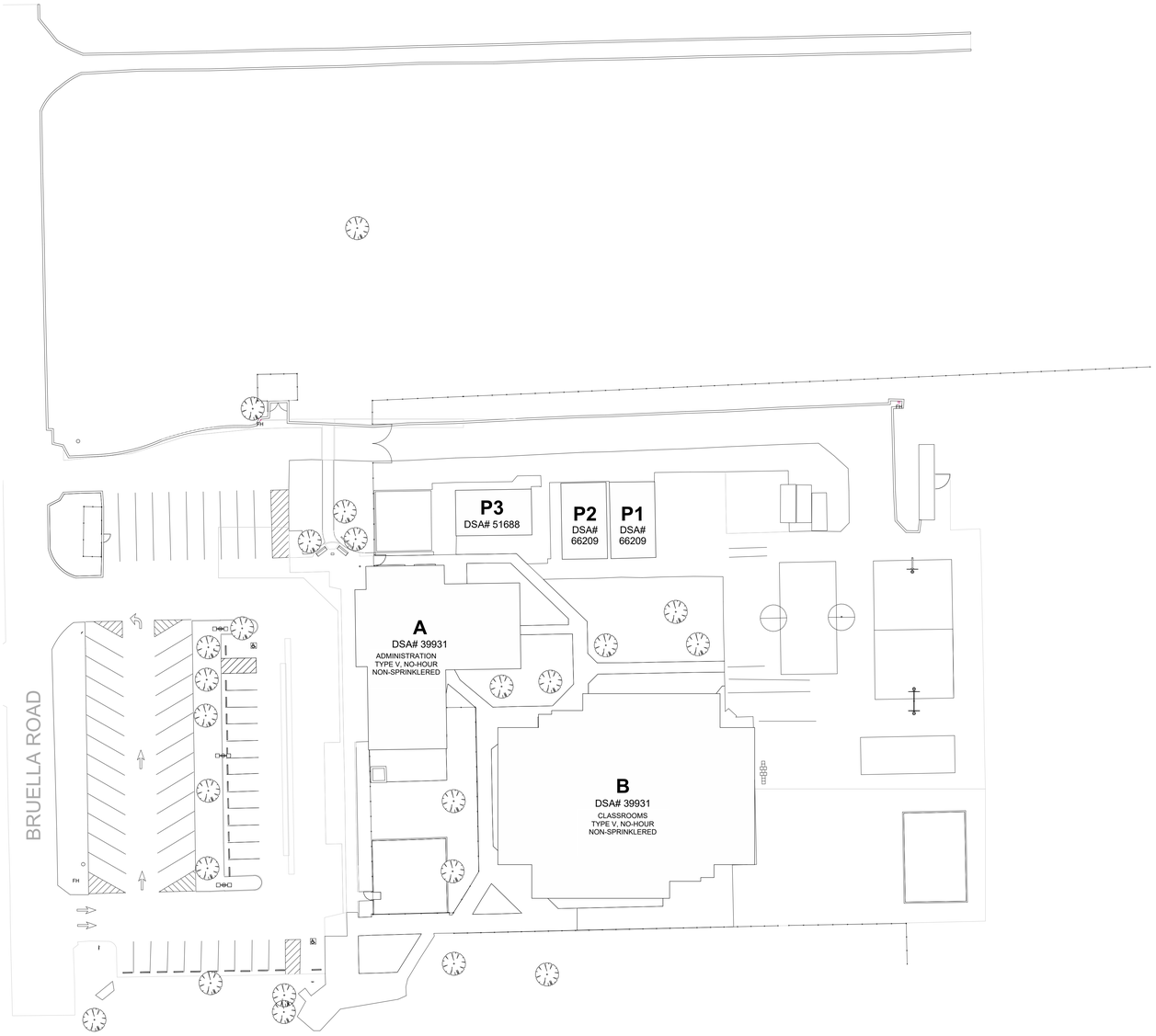
THE LINE SHOWN ABOVE IS ONE INCH LONG ON ORIGINAL PLOT SHEETS ORIGINAL PAGE SIZE

LODI UNIFIED SCHOOL DISTRICT

LODI UNIFIED SCHOOL DISTRICT - VICTOR ELEMENTARY SCHOOL HVAC REPLACEMENT

17670 BRUELLA RD
LODI, CA 95240



PN

- ARCHITECTURAL SITE PLAN - 1 (1" = 30'-0")

VOLUME 1 OF 3

Autodesk Docs://3431005000 Lodi USD Victor ES HVAC Replacement/3431005000-A-Victor-HVAC.rvt
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AGENCY APPROVAL:

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LODI USD

HMC ARCHITECTS
3431005-000

LICENSED ARCHITECT JEFFREY ALAN GRAF C-14648 8/31/2025 RENEWAL STATE OF CALIFORNIA

2101 CAPITOL AVENUE, SUITE 100
SACRAMENTO, CA 95816
916 325 1100 / www.hmcarchitects.com

PROJECT TEAM

Δ	DESCRIPTION	DATE

STRUCTURAL
RW CONSULTING ENGINEERS
1450 HARBOR BLVD SUITE F WEST SACRAMENTO, CA 95691
916.718.6910

MECHANICAL AND ELECTRICAL
CAPITAL ENGINEERING
11020 SUN CENTER DR SUITE 100 RANCHO CORDOVA, CA 95670
916.851.3500

FACILITY:
VICTOR ELEMENTARY SCHOOL
17670 BRUELLA RD
LODI, CA 95240

PROJECT:
LODI UNIFIED SCHOOL DISTRICT - VICTOR ELEMENTARY SCHOOL HVAC REPLACEMENT

SHEET NAME:
COVER SHEET

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:
G0.10

PLEASE RECYCLE

THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG AT THIS SHEETS ORIGINAL PAGE SIZE

GENERAL NOTES

1. CONSTRUCTION DOCUMENTS DESCRIBE THE PRODUCTS, SYSTEMS, QUANTITIES, CONFIGURATION, AND PERFORMANCE SPECIFICATIONS THAT DELIVER THE OVERALL DESIGN INTENT OF THE PROJECT.
2. THE CONSTRUCTION DOCUMENT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY BOTH.
3. PERFORMANCE BY THE CONSTRUCTION TEAM SHALL BE CONSISTENT WITH THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS AS NECESSARY TO DELIVER THE INDICATED RESULTS OF THE DESIGN INTENT.
4. VERIFY ALL DIMENSIONS, LOCATIONS OF EXISTING UTILITIES, AND CONDITIONS ON THE JOB SITE PRIOR TO THE START OF WORK OR PORTIONS OF THE WORK. NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE ACTUAL FIELD CONDITIONS AND THE CONSTRUCTION DOCUMENTS. EXISTING CONDITIONS ARE INDICATED AS A RESULT OF FIELD OBSERVATIONS, INFORMATION SHOWN ON AVAILABLE DOCUMENTS AND FIELD CONDITIONS AT THE TIME OF PREPARATION.
5. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL GOVERNING CODES, ORDINANCES, REGULATIONS AND LAWS.
6. THE DESIGN ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS AND SCAFFOLDING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. WHERE ANY CONFLICT OCCURS BETWEEN THE REQUIREMENTS OF LAWS, CODES, ORDINANCES, RULES AND REGULATIONS, THE MOST STRINGENT SHALL GOVERN.
8. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THE DRAWINGS.
9. DETAILS MARKED 'TYPICAL' SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY NOTED OTHERWISE.
10. ENACT ALL MEASURES TO PROTECT AND SAFEGUARD ALL EXISTING ELEMENTS TO REMAIN FROM BEING DAMAGED. REPLACE OR REPAIR EXISTING ELEMENTS DAMAGED BY THE EXECUTION OF THIS CONTRACT TO EQUAL OR BETTER CONDITION.
11. PRIOR TO THE START OF WORK THE CONTRACTOR SHALL COORDINATE BETWEEN THE REQUIREMENTS OF ALL DISCIPLINES HEREIN AND BETWEEN THE REQUIREMENTS OF ALL DRAWINGS AND SPECIFICATIONS IN ORDER THAT ALL ITEMS SATISFACTORILY RELATE TO ONE ANOTHER. NOTIFY ARCHITECT IMMEDIATELY REGARDING ANY ITEMS THAT CANNOT BE COORDINATED.
12. CONTRACTOR SHALL EXCERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING, CONDUIT, ETC. AND TO PREVENT HAZARD TO PERSONNEL AND/OR TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
13. NOT USED
14. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE EXISTING OR NEW STRUCTURAL ELEMENTS SHALL NOT TO BE STARTED UNTIL THE DETAILS HAVE BEEN REVIEWED AND APPROVED BY THE ARCHITECT, AND STRUCTURAL ENGINEER OF RECORD.
15. ALL WORK SHALL CONFORM TO 2022 EDITION TITLE 24, CALIFORNIA CODE OF REGULATION (CCR)
16. THE LIMIT OF WORK LINE SHOWS THESE DRAWINGS IS AN APPROXIMATE LIMIT OF WORK ONLY. REFER TO CONSULTANT DRAWINGS FOR ADDITIONAL WORK, INCLUDING BUT NOT LIMITED TO INSTALLATION OF CONDUIT, MANHOLES, PULLBOXES, ETC WHICH ARE TO BE PART OF THIS WORK, ALTHOUGH OCCURING OUTSIDE OF SHOWN LIMIT OF WORK LINES.
17. 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 BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY THE DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT.
18. CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24 CCR.
19. A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR. INSPECTOR TO BE CLASS 1.
20. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT. THE REPORTS SHALL BE SUBMITTED TO ARCHITECT OF RECORD, STRUCTURAL ENGINEER OF RECORD, OWNER, INSPECTOR OR RECORD, AND THE DSA FIELD ENGINEER. THE REPORTS OF ANY FAILURES OF TESTS AND INSPECTIONS ARE TO BE SUBMITTED TO DSA DISTRICT STRUCTURAL ENGINEER.
21. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
22. SAFETY DURING CONSTRUCTION SHALL COMPLY WITH CFC CHAPTER 33.
23. 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 DSA APPROVED 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)
24. CONTRACTOR IS TO REVIEW AND COMPLY WITH ALL REQUIREMENTS AND MITIGATION MEASURES SET FORTH IN BOTH THE ENVIRONMENTAL IMPACT REPORT (ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT | SCH NO. 2002071120) INCLUDING ATTACHED BIOLOGICAL RESOURCES TECHNICAL REPORT.
25. NO DUMPING OR PLACING OF ANY DIRT OR DEBRIS SHALL BE ALLOWED OUTSIDE OF THE CONTRACTORS LIMIT OF WORK AREA.

CODES

PARTIAL LIST OF APPLICABLE CODES

2022	CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2022	CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2021 INTERNATIONAL BUILDING CODE VOLUMES 1 & 2 AND 2022 CALIFORNIA AMENDMENTS)
2022	CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (2020 NATIONAL ELECTRICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
2022	CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R. (2021 UNIFORM MECHANICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
2022	CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2021 UNIFORM PLUMBING CODE AND 2022 CALIFORNIA AMENDMENTS)
2022	CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.
2022	CALIFORNIA HISTORICAL BUILDING CODE (CHBC), PART 8, TITLE 24 C.C.R.
2022	CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (2021 INTERNATIONAL FIRE CODE AND 2022 CALIFORNIA AMENDMENTS)
2022	CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 C.C.R. (2021 INTERNATIONAL EXISTING CODE AND 2022 CALIFORNIA AMENDMENTS)
2022	CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 C.C.R.
2022	CALIFORNIA REFERENCED STANDARDS, PART 12,TITLE 24 C.C.R.
TITLE 19	C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
2019	ASME A17.1/B44-19 SAFETY CODE FOR ELEVATORS AND ESCALATORS
2020	ASME 18.1 - SAFETY STANDARD FOR PLATFORM LIFTS AND STAIRWAY CHAIR LIFTS

PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 13	STANDARD FOR AUTOMATIC FIRE SPRINKLER SYSTEMS (CA AMENDED)	2022 ED.
NFPA 14	STANDARD FOR STANDPIPE AND HOSE SYSTEMS (CA AMENDED)	2019 ED.
NFPA 17	STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS	2021 ED.
NFPA 17A	STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS	2021 ED.
NFPA 20	STANDARD FOR STATIONARY PUMPS FOR FIRE PROTECTION	2019 ED.
NFPA 22	STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION	2013 ED.
NFPA 24	STANDARD FOR THE INSTALLATION OF PRIVATE FIRE MAINS AND THEIR APPURTENANCES (CA AMENDED)	2019 ED.
NFPA 72	NATIONAL FIRE ALARM & SIGNALING CODE (CA AMENDED)	2022 ED.
NFPA 80	STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES	2019 ED.
NFPA 2001	STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA AMENDED)	2018 ED.
UL 300	STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT	2005 (R2014)
UL 464	AUDIBLE SIGNAL APPLIANCES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES	2003 ED.
UL 521	STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 ED. (R2005)
UL 1971	STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED	2002 ED. (R2018)
ICC 300	STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS	2017 ED.

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.
SEE CALIFORNIA BUILDING CODE, CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

STATEMENT OF GENERAL CONFORMANCE

( ) THE DRAWINGS OR SHEETS LISTED ON THE INDEX SHEET WITH AN (*)
( ) THIS DRAWING PAGE OF SPECIFICATIONS/CALCULATIONS

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 CERTIFY THAT:

ALL DRAWINGS OR SHEETS LISTED ON THE SHEET INDEX WITH AN (*) IS/ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN AND HAS/HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.

SIGNATURE — ARCHITECT OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE

2023.09.22
DATE

JEFFERY GRAU
PRINT NAME

C-14648
LICENSE NUMBER

01-01-22
EXPIRATION DATE

PROJECT DESCRIPTION

1. REPLACEMENT OF HVAC UNITS ON BUILDING A (ADMINISTRATION BUILDING) AND BUILDING B (CLASSROOM BUILDING).
2. OTHER WORK AS SHOWN IN THE DOCUMENTS AND AS REQUIRED FOR A COMPLETE PROJECT

SHEET INDEX

SYMBOL LEGEND

NORTH ARROW (TN, PN)
TICK INDICATES PLAN NORTH
ARROW INDICATES TRUE NORTH

ELEVATION CALLOUT (TYPICAL FOR EXTERIOR) (1 / AX.XX)
LOCATION ON SHEET
SHEET WHERE ELEVATION IS DRAWN

ELEVATION CALLOUT (TYPICAL FOR INTERIOR) (A1, A2, A3, A4 / AX.XX)
LOCATION ON SHEET
SHEET WHERE ELEVATION IS DRAWN

ELEVATION CALLOUT - ALT. (FOR EXTERIOR AND INTERIOR) (18/AX.XX)
LOCATION & SHEET WHERE ELEVATION IS DRAWN

SECTION CALLOUT (SIM, 1 / AX.XX)
INDICATES A SIMILAR CONDITION
LOCATION ON SHEET
SHEET WHERE SECTION IS DRAWN

DETAIL CALLOUT (SIM, 1 / AX.XX)
INDICATES A SIMILAR CONDITION
LOCATION ON SHEET
SHEET WHERE SECTION IS DRAWN

CONTROL OR DATUM POINT (FIRST FLOOR +0' - 0")
NAME OF ELEVATION (IF APPLICABLE)
ELEVATION ABOVE FINISHED FLOOR

GRID BUBBLE (0)
EXISTING BUILDING GRID SYMBOL
GRID NUMBER
NEW BUILDING GRID SYMBOL

DOOR CALLOUT (101A)
DOOR NUMBER

INTERIOR FINISH CALLOUT (FA)
MATERIAL FINISH TYPE (SEE FINISH SCHEDULE)

WINDOW CALLOUT (09-WF1)
WINDOW NUMBER (SEE WINDOW SCHEDULE)

WALL TYPE CALLOUT (AS6A, AS4A, 55 1FB)
WALL TYPE MARK - SEE A10.11
WALL STC RATING
WALL FIRE RATING TYPE

MATCHLINE REFERENCE (X / X)
LOCATION ON SHEET
SHEET WHERE PLAN IS DRAWN

KEYNOTE (?)
KEYNOTE NUMBER (SEE LEGEND ON SHEET)

ROOM EXITING INFORMATION (OFFICE 1001, 150 SF, OL, OLF, OT, 2)
AREA (SQ FT)
OCCUPANT LOAD (AREA DIVIDED BY LOAD FACTOR)
OCCUPANT LOAD FACTOR (REFER TO TABLE 1004.5)
OCCUPANCY TYPE
NUMBER OF EXITS REQUIRED (REFER TO TABLE 1006.2.1)

WIC CASEWORK TAG (WI999, L, WD, HT, DP)
MANUFACTURER REFERENCE AND MODEL NUMBER
LOCK
CABINET DEPTH
CABINET HEIGHT
CABINET WIDTH

DISCIPLINE	
G	GENERAL
C	CIVIL
L	LANDSCAPE
A	ARCHITECTURE
I	INTERIORS
Q	EQUIPMENT
S	STRUCTURAL
P	PLUMBING
M	MECHANICAL
E	ELECTRICAL
FA	FIRE ALARM
T	TELECOM
AV	AV EQUIPMENT
K	KITCHEN
FP	FIRE PROTECTION

SHEET TYPE	
0	CODE ANALYSIS, NOTES
1	SITE PLAN
2	FLOOR PLAN
3	CEILING PLAN
4	ROOF PLAN
5	EXTERIOR ELEVATIONS
6	SECTIONS
7	ENLARGED PLANS
8	INTERIOR ELEVATIONS
9	SCHEDULES
10	DETAILS

BUILDING LETTER, SEGMENT, (USER DEFINED)
USED ONLY IF REQUIRED. IF NOT, COLUMN IS OMITTED.

DISCIPLINE — SHEET TYPE — SERIES / ORDER — USER DEFINED (IF APPLICABLE)

A A 1 . 1 1 A . A

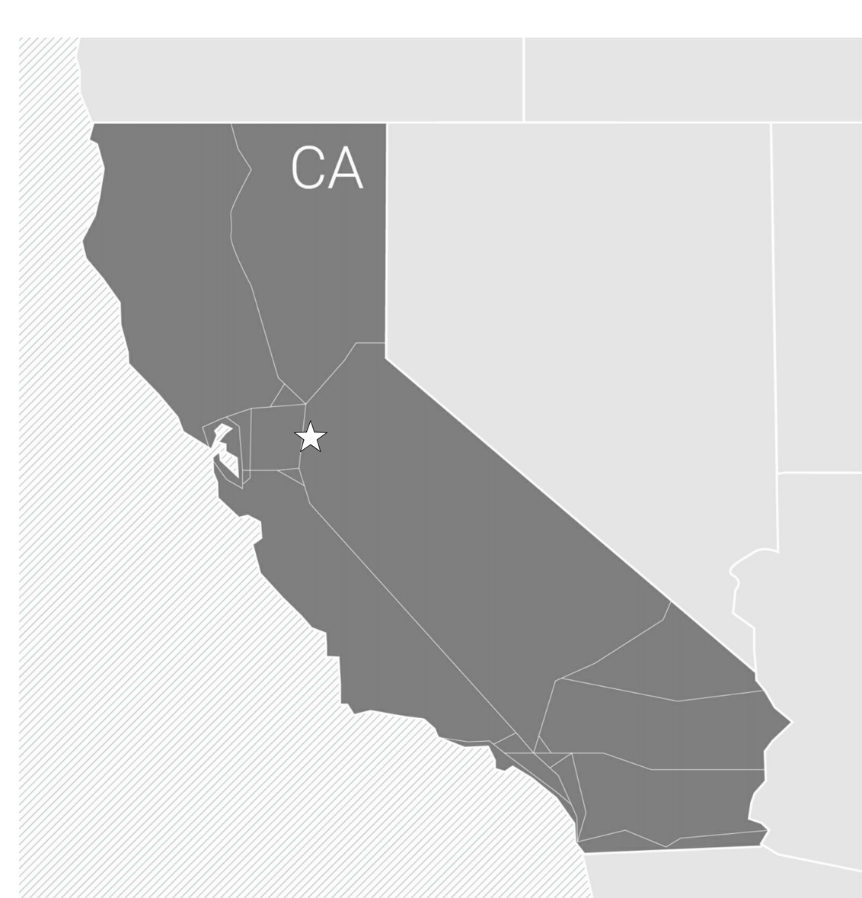
BULIDING LETTER (IF APPLICABLE) — FLOOR LEVEL OR SEQUENTIAL ORDER — SEGMENT (IF APPLICABLE)

ABBREVIATIONS

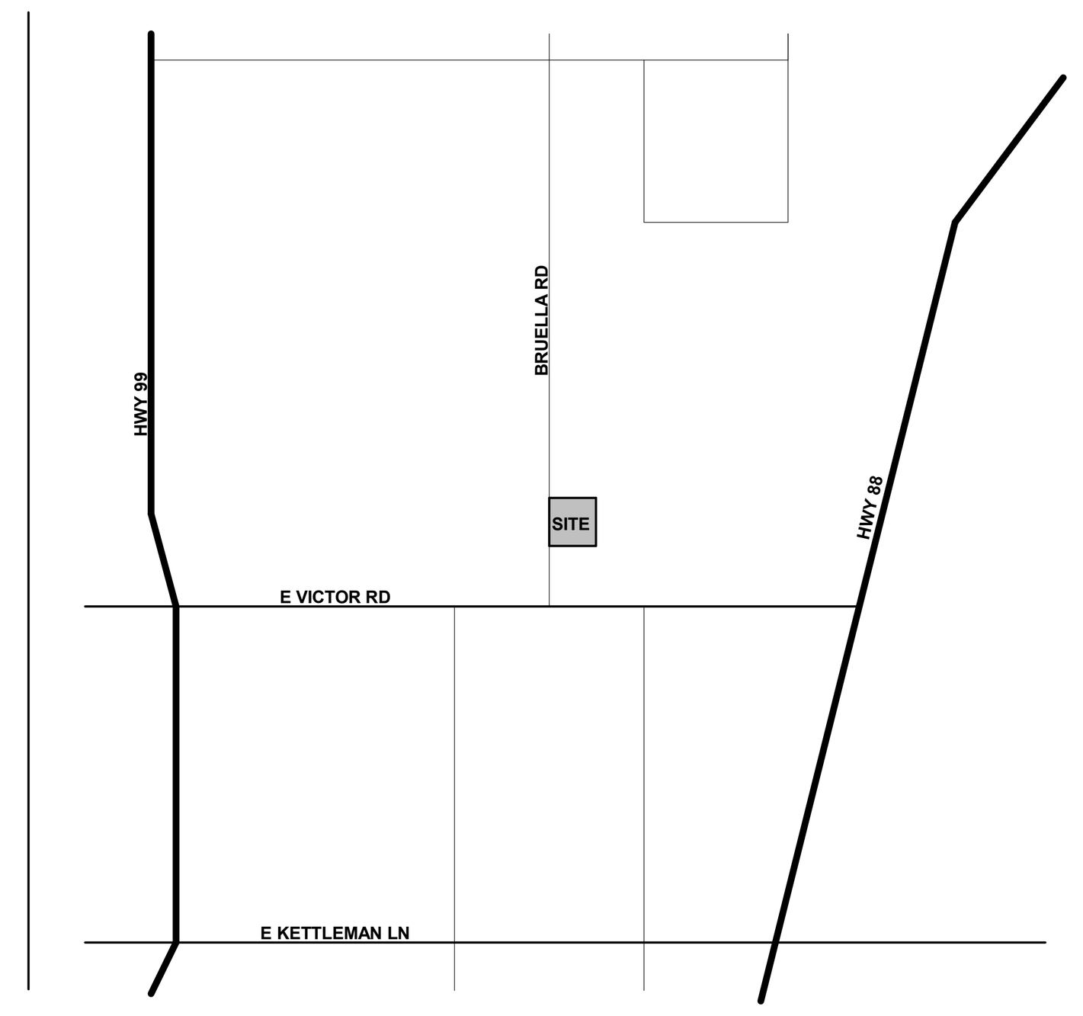
(E)	EXISTING
AB	ANCHOR BOLT
AC PAVING	ASPHALTIC CONCRETE PAVING
ACC	ACCESS/ACCESSIBLE
ACP	ACOUSTICAL CEILING PANEL
ACT	ACOUSTICAL CEILING TILE
ADJ	ADJACENT/ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AGG	AGGREGATE
AHU	AIR HANDLING UNIT
ARCH	ARCHITECTURAL
ATT	ATTENUATION
AUTO	AUTOMATIC
BD	BOARD
BLCG	BLOCKING
BUR	BUILT UP ROOFING
CABT	CABINET
CF	CUBIC FEET
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED
CG	CORNER GUARD
CJ	CONTROL JOINT
CL	CENTER LINE
CLF	CHAIN LINK FENCE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COMP	COMPRESSION / COMPOSITE
CF	CUBIC FEET
COORD	COORDINATE
CORR	CORRUGATED
CT	CERAMIC TILE
CTSK	COUNTER SKUNK
CW	CURTAINWALL
DEPR	DEPRESSED / DEPRESSION
DF	DRINKING FOUNTAIN
DIM	DIMENSION
DISP	DISPENSER
DS	DOWNSPOUT
DTL	DETAIL
DW	DISHWASHER
E/W	EACH WAY
EIFS SYSTEM	EXTERIOR INSULATION FINISH
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION / ELEVATOR
ENCL	ENCLOSE / ENCLOSURE
EOS	EDGE OF SLAB
EP	ELECTRICAL PANEL
EQ	EQUAL
ESC	EXCUTCHEON
EWC	ELECTRIC WATER COOLER
EXP	EXPOSED
FA	FIRE ALARM
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER W/ CABINET
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FSH	FLAT HEAD SCREW
FIN	FINISH
FLR	FLOOR
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FP	FIREPROOFING
FR	FIRE RATED
FRG	FIRE RATED GLASS
FRP	FIBERGLASS REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FS	FINISH SURFACE
FTG	FOOTING
GB	GRAB BAR
GFRC	GLASS FIBER REINFORCED CONCRETE
GL	GLASS TYPE
GLB	GLUE LAMINATED BEAM
GYP BD	GYPSUM BOARD
GYP PLAS	GYPSUM PLASTIC
HB	HOSE BIBB
HD	HEAVY DUTY
HDR	HEADER
HDWR	HARDWARE
HGT	HEIGHT
HM	HOLLOW METAL
HP	HIGH POINT
HSS	HOLLOW STEEL SECTION
ID	INSIDE DIAMTER
INT	INTERIOR
INV	INVERT
LANDS	LANDSCAPE
LAV	LAVATORY
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LT WT	LIGHT WEIGHT
LVR	LOUVER
MACH	MACHINE
MB	MACHINE BOLT
MDF	MEDIUM DENSITY FIBERBOARD
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MFR	MANUFACTURER
MH	MANHOLE
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
NIC	NOT IN CONTRACT
NR	NON RATED
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
O/	OVER
O/A	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OFVI	OWNER FURNISHED, VENDOR INSTALLED
OH	OPPOSITE HAND
OPER	OPERABLE
OPNG	OPENING
ORD	OVERFLOW ROOF DRAIN
P/L	PROPERTY LINE
PA	PUBLIC ADDRESS
PAF	POWDER ACTUATED FASTENER PAVING
PCC	PORTLAND CEMENT CONCRETE PAVING
PED	PEDESTRIAN
PERF	PERFORATED
PERIM	PERIMETER
PERP	PERPENDICULAR
PH	PANIC HARDWARE
PIV	POST INDICATOR VALVE
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLUMB	PLUMBING
PNL	PANEL
PNT	PAINT / PAINTED
POC	POINT OF CONNECTION
POLY ISO	POLYISOCYANURATE
PREFIN	PREFINISHED
PREP	PREP / PREPARATION
PTC	POST TENSIONED CONCRETE
PTD	PAPER TOWEL DISPENSER
PTN	PARTITION
PTS	PNEUMATIC TUBE STATION / SYSTEM
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QT	QUARRY TILE
R	RADIUS, RISER
RB	RESILIENT BASE
RD	ROOF DRAIN
RECEPT	ECEPTACLE
REF	REFERENCE
REFL	REFLECT(ED), (IVE)
REFL	REFLECT(ED), (IVE)
REFR	REFRIGERATOR
REINF	REINFORCE/REINFORCED/ REINFORCEMENT
REM	REMOVE
RH	ROUND HEAD
RHS	ROUND HEAD SCREW
RO	ROUGH OPENING
ROW	RIGHT OF WAY
SCH	SCHEDULE (FOR PIPE)
SCHED	SCHEDULE / SCHEDULING
SD	STORM DRAIN / SOAP DISPENSER
SECT	SECTION
SG	SAFETY GLASS
SHT	SHEET
SHTG	SHEATHING
SMS	SHEET METAL SCREW
SND	SANITARY NAPKIN DISPOSAL
SOV	SHUT OFF VALVE
SPEC	SPECIFICATIONS
SS	STAINLESS STEEL
STC	SOUND TRAMISSION CLASS
STL	STEEL
STSMS SCREW	SELF TAPPING SHEET METAL
SUSP	SUSPENDED
SV	SHEET VINYL
SYM	SYMMETRICAL
T	TREAD
T&B	TOP AND BOTTOM
TO	TOP OF
TOC	TOP OF CURB / CONCRETE
TOP	TOP OF PARAPET
TOS	TOP OF STEEL
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TS	TACKABLE SURFACE
U/C	UNDER CABINET (OR COUNTER
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
VAC	VACUUM
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W/	WITH
W/O	WITHOUT
WB	WOOD BASE
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WGT	WEIGHT
WH	WATER HEATER
WP	WATERPROOFING/WALL PROTECTION
WR	WATER RESISTANT
WRGB	WATER RESISTANT GYPSUM BOARD
WS	WOOD SCREW
WSCT	WAINSCOT
WWF	WELDED WIRE FABRIC

NOTE:
OTHER ABBREVIATIONS USED ON THESE DRAWINGS ARE CONSIDERED STANDARDS IN THE BUILDING INDUSTRY. CONTACT ARCHITECT FOR NECESSARY CLARIFICATION.

STATE MAP



VICINITY MAP



AGENCY APPROVAL:

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HMC ARCHITECTS
3431005-000
2101 CAPITOL AVENUE, SUITE 100
SACRAMENTO, CA 95816
916 325 1100 / www.hmcarchitects.com

LICENSED ARCHITECT — JEFFREY ALAN GRAU — C-14648 — 5 / 31 / 2025 RENEWAL DATE — STATE OF CALIFORNIA

ISSUE

Δ	DESCRIPTION	DATE

FACILITY:
VICTOR ELEMENTARY SCHOOL
17670 BRUELLA RD
LODI, CA 95240

PROJECT:
LODI UNIFIED SCHOOL DISTRICT - VICTOR ELEMENTARY SCHOOL HVAC REPLACEMENT

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Autodesk Docs://3431005000 Lodi USD Victor ES HVAC Replacement/3431005000-A-Victor-HVAC.rvt
9/21/2023 9:37:51 AM

NAILING SCHEDUJLE:

DESCRIPTION	NAILING
ROOF	
1. BLKG BTWN CLG JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRMG BLW	3-8d TOE NAIL, EA END
BLKG BTWN RAFTERS OR TRUSSES NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	2-8d TOE NAIL OR 2-16d END NAIL, EA END
FLAT BLKG TO TRUSS & WEB FILLER	16d FACE NAIL @ 6"cc
2. CLG JOIST TO TOP PLATE	3-8d TOE NAIL EA JOIST
3. CLG JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OV/ PARTITIONS (NO THRUST)	3-16d FACE NAIL
4. CLG JOIST ATTACHED TO PARALLEL RAFTER, LAPS OV/ PARTITIONS (W/ THRUST)	CBC TABLE 2308.7.3.1
5. COLLAR TIE TO RAFTER	3-10d FACE NAIL
6. RAFTER OR TRUSS TO TOP PLATE (SEE CBC SECTION 2308.7.3.1, TABLE 2308.7.3.1)	3-10d TOE NAIL
7. RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS; OR RAFTER TO 2" RIDGE	3-10d TOE NAIL OR 2-16d END NAIL
WALL	
8. STUD TO STUD (NOT BRACED WALL PANELS)	16d @ 24"cc FACE NAIL
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (BRACED WALL PANELS)	16d @ 6"cc FACE NAIL
10. BUILT UP HEADER (2" TO 2" HEADER)	16d @ 16"cc FACE NAIL
11. CONT HEADER TO STUD	4-8d TOE NAIL
12. TOP PLATE TO TOP PLATE	16d @ 16"cc FACE NAIL
13. TOP PLATE TO TOP PLATE, AT END JOINTS	8-16d EA SIDE OF END JOINT FACE NAIL (24" MIN LAP SPLICE EA END)
14. BOT PLATE TO JOIST, RIM, BAND JOIST OR BLKG (NOT @ BRACED WALL PANELS)	16d @ 16"cc
15. BOT PLATE TO JOIST, RIM, BAND JOIST OR BLKG (BRACED WALL PANELS)	2-16d @ 16"cc
16. STUD TO TOP OR BOT PLATE	4-8d TOE NAIL
17. TOP OR BOT PLATE TO STUD	2-16d END NAIL
18. TOP PLATED, LAPS AT CORNERS & INTERSECTIONS	2-16d FACE NAIL
19. 1" BRACE TO EA STUD & PLATE	2-8d FACE NAIL
20. 1x6 SHEATHING TO EA BEARING	2-8d FACE NAIL
21. 1x8 & WIDER SHEATHING TO EA BEARING	3-8d FACE NAIL
FLOOR	
22. JOIST TO SILL, TOP PLATE OR GIRDER	3-8d TOE NAIL
23. RIM JOIST, BAND JOIST, OR BLKG TO TOP PLATE, SILL, OR OTHER FRAMING BLW	8d @ 6"cc TOE NAIL
24. 1x6 SUB FLOOR OR LESS TO EA JOIST	2-8d FACE NAIL
25. 2" SUB FLOOR TO JOIST OR GIRDER	2-16d FACE NAIL
26. 2" PLANKS EA BEARING (PLANK & BEAM, FLOOR & ROOF)	2-16d FACE NAIL
27. BUILT UP GIRDERS & BEAMS, 2" LUMBER LAYERS	10d @ 24"cc FACE NAIL AT TOP & BOT, STAGGER ON OPPOSITE SIDES
28. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3-16d EA JOIST OR RAFTER FACE NAIL
29. JOIST TO BAND JOIST OR RIM JOIST	3-16d END NAIL
30. BRIDGING OR BLKG TO JOIST, RAFTER OR TRUSS	2-8d TOE NAIL EA END

ROUGH CARPENTRY-MATERIALS:

1. ALL SAWN LUMBER SHALL BE DOUG FIR UNO AND HAVE MOISTURE CONTENT NOT TO EXCEED 19% AT TIME OF INSTALLATION. EACH PIECE SHALL BEAR THE STAMP OF WCLIB OR WWPA SHOWING GRADE MARK.

2. ALL COMPOSITE WOOD PRODUCTS (IE LVL, LSL, GLULAM, ETC) SHALL BE PROTECTED FROM EXPOSURE AND EXCESSIVE MOISTURE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. MOISTURE CONTENT OF 16% PRIOR TO MEMBERS BEING WRAPPED OR ENCLOSED.

3. ALL SAWN LUMBER TO BE SPECIES & GRADE AS NOTED BELOW:

MEMBER	SPECIES & GRADE
2x_ & 3x_STUDS	#2 DF
2x_ JOISTS, PLATES	#1 DF
4x_ HEADERS	#1 DF
4x_ COLUMNS	#1 DF
6x_ & LARGER HEADERS	SS DF
6x_ & LARGER COLUMNS	SS DF

3.1 MATERIAL EXPOSED TO WEATHER OR IN CONTACT W/CONCRETE SHALL BE PRESSURE TREATED

3.2 OPTIONAL FOR EXPOSED 8X_ BEAMS & POSTS TO BE #1 AC IN LIEU OF TREATED DF

3.3 STUDS TALLER THAN 12'-0" SHALL BE #1 DF

4. PRESERVATIVE TREATED & PRESSURE TREATED LUMBER

4.1 SAWN LUMBER TO BE PROTECTED FROM EARTH, WEATHER, EARTH, & CONCRETE/CMU OR WOOD SHALL BE TREATED

4.2 PRESERVATIVE TREATMENT & CLEARANCES TO SOIL OR CONCRETE SHALL BE PER CBC 2303.1.9 & 2304.12.1.2

4.3 FIELD CUTS & HOLES IN TREATED LUMBER SHALL BE PROTECTED IN ACCORDANCE W/AWPA STANDARD M4

4.4 CONTRACTOR TO COORDINATE WITH TREATED WOOD SUPPLIER TO DETERMINE THE APPROPRIATE LEVEL OF CORROSION PROTECTION FOR HARDWARE & FASTENERS IN CONTACT WITH WOOD TREATED WITH CORROSIVE CHEMICALS.

5. ALL WOOD PANEL STRUCTURAL SHEATHING SHALL BE STAMPED W/APA TRADEMARK AND CONFORM TO MOST CURRENT EDITION OF PS-1. USE THICKNESS AND NAILING AS SHOWN ON DRAWINGS. SHEATHING SHALL HAVE EXPOSURE RATING AS APPROPRIATE FOR ON-SITE EXPOSURE CONDITIONS DURING CONSTRUCTION AND IN FINAL CONDITION.

ROUGH CARPENTRY-NAILS:

1. ALL SPECIFIED NAILS SHALL CONFORM TO ASTM F1667 OR ICC ESR-1539. ALTERNATE FASTENERS MUST HAVE AN ICC EVALUATION REPORT AND MAY NOT BE USED UNLESS APPROVED IN WRITING BY RW CONSULTING ENGINEERS. ALL NAILS SHALL BE FULL ROUND HEAD WITH MINIMUM PROPERTIES AS FOLLOWS:

SPECIFIED FASTENER	DIAMETER	LENGTH	PENETRATION	APPLICATION
8d	.131"Ø	2½"	1⅜"	SHTG/FRMG
10d	.148"Ø	3"	1½"	SHTG/FRMG
16d BOX	.135"Ø	3½"	1⅝"	FRMG
16d SINKER	.148"Ø	3¼"	1½"	FRMG
16d COMMON	.162"Ø	3½"	1⅝"	FRMG

ALL NAILS SHALL BE COMMON WIRE NAILS EXCEPT WHERE SPECIFICALLY NOTED

2. NAILS SHALL BE LOCATED AND SPACED TO PREVENT SPLITTING OF WOOD. PREDRILL ALL FASTENERS 75% MAX OF FASTENER DIAMETER WHERE WOOD TENDS TO SPLIT.

3. TOENAILS SHALL BE DRIVEN AT AN ANGLE OF APPROX 30° WITH THE MEMBER AND STARTED APPROX ⅓ THE LENGTH OF THE NAIL FROM THE MEMBER END.

4. NAILS USED IN HARDWARE SHALL BE AS SPECIFIED BY HARDWARE MFR.

5. MINIMUM NAILING SHALL BE PER CBC TABLE 2304.10.1 UNO (SEE TABLE ON THIS SHEET

6. NAILS INSTALLED IN TREATED LUMBER SHALL HAVE CORROSION PROTECTION APPROPRIATE FOR THE TYPE OF CHEMICALS USED IN THE TREATMENT PROCESS. AS A MINIMUM, NAILS INTO TREATED LUMBER OR IN EXTERIOR APPLICATIONS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153 CLASS D OR TYPE 316 STAINLESS STEEL.

7. SHEATHING NAILS SHALL BE DRIVEN SO THAT THEIR HEAD OR CROWN ARE FLUSH WITH THE SURFACE OF THE SHEATHING.

ROUGH CARPENTRY-HARDWARE:

1. ALL STEEL CONNECTORS, STRAPS, HANGERS, HARDWARE, ETC SHALL BE BY SIMPSON STRONG-TIE OR APPROVED EQUAL UNO. ATTACH WITH FASTENERS PER MFR TO ACHIEVE THE MAXIMUM TABULATED VALUE.

2. HARDWARE COMPONENTS AND FASTENERS INSTALLED AGAINST OR INTO TREATED LUMBER SHALL HAVE CORROSION PROTECTION APPROPRIATE FOR THE TYPE OF CHEMICALS USED IN THE TREATMENT PROCESS. AS A MINIMUM, ALL HARDWARE AND FASTENERS INTO/AGAINST TREATED LUMBER OR IN EXTERIOR APPLICATIONS SHALL BE HOT-DIPPED GALVANIZED (G185 MIN FOR HARDWARE) OR STAINLESS STEEL.

3. INSTALL ALL SPECIFIED FASTENERS BEFORE LOADING THE CONNECTION.

4. NAILS FOR HARDWARE SHALL NOT BE OVERDRIVEN OR DEFORM THE PART. THE CONTRACTOR SHALL VERIFY WITH THE HARDWARE MFR THAT THE PART PUBLISHED CAPACITIES ARE NOT REDUCED AS A RESULT OF THE INSTALLED CONDITION.

5. FASTENER SUBSTITUTIONS FOR HARDWARE ARE NOT ALLOWED UNLESS APPROVED FOR USE BY THE MFR AND THE HARDWARE CAPACITY IS NOT REDUCED.

6. WASHERS AT WOOD CONNECTIONS SHALL BE SQUARE PLATE STEEL OR MALLEABLE IRON WITH THE FOLLOWING MIN DIMENSIONS:

FASTENER DIAMETER	MIN WASHER DIMENSIONS	MIN THICKNESS
½"	2" x 2"	3⁄16"
⅝"	2½" x 2½"	¼"
¾"	2¾" x 2¾"	5⁄16"
⅞"	3" x 3"	5⁄16"
1"	3½" x 3½"	⅜"

ROUGH CARPENTRY-LAG SCREWS:

1. ALL SPECIFIED LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1.

2. LEAD HOLES FOR LAG SCREWS SHALL BE BORED TO AVOID SPLITTING OF WOOD MEMBERS. THE LEAD HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AND LENGTH AS THE UNTHREADED SHANK. THE LEAD HOLE FOR THE THREADED PORTION SHALL NOT EXCEED 70% OF THE SHANK DIAMETER AND HAVE MIN LENGTH EQUAL TO THREADED PORTION.

3. LAG SCREWS SHALL BE INSTALLED BY TURNING OF THE LAG SCREW & NOT BY DRIVING OF A HAMMER.

4. SOAP OR OTHER LUBRICANT MAY BE USED ON THE LAG SCREW OR IN THE LEAD HOLE AS REQ'D TO PREVENT DAMAGE TO THE LAG SCREW.

5. LAG SCREWS INSTALLED IN TREATED LUMBER SHALL HAVE CORROSION PROTECTION APPROPRIATE FOR THE TYPE OF CHEMICALS USED IN THE TREATMENT PROCESS. AS A MINIMUM, LAG SCREWS INTO TREATED LUMBER OR IN EXTERIOR APPLICATIONS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153 CLASS C OR TYPE 316 STAINLESS STEEL.

6. LAG SCREWS SHALL BE INSTALLED WITH A STANDARD CUT WASHER OR PLATE WASHER WITH CORROSION PROTECTION TO MATCH THE LAG SCREW.

7. ALL LAG SCREWS TO BE TIGHTENED DURING INSTALLATION & RE-TIGHTENED JUST PRIOR TO CLOSING IN.

DESIGN CRITERIA:

1. PROJECT ADDRESS: 17670 BRUELLA ROAD
   LODI, CA 95240

2. BUILDING CODE: 2022 CALIFORNIA BUILDING CODE

3. GRAVITY LOADS: (ESTIMATES OF AS-BUILT CONDITIONS
   BUILDING ROOFS
   DEAD LOAD = 13 PSF
   ROOF LIVE LOAD = 20 PSF (REDUCIBLE)

4. LATERAL LOADS: RISK CATEGORY III

   WIND LOADS (ASCE 7-16)

   BASIC WIND SPEED 100 MPH (77 MPH ASD)
   EXPOSURE C
   BUILDING IS CONSIDERED "ENCLOSED"

   PRESSURE COEFFICIENTS
   INTERNAL PRESSURE COEFFICIENT, GC_{pi} = ± 0.18
   TOPOGRAPHIC FACTOR, K_{zt} = 1.00
   WIND DIRECTIONALITY FACTOR, K_d = 0.85
   GROUND ELEVATION FACTOR, K_e = 1.00
   VELOCITY PRESSURES
   q (0'-15') = 11.0 PSF (ASD)
   q (15'-20') = 11.6 PSF (ASD)

   SEISMIC LOADS (ASCE 7-16)

   SITE CLASS D
   SEISMIC DESIGN CATEGORY D
   IMPORTANCE FACTOR 1.25
   REDUNDANCY FACTOR, ρ 1.0

   S_S = 0.560 S_1 = 0.243
   F_a = 1.352 F_v = 2.114
   S_{MS} = 0.757 S_{M1} = 0.513
   S_{DS} = 0.505 S_{D1} = 0.342

   MECHANICAL EQUIPMENT (ASCE 7-16)

   IMPORTANCE FACTOR, I_p 1.00
   RESPONSE MOD FACTOR, R_p 6.0
   AMPLIFICATION FACTOR, a_p 2.5

GENERAL NOTES:

1. ALL NEW WORK SHALL CONFORM TO TITLE 24 2022 EDITIONS WITH ALL DSA AMENDMENTS AND ALL OTHER APPLICABLE CODES AND REGULATIONS.

2. THIS SET OF STRUCTURAL DRAWINGS IS APPLICABLE ONLY TO THE LISTED PROJECT AND SITE LOCATION.

3. NOTES ON THIS SHEET ARE TYPICAL AND SHALL APPLY UNLESS OTHERWISE NOTED OR SHOWN. TYPICAL DETAILS SHALL APPLY FOR ALL LIKE CONDITIONS UNLESS OTHERWISE NOTED OR DETAILED.

4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS, ELEVATIONS, EXISTING CONDITIONS, AND OTHER RELATED ITEMS. THE CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS PRIOR TO CONSTRUCTION AND SHALL NOTIFY THE ENGINEER OF RECORD IF ANY CONFLICTS ARE SHOWN OR NOTED.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFORM TO RELEVANT SECTIONS OF THE CALIFORNIA "CONSTRUCTION SAFETY ORDERS" AND ALL OSHA REQUIREMENTS. THE ENGINEER OF RECORD ACCEPTS NO RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY W/ THESE REQUIREMENTS.

6. STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE, AND DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. DESIGN AND CONSTRUCTION OF ALL TEMPORARY BRACING, SHORING, FORMING, ETC REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

7. A COPY OF TITLE 24 CCR PARTS 1 -5 SHALL BE KEPT ON SITE AT ALL TIMES (T-24 PART 1, 4-317(c)).

INSPECTION NOTES:

1. ALL TESTS AND INSPECTIONS ARE TO BE PROVIDED BY A QUALIFIED TESTING LAB OF RECORD, HIRED BY THE DISTRICT (T-24 PART 1, 4-335).

2. ALL TESTS AND INSPECTIONS SHALL CONFORM TO CHAPTER 17A OF THE 2022 CBC AND THE PROJECT SPECIFIC DSA-103.

3. ALL SPECIAL INSPECTORS SHALL HAVE A MINIMUM OF THREE YEARS OF EXPERIENCE WITH MATERIAL BEING INSPECTED.

4. A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER OF RECORD SHALL OBSERVE ALL GRADING, BUILDING PAD PREP, AND FOOTING EXCAVATIONS.

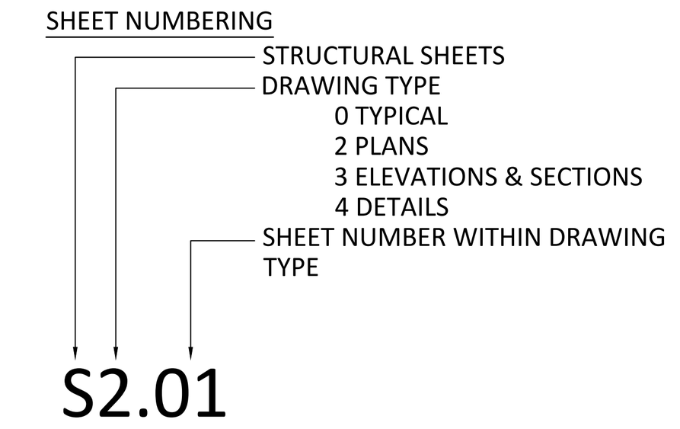
STRUCTURAL SHEET INDEX:

ABBREVIATIONS:

@	AT
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
APA	AMERICAN PLYWOOD ASSOCIATION
ARCH	ARCHITECT/ARCHITECTURAL
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
BLKG	BLOCKING
BLW	BELOW
BTWN	BETWEEN
B.O.	BOTTOM OF
BOT	BOTTOM
CBC	CALIFORNIA BUILDING CODE
cc	CENTER TO CENTER
CJ	COLD JOINT
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
Ø	DIAMETER
DWGS	DRAWINGS
DSA	DIVISION OF THE STATE ARCHITECT
ES	EDGE SCREW w/SPACING PER SHEAR WALL DIAGRAMS
F.O.	FACE OF
FRMG	FRAMING
HD	HOLDOWN
HSS	HOLLOW STRUCTURAL SECTION
L	STEEL ANGLE
MAX	MAXIMUM
MC	MISCELLANEOUS CHANNEL
MIN	MINIMUM
NTS	NOT TO SCALE
#	NUMBER OR POUNDS
OH	OPPOSITE HAND
OV/	OVER
PAF	POWDER-ACTUATED FASTENER
PJ	PANEL JOINT
SEOR	STRUCTURAL ENGINEER OF RECORD
SMS	SHEET METAL SCREW
T & B	TOP AND BOTTOM
THRU	THROUGH
T.O.	TOP OF
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
w/	WITH

DRAWING STANDARDS:

SHEET NUMBERING



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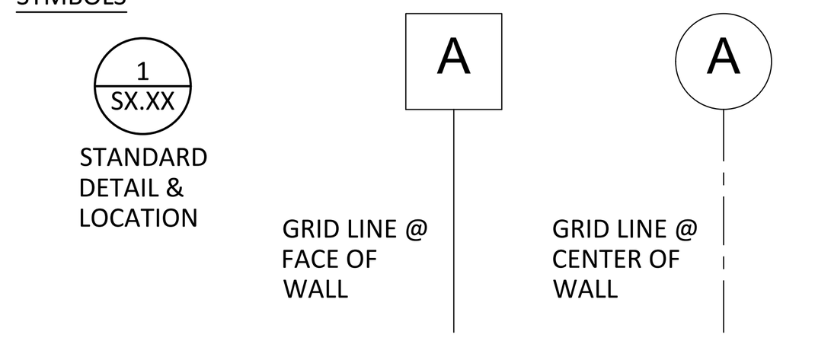

AGENCY APPROVAL:

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ISSUE

Δ	DESCRIPTION	DATE

RW CONSULTING Engineers Inc
1450 HARBOR BLVD SUITE F
WEST SACRAMENTO, CA 95691
916.716.6910

FACILITY:

LODI USD - VICTOR ELEMENTARY SCHOOL
17670 BRUELLA ROAD
LODI, CA 95240

PROJECT:

HVAC MODERNIZATION

SHEET NAME:

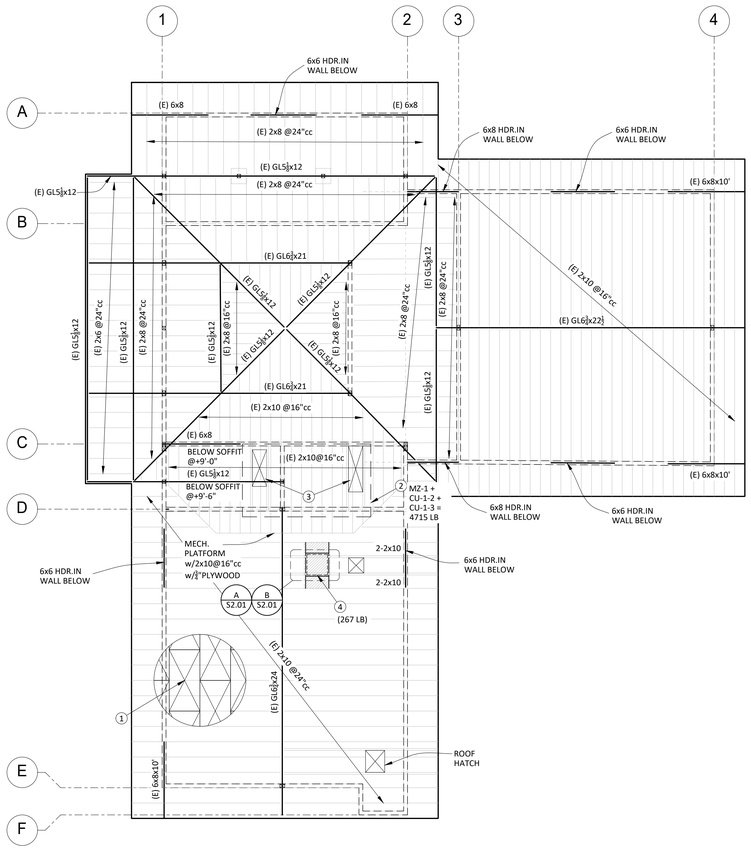
STRUCTURAL NOTES

CONSTRUCTION DOCUMENTS

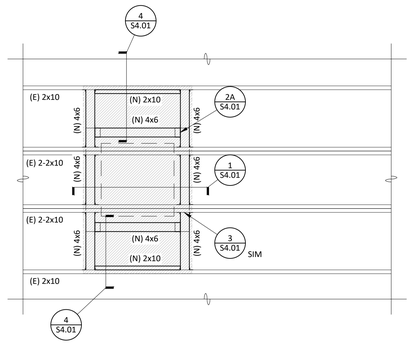
DATE: 10.03.2023

SHEET:

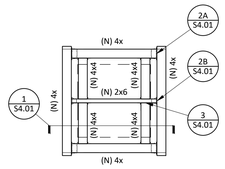
THE LINE SHOWN ABOVE IS EXACTLY 1" WHEN PRINTED FULL SHEET E (ORIGINAL SHEET SIZE)



STRUCTURAL PLAN
ADMIN - ROOF FRAMING
¼" = 1'-0"



PARTIAL FRAMING PLAN B
¾" = 1'-0"



NOTE: NEW 4x's ARE SHAPED PT LEVELING CURBS WITH 6" MIN DEPTH

PLATFORM FRAMING PLAN A
¾" = 1'-0"

STRUCTURAL PLAN NOTES:

1. CONTRACTOR SHALL COORDINATE ALL WORK CONTAINED HEREIN WITH ALL PROJECT WORK BY OTHERS INCLUDING CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL & PLUMPING.
2. STRUCTURAL SCOPE IS LIMITED TO MISCELLANEOUS FRAMING MODIFICATIONS TO ACCOMMODATE HVAC UPGRADES TO EACH BUILDING. ALL WORK PERFORMED IS TO NOT IMPACT EXISTING LATERAL FORCE RESISTING SYSTEM.
3. NEW MECHANICAL EQUIPMENT IS TO BE PLACED ON CURBS PER MECHANICAL DRAWINGS.
5. ALL NEW FRAMING REQUIRED IS TO BE INSTALLED FROM ABOVE THE ROOF DECK OR STRUCTURAL SHEATHING.
6. ALL DUCT DROP OPENINGS IN THE ROOF ARE EXISTING. NO NEW ROOF PENETRATIONS ARE TO BE CREATED WITHOUT PRIOR APPROVAL OF SEOR.
7. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AT LOCATION OF EQUIPMENT PRIOR TO COMMENCING WORK.

STRUCTURAL PLAN LEGEND:

EXISTING STUD WALL

EXISTING BEAM/GIRDER MEMBER

EXISTING JOIST/RAFTER MEMBER

NEW FRAMING MEMBER

NEW HVAC EQUIPMENT

EXTENT OF EXISTING SHEATHING TO BE REMOVED AND REPLACED WITH NEW 15/32" STRUCT 1 EXTERIOR GRADE - NAIL ALL EDGES w/ 8d @ 4"cc AND NAIL FIELD w/ 8d @ 12"cc

STRUCTURAL PLAN KEY NOTES:

1. EXISTING ½" PLYWOOD SHEATHING
2. NEW HVAC EQUIPMENT (TO REPLACE EXISTING EQUIPMENT) TO BE INSTALLED ON EXISTING CURB, WEIGHT INDICATED IN PARENTHESIS - SEE MECHANICAL DRAWINGS
3. EXISTING DUCT OPENINGS TO REMAIN
4. NEW HVAC EQUIPMENT (PLACED IN NEW LOCATION) TO BE INSTALLED ON NEW PLATFORM, WEIGHT INDICATED IN PARENTHESIS - SEE MECHANICAL DRAWINGS, A/S2.01 & B/S2.01

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REGISTERED PROFESSIONAL ENGINEER GREGORY T. RICHARDS S-4555 CIVIL STATE OF CALIFORNIA

10/2/2023

FACILITY:

LODI USD - VICTOR ELEMENTARY SCHOOL
17670 BRUELLA ROAD
LODI, CA 95240

PROJECT:

HVAC MODERNIZATION

SHEET NAME:

STRUCTURAL PLAN - ADMIN BUILDING

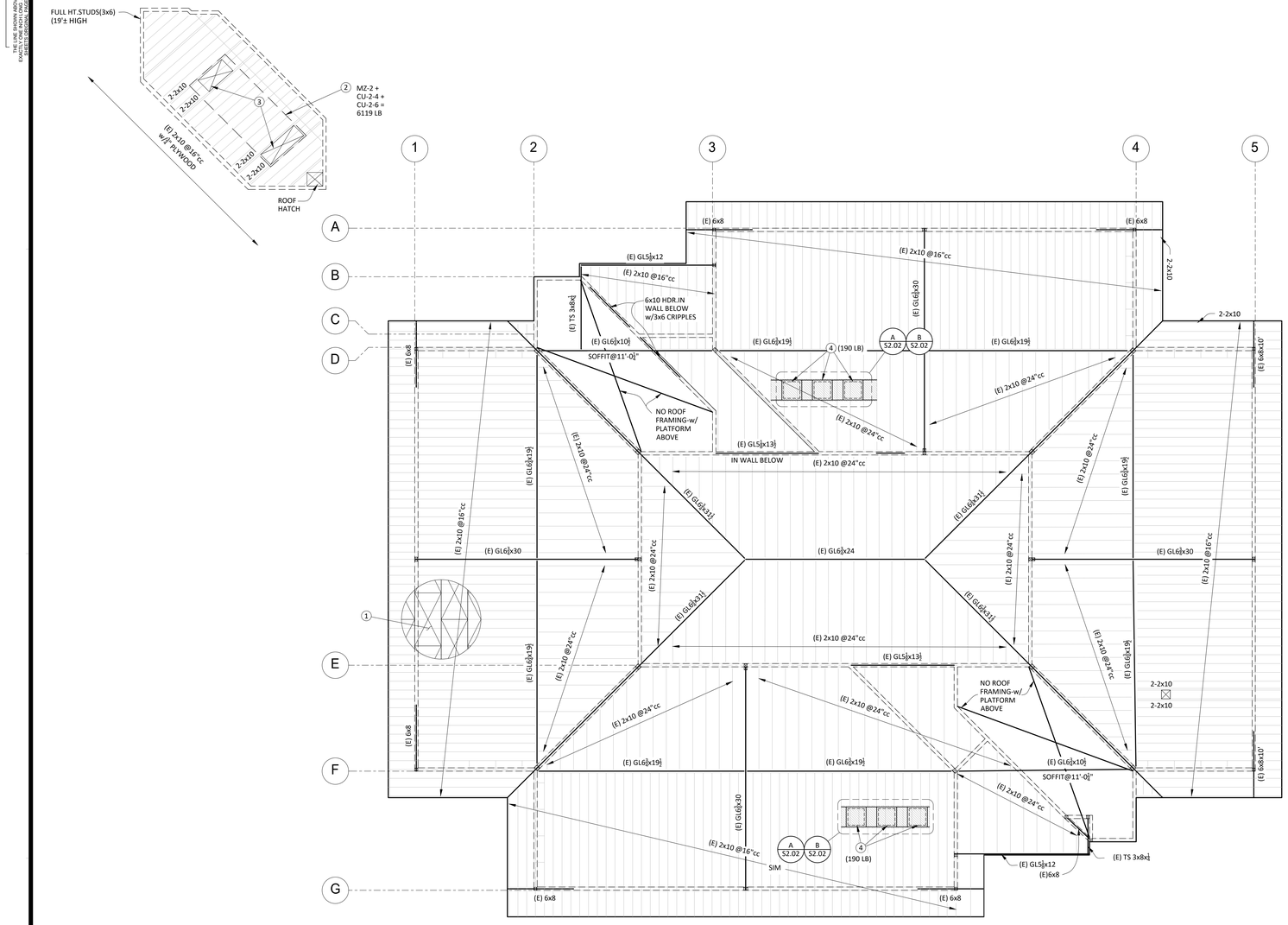
CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

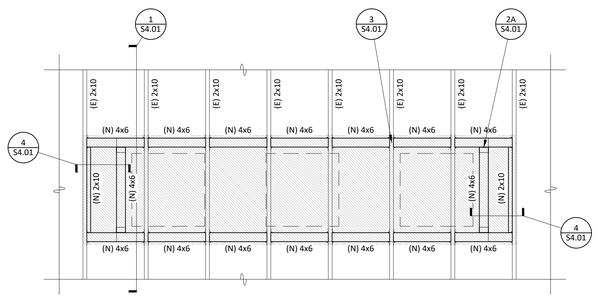
S2.01

PLEASE RECYCLE



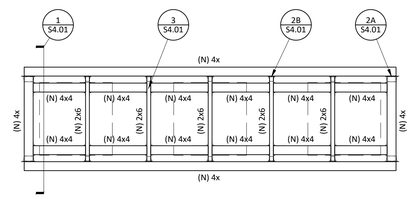
STRUCTURAL PLAN
CLASSROOM - ROOF FRAMING

1/8" = 1'-0"



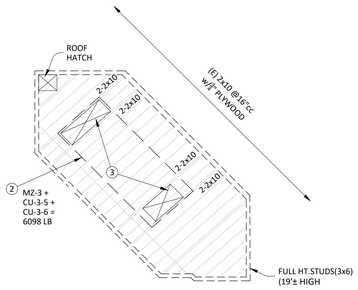
PARTIAL FRAMING PLAN B

1/4" = 1'-0"



PLATFORM FRAMING PLAN A

1/4" = 1'-0"



STRUCTURAL PLAN NOTES:

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3. NEW MECHANICAL EQUIPMENT IS TO BE PLACED ON CURBS PER MECHANICAL DRAWINGS.
5. ALL NEW FRAMING REQUIRED IS TO BE INSTALLED FROM ABOVE THE ROOF DECK OR STRUCTURAL SHEATHING.
6. ALL DUCT DROP OPENINGS IN THE ROOF ARE EXISTING. NO NEW ROOF PENETRATIONS ARE TO BE CREATED WITHOUT PRIOR APPROVAL OF SEOR.
7. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AT LOCATION OF EQUIPMENT PRIOR TO COMMENCING WORK.

STRUCTURAL PLAN LEGEND:

- EXISTING STUD WALL
- EXISTING BEAM/GIRDER MEMBER
- EXISTING JOIST/RAFTER MEMBER
- NEW FRAMING MEMBER
- NEW HVAC EQUIPMENT
- EXTENT OF EXISTING SHEATHING TO BE REMOVED AND REPLACED WITH NEW ½" STRUCT 1 EXTERIOR GRADE - NAIL ALL EDGES w/ 8d @ 4"cc AND NAIL FIELD w/ 8d @ 12"cc

STRUCTURAL PLAN KEY NOTES:

1. EXISTING ¾" PLYWOOD SHEATHING
2. NEW HVAC EQUIPMENT (TO REPLACE EXISTING EQUIPMENT) TO BE INSTALLED ON EXISTING CURB, WEIGHT INDICATED IN PARENTHESIS - SEE MECHANICAL DRAWINGS
3. EXISTING DUCT OPENINGS TO REMAIN
4. NEW HVAC EQUIPMENT (PLACED IN NEW LOCATION) TO BE INSTALLED ON NEW PLATFORM, WEIGHT INDICATED IN PARENTHESIS - SEE MECHANICAL DRAWINGS, A/S2.02 & B/S2.02

AGENCY APPROVAL:

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PROJECT:

HVAC MODERNIZATION

SHEET NAME:

STRUCTURAL PLAN - CLASSROOM BUILDING

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

S2.02

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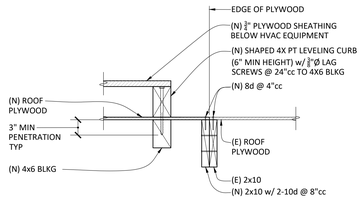
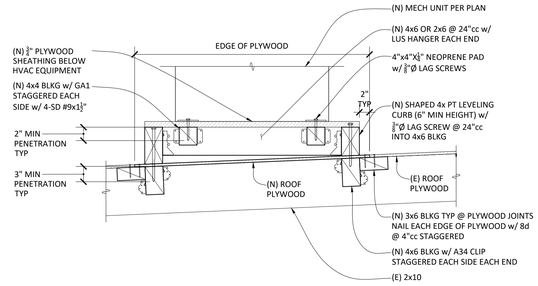
THE LINE BROKEN ABOVE IS EXACTLY 1" WHEN PRINTED AT THIS SHEET'S ORIGINAL IMAGE SIZE



FRAMED PLATFORM NOTES:

1. TOP OF PLATFORMS ARE TO BE SHEATHED WITH ¾" STRUCTURAL PLYWOOD - NAIL WITH 10d @ 6"cc ALONG ALL EDGES AND 12"cc WITHIN FIELD. NAIL TO ALL CROSS BLOCKING WITH 10d @ 6"cc. ALL EDGES ARE TO BE SUPPORTED ON FRAMING MEMBERS.
2. STRUCTURAL PLYWOOD TO IS TO BE EXTERIOR GRADE, EXPOSURE 1 PER APA DOC PS-1.

DETAIL 4
1½" = 1'-0"



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DETAIL 1
1½" = 1'-0"

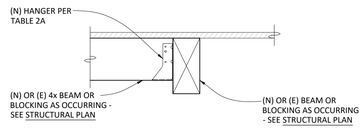


TABLE 2A

BRG SECTION	HANGER
4x6, 4x8	SIMPSON LUS46
4x10, 4x12	SIMPSON LUS410
4x14	SIMPSON LUS414

'A' CONDITION @ 4x FRAMING

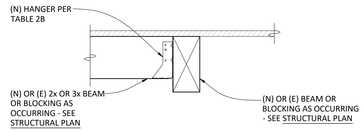
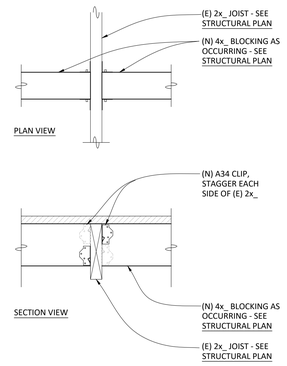


TABLE 2B

BRG SECTION	HANGER
2x6, 2x8	SIMPSON LUS26
2x10, 2x12, 2x14	SIMPSON LUS210
3x12	SIMPSON LUS310

'B' CONDITION @ 2x & 3x FRAMING

DETAIL 2
1½" = 1'-0"



THIS DETAIL IS TO BE USED WHERE NEW 4x_ MEMBERS ARE TO BE FRAMED INTO EXISTING JOIST

DETAIL 3
1½" = 1'-0"

PLEASE RECYCLE

AGENCY APPROVAL:

LODI USD

HMC ARCHITECTS

3431005-000

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ISSUE

Δ	DESCRIPTION	DATE

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REGISTERED PROFESSIONAL ENGINEER GREGORY T. RUSSMAN S-4555 CIVIL STATE OF CALIFORNIA

10/27/2023

FACILITY:

LODI USD - VICTOR ELEMENTARY SCHOOL
17670 BRUELLA ROAD
LODI, CA 95240

PROJECT:

HVAC MODERNIZATION

SHEET NAME:

DETAILS

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

S4.01

MECHANICAL GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, AND INDUSTRY STANDARDS.
2. VERIFY EXACT LOCATION OF ALL (E) EQUIPMENT, DUCTWORK, DIFFUSERS, REGISTERS, AND GRILLES. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN (E) SYSTEMS AND DRAWINGS.
3. COORDINATE EXACT LOCATION OF EQUIPMENT AND ALL PENETRATIONS THROUGH ROOF, FLOORS, AND WALLS WITH ARCHITECTURAL STRUCTURAL SYSTEMS PRIOR TO COMMENCING WORK.
4. COORDINATE EXACT SIZE AND ROUTING OF DUCTWORK WITH ARCHITECTURAL PLANS, STRUCTURE, AND EQUIPMENT PRIOR TO COMMENCING WORK.
5. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES.
6. FURNISH AND INSTALL MANUAL AIR DAMPERS AT ALL DUCT BRANCH TAKEOFFS TO A SINGLE SUPPLY DIFFUSER.
7. FLEXIBLE DUCTWORK CONNECTIONS TO CEILING DIFFUSERS ARE LIMITED TO 5' MAXIMUM LENGTH.
8. ALL DUCTWORK, CEILING DIFFUSERS/REGISTERS/GRILLES, EQUIPMENT, PIPING, ETC. ARE NEW U.O.N. (SHOWN HEAVY). (E) DUCTWORK, PIPING, ETC. IS SHOWN LIGHT. SEE LEGEND.
9. (E) DUCTWORK AND ITEMS TO BE REMOVED ARE SHOWN CROSSED ("X") OUT, SEE LEGEND. COORDINATE CLOSELY WITH (N) DUCTWORK AND P.O.C.'S SHOWN. ALL OTHER (E) DUCTWORK, ETC. TO REMAIN.
10. WHERE INLET DUCT DIAMETER AND DIFFUSER NECK SIZE ARE THE SAME (I.E. 9"ø AND 9x9) CONTRACTOR SHALL OVERSIZE THE SHEET METAL PLENUM TO ACCOMODATE THE ROUND DUCT CONNECTION.

MEP COMPONENT ANCHORAGE NOTE

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

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

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

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTION 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, & ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7,13.6.8, AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON PREPAPPROVED INSTALLATION GUIDE (E.G., SMACNA OR 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 REVORD 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-APPROVED (OPM #) #0043-13.

CALIFORNIA ENERGY CODE - ACCEPTANCE TESTING

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 A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).

MECHANICAL SYSTEM ACCEPTANCE TESTS 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 OF RECORD OR THE OWNER'S AGENT.

A LISTING OF CERTIFIED ATT CAN BE FOUND AT HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TEST-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE

THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR 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.

HVAC ABBREVIATIONS

SYMBOL	DESCRIPTION
ABC	ABOVE CEILING
ABV	ABOVE
ACC DR	ACCESS DOOR
ACC P	ACCESS PANEL
AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP, INCHES WATER COLUMN
ATV	ACOUSTIC TURNING VANE
BD	BALANCE DAMPER
BDD	BACK DRAFT DAMPER
BHP	BRAKE HORSE POWER
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CD	CONDENSATE DRAIN
CEF	CEILING EXHAUST FAN
CFM	CUBIC FEET OF AIR FLOW PER MINUTE
CLG	CEILING
CONC	CONCRETE
COND	CONDENSER
CONT	CONTINUATION
D	DAMPER
DIA	DIAMETER
DL	DOOR LOUVER
DN	DOWN
DB	DRY BULB
EA	EXHAUST AIR
EAD	EXHAUST AIR DAMPER
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
ELEC	ELECTRIC/ELECTRICAL
ENT	ENTERING
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EWB	ENTERING WET BULB
f	CUBIC FEET OF AIR FLOW PER MINUTE
F	DEGREES FAHRENHEIT
FA	FROM ABOVE
FB	FROM BELOW
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
FSD	FIRE AND SMOKE DAMPER
FT (')	FOOT OR FEET
FT^2	SQUARE FEET
GA	GAUGE
GALV	GALVANIZED
GI	GALVANIZED IRON
HDG	HEAVY DUTY GRILLE
HP	HORSE POWER
IN, (")	INCH
IN^2	SQUARE INCHES
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LDB	LEAVING DRY BULB
LRA	LOCKED ROTOR AMPS
LVR	LOUVER
LWB	LEAVING WET BULB
MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTUs PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
OA	OUTSIDE AIR
OAD	OUTSIDE AIR DAMPER
OH	OVERHEAD
OV	OUTLET VELOCITY
PD	PRESSURE DROP
PSI (G) (A)	POUNDS PER SQUARE INCH (GAUGE) (ABSOLUTE)
RA	RETURN AIR
RAD	RETURN AIR DAMPER
REF	ROOF EXHAUST FAN
RPM	REVOLUTIONS PER MINUTE
RLA	RATED LOAD AMPS
SA	SUPPLY AIR
SEER	SEASONAL ENERGY EFFICIENCY RATING
SF	SUPPLY FAN
SM	SHEET METAL
SP	STATIC PRESSURE
SPD	STATIC PRESSURE DROP
SQ FT	SQUARE FEET
SQ IN	SQUARE INCHES
SS	STAINLESS STEEL
STRUC	STRUCTURAL
TA	TO ABOVE
TB	TO BELOW
TEMP	TEMPERATURE
TP	TOTAL PRESSURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VD	VOLUME DAMPER
W	WATTS
WB	WET BULB
WMS	WIRE MESH SCREEN
WT	WEIGHT

SYMBOLS LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	---	BALL VALVE
	---	BOTTOM CONNECTION
BPT	BPT	BYPASS TIMER
	CBV	CALIBRATED BALANCE VALVE
DS	DS	DYNAMIC SENSOR
	---	ECCENTRIC REDUCER
	EJ	EXPANSION JOINT
F	FD	FIRE DAMPER
FS	FS	FIRE/SMOKE DAMPER
	---	FLEXIBLE CONNECTOR
	---	FLOW ARROW
H X	H	HUMIDISTAT
	---	LIMIT OF DEMOLITION
	---	PIPE BREAK
	---	PIPE CAP
	---	PIPE DOWN
	---	PIPE UP
	---	POINT OF CONNECTION
	---	REDUCER
SD	SD	SMOKE DAMPER
SD	SKD	SMOKE DETECTOR
TS X	TS	TEMPERATURE SENSOR
T X	T	THERMOSTAT

DUCT LEGEND

SINGLE LINE SYMBOL	DOUBLE LINE SYMBOL	DESCRIPTION
24x12	24x12	RECTANGULAR DUCT: WIDTH x DEPTH (PLAN VIEW) DEPTH x WIDTH (SECTION VIEW)
26x14L	26x14L	ACOUSTICALLY LINED RECTANGULAR DUCT - DIMENSIONS ARE OUTSIDE
		MANUAL AIR DAMPER
R or D	R or D	RISE OR DROP DUCT IN DIRECTION OF AIR FLOW
	OR	RECTANGULAR TO RECTANGULAR TRANSISTION OR ROUND TO ROUND TRANSITION, MAX. SLOPE OF 1:3
		RECTANGULAR TO ROUND TRANSITION, MAX. SLOPE OF 1:3
	W, R, R/W = 1.5	ELBOW, RECTANGULAR, SMOOTH RADIUS, WITHOUT TURNING VANES
		SQUARE/RECTANGULAR DUCT ELBOW WITH TURNING VANES
		CONVERGING OR DIVERGING TEE, 45° ENTRY, RECTANGULAR MAIN AND BRANCH. WHEN REDUCING MAIN, SIDE OF TAKE OFF OR ENTRY BRANCH TO BE FLAT, OTHER SIDES MAX. SLOPE OF 1:3
ROUND DUCT		ROUND DUCT TAKE OFF FROM RECTANGULAR VIA SMOOTH CONVERGING BELL MOUTH
		RECTANGULAR DUCT TEE MAD'S ON THE 2 BRANCHES, THROAT SIZED FOR EQUAL PRESSURE DROP
		RECTANGULAR DUCT SPLIT MAD'S, THROAT SIZED FOR EQUAL PRESSURE DROP
		FOR CONCEALED DUCT: DROP TO DIFFUSER SHALL BE FULL SIZE OF DIFFUSER NECK. FOR EXPOSED DUCT: DROP SHALL BE FULL SIZE OF OD DIFFUSER FRAME, FLANGE FOR MOUNTING DIFFUSER TURNED IN AIR EXTRACTOR AND EQUALIZER GRID AT CONNECTION TO MAIN.
		SUPPLY AIR, SUPPLY DROP/RISE
		RETURN AIR, RETURN AIR DROP/RISE
		EXHAUST AIR, EXHAUST AIR DROP/RISE
		FLEXIBLE DUCT (ROUND)

AGENCY APPROVAL:

REVIEWING AGENCIES STAMP HERE

EDIT THIS FAMILY, AND PLACE A PROJECT IMAGE HERE. IT WILL UPDATE ALL TITLEBLOCKS AUTOMATICALLY.

HMC Architects

3431-004-000

3546 CONCOURS STREET
ONTARIO, CA 91764
909 989 9979 / www.hmcarchitects.com

NOT FOR CONSTRUCTION

ISSUE

Δ	DESCRIPTION	DATE

KEYNOTES

NOTES

capital engineering
RANCHO CORDOVA, CALIFORNIA
XX - XX/XX/XX PM - DESIGN TEAM
230527.00 PROJECT NO.

REGISTERED PROFESSIONAL ENGINEER
KEVIN D. STILLMAN
M 33498
EXPIRES 9/30/24
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED:

KEY PLAN:

P3 P1 P2 A B

FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL LEGEND AND NOTES

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

M0.01

THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG. IF IT IS NOT, ADJUST DRAWING SCALE ACCORDINGLY

MULTI-ZONE UNIT SCHEDULE

EQUIPMENT TAG	"CME" CUSTOM MECHANICAL EQUIPMENT MODEL NO	QTY BUILDING ZONES	QTY UNIT ZONES	SUPPLY AIR (CFM)	MIN OA (CFM)	DX COOLING				TOTAL GAS LOAD					ELECTRICAL DATA		MCA	ELECTRICAL DATA	SEER (EER)	MOUNTING DETAIL	CONTROL DIAGRAM	OPER WT (LBS)	NOTES
						SENSIBLE CAPACITY	TOTAL COOLING CAP (MBH)	EAT		INPUT (MBH)		OUTPUT (MBH)		AFUE (%)	VOLT	PHASE		MOCP (AMPS)					
								EDB (F)	EWB (F)	LOW FIRE	HIGH FIRE	LOW FIRE	HIGH FIRE										
MZ-1	PMZ3-15GG41-XX	5	3	5740	889	132.2	174.5	80	67	171	264	165	255	96	460	3	41	45		1/M5.03	M6.04	4181	1, 2, 3, 4, 5, 6, 7, 8, 9
MZ-2	PMZ3-25GG41-XX	6	5	6630	966	146.0	194.7	80	67	285	440	275	425	96	460	3	55	60		1/M5.03	M6.05	5549	1, 2, 3, 4, 5, 6, 7, 8, 9
MZ-3	PMZ3-25GG41-XX	5	5	6130	938	157.4	204.2	80	67	285	440	275	425	96	460	3	54	60		1/M5.03	M6.06	5528	1, 2, 3, 4, 5, 6, 7, 8, 9

1. PROVIDE CONDENSING UNITS WITH OPTIMAL START TO PREVENT ALL CONDENSERS FROM STARTING SIMULTANEOUSLY.
2. (E) ROOF CURBS SHALL BE RE-USED.
3. ALL UNITS SHALL BE CONSTRUCTED FROM PRE-PAINTED MATERIAL. COLOR SHALL BE PER ARCHITECT.
4. UNITS SHALL BE CUSTOM BUILT/FITTED TO MATE DIRECTLY TO EXISTING ZONE DUCT AND RETURN DUCT CONNECTIONS.
5. UNIT OPERATING WEIGHT INCLUDES FURNACES AND CONDENSING UNITS.
6. PROVIDE WITH MANUFACTURER'S RELIEF FAN. FAN TO PROVIDE POWERED RELIEF DURING ECONOMIZER OPERATION. FAN, CONTROLS, AND WIRING SHALL BE BY UNIT MANUFACTURER.
7. MCA AND MOCP INCLUDE INTERIOR FURNACE UNITS AND EXTERIOR CONDENSING UNITS. THERE IS A SINGLE POINT OF CONNECTION.
8. PROVIDE UNITS WITH 2" THICK MERV 13 FILTERS.
9. DUCT SMOKE DETECTOR IS REQUIRED IN THE SUPPLY DUCTS, (ONE PER FURNACE ACCORDING TO 2022 CMC 608. DETECTOR TO SHUT DOWN UNIT UPON DETECTION OF PARTICLES OF COMBUSION AND SIGNAL THE FIRE ALARM SYSTEM.

FURNACE WITH DX COIL SCHEDULE

EQUIPMENT TAG	BUILDING ZONE	UNIT ZONE	"LENNOX" MODEL NO	CFM	MIN OA (CFM)	ESP (IN WG)	"LENNOX" COIL MODEL NO	COIL APD (IN WG)	GAS HEATING					ELECTRICAL DATA		MOTES
									INPUT (MBH)		OUTPUT (MBH)		AFUE (%)	FAN HP	VOLT	
									LOW FIRE	HIGH FIRE	LOW FIRE	HIGH FIRE				
F-1-2	3 & 5	2	EL296UH090XV60C	2000	305	0.8	76L14	0.24	57	88	55	85	96	1	120	1, 3
F-1-3	4	3	EL296UH090XV60C	1740	261	0.8	76L14	0.20	57	88	55	85	96	1	120	1, 3
F-1-4	1 & 2	4	EL296UH090XV60C	2000	323	0.8	76L14	0.25	57	88	55	85	96	1	120	1, 2
F-2-1	1	1	EL296UH090XV60C	1250	180	0.8	76L14	0.15	57	88	55	85	96	1	120	1, 3
F-2-3	5	3	EL296UH090XV60C	1130	170	0.8	76L14	0.13	57	88	55	85	96	1	120	1, 2
F-2-4	3	4	EL296UH090XV60C	1250	173	0.8	76L14	0.13	57	88	55	85	96	1	120	1, 3
F-2-5	2	5	EL296UH090XV60C	1250	180	0.8	76L14	0.15	57	88	55	85	96	1	120	1, 3
F-2-6	4 & 6	6	EL296UH090XV60C	1750	263	0.8	76L14	0.25	57	88	55	85	96	1	120	1, 2
F-3-2	3	2	EL296UH090XV60C	1250	180	0.8	76L14	0.15	57	88	55	85	96	1	120	1, 3
F-3-3	5	3	EL296UH090XV60C	1130	210	0.8	76L14	0.21	57	88	55	85	96	1	120	1, 2
F-3-4	1	4	EL296UH090XV60C	1250	180	0.8	76L14	0.15	57	88	55	85	96	1	120	1, 3
F-3-5	4	5	EL296UH090XV60C	1250	188	0.8	76L14	0.16	57	88	55	85	96	1	120	1, 3
F-3-6	2	6	EL296UH090XV60C	1250	180	0.8	76L14	0.15	57	88	55	85	96	1	120	1, 3

1. FURNACE IS AN INTEGRAL PART OF THE MULTI-ZONE UNIT.
2. INSTALL DUCT SMOKE DETECTOR IN SUPPLY AIR DUCT FOR AUTOMATIC SHUDOWN OF HVAC SYSTEM UPON SENSING SMOKE. PROVIDED, POWERED, AND INTERLOCKED WITH FIRE ALARM SYSTEM BY DIV. 26, INSTALLED AND CONNECTED TO FURNACE UNIT BY DIV. 23.
3. AUTOMATIC SHUTDOWN OF HVAC SYSTEM IS NOT REQUIRED PER 2019 CMC, SECTION 608.1, EXCEPTION 2: ALL ROOMS HAVE DIRECT EXIT TO OUTSIDE WITH TRAVEL DISTANCE LESS THAN 100 FEET.

CONDENSING UNIT - AIR COOLED SCHEDULE

EQUIPMENT TAG	"LENNOX" MODEL NO	UNIT ZONE	EVAP CFM	SENSIBLE COOLING CAP. (MBH)	TOTAL COOLING CAP. (MBH)	EVAP.		VOLT	PHASE	CONDENSER FAN FLA	COMPRESSOR		MCA	SEER	MOUNTING DETAIL	CONTROL DIAGRAM	OPER WT (LBS)	REMARKS
						EDB (F)	EWB (F)				LRA	RLA						
CU-1-2	ML14XC1-060-463	2	4550	0	0	80	67	460	3	1.0	60	7.8	10.7	0	2/M5.03	M6.04	267	1, 3, 4, 5, 6, 7
CU-1-3	ML14XC1-060-463	3	4550	0	0	80	67	460	3	1.0	60	7.8	10.7	0	4/M5.03	M6.04	267	1, 3, 4, 5, 6, 7
CU-1-4	ML14XC1-060-463	4	4550	0	0	80	67	460	3	1.0	60	7.8	10.8	0	4/M5.03	M6.04	267	2, 3, 4, 5, 6, 7
CU-2-1	ML14XC1-036-463	1	3160	0	0	80	67	460	3	0.6	38	5.8	7.8	0	4/M5.03	M6.05	190	2, 3, 4, 5, 6, 7
CU-2-3	ML14XC1-036-463	3	3160	0	0	80	67	460	3	0.6	38	5.8	7.8	0	4/M5.03	M6.05	190	2, 3, 4, 5, 6, 7
CU-2-4	ML14XC1-036-463	4	3160	0	0	80	67	460	3	0.6	38	5.8	7.8	0	2/M5.03	M6.05	190	1, 3, 4, 5, 6, 7
CU-2-5	ML14XC1-036-463	5	3160	0	0	80	67	460	3	0.6	38	5.8	7.8	0	4/M5.03	M6.05	190	2, 3, 4, 5, 6, 7
CU-2-6	ML14XC1-060-463	6	4550	0	0	80	67	460	3	1.0	60	7.8	10.7	0	2/M5.03	M6.05	267	1, 3, 4, 5, 6, 7
CU-3-2	ML14XC1-036-463	2	3160	0	0	80	67	460	3	0.6	38	5.8	7.8	0	4/M5.03	M6.06	190	2, 3, 4, 5, 6, 7
CU-3-3	ML14XC1-048-463	3	3600	0	0	80	67	460	3	0.9	60	7.1	8.5	0	2/M5.03	M6.06	218	1, 3, 4, 5, 6, 7
CU-3-4	ML14XC1-036-463	4	3160	0	0	80	67	460	3	0.6	38	5.8	7.8	0	4/M5.03	M6.06	190	2, 3, 4, 5, 6, 7
CU-3-5	ML14XC1-048-463	5	3600	0	0	80	67	460	3	0.9	60	7.1	8.5	0	2/M5.03	M6.06	218	1, 3, 4, 5, 6, 7
CU-3-6	ML14XC1-036-463	6	3160	0	0	80	67	460	3	0.6	38	5.8	7.8	0	4/M5.03	M6.06	190	2, 3, 4, 5, 6, 7

1. CONDENSING UNIT TO BE MOUNTED ON MULTI-ZONE UNIT CURB CAP/SUPPORT FRAME.
2. CONDENSING UNIT TO BE REMOTE MOUNTED ON THE ROOF. SEE PLAN FOR LOCATIONS.
3. CONDENSING UNIT INDIVIDUAL ELECTRICAL DATA IS INCLUDED IN THE MULTI-SONE UNIT MCA AND MOCP.
4. ELECTRICAL CONTRACTOR TO WIRE BETWEEN CONDENSER AND DISCONNECT LOCATED ON EXTERIOR OF MULTI-ZONE UNIT.
5. CONTROL CONTRACTOR TO WIRE BETWEEN CONDENSER AND CONTROL "J" BOX LOCATED ON EXTERIOR OF MULTI-ZONE UNIT.
6. REFRIGERANT: R-410a
7. CONTRACTOR TO RUN REFRIGERANT LINES BETWEEN CONDENSING UNIT AND STUBS AT MULTI-ZONE UNIT AND INSTALL SIGHT GLASS AT CONDENSING UNIT, PROVIDED BY UNIT MANUFACTURER.

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LICENSED ARCHITECT JEFFREY ALAN GRAU C-14648 8.31.2025 RENEWAL STATE OF CALIFORNIA

ISSUE

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KEYNOTES

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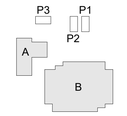
XX - XX/XX/XX PM - DESIGN TEAM | 230527.00 PROJECT NO.

DATE SIGNED:

KEY PLAN:



FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL SCHEDULES

CONSTRUCTION DOCUMENTS

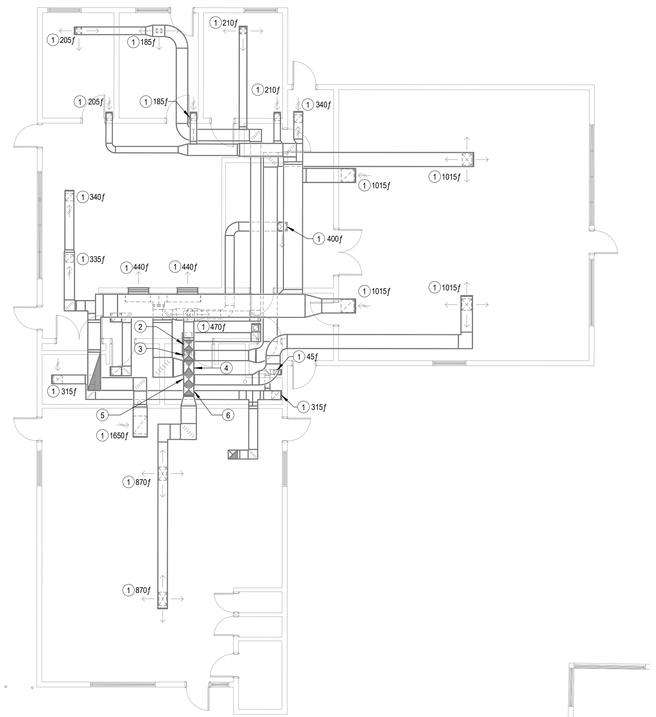
DATE: 10.03.2023

SHEET:

M0.02

KEYNOTES

1 SET DIFFUSER / GRILLE TO AIRFLOW NOTED.
2 (E) BUILDING ZONE 1.
3 (E) BUILDING ZONE 3.
4 (E) BUILDING ZONE 2.
5 (E) BUILDING ZONE 5.
6 (E) BUILDING ZONE 4.



1 M2.11A MECHANICAL FLOOR PLAN - ADMINISTRATION BLDG
SCALE: 1/8" = 1'-0"

AGENCY APPROVAL:

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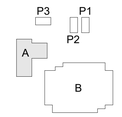
KEY PLAN:



FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL FLOOR PLAN - ADMINISTRATION BLDG

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

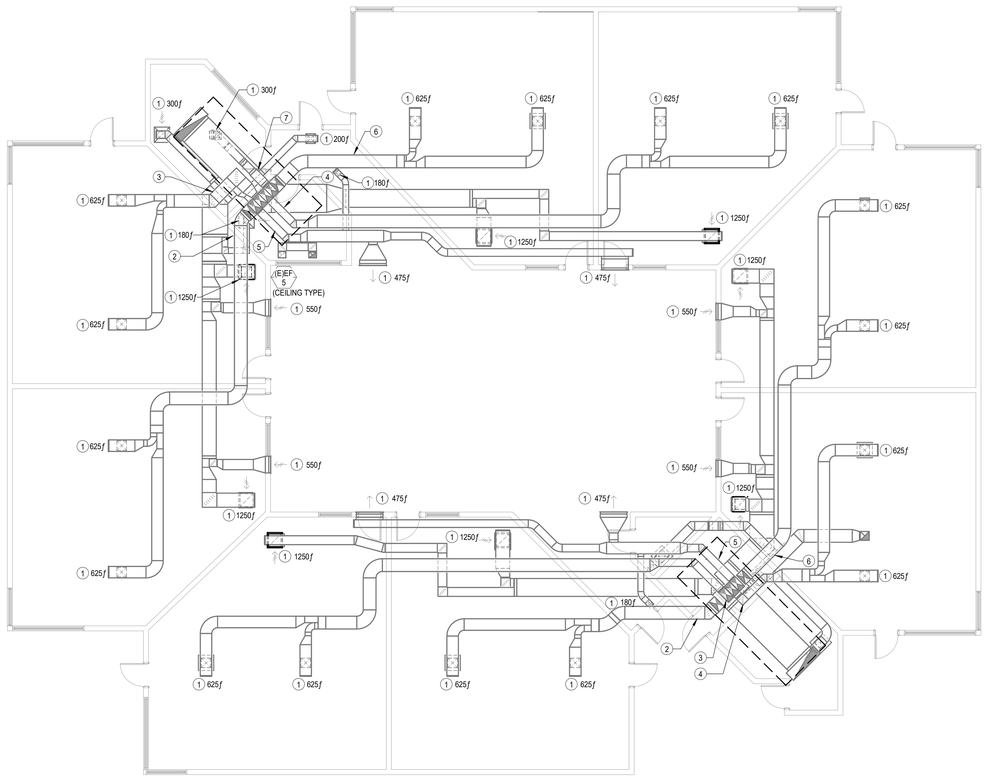
SHEET:

M2.11A

THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG ON ARCH D SHEETS ORIGINAL LARGE SCALE

KEYNOTES

1 SET DIFFUSER / GRILLE TO AIRFLOW NOTED.
2 (E) BUILDING ZONE 2.
3 (E) BUILDING ZONE 1.
4 (E) BUILDING ZONE 3.
5 (E) BUILDING ZONE 5.
6 (E) BUILDING ZONE 4.
7 (E) BUILDING ZONE 6.



1 M2.11B MECHANICAL FLOOR PLAN - CLASSROOM BLDG
SCALE: 1/8" = 1'-0"

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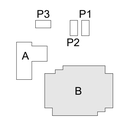
KEY PLAN:



FACILITY:

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STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL FLOOR PLAN - CLASSROOM BLDG

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

M2.11B

THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG ON ORIGINAL D SIZE SHEETS. IF NOT, ADJUST SCALE ACCORDINGLY

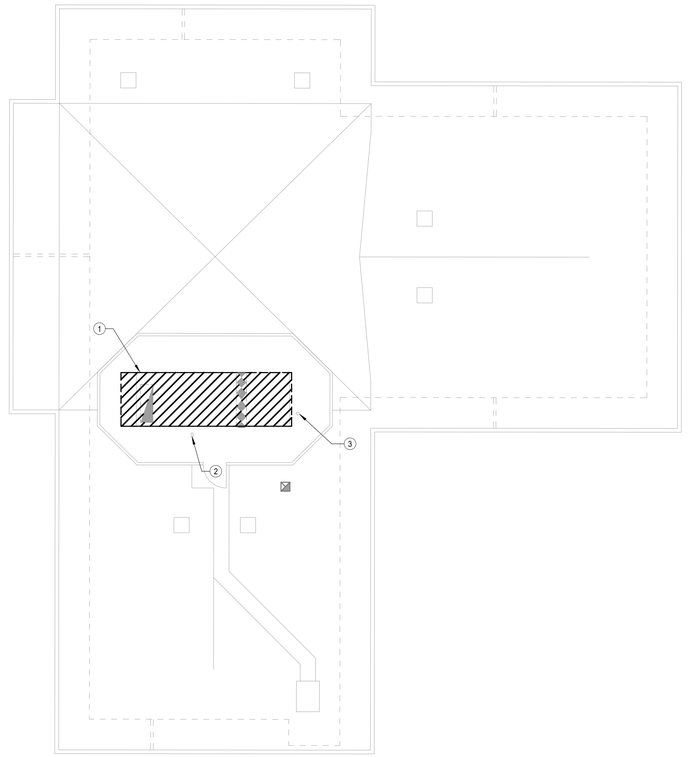
KEYNOTES

1 MULTI-ZONE UNIT TO BE REMOVED. ROOF CURB TO REMAIN. GAS PIPING, CONDENSATE PIPING, AND CONTROLS WIRING TO REMAIN.
2 2" G THOURH ROOF TO REMAIN.
3 1-1/2" CD THROUGH ROOF TO REMAIN.

DEMOLITION NOTES

BEFORE START OF MZ-UNIT DEMOLITION, REMOVE ALL EXISTING EMCS CONTROL COMPONENTS INCLUDING SENSORS, MAIN PANELS, THERMOSTATS, AND UNIT CONTROLLERS. PACKAGE IN BOXES WITH DESCRIPTIONS OF CONTENTS AND DELIVER TO:

LODI UNIFIED SCHOOL DISTRICT
ATTN: RYAN LANCASTER, LEAD CONSTRUCTION PROJECTS SPECIALIST
880 N. GUILD AVE.
LODI, CALIFORNICA 95240



1 M4.10A MECHANICAL ROOF DEMOLITION PLAN - ADMINISTRATION BLDG
SCALE: 1/8" = 1'-0"

AGENCY APPROVAL:

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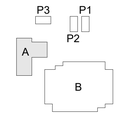
KEY PLAN:



FACILITY:

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PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL ROOF DEMOLITION PLAN - ADMINISTRATION BLDG

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

M4.10A

THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG ON ORIGINAL 24X36 SHEETS. IF NOT, ADJUST SCALE ACCORDINGLY

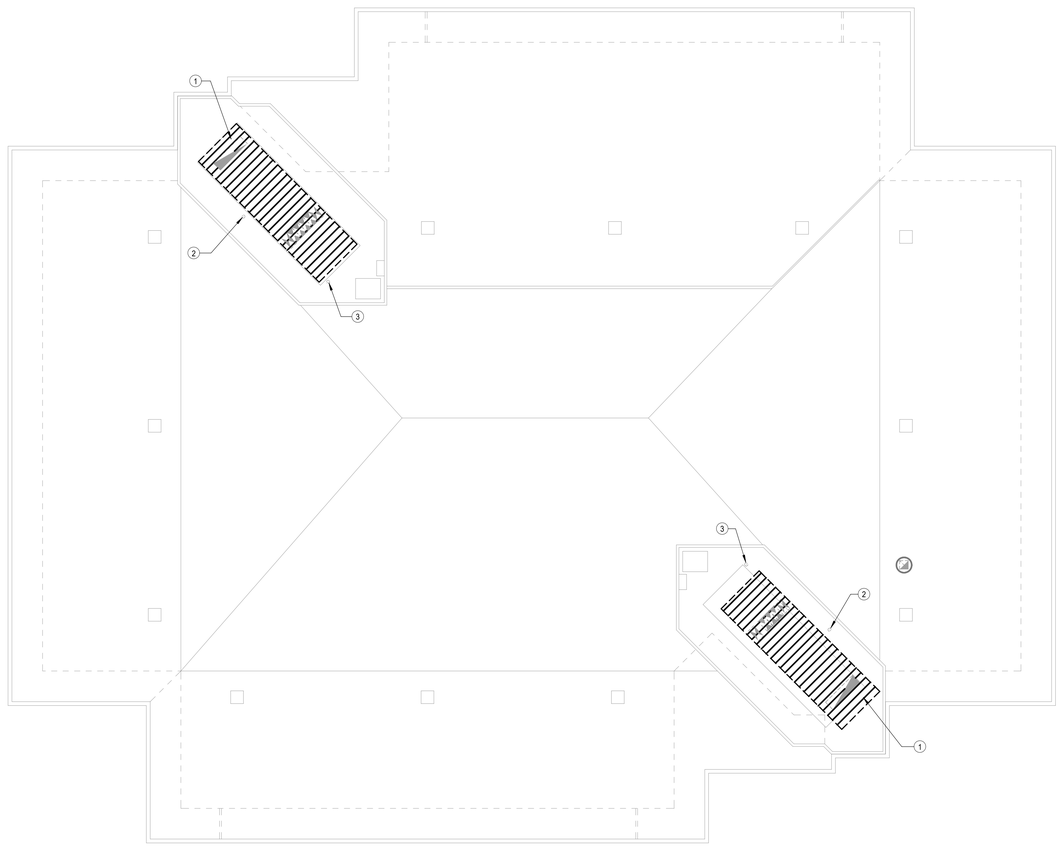
KEYNOTES

1 MULTI-ZONE UNIT TO BE REMOVED. ROOF CURB TO REMAIN. GAS PIPING, CONDENSATE PIPING, AND CONTROLS WIRING TO REMAIN.
2 2" G THOURH ROOF TO REMAIN.
3 1-1/2" CD THROUGH ROOF TO REMAIN.

DEMOLITION NOTES

BEFORE START OF MZ-UNIT DEMOLITION, REMOVE ALL EXISTING EMCS CONTROL COMPONENTS INCLUDING SENSORS, MAIN PANELS, THERMOSTATS, AND UNIT CONTROLLERS. PACKAGE IN BOXES WITH DESCRIPTIONS OF CONTENTS AND DELIVER TO:

LODI UNIFIED SCHOOL DISTRICT
ATTN: RYAN LANCASTER, LEAD CONSTRUCTION PROJECTS SPECIALIST
880 N. GUILD AVE.
LODI, CALIFORNICA 95240



1 / M4.10B MECHANICAL ROOF DEMOLITION PLAN - CLASSROOM BLDG
SCALE: 1/8" = 1'-0"

AGENCY APPROVAL:

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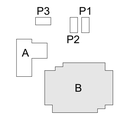
DATE SIGNED:

KEY PLAN:



FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL ROOF DEMOLITION PLAN - CLASSROOM BLDG

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

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M4.10B

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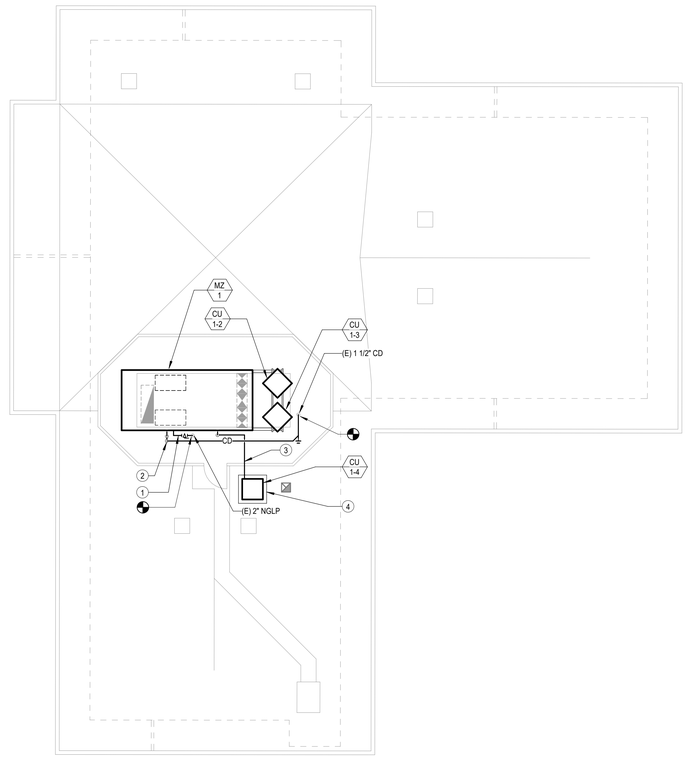
THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG ON ORIGINAL DRAWING. IF IT IS NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

KEYNOTES

1 2" G, CONNECT TO UNIT WITH SOV AND 6" DIRT LEG.
2 1-1/2" CD, CONNECT TO UNIT WITH MIN. 3" DEEP P-TRAP.
3 RS & RL PIPING, SEE CONDENSING UNIT SCHEDULE FOR SIZES, SEE DETAIL 5/M5.03 FOR SUPPORT.
4 CONDENSING UNIT SUPPORT PLATFORM, SEE DETAIL 4/M5.03.



1 M4.11A MECHANICAL ROOF PLAN - ADMINISTRATION BLDG
SCALE: 1/8" = 1'-0"

AGENCY APPROVAL:

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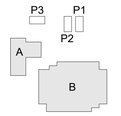

FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL ROOF PLAN - ADMINISTRATION BLDG

CONSTRUCTION DOCUMENTS

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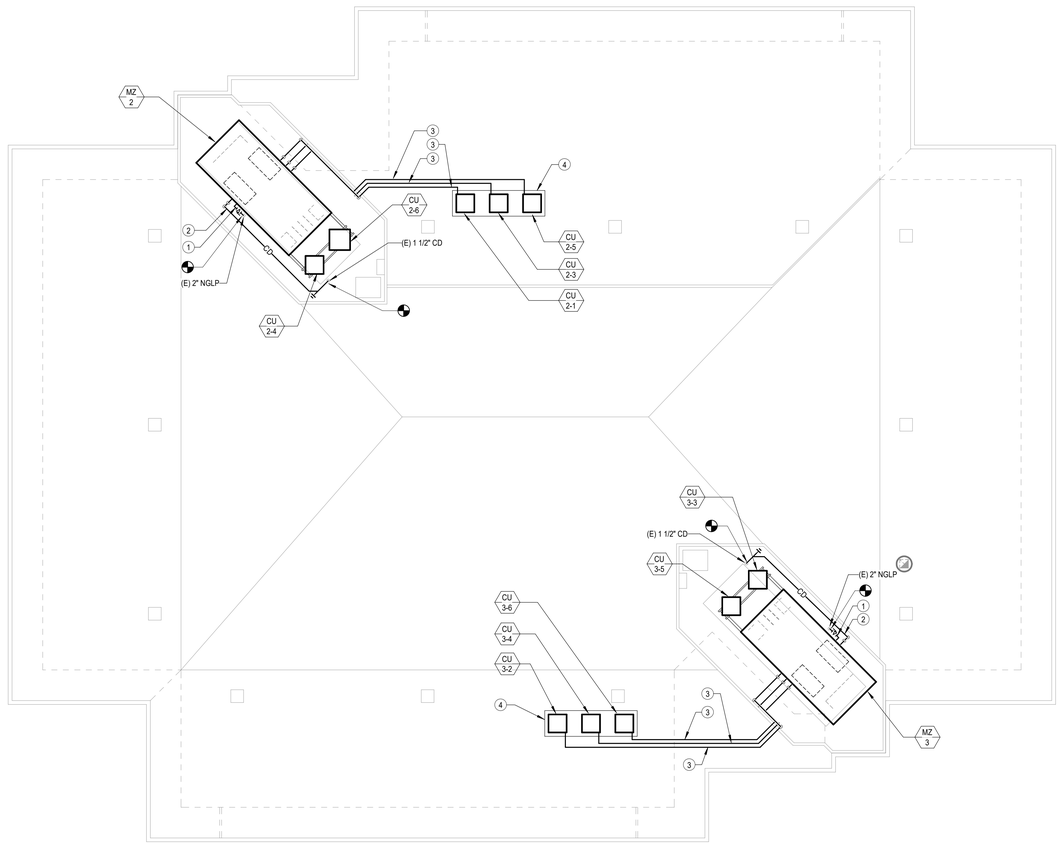
KEYNOTES

1 2" G, CONNECT TO UNIT WITH SOV AND 6" DIRT LEG.
2 1-1/2" CD, CONNECT TO UNIT WITH MIN. 3" DEEP P-TRAP.
3 RS & RL PIPING, SEE CONDENSING UNIT SCHEDULE FOR SIZES, SEE DETAIL 5/M5.03 FOR SUPPORT.
4 CONDENSING UNIT SUPPORT PLATFORM, SEE DETAIL 4/M5.03.



1 M4.11B MECHANICAL ROOF PLAN - CLASSROOM BLDG
SCALE: 1/8" = 1'-0"

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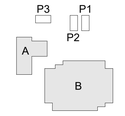
DATE SIGNED:

KEY PLAN:



FACILITY:

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STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL ROOF PLAN - CLASSROOM BLDG

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

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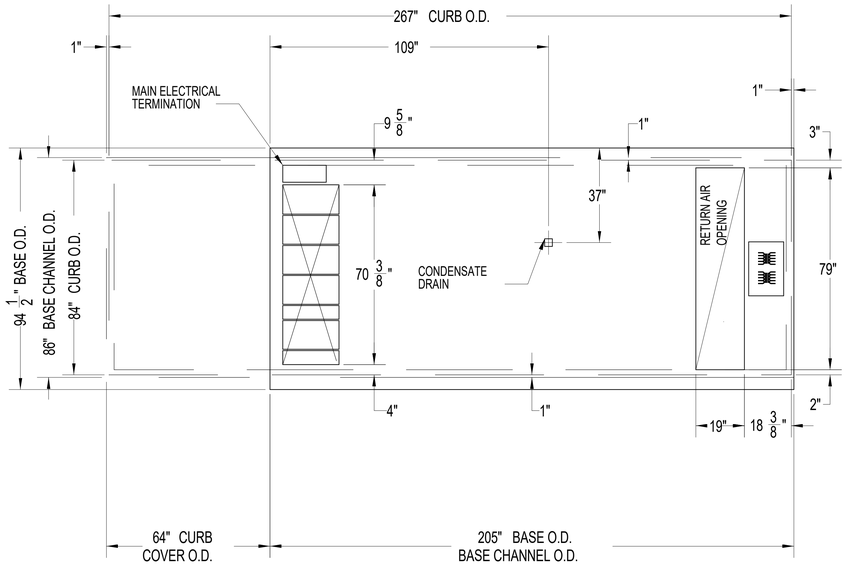
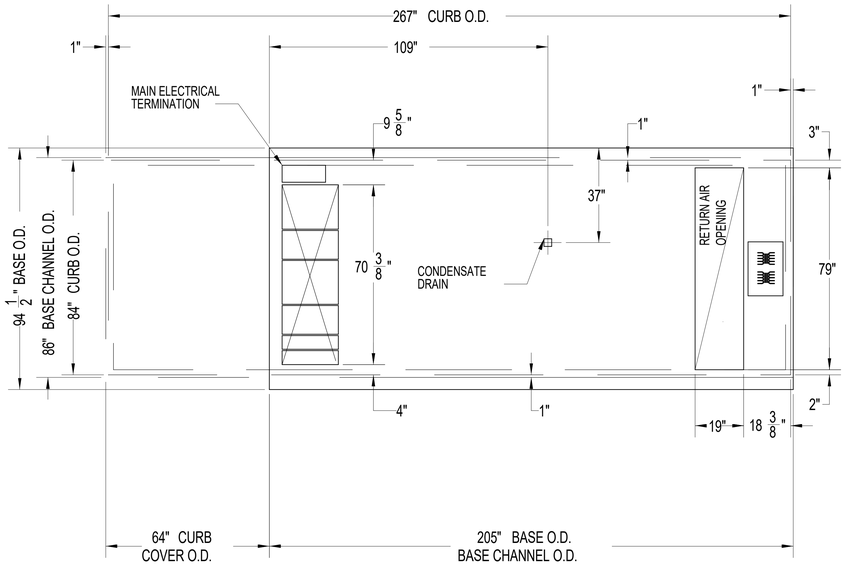


PMZ3 UNIT
EXISTING CURB
BASE CHANNEL

4 M5.01 MZ-2 CURB LAYOUT

SCALE: NONE



PMZ3 UNIT
EXISTING CURB
BASE CHANNEL

2 M5.01 MZ-1 CURB LAYOUT

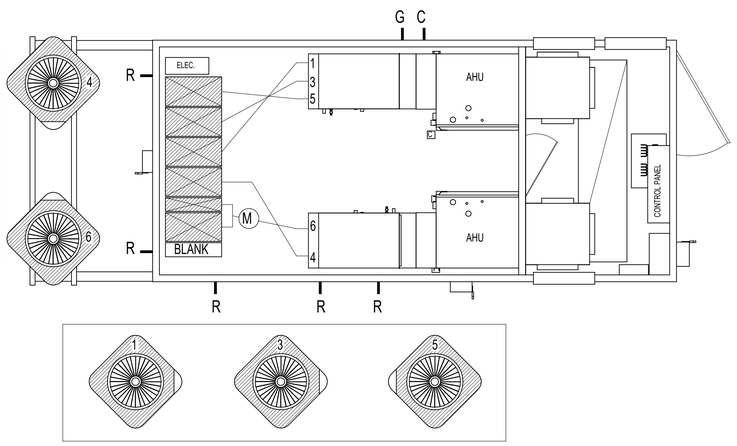
SCALE: NONE

Ⓜ MANUAL
Ⓢ SUBZONED
Ⓩ TRIZONED
Ⓣ TWINNED
Ⓡ TRIPLED

AHU LOCATIONS

1	2
3	4
5	6

FRNC ZONE	BLDG ROOM	SUPPLY CFM
5	CLASSROOM	1250
3	LIBRARY	1130
1	CLASSROOM	1250
4	CLASSROOM	1250
6	ENTRY/WORK	500
6	CLASSROOM	1250
	BLANK	



CONDENSERS TO BE REMOTE MOUNTED

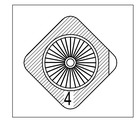
3 M5.01 MZ-2 COMPONENTS PLAN VIEW

SCALE: NONE

Ⓜ MANUAL
Ⓢ SUBZONED
Ⓩ TRIZONED
Ⓣ TWINNED
Ⓡ TRIPLED

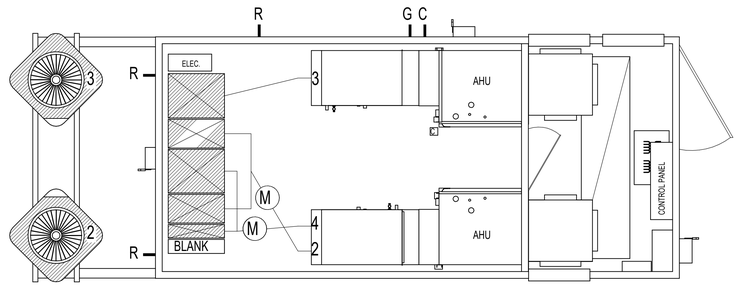
AHU LOCATINS

1	2
3	4



CONDENSER TO BE REMOTE MOUNTED

FRNC ZONE	BLDG ROOM	SUPPLY CFM
3	KINDERGARTEN	1740
2	MULTIPURPOSE	1015
4	RECEPTION	1650
2	MULTIPURPOSE	1015
4	OFFICES	500
	BLANK	



1 M5.01 MZ-1 COMPONENTS PLAN VIEW

SCALE: NONE

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ISSUE

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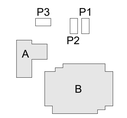
DATE SIGNED:

KEY PLAN:



FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

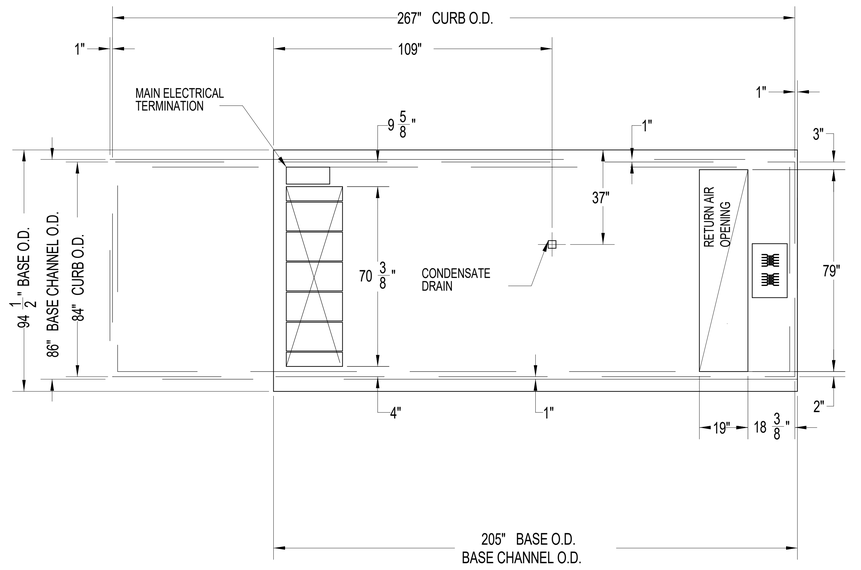
MECHANICAL MULTIZONE COMPONENTS AND CURBS

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

M5.01



PMZ3 UNIT
EXISTING CURB
BASE CHANNEL

2 M5.02 MZ-3 CURB LAYOUT

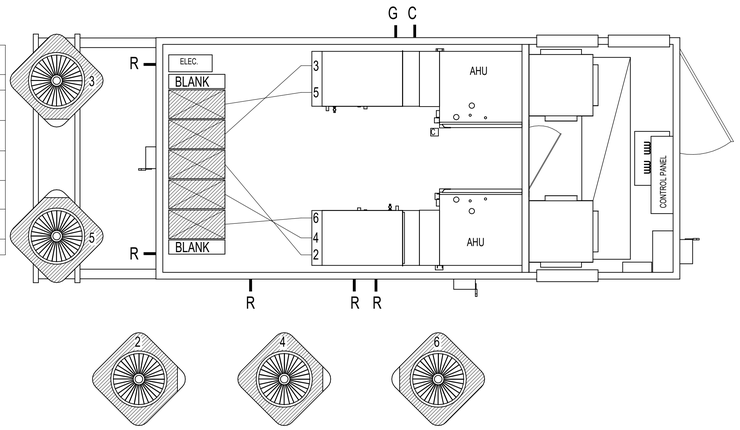
SCALE: NONE

(M) MANUAL
(S) SUBZONED
(Z) TRIZONED
(T) TWINNED
(R) TRIPLED

AHU LOCATIONS

1	2
3	4
5	6

FRNC ZONE	BLDG ROOM	SUPPLY CFM
	BLANK	
5	CLASSROOM	1250
3	LIBRARY	1130
2	CLASSROOM	1250
4	CLASSROOM	1250
6	CLASSROOM	1250
	BLANK	



1 M5.02 MZ-3 COMPONENTS PLAN VIEW

SCALE: NONE

AGENCY APPROVAL:

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LODI USD

HMC ARCHITECTS
3431005-000
2101 CAPITOL AVENUE, SUITE 100
SACRAMENTO, CA 95816
916 325 1100 / www.hmcarchitects.com

LICENSED ARCHITECT JEFFREY ALAN GRAU C-14648 8/31/2025 STATE OF CALIFORNIA

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KEYNOTES

NOTES

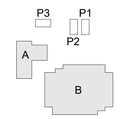
capital engineering
RANCHO CORDOVA, CALIFORNIA

XX - XX/XX/XX PM - DESIGN TEAM | 230527.00 PROJECT NO.

REGISTERED PROFESSIONAL ENGINEER KEVIN D. STILLMAN M 33498 EXPIRES 9/30/24 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED:

KEY PLAN:



FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

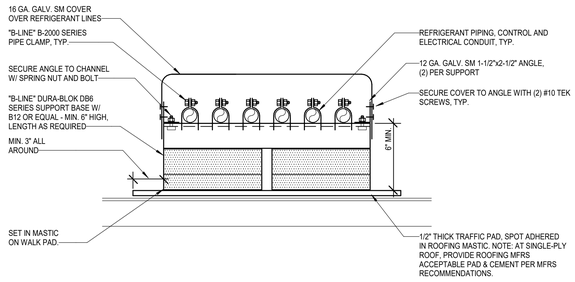
MECHANICAL MULTIZONE COMPONENTS AND CURBS

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

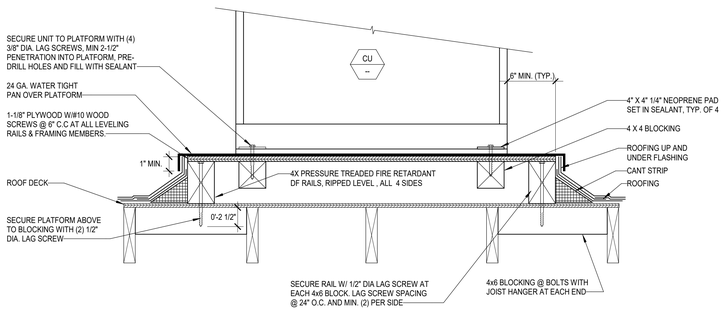
SHEET:

M5.02



5 / M5.03 PIPE SUPPORT ON ROOF - COVERED

SCALE: NONE

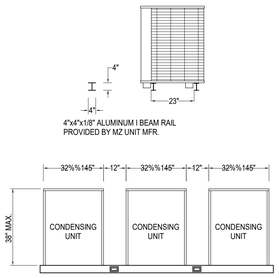


NOTES:

1. MIN. 24" BETWEEN CONDENSING UNITS ON PLATFORM. CO-ORDINATE PLATFORM SIZE AND LOCATION WITH CLEARANCE REQUIREMENTS OF CONDENSING UNITS.
2. ALL ROOF FRAMING SUPPORT WORK TO BE PERFORMED FROM OUTSIDE THE BUILDING ENVELOPE. ADDITION OF BLOCKING TO BE ACHIEVED BY REMOVING ROOFING AND ROOF SHEATHING INSTALLING BLOCKING AND REINSTALLING SHEATHING AND ROOFING TO MATCH EXISTING. COORDINATE THE ROOFING WITH ARCHITECTURAL PLANS.

4 / M5.03 CU SUPPORT AT PLATFORM

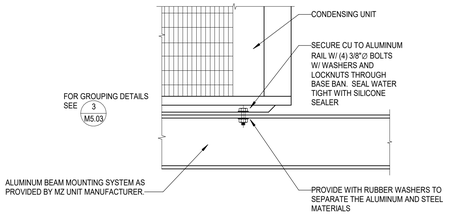
SCALE: NONE



NOTES:
1. NUMBER AND TYPE AS SHOWN ON MECH FLOOR PLANS

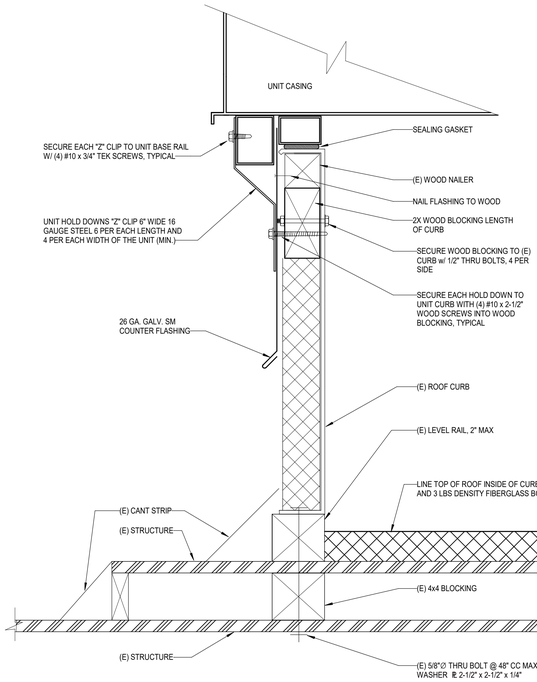
3 / M5.03 CU SUPPORT RAIL

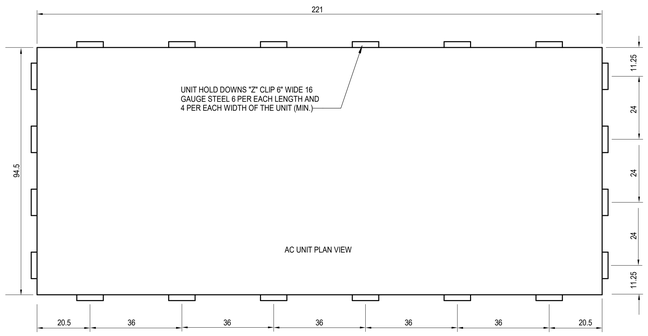
SCALE: NONE



2 / M5.03 CU SUPPORT AT ALUMINUM BEAM

SCALE: NONE





NOTES:
1. PRIOR TO COMMENCEMENT OF WORK, FIELD VERIFY ALL CONDITIONS INCLUDING DIMENSIONS OF EXISTING CURBS, STRUCTURAL ELEMENTS ETC.

1 / M5.03 MZ UNIT TO CURB

SCALE: NONE

AGENCY APPROVAL:

REVIEWING AGENCIES STAMP HERE

EDIT THIS FAMILY, AND PLACE A PROJECT IMAGE, HERE. IT WILL UPDATE ALL TITLEBLOCKS AUTOMATICALLY.

HMC Architects

3431-004-000

3546 CONCOURS STREET
ONTARIO, CA 91764
909 989 9979 / www.hmcarchitects.com

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KEYNOTES

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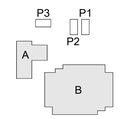
capital engineering
RANCHO CORDOVA, CALIFORNIA
XX - XX/XX/XX PM - DESIGN TEAM
230527.00 PROJECT NO.

REGISTERED PROFESSIONAL ENGINEER
KEVIN D. STITTLEMAN
M 33498
EXPIRES 9/30/24
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED:

KEY PLAN:



FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL DETAILS

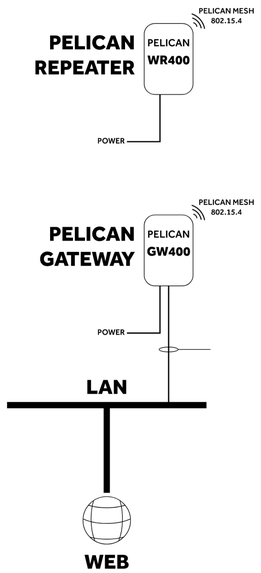
CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

M5.03

THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG ON ORIGINAL DRAWINGS. IF NOT ADJUST SCALES ACCORDINGLY



NETWORK DEVICE PLACEMENT

NETWORK COMMUNICATION

COMMUNICATION SHALL BE ESTABLISHED ACROSS THE CAMPUS OVER PELICAN'S WIRELESS MESH NETWORK.

A SINGLE (1) PELICAN GATEWAY SHALL BE INSTALLED AT THE CAMPUS, UNLESS ADVISED OTHERWISE BY PELICAN TECHNICAL SUPPORT. GATEWAY SHALL BE INSTALLED CENTRAL TO CAMPUS LAYOUT AS SHOWN IN DIAGRAM TO THE RIGHT. CONTROLS CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH DISTRICT INTERNET TECHNOLOGIES DEPARTMENT TO BE PROVIDED AN AVAILABLE ETHERNET PORT AT REQUIRED LOCATION. CONTROLS CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH DISTRICT TO BE PROVIDED AN AVAILABLE AND SECURE 120VAC POWER CONNECTION. IF DISTRICT ALREADY HAS A GATEWAY INSTALLED AT CAMPUS, GATEWAY SHALL BE RE-LOCATED TO NEW LOCATION. DO NOT INSTALL GATEWAYS ON NETWORK RACKS OR NEXT TO OTHER NETWORK OR WIRELESS EQUIPMENT.

A MINIMUM OF (2) PELICAN REPEATERS SHALL BE INSTALLED AT THE CAMPUS, UNLESS ADVICES OTHERWISE BY PELICAN TECHNICAL SUPPORT. EACH REPEATER SHALL BE INSTALLED IN AN AREA AS SHOWN ON DIAGRAM TO THE RIGHT TO BRIDGE COMMUNICATION BETWEEN BUILDINGS. CONTROLS CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH DISTRICT TO BE PROVIDED AN AVAILABLE AND SECURE 120VAC POWER CONNECTION AT EACH REPEATER LOCATION. REPEATER SHALL BE INSTALLED IN A LOCATION WHERE SOMEONE CANNOT ACCESS. DO NOT INSTALL REPEATERS ON NETWORK RACKS OR NEXT TO OTHER NETWORK OR WIRELESS EQUIPMENT. ADDITIONAL REPEATERS SHALL BE INSTALLED, IF NEEDED, TO BRIDGE THE ENTIRE CAMPUS INTO THE PELICAN WIRELESS MESH NETWORK.

ALL OTHER PELICAN DEVICES SHALL BE WIRELESS REPEATERS IN THE WIRELESS NETWORK (NOT SHOWN IN NETWORK DIAGRAM TO THE RIGHT.

CONTROLS CONTRACTOR IS RESPONSIBLE TO WORK WITH PELICAN TECHNICAL SUPPORT TO ESTABLISH BEST PRACTICES WHEN IT COMES TO NETWORK ESTABLISHMENT.

PELICAN	GW400	PELICAN ETHERNET GATEWAY	1
PELICAN	WR400	PELICAN REPEATER	2

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RANCHO CORDOVA, CALIFORNIA

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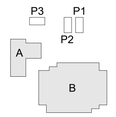


FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL CONTROLS

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

M6.01

PLEASE RECYCLE

C:\Users\bvogt.CAPSAC\OneDrive - Capital\Documents\230527_Victor ES MZ_MP22_Central_bvogt@capital-engineering.com.rvt
9/20/2023 8:42:19 AM

ALL NOTES APPLY

NOTE 1: DEVICE WILL REQUIRE POWER FROM AN UNINTERRUPTED 120V POWER SOURCE.

NOTE 2: INSTALL IN A LOCATION THAT IS HIGH ON THE WALL WITH THE ANTENNA POINTED STRAIGHT UP.

NOTE 3: LINE OF SITE TO PELICAN DEVICES FROM THE GATEWAY ARE NOT TO BE OBSTRUCTED BY ANY SOLID METAL STRUCTURE, BUNDLE OF WIRING, OR METAL PIPING.

NOTE 4: DO NOT PLACE WITHIN 10 FEET OF ANY OTHER WIRELESS EMITTING DEVICE OR HIGH VOLTAGE SOURCE OR DEVICE SUCH AS TRANSFORMERS, MOTORS, VFDs, OR SWITCHGEAR.

NOTE 5: LOCATE IN SUCH A LOCATION THAT IT CAN REACH THE LTE NETWORK OUTSIDE THE STRUCTURE.

Internet

The Pelican Repeater extends the Pelican Network signal.

CONTROLS WIRING SCHEMATIC

SEQUENCE OF OPERATION

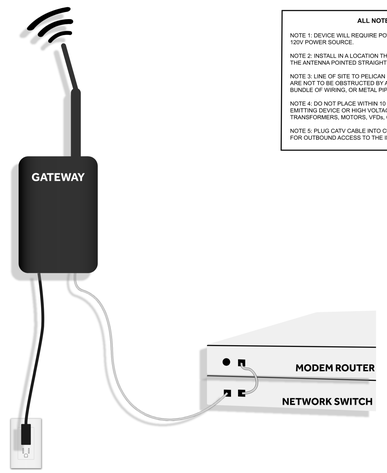
THE PELICAN REPEATER COMMUNICATES THE PELICAN WIRELESS NETWORK UTILIZING IEEE STANDARD 802.15.4 AT 2.48GHZ LOCALLY WITH ALL PELICAN DEVICES AND CONNECTS THEM TO THE PELICAN CLOUD OVER AN ENCRYPTED VLAN CONNECTION THROUGH OUTBOUND ONLY FIREWALL PORTS. THERE IS NO PUBLIC IP ASSIGNED AND MAPPED TO ANY INTERNAL CUSTOMER LOCATION.

CONFIGURATIONS

Configuration with Pelican WebApp: Go to – ADMIN > NETWORK MAP> and select the correct serial number.

Put the building and room number as the name. e.g. BLDG1RM201, or BLDG76RM400

NOTE: IF YOU HAVE ANY TROUBLE WITH THIS STEP PLEASE CONTACT PELICAN WIRELESS SUPPORT AT support@pelicanwireless.com or 888-512-0490 Opt 2.



ALL NOTES APPLY

NOTE 1: DEVICE WILL REQUIRE POWER FROM AN UNINTERRUPTED 120V POWER SOURCE.

NOTE 2: INSTALL IN A LOCATION THAT IS HIGH ON THE WALL WITH THE ANTENNA POINTED STRAIGHT UP.

NOTE 3: LINE OF SITE TO PELICAN DEVICES FROM THE GATEWAY ARE NOT TO BE OBSTRUCTED BY ANY SOLID METAL STRUCTURE, BUNDLE OF WIRING, OR METAL PIPING.

NOTE 4: DO NOT PLACE WITHIN 10 FEET OF ANY OTHER WIRELESS EMITTING DEVICE OR HIGH VOLTAGE SOURCE OR DEVICE SUCH AS TRANSFORMERS, MOTORS, VFDs, OR SWITCHGEAR.

NOTE 5: PLUG CATV CABLE INTO CUSTOMERS INTERNET SWITCH FOR OUTBOUND ACCESS TO THE INTERNET.

Internet

The Pelican Gateway connects to your network router or switch. It recieves a DHCP IP address (static IP is optional) and will establish an Outbound connection to your Pelican App.

CONTROLS WIRING SCHEMATIC

SEQUENCE OF OPERATION

THE PELICAN GATEWAY COMMUNICATES THE PELICAN WIRELESS NETWORK UTILIZING IEEE STANDARD 802.15.4 AT 2.48GHZ LOCALLY WITH ALL PELICAN DEVICES AND CONNECTS THEM TO THE PELICAN CLOUD OVER AN ENCRYPTED VLAN CONNECTION THROUGH OUTBOUND ONLY FIREWALL PORTS. THERE IS NO PUBLIC IP ASSIGNED AND MAPPED TO ANY INTERNAL CUSTOMER LOCATION.

THE GATEWAY IS CONFIGURED TO RECEIVE A LOCAL ADDRESS VIA DHCP. IT CAN BE GIVEN A STATIC ADDRESS AFTER IT IS CONNECTED TO THE PELICAN CLOUD.

CONFIGURATIONS

CONFIGURE THE GATEWAY FOR A NEW SITE: GO TO WWW.PELICANWIRELESS.COM > NEW SITE SETUP

STEP 1 - ENTER THE GATEWAY SERIAL NUMBER

STEP 2 - ENTER THE DESIRED NAME OF THE SITE WITH NO SPACES. LETTERS, NUMBERS, DASH, AND UNDERSCORE ARE ACCEPTABLE. THE NAME IS NOT CASE SENSITIVE, (IF THE NAME IS ALREADY IN USED YOU WILL BE NOTIFIED.)

STEP 3 - ENTER YOUR EMAIL ADDRESS AS THE ADMINISTRATOR. (YOU CAN ADD AS MANY ADMINISTRATORS AND USERS LATER AS WELL AS REMOVE YOURSELF IF YOU CHOOSE.)

STEP 4 - ENTER THE ZIP CODE OF THE LOCATION WHERE YOU ARE INSTALLING.

STEP 5 - VERIFY THAT THE INFORMATION, ESPECIALLY THE EMAIL ADDRESS, IS CORRECT AND CLICK SUBMIT.

STEP 6 - FROM THE AUTO GENERATED EMAIL (POSSIBLY IN YOUR SPAM FOLDER) LOGIN TO THE SITE.

CONFIGURE THE GATEWAY ON AN EXISTING SITE: GO TO THE SITE NAME OF THE EXISTING SITE.

STEP 1 - LOGIN TO THE SITE

STEP 2 - CLICK ON ADMIN

STEP 3 - CLICK ON SITE SETTINGS

STEP 4 - CLICK ON GATEWAYS

STEP 5 - CLICK THE "+"

STEP 6 - ENTER THE NEW GATEWAY SERIAL NUMBER.

STEP 7 - CLICK ON THAT GATEWAY AND ENTER THE NAME OF THE ROOM IT IS LOCATED IN.

NOTE: IF YOU HAVE ANY TROUBLE WITH THIS STEP PLEASE CONTACT PELICAN WIRELESS SUPPORT AT support@pelicanwireless.com or 888-512-0490 Opt 2.

AGENCY APPROVAL:

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3431005-000

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LICENSED ARCHITECT — JEFFREY ALAN GRAU — C-14648 — 8/31/2025 RENEWAL DATE — STATE OF CALIFORNIA

ISSUE

Δ	DESCRIPTION	DATE

KEYNOTES

NOTES

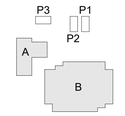
capital engineering
RANCHO CORDOVA, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — KEVIN D. STYLEMAN — M 33498 — EXPIRES 9/30/24 — MECHANICAL — STATE OF CALIFORNIA

XX - XX/XX/XX — PM - DESIGN TEAM
230527.00 — PROJECT NO.

DATE SIGNED:

KEY PLAN:



FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL CONTROLS

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

M6.02

THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG ON ANSI D SIZED ORIGINAL DRAWINGS

SYSTEM CONFIGURATIONS

SINGLE THERMOSTAT SYSTEMS

Configuration with Pelican WebApp: Go to – ADMIN > THERMOSTAT CONFIGURATION > and select the correct serial number.

Thermostat Setup Page:
Name: ** This is the room name that the stat is located in.
Group: ** Set as instructed by the CUSTOMER.
Description: The first line should be the RTU Number + Zone Number. e.g., RTU1-Z4, or RTU13-Z1-2

Thermostat Settings
System Type: Conventional
Heat Stages: 2
Cool Stages: 1
Fan Stages: 1 (this will show "1- variable" later)
Heat Needs Fan: Yes

Temperature Settings
Heat Range: 56° to 72°
Cool Range: 68° to 86°
CO2 Ventilation: 800ppm

Thermostat Operation
Please leave these as shown

Economizer = On
Note that you should run the "Economizer test and calibration function first to verify operation of the economizer damper. Damper open and closed positions will be recorded automatically.
Auto Configure: No
Minimum Damper Position: 10%*
Maximum Ventilation Position: 100%*

Variable Speed Fan = On
Cooling Fan Speed: 100%*
Heating Fan Speed: 50%*
Heating Fan Speed – Stage 2: 80%*
Ventilation Fan Speed: 40% *

Input Sensor T1 = On
Function: Supply Temperature
Cool Safe Range: 40° to 85°
Heat Safe Range: 50° to 165°

Input Sensor T2 = On
Function: Alarm
Label: Fan Status
Alarm Active Indication: Open*
Alarm Enabled: During Fan

Input Sensor T3 = On
Function: Outside Temperature

Wired Sensor
Function: Supply Temperature
Cool Safe Range: 40° to 85°
Heat Safe Range: 50° to 165°

Notification Settings
Sensitivity: Custom
Setpoint Deviation: 5°
Notify if Unreachable: Yes
Safe Range: 35° to 95°
CO2 Warning Level: 1800ppm

BUILDING STATIC COORDINATOR SETTINGS

Configuration with Pelican WebApp: Go to – ADMIN > ZONE CONTROLLER > and select the correct serial number then click CONFIGURATION SETTINGS

Name: ** This is the RTU number and AHU number. e.g., RTU2-4, RTU7-2

System Settings
System Type: Conventional
Heat Stages: 0
Cool Stages: 0
Fan Stages: 1
Heat Needs Fan: Yes

§ Building Static Control = On
Modulating Control Type (A1) = Damper Actuator
Actuator Voltages: Open = 0.0 / Closed = 10.0
Maximum Building Static: 0.06wc
Start Exhaust First (G2) = Yes
Variable Speed Fan = Off
Bypass Controller = Off
Static Pressure = Off
Economizer = Off
Humidity Settings = Off
Boiler Controller = Off

Input Sensor T1 = Off
Input Sensor T2 = Off
Input Sensor T3 = Off

NOTES:
All configurations are not shown here. Only the ones relevant to this installation. If you have any questions regarding any configuration you are seeing, please contact Pelican Technical Support and reference the document and or project number on this page.

* - Set as appropriate per unit
** - Mechanical Contractor is to verify that the name is correct in respect to the Pelican Wireless thermostat serial number.
§ - Contact Pelican Technical Support for assistance

SEQUENCE OF OPERATION

NORMAL OPERATIONS:
VIA PELICAN EMS, THE UNIT WILL RUN ACCORDING TO THE USER DEFINABLE TIME SCHEDULE IN THE FOLLOW MODES:
A. OCCUPIED MODE: THE AHU WILL MAINTAIN
   1. ALL OUTSIDE DAMPERS SHALL MAINTAIN MINIMUM AIRFLOW RATE (SET BY TAB), ALL SUPPLY FANS SHALL RUN SIMULTANEOUSLY. SYSTEMS WITH FLOATING ZONE DAMPERS THE FAN WILL MODULATE BASED ON STATIC PRESSURE OR OPERATE AT MINIMUM SPEED. FOR SYSTEMS WITH BACKDRAFT DAMPERS THE FAN WILL MODULATE BASED ON STAGES OF HEATING, COOLING, OR VENTILATION.
B. UNOCCUPIED MODE (NIGHT SETBACK), SCHEDULED FROM PELICAN EMS:
   1. ZONE THERMOSTATS SHALL BE SET TO AN ECONOMY (ADJ) ROOM SET POINT.
   2. AHU OUTSIDE DAMPER SHALL BE CLOSED AND FANS SHALL BE OFF.
   3. ANY THERMOSTAT MAY CALL ANY INDIVIDUAL ZONE AIR HANDLER SYSTEM ON INDEPENDANT OF OTHER ZONES.
C. MORNING START:
   1. ALL ZONE THERMOSTAT OCCUPIED SCHEDULES SHALL USE OPTIMUM START, ZONES SHALL BE SCHEDULED FOR THE TIME WHEN OCCUPANTS NORMALLY ARRIVE AND SHALL AUTO-CALCULATE WHEN TO START THE UNIT TO BRING ROOM TO THE OCCUPIED TEMPERATURE SET POINTS.
D. HEATING MODES:
   1. ON SINGLE ZONE SYSTEM, PELICAN ZONE THERMOSTATS SHALL MONITOR ROOM TEMPERATURE. IF THE ROOM TEMPERATURE IS WITHIN ONE DEGREE BELOW THE HEAT SETPOINT, THERMOSTAT SHALL GO INTO MODERATE HEATING DEMAND, ENABLE FIRST STAGE HEATING, FAN SHALL TARGET THE LOW HEATING SPEED, AND OUTSIDE DAMPER SHALL PROVIDE VENTILATION UNTIL THE SPACE HEATING DEMAND IS SATISFIED. IF THE ROOM TEMPERATURE IS MORE THAN A DEGREE FROM THE HEAT SETPOINT, THERMOSTAT SHALL GO INTO AGGRESSIVE HEATING DEMAND, SECOND STAGE HEAT WILL BE ADDED, FAN SHALL TARGET THE HIGH HEATING SPEED, AND THE OUTSIDE DAMPER SHALL PROVIDE VENTILATION UNTIL THE SPACE HEATING DEMAND IS SATISFIED. ONCE ALL HEATING DEMAND IS ELIMINATED, A PURGE CYCLE SHALL OCCUR TO PUSH EXCESS HEAT OUT OF THE SYSTEM AND INTO THE SPACE. THEN HEAT SHALL BE DISABLED.
E. COOLING MODES:
   1. ON SINGLE ZONE SYSTEM, PELICAN ZONE THERMOSTATS SHALL MONITOR ROOM TEMPERATURE. IF THE ROOM TEMPERATURE IS WITHIN ONE DEGREE ABOVE THE COOL SETPOINT, THERMOSTAT SHALL GO INTO MODERATE COOLING DEMAND, ENABLE FIRST STAGE COOLING, FAN SHALL TARGET THE LOW COOLING SPEED, AND OUTSIDE DAMPER SHALL PROVIDE VENTILATION UNTIL THE SPACE HEATING DEMAND IS SATISFIED. IF THE ROOM TEMPERATURE IS MORE THAN A DEGREE FROM THE COOL SETPOINT, THERMOSTAT SHALL GO INTO AGGRESSIVE COOLING DEMAND, SECOND STAGE COOLING WILL BE ADDED, FAN SHALL TARGET THE HIGH COOLING SPEED, AND THE OUTSIDE DAMPER SHALL PROVIDE VENTILATION UNTIL THE SPACE COOLING DEMAND IS SATISFIED. ONCE ALL COOLING DEMAND IS ELIMINATED, A PURGE CYCLE SHALL OCCUR TO PUSH EXCESS COOLING OUT OF THE SYSTEM AND INTO THE SPACE. THEN COOLING SHALL BE DISABLED.
F. ECONOMIZER
   1. IF THERE IS COOLING DEMAND AND THE OUTSIDE AIR IS BELOW 65°F (ADJ), AND AT LEAST 4°F BELOW THE SPACE TEMPERATURE, AND IF THE ENTHALPY IS ACCEPTABLE, AHU SHALL ALLOW FOR AN ECONOMIZER CYCLE TO COOL ZONES. STAGES OF COOLING MAY BE ADDED IF ACCEPTABLE TO MEET SPACE CONDITIONS.
G. BUILDING PRESSURIZATION CONTROL:
   1. THE BUILDING PRESSURE CONTROLLER WILL MONITOR BUILDING PRESSURE TO MAINTAIN A POSITIVE BUILDING PRESSURE OF 0.06 in wc. AS PRESSURE INCREASES IT WILL START THE EXHAUST FAN OR FANS AND WILL MODULATE THE SPEED OR SPEEDS TO REDUCE BUILDING PRESSURE.
H. DEMAND CONTROLLED VENTILATION
   1. PELICAN ZONE THERMOSTATS WILL MEASURE CO2 IN THE SPACE.
   2. AS CO2 INCREASES ABOVE THE SETPOINT OF 800ppm THE ASSOCIATED OUTDOOR AIR DAMPER WILL MODULATE OPEN UNTIL THE CO2 LEVEL STOPS INCREASING.
   3. AS C02 LEVELS BEGIN TO FALL AFTER EXCEEDING THE SETPOINT THE ASSOCIATED OUTDOOR AIR DAMPER WILL MODULATE BACK TO THE MINIMUM VENTILATION POSITION.
I. SAFETIES AND ALARMS:
   1. FAULTS SHALL ALARM TO THE PELICAN EMS.
   2. DUCT SMOKE DETECTOR(S) ARE TO BE HARD WIRED TO STOP THE EQUIPMENT, SUPPLY & EXHAUST FANS WHEN PRODUCTS OF COMBUSTION ARE DETECTED IN THE AIR STREAM.

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ISSUE

Δ	DESCRIPTION	DATE

KEYNOTES

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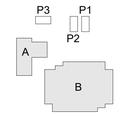
RANCHO CORDOVA, CALIFORNIA

XX - XX/XX/XX — PM - DESIGN TEAM
230527.00 — PROJECT NO.

REGISTERED PROFESSIONAL ENGINEER — KEVIN D. STYLMAN — M 33498 — EXPIRES 9/30/24 — MECHANICAL — STATE OF CALIFORNIA

DATE SIGNED:

KEY PLAN:



FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:
LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:
MECHANICAL CONTROLS

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

M6.03

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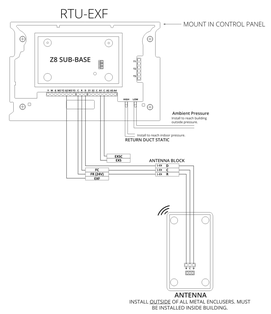
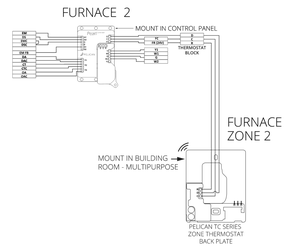
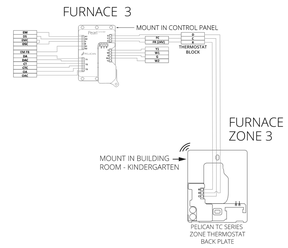
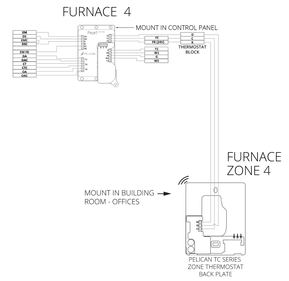


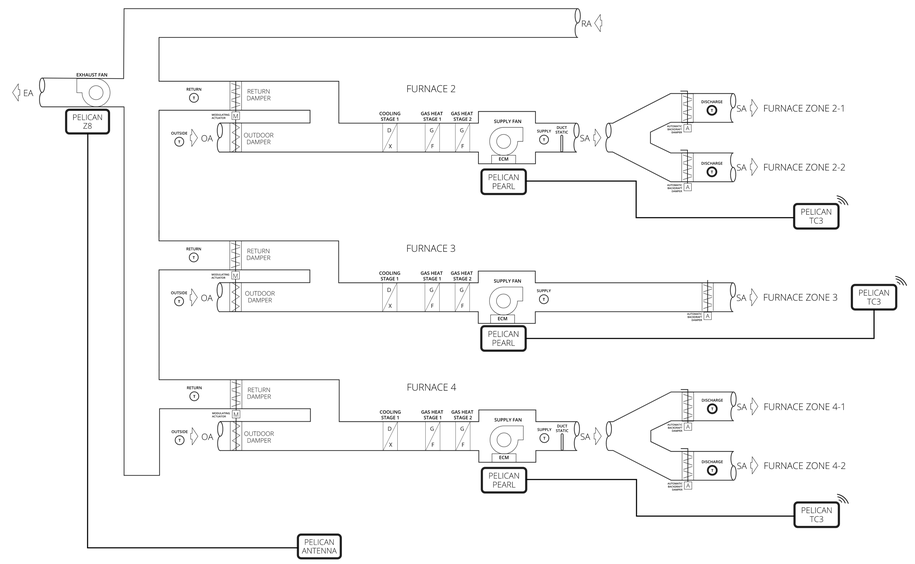






TERMINAL TABLE	
FR (24V)	FURNCE TRANSFORMER 24VAC POWER
FC	FURNACE COMMON
RA/RAC	RETURN SENSOR (10K TYPE 2)
OA/OAC	OUTSIDE SENSOR (10K TYPE 2)
DA/ DAC	SUPPLY SENSOR (10K TYPE 2)
G	SUPPLY FAN
EXF	EXHAUST FAN
W1	HEAT STAGE 1
W2	HEAT STAGE 2
CT/CTC	FAN STATUS (DRY-CONTACT)
DS	FAN SPEED
DSC	FAN SPEED COMMON
EM	ECON ACTUATOR POSITION
EMC	ECON ACTUATOR COMMON
EM FB	ECON FEEDBACK
Y1	COOLING STAGE 1
EXS	EXHAUST FAN SPEED
EXSC	EXHAUST FAN SPEED COMMON

CONTROLS WIRING SCHEMATIC



AIR FLOW SCHEMATIC

MFG	PART NUMBER	PART NAME	QTY
PELICAN	TC3	TOUCH THERMOSTAT w/CO2	3
PELICAN	PEARL	ADVANCED CONTROLLER	3
PELICAN	Z8	ZONE COORDINATOR	1

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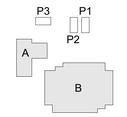

FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

MECHANICAL CONTROLS

CONSTRUCTION DOCUMENTS

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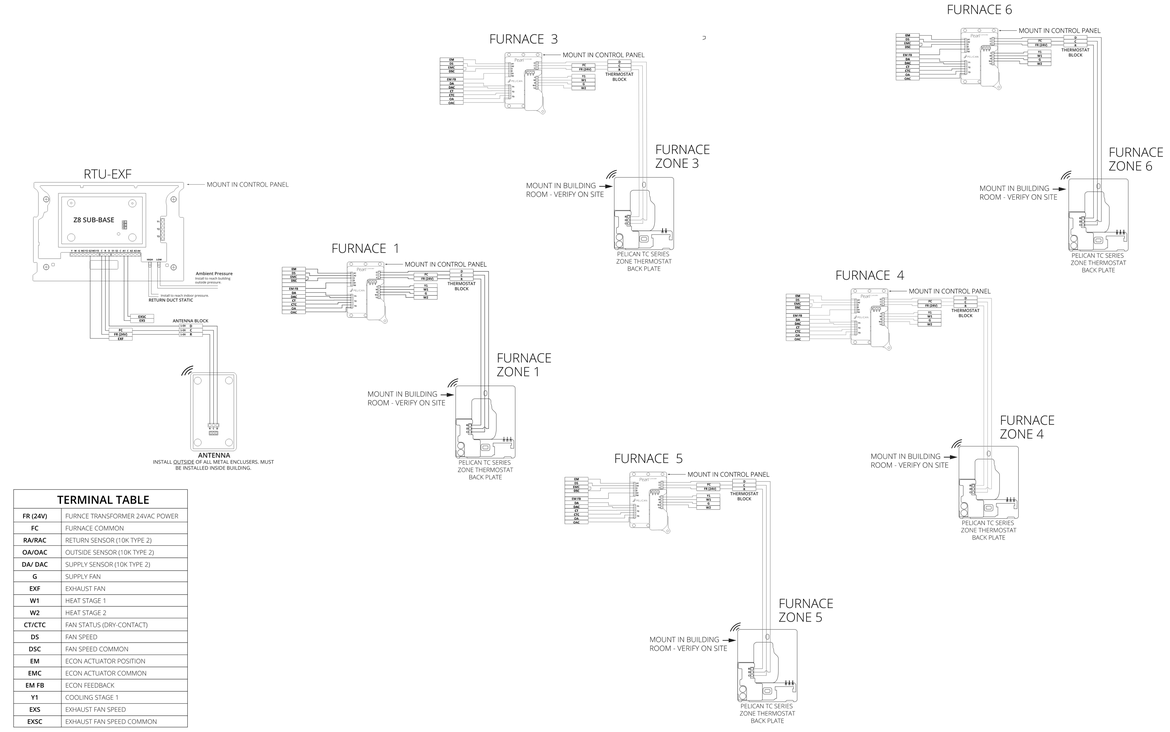

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W2	HEAT STAGE 2
CT/CTC	FAN STATUS (DRY-CONTACT)
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DSC	FAN SPEED COMMON
EM	ECON ACTUATOR POSITION
EMC	ECON ACTUATOR COMMON
EM FB	ECON FEEDBACK
Y1	COOLING STAGE 1
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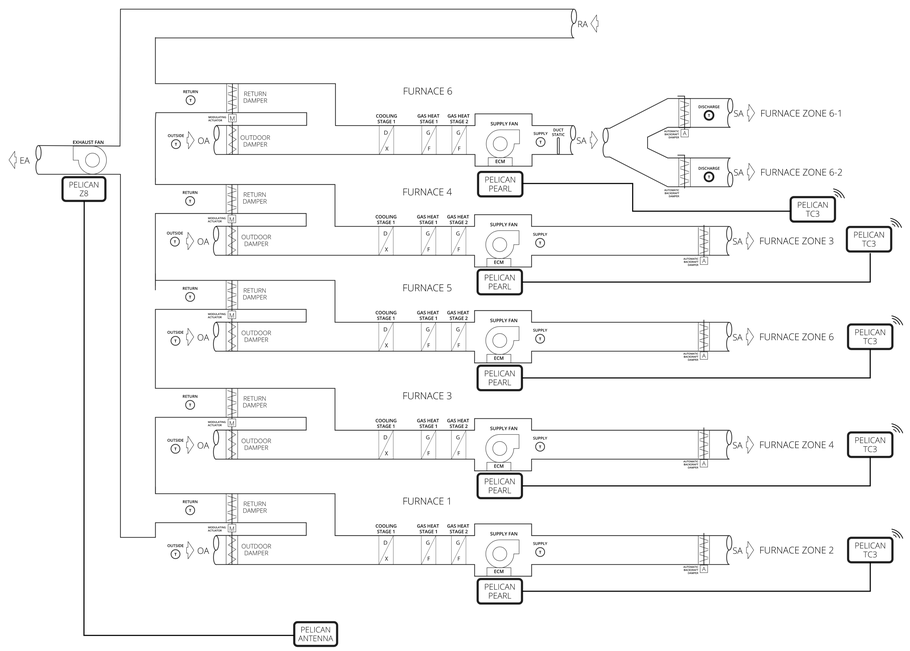
CONTROLS WIRING SCHEMATIC



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PELICAN	PEARL	ADVANCED CONTROLLER	5
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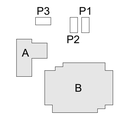

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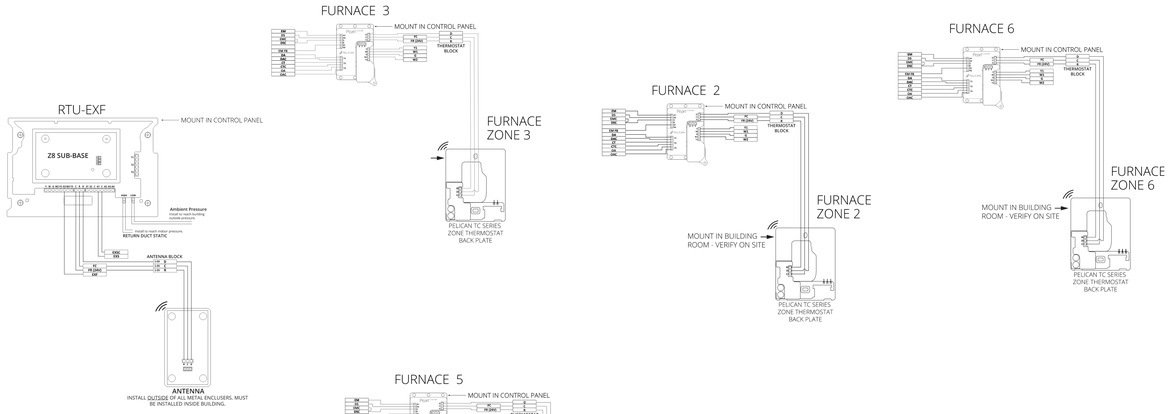

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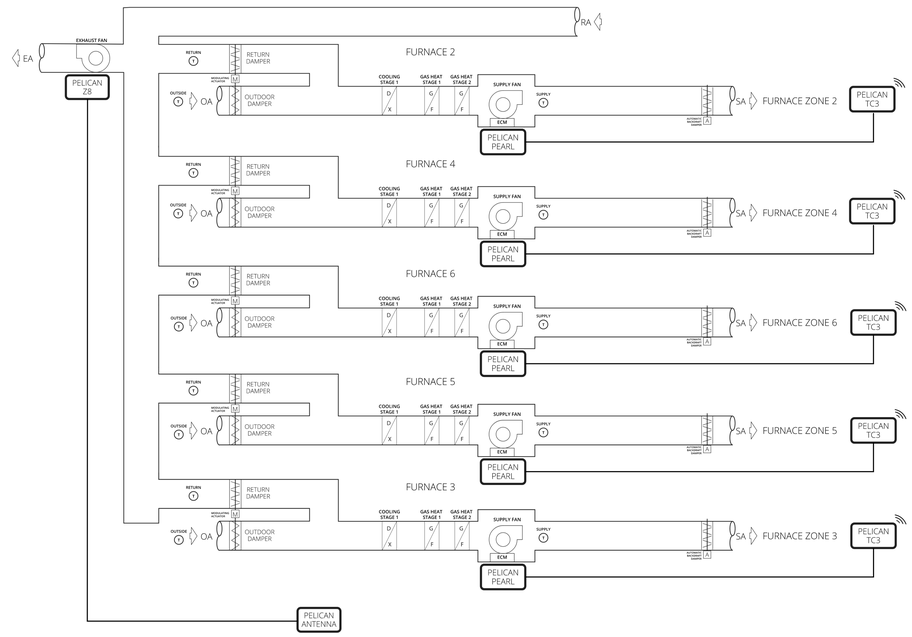

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MFG	PART NUMBER	PART NAME	QTY
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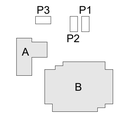

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STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.	
Project Name: Victor ES HVAC Replacement-Lodi USD	**Report Page:** (Page 1 of 11)
Project Address:	**Date Prepared:** 2023-09-22T14:26:48-04:00

A. GENERAL INFORMATION

01	Project Location (city)	Lodi	04	Total Conditioned Floor Area	9999
02	Climate Zone	12	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

• Classroom

B. PROJECT SCOPE

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

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

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Victor ES HVAC Replacement-Lodi USD	**Report Page:** (Page 2 of 11)
	Date Prepared: 2023-09-22T14:26:48-04:00

C. COMPLIANCE RESULTS

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

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

D. EXCEPTIONAL CONDITIONS

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

The permit applicant has indicated on Table J that ventilation calculations have been attached or included elsewhere on the plans.

Selections made in the Certificates of Acceptance Table have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS

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

{NRCA-MCH-03-A Explanation} Not automatically moved to yes - Needed for Single Zone Sys

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Victor ES HVAC Replacement-Lodi USD	**Report Page:** (Page 3 of 11)
	Date Prepared: 2023-09-22T14:26:48-04:00

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
MZ-1 - F-1-2 thru F-1-4	3	Single zone	New/ Addition	School or Classroom	☐
MZ-2 F2-1 thru F2-6	5	Single zone	New/ Addition	School or Classroom	☐
MZ-3 F-3-2 thru F-3-6	5	Single zone	New/ Addition	School or Classroom	☐

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available[1] 140.4(a) and 170.2(c)1	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
MZ-1 - F-1-2 thru F-1-4	Unitary AC/ Condensers	AC, air cooled, split (3 phase)	Yes				60	60		60
MZ-2 F2-1 thru F2-6	Unitary AC/ Condensers	AC, air cooled, split (3 phase)	Yes				48	60		48
MZ-3 F-3-2 thru F-3-6	Unitary AC/ Condensers	AC, air cooled, split (3 phase)	Yes				48	48		48

[1]*FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are excepted.*

[2]*It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*

[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*

[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).*

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Victor ES HVAC Replacement-Lodi USD	**Report Page:** (Page 4 of 11)
	Date Prepared: 2023-09-22T14:26:48-04:00

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

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

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
MZ-1 - F-1-2 thru F-1-4	<65,000					SEER	13	13
MZ-2 F2-1 thru F2-6	<65,000					SEER	13	13
MZ-3 F-3-2 thru F-3-6	<65,000					SEER	13	13

G. PUMPS

This section does not apply to this project.

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Victor ES HVAC Replacement-Lodi USD	**Report Page:** (Page 5 of 11)
	Date Prepared: 2023-09-22T14:26:48-04:00

H. FAN SYSTEMS & AIR ECONOMIZERS

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

System Name	SF 2000 cfm	Quantity	2	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	2,000	Site Elevation	0	Economizer	Fixed Temperature

01	02	03	04	05	06	07	08	09	10	11
						Allowance		Design		
Fan Name or Item Tag	Fan Type	Qty	Component	Airflow through Component (%)	Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method	Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF-2000 cfm	Supply	1	Base Allowance for system serving spaces <=6 floors away	100		0	0.197	Default per Table 140.4-D	>=1 and <1_5	1.29
			Hydronic/DX cooling coil or heat pump coil	100		0.13				
			Gas heat	100		0.05				
Supply Fan Base Allowance (kW)	0.232	Exhuast/Return/Relief/Transfer Fan Base Allowance(kW)			0	Fan System Allowance (kW)[3]			Fan System Electrical Output (kW)	1.29

[1] *FOOTNOTES: Fans serving spaces with design background noise goals below NC35*

[2] *Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.*

[3] *Fan system allowance includes fan system base allowance.*

[4] *Filter pressure loss can only be counted once per fan system.*

[5] *Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both.*

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

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

01	02	03	04	05	06	07	08	09	10	11

STATE OF CALIFORNIA

Mechanical Systems

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Project Name: Victor ES HVAC Replacement-Lodi USD	**Report Page:** (Page 6 of 11)
	Date Prepared: 2023-09-22T14:26:48-04:00

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

Fan System Name	Qty	Hours of Operation per Year	Design Supply Airflow Rate	Outdoor Airflow	% Outdoor Air at Full Design Airflow	Exemptions to Exhaust Air Heat Recovery Requirement per 140.4(q) & 170.2(c)4O	Exhaust Air Heat Recovery 140.4(q) & 170.2(c)4O	Type Of Heat Recovery Rating	Required Recovery Ratio	Energy Recovery Bypass
SF 2000 cfm	2	< 8,000	2,000	600	0.3	No Exemptions Apply	Not Required			

Fan Energy Index (FEI)

01	02	03
Name or Item Tag	FEI Exception	FEI
SF-2000 cfm	Embedded Fan <5HP or <4.1kW	

I. SYSTEM CONTROLS

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

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

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

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J. VENTILATION AND INDOOR AIR QUALITY

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

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

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.

Duct Leakage Testing

The answers to the questions below apply to the following duct systems:	Mech Floor Plan -	**NR/ Common Use:** Duct leakage testing shall not exceed 15% per NA7.5.3 required for these systems?	No

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L. DISTRIBUTION (DUCTWORK and PIPING)

	Connection to (E) duct	**Dwelling Units:** Total duct leakage of duct system shall not exceed 15% or duct system to outside shall not exceed 10% per RA3.1.4 required for systems?	---
		Duct leakage testing per CMC Section 603.10.1 required for these systems?	No

11	No	The scope of the project includes only duct systems serving healthcare facilities
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13	Yes	The space conditioning system serves less than 5,000 ft^2 of conditioned floor area.
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17	Yes	All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A
18	Yes	All ductwork is an extension of an existing duct system
19	No	Ductwork serving individual dwelling unit
20	Yes	< 25 ft of new or replacement space conditioning ducts installed
21	R-4.2	Duct Insulation R-value
22	Yes	Ductwork Existing To Remain
23	Yes	Duct System Connected To Altered Space Conditioning System

M. COOLING TOWERS

This section does not apply to this project.

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N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

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

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

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

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

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	MZ-1 - F-1-2 thru F-1-4; MZ-2 F2-1 thru F2-6; MZ-3 F-3-2 thru F-3-6
NRCA-MCH-05-A - Air Economizer Controls	SF 2000 cfm
NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	MZ-1 - F-1-2 thru F-1-4; MZ-2 F2-1 thru F2-6; MZ-3 F-3-2 thru F-3-6
NRCA-MCH-18-A Energy Management Control Systems	MZ- All

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

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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 Mandatory Measures Note Block	No	Plan sheet or construction document location

03	04
Mandatory Measure	**Plan sheet or construction document location**
Heating Equipment Efficiency per 110.1	M0.02
Cooling Equipment Efficiency per 110.1	M0.02
Furnace Standby Loss Control per 110.2(d)	M0.02
Duct Insulation per 120.4	HVAC Specifications
Heat Pump with Supplemental electric Resistance Heater Controls per 110.2(b)	NA
The air duct and plenum system is designed per 120.4(a)-(f)	M0.02 & HVAC Specifications
Kitchen range hoods shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2	NA

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Project Address:	**Date Prepared:** 2023-09-22T14:26:48-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Aaron Wintersmith	Documentation Author Signature:
Company: Capital Engineering	Signature Date:
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

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

Responsible Designer Name:	Responsible Designer Signature:
Company:	Date Signed:
Address:	License:
City/State/Zip:	Phone:

C:\Users\bvogt.CAPSAC\OneDrive - Capital\Documents\230527_Victor ES MZ_MP22_Central_bvogt@capital-engineering.com.rvt
9/22/2023 11:59:08 AM

AGENCY APPROVAL:

REVIEWING AGENCIES STAMP HERE

EDIT THIS FAMILY, AND PLACE A PROJECT IMAGE HERE. IT WILL UPDATE ALL TITLEBLOCKS AUTOMATICALLY.

HMC Architects
3431-004-000
3546 CONCOURS STREET
ONTARIO, CA 91764
909 989 9979 / www.hmcarchitects.com

NOT FOR CONSTRUCTION

ISSUE

Δ	DESCRIPTION	DATE

KEYNOTES

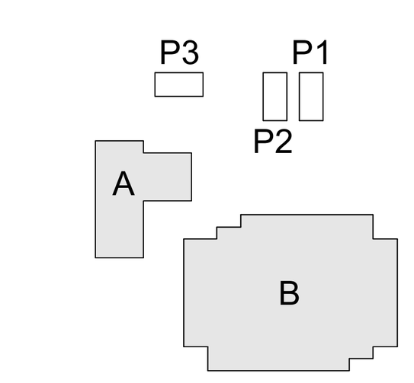
NOTES

capital engineering
RANCHO CORDOVA, CALIFORNIA
XX - XX/XX/XX 230527.00
PM - DESIGN TEAM PROJECT NO.

REGISTERED PROFESSIONAL ENGINEER KEVIN D. STILLMAN M 33498 EXPIRES 9/30/24 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED:

KEY PLAN:



FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

TITLE 24 DOCUMENTATION

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

M7.01

PLEASE RECYCLE

ELECTRICAL ABBREVIATIONS LIST

1P	1 POLE (2P, 3P, 4P, ETC.)	M/C	MOMENTARY CONTACT
A	AMPERE	MC	MECHANICAL CONTRACTOR
AC	ABOVE COUNTER	MCB	MAIN CIRCUIT BREAKER
ACLG	ABOVE CEILING	MCC	MOTOR CONTROL CENTER
AF	AMP FRAME	MDC	MAIN DISTRIBUTION CENTER
AFF	ABOVE FINISHED FLOOR	MDF	MAIN DISTRIBUTION FRAME
AFG	ABOVE FINISHED GRADE	MDP	MAIN DISTRIBUTION PANEL
AFI	ARC FAULT CIRCUIT INTERRUPTER	MFR	MANUFACTURER
		MFS	MAIN FUSED DISCONNECT SW
AHU	AIR HANDLING UNIT	MH	MANHOLE
AL	ALUMINUM	MIC	MICROPHONE
ALT	ALTERNATE	MIN	MINIMUM
AMP	AMPERE	MISC	MISCELLANEOUS
AMPL	AMPLIFIER	MLO	MAIN LUGS ONLY
ANNUN	ANNUNCIATOR	MMS	MANUAL MOTOR STARTER
APPROX	APPROXIMATELY	MOA	MULTIOUTLET ASSEMBLY
AQ-STAT	AQUASTAT	MSP	MOTOR STARTER PANELBOARD
ARCH	ARCHITECT, ARCHITECTURAL	MSBD	MAIN SWITCHBOARD
AS	AMP SWITCH	MT	MOUNT
AT	AMP TRIP	MT.C	EMPTY CONDUIT
ATS	AUTOMATIC TRANSFER SWITCH	MTS	MANUAL TRANSFER SWITCH
AUTO	AUTOMATIC	MTR	MOTOR, MOTORIZED
AUX	AUXILIARY	(N)	NEW
AV	AUDIO VISUAL	N.C.	NORMALLY CLOSED
AWG	AMERICAN WIRE GAUGE	NEC	NATIONAL ELECTRICAL CODE
BATT	BATTERY	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
BC	BARE COPPER		
BD	BOARD	NFDS	NON-FUSED SAFETY DISCONNECT SWITCH
BLDG	BUILDING		
BMS	BUILDING MANAGEMENT SYSTEM	NIC	NOT IN CONTRACT
C	CONDUIT	NL	NIGHT LIGHT
CAB	CABINET	N.O.	NORMALLY OPEN
CAT	CATALOG	NPF	NORMAL POWER FACTOR
CATV	CABLE TELEVISION	NTS	NOT TO SCALE
CB	CIRCUIT BREAKER	OH	OVERHEAD
CCTV	CLOSED CIRCUIT TELEVISION	OL	OVERLOADS
CKT	CIRCUIT	PA	PUBLIC ADDRESS
CLG	CEILING	PB	PULL BOX OR PUSHBUTTON
COMB	COMBINATION	PE	PNEUMATIC ELECTRIC
CMPR	COMPRESSOR	PED	PEDESTAL
COMM	COMMUNICATION	PF	POWER FACTOR
CONN	CONNECTION	PH	PHASE
CONST	CONSTRUCTION	PIV	POST INDICATING VALVE
CONT	CONTINUATION OR CONTINUOUS	PNL	PANEL
CONTR	CONTRACTOR	PP	POWER POLE
CONV	CONVECTOR	PR	PAIR
CP	CIRCULATING PUMP	PRI	PRIMARY
CRT	CATHODE-RAY TUBE	PROJ	PROJECTION
CT	CURRENT TRANSFORMER	PT	POTENTIAL TRANSFORMER
CTR	CENTER	PVC	POLYVINYL CHLORIDE (CONDUIT)
CU	COPPER	PWR	POWER
DCP	DOMESTIC WATER CIRCULATING PUMP	QTY	QUANTITY
DEPT	DEPARTMENT	RCPT	RECEPTACLE
DET	DETAIL	REQD	REQUIRED
DIA	DIAMETER	RM	ROOM
DISC	DISCONNECT	RSC	RIGID STEEL CONDUIT
DIST	DISTRIBUTION	RTU	ROOF TOP UNIT
DN	DOWN	SC	SURFACE CONDUIT
DPR	DAMPER	SEC	SECONDARY
DS	SAFETY DISCONNECT SWITCH	SHT	SHEET
DT	DOUBLE THROW	SIM	SIMILAR
DWG	DRAWING	S/N	SOLID NEUTRAL
(E)	EXISTING	SPEC	SPECIFICATION
EC	ELECTRICAL CONTRACTOR	SPKR	SPEAKER
ELEC	ELECTRIC, ELECTRICAL	SP	SPARE
ELEV	ELEVATOR	SR	SURFACE RACEWAY
EM	EMERGENCY	SS	STAINLESS STEEL
EMS	ENERGY MANAGEMENT SYSTEM	SSW	SELECTOR SWITCH
EMT	ELECTRICAL METALLIC TUBING	S/S	STOP/START PUSHBUTTONS
EP	ELECTRIC PNEUMATIC	STA	STATION
EQUIP	EQUIPMENT	STD	STANDARD
EWC	ELECTRIC WATER COOLER	SURF	SURFACE MOUNTED
EXIST	EXISTING	SW	SWITCH
EXH	EXHAUST	SWBD	SWITCHBOARD
EXP	EXPLOSION PROOF	SYM	SYMMETRICAL
(F)	FUTURE	SYS	SYSTEM
FA	FIRE ALARM	TEL	TELEPHONE
FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL	TEL/DATA	TELEPHONE/DATA
		TERM	TERMINAL
FACP	FIRE ALARM CONTROL PANEL	TL	TWIST LOCK
FCU	FAN COIL UNIT	TR	TAMPER RESISTANT
FIXT	FIXTURE	T-STAT	THERMOSTAT
FLR	FLOOR	TTC	TELEPHONE TERMINAL CABINET
FLUOR	FLUORESCENT	TV	TELEVISION
FU	FUSE	TVTC	TELEVISION TERMINAL CABINET
FUDS	FUSED SAFETY DISCONNECT SWITCH	TYP	TYPICAL
GA	GAUGE	UC	UNDER COUNTER
GAL	GALLON	UE	UNDERGROUND ELECTRICAL
GALV	GALVANIZED	UG	UNDERGROUND
GC	GENERAL CONTRACTOR	UH	UNIT HEATER
GEN	GENERATOR	UL	UNDERWRITER LAB
GFI	GROUND FAULT CIRCUIT INTERRUPTER	UT	UNDERGROUND TELEPHONE
GFP	GROUND FAULT PROTECTOR	UTIL	UTILITY
G	GROUND	UV	ULTRAVIOLET
GRS	GALVANIZED RIGID STEEL (CONDUIT)	V	VOLT
GYP BD	GYPSUM BOARD	VA	VOLT-AMPERES
HOA	HANDS-OFF-AUTOMATIC SWITCH	VDT	VIDEO DISPLAY TERMINAL
HORIZ	HORIZONTAL	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HPF	HIGH POWER FACTOR	VIF	VERIFY IN FIELD
HT	HEIGHT	VOL	VOLUME
HTG	HEATING	W	WIRE
HTR	HEATER	W/	WITH
HV	HIGH VOLTAGE	WG	WIRE GUARD
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	WH	WATER HEATER
		W/O	WITHOUT
IAP	INTRUSION ALARM PANEL	WP	WEATHERPROOF
IC	INTERRUPTING CAPACITY	XFMR	TRANSFORMER
IDF	INTERMEDIATE DISTRIBUTION FRAME	XFR	TRANSFER
IG	ISOLATED GROUND		
IMC	INTERMEDIATE METAL CONDUIT		
IR	INFRARED		
I/W	INTERLOCK WITH	∠	ANGLE
J-BOX	JUNCTION BOX	@	AT
KV	KILOVOLT	'▲	DELTA
KVA	KILOVOLT-AMPERE		FEET
KVAR	KILOVOLT-AMPERE REACTIVE	"	INCHES
KW	KILOWATT	#	NUMBER
KWH	KILOWATT HOUR	Ø	PHASE
LOC	LOCATE OR LOCATION	C	CENTER LINE
LT	LIGHT	P	PLATE
LTG	LIGHTING		
LTNG	LIGHTNING		
LV	LOW VOLTAGE		
MAX	MAXIMUM		
MAG.S	MAGNETIC STARTER		

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	LIGHTING FIXTURES, TYPICAL, RECTANGULAR FILLED CIRCLES INDICATE RECESSED, OPEN CIRCLES INDICATE SURFACE DIAGONAL LINE INDICATES LENSED OUTER DOTS INDICATE SUSPENDED
	LIGHTING FIXTURES, TYPICAL, ROUND CENTER DOT INDICATES PENDANT DIAGONAL LINE INDICATES LENSED CHEVRON INDICATES WALL WASH
	WALL-MOUNTED FIXTURES, TYPICAL
	STRIP FIXTURE
	DIRECTIONAL LIGHT, TRACK, FLOOD
	LINEAR LIGHT, TAPE LIGHT
	EMERGENCY LIGHTING UNIT, CEILING-MOUNTED, INTEGRAL BATTERY
	EMERGENCY LIGHTING UNIT, CEILING-MOUNTED, REMOTE BATTERY
	EMERGENCY LIGHTING UNIT, WALL-MOUNTED, INTEGRAL BATTERY
	EMERGENCY LIGHTING UNIT, WALL-MOUNTED, REMOTE BATTERY
	EXIT LIGHT, CEILING-MOUNTED, SHADING AND ARROWS INDICATE FACES AND DIRECTION
	EXIT LIGHT, WALL-MOUNTED, SHADING AND ARROWS INDICATE FACES AND DIRECTION
	EXIT/ELU COMBO
	POLE/AREA LIGHTS
	POST-TOP AREA LIGHT
	BOLLARD LIGHT
	DIAGONAL HATCH INDICATES LIGHT ON A CRITICAL CIRCUIT
	SOLID HATCH INDICATES LIGHT ON AN EMERGENCY OR LIFE SAFETY CIRCUIT
	SINGLE POLE SWITCH
3	3-WAY SWITCH
4	4-WAY SWITCH
K	KEYED SWITCH
	SWITCH W/PILOT
D	DIMMER SWITCH
OS	OCCUPANCY SENSOR W/ DIMMER AND MANUAL ON/OFF SWITCH
T	TIMER SWITCH
TD	TIME DELAY SWITCH
TC	TIME CONTROL SWITCH

SYMBOL	DESCRIPTION
	SINGLE RECEPT.
	DUPLEX RECEPT.
48"	(DESIGNATES SPECIFIC MOUNTING HEIGHT) DUPLEX RECEPT.
GFI	GFI DUPLEX RECEPT. (FEED THROUGH)
GFI WP	GFI WEATHERPROOF RECEPT.
	SPLIT DUPLEX RECEPT.
	DUPLEX ISOLATED GROUND RECEPT.
	DUPLEX RECEPT. ON EMERG. CIRCUIT
	FLOOR DUPLEX RECEPT.
CLNG	CEILING DUPLEX RECEPT.
	FOURPLEX RECEPT.
	FOURPLEX GFI RECEPT.
	240V RECEPTACLE
	RECEPT. ON CORD REEL
	SPECIAL RECEPT.
J	JUNCTION BOX
J	FLOOR JUNCTION BOX
J CLNG	CEILING JUNCTION BOX
PS - D2	MULTIOUTLET ASSEMBLY
	COMB. MOTOR STARTER (FUSED)
	SAFETY DISC. SW. (NON-FUSED)
	SAFETY DISC. SW. (FUSED)
R	RELAY
	PUSH BUTTON
AC	ABOVE COUNTER DUPLEX RECEPT.
TR	TAMPER RESISTANT DUPLEX RECEPT.
TR	TAMPER RESISTANT FOURPLEX RECEPT.
P	POWER POLE (OPEN OFFICE STYLE)
	SURGERY SERVICE COLUMN
	STATIC GROUND RECEPTACLE
P	UTILITY SERVICE POWER POLE
XX-1	MOTOR
XX-1	IDENTITY (SEE SCHEDULE)
XX-1 XX-1	EXISTING TO REMAIN
XX-1 XX-1	RELOCATED
XX-1 XX-1	DEMOLISHED
T1	TRANSFORMER
	BUS DUCT W/ PLUG IN DISCONNECT CABLE TAP BOX

SYMBOL	DESCRIPTION
	TELEPHONE OUTLET
	FLOOR TELEPHONE OUTLET
1V2D	VOICE/DATA OUTLET
	# OF VOICE AND # OF DATA OUTLETS. FOR EXAMPLE 1V2D = 1 VOICE, 2 DATA
	FLOOR DATA OUTLET
CLNG	CEILING DATA OUTLET
M	MICROPHONE OUTLET
	CATV OUTLET
TV	TV OUTLET
V	VOLUME CONTROL
	DOOR BELL
	DOOR BUZZER
	DOOR CHIME
D	DOOR SIGNAL
	AUTO DOOR PUSH PAD
ES	ELECTRIC STRIKE
ML	MAGNETIC LOCK
CL	COMBINATION LOCK
DC	DOOR CONTACT
CR	CARD READER
	SECURITY KEYPAD
MD	MOTION DETECTOR
E	NURSE CALL EMERG. STATION
B	NURSE CALL CODE BLUE STATION
D	NURSE CALL DUTY STATION
S	NURSE CALL STAFF STATION
P	NURSE CALL PATIENT STATION
N 1	NURSE CALL DOME LIGHT (1-COLOR)
N 2	NURSE CALL DOME LIGHT (2-COLORS)
	WIRELESS ACCESS POINT OUTLET
	CCTV OUTLET

ELECTRICAL SYMBOL NOTES

S3 1d	LIGHTING FIXTURE TAG DESCRIPTORS: TOP VALUE: FIXTURE TYPE ID. BOTTOM VALUE, NUMBER: CIRCUIT NUMBER, REFER TO DRAWINGS FOR PANEL. BOTTOM VALUE, LOWERCASE LETTER: SWITCH DESIGNATION. ABSENCE OF A SWITCH ID INDICATES FIXTURE IS CONTROLLED BY THE ONLY SWITCH IN THE SPACE. "x" IN PLACE OF THE SWITCH ID INDICATES NIGHT LIGHT, UNSWITCHED.
EXW1 1	EXIT LIGHTS. STEM INDICATES WALL MOUNTING. NO STEM INDICATES CEILING MOUNTING. SHADED AREA INDICATES ILLUMINATED FACE(S). ARROW INDICATES DIRECTIONAL ARROW ON ILLUMINATED FACE(S). THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. EXAMPLE: THE WALL MOUNTED EXIT LIGHT TYPE "E1" WITH SINGLE FACE AND DIRECTIONAL ARROW IS CONNECTED TO CIRCUIT 1.
1d	DEVICES. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SPLIT DUPLEX RECEPTACLE IS CONNECTED TO CIRCUIT 1 AND ONE RECEPTACLE OUTLET IS CONTROLLED BY SWITCH "d".
d	THE CONTROL DEVICE DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SINGLE POLE SWITCH "d" TO CONTROL LIGHTING FIXTURES INDICATED BY "d".
D e	WALL BOX DIMMER WITH SIZE AS INDICATED AT DEVICE. EXAMPLE: 600 WATT WALL BOX DIMMER TO CONTROL LIGHTING FIXTURES INDICATED BY "e". SEE SPECIFICATIONS FOR WATTAGE IF NOT INDICATED.
ELEC-1 2,4	SPECIAL CONNECTIONS. THE EQUIPMENT IS INDICATED BY A NUMBER IN A CIRCLE. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE LOAD DESCRIPTION AND TYPE OF CONNECTION. THE CIRCUIT DESIGNATION IS INDICATED BY NUMBER(S) ADJACENT TO THE SYMBOL. EXAMPLE: EQUIPMENT NO. ELEC-1; 1 PHASE CONNECTION TO CIRCUITS 2, 4.
	PANELBOARDS. PANELBOARD DOORS MAY BE SHOWN TO INDICATE OPENING SIDE OF RECESSED PANELBOARDS. SEE PANELBOARD IDENTIFICATION FOR DESIGNATION CODES.
	FLOOR CLEARANCE AREA
XX-1	MOTOR CONNECTIONS. THE MOTOR IS INDICATED BY A NUMBER WITHIN OR CHARACTERS ADJACENT TO THE MOTOR SYMBOL. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE MOTOR DESCRIPTION AND ELECTRICAL REQUIREMENTS.
T1	TRANSFORMERS. THE TRANSFORMER TYPE IS INDICATED BY A NUMBER FOLLOWING THE UPPER CASE LETTER "T". SEE THE TRANSFORMER SCHEDULE OR THE SINGLE LINE DIAGRAM FOR THE TRANSFORMER DESCRIPTION AND REQUIREMENTS. EXAMPLE: TRANSFORMER TYPE "T1".
	CONDUIT IN CEILING, FLOOR OR WALL AS REQUIRED BY FIELD CONDITIONS
	CONDUIT IN FLOOR
#12	CONDUIT SHOWN WITHOUT SLASH MARKS SHALL CONTAIN 1 # 12 CONDUCTOR PER PHASE, NEUTRAL, AND GROUND IN 3/4" CONDUIT UNLESS SPECIFIC EQUIPMENT REQUIRES A DIFFERENT SIZE.
#10	CONDUIT SHOWN SHALL CONTAIN 1 # 10 CONDUCTOR PER PHASE IN ELECTRICAL CODE SIZED MINIMUM CONDUIT UNLESS A CONDUCTOR AND CONDUIT SIZE IS SHOWN ADJACENT.
P4N-102 1, 3, 5	HOME RUN TO BRANCH CIRCUIT PANELBOARD. THE PANELBOARD DESIGNATION IS SHOWN ADJACENT TO THE HOME RUN ARROW AS A NUMERATOR AND THE CIRCUIT DESIGNATION IS SHOWN AS THE DENOMINATOR. CIRCUIT BREAKER SIZES (AMPS/NUMBER OF POLES) ARE SHOWN IN THE PANELBOARD SCHEDULE WITH THE CORRESPONDING PANELBOARD AND CIRCUIT DESIGNATION. EXAMPLE: HOME RUN TO PANELBOARD P4N-102; CIRCUITS 1, 3, 5.
	EXISTING CONDUIT TO REMAIN
	EXISTING CONDUIT TO BE REMOVED

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 29 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED: SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCET PLUGS FOR 110/220 VOLT RECEPTACLES HAVING FLEXIBLE CABLE
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE RETRAINED WITH TEMPORARY ATTACHMENTS.

THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

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

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK, & ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7,13.6.8, AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON PREPAPPROVED INSTALLATION GUIDE (E.G., SMACNA OR 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 REVORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

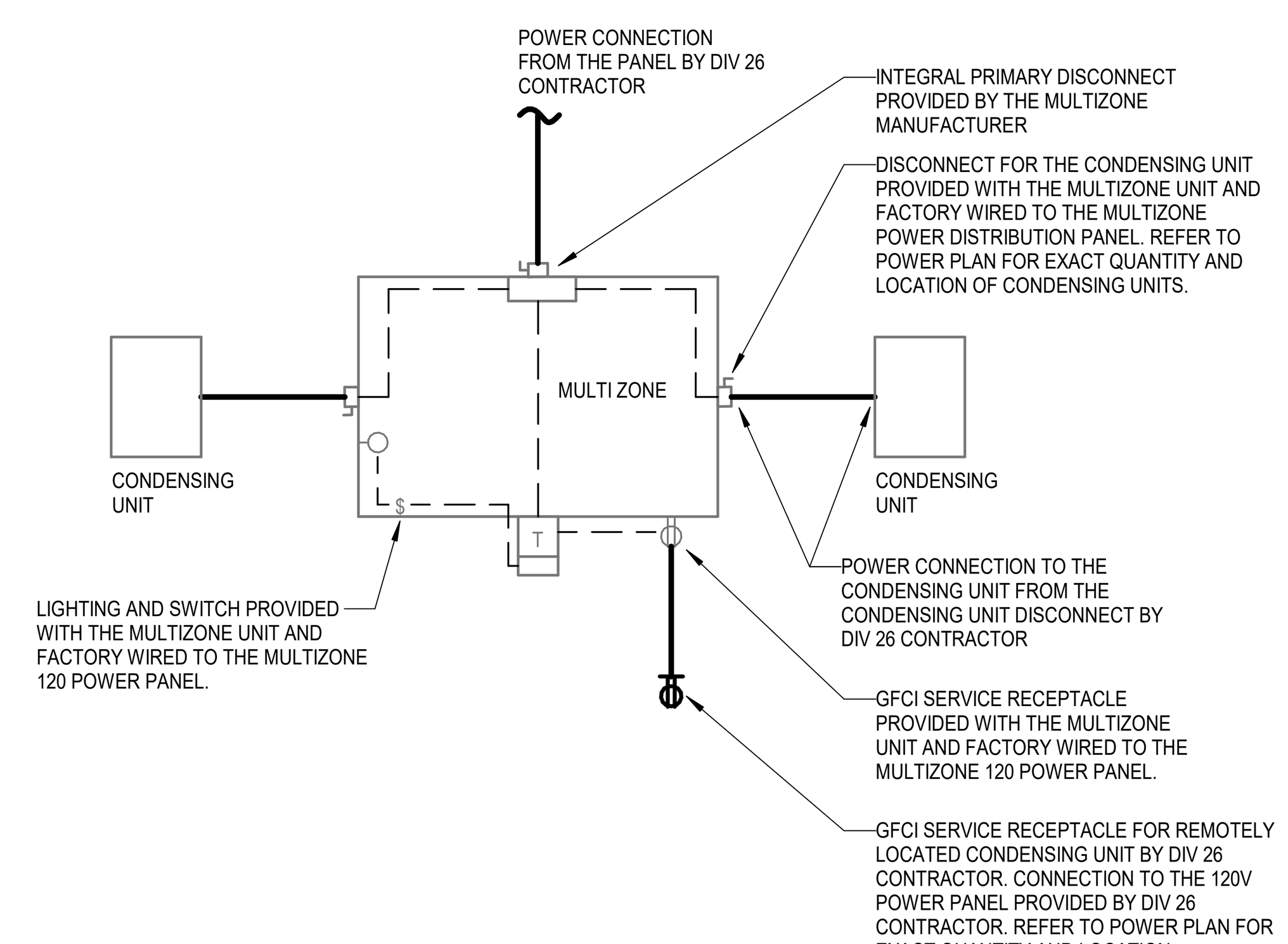
MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

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-APPROVED (OPM #) #__________________, AS INCLUDED IN THESE DRAWINGS WITH PROJECT-SPECIFIC NOTES AND DETAILS.

ELECTRICAL SHEET INDEX

SHEET NUMBER	SHEET NAME
E0.01	ELECTRICAL LEGEND AND NOTES
E4.10A	ELECTRICAL ROOF DEMOLITION PLAN - ADMINISTRATION BLDG
E4.10B	ELECTRICAL ROOF DEMOLITION PLAN - CLASSROOM BLDG
E4.11A	ELECTRICAL ROOF PLAN - ADMINISTRATION BLDG
E4.11B	ELECTRICAL ROOF PLAN - CLASSROOM BLDG



1 / E0.01 TYPICAL MULTI ZONE WIRING DIAGRAM

SCALE: NONE

AGENCY APPROVAL:

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EDIT THIS FAMILY, AND PLACE A PROJECT IMAGE HERE. IT WILL UPDATE ALL TITLEBLOCKS AUTOMATICALLY.

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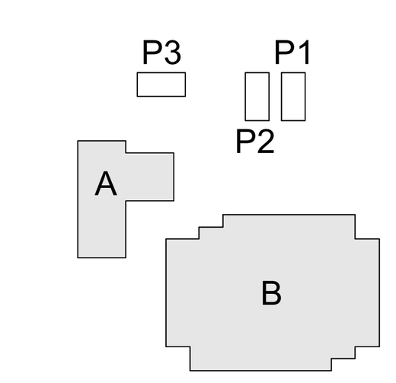
KEYNOTES

NOTES

capital engineering
RANCHO CORDOVA, CALIFORNIA
XX - XX/XX/XX — PM - DESIGN TEAM
230527.00 — PROJECT NO.
REGISTERED PROFESSIONAL ENGINEER NATHAN A. HEARN No. E 23927 3-31-2024 ELECTRICAL STATE OF CALIFORNIA

KEY PLAN:



FACILITY:

8405 TAM O'SHANTER DR.
STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

ELECTRICAL LEGEND AND NOTES

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

E0.01

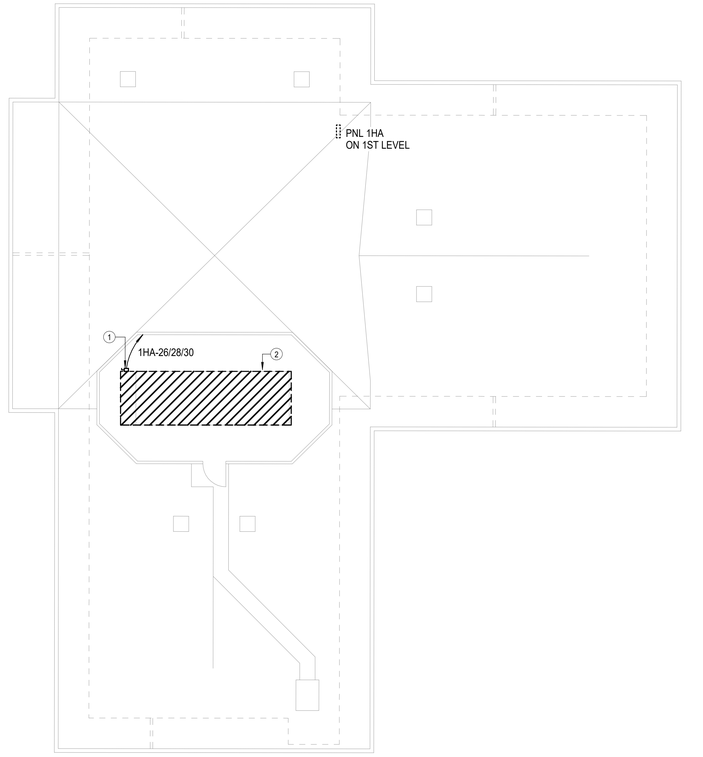
PLEASE RECYCLE

THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG ON ANSI D SHEETS ORIGINAL LARGE SCALES

KEYNOTES

1 DISCONNECT AND REMOVE (E) DISCONNECT SWITCH. PROTECT EXISTING BRANCH CIRCUIT CONDUIT AND WIRING TO BE REUSED IN THE RENOVATION PLAN. SEE RENOVATION PLAN FOR MORE INFORMATION.

2 EXISTING DUCT SMOKE DETECTOR TO BE REMOVED AND REINSTALLED. PRESERVE EXISTING FIRE ALARM CONNECTION TO BE REUSED ON THE RENOVATION PLAN.



1 / E4.10A ELECTRICAL ROOF DEMOLITION PLAN - ADMINISTRATION BLDG

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

AGENCY APPROVAL:

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LICENSED ARCHITECT JEFFREY ALAN GRAU C-14648 8/31/2025 RENEWAL STATE OF CALIFORNIA

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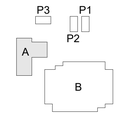
REGISTERED PROFESSIONAL ENGINEER NATHAN A. HEBEN No. E 23927 3-31-2024 ELECTRICAL STATE OF CALIFORNIA

KEY PLAN:



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PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

ELECTRICAL ROOF DEMOLITION PLAN - ADMINISTRATION BLDG

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

E4.10A

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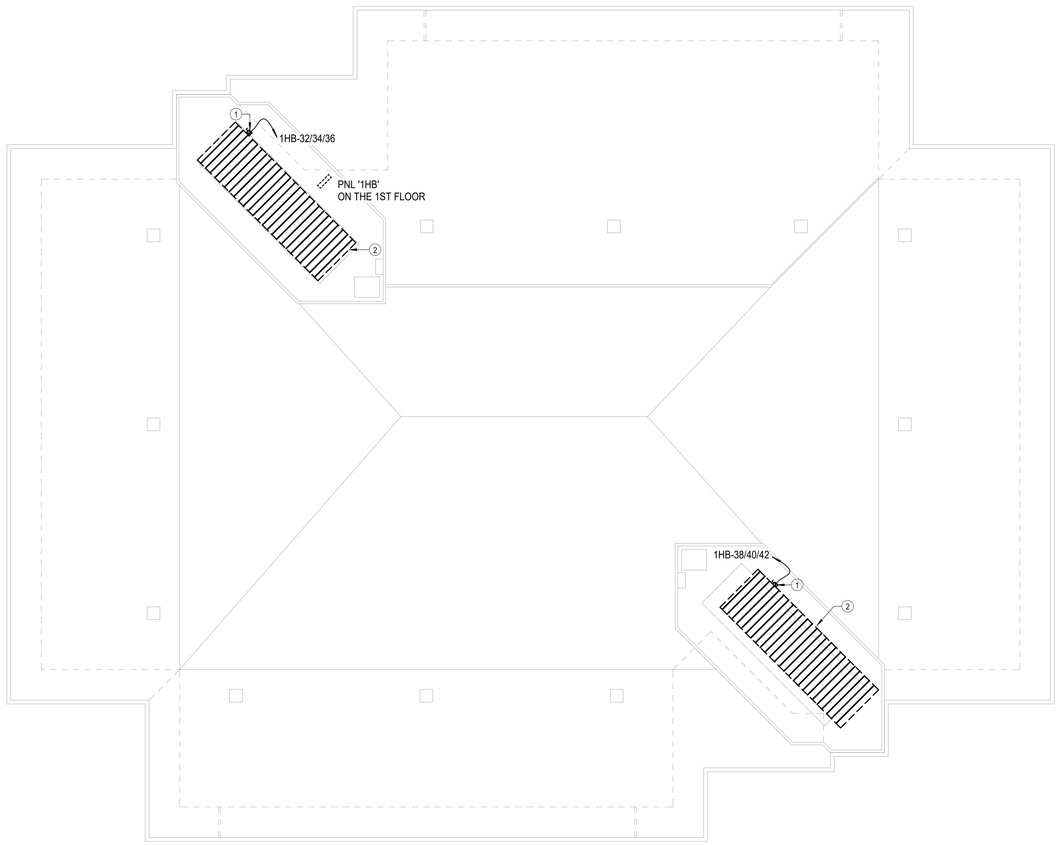
THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG ON ORIGINAL 24X36 SHEETS. IF NOT, ADJUST SCALE ACCORDINGLY

KEYNOTES

1 DISCONNECT AND REMOVE (E) DISCONNECT SWITCH. PROTECT EXISTING BRANCH CIRCUIT CONDUIT AND WIRING TO BE REUSED IN THE RENOVATION PLAN. SEE RENOVATION PLAN FOR MORE INFORMATION.

2 EXISTING DUCT SMOKE DETECTOR TO BE REMOVED AND REINSTALLED. PRESERVE EXISTING FIRE ALARM CONNECTION TO BE REUSED ON THE RENOVATION PLAN.



1 E4.10B ELECTRICAL ROOF DEMOLITION PLAN - CLASSROOM BLDG

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

AGENCY APPROVAL:

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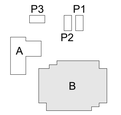
KEY PLAN:



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PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

ELECTRICAL ROOF DEMOLITION PLAN - CLASSROOM BLDG

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

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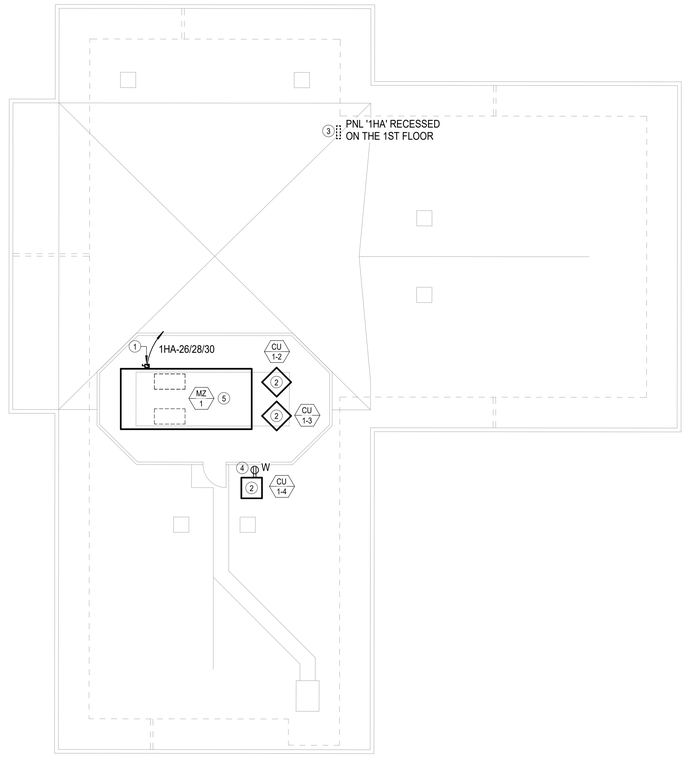
THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG ON ARCH D SHEETS ORIGINALLY PAGE SIZED

KEYNOTES

1 INTERCEPT AND EXTEND (E) BRANCH CIRCUIT CONDUIT AND CONDUCTORS TO THE MULTI ZONE AIR HANDLER INTEGRAL PRIMARY DISCONNECT SWITCH.
2 PROVIDE POWER CONNECTION FROM EACH CONDENSING UNIT TO THE FACTORY SUPPLIED DISCONNECT SWITCH. USE 3/4" C - 3#12, #12G. SEE DETAIL 5 ON MECHANICAL SHEET M5.03 FOR PIPE SUPPORT ON ROOF - MOUNTING DETAIL. REFER TO DETAIL 1 ON SHEET E0.01 FOR ADDITIONAL INFORMATION.
3 REPLACE EXISTING 90A/3P CIRCUIT BREAKER FOR AC-1 ON CIRCUIT 26/28/30 WITH NEW 45A/3P FOR MZ-1
4 CONNECT NEW SERVICE RECEPTACLE TO THE LOAD SIDE FACTORY SUPPLIED GFCI SERVICE RECEPTACLE PROVIDED BY THE MZ MANUFACTURER. USE 1/2"C - 2#12, #12G.
5 REINSTALL PRESERVED DUCT SMOKE DETECTOR. RECONNECT TO THE PRESERVED CONNECTION FROM THE EXISTING FIRE ALARM SYSTEM. CONNECT TO THE NEW MULTI-ZONE UNIT FOR AUTOMATIC SHUTOFF.



1 / E4.11A ELECTRICAL ROOF PLAN - ADMINISTRATION BLDG
SCALE: 1/8" = 1'-0"

AGENCY APPROVAL:

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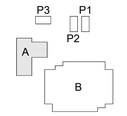
230527.00 PROJECT NO.

REGISTERED PROFESSIONAL ENGINEER
NATHAN A. HEBEN
No. E 23927
3-31-2024
ELECTRICAL
STATE OF CALIFORNIA

KEY PLAN:



FACILITY:

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STOCKTON, CA 95210

PROJECT:

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SHEET NAME:

ELECTRICAL ROOF PLAN - ADMINISTRATION BLDG

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

E4.11A

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KEYNOTES

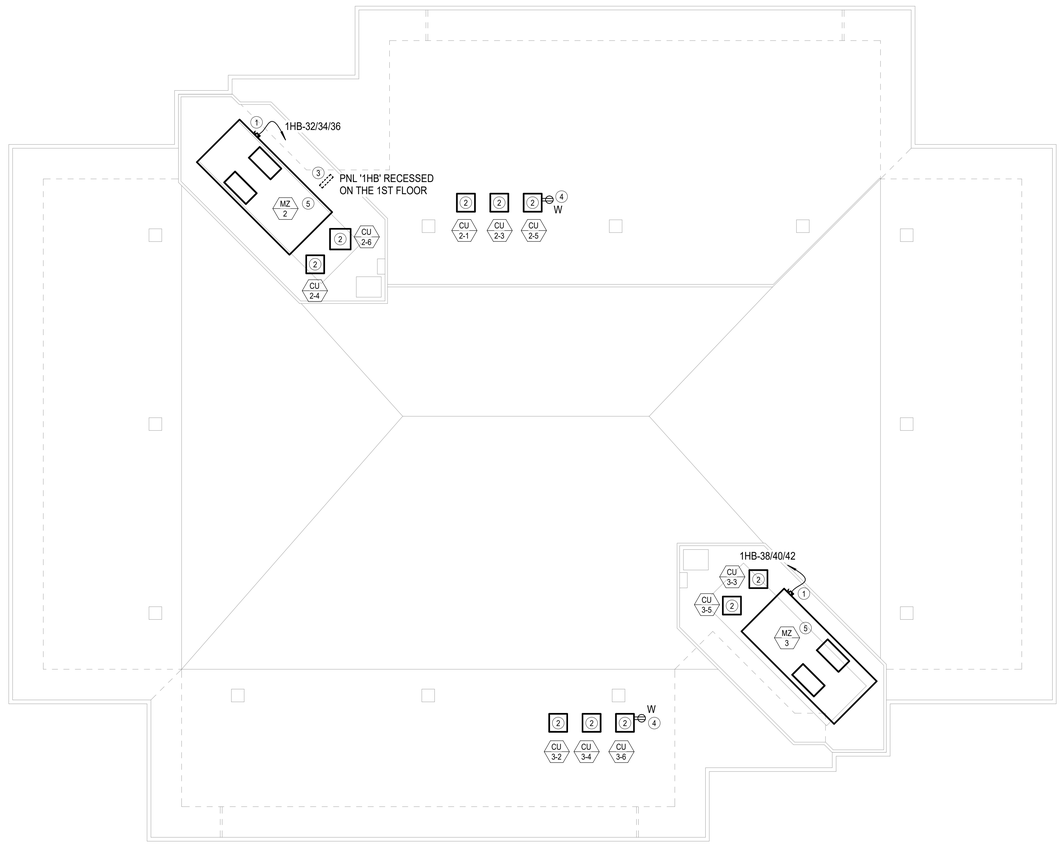
1 INTERCEPT AND EXTEND (E) BRANCH CIRCUIT CONDUIT AND CONDUCTORS TO THE MULTI ZONE AIR HANDLER INTEGRAL PRIMARY DISCONNECT SWITCH.

2 PROVIDE POWER CONNECTION FROM EACH CONDENSING UNIT TO THE FACTORY SUPPLIED DISCONNECT SWITCH. USE 3/4" C - 3#12, #12G. SEE DETAIL 5 ON MECHANICAL SHEET M5.03 FOR PIPE SUPPORT ON ROOF - MOUNTING DETAIL. REFER TO DETAIL 1 ON SHEET E0.01 FOR ADDITIONAL INFORMATION.

3 REPLACE EXISTING 90A/3P CIRCUIT BREAKER WITH NEW 60A/3P. EQUIPMENT AND CIRCUIT INFORMATION AS FOLLOWS:
* AC-2 => MZ-2 ; 1HB-32/34/36
* AC-3 => MZ-3 ; 1HB-38/40/42

4 CONNECT NEW SERVICE RECEPTACLE TO THE LOAD SIDE FACTORY SUPPLIED GFCI SERVICE RECEPTACLE PROVIDED BY THE MZ MANUFACTURER. USE 1/2"C - 2#12, #12G.

5 REINSTALL PRESERVED DUCT SMOKE DETECTOR. RECONNECT TO THE PRESERVED CONNECTION FROM THE EXISTING FIRE ALARM SYSTEM. CONNECT TO THE NEW MULTI-ZONE UNIT FOR AUTOMATIC SHUTOFF.



1 E4.11B ELECTRICAL ROOF PLAN - CLASSROOM BLDG

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

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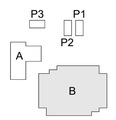
REGISTERED PROFESSIONAL ENGINEER NATHAN A. HEBRON No. E 23927 3-31-2024 ELECTRICAL STATE OF CALIFORNIA

KEY PLAN:



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STOCKTON, CA 95210

PROJECT:

LODI USD VICTOR ES HVAC REPLACEMENT

SHEET NAME:

ELECTRICAL ROOF PLAN - CLASSROOM BLDG

CONSTRUCTION DOCUMENTS

DATE: 10.03.2023

SHEET:

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