BARRANCA ELEMENTARY SCHOOL 727 S. BARRANCA AVENUE. COVINA, CA 91723 COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT **100% CONSTRUCTION DOCUMENTS** 05/05/2022 DLR GROUP PROJECT NUMBER: 75-22605-00

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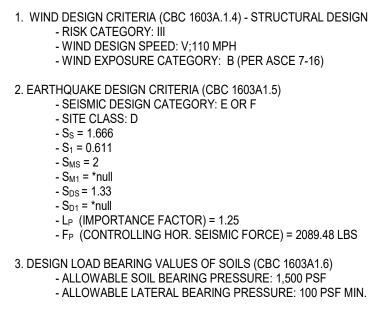
.GENERAL.

VICINITY MAP



THE DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEETS THIS DRAWING, PAGE OF SPECIFICATION/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)) ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET I FIND THAT: FOR EACH DISCIPLINE (SEE SHEET INDEX FOR LIST OF DISCIPLINES) THIS DRAWING OR PAGE ARE IN GENERAL CONFORMANCE WITH ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN, THE PROJECT DESIGN INTENT, AND HAVE BEEN COORDINATED WITH THE HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS. PROJECT PLANS AND SPECIFICATIONS. 05/05/2022 DATE SIGNATURE ARCHITECT OR ENGINEER DESIGNATED TO BE IN ARCHITECT OR ENGINEER DELEGATED GENERAL RESPONSIBLE CHARGE RESPONSIBILITY FOR THIS PORTION OF THE JESSE MILLER PRINT NAME PRINT NAME C-32306 10/31/2023 LICENSE NUMBER EXPIRATION DATE LICENSE NUMBER EXPIRATION DATE

DESIGN ANALYSIS DATA



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Statement of General Conformance

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

SCOPE OF WORK

SCOPE OF WORK SHALL BE AS FOLLOWS

IN ADDITIONAL REMOVAL AND REPLACEMENT OF EXISTING MPR UNIT WITH NEW HVAC SYSTEMS. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL SCOPE AS REQUIRED.

APPLICABLE CODES

| 2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR 2019 CAFILORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR |
|--|
| (2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2019 CALIFORNIA AMENDMENTS) |
| 2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR |
| (2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS) |
| 2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR |
| (2018 IAPMO UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS) |
| 2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 TITLE CCR |
| (2018 IAPMO UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS) |
| 2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR |
| 2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR |
| (2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS) |
| 2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR |
| (2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS) |
| 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL GREEN), PART 11, TITLE 24 CCR |
| 2019 CALIFORNIA REFERENCED STANDARDS CODE (CEBC), PART 12, TITLE 24 CCR |
| TITLE 19 CCR, PUBLIC SAFETY, STATE FIR MARSHAL REGULATIONS |
| 2016 ASME A17.1/CSA B44-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS (PER 2019 CBC PART 2 CH 35) |
| NOTE: CAL/OSHA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY |
| ADOPTION |
| 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN |
| |

| NFPA 13 NFPA 14 NFPA 17 NFPA 17A NFPA 20 NFPA 22 NFPA 24 | | STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS STANDARD FOR INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION |
|--|-------------|---|
| NFPA 72 NFPA 80 NFPA 2001 UL 300 UL 464 | - | NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED) STANDARD FOR FIRE DOORS AND OTHER OPENINGS PROTECTIVE STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA AMENDED) STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES |
| UL 521 UL 1971 ICC 300 | - - - | STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS |

DSA GENERAL NOTES

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

2016 ADDITION

2013 ADDITION 2016 ADDITION

2017 ADDITION

2017 ADDITION 2013 ADDITION

(CA AMENDED)

2016 ADDITION 2016 ADDITION

2016 ADDITION

2015 ADDITION

2003 ADDITION

1999 ADDITION

2002 (R2010) 2017 ADDITION

2005 (R2010)



75-22605-00 DSA A#03-122224 DSA File #: 19-25 COVER SHEET

G0.[^]

GENERAL ABBREVIATIONS

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

ARCHITECTUAL ABBREVIATIONS

A/E

AF

AD.IT

ADMIN

ALUM

APC

ASPH

AUTO

AVG

AWP

B.O

BD

BCS

BLK

BLKG

BM(S)

BOT

BRDG

BRG

BRKT

BTWN

BT

CAB

CBD

CER

CFCI

CFMF

CLO

CLR

CMU

COL

COM COMB

COMM

COMPR

CONFIG

CORR

CS CSTJ

СТ

CTG

CTIG

CU

CU

CV

CY

CYL

DBL

DEPR

DEPT

DIAG

DR

DSN

DW

DWR

EB

EE

EEW

EFF

ELAS

ELEV

EMER

ENCL

ENTR

ERF

EUI

EW

EWC

EXP

EXP

FΟ

FIG

FIX

FLASH

FLEX

FLG

FLM

FO

FOC

FOF

FOM

FOS

FOW

FP

FSS

FTG

FVC

FWC

GAL GALV

GB

GEN

GFA

GD

FLUOR

EJ

EEWS

DWL(S)

DPFG

DET

DC

CSWK

CONF

CF

BLKHD

В

| Аг | CONTECTUAL ADDRE |
|----|---|
| | ARCHITECT/ENGINEER AIR BARRIER |
| | ASBESTOS |
| | ADA ACCESSIBLE ACRYLIC |
| | ACOUSTIC CEILING TILE |
| | ACCESS DOOR ADJUSTABLE |
| | ADJACENT ADMINISTRATION |
| | AUTOMATED EXTERNAL DEFIBRILLATORS |
| | ALUMINUM |
| | ACCESS PANEL ACOUSTIC PANEL CEILING |
| | ASPHALT |
| | AUTOMATIC AVERAGE |
| | ACOUSTIC WALL PANEL |
| | BOTTOM OF |
| | BABY CHANGING STATION BOARD |
| | BLOCK |
| | BLOCKING BULKHEAD |
| | BEAM(S) |
| | BOTTOM BRIDGING |
| | BEARING BRACKET |
| | BATHTUB |
| | BETWEEN |
| | CABINET CHALKBOARD |
| | CERAMIC |
| | CUBIC FEET CONTRACTOR FURNISHED CONTRACTOR INSTALLED |
| | COLD-FORMED METAL FRAMING |
| | CLEAR FLOAT GLASS CAST IRON |
| | CLEAR INSULATING GLASS CAST IN PLACE |
| | CONTROL JOINT |
| | CONTROL JOINT ABOVE CLOSET |
| | CLEAR CONCRETE MASONRY UNIT |
| | COLUMN |
| | COMMON COMBINATION |
| | COMMUNICATIONS COMPRESSIBLE |
| | CONFERENCE |
| | CONFIGURATION |
| | COVER PLATE |
| | CARPET CHAIR RAIL |
| | COUNTERSINK CONSTRUCTION JOINT |
| | CASEWORK |
| | CERAMIC TILE CLEAR TEMPERED FLOAT GLASS |
| | CLEAR TEMPERED INSULATING GLASS |
| | |
| | CONDOM VENDOR CUBIC YARD |
| | CYLINDER |
| | DECIBEL DOUBLE |
| | DUST COLLECTOR |
| | DEPRESS(ION)(ED) DEPARTMENT |
| | DETENTION |
| | DRINKING FOUNTAIN DOOR GRILLE |
| | DIAGONAL DAMPROOFING |
| | DOOR |
| | DOWNSPOUT NOZZLE DISHWASHER |
| | DOWEL(S) DRAWER |
| | |
| | EXPANSION BOLT EACH END |
| | EMERGENCY EYE WASH EMERGENCY EYE WASH SHOWER |
| | EFFICIENCY |
| | EXPANSION JOINT ELASTOMERIC |
| | ELEVATOR EMERGENCY |
| | ENCLOSURE ENTRANCE |
| | EPOXY RESIN FLOORING |
| | ENERGY USE INTENSITY EACH WAY |
| | ELECTRIC WATER COOLER EXPANSION |
| | EXPOSED |
| | FABRIC |
| | FACE OF FABRICATE(D) |
| | FACE BRICK FLOOR DRAIN |
| | FOUNDATION |
| | FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET |
| | FINISH FLOOR FIRE HYDRANT |
| | FIRE HOSE CABINET FIGURE |
| | FIXTURE |
| | FLASHING FLEXIBLE |
| | FLOORING FULL LENGTH MIRROR |
| | FLUORESCENT |
| | FINISH OPENING FACE OF CONCRETE |
| | FACE OF FINISH FACE OF MASONRY |
| | FACE OF STUD FACE OF WALL |
| | FIREPROOFING |
| | FIRE RESISTANT FIBERGLASS REINFORCED PANEL |
| | FIRE RESISTANCE TREATED FLOOR SINK |
| | FOLDING SHOWER SEAT |
| | FOOTING FIRE VALVE CABINET |
| | FABRIC WALL COVERING |
| | GROUT |
| | GAUGE GALLON |
| | GALVANIZED GRAB BAR |
| | GARBAGE DISPOSAL GENERAL |
| | GENERAL GROSS FLOOR AREA |
| | |

| GLUE LAMINATED GLASS GUARANTEED MAXIMUM PRICE GUARD RAIL | SD SECY SF SG |
|--|--|
| GRADE GALVANIZED RIGID STEEL | SGL SH |
| GYPSUM WALL BOARD GYPSUM | SHM SLNT |
| HOLLOW CORE HAND DRYER HIGH DENSITY FIBERBOARD HEADER HARDWOOD HARDWARE HOLLOW METAL HOUR | SM SND SNV SPL SQ SS SSA SSS SST |
| HANDRAIL | ST |
| HARDWARE SET HOLLOW STRUCTURAL SHAPE HEATING VENTILATING AND AIR CONDITIONING | ST STAG'D STC STGR |
| IN ACCORDANCE WITH INSIDE DIAMETER INSIDE FACE | SUBFL SURF SUSP |
| INSULATED INFILL PANEL GLASS ISOLATION JOINT IN JOIST SPACE | SVF T |
| INCLUDE(ING) INSULATION | T&G T.O. TAN |
| JANITOR JOIST BEARING ELEVATION JUNCTION | TB TBD TCP |
| JOINT FILLER BOARD | TERR |
| JOIST JOINT | TFG TG TH |
| KEYED CONSTRUCTION JOINT KNOCKDOWN | THK TI |
| KITCHEN HOOD KITCHEN | tig TMR Toil |
| ANGLE LABORATORY | TOP TRANS |
| LAMINATED LAVATORY | TT TTD |
| LUMBER | TTG |
| LOADING LINEAR FOOT | TTIG TW |
| LENGTH (LONG) LAMINATED GLASS | UL |
| LINEAR | UR |
| LINOLEUM | US UTIL |
| LOCATION | |
| LONGITUDINAL LIFE SAFETY CODE | VB VB |
| LIGHTING LOUVER | VCB VF |
| LUXURY VINYL TILE | VOC VOL |
| MAGNETIC MAINTENANCE | VP VT |
| MANUAL MASONRY | VWC |
| MASONRY MATERIAL | W |
| MOP BASIN MARKER BOARD | WB WC |
| MOP/BROOM HOLDER | WC |
| MEDICINE CABINET MEMBRANE | WCL WD |
| MANHOLE | WDF |
| MIRROR WITH SHELF MOUNTED | WDW WG |
| MOUNTING | WOM |
| MULLION | WOM WR |
| NOISE CRITERIA NATIONAL FIRE PROTECTION ASSOCIATION | WRB WW |
| NOMINAL FIRE PROTECTION ASSOCIATION NOMINAL | WWF |
| OUT TO OUT OVERALL | YD |

OVERALL OWNER FURNISHED CONTRACTOR INSTALLED

OFFICE

OWNER FURNISHED OWNER INSTALLED OPPOSITE HAND

OVERFLOW

OPENING(S) OPERATIONAL SAFETY AND HEALTH ADMINISTRATION OPEN TO BELOW

PAINT PANIC BOLT PARTICLE BOARD PRECAST CONCRETE PAPER CUP DISPENSER PORCELAIN CERAMIC TILE PANIC DEVICE PERFORATED PERPENDICULAR PATTERN GLASS PORTABLE INSTRUMENT CONNECTION PATTERN INSULATING GLASS PLATE PROPERTY LINE PLASTIC LAMINATE PLASTIC LAMINATE PLUMBING PAIR PREFABRICATED PROJECT(OR) (ION) PROJECTION SCREEN POINT POINT OF TANGENCY

PAPER TOWEL DISPENSER COMBINATION TOWEL DISPENSER/RECEPTACLE PARTITION POLYVINYL CHLORIDE SOUND POWER LEVEL QUARRY TILE

QUARTER ROUND

RISER RADIUS RUBBER BASE REMOTE CONTROL REFLECTED CEILING PLAN ROOF DRAIN REFERENCE REFLECTED REMOVABLE RESILIENT RESILIENT FLOORING RUBBER FLOOR RECESSED FLOOR MAT ROBE HOOK ROUGH IN AND CONNECT

SINK SPRAYED ACOUSTIC TREATMENT SOUND ABSORBING WALL UNITS SPLASH BLOCK SOLID CORE SHOWER CURTAIN SEAT COVER DISPENSER SHOWER CURTAIN HOOK SHOWER CURTAIN ROD STRUCTURAL CLAY TILE

SCT

SPANDREL GLASS SINGLE SHOWER SECURITY HOLLOW METAL SEALANT SHEET METAL SANITARY NAPKIN DISPOSAL SANITARY NAPKIN VENDOR SOUND PRESSURE LEVEL SQUARE SOLID SURFACE STORM SHELTER AREA STAINLESS STEEL SHELF STAINLESS STEEL STONE STAIR STAGGERED SOUND TRANSMISSION CLASS STRINGER SUBFLOOR SURFACE SUSPENDED SHEET VINYL FLOORING TREAD TONGUE AND GROOVE TOP OF TANGENT TOWEL BAR TACK BOARD TOILET COMPARTMENT PARTITION TERRAZZO TINTED FLOAT GLASS TEMPERED GLASS THRESHOLD THICK(NESS) TENANT IMPROVEMENT TINTED INSULATING GLASS TILT MIRROR UNIT TOILET TOP OF PAVING TRANSVERSE TERRAZZO TILE TOILET TISSUE DISPENSER TINTED TEMPERED FLOAT GLASS TINTED TEMPERED INSULATING GLASS TACK WALL UNDERWRITERS LABORATORIES URINAL UTILITY SHELF UTILITY VAPOR BARRIER VINYL BASE VENTED COVE BASE VINYL FLOOR VOLITILE ORGANIC COMPOUND VOLUME VENEER PLASTER VINYL TILE VINYL WALL COVERING WIDE WALL BASE WATER CLOSET WALL COVERING WATER CLOSET/LAVATORY COMBINATION WOOD WOOD FLOORING

С

SOAP DISPENSER

SECRETARY

SQUARE FEET

WINDOW POLISHED WIRE GLASS WROUGHT IRON WALK OFF MAT WASTE RECEPTACLE WEATHER RESISTANT BARRIER WARM WHITE WELDED WIRE FABRIC YARD

GENERAL SYMBOLS

| | — DETAIL NUMBER | | |
|----------------------|---|--------------|-----------------------------------|
| (?) | CROSS REFERENCE | | EARTH |
| 2112 | — SHEET NUMBER | ပ္လံု ္ ္လံု | GRAVEL |
| XX (A4.XX) | BUILDING ELEVATION | | SAND |
| XX | | 2 A A | CONCRETE |
| XX A12.X XX | INTERIOR ELEVATION | | PRECAST CONCRETE |
| XX | | | STEEL |
| · | SIMILAR OR TYPICAL REFERENCE | | STONE |
| ? SIM | | | CONCRETE MASONRY UNIT |
| ??? | WALL SECTION | | BRICK VENEER |
| ? | DETAIL REFERENCE | | STEEL (LARGE SCALE) |
| 777 | | | GYM FLOOR |
| \land \land | | | WOOD (CONTINUOUS BLOCKING) |
| <u> </u> | BUILDING SECTION | | WOOD (NON-CONTINUOUS BLOCKING) |
| (\mathbf{x}) | SHEET NOTE | | WOOD (TRIM/FINISH) |
| \bigcirc | | /// · · · · | GLASS |
| ? | REFERENCE KEYNOTE | | SHINGLES |
| | COLUMN GRID LINE | | PLYWOOD (LARGE SCALE) |
| (?) | | | GYPSUM WALL BOARD |
| ROOM NAME | ROOM NUMBER/NAME | | BLANKET INSULATION |
| xxx-xx | REVISION NUMBER | | RIGID INSULATION |
| | | | SPRAY FOAM INSULATION |
| LEVEL XX XXX'-XX" | LEVEL ELEVATION | | MINERAL WOOL INSULATION |
| TYP FF EL= | FINISH FLOOR | | PROTECTION BOARD |
| 100'-0" | ELEVATION | | CARPET (LARGE SCALE) |
| | | | ACOUSTIC TILE (LARGE SCALE) |
| <u> </u> | SPOT ELEVATION | | TILE (LARGE SCALE) |
| | | | |

SITE SYMBOLS

| | PROPERTY LINE | | AREA INLET |
|-------------------------------|----------------------------------|----------------------|-------------------------|
| | LOT LINE | 0 | CURB INLET |
| | EASMENT LINE | • | MANHOLE |
| | BUILDING LINE, EXISTING | (| HEAD WALL |
| | BUILDING LINE, NEW W/DOOR | • | FLARED END |
| 100 | OPENING AND STRUCTURAL STOOP | •CO | CLEAN OUT |
| 100 | PRIMARY CONTOUR, EXISTING |] | CAP |
| - 99 - | PRIMARY CONTOUR, NEW | | THRUST BLOCK |
| 99 | SECONDARY CONTOUR, EXISTING | M | VALVE |
| | SECONDARY CONTOUR, NEW | PIV | POST INDICATOR VALVE |
| ■ 1% SLOPE DOWN | SLOPE, PAVEMENT | | REDUCER |
| \sim | DRAINAGE DITCH OR SWALE | ¥FH | FIRE HYDRANT |
| | STREET CENTERLINE | ŢFH ¢ | POWER POLE |
| | CURB, THICKENED EDGE | ,~ | LIGHT POLE |
| | CURB, EXISTING | | TELEPHONE MANHOLE |
| | CURB, NEW | | TELEPHONE BOX |
| | PAVING CONTRACTION JOINT | | SPRINKLER HEAD, 360° |
| KCJ | PAVING KEYED CONSTRUCTION JOINT | • | SPRINKLER HEAD, 270° |
| — <u> </u> | PAVING TIED CONSTRUCTION JOINT | • | |
| EJ | PAVING EXPANSION JOINT | 0 | SPRINKLER HEAD, 180° |
| -xx xx xx xx | FENCE, SECURITY | o ⊗ ^{QC} | SPRINKLER HEAD, 90° |
| - <u>x x x x</u> | FENCE, BARBED WIRE | | |
| -000 | FENCE, CHAIN LINK | Ø ^X " | TREE, EXISTING DECIDUOU |
| * * * * | FENCE, WOOD | \oslash^{X} | TREE, EXISTING CONIFER |
| | SEED LIMIT | | SHADE TREE |
| | SOD LIMIT | 2 mm | |
| | FOUNDATION DRAIN, NON-PERFORATED | Entry Mary | ORNAMENTAL TREE |
| FD | FOUNDATION DRAIN, PERFORATED | | DECIDUOUS TREE |
| — — — PSD — — — | SUBDRAIN, PERFORATED | ~~\\\\\ _~_\ | |
| S | SANITARY SEWER | < <u>`</u> } | SHRUB |
| | FORCE MAIN | [] | CLIPPED SHRUB |
| W | WATER | | |
| | FIRE | | |
| G | GAS | | |
| | HIGH PRESSURE STEAM | | |
| MPS | MEDIUM PRESSURE STEAM | | |
| LPS | LOW PRESSURE STEAM | | |
| | UNDERGROUND ELEC/TELEPHONE | | |
| — - — OHP— - — | OVERHEAD POWER | | |
| — | LAWN SPRINKLER HOT LINE | | |
| | LAWN SPRINKLER HOT LINE | | |
| LAT | | | |
| | | | |

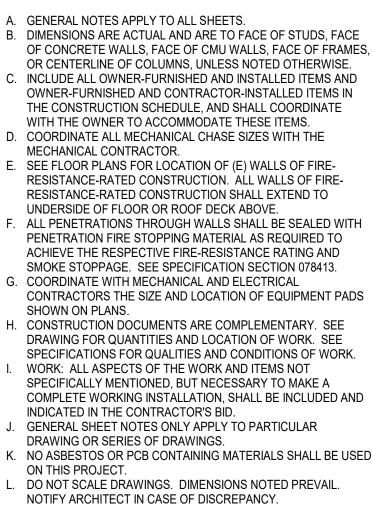
ARCHITECTURAL SYMBOLS

| CASEWORK ELEVATION |
|--|
| DOOR NUMBER |
| INTERIOR WINDOW NUMBER |
| EXTERIOR WINDOW / CURTAIN WALL NUMBER |
| WALL TYPE |
| CEILING TYPE |
| |

| |] | |
|-------|---|--|
| | | |
| | | |
| | | |
| /ALVE | | |
| | | |
| IOLE | | |
| 360° | | |
| 270° | | |

DUS

GENERAL NOTES



OF DISCREPANCY.

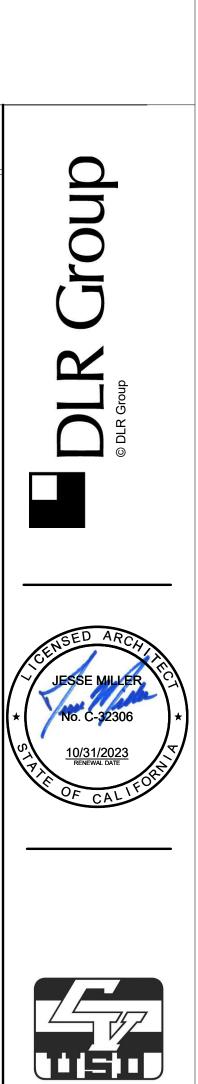
B. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU WALLS, FACE OF FRAMES, OR CENTERLINE OF COLUMNS, UNLESS NOTED OTHERWISE. C. INCLUDE ALL OWNER-FURNISHED AND INSTALLED ITEMS AND OWNER-FURNISHED AND CONTRACTOR-INSTALLED ITEMS IN THE CONSTRUCTION SCHEDULE, AND SHALL COORDINATE WITH THE OWNER TO ACCOMMODATE THESE ITEMS. D. COORDINATE ALL MECHANICAL CHASE SIZES WITH THE

RESISTANCE-RATED CONSTRUCTION. ALL WALLS OF FIRE-RESISTANCE-RATED CONSTRUCTION SHALL EXTEND TO F. ALL PENETRATIONS THROUGH WALLS SHALL BE SEALED WITH PENETRATION FIRE STOPPING MATERIAL AS REQUIRED TO ACHIEVE THE RESPECTIVE FIRE-RESISTANCE RATING AND SMOKE STOPPAGE. SEE SPECIFICATION SECTION 078413.

H. CONSTRUCTION DOCUMENTS ARE COMPLEMENTARY. SEE DRAWING FOR QUANTITIES AND LOCATION OF WORK. SEE SPECIFICATIONS FOR QUALITIES AND CONDITIONS OF WORK. WORK: ALL ASPECTS OF THE WORK AND ITEMS NOT SPECIFICALLY MENTIONED, BUT NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED AND

K. NO ASBESTOS OR PCB CONTAINING MATERIALS SHALL BE USED DO NOT SCALE DRAWINGS. DIMENSIONS NOTED PREVAIL.

M. HORIZONTAL AND VERTICAL DIMENSIONS ARE MINIMUM DIMENSIONS. CLEARANCES ARE GIVEN TO FINISH SURFACES. GC TO VERIFY ALL CLEARANCES. NOTIFY ARCHITECT IN CASE

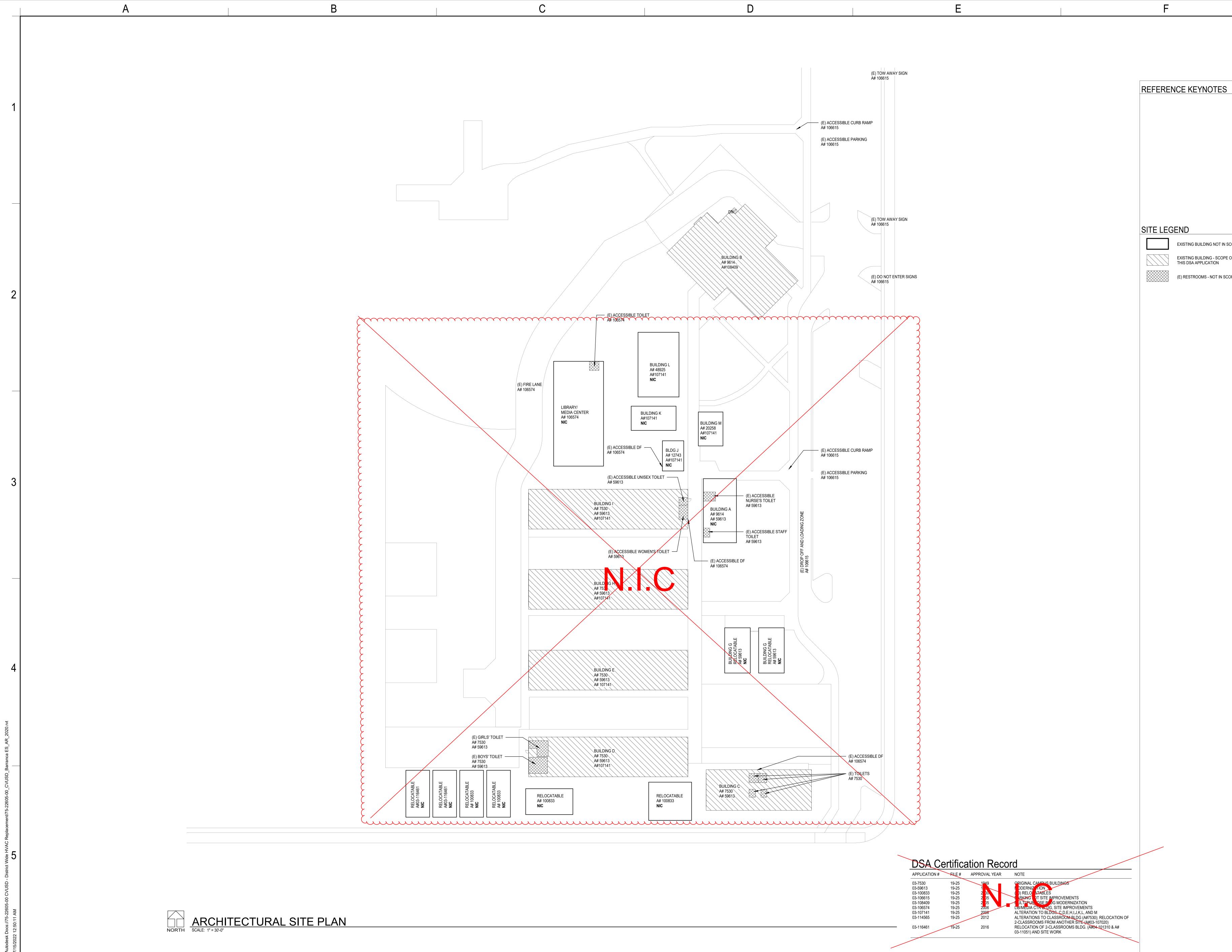


| BARRANCA ELEMENTARY SCHOOL | COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT | 727 S. BARRANCA AVENUE. COVINA, CA 91723 |
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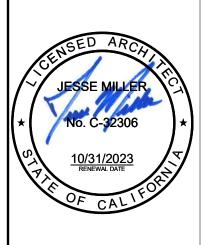
100% CONSTRUCTION DOCUMENTS 05/05/2022 REVISIONS

75-22605-00 DSA A#03-122224 DSA File #: 19-25 GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

G1.1



Group OLR





100% CONSTRUCTION DOCUMENTS 05/05/2022 REVISIONS

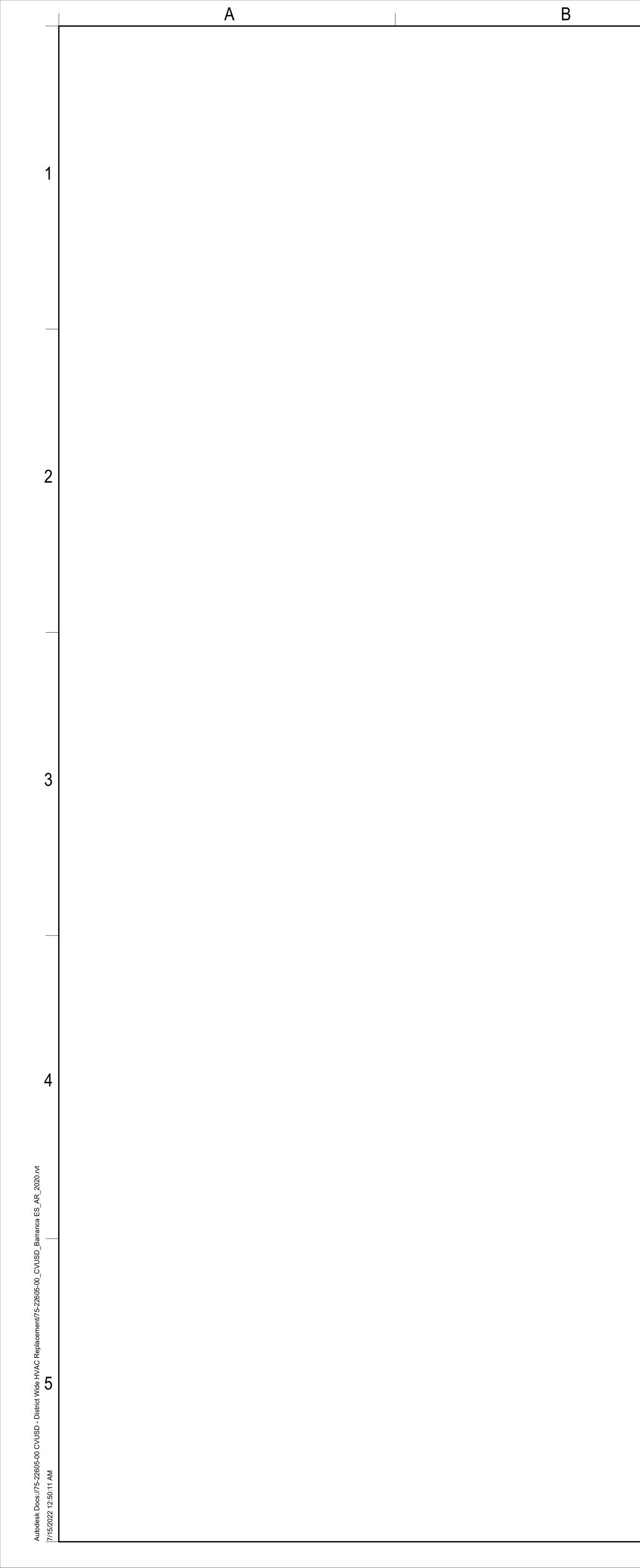
75-22605-00 DSA A#03-122224 DSA File #: 19-25 ARCHITECTURAL SITE PLAN

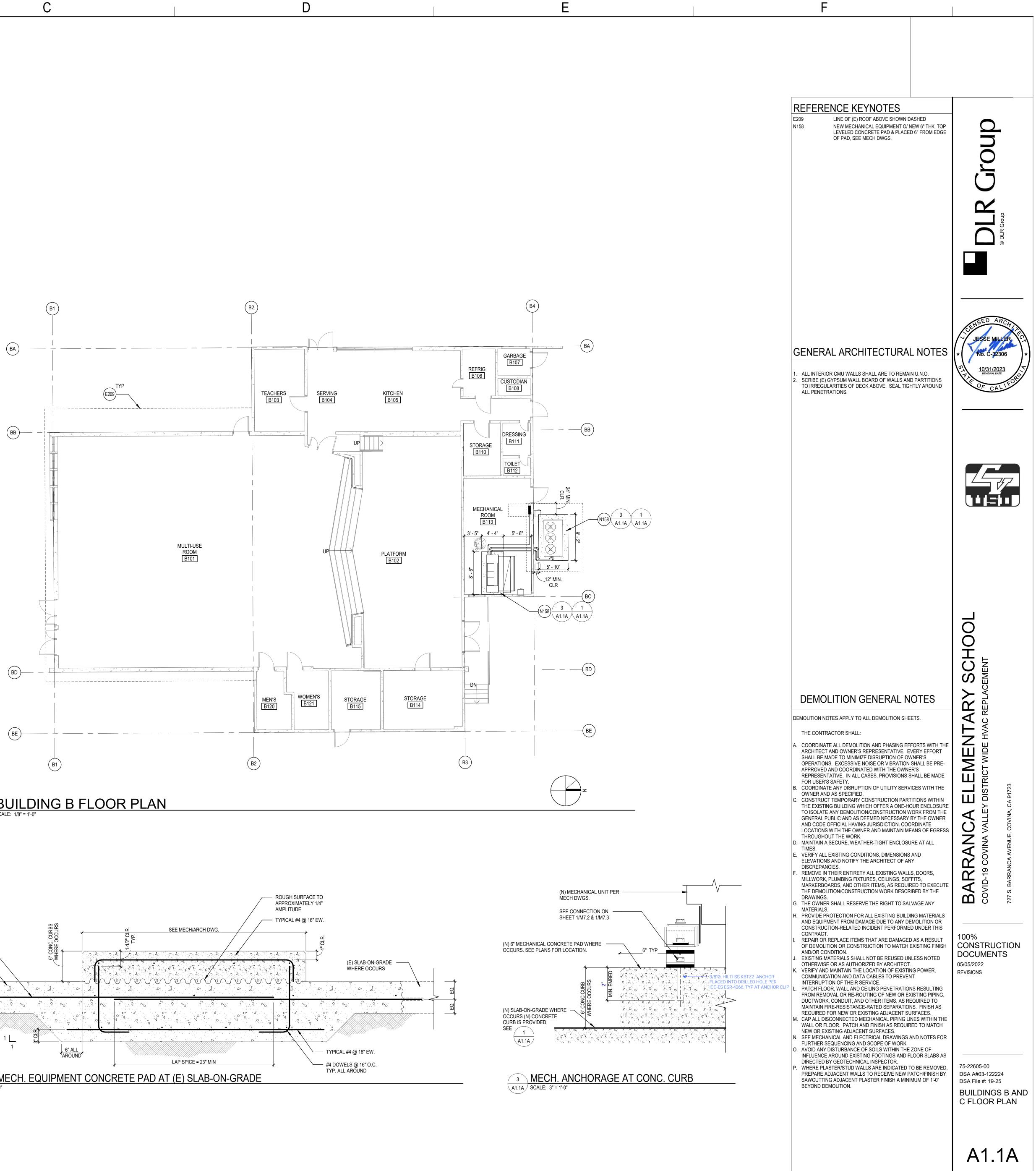
A1.1

EXISTING BUILDING NOT IN SCOPE

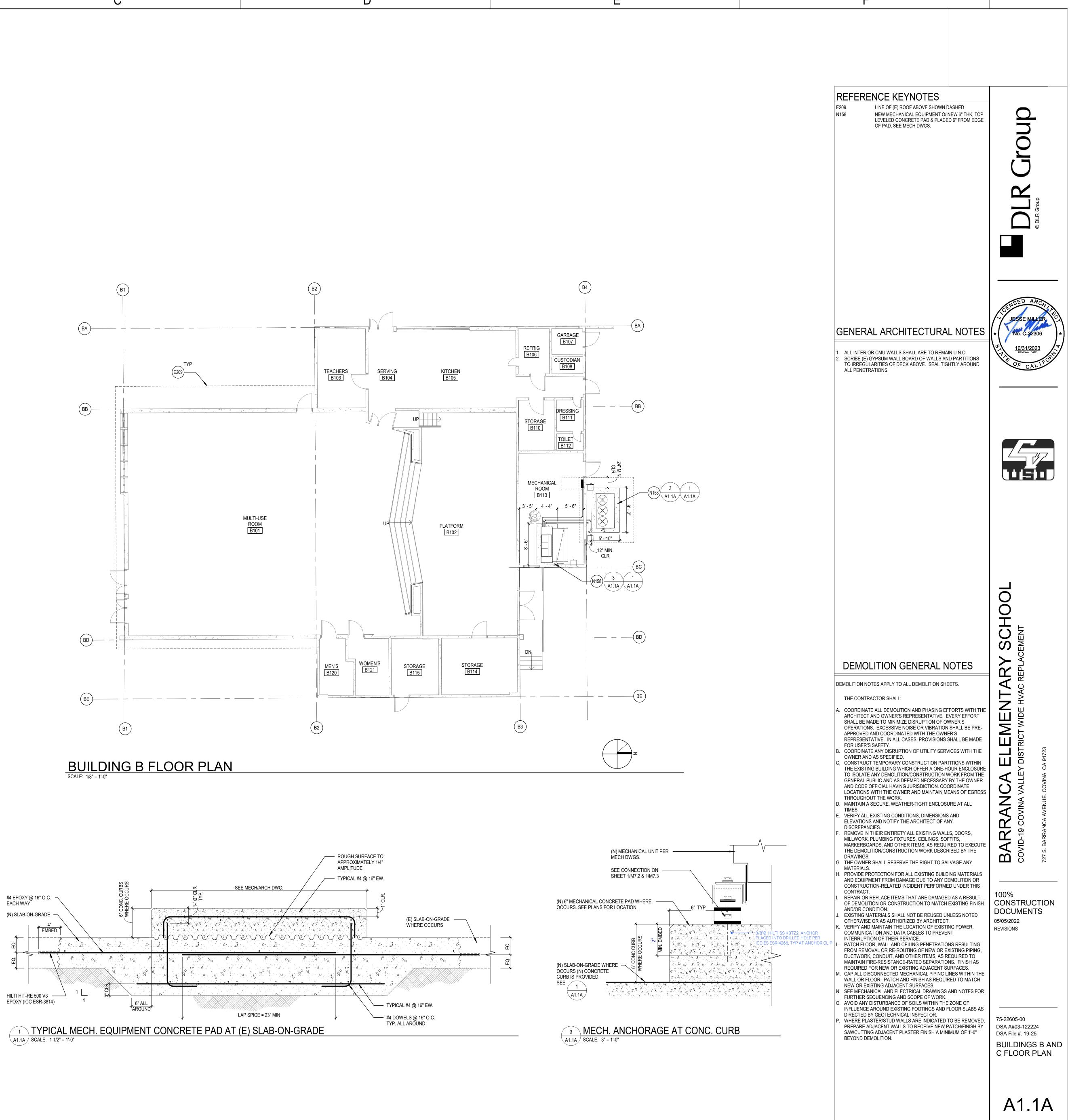
EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION

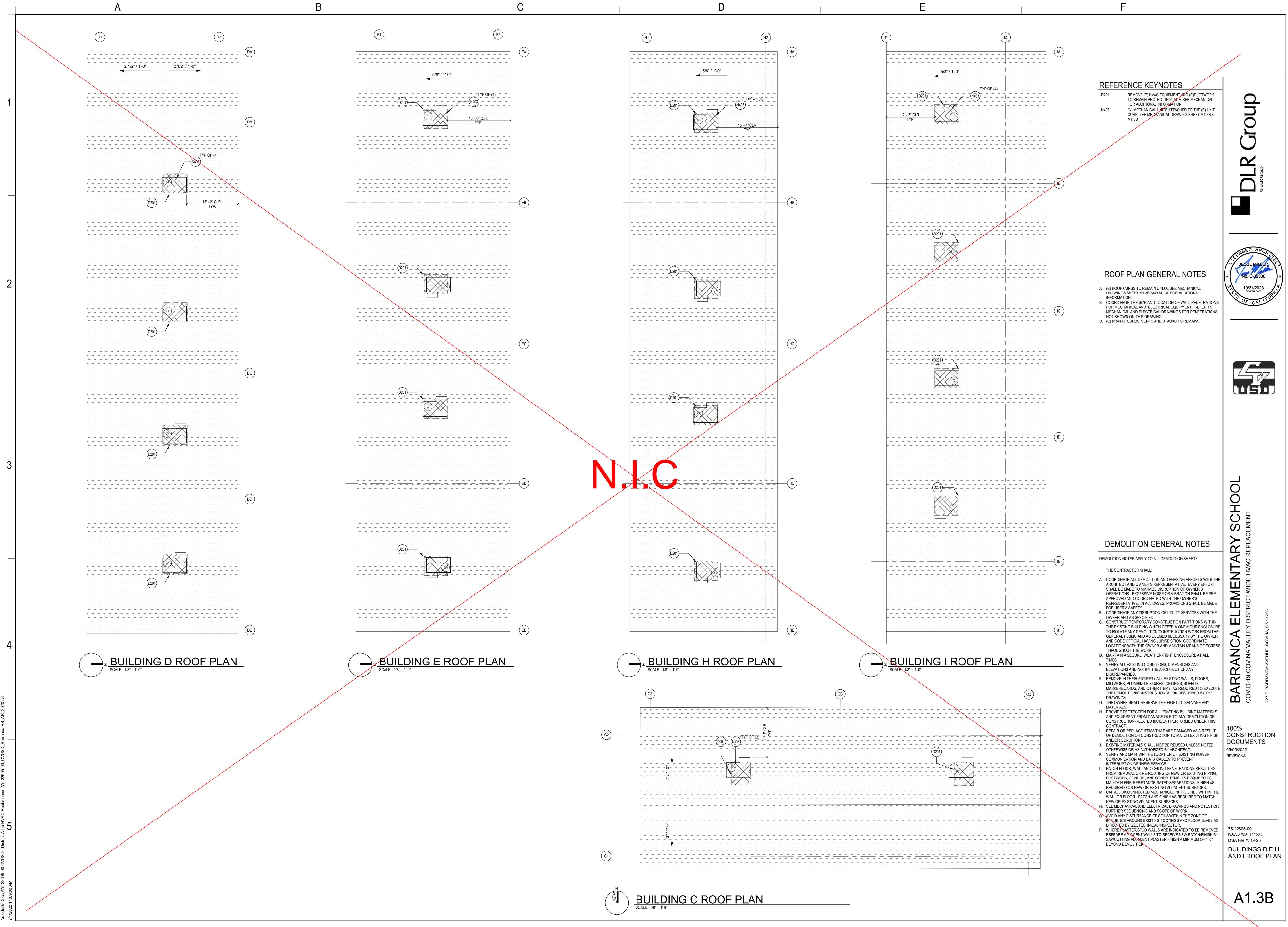
(E) RESTROOMS - NOT IN SCOPE











ABBREVIATIONS

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

ABBREVIATIONS

HIGH TEMPERATURE HOT WATER RETURN HIGH TEMPERATURE HOT WATER SUPPLY HUMIDIFIER HEATING VENTILATING UNIT HEATING VENTILATING AND AIR CONDITIONING HEATING WATER RETURN HEATING WATER SUPPLY HEAT EXCHANGER HERTZ (FREQUENCY) INDOOR AIR QUALITY IN ACCORDANCE WITH **INSIDE DIAMETER** INTAKE HOOD INSULATION KITCHEN HOOD LEAVING AIR TEMPERATURE LINEAR FOOT LENGTH (LONG) LINEAR LIQUID OXYGEN LIQUIFIED PETROLEUM GAS LOW PRESSURE STEAM RETURN LOW PRESSURE STEAM SUPPLY LINED TRANSFER DUCT LOUVER LEAVING MIXED AIR MAINTENANCE MANUAL MATERIAL MAKEUP AIR UNIT MANUAL AIR VENT THOUSAND BTU PER HOUR MANUFACTURING MOTORIZED LOUVER MEDIUM PRESSURE GAS MOUNTED

MOUNTING MEDIUM TEMP HOT WATER RETURN MEDIUM TEMP HOT WATER SUPPLY

NORMALLY CLOSED NORMALLY OPEN NATIONAL ELECTRIC CODE NATIONAL ELECTRICAL MANUFACTURERS ASSN. NUMBER NOMINAL **OPERATION AND MAINTENANCE** OUTSIDE AIR

OUTSIDE DIAMETER

PUMP PRESSURE/TEMPERATURE TEST PORT PUSH BUTTON POUNDS PER CUBIC FOOT PRESSURE DROP PERFORATED PERPENDICULAR PRESSURE GAUGE POINT OF INTERSECTION PRESSURE INDICATOR PLATE PLUMBING PNEUMATIC PANEL POINT OF CONNECTION PAIR POUNDS PER SQUARE INCH

POLYVINYL CHLORIDE POWER **RETURN AIR**

RADIUS RADIATOR RADIATED REFLECTED CEILING PLAN RECIPROCATING CHILLER UNIT REFRIGERANT DISCHARGE REFRIGERANT REGISTER

REMOVABLE RESPONSIVE RETURN FAN **RELATIVE HUMIDITY** REFLIEF HOOD REHEAT COIL **REFRIGERANT HOT GAS** REFRIGERANT LIQUID **REVOLUTIONS PER MINUTE** REFRIGERANT SUCTION

ROOF TOP UNIT

SMOKE DAMPER SUPPLY AIR SECURITY SMOKE DAMPER SMOKE DETECTOR SOAP DISPENSER STEAM EXHAUST VENT SINGLE STATIC PRESSURE (H2O) SURGE PROTECTION DEVICE SQUARE STAINLESS STEEL STORAGE SUSPENDED SOLENOID VALVE

WP

WΤ

THERMOSTAT TOP AND BOTTOM TRANSFER AIR TERMINAL BOX TEMPERATURE CONTROL TRANSFER DUCT TEMPERATURE THICK(NESS) TOP OF DUCT TEMPERATURE SENSOR TOTAL STATIC PRESSURE **TEMPERATURE TRANSMITTER**

STEAM WORKING PRESSURE

UNIT COOLER UNDERGROUND UNIT HEATER UNDERWRITERS LABORATORIES UNIT VENTILATOR

VOLT VOLT-AMPERE VALVE VACUUM VARIABLE AIR VOLUME VOLUME DAMPER VELOCITY VENTALATOR(TION) VARIABLE FREQUENCY DRIVE VOLUME VACUUM PUMP VARIABLE SPEED MOTOR CONTROLLER

WATT WET BULB WATER COLUMN WATER COOLED CONDENSER WATER FLOW MEASURING DEVICE WATER HEATER WATER LOOP RETURN WATER LOOP SUPPLY WEATHERPROOF WEIGHT

WIDE

В **SHEET INDEX**

| ••• | |
|-------|------------------------------|
| M0.1 | MECHANICAL SYMBOLS, ABBR |
| M0.2 | TITLE 24 COMPLIANCE |
| M0.3 | TITLE 24 COMPLIANCE |
| M0.4 | TITLE 24 COMPLIANCE |
| M0.5 | TITLE 24 COMPLIANCE |
| M0.6 | TITLE 24 COMPLIANCE |
| | |
| M1.1 | MECHANICAL SITE PLAN |
| MD1.1 | MECHANICAL DEMOLITION PLA |
| M1.1B | BUILDING B & C MECHANCIAL F |
| M1.1D | BUILDINGS D,E,H & I MECHANIC |
| M1.3B | BUILDING C MECHANICAL ROO |
| M1.3D | BUILDINGS D,E,H & I MECHANIC |
| | |
| M5.1 | CONTROLS DIAGRAMS |
| M5.2 | CONTROLS DIAGRAMS |
| | |
| M7.1 | MECHANICAL DETAILS |
| M7.2 | MECHANICAL DETAILS |
| M7.3 | MECHANICAL DETAILS |
| | |
| M8.1 | MECHANICAL SCHEDULES |
| | |

MECHANICAL MANDATORY MEASURES

EQUIPMENT AND SYSTEMS EFFICIENCY

ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STADARD ESTABLHISHED IN THE APPLIANCE EFFICIENCY STANDARDS SHALL COMPLY WITH THAT STANDARD. PIPING, EXCEPT THOSE CONVEYING FLUIDS WITH A DESIGN OPERATING TERMPERATURE BETWEEN 60°F AND 105°F, OR WITHIN SPACE-CONDITIONING EQUIPMENT CERTIFIED UNDER, §110.1 OR §110.2, SHALL BE INSULATED IN ACCORDANCE WITH §120.3. ALL AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS ARE REQUIRED TO BE INSTALLED, SEALED, AND INSULATED IN ACCORDANCE WITH THE CALIFORNIA MECHANICAL CODE (CMC) SECTIONS 601, 602, 603, 604, 605, AND ANSI/SMACNA-006-2006 HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE 3RD EDITION.

VENTILATION

CONTROLS SHALL BE PROVIDED TO ALLOW OUTSIDE AIR DAMPERS OR DEVICES TO BE OPERATED AT THE VENTILATION RATES AS SPECIFIED IN THESE PLANS. ALL GRAVITY VENTILATING SYSTEMS SHALL BE PROVIDED WITH AUTOMATIC OR READILY ACCESSIBLE MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE. AIR BALANCING: ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE

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

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

CONTROLS

COOLING IS SHUT OFF OR REDUCED TO A MINIMUM.

EACH SPACE CONDITIONING SYSTEM SERVING BUILDING TYPES SUCH AS OFFICES AND MANUFACTURING FACILITIES (AND ALL OTHERS NOT EXPLICITLY EXEMPT FROM THE REQUIREMENTS OF SECTION 112 (D)) SHALL BE INSTALLED WITH AN AUTOMATIC TIME SWITCH WITH AN ACCESSIBLE MANUAL OVERRIDE THAT ALLOWS OPERATION OF THE SYSTEM DURING OFF-HOURS FOR UP TO 4 HOURS. THE TIME SWITCH SHALL BE CAPABLE OF PROFGRAMMING DIFFERENT SCHEDULES FOR WEEKDAYS OR WEEKENDS. INCORPORATE AN AUTOMATIC HOLIDAY "SHUTOFF" FEATURE THAT TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS, THEN RESUMES THE NORMALLY SCHEDULED OPERATION; AND HAS PROGRAM BACKUP CAPABILITIES THAT PREVENT THE LOSS OF THE DEVICES PROGRAM AND TIME SETTING FOR AT LEAST 10 HOURS IF POWER IS INTERRUPTED.

SYSTEM WITH DDC TO THE §110.2(c) ARE ALSO REQUIRED TO HAVE AUTOMATIC DEMAND SHED CONTROLS. EACH SPACE CONDITIONING SYSTEM MUST BE PROVIDED WITH CONTROLS THAT CAN AUTOMATICALLY SHUT OFF THE EQUIPMENT DURING UNOCCUPIED HOURS. WHEN SHUT DOWN, THE CONTROLS SHALL AUTOMATICALLY RESTART THE SYSTEM TO MAINTAIN A SETBACK HEATING THERMOSTAT SETPOINT, IF THE SYSTEM PROVIDES MECHANICAL HEATING AND SETPU COOLING THERMOSTAT SETPOINT, IF THE SYSTEM PROVIDES MECHANICAL COOLING.

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

HTR

REVIATIONS & NOTES

AN FLOOR PLAN IICAL FLOOR PLAN OF PLAN IICAL ROOF PLAN

GENERAL SYMBOLS

 \Box

| | POINT OF DISCONNECT - DEMOLITION REMOVED FRO |
|--|--|
| | POINT OF CONNECTION - NEW CONNECTS TO EXISTI |
| $\times\!\!\times\!\!\times\!\!\times$ | AREA NOT IN CONTRACT |

GENERAL NOTES

- 1 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING, PRIOR TO FINAL BID, FOR ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS.
- 2 WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.
- 3 COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS. 4 THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AS WELL AS THOSE WHICH CAN BE REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS
- PROJECT. 5 FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE CALIFORNIA BUILDING CODE AND CALIFORNIA MECHANICAL CODE.
- 6 INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- 7 FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS. 8 LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING,
- ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- 9 ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.

GENERAL HVAC NOTES

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

EQUIPMENT ANCHORAGE NOTE

MEP COMPONENT ANCHORAGE NOTE

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

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

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

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

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

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

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2019 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

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

MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD

PRE-APPROVAL (OPM#) #0043-13.

ACCEPTANCE TESTING

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

- NRCA-MCH-02-A OUTDOOR AIR ACCEPTANCE NRCA-MCH-03-A - CONSTANT VOLUME, SINGLE ZONE, UNITARY AIR CONDITIONER AND HEAT PUMP SYSTEMS. NRCA-MCH-04-A – AIR DISTRIBUTION SYSTEMS ACCEPTANCE
- NRCA-MCH-05-A AIR ECONOMIZER CONTROLS ACCEPTANCE NRCA-MCH-06-A – DEMAND CONTROL VENTILATION SYSTEMS ACCEPTANCE NRCA-MCH-07-A – SUPPLY FAN VFD ACCEPTANCE
- NRCA-MCH-08-A VALVE LEAKAGE TEST NRCA-MCH-11-A – AUTOMATIC DEMAND SHED CONTROL ACCEPTANCE
- NRCA-MCH-12-A FAULT DETECTION & DIAGNOSITCS (FDD) FOR PACKAGED DIRECT EXPANSION UNITS NRCA-MCH-13-A – AUTOMATIC FAULT DETECTION & DIÀGNÓSITCS (FDD) FOR AIR HANDLING UNITS & ZONE TERMINAL UNITS ACCEPTANCE
- NRCA-MCH-16-A SUPPLY AIR TEMPERATURE RESET CONTROLS ACCEPTANCE NRCA-MCH-18-A – ENERGY MANAGEMENT CONTROL SYSTEM ACCEPTANCE

QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE ASSOCIATED AIR BALANCE COUNCIL

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

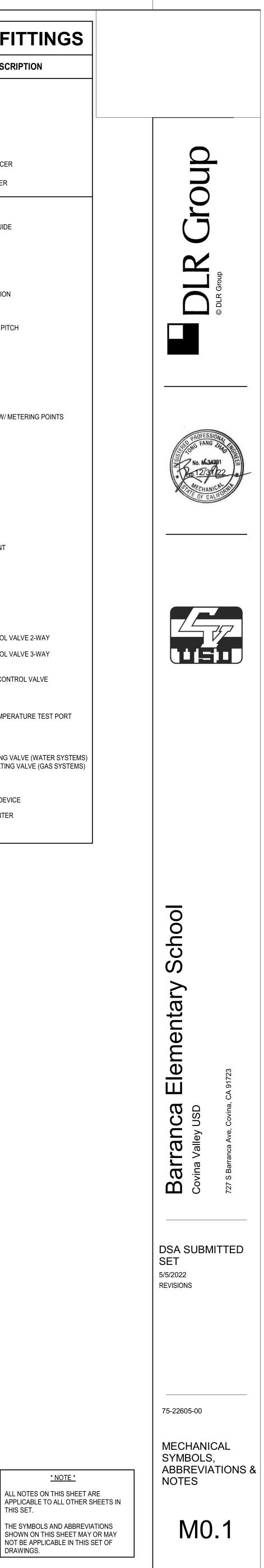
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| RETURN ARROW Haust ARROW UC DOOR UNDERCUT ARROW WITH CFM DOOR UNDERCUT ARROW WITH CFM D-1 12"x12" DOOR UNDERCUT ARROW WITH CFM DOOR UNDERCUT ARROW WITH CFM D-1 12"x12" DOOR UNDERCUT ARROW WITH CFM D-1 12"x12" Z4"x12" TYPICAL DUCT - SQ / RECT) (0"p ROUND) AIR FLOW (CUBIC FEET PER MINUTE) 24"x12" TYPICAL DUCT - SIZE AS INDICATED (WIDTH x DEPTH) SIZE INDICATED FREE AREA Image: DDC-xx Imag | | 2 2 | DUCT SMOKE DETECTOR | | | | | |
| UC DOOR UNDERCUT ARROW WITH CFM D-1 DIFFUSER, REGISTER OR GRILLE TAG 12"x12" NECK SIZE (00"x00"- SQ / RECT) (0"ø ROUND) 200 CFM AR FLOW (CUBIC FEET PER MINUTE) 24"x12" TYPICAL DUCT - SIZE AS INDICATED FREE AREA Image: Comparison of the state of the | د | — ← | | | | | | |
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| 200 CFM AIR FLOW (CUBIC FEET PER MINUTE) 24"x12" TYPICAL DUCT - SIZE AS INDICATED (WIDTH x DEPTH) SIZE INDICATED FREE AREA Image: DDC-xx MECHANICAL EQUIPMENT TAG Image: DDC-xx MECHANICAL EQUIPMENT CLEARANCE Image: DDC-xx CARBON DIOXIDE SENSOR - WALL MOUNTED Image: DDC-xx MITROGEN DIOXIDE SENSOR - CEILING MOUNTED Image: DDC-xx MITROGEN DIOXIDE SENSOR - CEILING MOUNTED < | 11 | 00 I-1 - | DIFFUSER, REGISTER OR GRILLE TAG | | | | | |
| 24'x12" (WIDTH x DEPTH) SIZE INDICATED FREE AREA Image: DDC-xx MECHANICAL EQUIPMENT TAG MECHANICAL EQUIPMENT CLEARANCE MECHANICAL EQUIPMENT CLEARANCE Image: DD2 CARBON DIOXIDE SENSOR - WALL MOUNTED Image: DD2 CARBON DIOXIDE SENSOR - CEILING MOUNTED Image: DD2 CARBON MONOXIDE SENSOR - CEILING MOUNTED Image: DD2 HUMIDISTAT - WALL MOUNTED Image: DD2 NITROGEN DIOXIDE SENSOR - WALL MOUNTED Image: DD2 NITROGEN DIOXIDE SENSOR - CEILING MOUNTED Image: DD2 PRESSURE SENSOR - CEILING MOUNTED Image: DD2 PRESSURE SENSOR - CEILING MOUNTED Image: DD2 PRESSURE SENSOR - CEILING MOUNTED Image: DD2 TEMPERATURE SENSOR - CEILING MOUNTED Image: DD2 TEMPERATURE SENSOR - CEILING MOUNTED Image: DD2 TEMPERATURE SENSOR - C | 200 | CFM - | AIR FLOW (CUBIC FEET PER MINUTE) | | | | | |
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STATE OF CALIFORNIA Mechanical Systems

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

01

RTU-E3

RTU-E4

RTU-H1

RTU-H2

RTU-H3

RTU-H4

RTU-I1

RTU-I2

RTU-I3

RTU-I4

Mechanical Systems

CERTIFICATE OF COMPLIANCE

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

02

Unitary Heat Pumps

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

§140.4(a). Healthcare facilities are excepted.

Α

| CERTIFICATE OF COMPLIANCE | | | | | | | | | NRCC-MCH-E |
|---|----------------|---------------------|------------------------|--------|--------------------------------|---------------------------|---|--------------------------|---------------------------------------|
| This document is used to demonstrate compliant path outlined in <u>§140.4</u> , or <u>§141.0(b)2</u> for altered | • | ical syster | ns that are within the | scope | e o | of the permit applicatio | n and are o | demonstra | ing compliance using the prescriptive |
| Project Name: | | | CVUSD Barranca | Report | rt P | Page: | | | (Page 1 of 39) |
| Project Address: | | 727 S Barranca Ave | Date P | Pre | epared: | | | 6/28/2022 | |
| A. GENERAL INFORMATION | | | | | | | | | |
| 01 Project Location (city) | | | /ina | 04 | Т | otal Conditioned Floor | Area | | 21505 |
| 02 Climate Zone | | | 0 | 05 | T | Total Unconditioned Flo | or Area | | 0 |
| 03 Occupancy Types Within Project: | | | | 06 | ; # | f of Stories (Habitable A | bove Grad | e) | 1 |
| Office (B) Retail (| | | | | Non-refrigerated Warehouse (S) | | | | |
| Hotel/ Motel Guest Rooms (R-1) | School | (E) 🗆 H | | | lealthcare Facility (I) | | | | |
| High-Rise Residential (R-2/R-3) | Relocat | able Class Bldg (E) | | | Other (write in) | | | | See Table J |
| B. PROJECT SCOPE This table Includes mechanical systems or compo <u>§140.4</u> , or <u>§141.0(b)2</u> for alterations. | onents that ar | e within ti | he scope of the permin | t appl | lic | ation and are demonsti | rating com | pliance usii | ng the prescriptive path outlined in |
| 01 | | | 02 | 2 | | | 03 | | |
| Air System(s) | | | Wet System C | ompo | on | ients | | Dry | System Components |
| Heating Air System | | | Water Economizer | | | | \boxtimes | Air Econo | omizer |
| Cooling Air System | | | Pumps | | | | | Electric Resistance Heat | |
| Mechanical Controls | | | System Piping | | | | \boxtimes | Fan Syste | ms |
| Mechanical Controls (existing to ren or new) | nain, altered | Cooling Towers | | | | | Ductwork (existing to remain, altered o | | (existing to remain, altered or new) |
| | | | -1 -11 | | | | \boxtimes | Manathat | |
| | | | Chillers | | | | | Ventilatio | on |

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

Total System Design Supply Airflow (CFM):

Registration Date/Time:

1600

Total System Design

(B)HP:

Report Version: 2019.1.003 Schema Version: rev 20200601

0.91

Power (B)HP:

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

Registration Date/Time:

Report Version: 2019.1.003

Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE OF COMPLIANCE

Registration Number:

CVUSD Barranca Report Page: Project Name: 727 S Barranca Ave Date Prepared: Project Address: H. FAN SYSTEMS & AIR ECONOMIZERS Economizer Designed per <u>§140.4(e)</u> and System NA: <=54 kBtu/h cooling System Fan Type: RTU-C2 Constant Volume Economizer:¹ Controls: Name: 01 02 03 04 06 07 08 05 Fan Power Pressure Drop Adjustment - Table 140.4-B Maximum Design Supply Airflow Fan Name or Fan Function HP Unit² Design HP Design Airflow through Item Tag (CFM) Device Device (CFM) SF Supply 2000 BHP 0.91 1 Maximum System Fan Total System Design 0.91 2000 Total System Design Supply Airflow (CFM): (B)HP: Power (B)HP: System Economizer Designed per §140.4(e) and Economizer:¹ NA: <=54 kBtu/h cooling System Fan Type: RTU-D1 Constant Volume Name: Controls: (m) 01 03 04 06 08 02 05 07 Fan Power Pressure Drop Adjustment - Table 140.4-B Fan Name or Maximum Design Supply Airflow Fan Function HP Unit² Design HP Design Airflow through Item Tag (CFM) Device Device (CFM) SF Supply 1600 BHP 0.91 1 Maximum System Fan Total System Design Total System Design Supply Airflow (CFM): 1600 0.91 (B)HP: Power (B)HP: System Economizer Designed per §140.4(e) and RTU-D2 Economizer:¹ NA: <=54 kBtu/h cooling System Fan Type: Constant Volume Name: Controls: (m) 01 02 03 04 05 06 07 08 Fan Power Pressure Drop Adjustment - Table 140.4-B Maximum Design Supply Airflow Fan Name or Fan Function HP Unit² Design HP Design Airflow through Item Tag (CFM) Device Device (CFM) SF 1600 BHP 0.91 Supply 1 Maximum System Fan

Registration Date/Time:

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

03

Air-cooled, pkg (3 phase)

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

⁴ Authority Having Jurisdiction may ask for load calculations used for compliance per <u>§140.4(b)</u>.

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

Report Version: 2019.1.003 Schema Version: rev 20200601

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727 S Barranca Ave Date Prepared:

04

NA: Load

Controls NA: Load

Controls

NA: Load

Controls

NA: Load

Controls

NA: Load

Controls NA: Load

Controls NA: Load

Controls

NA: Load

Controls

NA: Load

Controls

NA: Load

Controls

05

19.86

21.16

20.14

21.07

20.04

19.93

33.62

35.83

34.1

35.67

33.92

33.74

21.02 35.58

19.86 33.62

21.02 35.58

19.97 33.81

06 07 08 09

0

0

0

0

36

36

38.7

36.15

38.22 35.83

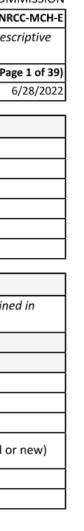
36.98 34.41

36.32

33.55

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B



Registration Provider: Energysoft

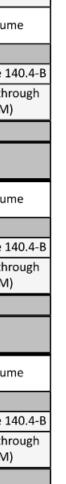
CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 4 of 39) 6/28/2022 10 11 33.4 43.71 36.74 37.49 34.94 46.26 38.42 39.4

46.57

43.85

44.32 37.85 33.4 43.71 36.74 37.49 34.94 46.26 38.42 46.36 39.95 36.48 33.89 44.09 37.27 36.33 33.74 43.95 37.11 36.9 ¹FOOTNOTES: 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

> CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 7 of 39 6/28/2022



STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

| | CALIFORNIA ENERGY COMMISSION | | | | | | | | | | | | | | |
|----------------------------------|---|--------------------|-----|------------------------------------|-----|--|-----|-----------------------|-----|---------------------------------------|-----|--|-----|------------------------------|-----------------|
| ERTIFICATE OF CO | OMPI | LIANCE | | | | | | | | | | | | | NRCC-MCH |
| Project Name: | | | | | | | | | | | | | | | |
| roject Address: | Diject Address: 727 S Barranca Ave Date Prepared: 6/28/202 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| C. COMPLIANC | E RE | SULTS | | | | | | | | | | | | | |
| | ble 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 DT 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 |
| <u>§110.1</u> , | ND 0 | Pumps §140.4(k) | AND | Fans/ Economizers §140.4(c), | AND | System Controls <u>§110.2</u> , §120.2, | AND | Ventilation §120.1 | AND | Terminal Box Controls §140.4(d) | AND | Distribution <u>§120.3</u> , §140.4(l) | AND | Cooling Towers §110.2(e)2 | Compliance Resu |
| <u>§110.2</u> , <u>§140.4</u> | | | | <u>§140.4(e)</u> | | §140.4(f) | | | | <u>3110.1(4)</u> | | <u>3110.1(1)</u> | | | |
| | | (See Table G) | | <u>§140.4(e)</u> (See Table H) | | | | (See Table J) | | (See Table K) | | (See Table L) | | (See Table M) | - |
| <u>§140.4</u> See Table F) | ND | (See Table G) | AND | | AND | <u>§140.4(f)</u> | AND | (See Table J) Yes | AND | | AND | | AND | (See Table M) | COMPLIES |

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

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

E. ADDITIONAL REMARKS

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

Schema Version: rev 20200601

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

STATE OF CALIFORNIA Mechanical Systems NDCC MCH E

| Weenamear Systems | | | |
|---------------------------|--------------------|----------------|------------------------------|
| NRCC-MCH-E | | | CALIFORNIA ENERGY COMMISSION |
| CERTIFICATE OF COMPLIANCE | | | NRCC-MCH-E |
| Project Name: | CVUSD Barranca | Report Page: | (Page 5 of 39) |
| Project Address: | 727 S Barranca Ave | Date Prepared: | 6/28/2022 |
| | | · | |

| F. HVAC SYSTEM | SUMMARY (DRY & WET SYSTEMS) | | | | | | | |
|---------------------|--|-----------------------------|-------------------|---|-------------------|-----------------|---|------------------|
| Dry System Equip | ment Efficiency (other than Package Term | ninal Air Conditi | ioners (PTAC) and | Package Terminal | Heat Pumps (PTH | ?)) | | |
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
| | | | Heat | ng Mode | | Cooling Mode | | |
| Name or Item Tag | Size Category (Btu/h) | Rating Condition (°F) | Efficiency Unit | Minimum Efficiency Required per Tables 110.2 / Title 20 | Design Efficiency | Efficiency Unit | Minimum Efficiency Required per Tables 110.2 / Title 20 | Design Efficiend |
| FCU-B1 | >=135,000 and <240,000 | | СОР | 3.2 | 3.4 | EER IEER | 10.6 11.6 | 12.2 12.9 |
| RTU-C1 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-C2 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-D1 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-D2 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-D3 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-D4 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-E1 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-E2 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-E3 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-E4 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-H1 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-H2 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-H3 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-H4 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-I1 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-I2 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-I3 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |
| RTU-I4 | <65,000 | | HSPF | 7.7 | 13 | SEER | 13.0 | 14.3 |

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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STATE OF CALIFORNIA

Mechanical Systems

| NRCC-MCH-E | | | | | | | | | CALIFOR | NIA ENERGY COMMISSION |
|---|--------------------|-------------------------|---------|--|------------------|-------------------------|---------------------------|-----------------------------------|------------------------------------|--|
| CERTIFICATE OF | COMPLIANCE | | | | | | | | | NRCC-MCH-E |
| Project Name: | | | | | JSD Barranc | | - | | | (Page 8 of 39) |
| Project Address | : | | | 727 S | Barranca Av | e Date Pre | epared: | | | 6/28/2022 |
| H. FAN SYSTE | MS & AIR ECONO | MIZERS | | | | | | | | |
| System Name: | RTU-D3 | Econor | nizer:1 | NA: <=54 kBtu/h cooling Controls | | | | d per <u>§140.4(e)</u> and (m) | System Fan Type: | Constant Volume |
| 01 | 02 | | 03 | 04 | | 05 | 5 | 06 | 07 | 08 |
| | | | | Maximum Design Sumply Ainflaw | | | | | Fan Power Pressure Drop A | Adjustment - Table 140.4-B |
| Fan Name or Item Tag | Fan Functio | Fan Function Qty Maximu | | Maximum Design Supply (CFM) | AITTIOW | HP U | nit ² | Design HP | Device | Design Airflow through Device (CFM) |
| SF | Supply | | 1 | 1600 | | BH | IP | 0.91 | NA | NA |
| Total System Design Supply Airflow (CFM): | | | M): | 1600 | 1600 | | stem Design B)HP: 0.91 | | Maximum System Fan Power (B)HP: | |
| System Name: | RTU-D4 | Econor | nizer:1 | NA: <=54 kBtu/h cooling | | conomizer Designed | | d per <u>§140.4(e)</u> and (m) | System Fan Type: | Constant Volume |
| 01 | 02 | | 03 | 04 | | 05 | 5 | 06 | 07 | 08 |
| | | | | Maximum Dasign Sumplu | Airflow | | | | Fan Power Pressure Drop | Adjustment - Table 140.4-B |
| Fan Name or Item Tag | Fan Functio | on | Qty | Maximum Design Supply Airflow (CFM) | | HP Unit ² | | Design HP | Device | Design Airflow through Device (CFM) |
| SF | Supply | | 1 | 1600 | | BH | IP | 0.91 | NA | NA |
| Total Syst | em Design Supply A | Airflow (CF | M): | 1600 | | System Design (B)HP: | | 0.91 | Maximum System Fan Power (B)HP: | |
| System Name: | RTU-E1 | Econor | nizer:1 | NA: <=54 kBtu/h cooling | Econom Contro | | Designe | d per <u>§140.4(e)</u> and (m) | System Fan Type: | Constant Volume |
| 01 | 02 | · | 03 | 04 | | 05 | 5 | 06 | 07 | 08 |
| Fan Name or | | | | Maximum Design Supply | Airflow | | | | Fan Power Pressure Drop A | Adjustment - Table 140.4-B |
| Item Tag | Fan Functio | n | Qty | (CFM) | AITHOW | HP U | nit ² | Design HP | Device | Design Airflow through Device (CFM) |
| SF | Supply | | 1 | 1600 | | BH | IP | 0.91 | NA | NA |
| Total Syste | em Design Supply A | Airflow (CF | M): | 1600 | | ystem De (B)HP: | esign | 0.91 | Maximum System Fan Power (B)HP: | |

Registration Number:

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Registration Provider: Energysoft

Report Generated: 2022-06-28 11:56:10

STATE OF CALIFORNIA Mechanical Systems

Project Name:

Project Address:

NRCC-MCH-E CERTIFICATE OF COMPLIANCE

CVUSD Barranca Report Page: 727 S Barranca Ave Date Prepared:

| F. HVAC SYSTEM | M SUMMARY (DRY & WET | SYSTEMS) | | | | | | | | |
|---------------------|--|--|------------------------|------------------------|--------------------------|--|--|-----------------------|--------------------------------------|----------------------|
| 1 | to demonstrate compliance 140.4(k) or <u>§141.0(b)2</u> for a | for mechanical equipment with mandato Iterations. | ry requirements ; | found in <u>§11</u> | <u>0.1</u> and <u>§1</u> | <u>10.2(a)</u> and | l prescriptive | e requireme | nts found in | <u>§1</u> 4 |
| Dry System Equi | pment Sizing (includes air co | nditioners, condensers, heat pumps, VR | F, furnaces and ι | init heaters) | | | | | | |
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | |
| | Equipment Category per Tables 110.2 | Equipment Type per Tables 110.2 / Title 20 | | | Equipme | | per Mechanical Schedule (kBtu/h) §140.4 (a&b) | | | |
| | | | Smallest Size | Hea | ating Outpu | t ^{2,3} | Cooling C | Output ^{2,3} | Load Calc | ulati |
| Name or Item Tag | | | Available 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) | Se Co l (kl |
| FCU-B1 | Unitary Heat Pumps | Air-cooled, split (3 phase) | NA: Load Controls | 100.42 | 170 | 0 | 188.38 | 144 | 359.82 | 2 |
| RTU-C1 | Unitary Heat Pumps | Air-cooled, pkg (3 phase) | NA: Load Controls | 33.55 | 56.8 | 0 | 41.9 | 39.6 | 49.75 | 4 |
| RTU-C2 | Unitary Heat Pumps | Air-cooled, pkg (3 phase) | NA: Load Controls | 33.55 | 56.8 | 0 | 41.9 | 39.6 | 49.82 | 4 |
| RTU-D1 | Unitary Heat Pumps | Air-cooled, pkg (3 phase) | NA: Load Controls | 19.94 | 33.76 | 0 | 36.21 | 33.61 | 43.89 | 3 |
| RTU-D2 | Unitary Heat Pumps | Air-cooled, pkg (3 phase) | NA: Load Controls | 19.94 | 33.76 | 0 | 36.21 | 33.61 | 43.89 | 3 |
| RTU-D3 | Unitary Heat Pumps | Air-cooled, pkg (3 phase) | NA: Load Controls | 19.93 | 33.74 | 0 | 36.15 | 33.55 | 43.85 | : |
| RTU-D4 | Unitary Heat Pumps | Air-cooled, pkg (3 phase) | NA: Load Controls | 20.96 | 35.48 | 0 | 37.25 | 34.69 | 46.13 | 3 |
| RTU-E1 | Unitary Heat Pumps | Air-cooled, pkg (3 phase) | NA: Load Controls | 21.16 | 35.83 | 0 | 38.22 | 35.83 | 46.57 | |
| RTU-E2 | Unitary Heat Pumps | Air-cooled, pkg (3 phase) | NA: Load Controls | 20.14 | 34.1 | 0 | 36.98 | 34.41 | 44.32 | 3 |

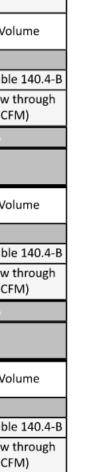
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MMISSION NRCC-MCH-E Page 8 of 39) 6/28/2022



Total System Design Supply Airflow (CFM):

Fan Function

Supply

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

RTU-E4

03

Registration Number:

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

Total System Design

(B)HP:

Registration Provider: Energysoft

BHP

Maximum System Fan

Power (B)HP:

Report Generated: 2022-06-28 11:56:10

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

Report Generated: 2022-06-28 11:56:10

Mechanical Systems NRCC-MCH-E

STATE OF CALIFORNIA

| CERTIFICATE OF COMPLIANCE | | | NRCC |
|--|--------------------|----------------|-------|
| Project Name: | CVUSD Barranca | Report Page: | (Page |
| Project Address: | 727 S Barranca Ave | Date Prepared: | 6/2 |
| | | | |
| G. PUMPS | | | |
| | | | |
| | | | |
| This section does not apply to this project. | | | |

| n. PAN SISIL | INIS & AIR LCONO | WIIZER3 | | | | | | | | |
|-----------------|---|------------|---------|---|--------------------------------|-------------------|-------------------|------------------------------------|------------------------------------|------------------------------------|
| | | | | escriptive requirements four be included in Table H. | nd in <u>§140</u> |).4(c), §. | <u>140.4(e)</u> c | and <u>§140.4(m)</u> for fan : | systems. Fan systems servin | g only process loads |
| System Name: | FCU-B1 | Econor | nizer:1 | NA: Special OA filtration Economizer Controls: Designed per <u>§140.4(e)</u> and (m) | | System Fan Type: | Constant Volun | | | |
| 01 | 02 | | 03 | 04 | | | 05 | 06 | 07 | 08 |
| Fan Name or | | | | Maximum Dosign Supply | Mauinum Danier Gunghy Airflaur | | | | Fan Power Pressure Drop A | djustment - Table 1 |
| Item Tag | Fan Functio | n | Qty | Maximum Design Supply Airflow (CFM) | | Unit ² | Design HP | Device | Design Airflow thr Device (CFM) | |
| SF | Supply | | 1 | 6000 | ВНР | | | 0.91 | NA | NA |
| Total Syst | Total System Design Supply Airflow (CFM): | | M): | 6000 | 6000 Total Sy | | Design | 0.91 | Maximum System Fan Power (B)HP: | |
| System Name: | RTU-C1 | Econor | nizer:1 | NA: <=54 kBtu/h cooling | Econon Contre | | Designe | ed per <u>§140.4(e)</u> and (m) | System Fan Type: | Constant Volun |
| 01 | 02 | | 03 | 04 | | | 05 | 06 | 07 | 08 |
| Fan Name or | | | | Maximum Design Supply | Airflow | | | | Fan Power Pressure Drop A | djustment - Table 14 |
| Item Tag | Fan Functio | n | Qty | Maximum Design Supply Airflow (CFM) | | HP | Unit ² | Design HP | Device | Design Airflow thr Device (CFM) |
| SF | Supply | | 1 | 2000 | | E | 3HP | 0.91 | NA | NA |
| Total Syst | em Design Supply A | irflow (CF | M): | 2000 | Total S | ystem l (B)HP: | Design | 0.91 | Maximum System Fan Power (B)HP: | |

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

STATE OF CALIFORNIA

Mechanical Systems

01

Fan Name or

Item Tag

SF

System

Name:

01

Fan Name or

Item Tag

SF

| NRCC-MCH-E | • | | | | | | | | CALIFOR | NIA ENERGY COMMISSION | | | |
|--|--|--------|---------|-------------------------------|-------------------------|----------------------|----------|-----------------------------------|------------------------------------|--|--|--|--|
| CERTIFICATE OF | COMPLIANCE | | | | | | | | | NRCC-MCH- | | | |
| Project Name: | | | | CVU | JSD Barranc | a Repo | rt Page: | | | (Page 9 of 39 | | | |
| Project Address | ect Address: 727 S Barranca Ave Date Prepared: | | | | | | | | | 6/28/2022 | | | |
| | | | | | | | | | | | | | |
| H. FAN SYSTE | MS & AIR ECONO | MIZERS | | | | | | | | | | | |
| System Name: | RTU-E2 | Econon | nizer:1 | NA: <=54 kBtu/h cooling | Economizer Controls: | | | | System Fan Type: | Constant Volume | | | |
| 01 | 02 | Î | 03 | 04 | | | 05 | 06 | 07 | 08 | | | |
| Fan Name or | | | | Maximum Design Supply Airflow | | | | | Fan Power Pressure Drop | Adjustment - Table 140.4-B | | | |
| Item Tag | Fan Functio | on | Qty | (CFM) | Airnow | HP Unit ² | | Design HP | Device | Design Airflow through Device (CFM) | | | |
| SF | Supply | | 1 | 1600 | | E | знр | 0.91 | NA | NA | | | |
| Total System Design Supply Airflow (CFM): 1600 | | | | | | ystem l (B)HP: | Design | 0.91 | Maximum System Fan Power (B)HP: | | | | |
| System Name: | RTU-E3 | Econon | nizer:1 | NA: <=54 kBtu/h cooling | Econom Contro | | Designe | d per <u>§140.4(e)</u> and (m) | System Fan Type: | Constant Volume | | | |

¹⁶ Controls: (m) 03 04 05 06 07 02 Maximum Design Supply Airflow Fan Function HP Unit² Design HP (CFM) Device Supply 1600 BHP 0.91 1 Total System Design Total System Design Supply Airflow (CFM): 1600 0.91 (B)HP: Power (B)HP:

1600

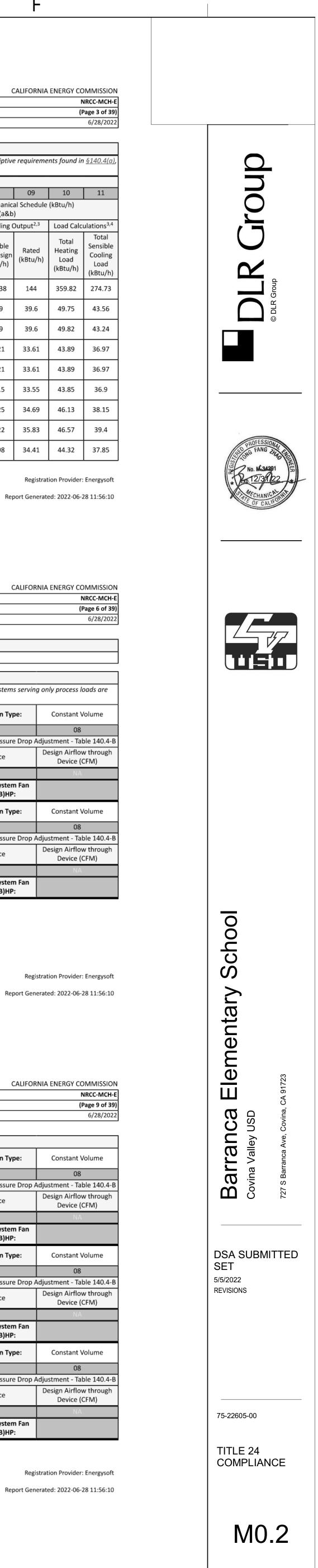
1600

08 Fan Power Pressure Drop Adjustment - Table 140.4-B Design Airflow through Device (CFM) Maximum System Fan Economizer Designed per <u>§140.4(e)</u> and Economizer:¹ NA: <=54 kBtu/h cooling System Fan Type: Constant Volume Controls: (m) 04 05 06 07 08 an Power Pressure Drop Adjustment - Table 140.4-E Maximum Design Supply Airflow HP Unit² Design HP Design Airflow through (CFM) Device Device (CFM)

0.91

0.91

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



STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE OF COMPLIANCE Project Name:

| | | | | | bob barran | | | | | (1 060 10 01 00) |
|-----------------|--------------------|------------|---------|--------------------------------|-----------------|------------------------------|-------------------|------------------------------------|------------------------------------|--|
| Project Address | : | | | 727 5 1 | Barranca Av | /e Date | Prepared: | | | 6/28/2022 |
| | | | | | | | | | | |
| H. FAN SYSTE | MS & AIR ECONO | MIZERS | | | | | | | | |
| System Name: | RTU-H1 | Econor | nizer:1 | NA: <=54 kBtu/h cooling | Econor Contr | | Designe | ed per <u>§140.4(e)</u> and (m) | System Fan Type: | Constant Volume |
| 01 | 02 | · | 03 | 04 | · | | 05 | 06 | 07 | 08 |
| Fan Name or | | | | Maximum Docign Supply | Airflow | | | | Fan Power Pressure Drop A | Adjustment - Table 140.4-B |
| Item Tag | Fan Functio | 'n | Qty | Maximum Design Supply (CFM) | AITTOW | HP | Unit ² | Design HP | Device | Design Airflow through Device (CFM) |
| SF | Supply | | 1 | 1600 | | E | внр | 0.91 | NA | NA |
| Total Syste | em Design Supply A | irflow (CF | M): | 1600 Total Sy | | | Design | 0.91 | Maximum System Fan Power (B)HP: | |
| System Name: | RTU-H2 | Econor | nizer:1 | NA: <=54 kBtu/h cooling | ooling Contro | | Designe | ed per <u>§140.4(e)</u> and (m) | System Fan Type: | Constant Volume |
| 01 | 02 | | 03 | 04 | | | 05 | 06 | 07 | 08 |
| Fan Name or | | | | Maximum Design Supply | Airflow | | | | Fan Power Pressure Drop A | Adjustment - Table 140.4-B |
| Item Tag | Fan Functio | n | Qty | (CFM) | Airnow | HP Unit ² | | Design HP | Device | Design Airflow through Device (CFM) |
| SF | Supply | | 1 | 1600 | | BHP | | 0.91 | NA | NA |
| Total System | em Design Supply A | irflow (CF | M): | 1600 | Total S | System Design (B)HP: 0.91 | | 0.91 | Maximum System Fan Power (B)HP: | |
| System Name: | RTU-H3 | Econor | nizer:1 | NA: <=54 kBtu/h cooling | Econor Contr | | Designe | ed per <u>§140.4(e)</u> and (m) | System Fan Type: | Constant Volume |
| 01 | 02 | · | 03 | 04 | · | | 05 | 06 | 07 | 08 |
| Fan Name or | | | | Maximum Design Supply | Airflow | | | | Fan Power Pressure Drop A | Adjustment - Table 140.4-B |
| Item Tag | Fan Functio | n | Qty | (CFM) | AIIIOW | HP | Unit ² | Design HP | Device | Design Airflow through Device (CFM) |
| SF | Supply | | 1 | 1600 | | E | BHP | 0.91 | NA | NA |
| Total System | em Design Supply A | irflow (CF | M): | 1600 | Total S | ystem l (B)HP: | Design | 0.91 | Maximum System Fan Power (B)HP: | |

CVUSD Barranca Report Page:

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019.1.003

CVUSD Barranca Report Page:

727 S Barranca Ave Date Prepared:

Schema Version: rev 20200601

Registration Provider: Energysoft

CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E

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

Project Name: Project Address:

I. SYSTEM CONTROLS

| I. SYSTEM CONTROLS | | | | | | | | |
|---|------------------|---|---|-----------------------------------|--|--|--|------------------------------------|
| This table is used to demon space conditioning systems | | nce with mand | atory controls in <u>§110.2</u> and | <u>§120.2</u> and p | prescriptive con | trols in <u>§140.4(f)</u> and (n) or | requirements i | n <u>§141.0(b)2E</u> for altered |
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
| System Name | System Zoning | Conditioned Floor Area Being Served (ft ²) | Thermostats <u>§110.2(b)</u> & (c) ¹ , <u>§120.2(a)or</u> <u>§141.0(b)2E</u> | Shut-Off Controls §120.2(e) | Isolation Zone Controls §120.2(g) | Demand Response §110.12 and §120.2(b) | Supply Air Temp. Reset §140.4(f) | Window Interlocks per §140.4(n) |
| FCU-B1 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |
| RTU-C1 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |
| RTU-C2 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |
| RTU-D1 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |
| RTU-D2 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |
| RTU-D3 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |
| RTU-D4 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |
| RTU-E1 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |
| RTU-E2 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |
| RTU-E3 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |
| RTU-E4 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |
| RTU-H1 | Single zone | <= 25,000 ft ² | Setback | Auto Timer Switch | 4 Hour Timer | EMCS | Included | Provided |

Registration Number:

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STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

Project Name:

| i roject Hamer | | | | | | | | | | | | |
|---------------------------|-----------------------------------|---|----------------------------------|------------------------|---------------------------|-----------------------|----------------------------|--|-------|--|--|--|
| Project Address: | | | 727 S | Barranca Ave | e Date Prep | ared: | | | | | | |
| | | | | | | | | | | | | |
| J. VENTILATIC | ON AND INDOOR AIR QUALITY | | | | | | | | | | | |
| | 04 | | 05 | | | | 06 | 07 | | | | |
| System Name | RTU-C2 | System Desi Airfl | - | 450 | | n Design ' Air CFM | 0 | Air Filtration per <u>§120</u> Provided per <u>§1</u> Hotel/ | .20.1 | | | |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | 16 | | | |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u> | <u>)3</u> ³ | | Exh. | Vent per <u>§120.1(c)4</u> | | | | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Cont <u>§120.1(d)5</u> , ar | | | | |
| Classroom | Lecture/ postsecondary classroom | 1270 | | 30 | 450 | 0 | 0 | DCV | | | | |
| 0.000100011 | | | | | | | - | Occ Sensor | ' | | | |
| 17 | Total System Required Min OA CFM | | | 450 | 18 | Ventilation for this | System Complies? | | | | | |
| | 04 | | | | | 0 |)7 | | | | | |
| System Name | RTU-D1 | System Desi Airfl | - | 450 | | n Design Air CFM | 0 | Air Filtration per <u>§120</u> Provided per <u>§1</u> Hotel/ | .20.1 | | | |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | 16 | | | |
| | Mechanical Venti | | | | | Exh. | Vent per <u>§120.1(c)4</u> | | | | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Cont §120.1(d)5, ar | | | | |
| Classroom | Lecture/ postsecondary classroom | 930 | | 30 | 450 | 0 | 0 | DCV | | | | |
| clubbroom | Letter of postsecondary elassicon | | | | | Ĭ | Ŭ | | 1 | | | |

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

17 Total System Required Min OA CFM

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450

18

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

Occ Sensor

Ventilation for this System Complies?

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Single zone <= 25,000 ft²

D

CALIFORNIA ENERGY COMMISSION

STATE OF CALIFORNIA Mechanical Systems

| NRCC-MCH-E |
|---------------------------|
| CERTIFICATE OF COMPLIANCE |

| CERTIFICATE OF | COMPLIANCE | | | | | | | | | NRCC-MCH-E |
|-------------------------|--------------------|-------------|---------|--------------------------------|-------------------------|-----------------------------|-------------------|-----------------------------------|------------------------------------|--|
| Project Name: | | | | CVL | JSD Barrand | a Repor | rt Page: | | | (Page 11 of 39) |
| Project Address: | | | | 727 S I | Barranca Av | /e Date I | Prepared: | | | 6/28/2022 |
| | | | | | | | | | | |
| H. FAN SYSTE | MS & AIR ECONO | MIZERS | | | | | | | | |
| System Name: | RTU-H4 | Econor | nizer:1 | NA: <=54 kBtu/h cooling | Econon Contro | | | | System Fan Type: | Constant Volume |
| 01 | 02 | | 03 | 04 | | | 05 | 06 | 07 | 08 |
| Fan Nama ar | | | | Mavimum Dasian Supply | Airflow | | | | Fan Power Pressure Drop A | Adjustment - Table 140.4-E |
| Fan Name or Item Tag | Fan Functio | 'n | Qty | Maximum Design Supply (CFM) | y Airflow HP U | | Unit ² | Design HP | Device | Design Airflow through Device (CFM) |
| SF | Supply | | 1 | 1600 | | ВНР | | 0.91 | NA | NA |
| Total Syste | em Design Supply A | Airflow (CF | M): | 1600 | | ystem Design (B)HP: | | 0.91 | Maximum System Fan Power (B)HP: | |
| System Name: | RTU-I1 | Econor | nizer:1 | NA: <=54 kBtu/h cooling | Economizer Controls: | | Designe | d per <u>§140.4(e)</u> and (m) | System Fan Type: | Constant Volume |
| 01 | 02 | | 03 | 04 | | | 05 06 | | 07 | 08 |
| Fan Nama an | | | | Maximum Dasian Gunahu | A : £1 | irflow HP Unit ² | | | Fan Power Pressure Drop A | Adjustment - Table 140.4-E |
| Fan Name or Item Tag | Fan Functio | 'n | Qty | Maximum Design Supply (CFM) | AITTIOW | | | Design HP | Device | Design Airflow through Device (CFM) |
| SF | Supply | | 1 | 1600 | | B | BHP 0.91 | | NA | NA |
| Total Syste | em Design Supply A | Airflow (CF | M): | 1600 | | ystem [(B)HP: | Design | 0.91 | Maximum System Fan Power (B)HP: | |
| System Name: | RTU-I2 | Econor | nizer:1 | NA: <=54 kBtu/h cooling | Econon Contro | | Designe | d per <u>§140.4(e)</u> and (m) | System Fan Type: | Constant Volume |
| 01 | 02 | | 03 | 04 | | | 05 | 06 | 07 | 08 |
| Fan Nama ar | | | | Maximum Dasign Sugah | Airflow | | | | Fan Power Pressure Drop A | Adjustment - Table 140.4-I |
| Fan Name or Item Tag | Fan Functio | n | Qty | Maximum Design Supply (CFM) | AIITIOW | HP | Unit ² | Design HP | Device | Design Airflow through Device (CFM) |
| SF | Supply | | 1 | 1600 | | B | SHP | 0.91 | NA | NA |
| Total Syste | em Design Supply A | Airflow (CF | M): | 1600 | | ystem [(B)HP: | Design | 0.91 | Maximum System Fan Power (B)HP: | |

| Registration | Number: |
|--------------|---------|
| | |

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

I. SYSTEM CONTROLS

RTU-H2

RTU-H3

RTU-H4

RTU-I1

RTU-I2

RTU-I3

RTU-I4

have setback thermostats.

EXCEPTION 1 to §140.4(f)

01

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Mechanical Systems

CERTIFICATE OF COMPLIANCE

02

J. VENTILATION AND INDOOR AIR QUALITY

 \bowtie

Nonresidential and Hotel/ Motel Ventilation Systems

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Provider: Energysoft

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

CVUSD Barranca Report Page:

727 S Barranca Ave Date Prepared:

Auto Timer

Switch

This table is used to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel

Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.

Registration Date/Time:

Report Version: 2019.1.003

Schema Version: rev 20200601

4 Hour Time

4 Hour Tim

4 Hour Time

4 Hour Time

4 Hour Time

4 Hour Tim

4 Hour Timer

EMCS

EMCS

EMCS

EMCS

EMCS

EMCS

EMCS

Setback

Setback

Setback

Setback

Setback

Setback

Setback

outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

Check this box if the project included Nonresidential or Hotel/Motel spaces

Check this box if the project included new or altered high-rise residential dwelling units.

Report Generated: 2022-06-28 11:56:10

Included

Included

Included

Included

Included

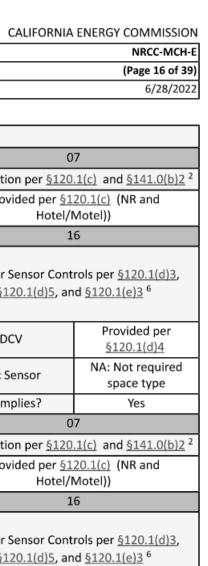
Included

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| CALIFORNIA ENERGY COMMISSION |
|------------------------------|
| NRCC-MCH-E |
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| 6/28/2022 |

Registration Provider: Energysoft

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Provided per <u>§120.1(d)4</u> NA: Not required space type

Yes

| CERTIFICATE OF | COMPLIANCE | | | | | | | | INKCC-IVI |
|---------------------------|----------------------------------|---|----------------------------------|-------------------------|---------------------------|---------------------|----------------------------|--|---|
| Project Name: | | | | USD Barranca | · · · | - | | | (Page 17 c |
| Project Address | : | | 727 S | Barranca Ave | Date Prepa | ared: | | | 6/28/ |
| | | | | | | | | | |
| J. VENTILATIO | ON AND INDOOR AIR QUALITY | | | | | | | | |
| | 04 | | 05 | | | | 06 | C |)7 |
| | | System Desi | σn ΟΔ CEM | | System | Design | | Air Filtration per §120 | .1(c) and <u>§141.0(k</u> |
| System Name | RTU-D2 | Airfle | - | 450 | | Air CFM | 0 | | <u>.20.1(c)</u> (NR and Motel)) |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | .6 |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u>) | <u>)3</u> ³ | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Cont <u>§120.1(d)5</u> , ar | rols per <u>§120.1(d)</u> nd <u>§120.1(e)3</u> ⁶ |
| Classroom | Lecture/ postsecondary classroom | 930 | | 30 | 450 | 0 | 0 | DCV | Provided per <u>§120.1(d)4</u> |
| Classicolli | Lecture/ postsecondary classicom | 930 | | 50 | 430 | Ū | 0 | Occ Sensor | NA: Not require space type |
| 17 | Total System Required Min OA CFM | | | ° | 450 | 18 | Ventilation for this S | System Complies? | Yes |
| | 04 | | 05 | | | | 06 | C |)7 |
| | | System Desi | gn OA CEM | | System | Design | | Air Filtration per §120 | .1(c) and §141.0(b |
| System Name | RTU-D3 | Airfle | - | 450 | | Air CFM | 0 | · · – | <u>20.1(c)</u> (NR and Motel)) |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | .6 |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u>) |) <u>3</u> ³ | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Cont <u>§120.1(d)5</u> , ar | rols per <u>§120.1(d)3</u> nd <u>§120.1(e)3</u> ⁶ |
| Classroom | Lecture/ postsecondary classroom | 925 | | 30 | 450 | 0 | 0 | DCV | Provided per §120.1(d)4 |
| | Lecture, postsecondary classicon | 525 | | 50 | -50 | | 0 | Occ Sensor | NA: Not require space type |
| 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this S | System Complies? | Yes |

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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CALIFORNIA ENERGY COMMISSION

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

| CERTIFICATE OF (| RTIFICATE OF COMPLIANCE NRCC-MCH-E | | | | | | | | | | | | |
|--|------------------------------------|------------|---------|--|------------------|-------------------------------|-------------------|-----------------------------------|------------------------------------|--|--|--|--|
| Project Name: | | | | CVU | JSD Barrand | ca Repo | rt Page: | | | (Page 12 of 39) | | | |
| Project Address: | | | | 727 S | Barranca Av | /e Date | Prepared: | | | 6/28/2022 | | | |
| | | | | | | | | | | | | | |
| H. FAN SYSTEMS & AIR ECONOMIZERS | | | | | | | | | | | | | |
| System Name: | RTU-I3 | Econor | nizer:1 | NA: <=54 kBtu/h cooling | Econon Contro | | | | System Fan Type: | Constant Volume | | | |
| 01 | 02 | | 03 | 04 | | | 05 | 06 | 07 | 08 | | | |
| Fan Name or | | | | Mauinaum Danian Gumphy Ainflaur | | | | | Fan Power Pressure Drop | Adjustment - Table 140.4-B | | | |
| Item Tag | Fan Functio | n | Qty | Maximum Design Supply Airflow (CFM) | | HP Unit ² | | Design HP | Device | Design Airflow through Device (CFM) | | | |
| SF | Supply | | 1 | 1600 | | 1 | внр | 0.91 | NA | NA | | | |
| Total Syste | em Design Supply A | irflow (CF | M): | 1 1600 1 | | Total System Design (B)HP: | | 0.91 | Maximum System Fan Power (B)HP: | | | | |
| System Name: | RTU-I4 | Econor | nizer:1 | NA: <=54 kBtu/h cooling | | Conomizer Designed | | d per <u>§140.4(e)</u> and (m) | System Fan Type: | Constant Volume | | | |
| 01 | 02 | | 03 | 04 | | | 05 | 06 | 07 | 08 | | | |
| Fan Name or | | | | Maximum Design Supply | Airflow | | | | Fan Power Pressure Drop | Adjustment - Table 140.4-B | | | |
| Item Tag | Fan Functio | n | Qty | Maximum Design Supply Airflow (CFM) | | HP | Unit ² | Design HP | Device | Design Airflow through Device (CFM) | | | |
| SF Supply 1 1600 BHP 0.91 NA | | | | | | | | NA | NA | | | | |
| Total Syste | em Design Supply A | irflow (CF | M): | 1600 | Total S | ystem (B)HP: | Design | 0.91 | Maximum System Fan Power (B)HP: | | | | |

¹ FOOTNOTES: Computer room economizers must meet requirements of $\frac{§140.9(a)}{2}$ and will be documented on the NRCC-PRC-E document. ² The unit used for HP must be consistent for all fans within a system.

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

System Name

08

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

J. VENTILATION AND INDOOR AIR QUALITY

04

FCU-B1

09

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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06

15

System Design

Transfer Air CFM

Registration Date/Time:

CVUSD Barranca Report Page:

727 S Barranca Ave Date Prepared:

4500

10 11 12 13 14

05

System Design OA CFM

Airflow¹

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

CALIFORNIA ENERGY COMMISSION

07

Provided per §120.1(c) (NR and

Hotel/Motel))

16

Air Filtration per §120.1(c) and §141.0(b)2

NRCC-MCH-E

6/28/2022

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Yes

Yes

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Page 14 of 39) 6/28/2022 Provided

Provided

Provided Provided Provided Provided Provided ¹FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to *Notes: Controls with a * require a note in the space below explaining how compliance is achieved. EX: system 1: SA Temp Reset: Exempt because zones compliant with §140.4(d);

occupancies. For alterations, only ventialtion systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required 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.

> Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

CALIFORNIA ENERGY COMMISSION NRCC-MCH-E e 17 of 39) 28/2022 ____ (b)2² uired

> uired _____

Exh. Vent per <u>§120.1(c)4</u> Mechanical Ventilation Required per §120.1(c) DCV or Sensor Controls per §120.1(d)3, Space Name r # of Required Min OA people⁵ CFM Required Provided per Design Conditioned # of Shower ot item Tag Floor Area heads/ (ft²) toilets <u>§120.1(d)5</u>, and <u>§120.1(e)3</u> ⁶ Occupancy Type⁴ Provided per DCV §120.1(d)4 3700 300 4500 MPR Building Assembly- multiuse 0 0 NA: Not required Occ Sensor space type 17 Total System Required Min OA CFM 4500 18 Ventilation for this System Complies? 05 04 06 Air Filtration per §120.1(c) and §141.0(b)2 System Design OA CFM System Design RTU-C1 450 System Name Provided per §120.1(c) (NR and Airflow¹ Transfer Air CFM Hotel/Motel)) 08 10 11 12 13 14 09 16 15 Mechanical Ventilation Required per §120.1(c) Exh. Vent per <u>§120.1(c)4</u> 5 Min OA CFM Min CFM CFM DCV or Sensor Controls per §120.1(d)3, Space Name Conditioned # of Shower # of ot item Tag <u>§120.1(d)5</u>, and <u>§120.1(e)3</u> ⁶ Floor Area heads/ Occupancy Type⁴ people⁵ (ft²) toilets Provided per DCV <u>§120.1(d)4</u> 450 Lecture/ postsecondary classroom 1260 Classroom 30 0 0 NA: Not required Occ Sensor space type 17 Total System Required Min OA CFM 450 18 Ventilation for this System Complies? Registration Number: Registration Date/Time: Registration Provider: Energysoft CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Report Generated: 2022-06-28 11:56:10 Schema Version: rev 20200601

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

| CERTIFICATE OF | COMPLIANCE | | | | | | | | NRCC-MCH-I | | | |
|---------------------------|----------------------------------|---|----------------------------------|------------------------|--------------------------------|---------------------|----------------------------|---|-----------------------------------|--|--|--|
| Project Name: | | | CVI | USD Barranca | a Report Pa | ge: | | | (Page 18 of 39 | | | |
| Project Address: | : | | 727 S | Barranca Ave | anca Ave Date Prepared: 6/28/2 | | | | | | | |
| | | | | | | | | | | | | |
| J. VENTILATIO | ON AND INDOOR AIR QUALITY | | | | | | | | | | | |
| | 04 | | 05 | | | | 06 | 0 | 7 | | | |
| | | System Desi | | | Custom | Design | | Air Filtration per §120 | .1(c) and §141.0(b)2 | | | |
| System Name | RTU-D4 | Airfl | - | 450 | | Design Air CFM | 0 | Provided per <u>§120.1(c)</u> (NR and Hotel/Motel)) | | | | |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | 6 | | | |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u>) | <u>)3</u> ³ | | Exh. | Vent per <u>§120.1(c)4</u> | | | | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Controls per <u>§120.1(d)</u> §120.1(d)5, and <u>§120.1(e)3</u> ⁶ | | | | |
| Classroom | Lecture/ postsecondary classroom | 950 | | 30 | 450 | 0 | 0 | DCV | Provided per <u>§120.1(d)4</u> | | | |
| Classicom | Lecture, postsecondary classicom | 550 | | 50 | 450 | 0 | 0 | Occ Sensor NA: Not requi space type | | | | |
| 17 | Total System Required Min OA CFM | | | ° | 450 | 18 | Ventilation for this S | System Complies? | Yes | | | |
| | 04 | | 05 | | | | 06 | 07 | | | | |
| | | System Desi | σn ΟΔ CFM | | System | Design | | Air Filtration per §120 | .1(c) and §141.0(b)2 | | | |
| System Name | RTU-E1 | Airfl | - | 450 | Transfer | ~ 1 | 0 | | <u>20.1(c)</u> (NR and Motel)) | | | |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | 6 | | | |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u>) | <u>)3</u> ³ | | Exh. Y | Vent per <u>§120.1(c)4</u> | | | | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Controls per <u>§120.1(d</u> §120.1(d)5, and <u>§120.1(e)3</u> ⁶ | | | | |
| Classroom | Lecture/ postsecondary classroom | 995 | | 30 | 450 | 0 | 0 | DCV | Provided per §120.1(d)4 | | | |
| Classicoum | Lecture/ postsecondary classroom | 332 | | 50 | 450 | 0 | U | Occ Sensor | NA: Not required space type | | | |
| 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this S | System Complies? | Yes | | | |

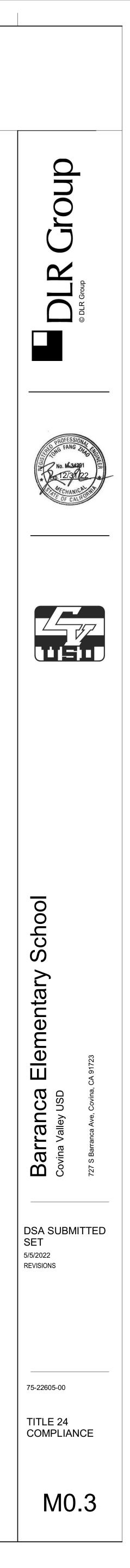
Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

CERTIFICATE OF COMPLIANCE Project Name:

| | | | | | | | | | (-0, |
|---------------------------|----------------------------------|---|----------------------------------|-----------------------------|---------------------------|---------------------|----------------------------|--------------------------------------|---|
| Project Address | : | | 727 S | Barranca Ave | Date Prep | ared: | | | 6/28/2022 |
| | | | | | | | | | |
| J. VENTILATIO | ON AND INDOOR AIR QUALITY | | | | | | | | |
| | 04 | | 05 | | | | 06 | 0 | 7 |
| | | System Desi | gn OA CFM | | System | Design | | Air Filtration per §120 | .1(c) and §141.0(b)2 ² |
| System Name | RTU-E2 | Airfl | - | 450 | | Air CFM | 0 | Provided per <u>§1</u> Hotel/I | <u>20.1(c)</u> (NR and Motel)) |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u>) | <u>3</u> 3 | | Exh. \ | Vent per <u>§120.1(c)4</u> | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people ⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Cont §120.1(d)5, an | rols per <u>§120.1(d)3</u> , 1d <u>§120.1(e)3</u> ⁶ |
| Classroom | Lecture/ postsecondary classroom | 995 | | 30 | 450 | 0 | 0 | DCV | Provided per <u>§120.1(d)4</u> |
| Classicoli | Lecture/ postsecondary classicom | 222 | | 30 | 430 | Ŭ | 0 | Occ Sensor | NA: Not required space type |
| 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this S | System Complies? Yes | |
| | 04 | | 05 | | | | 06 | 0 | 7 |
| | | System Desi | gn OA CFM | | System | Design | | Air Filtration per §120 | .1(c) and §141.0(b)2 ² |
| System Name | RTU-E3 | Airfl | - | 450 | | Air CFM | 0 | Provided per <u>§1</u> Hotel/I | <u>20.1(c)</u> (NR and Motel)) |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | 6 |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u>) | <u>3</u> 3 | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Cont §120.1(d)5, an | rols per <u>§120.1(d)3</u> , ad <u>§120.1(e)3</u> ⁶ |
| Classroom | Lecture/ postsecondary classroom | 915 | | 30 | 450 | 0 | 0 | DCV | Provided per §120.1(d)4 |
| Classicon | Letter possecondary classicon | 515 | | 50 | -50 | U | 0 | Occ Sensor | NA: Not required space type |
| 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this S | System Complies? | Yes |
| | | | | | | | | | |

CVUSD Barranca Report Page:

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

CVUSD Barranca Report Page:

727 S Barranca Ave Date Prepared:

Registration Provider: Energysoft

CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E

(Page 19 of 39)

Report Generated: 2022-06-28 11:56:10

В

STATE OF CALIFORNIA

Mechanical Systems NRCC-MCH-E CERTIFICATE OF COMPLIANCE

Project Name:

Project Address:

CALIFORNIA ENERGY COMMISSION

| J. VENTILATION AND INDOOR AIR QUALITYOfOfOfSystem NameRTU-H4System Design OA CFM AirHow ² 450System Case Transfer Air CFMOf0809101112131415160910111213141516Space Name ot item TagMechanical Ventilation Required per \$120.1(c).3 ³ Exh. Vent per \$120.1(c).4DCV or Sensor Controls per \$120.1(c).4Space Name ot item TagOccupancy Type4Conditioned # of Shower Floor Area heads/ toilets# of people5Required CFMProvided per Design CFMDCV or Sensor Controls per \$120.1(c).4Classroom ot item TagConditioned # of Shower Floor Area heads/ toilets# of space NameRequired min OA people5Provided per S120.1(c).4DCV or Sensor Controls per \$120.1(d).3Classroom ot item TagConditioned # of Shower Floor Area heads/ toilets# of space NameRequired min OA people5Provided per S120.1(c).4DCV or Sensor Controls per \$120.1(d).3Total System Required Min OA CFM97030450000DCVProvided per \$120.1(c).4System NameRTU-HSystem Design OA CFM AirHow ³ 450System Design Transfer Air CFM0Air Filtration per \$120.1(c).4Occupancy Type4Gonditioned # of Shower (ft ²)111213141516Space Name ot item TagMechanical Ventilation Required Pei Shower (ft ²) <th></th> | | | | | | | | | | |
|---|---------------|-----------------------------------|---------------|-----------------------|----------------|--------|--------|----------------------------|-------------------------|--|
| System NameRTU-H4System Design 0A CFM Airflow1450System Design Transfer Air CFM0Air Filtration per \$120.1(c) and \$141.0(b)2 Provided per \$120.1(c) (NR and Hote/Motel))080910111213141516Space Name ot item TagMechanical Ventilation Required per \$120.1(c) 3 Floor Area (ft?)Conditioned # of Shower heads/ (ft?)# of Shower heads/ (ft?)# of Shower peple5# of Shower Provided per Design Min CFMProvided per Design CFMDCV or Sensor Controls per \$120.1(c)3 \$120.1(d)3. \$120.1(d)5. and \$120.1(e)3 & 6ClassroomLecture/ postsecondary classroom97030450000Ne: Not required space Name CFM17Total System Required Min OA CFM of tem TagSystem Design OA CFM Airflow1450System Design Transfer Air CFM000Ne: Not required space Name CFM080910111213141516System Name ot item TagRTU-I1System Design OA CFM Airflow1450System Design Transfer Air CFM0Air Filtration per \$120.1(c) (NR and Hote/Motel))080910111213141516Space Name ot item TagOccupancy Type4Conditioned (ft?)# of Shower Airflow1# of Shower Hote/Motel)# of Shower Provided per Design Transfer Air CFMOC Sensor Controls per \$120.1(c) (NR and Hote/Motel)0809101112 <th>J. VENTILATIO</th> <th>ON AND INDOOR AIR QUALITY</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> | J. VENTILATIO | ON AND INDOOR AIR QUALITY | | | | | | | | |
| System NameRTU-H4System Design Airflow10Provided per \$120.1(c) (NR and Hote//Motel))00809101112131415160Mechanical Ventilation Required per \$120.1(c) 3Exh. Vent per \$120.1(c) 4DCV or Sensor Controls per \$120.1(a) 5DCV or Sensor Controls per \$120.1(a) 5DCV or Sensor Controls per \$120.1(a) 5Space Name ot item TagOccupancy Type4Conditioned (ft²)# of Shower heads/ toilets# of people5Required People5Provided per Design OC FMDCV or Sensor Controls per \$120.1(a) 5Classroom 17Lecture/ postsecondary classroom9703045000DCVProvided per \$120.1(a)17Total System Required Min OA CFM Airflow1System Design OA CFM Airflow145030450000017Total System Required Min OA CFM Airflow1System Design OA CFM Airflow1450System Design Transfer Air CFM0Air Flitration per \$120.1(c) (MR and Hote//Motel))080910111213141516Space Name ot item TagOccupancy Type4Conditioned (ft²)# of Shower heads/# of people5Required Min OAProvided per \$120.1(c) (MR and Hote//Motel))080910111213141516Space Name ot item TagOccupancy Type4Conditioned (ft²)for Shower heads/# of Shower people5# of Shower R | | 04 | | 05 | | | | 06 | 0 | 7 |
| System Name OBRIU-H4Airflow1450Transfer Air CFM0Provided per \$120.1(c) Hore/Motel)Provided per \$120.1(c) Hore/Motel)080910111213141516Space Name ot item TagMechanical Ventilation Required per \$120.1(c)3 $Exh. Vent per $120.1(c)4$ Provided per Design Min OA CFMProvided per Design Min CFMDCV or Sensor Controls per \$120.1(d)3. \$120.1(d)5, s120.1(d)4ClassroomLecture/ postsecondary classroom970 $III12131415DCV or Sensor Controls per $120.1(d)417Total System Required Min OA CFMIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII$ | | | System Desi | σn ΟΔ CFM | | System | Design | | Air Filtration per §120 | .1(c) and <u>§141.0(b)2</u> ² |
| Mechanical Ventilation Required per §120.1(c) 3 *Exh. Vent per §120.1(c) 4Space Name ot item TagOccupancy Type 4Conditioned Floor Area (ft ²)# of heads/ toiletsRequired people5Required Min CA CFMProvided per Design CFMDCV or Sensor Controls per §120.1(d)3. §120.1(d)5, and §120.1(e)3 *Classroom Lecture/ postsecondary classroom970# of resultRequired people5Required Min CA CFMProvided per Design CFMDCV or Sensor Controls per §120.1(d)3. §120.1(d)4DCVProvided per §120.1(d)417Total System Required Min OA CFM970304500000NA: Not required space type17Total System Required Min OA CFM5018Ventilation for this System Complies?Yes04050607System NameRTU-I1System Design OA CFM Airflow ¹ 450System Design Transfer Air CFM0Air Filtration per §120.1(c) and §141.0(b)2 \$120.1(c) and \$141.0(b)2 \$120.1(c) and \$141.0(b)2 \$120.1(c) and \$141.0(b)2 \$120.1(c) and \$141.0(b)2080910111213141516Space Name ot item TagOccupancy Type 4Conditioned # of Shower Floor Area (ft ²)# of heads/ (ft ²)Required # of people ⁵ Provided per Design CFMDCV or Sensor Controls per §120.1(d)3. \$120.1(d)4Classroom titem TagOccupancy Type 4Conditioned # of Shower Floor Area (ft ²)# of heads/ citelts <td>System Name</td> <td>RTU-H4</td> <td></td> <td>-</td> <td>450</td> <td></td> <td>-</td> <td>0</td> <td>·</td> <td></td> | System Name | RTU-H4 | | - | 450 | | - | 0 | · | |
| Space Name ot item TagOccupancy Type4Conditioned Floor Area (ft ²)# of heads/ tilletsRequired people5Required Min CA Min CFMProvided per Design CFMDCV or Sensor Controls per §120.1(d)3, §120.1(d)5, aid §120.1(d)4ClassroomLecture/ postsecondary classroom97030450000DCVProvided per Design §120.1(d)417Total System Required Min OA CFM97097045018Ventilation for this System Comples?NA: Not required space type17Total System Required Min OA CFM0018Ventilation for this System Comples?Yes040500607System NameRTU-11System Design OA CFM Airflow ¹ 450System CFM Transfer Air CFMAir Filtration per §120.1(c) and §141.0(b)2080910111213141516Space Name ot item TagOccupancy Type4Conditioned Floor Area (ft ²)# of Shower heads/ toilets# of people5Required Min CA Required Min CFMProvided per Design Occupancy Type4DCV or Sensor Controls per §120.1(c) (IR and §120.1(c) and §121.0(c) aClassroomLecture/ postsecondary classroom97530450000DCV or Sensor Controls per §120.1(c) Bit On Area S120.1(c)ClassroomLecture/ postsecondary classroom97530450000DCV or Sensor Controls per §120.1(c) S120.1(d)4ClassroomLecture/ pos | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
| ot item TagOccupancy Type4Floor Area (ft?)Hodds/ heads/ toilets# of people5Required people5Provided per Design Min CFMS120.1(d)5, and 5120.1(e)3 eClassroomLecture/ postsecondary classroom9709703045000< | | Mechanical Ventila | tion Required | per <u>§120.1(c</u>) | 3 ³ | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| $ \begin{array}{ c c c c c } \hline \begin{tabular}{ c c c c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$ | | Occupancy Type ⁴ | Floor Area | heads/ | | Min OA | | | | |
| Image: Normal system Required Min DA CFMImage: Normal system Required Min DA CFMMain Normal system Required Min DA CFMMain Normal system ComplexityMain Normal system Com | Classroom | Lecture / postsocondary classroom | 970 | | 20 | 450 | 0 | 0 | DCV | |
| 04050607System NameRTU-I1System Design OA CFM Airflow1450System Design Transfer Air CFM0Air Filtration per §120.1(c) and §141.0(b)2 20809101112131415I0809101112131415ISpace Name ot item TagMechanical Ventilation Required per §120.1(c)3 3Exh. Vent per §120.1(c)4DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 6DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(d)3, §120.1(d)5, and §120.1(d)3, §120.1(d)4ClassroomLecture/postsecondary classroom9753045000DCVProvided per §120.1(d)4ClassroomLecture/postsecondary classroom9753045000NA: Not required space type | Classicolin | Lecture/ possecondary classicom | 970 | | 50 | 430 | Ū | 0 | Occ Sensor | |
| System NameRTU-I1System Design OA CFM Airflow1450System Design Transfer Air CFM0Air Filtration per §120.1(c) and §141.0(b)220809101112131415 | 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this S | System Complies? Yes | |
| System NameRTU-I1System Design DA CFM Airflow1450System Design Transfer Air CFM0Provided per $\frac{5120.1(c)}{Hotel/Motel)}$ 0809101112131415 | | 04 | | 05 | | | | 06 | 0 | 7 |
| System NameR10-11Airflow1450Transfer Air CFM0Provided per $\frac{5120.1(c)}{Hotel/Motel}$ (NR and Hotel/Motel)0809101112131415 | | | System Desi | gn OA CEM | | System | Design | | Air Filtration per §120 | .1(c) and <u>§141.0(b)2</u> ² |
| Mechanical Ventilation Required per §120.1(c)3 ³ Exh. Vent per §120.1(c)4 DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(d)3, §120.1(d)4 Space Name ot item Tag Occupancy Type ⁴ Conditioned floor Area (ft ²) # of heads/ toilets # of people ⁵ Required Min OA CFM Provided per Design CFM DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 ⁶ Classroom Lecture/ postsecondary classroom 975 30 450 0 0 DCV Provided per §120.1(d)4 Occ Sensor NA: Not required space type 1000000000000000000000000000000000000 | System Name | RTU-I1 | | - | 450 | | | 0 | | |
| Space Name ot item Tag Occupancy Type ⁴ Conditioned Floor Area (ft ²) # of Shower heads/ toilets # of people ⁵ Required Min OA CFM Provided per Design CFM DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 ⁶ Classroom Lecture/ postsecondary classroom 975 A 30 450 0 0 DCV DCV or Sensor Controls per §120.1(d)3, §120.1(d)4 Provided per §120.1(d)4 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | 6 |
| ot item Tag Occupancy Type ⁴ Floor Area (ft ²) # of beads/ toilets # of people ⁵ Min OA CFM Required Min CFM Provided per Design CFM §120.1(d)5, and §120.1(e)3 ⁶ Classroom Lecture/ postsecondary classroom 975 30 450 0 0 0 DCV Provided per §120.1(d)4 NA: Not required space type | | Mechanical Ventila | tion Required | per <u>§120.1(c</u>) | <u>3</u> 3 | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| Classroom Lecture/ postsecondary classroom 975 30 450 0 0 0 DCV §120.1(d)4 Occ Sensor NA: Not required space type | | Occupancy Type ⁴ | Floor Area | heads/ | | Min OA | | | | |
| Occ Sensor NA: Not required space type | Classroom | Lecture/ postsecondary classroom | 975 | | 30 | 450 | 0 | 0 | DCV | |
| 17Total System Required Min OA CFM45018Ventilation for this System Complies?Yes | Classicon | | 575 | | 50 | 450 | Ŭ | U U | Occ Sensor | |
| | 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this S | System Complies? | Yes |

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

| CERTIFICATE OF CO | MPLIANCE | | | | | NRCC-M |
|--------------------|-----------------|------------------------|---------------------------|--|--|--------------------|
| Project Name: | | | | CVUSD Barranca Report Page: | | (Page 25 d |
| Project Address: | | | 72 | 27 S Barranca Ave Date Prepared | d: | 6/28/ |
| | | | | | | |
| L. DISTRIBUTION | (DUCTWOR | (and PIPING) | | | | |
| This table is used | to show complie | ance with mandator | y pipe insulation require | ements found in <u>§120.3</u> and | prescriptive requirements found in <u>§140.4(I)</u> for duct leaka | ige testing. |
| Duct Leakage Sea | ling | | | | | |
| The answers to th | e questions bel | ow apply to the follo | owing duct systems: | FCU-B1 | Duct leakage testing triggered for these systems? | No |
| 11 | No | The scope of the | project includes only di | uct systems serving healthcar | e facilities | |
| 12 | Yes | Duct system prov | vides conditioned air to | an occupiable space for a cor | nstant volume, single zone, space-conditioning system. | |
| 13 | Yes | The space condit | ioning system serves les | ss than 5,000 ft ² of condition | ed floor area. | |
| 14 | No | The <u>combined</u> su | rface area of the ducts | in the following locations is n | nore than 25% of the total surface area of the entire duct s | system: |
| | | | Outdoors | | | |
| | | | | - | reater than the u-factor of the ceiling, or if the roof does n I vents or openings to the outside/ unconditioned spaces | ot meet the |
| | | | In an unconditioned cr | awl space | | |
| | | | In other unconditioned | spaces | | |
| 15 | | The scope of the | project includes extend | ling an existing duct system, v | which is constructed, insulated or sealed with asbestos. | |
| 16 | | | | ē , | mented to have been previously sealed as confirmed throu e Nonresidential Appendix NA2. | ugh field verifica |
| 17 | Yes | Duct system shal | l be sealed in acordance | e with the California Mechani | cal Code | |
| The answers to th | e questions bel | ow apply to the follo | owing duct systems: | RTU-C1 | Duct leakage testing triggered for these systems? | No |
| 11 | No | The scope of the | project includes only d | uct systems serving healthcar | re facilities | |
| 12 | Yes | Duct system prov | ides conditioned air to | an occupiable space for a cor | nstant volume, single zone, space-conditioning system. | |
| 13 | Yes | The space condit | ioning system serves les | ss than 5,000 ft ² of condition | ed floor area. | |
| 14 | No | The <u>combined</u> su | rface area of the ducts | in the following locations is n | nore than 25% of the total surface area of the entire duct s | system: |
| | | | Outdoors | | | |
| | | | | | reater than the u-factor of the ceiling, or if the roof does r I vents or openings to the outside/ unconditioned spaces | ot meet the |
| | | | In an unconditioned cr | awl space | | |
| | | | | | | |

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

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CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E

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

| Project Address | | | | USD Barranca | | | | | (Page 20 of 39) |
|---------------------------|----------------------------------|---|----------------------------------|------------------------|---------------------------|---------------------|----------------------------|--------------------------------------|---|
| rioject Address | : | | 727 S | Barranca Ave | Date Prep | ared: | | | 6/28/2022 |
| | | | | | | | | | |
| J. VENTILATIO | ON AND INDOOR AIR QUALITY | | | | | | | | |
| | 04 | | 05 | | | | 06 | | 7 |
| | | System Desi | gn OA CFM | | System | Design | _ | | .1(c) and §141.0(b)2 ² |
| System Name | RTU-E4 | , Airflo | - | 450 | | Air CFM | 0 | | <u>20.1(c)</u> (NR and Motel)) |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u>) | <u>)3</u> ³ | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Cont §120.1(d)5, an | rols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶ |
| Classroom | Lecture/ postsecondary classroom | 970 | | 30 | 450 | 0 | 0 | DCV | Provided per §120.1(d)4 |
| classicoli | | 570 | | 50 | 450 | Ű | 0 | Occ Sensor | NA: Not required space type |
| 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this S | | Yes |
| | 04 | | 05 | | | | 06 | 0 | 7 |
| | | System Desi | gn OA CFM | | System | Design | | - | .1(c) and §141.0(b)2 ² |
| System Name | RTU-H1 | Airflo | - | 450 | | Air CFM | 0 | | <u>20.1(c)</u> (NR and Motel)) |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | .6 |
| | Mechanical Ventila | | | <u>)3</u> ³ | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Cont §120.1(d)5, ar | rols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶ |
| Classroom | Lecture/ postsecondary classroom | 995 | | 30 | 450 | 0 | 0 | DCV | Provided per §120.1(d)4 |
| Classicolli | cecture, possecondary classicom | | | 50 | 450 | Ŭ | 0 | Occ Sensor | NA: Not required space type |
| 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this S | system Complies? | Yes |

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

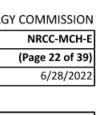
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601

CVUSD Barranca Report Page:

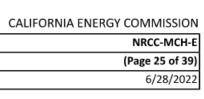
727 S Barranca Ave Date Prepared:

Registration Provider: Energysoft

Report Generated: 2022-06-28 11:56:10



: Not required space type Yes



| e testing. |
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| No |
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| t meet the |
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| h field verification |
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| stem: |
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| t meet the |

| J. VENTILATIO | ON AND INDOOR AIR QUALITY | | | | | | | | |
|---------------------------|----------------------------------|---|----------------------------------|-----------------------------|---------------------------|-----------------------------------|----------------------------|-------------------------|---|
| | 04 | | 05 | | | | 06 | C | 7 |
| Custom Norma | RTU-I2 | System Desi | gn OA CFM | 450 | System | n Design | | | .1(c) and §141.0(b)2 ² |
| System Name | KTU-IZ | Airflow ¹ 450 Transfer Air CFM | | 0 | | <u>20.1(c)</u> (NR and Motel)) | | | |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | .6 |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u> |) <u>3</u> ³ | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people ⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | | rols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶ |
| Classroom | Lecture/ postsecondary classroom | 950 | | 30 | 450 | 0 | 0 | DCV | Provided per <u>§120.1(d)4</u> |
| Classicon | | 550 | | 50 | 450 | | Ŭ | Occ Sensor | NA: Not required space type |
| 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this | System Complies? Yes | |
| | 04 | | 05 | | | | 06 | 07 | |
| | | System Desi | gn OA CEM | | | n Design | | Air Filtration per §120 | .1(c) and §141.0(b)2 ² |
| System Name | RTU-I3 | | Airflow ¹ | | | Air CFM | 0 | | <u>20.1(c)</u> (NR and Motel)) |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | .6 |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u> | <u>)3</u> ³ | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people ⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | | rols per <u>§120.1(d)3</u> , nd <u>§120.1(e)3</u> ⁶ |
| Classroom | Lecture/ postsecondary classroom | 940 | | 30 | 450 | 0 | 0 | DCV | Provided per §120.1(d)4 |
| | cecture, postecondary classicon | 540 | | | 450 | | Ŭ | Occ Sensor | NA: Not required space type |
| 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this | System Complies? | Yes |
| | | | | | | | | | |

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

STATE OF CALIFORNIA Machanical S

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Registration Number:

12

| Mechanical S | Systems | | | | | CALIFORNI | A ENERGY COMM | | |
|-------------------|-----------------|------------------------|--|--|---------|--|---------------------|--|--|
| CERTIFICATE OF CO | MPLIANCE | | | | | | NRCC- | | |
| Project Name: | | | | CVUSD Barranca Report P | Page: | | (Page 20 | | |
| Project Address: | | | 7 | 27 S Barranca Ave Date Pre | epared | 1: | 6/2 | | |
| | | | | | | | | | |
| L. DISTRIBUTION | N (DUCTWORK | (and PIPING) | | | | | | | |
| | | | In other unconditione | d spaces | | | | | |
| 15 | | The scope of the | project includes exten | ding an existing duct syst | em, v | which is constructed, insulated or sealed with asbestos. | | | |
| 16 | | · · · | | 2 . | | mented to have been previously sealed as confirmed th e Nonresidential Appendix NA2. | rough field verific | | |
| 17 | Yes | Duct system shal | Il be sealed in acordand | e with the California Mee | chani | cal Code | | | |
| The answers to th | e questions bel | ow apply to the foll | pply to the following duct systems: RTU-C2 Duct leakage testing triggered for these systems? | | | | | | |
| 11 | No | The scope of the | project includes only o | luct systems serving heal | thcar | e facilities | | | |
| 12 | Yes | Duct system prov | vides conditioned air to | an occupiable space for | a con | stant volume, single zone, space-conditioning system. | | | |
| 13 | Yes | The space condit | tioning system serves le | ess than 5,000 ft ² of cond | litione | ed floor area. | | | |
| 14 | No | The <u>combined</u> su | urface area of the ducts | in the following location | ns is m | nore than 25% of the total surface area of the entire due | ct system: | | |
| | • | | Outdoors | | | | | | |
| | | | | | - | reater than the u-factor of the ceiling, or if the roof doe vents or openings to the outside/ unconditioned space | | | |
| | | | In an unconditioned c | rawl space | | | , | | |
| | | | In other unconditione | d spaces | | | | | |
| 15 | | The scope of the | ne scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. | | | | | | |
| 16 | | | | | | mented to have been previously sealed as confirmed th e Nonresidential Appendix NA2. | rough field verific | | |
| | | | | | | | | | |

The answers to the questions below apply to the following duct systems: RTU-D1 Duct leakage testing triggered for these systems? No No The scope of the project includes only duct systems serving healthcare facilities Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area. No The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: Outdoors In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces In an unconditioned crawl space

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17 Yes Duct system shall be sealed in acordance with the California Mechanical Code

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E

| Project Address: | 727 S Barranca Ave | Date Prepared: | |
|---------------------------|--------------------|----------------|-----------------|
| Project Name: | CVUSD Barranca | Report Page: | |
| CERTIFICATE OF COMPLIANCE | | | |
| NRCC-MCH-E | | | CALIFORNIA ENER |
| Mechanical Systems | | | |
| STATE OF CALIFORNIA | | | |

| J. VENTILATIO | ON AND INDOOR AIR QUALITY | | | | | | | | |
|---------------------------|----------------------------------|---|----------------------------------|-----------------------------|---------------------------|---------------------|----------------------------|---|--|
| | 04 | | 05 | | | | 06 | C |)7 |
| System Name | RTU-H2 | System Desi Airfl | - | 450 | | Design Air CFM | 0 | · · _ | <u>1.1(c)</u> and <u>§141.0(</u> 20.1(c) (NR and Motel)) |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | .6 |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u> |) <u>3</u> ³ | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people ⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Cont §120.1(d)5, ar | rols per <u>§120.1(d)</u> nd <u>§120.1(e)3</u> ⁶ |
| Classroom | Lecture/ postsecondary classroom | 995 | | 30 | 450 | 0 | 0 | DCV | Provided pe §120.1(d)4 |
| Classicon | Lecture/ postsecondary classicon | 333 | | 50 | 430 | 0 | 0 | Occ Sensor | NA: Not requir space type |
| 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this | System Complies? | Yes |
| | 04 | | 05 | | | | 06 | C |)7 |
| System Name | RTU-H3 | System Desi Airfl | - | 450 | | Design Air CFM | 0 | | . <u>1(c)</u> and <u>§141.0(</u> 20.1(c) (NR and Motel)) |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | .6 |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u> |) <u>3</u> ³ | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people ⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | DCV or Sensor Controls per <u>§12</u> §120.1(d)5, and <u>§120.1(e)</u> | |
| Classroom | Lecture/ postsecondary classroom | 915 | | 30 | 450 | 0 | 0 | DCV | Provided per §120.1(d)4 |
| Classicolli | | 515 | | 30 | 430 | | | Occ Sensor | NA: Not requir space type |
| 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this | System Complies? | Yes |

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

J. VENTILATION AND INDOOR AIR QUALITY

04

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time:

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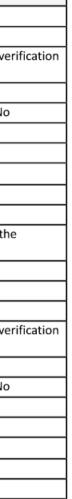
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Registration Provider: Energysoft

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| | | System Desi | gn OA CEM | | System | Design | | Air Filtration per §120 | <u>.1(c)</u> and <u>§141</u> . |
|---------------------------|---|---|----------------------------------|-----------------|---------------------------|---------------------|----------------------------|---|--------------------------------|
| System Name | RTU-I4 | Airfl | - | 450 | | Air CFM | 0 | Provided per <u>§1</u> Hotel/N DCV or Sensor Contr <u>§120.1(d)5</u> , an DCV Occ Sensor System Complies? | |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 1 | .6 |
| | Mechanical Ventila | tion Required | per <u>§120.1(c</u>) | <u>3</u> 3 | | Exh. | Vent per <u>§120.1(c)4</u> | | |
| Space Name ot item Tag | Occupancy Type ⁴ | Conditioned Floor Area (ft ²) | # of Shower heads/ toilets | # of people⁵ | Required Min OA CFM | Required Min CFM | Provided per Design CFM | | |
| Classroom | Lecture/ postsecondary classroom | 925 | | 30 | 450 | 0 | 0 | DCV | Provided §120.1(d |
| Classicoli | Lecture, possecondary classicom | 525 | | 50 | 450 | | 0 | Occ Sensor | NA: Not req space typ |
| 17 | Total System Required Min OA CFM | | | | 450 | 18 | Ventilation for this | System Complies? | Yes |
| ¹ FOOTNOTES: | System CFM should include both mech | anical and nat | ural ventilati | on for the z | one/systen | n | | | |
| ventilation syst | requirements apply to the following the tems providing outside air to occupiabl occupiable space. | | | | | | | | |

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³ Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.

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⁴ See Standards Tables 120.1-A and 120.1-B.

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⁵ For lecture halls with fixed seating, the expected number of occupants shall be shall be determined in accordance with the California Building Code. ⁶ <u>§120.2(e)3</u> requires systems serving rooms that are required by <u>§130.1(c)</u> to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).

K. TERMINAL BOX CONTROLS This section does not apply to this project.

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STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

| CERTIFICATE OF COM | IPLIANCE | | | | | | NRCC-N | |
|---|-----------|-----------------------------------|---|--------------------------------|---|--|-----------------------|--|
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| | | | | | | | | |
| L. DISTRIBUTION | (DUCTWORK | and PIPING) | | | | | | |
| | | | In other unconditione | ed spaces | | | | |
| 15 | | The scope of the | project includes exter | nding an existing o | duct system, v | which is constructed, insulated or sealed with asbestos. | | |
| 16 | | | | | | mented to have been previously sealed as confirmed the Nonresidential Appendix NA2. | nrough field verifica | |
| 17 | Yes | Duct system sha | Duct system shall be sealed in acordance with the California Mechanical Code | | | | | |
| The answers to the questions below apply to the following duct systems: RTU-I | | | RTU-C | 02 | Duct leakage testing triggered for these systems? | No | | |
| 11 | No | The scope of the | he project includes only duct systems serving healthcare facilities | | | | | |
| 12 | Yes | Duct system pro- | vides conditioned air to | o an occupiable s | pace for a cor | nstant volume, single zone, space-conditioning system. | | |
| 13 | Yes | The space condit | tioning system serves l | ess than 5,000 ft ² | ² of condition | ed floor area. | | |
| 14 | No | The <u>combined</u> su | urface area of the duct | s in the following | locations is n | nore than 25% of the total surface area of the entire du | ct system: | |
| | | | Outdoors | | | | | |
| | | | | | - | reater than the u-factor of the ceiling, or if the roof doe I vents or openings to the outside/ unconditioned space | | |
| In an unconditioned crawl space | | | | | | | | |
| | | | In other unconditione | ed spaces | | | | |
| 15 | | The scope of the | e project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. | | | | | |
| 16 | | | e project includes an existing duct system that is documented to have been previously sealed as confirmed through field verifica testing in accordance with procedures in the Reference Nonresidential Appendix NA2. | | | | | |

17 Yes Duct system shall be sealed in acordance with the California Mechanical Code The answers to the questions below apply to the following duct systems: RTU-D3 Duct leakage testing triggered for these systems? No No The scope of the project includes only duct systems serving healthcare facilities 11 Yes Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. 12 Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.

No The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: Outdoors In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of <u>§140.3(a)1B</u> or if the roof has fixed vents or openings to the outside/ unconditioned spaces

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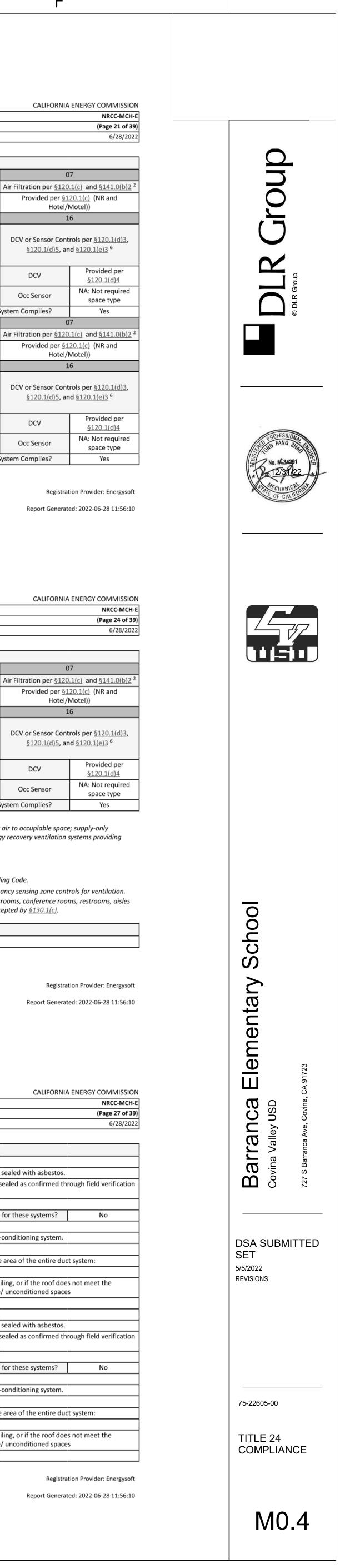
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14

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In an unconditioned crawl space Registration Date/Time:



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| CERTIFICATE OF COM | PLIANCE | | | | | | NRCC-MCH- | |
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| | | | | | | | | |
| L. DISTRIBUTION | (DUCTWOR | K and PIPING) | | | | | | |
| | | | In other unconditioned | spaces | | | | |
| 15 | | The scope of the | project includes extend | ing an existing o | duct system, | which is constructed, insulated or sealed with asbestos. | | |
| 16 | | | | | | mented to have been previously sealed as confirmed the e Nonresidential Appendix NA2. | ough field verification | |
| 17 | Yes | Duct system shal | l be sealed in acordance | with the Califo | rnia Mechan | ical Code | | |
| The answers to the | questions be | low apply to the follo | owing duct systems: | RTU-D | 04 | Duct leakage testing triggered for these systems? | No | |
| 11 | No | The scope of the | The scope of the project includes only duct systems serving healthcare facilities | | | | | |
| 12 | Yes | Duct system prov | Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. | | | | | |
| 13 | Yes | The space condit | The space conditioning system serves less than 5,000 ft ² of conditioned floor area. | | | | | |
| 14 | No | The <u>combined</u> su | The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: | | | | | |
| | | | Outdoors | | | | | |
| | | | | | | greater than the u-factor of the ceiling, or if the roof does d vents or openings to the outside/ unconditioned spaces | | |
| | | | In an unconditioned cra | awl space | | | | |
| | | | In other unconditioned | spaces | | | | |
| 15 | | The scope of the | project includes extend | ing an existing o | duct system, | which is constructed, insulated or sealed with asbestos. | | |
| 16 | | | | - , | | imented to have been previously sealed as confirmed the e Nonresidential Appendix NA2. | ough field verification | |
| 17 | Yes | Duct system shal | l be sealed in acordance | with the Califo | rnia Mechan | ical Code | | |
| The answers to the | questions be | low apply to the follo | owing duct systems: | RTU-E | 1 | Duct leakage testing triggered for these systems? | No | |
| 11 | No | The scope of the | The scope of the project includes only duct systems serving healthcare facilities | | | | | |
| 12 | Yes | Duct system prov | Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. | | | | | |
| 13 | Yes | The space condit | The space conditioning system serves less than 5,000 ft ² of conditioned floor area. | | | | | |
| 14 | No | The <u>combined</u> su | rface area of the ducts i | n the following | locations is a | nore than 25% of the total surface area of the entire duc | t system: | |
| | | | Outdoors | | | | | |
| | | | | | | greater than the u-factor of the ceiling, or if the roof does d vents or openings to the outside/ unconditioned spaces | | |
| | | | In an unconditioned cra | | | | | |

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STATE OF CALIFORNIA Mechanical Systems

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| | | | | | | | | |
| L. DISTRIBUTION | (DUCTWORK | and PIPING) | | | | | | |
| | • | | In other unconditioned s | Daces | | | | |
| 15 | | | | | which is constructed, insulated or sealed with asbestos. | | | |
| 16 | | The scope of the | e project includes an existir | ng duct system that is docu | imented to have been previously sealed as confirmed three Nonresidential Appendix NA2. | ough field verification | | |
| 17 | Yes | Duct system sha | all be sealed in acordance w | vith the California Mechan | ical Code | | | |
| The answers to the | questions bel | | llowing duct systems: | RTU-H2 | Duct leakage testing triggered for these systems? | No | | |
| 11 | No | The scope of the | e project includes only duct | systems serving healthca | re facilities | | | |
| 12 | Yes | Duct system pro | Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. | | | | | |
| 13 | Yes | The space cond | he space conditioning system serves less than 5,000 ft ² of conditioned floor area. | | | | | |
| 14 | No | The combined s | he combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: | | | | | |
| | | | Outdoors | - | | | | |
| | | | | | greater than the u-factor of the ceiling, or if the roof does d vents or openings to the outside/ unconditioned spaces | | | |
| In an unconditioned crawl space | | | | | | | | |
| | | | In other unconditioned s | baces | | | | |
| 15 | | The scope of the | e project includes extendin | g an existing duct system, | which is constructed, insulated or sealed with asbestos. | | | |
| 16 | | | | | mented to have been previously sealed as confirmed thr e Nonresidential Appendix NA2. | ough field verification | | |
| 17 | Yes | Duct system sha | all be sealed in acordance w | ith the California Mechan | ical Code | | | |
| The answers to the | questions bel | ow apply to the fo | llowing duct systems: | RTU-H3 | Duct leakage testing triggered for these systems? | No | | |
| 11 | No | The scope of the | e project includes only duct | systems serving healthca | re facilities | | | |
| 12 | Yes | Duct system pro | puct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. | | | | | |
| 13 | Yes | The space cond | The space conditioning system serves less than 5,000 ft ² of conditioned floor area. | | | | | |
| 14 | 14 No The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: | | | | | | | |
| | | | Outdoors | | | | | |
| | | | | | greater than the u-factor of the ceiling, or if the roof does d vents or openings to the outside/ unconditioned spaces | | | |
| | | | In an unconditioned craw | Ispace | | | | |

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STATE OF CALIFORNIA Mechanical Systems

Registration Number:

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| Project Address: | | | 7 | 727 S Barranca Ave Date Prepare | ed: | 6/28/2 |
| | | | | | | |
| L. DISTRIBUTION | (DUCTWOR | K and PIPING) | | | | |
| | | | In other unconditione | d spaces | | |
| 15 | | The scope of the p | project includes exten | ding an existing duct system, | which is constructed, insulated or sealed with asbestos. | |
| 16 | | | | e , | umented to have been previously sealed as confirmed the co | rough field verification |
| 17 | Yes | Duct system shall | be sealed in acordanc | e with the California Mechan | ical Code | |
| The answers to the | e questions be | low apply to the follo | wing duct systems: | RTU-I4 | Duct leakage testing triggered for these systems? | No |
| 11 | No | The scope of the p | project includes only d | duct systems serving healthca | re facilities | |
| 12 | Yes | Duct system provi | des conditioned air to | an occupiable space for a co | onstant volume, single zone, space-conditioning system. | |
| 13 | Yes | The space condition | oning system serves le | ess than 5,000 ft ² of conditior | ned floor area. | |
| 14 | No | The <u>combined</u> sur | face area of the ducts | in the following locations is | more than 25% of the total surface area of the entire duc | t system: |
| | | | Outdoors | | | |
| | | | | | greater than the u-factor of the ceiling, or if the roof doe d vents or openings to the outside/ unconditioned space | |
| In an unconditioned crawl space | | | | | | |
| In other unconditioned spaces | | | | | | |
| 15 | | The scope of the p | The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos. | | | |
| 16 | | | The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verificat and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2. | | | |
| 17 | Yes | Duct system shall | Duct system shall be sealed in acordance with the California Mechanical Code | | | |

M. COOLING TOWERS This section does not apply to this project.

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| NRCC-MCH-E | MPLIANCE | | | | | A ENERGY COMMISSIC NRCC-MCH | |
|-------------------|-------------------|--|--|----------------|--|--------------------------------|--|
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| - | | | | | | | |
| L. DISTRIBUTIO | N (DUCTWORK | and PIPING) | | | | | |
| | | | In other unconditioned spaces | | | | |
| 15 | | The scope of the | · | duct system, | which is constructed, insulated or sealed with asbestos. | | |
| 10 | | | | | mented to have been previously sealed as confirmed th | rough field verificatio | |
| 16 | | and diagnostic te | sting in accordance with procedures in | the Referenc | e Nonresidential Appendix NA2. | | |
| 17 | Yes | Duct system shal | I be sealed in acordance with the Califo | rnia Mechan | ical Code | | |
| The answers to th | ne questions belo | w apply to the foll | owing duct systems: RTU-I | 2 | Duct leakage testing triggered for these systems? | No | |
| 11 | No | The scope of the | project includes only duct systems serv | ring healthca | re facilities | | |
| 12 | Yes | Duct system prov | vides conditioned air to an occupiable s | pace for a co | nstant volume, single zone, space-conditioning system. | | |
| 13 | Yes | The space conditioning system serves less than 5,000 ft ² of conditioned floor area. | | | | | |
| 14 | No | The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: | | | | | |
| | | | Outdoors | | | | |
| | | | | | greater than the u-factor of the ceiling, or if the roof doe | | |
| | | | | roof has fixe | d vents or openings to the outside/ unconditioned space | 25 | |
| | | | In an unconditioned crawl space | | | | |
| 45 | | | In other unconditioned spaces | | | | |
| 15 | | | | - | which is constructed, insulated or sealed with asbestos. | | |
| 16 | | | project includes an existing duct system esting in accordance with procedures in | | imented to have been previously sealed as confirmed th re Nonresidential Appendix NA2 | rough field verificatio | |
| 17 | Yes | | I be sealed in acordance with the Califo | | | | |
| | | · · | owing duct systems: RTU-I | | Duct leakage testing triggered for these systems? | No | |
| 11 | No | | project includes only duct systems serv | ing healthca | | | |
| 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 <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: | | | | | |
| | | | Outdoors | | | | |
| | | | In a space directly under a roof that ha | s a U-factor g | greater than the u-factor of the ceiling, or if the roof doe | s not meet the | |
| | | | requirements of $\underline{\$140.3(a)1B}$ or if the | roof has fixe | d vents or openings to the outside/ unconditioned space | S | |
| | | | In an unconditioned crawl space | | | | |

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STATE OF CALIFORNIA

NRCC-MCH-E

Mechanical Systems

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| | | | | | | | | | |
| L. DISTRIBUTION | (DUCTWORK | and PIPING) | | | | | | | |
| | | | In other unconditioned | spaces | | | | | |
| 15 | | The scope of the | e project includes extend | ling an existing duct system, v | which is constructed, insulated or sealed with asbestos. | | | | |
| 16 | | | | | mented to have been previously sealed as confirmed the e Nonresidential Appendix NA2. | rough field verification | | | |
| 17 | Yes | Duct system sha | II be sealed in acordance | e with the California Mechani | ical Code | | | | |
| The answers to the | questions belo | w apply to the fol | lowing duct systems: | RTU-H4 | Duct leakage testing triggered for these systems? | No | | | |
| 11 | No | The scope of the | e project includes only di | uct systems serving healthcar | re facilities | | | | |
| 12 | Yes | Duct system pro | vides conditioned air to | an occupiable space for a cor | nstant volume, single zone, space-conditioning system. | | | | |
| 13 | Yes | The space condi | tioning system serves les | ss than 5,000 ft ² of condition | ed floor area. | | | | |
| 14 | No | The <u>combined</u> s | he combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: | | | | | | |
| | | | Outdoors | | | | | | |
| | | | | | reater than the u-factor of the ceiling, or if the roof does d vents or openings to the outside/ unconditioned spaces | | | | |
| | | | In an unconditioned cr | awl space | | | | | |
| | | | In other unconditioned | spaces | | | | | |
| 15 | | The scope of the | e project includes extend | ling an existing duct system, v | which is constructed, insulated or sealed with asbestos. | | | | |
| 16 | | | | | mented to have been previously sealed as confirmed the Nonresidential Appendix NA2. | rough field verification | | | |
| 17 | Yes | Duct system sha | II be sealed in acordance | e with the California Mechani | ical Code | | | | |
| The answers to the | questions belo | w apply to the fol | lowing duct systems: | RTU-I1 | Duct leakage testing triggered for these systems? | No | | | |
| 11 | No | The scope of the | e project includes only d | uct systems serving healthcar | re facilities | | | | |
| 12 | Yes | Duct system pro | Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. | | | | | | |
| 13 | Yes | The space condi | The space conditioning system serves less than 5,000 ft ² of conditioned floor area. | | | | | | |
| 14 | No | The <u>combined</u> s | The <u>combined</u> surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: | | | | | | |
| | - | | Outdoors | | | | | | |
| | | | | | reater than the u-factor of the ceiling, or if the roof does I vents or openings to the outside/ unconditioned space | | | | |
| | | | In an unconditioned cra | awl space | | | | | |

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

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| RCC-MCH-E | |
| age 34 of 39) | |
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STATE OF CALIFORNIA

Registration Number:

| Mechanical Systems | | | | |
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| NRCC-MCH-E | | CALIFORNIA ENE | RGY COMMISSION | |
| CERTIFICATE OF COMPLIANCE | | | | NRCC-MCH- |
| Project Name: | CVUSD Barranca | Report Page: | | (Page 35 of 39 |
| Project Address: | 727 S Barranca Ave | Date Prepared: | | 6/28/2022 |
| N. DECLARATION OF REQUIRED CERTIFICATES OF Selections have been made based on information provide These documents must be provided to the building insp https://www.energy.ca.gov/title24/2019standards/201 | ded in previous tables of this docume ector during construction and can be | found online at | | |
| | Form/Title | | Field In | spector |
| | , | | Pass | Fail |
| NRCI-MCH-01-E - Must be submitted for all buildings | | | | |

Registration Date/Time:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E

| ERTIFICATE OF CON | IPLIANCE | | | | | | NRCC-MCH (Page 30 of 3 | |
|-------------------|-----------------|---|---|-------------------------------|----------------|--|---------------------------|--|
| roject Name: | | | CVUSD Barranca Report Page: | | | | | |
| Project Address: | | | 7: | 27 S Barranca Ave | Date Prepared | d: | 6/28/20 | |
| . DISTRIBUTION | (DUCTWORK | and PIPING) | | | | | | |
| | | | In other unconditioned | spaces | | | | |
| 15 | | The scope of the | e project includes extend | ling an existing d | luct system, v | which is constructed, insulated or sealed with asbestos. | | |
| 16 | | | | | | mented to have been previously sealed as confirmed three Nonresidential Appendix NA2. | ough field verificatio | |
| 17 | Yes | Duct system sha | II be sealed in acordance | e with the Califo | rnia Mechani | cal Code | | |
| he answers to the | questions below | w apply to the fol | lowing duct systems: | RTU-E | 4 | Duct leakage testing triggered for these systems? | No | |
| 11 | No | The scope of the | e project includes only d | uct systems serv | ing healthcar | e facilities | | |
| 12 | Yes | Duct system pro | vides conditioned air to | an occupiable s | pace for a cor | nstant volume, single zone, space-conditioning system. | | |
| 13 | Yes | The space condi | tioning system serves le | ss than 5,000 ft ² | of condition | ed floor area. | | |
| 14 | No | The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system: | | | | | | |
| | | | Outdoors | | | | | |
| | | | In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of $\frac{\$140.3(a)1B}{1000}$ or if the roof has fixed vents or openings to the outside/ unconditioned spaces | | | | | |
| | | In an unconditioned crawl space | | | | | | |
| | | | In other unconditioned spaces | | | | | |
| 15 | | The scope of the | e project includes extend | ling an existing o | luct system, v | which is constructed, insulated or sealed with asbestos. | | |
| 16 | | | | | | mented to have been previously sealed as confirmed three Nonresidential Appendix NA2. | ough field verification | |
| 17 | Yes | Duct system sha | Il be sealed in acordance | e with the Califo | rnia Mechani | cal Code | | |
| he answers to the | questions below | w apply to the fol | lowing duct systems: | RTU-H | 11 | Duct leakage testing triggered for these systems? | No | |
| 11 | No | The scope of the | e project includes only d | uct systems serv | ing healthcar | e facilities | | |
| 12 | Yes | Duct system pro | Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system. | | | | | |
| 13 | Yes | The space conditioning system serves less than 5,000 ft ² of conditioned floor area. | | | | | | |
| 14 | No | The <u>combined</u> s | urface area of the ducts | in the following | locations is n | nore than 25% of the total surface area of the entire duct | system: | |
| | - | | Outdoors | | | | | |
| | | | | | | reater than the u-factor of the ceiling, or if the roof does I vents or openings to the outside/ unconditioned spaces | | |
| | | | In an unconditioned cr | awl space | | | | |

Registration Number:

STATE OF CALIFORNIA

NRCC-MCH-E

Project Name:

Project Address:

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Registration Number:

Mechanical Systems

CERTIFICATE OF COMPLIANCE

L. DISTRIBUTION (DUCTWORK and PIPING)

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

The answers to the questions below apply to the following duct systems:

Outdoors

Outdoors

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003 Schema Version: rev 20200601

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CVUSD Barranca Report Page:

727 S Barranca Ave Date Prepared:

and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.

and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.

The answers to the questions below apply to the following duct systems: RTU-I3 Duct leakage testing triggered for these systems? No

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

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

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

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

The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.

The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.

RTU-I2 Duct leakage testing triggered for these systems?

In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the

In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the

requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces

requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces

In other unconditioned spaces

In an unconditioned crawl space

In other unconditioned spaces

Yes Duct system shall be sealed in acordance with the California Mechanical Code

No The scope of the project includes only duct systems serving healthcare facilities

In an unconditioned crawl space

Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.

Yes Duct system shall be sealed in acordance with the California Mechanical Code

No The scope of the project includes only duct systems serving healthcare facilities

Yes The space conditioning system serves less than 5,000 ft² of conditioned floor area.

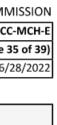
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CALIFORNIA ENERGY COMMISSION NRCC-MCH-I 32 of 39 6/28/2022



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| STATE OF CALIFORNIA | | | | | |
|---|--|-----------------|---|-----------------|--------------|
| Mechanical Systems | | | | | |
| NRCC-MCH-E | | | CALI | FORNIA ENERG | |
| CERTIFICATE OF COMPLIANCE | | | | | NRCC-MC |
| Project Name: | CVUSD Barranca | Report Page: | | | (Page 36 of |
| Project Address: | 727 S Barranca Ave | Date Prepared: | | | 6/28/20 |
| | | | | | |
| O. DECLARATION OF REQUIRED CERTIFICATES | S OF ACCEPTANCE | | | | |
| Selections have been made based on information µ These documents must be provided to the building https://www.energy.ca.gov/title24/2019standards | inspector during construction and can be | found online at | changed, please explain why in | Table E Additio | nal Remarks. |
| | Form/Title | | Systems/Spaces To Be Field | Field Inspector | |
| | Formy fille | | Verified | Pass | Fail |
| NRCA-MCH-02-A - Outdoor Air must be submitted conjunction with MCH-07-A Supply Fan VFD Accep | | - | FCU-B1; RTU-C1; RTU-C2; RTU-D1; RTU-D2; RTU-D3; RTU-D4; RTU-E1; RTU-E2; RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4; | | |
| NRCA-MCH-03-A - Constant Volume Single Zone H Volume Single Zone HVAC Systems are included in | | | FCU-B1; RTU-C1; RTU-C2; RTU-D1; RTU-D2; RTU-D3; RTU-D4; RTU-E1; RTU-E2; RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4; | | |

NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.

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

NRCA-MCH-05-A - Air Economizer Controls

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

Registration Provider: Energysoft

RTU-C1; RTU-C2; RTU-D1; RTU-D2; RTU-D3; RTU-D4;

RTU-E1; RTU-E2; RTU-E3;

RTU-E4; RTU-H1; RTU-H2;

RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4;

FCU-B1; RTU-C1; RTU-C2;

RTU-D1; RTU-D2; RTU-D3;

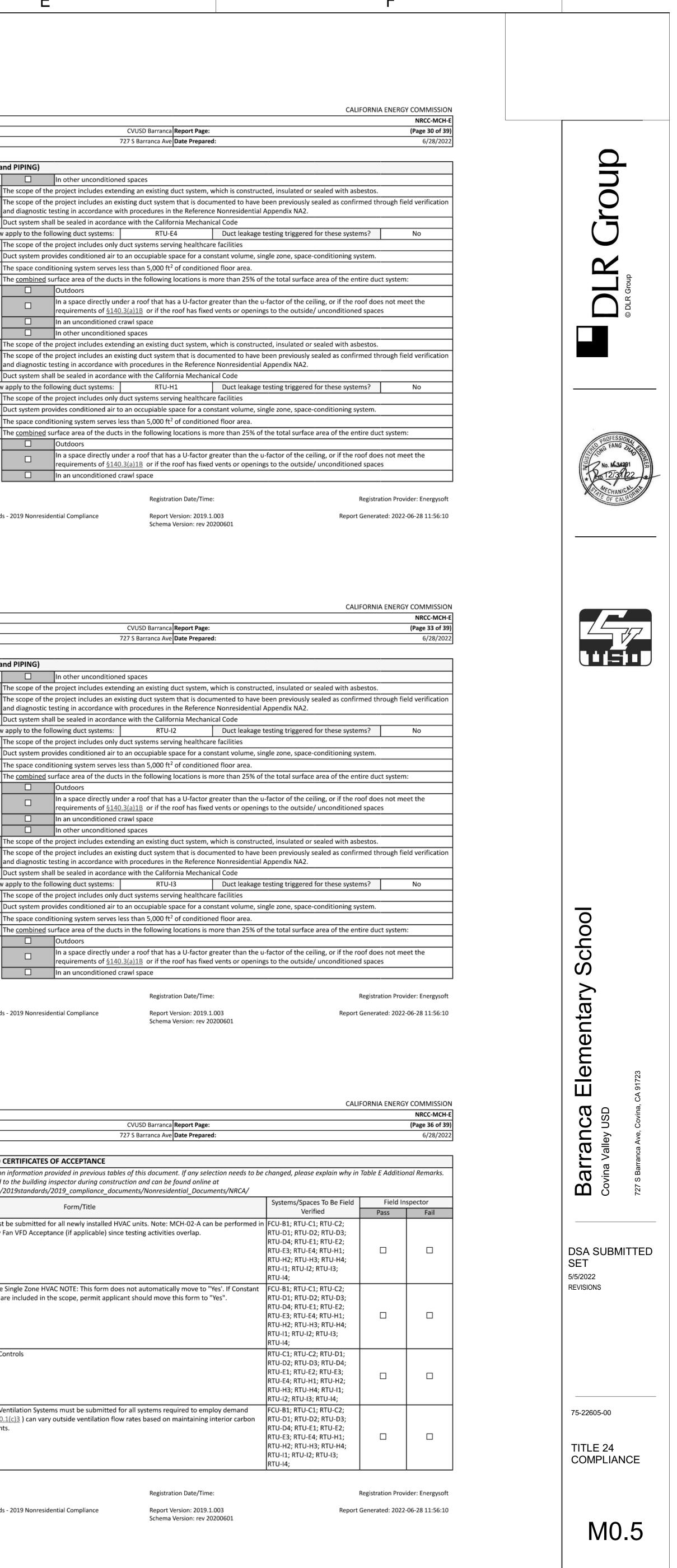
RTU-D4; RTU-E1; RTU-E2;

RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4;

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RTU-I4;

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| Mechanical | Systems |

NRCC-MCH-E CERTIFICATE OF COMPLIANCE

Project Name: CVUSD Barranca Report Page: 727 S Barranca Ave Date Prepared: Project Address: 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 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/ Systems/Spaces To Be Fie Form/Title Verified NRCA-MCH-11-A Automatic Demand Shed Controls FCU-B1; RTU-C1; RTU-C2; RTU-D1; RTU-D2; RTU-D3; RTU-D4; RTU-E1; RTU-E2; RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4; FCU-B1; RTU-C1; RTU-C2; NRCA-MCH-16-A Supply Air Temperature Reset Controls RTU-D1; RTU-D2; RTU-D3; RTU-D4; RTU-E1; RTU-E2; RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4; FCU-B1; RTU-C1; RTU-C2; RTU-D1; RTU-D2; RTU-D3; NRCA-MCH-18-A Energy Management Control Systems RTU-D4; RTU-E1; RTU-E2; RTU-E3; RTU-E4; RTU-H1; RTU-H2; RTU-H3; RTU-H4; RTU-I1; RTU-I2; RTU-I3; RTU-I4; P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION There are no NRCV forms required for this project.

Registration Number:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003 Schema Version: rev 20200601

Registration Date/Time:

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| | | NRCC-MCH-E (Page 37 of 39) |
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| Mechanical Systems NRCC-MCH-E | | | | | | |
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| CERTIFICATE OF COMPLIANCE | | | | | | |
| Project Name: CV | | | CVUSD Barranca Report Page: | | | |
| Project Address: 727 S Barranca Ave Date Prepared: | | | | | | |
| | | | | | | |
| Q. MANDATORY MEASURES DOCUME | NTATION LOCATION | | | | | |
| Q. MANDATORY MEASURES DOCUME This table is used to indicate where manda | | he plan set or c | onstruction documentation. | | | |
| | | he plan set or c | onstruction documentation. | 02 | | |

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10 **Registration Number:**

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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

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| | Report Page: (Page 39 of 39) | | | | | | |
| | re Date Prepared: 6/28/2022 | | | | | | |
| DOCUMENTATION AUTHOR'S DECLARATION STATEMENT | | | | | | | |
| I certify that this Certificate of Compliance documentation is accurate and comp | ete. | | | | | | |
| Documentation Author Name: TONG FANG ZHAO | Documentation Author Signature: Fre These | | | | | | |
| Company: DLR Group | Signature Date: 2022-06-28 | | | | | | |
| Address: 700 FLOWER STREET | CEA/ HERS Certification Identification (if applicable): | | | | | | |
| City/State/Zip: LOS ANGELES CA 90017 | Phone: 213-444-0610 | | | | | | |
| 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 plans and specifications submitted to the enforcement agency for approval with this building permit | ces for the building design or system design identified on this Certificate of Compliance conform to the requirements e consistent with the information provided on other applicable compliance documents, worksheets, calculations, application. ith the building permit(s) issued for the building, and made available to the enforcement agency for all applicable o be included with the documentation the builder provides to the building owner at occupancy. | | | | | | |
| Responsible Designer Name: TONG FANG ZHAO | Responsible Designer Signature: Julius | | | | | | |
| Company: DLR GROUP | Date Signed: 2022-06-28 | | | | | | |
| Address: 700 FLOWER STREET | License: M-34291 | | | | | | |
| City/State/Zip: LOS ANGELES CA 90017 | Phone: 213-444-0610 | | | | | | |

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Registration Provider: Energysoft

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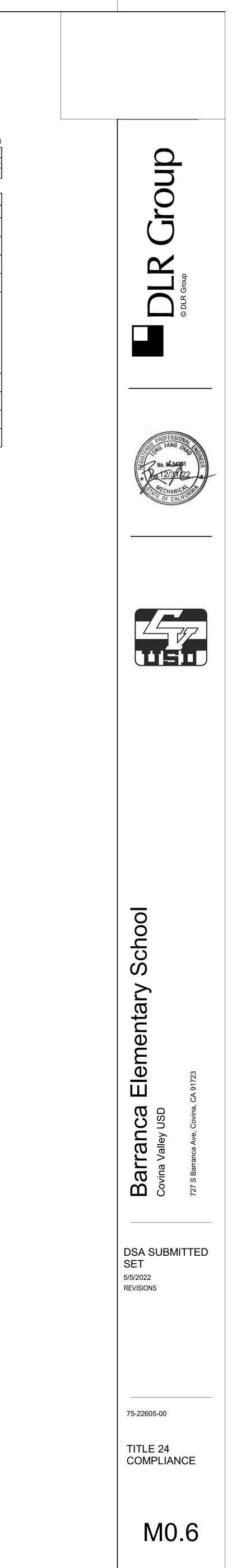
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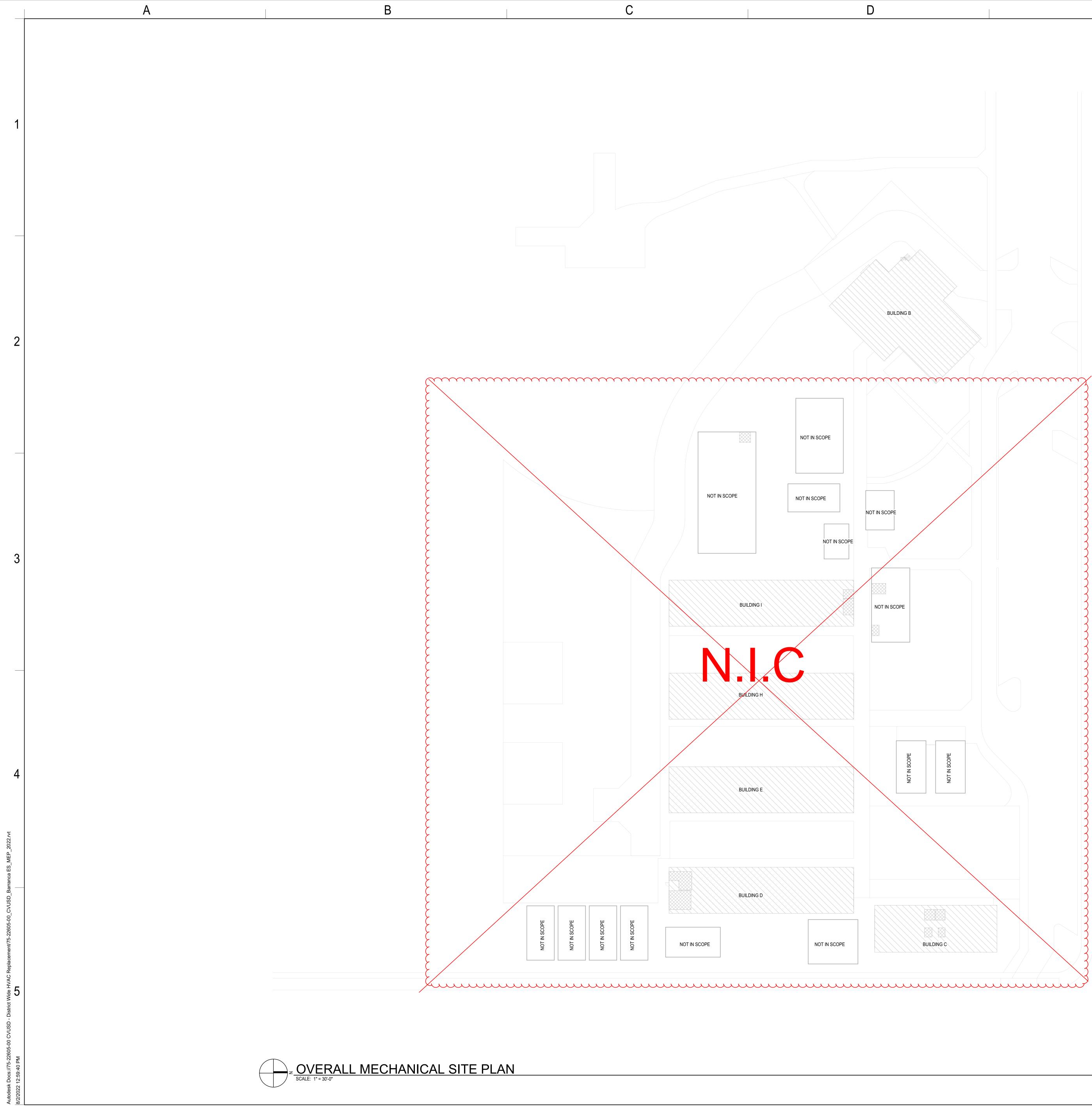
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time:

Registration Provider: Energysoft Report Generated: 2022-06-28 11:56:10

Report Version: 2019.1.003 Schema Version: rev 20200601





SITE LEGEND

(E) RESTROOMS - NOT IN SCOPE

GENERAL NOTES

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A FOR SYMBOLS AND ABBREVIATIONS SEE DRAWING M0.1

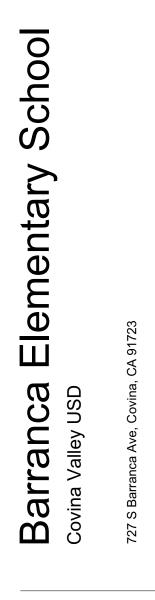
EXISTING BUILDING NOT IN SCOPE

EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION







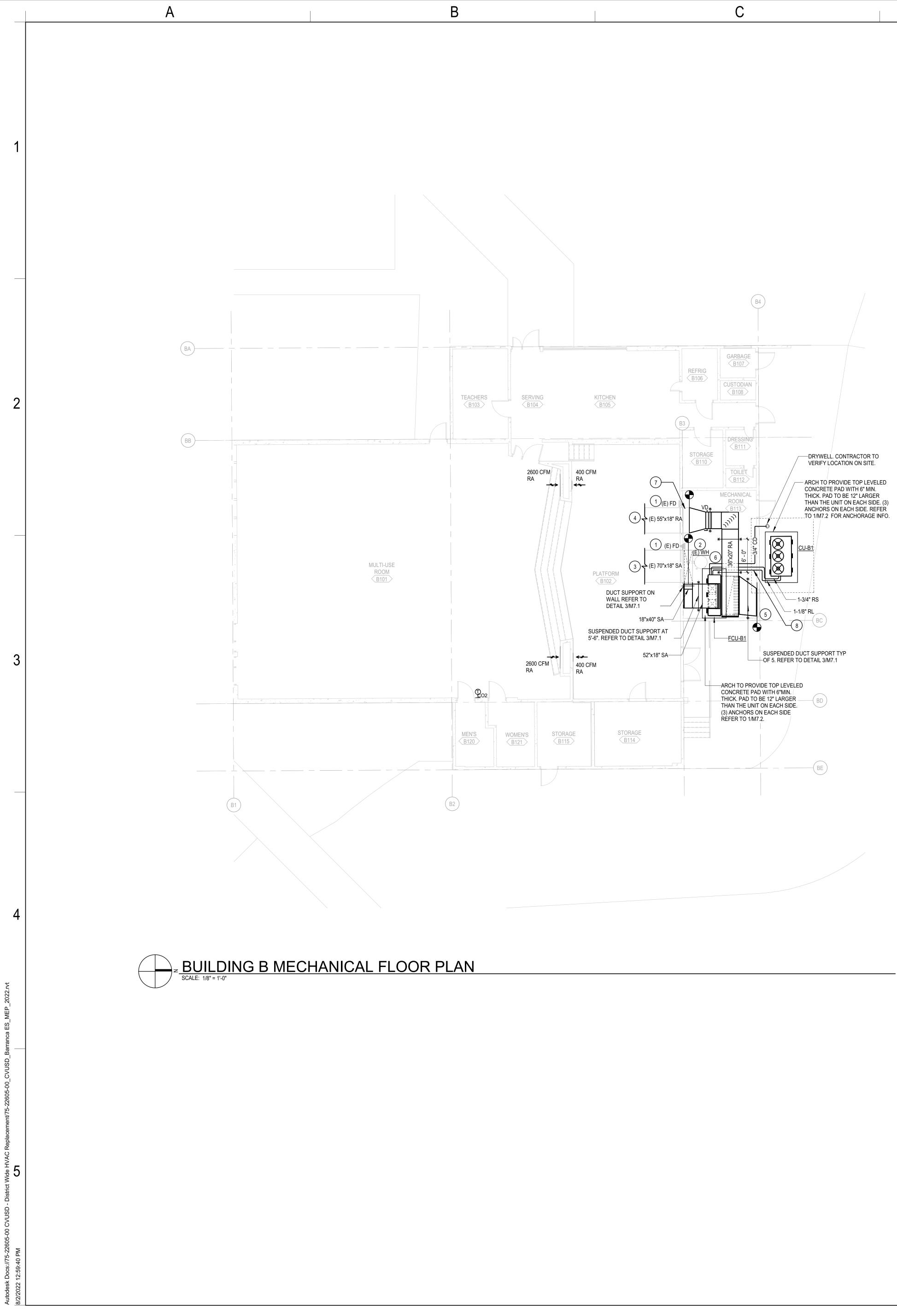


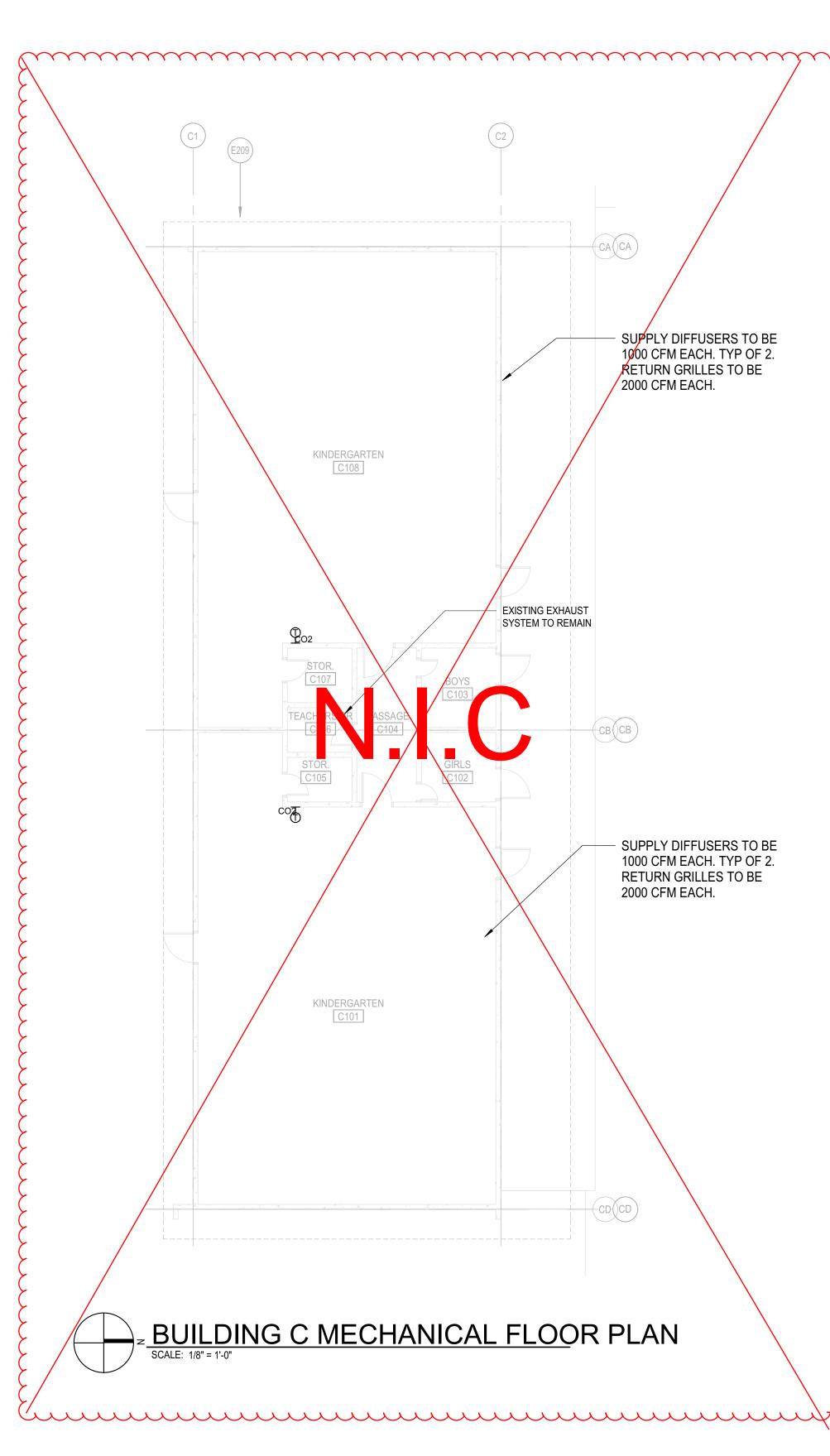
DSA SUBMITTED SET 5/5/2022 REVISIONS

75-22605-00

MECHANICAL SITE PLAN

M1.1





D



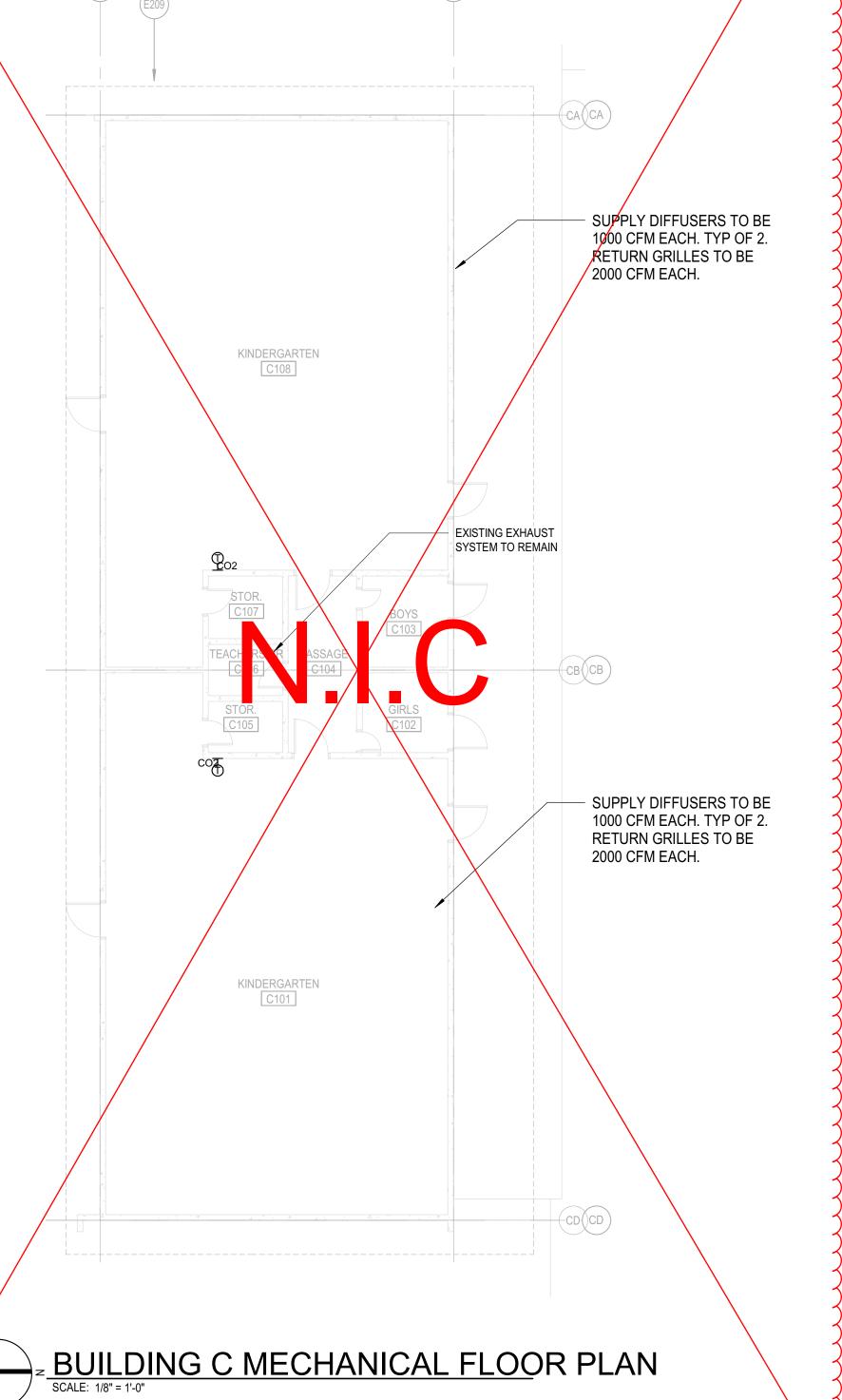


TÓ REMAIN..

GENERAL NOTES

KEY NOTES

 (E) FIRE DAMPER AND RELATED ACCESS PANEL TO REMAIN.
 POD/POC TO BE BEFORE (E) FIRE DAMPER ACCESS PANEL.
 (E) SA DUCTWORK TO REMAIN. 200 CFM FOR EACH SA DIFFUSER. TYP. OF 30.
 (E) RA DUCTWORK & ROUTE TO REMAIN. DAMPER CONDITION ON SITE PROIR TO BID. CONTRACTOR TO VERIFY PROIR TO BID.



Ε

A. REMOVE SUPPLY FAN, FURNACE AND RELATED DUCT, WIRING, MOTOR, SUPPORTS AND OTHER APPURTENANCES TO POC. REMOVE GAS PIPING UP TO MAIN AND CAP.
B. (E) WH AND RELATED EQUIPMENT, PIPING AND FLUE DUCT

SCOPE OF WORK IS CLASSROOMS & MPR ONLY.
 EXISTING DUCTWORK IN CLASSROOMS & MPR TO REMAIN.
 DIFFUSERS AND GRILLES AIR PATH CANNOT BE BLOCK BY ANY ITEMS.
 PROVIDE 1" LINEAR TO NEW DUCT IN MPR.

5. (É) OSA LOUVER & DAMPER TO REMAIN TO BE READY TO CÓNNECT TO DUCTWORK. CONTRACTOR TO VERIFY 6. PROVIDE 1" CD PIPING TO DRAIN TO EXISTING FLOOR SINK. 7. RE-BALANCE (E) EXHAUST DAMPER TO 2000 CFM. (E)

EXHAUST HOOD TO REMAIN.
 RL/RS PENETRATE WALL ABOVE GRADE. CONTRACTOR TO VERIFY LOCATION ON SITE. PROVIDE PHP PIPE SUPPORT.







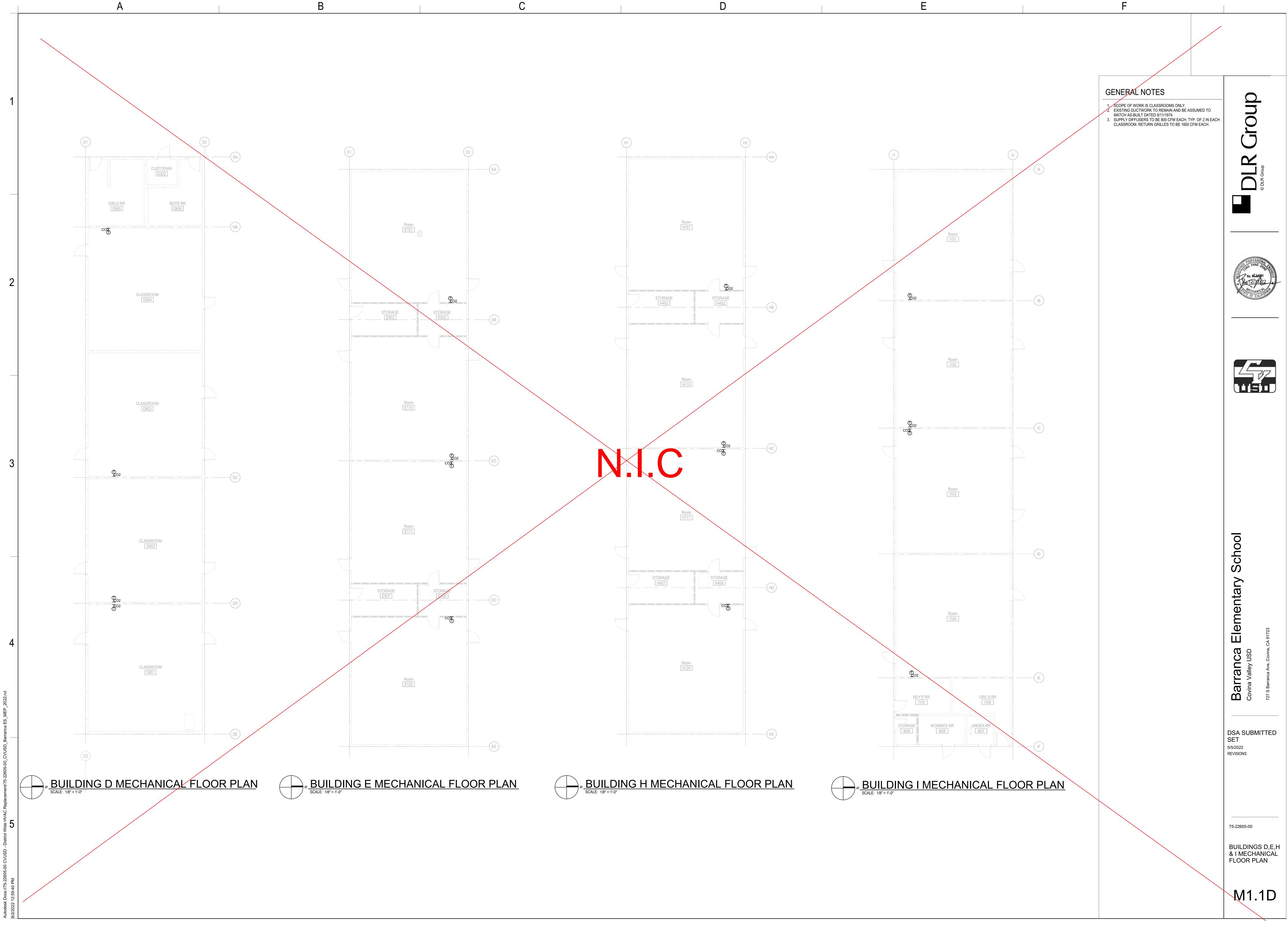


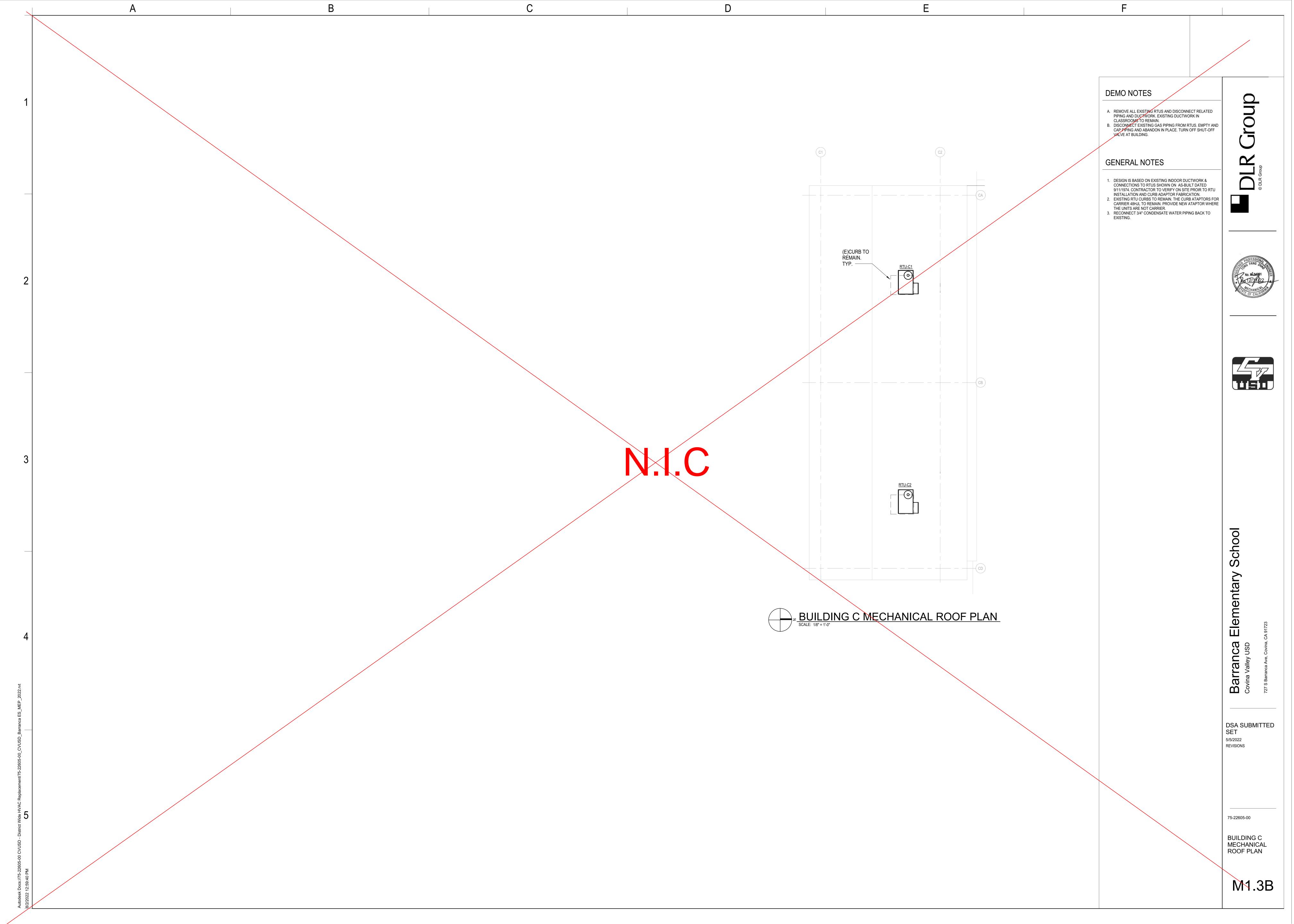
DSA SUBMITTED SET 5/5/2022 REVISIONS

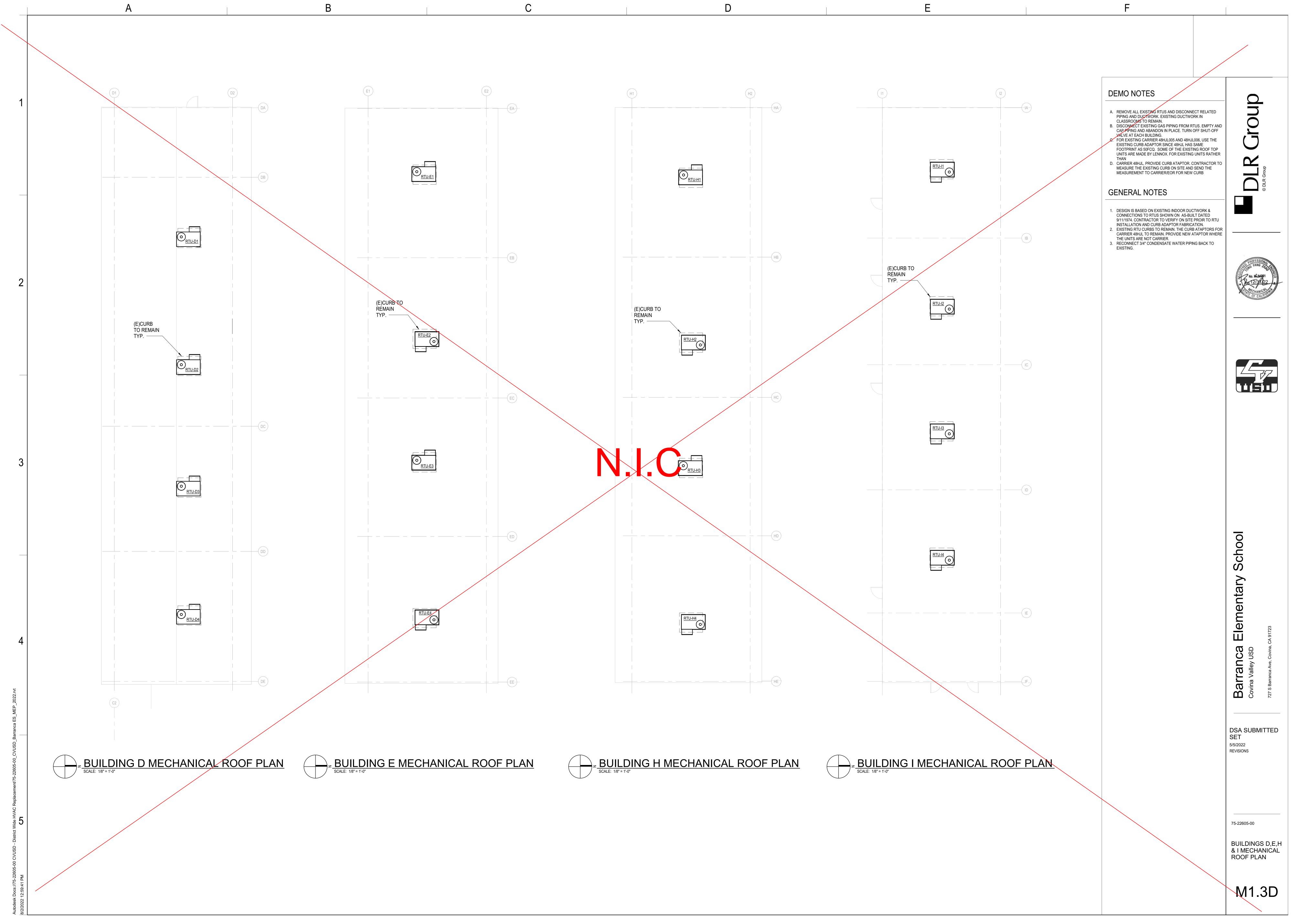
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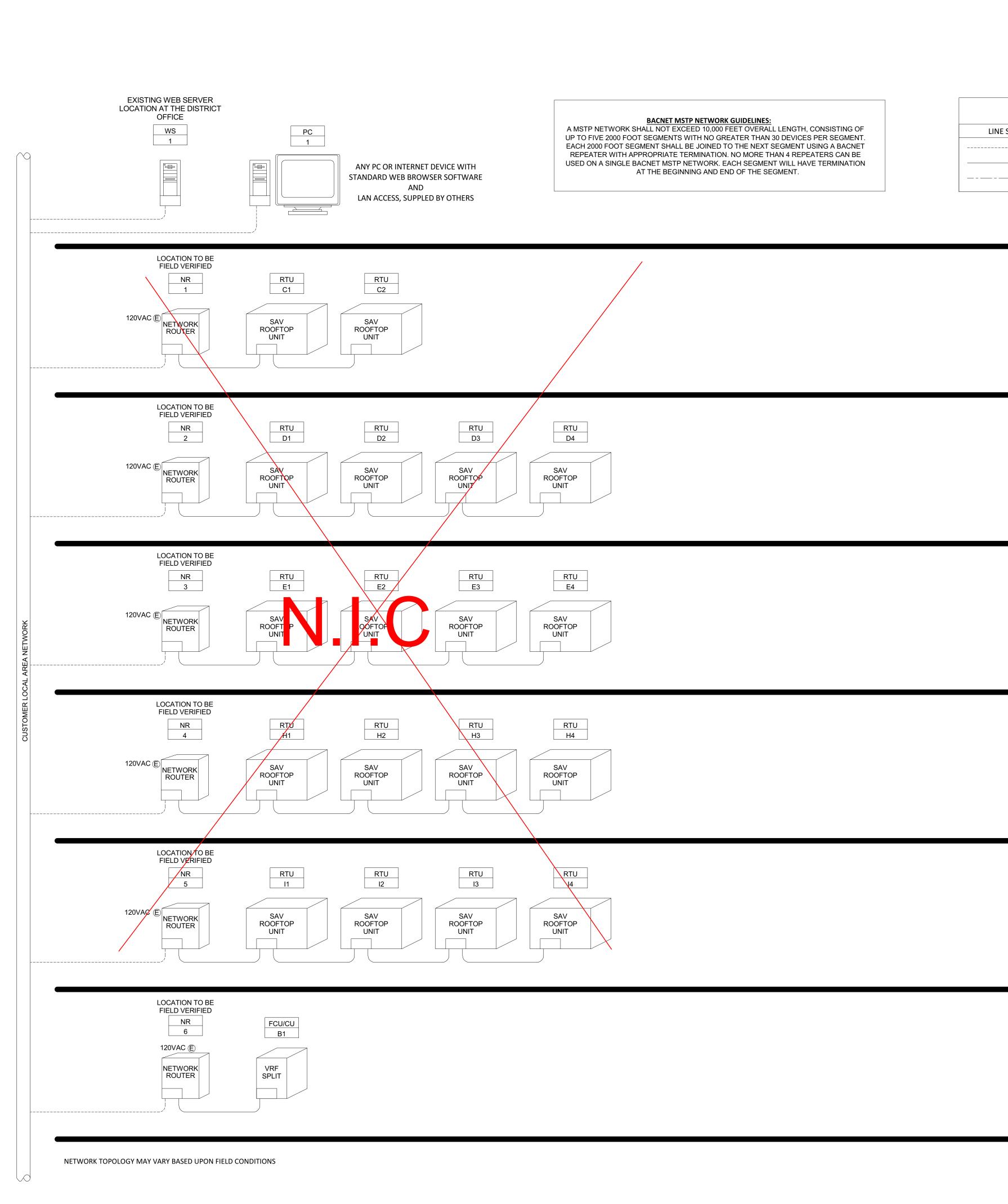
BUILDING B & C MECHANCIAL FLOOR PLAN

M1.1B









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1 BACS RISER DIAGRAM M5.1 NO SCALE D

CVUSD

BLDG C

BLDG D

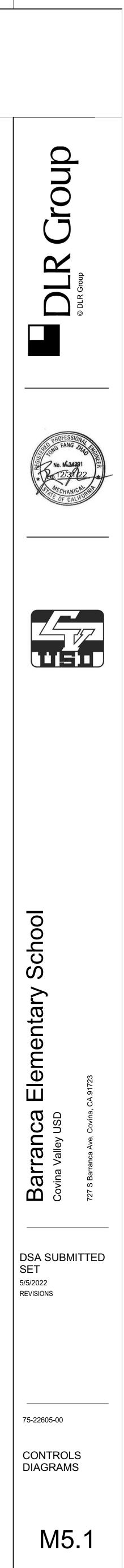
BLDG E

BLDG H

BLDG I

MPR

CONTROLS PROVIDED AND INSTALLED BY CARRIER CONTROLS EXPERT DEALER



SEQUENCES OF OPERATION

SEQUENCE OF OPERATION FOR CVUSD BARRANCA ES HEAT PUMP RTU CONTROLLER (RTU-C1 AND RTU-C2, RTU- D1 THRU RTU-D4, RTU-E1 THRU RTU-E4, RTU-H1 THRU RTU-H4, AND RTU-I1 THRU RTU-I4)

Indoor Fan The fan operates at a variable speed to meet the load conditions and SAT safety requirements to provide maximum energy savings by minimizing fan horsepower consumption. Fan speed is NOT controlled by static pressure.

Heating Mode When space temperature is below the occupied heating setpoint, unit shall operate in the heating mode. Unit shall stage available heat stages to satisfy demand in the occupied

space.

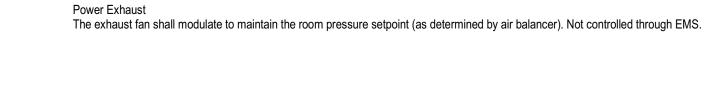
Economizer

Economizer shall close when fan is off or during a loss of power. During occupied hours when fan is energized, the economizer shall open to adjustable minimum position. When outside air temperature is below 75° and occupied space requires cooling, economizer shall open. If economizer air is not sufficient to meet the demand in the occupied space, unit shall enable available mechanical cooling stages to satisfy demand in the occupied space.

CO2 Control

Unit shall monitor space CO2 when the supply fan is energized. When CO2 is above setpoint of 1000 PPM, economizer shall modulate open toward an adjustable maximum CO2 position. As the CO2 level in the space increases above the setpoint, the minimum positions of the dampers will be increased proportionally, until the maximum ventilation setting is reached. As the space CO2 level decreases because of the increase in fresh air, the outdoor-damper will follow the higher demand condition from the DCV mode or

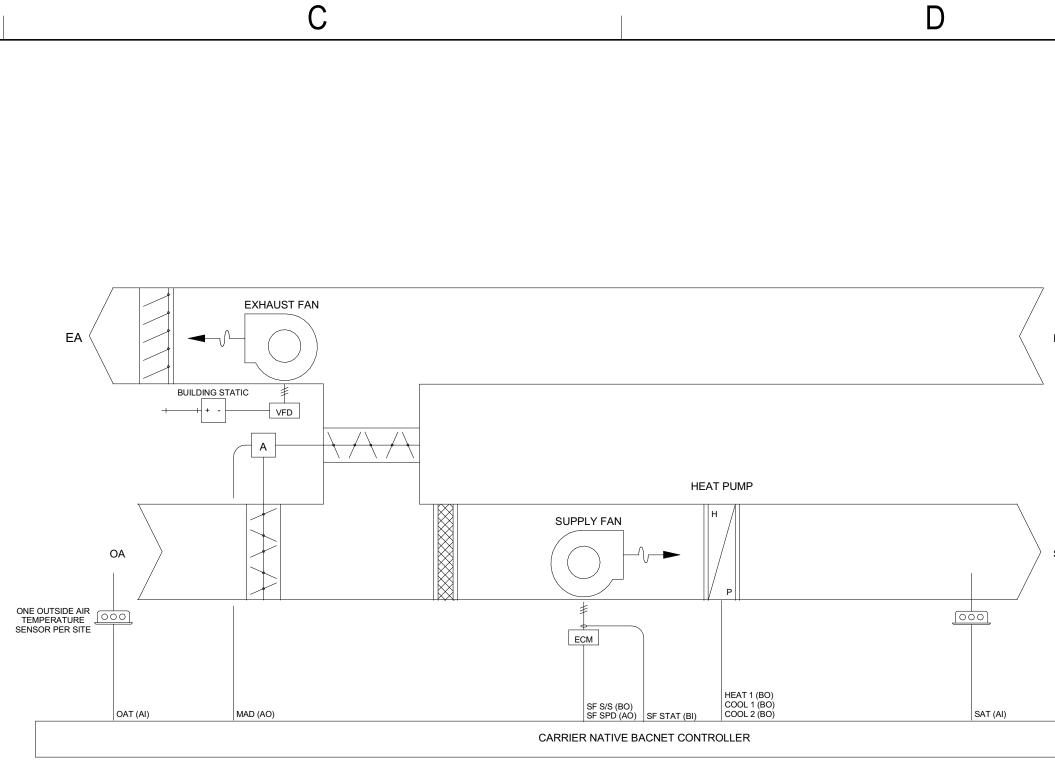
from the free-cooling mode.



1 DETAILS M5.2 NO SCALE

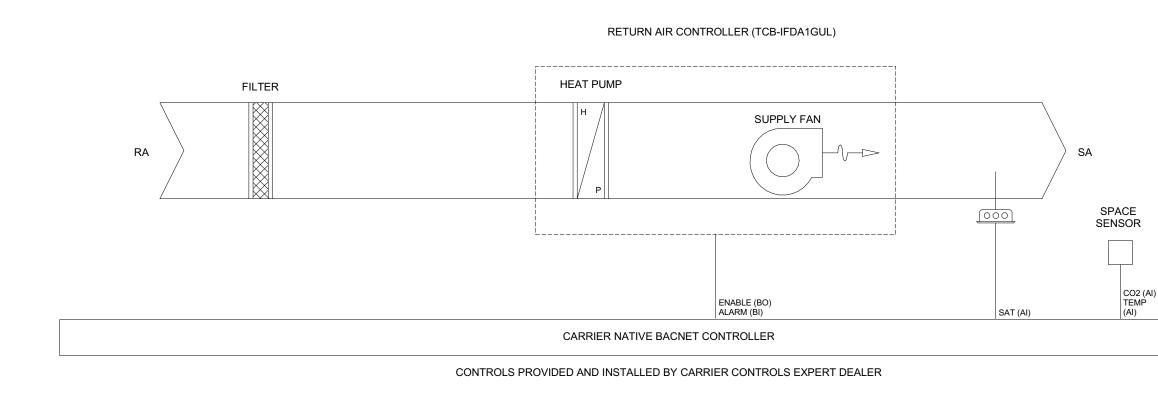
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CONTROLS PROVIDED AND INSTALLED BY RUSSELL SIGLER INC CONTROLS GROUP CONTROL PANEL SHALL CONFORM TO UL 508A STANDARDS

50FCQ HEAT PUMP DETAIL (RTU-C1, RTU-C2, RTU- D1 THRU RTU-D4, RTU-E1 THRU RTU-E4, RTU-H1 THRU RTU-H4, AND RTU-I1 THRU RTU-I4)

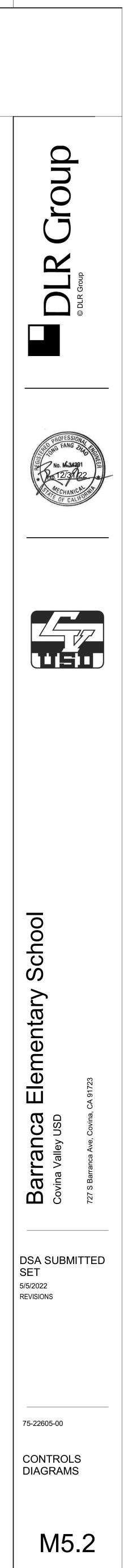


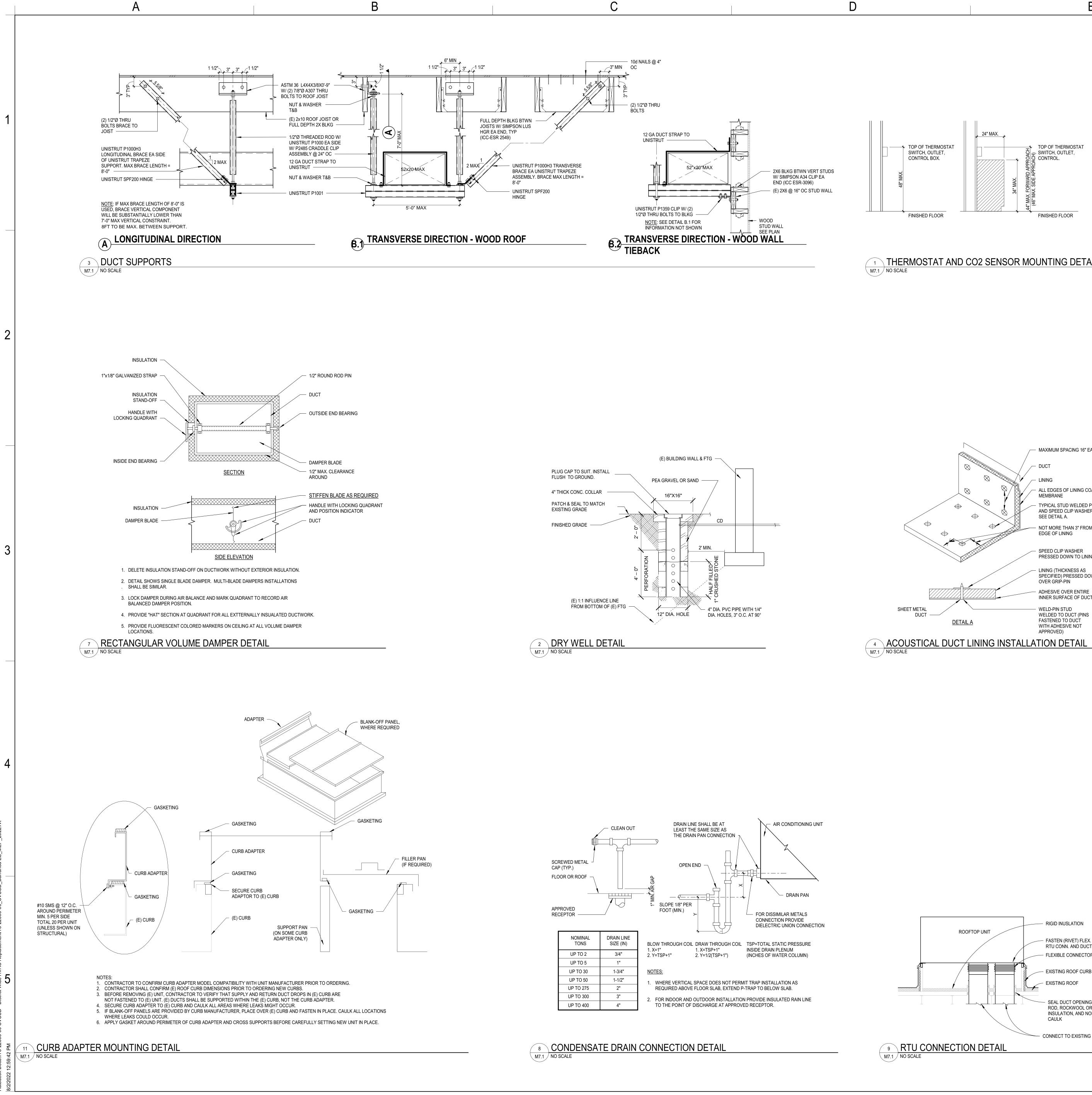
SPLIT SYSTEM DETAIL (FCU/CU-B1)

24 VAC BACNET MS/TP SCALE 1

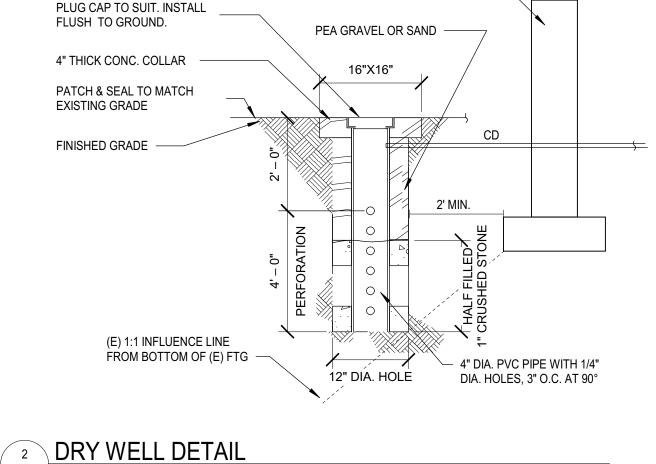
| SCALE | 0 |
|-------|---|
| NONE | 2 |
| | |

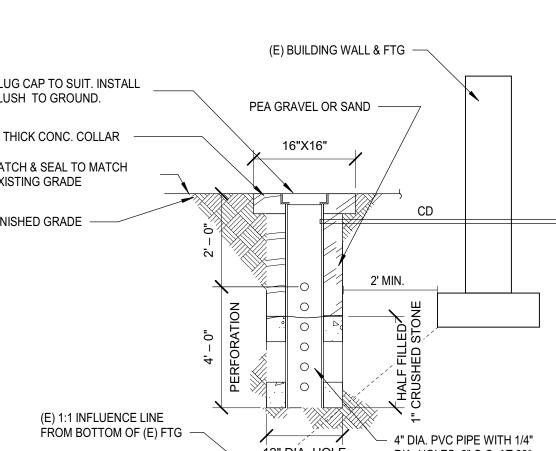
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| | ~ | CLEAN OUT | LEAST THE SAME SIZE AS |
|-----|------------------|-------------------------|---|
| CAF | REWED METAL | | OPEN END |
| APF | PROVED CEPTOR | | CONNECTION PROVIDE DIELECTRIC UNION CONNECTION |
| | NOMINAL TONS | DRAIN LINE SIZE (IN) | |
| | UP TO 2 | 3/4" | 1. X=1" 1. X=TSP+1" INSIDE DRAIN PLENUM 2. Y=TSP+1" 2. Y=1/2(TSP+1") (INCHES OF WATER COLUMN) |
| | UP TO 5 | 1" | |
| | UP TO 30 | 1-3/4" | NOTES: |
| | UP TO 50 | 1-1/2" | 1. WHERE VERTICAL SPACE DOES NOT PERMIT TRAP INSTALLATION AS |
| | UP TO 275 | 2" | REQUIRED ABOVE FLOOR SLAB, EXTEND P-TRAP TO BELOW SLAB. |
| | UP TO 300 | 3" | 2. FOR INDOOR AND OUTDOOR INSTALLATION PROVIDE INSULATED RAIN LINE |
| | UP TO 400 | 4" | TO THE POINT OF DISCHARGE AT APPROVED RECEPTOR. |
| • | | | |

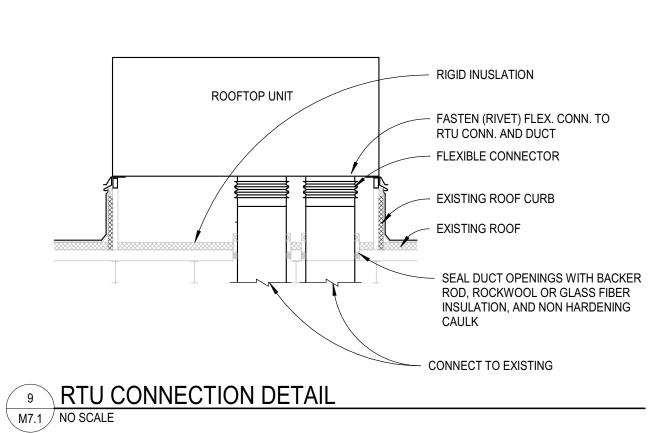


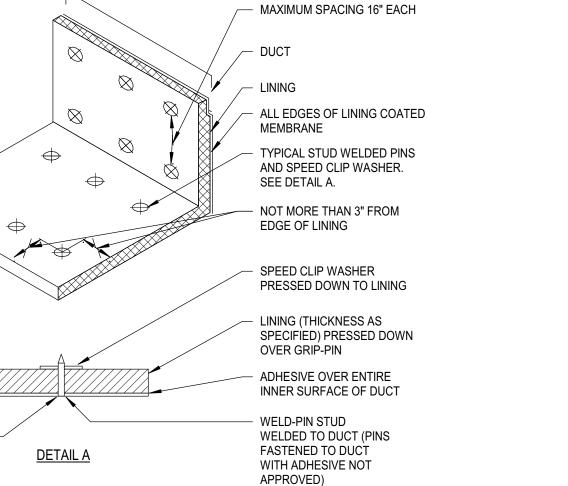


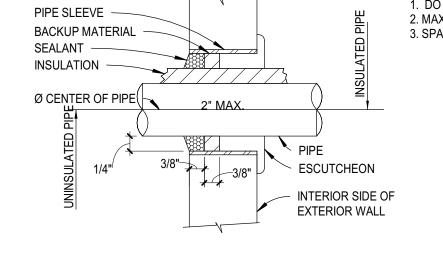


SHEET METAL

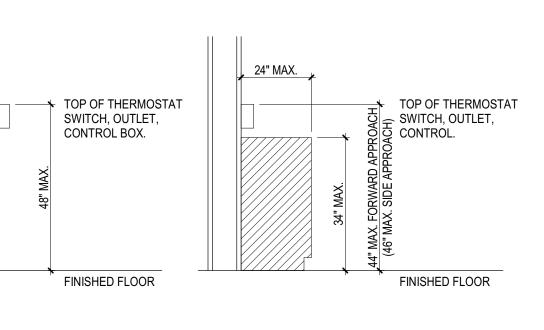
DUCT

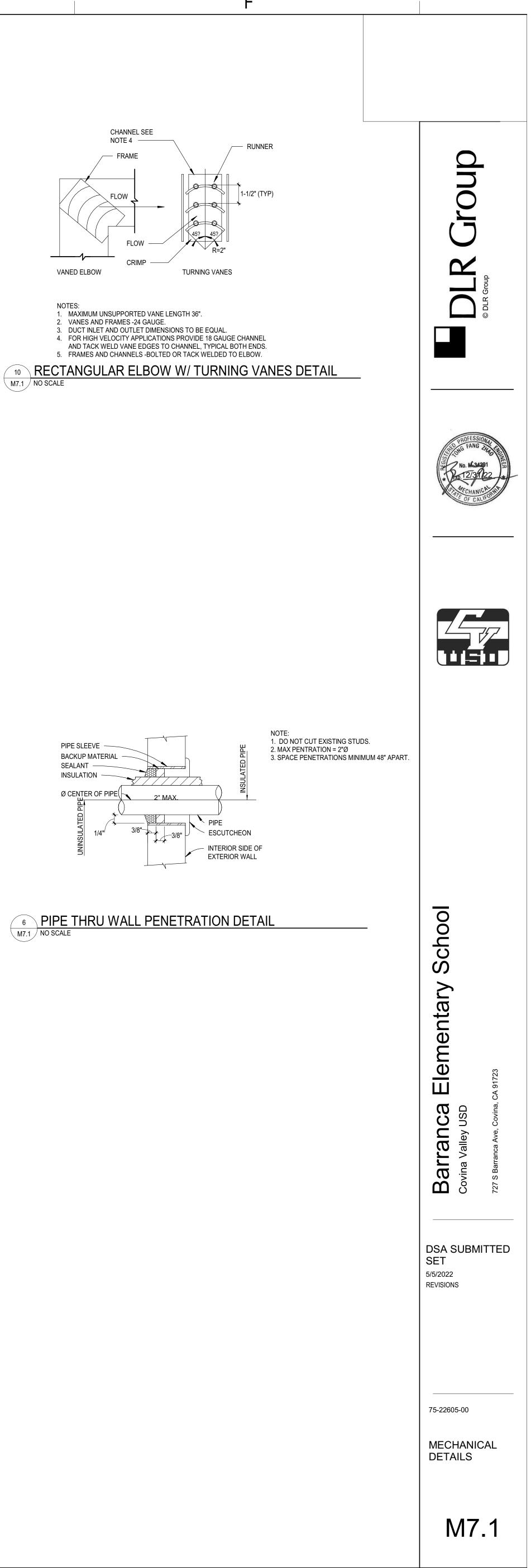


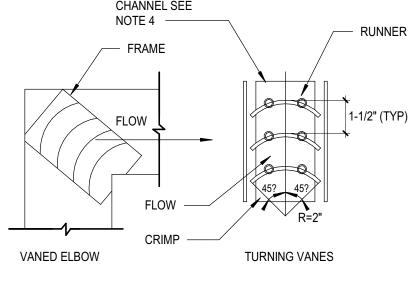


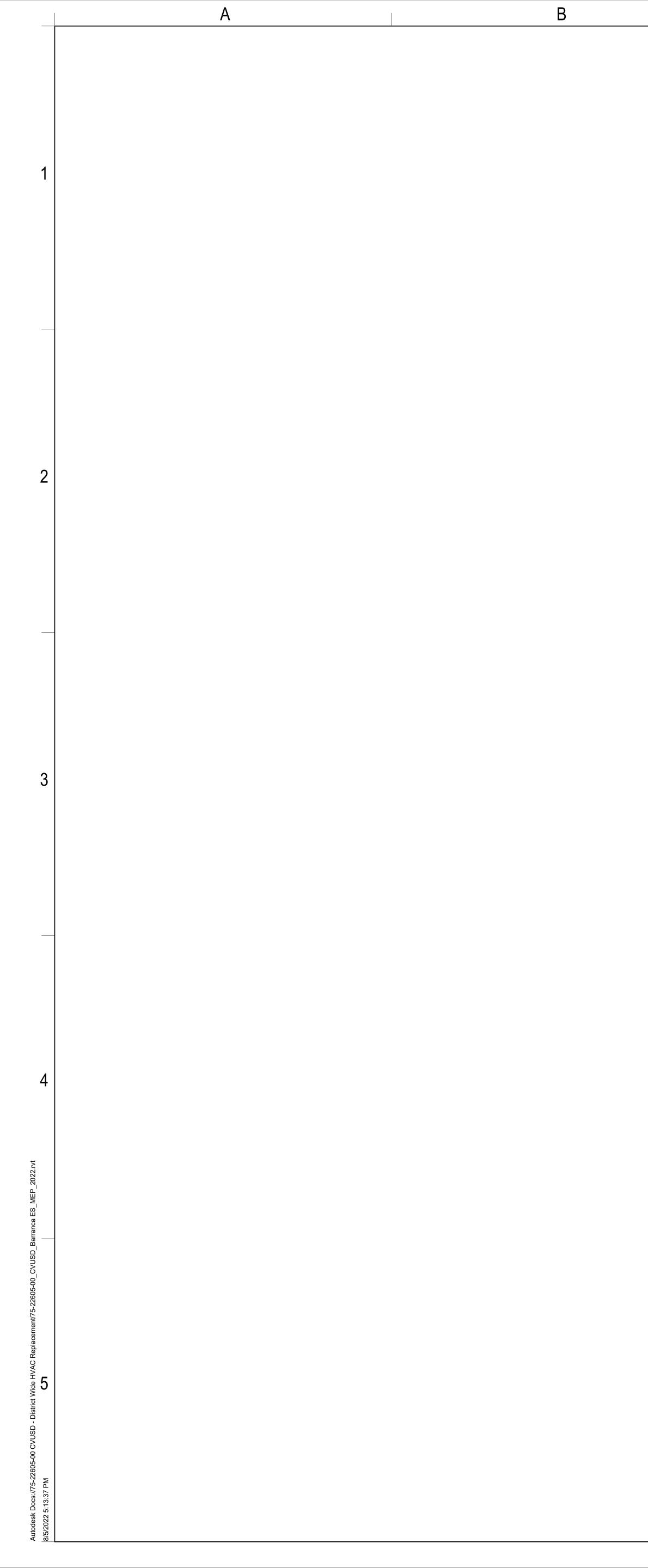


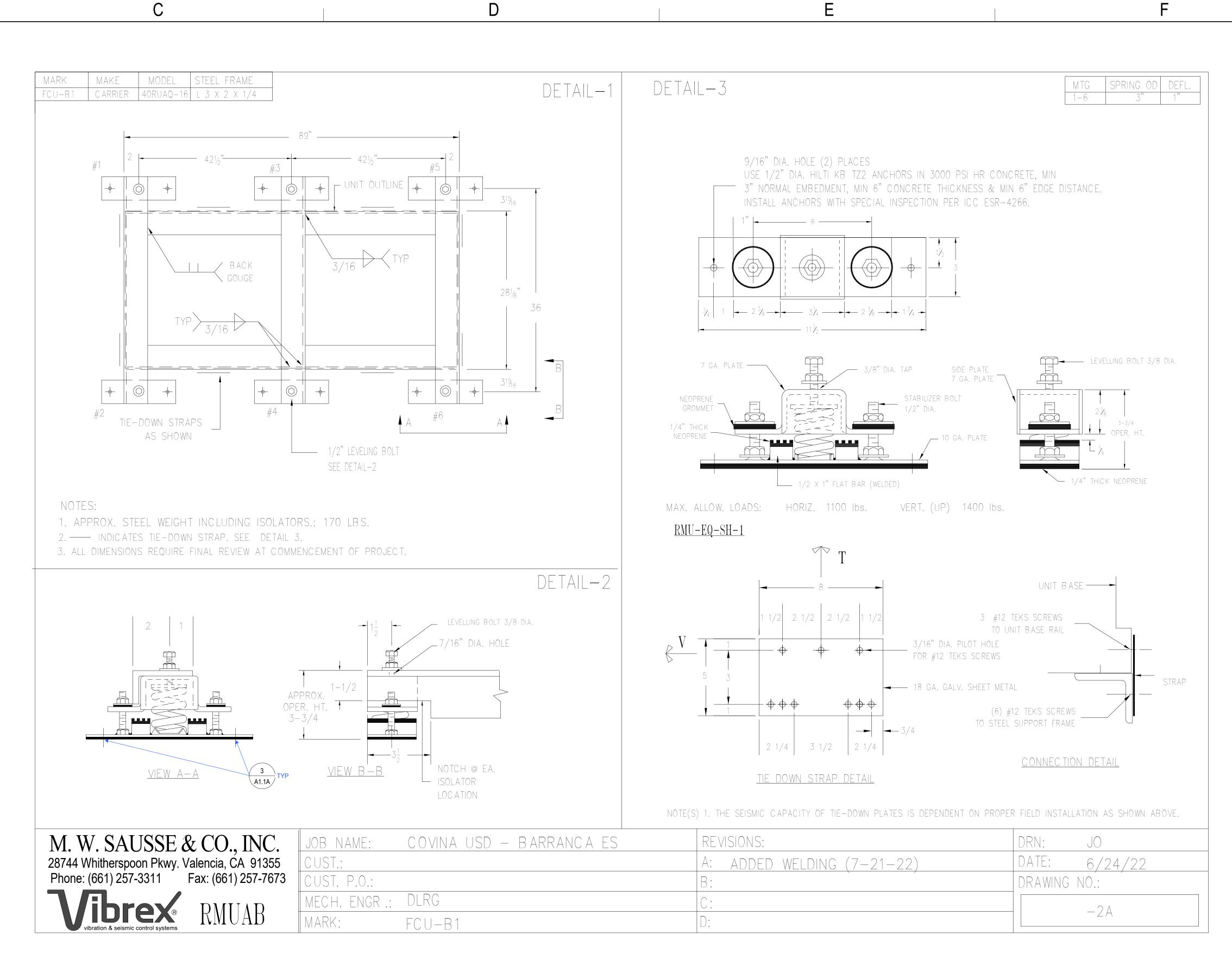
THERMOSTAT AND CO2 SENSOR MOUNTING DETAIL



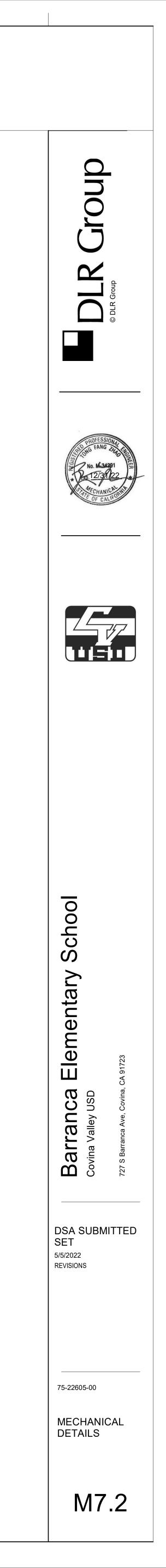


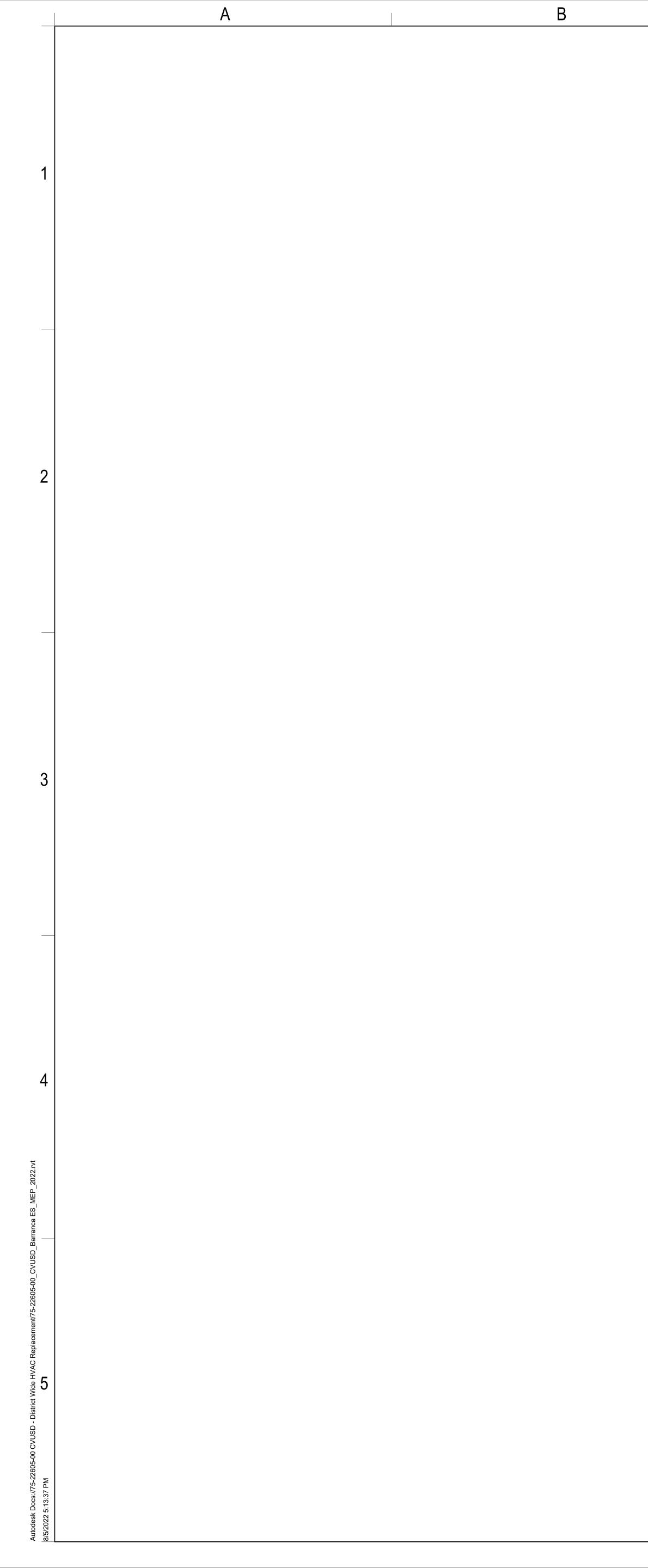


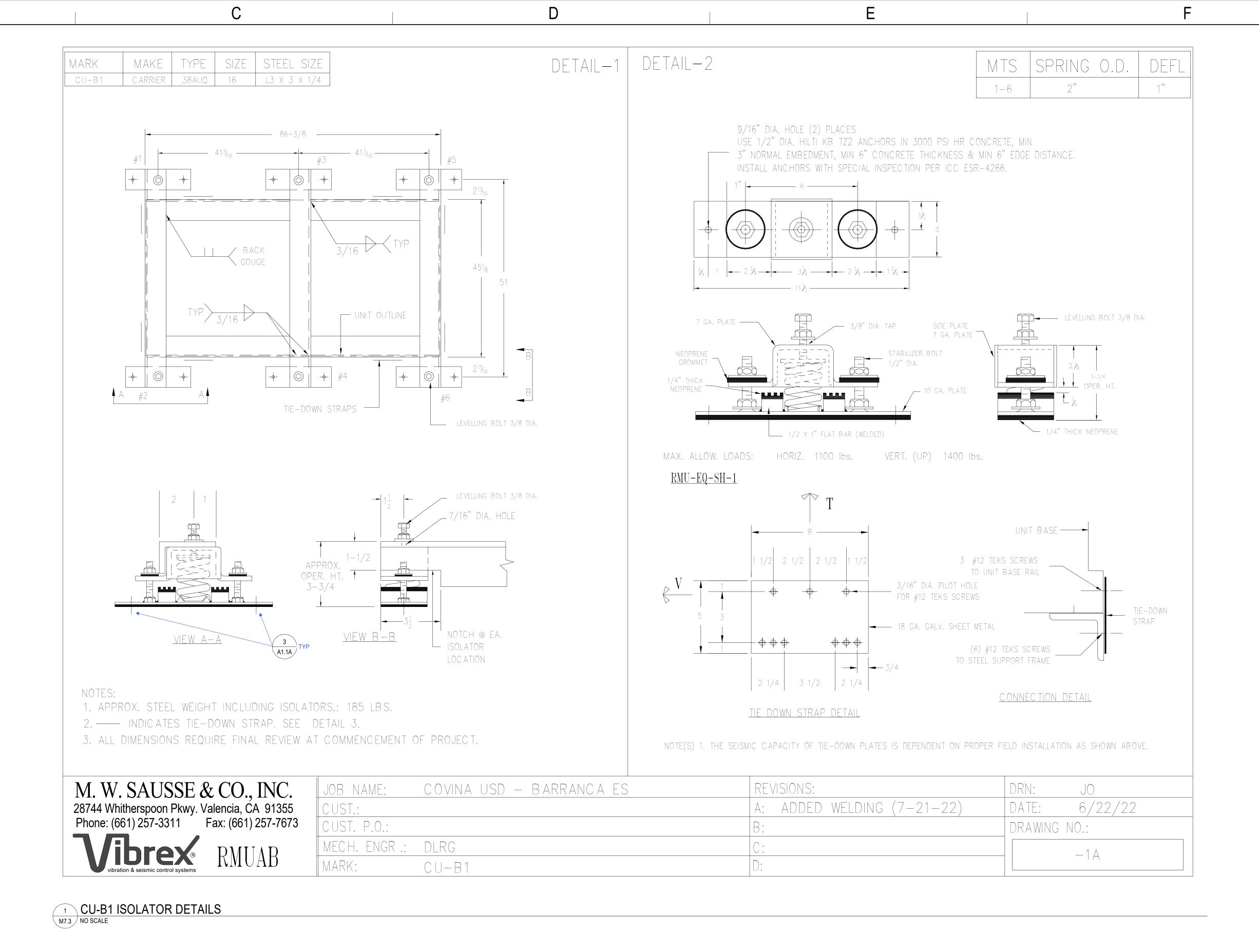


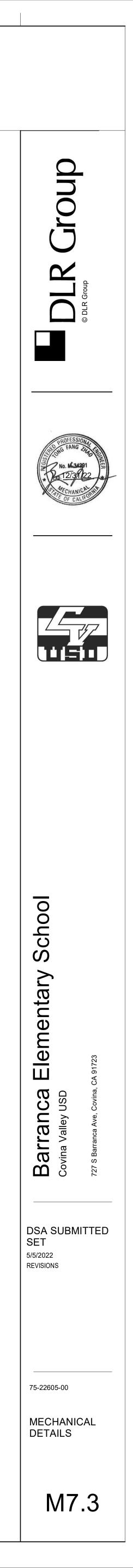


1 ISOLATOR DETAILS M7.2 NO SCALE









| | | | | | | | | | | | | | | | BARR | ANCA E. | S. AC UNIT RI | EPLACEME | NT | | | | | | | | | | | | | | | | | |
|--------------------|-----------|---------|----------|----------------------------|--------------------|-------------------------------|----------|---------------------------|-----------------|----------|-----------|-----------|---------------------------------|-------|------------------------------|-------------------|--------------------|---------------|----------|--------|---------|---------------------|-------------------|-------------------------------|------------|-----------------|--------------|-----------|------------|-----------|--------------|-------------|------------------------------------|----------------------------------|------------------------------------|------------------|
| | | | | | BARRAN | ICA E.S. E | XISTING | UNIT | | | | | | | | | | | | | | | | | | NEW UN | т | | | | | | | | | |
| TAGS | | MAKE | MODEL | ТҮРЕ | CAPACITY (TONS) | GAS INPUT/OUTF (BTU/HR) | (SIN | LECTRICAL GLE CIRCUIT) | WEIGHT (LBS) | ECONOM | IZER F | OWER EXHA | UST OPERATING WEIGHT (LBS | | DIRECT REPLACEMENT Y/N | CURB ? ADAPTOR | CARRIER MODEL # | COOLING CA | PACITY | AIRFLO | . , | IN SEER / IEER E | HEATIN CAPACIT | IG TY NEW MEF RATING | SIZE (W" X | & | CTRICAL | WEIGHT | ECONOMIZER | | POWER EXH | IAUST | ROOF CURB & ADAPTE WEIGHT | TOTAL WEIGHT DIM C (LBS) X | UNIT MENSIONS (L" X W" X H") | DETAIL REFEREN |
| | | | | | | | | MCA MO | CP | EXISTING | WEIGHT EX | | EIGHT | (LBS) | | | | NOMINAL TOTAL | SENSIBL | | MIN OSA | | (MBH) | | D") | V-PH | | LBS | REQUIRED? | REQUIRED? | MODEL # | MCA MOCP WE | | . | | |
| RTU-C1 & RTU-C2 (E | | CARRIER | 48HJL006 | SINGLE ZONE GAS HTG/DX CLG | 5.0 | 60000/4900 | 00 230/3 | 28.9 3 | 5 560 | YES | 47 | NO | 0 810 | 200 | Y | NOTE 8 | 50FCQA06A2A3 | 5 61900 | | 2000 | 300 1 | 14.3 | - 56.8 | 13 | 4 (16X16X | 2) 230-3 | 31 45 | 500 | YES | YES | PECD-SRT12CB | 7.1 12.8 | 191 200 | | | <u>11/M7.1</u> |
| RTU-D1 THRU RTU-D4 | (BLDG. D) | CARRIER | 48HJL005 | SINGLE ZONE GAS HTG/DX CLG | 4.0 | 60000/4900 | 00 230/3 | 22.5 3 | 540 | YES | 47 | NO | 0 790 | 200 | Y | NOTE 8 | | 4 49920 | 37820 | 1600 | 300 1 | 14.3 1 | 0.44 46.1 | 13 | 2 (16X25X | 2) <u>230-3</u> | 26 30 | 475 | YES | YES | PCD-SRT12CA | 4.9 8.8 | 191 200 | 866 | 75x47x34 | 11/M7.1 |
| RTU-E1 THRU RTU-E4 | (BLDG. E) | CARRIER | 48HJL005 | SINGLE ZONE GAS HTG/DX CLG | 4.0 | 60000/4900 | 00 230/3 | 22.5 3 | 540 | YES | 47 | NO | 0 790 | 200 | Y | NOTE 8 | DECC AA2A3 | 49920 | 37820 | 1600 | 300 1 | 14.3 1 | 0.44 46.1 | 13 | 2 (16X25X | 2) 230-3 | 26 30 | 475 | YES | YES | PCD-SRT12CA | 4.9 8.8 | 191 200 | 866 | 75x47x34 | 11/M7.1 |
| RTU-H1 THRU RTU-H4 | (BLDG. H) | CARRIER | 48HJL005 | SINGLE ZONE GAS HTG/DX CLG | 4.0 | 60000/4900 | 00 230/3 | 22.5 3 | 540 | YES | 47 | NO | 0 790 | 200 | Y | NOTE 8 | 50FCQA05A2A3 | 4 49920 | 37820 | 1600 | 300 1 | 14.3 1 | 0.44 46.1 | 13 | 2 (16X25X | 2) 230-3 | 26 30 | 475 | YES | YES | PCD-SRT12CA | 4.9 8.8 | 191 200 | 866 | 75x47x34 | 11/M7.1 |
| RTU-I1 THRU RTU-I4 | BLDG. I) | CARRIER | 48HJL005 | SINGLE ZONE GAS HTG/DX CLG | 4.0 | 60000/4900 | 230/3 | 22.5 3 | 540 | YES | 47 | NO | 0790 | 200 | <u> </u> | NOTE 8 | 50FCQA05A2A3 | 49920 | 37820 | 1600 | 300 1 | | 0.44 46.1 | 13 | 2 (16X25X | 2) 230-3 | 26 30 | 475 | YES | YES | PCD-SRT12CA | 4.9 8.8 | 191 200 | 866 | 75x47x34 | 11/M7.1 |
| CU-B1 (BLDG. | В) | NA | NA | NA | NA | NA | NA | NA N | A NA | NA | NA | NA | NA NA | N/A | N | NA | MMY-AP192S6HT9P | 16 | | | | 22.6 | 12.3 | | | 230-3 | 5.4+27 50+30 | 684 + 574 | NO | NO | N/A | N/A N/A M | N/A N/A | | | 1&3/A1.1A, 1/M7. |
| FCU-B1 (BLDG | B) | NA | NA | NA | NA | NA | NA | NA N | A NA | NA | NA | NA | NA NA | N/A | N | NA | 40RUQA16T2A5-0A0A0 | 187000 | 0 144000 | 0 6000 | 2000 1 | | 170 | 13 | NA | 230-3 | 14 20 | 713 | NO | NO | N/A | N/A N/A 1 | N/A N/A | | | 1&3/A1.1A, 1/M7. |

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NOTES:

1. PROVIDE MECHANICAL UNIT WITH INTEGRAL CONVENIENCE RECEPTACLE.

Α

2. ALL ROOFTOP UNITS SHALL BE PROVIDED WITH UNPOWERED CONVENIENCE OUTLET. 3. ALL ROOFTOP UNITS ARE HORIZONTALLY DISCHARGED CONFIGURATION, UNO. FIELD VERIFY PRIOR TO ORDERING.

4. ALL ROOFTOP UNITS SHALL BE PROVIDED WITH UNPOWERED CONVENIENCE OUTLET.

5. PROVIDE HINGED ACCESS PANEL FOR ALL ROOFTOP UNITS.

6. FINAL WEIGHT (LBS) IS SUMMATION OF RTU WEIGHT, ECONOMIZER SECTION, POWER EXHAUST 14" ROOF CURB, AND 18" HIGH CURB ADAPTOR, AS APPLICABLE. 7. SCCR RATING OF RTUS AND FCU-B1 SHALL BE MINIMUM OF 10KA. CU-B1 TO BE 25KA 8. PROVIDE MODULATING POWER EXHAUST WHERE ECONOMIZER IS REQUIRED.

9. FOR EXISTING CARRIER 48HJL005 AND 48HJL006, USE THE EXISTING CURB ADAPTOR SINCE 48HJL HAS SAME FOOTPRINT AS 50FCQ. CONTRACTOR TO VERIFY ON SITE. SOME OF THE EXISTING ROOF TOP UNITS ARE MADE BY LENNOX. FOR EXISTING UNITS RATHER THAN CARRIER 48HJL, PROVIDE CURB ATAPTOR. TO MATCH CARRIER UNITS.

10. PROVIDE VFD FAN FOR FCU-B1.

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

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

REMARKS:

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

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

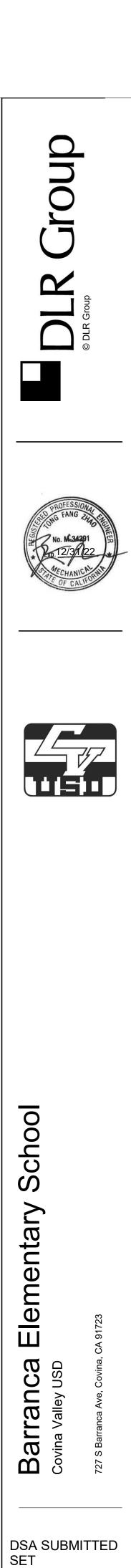
| AIR VELOCITY GUIDELINES (FPM) | | | | | | | | | | | | | |
|-------------------------------|---------------------|------|------|-----|-----|-----|--|--|--|--|--|--|--|
| LOCATION | NOISE CRITERIA (NC) | | | | | | | | | | | | |
| LUCATION | 40 | 35 | 30 | 25 | 20 | 15 | | | | | | | |
| MAIN SUPPLY DUCT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

MINIMUM CONDENSATE PIPE DIAMETER (IN)

| MINIMUM CONDE | NSATE PIPE SIZE |
|---|---|
| EQUIPMENT CAPACITY IN TONS OF REFRIGERATION | MINIMUM CONDENSATE F DIAMETER (IN |
| UP TO 20 | 3/4 |
| 21 - 40 | 1 |
| 41 - 90 | 1 1/4 |
| 91 - 125 | 1 1/2 |
| 126 - 250 | 2 |
| | |
| | |

В

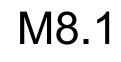
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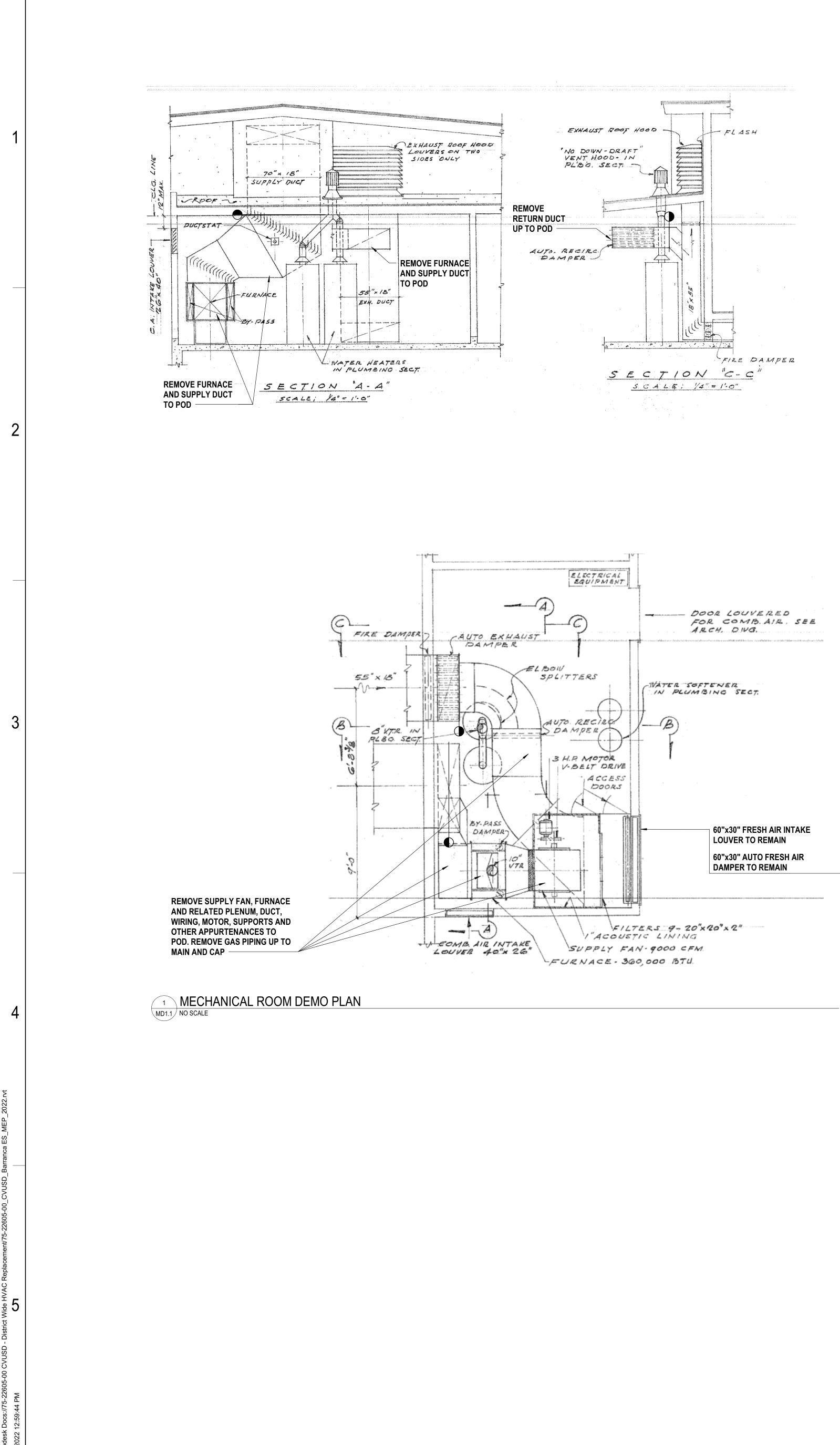


5/5/2022 REVISIONS

75-22605-00

MECHANICAL SCHEDULES





В

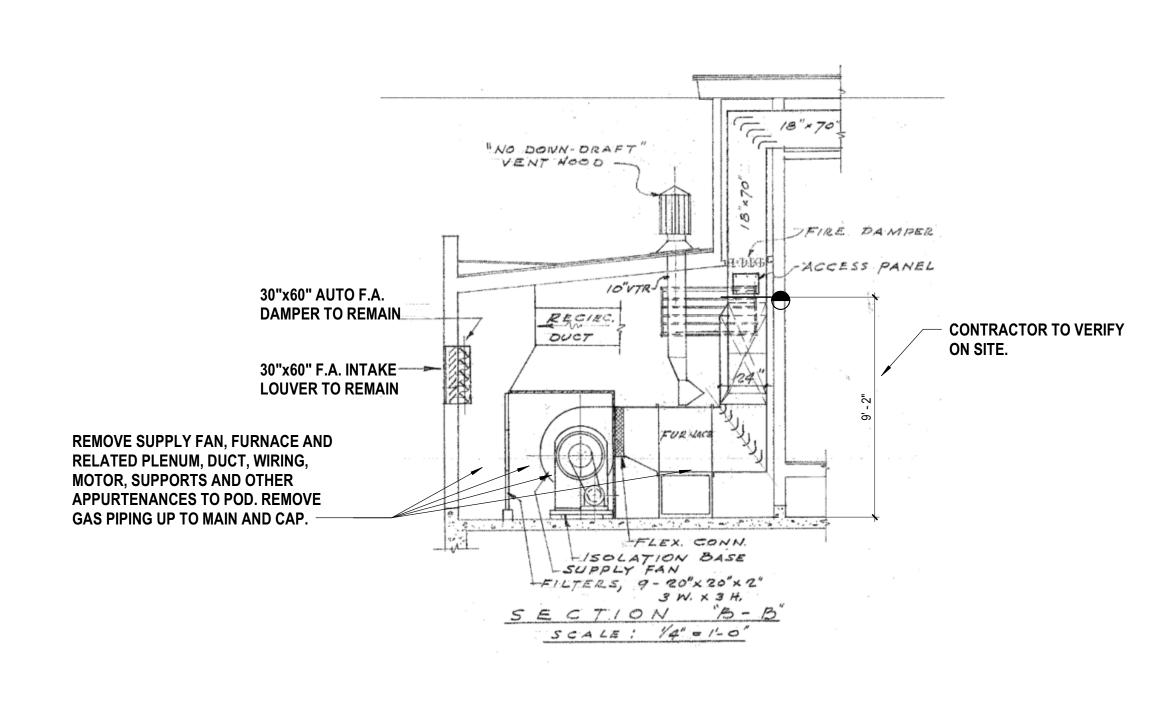
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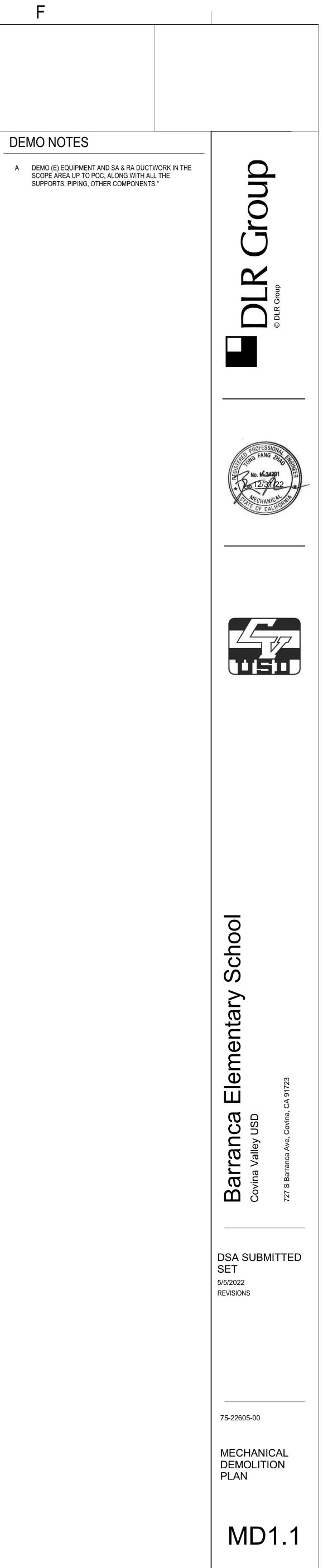


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SHEET INDEX

| E0.1 | ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES |
|------|---|
| E2.1 | ROOF ELECTRICAL PLAN |
| E5.1 | ELECTRICAL DIAGRAMS |
| E6.1 | ELECTRICAL DETAILS |

APPLICABLE CODE: 2019 CBC

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MEP COMPONENT ANCHORAGE NOTE

REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS. 2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE. 3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA. THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS: A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT. B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED

FROM A ROOF OR FLOOR OR HUND FROM A WALL.

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

.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

| BRACE LOAD | S. | | ENGINEERO | TREGOR |
|------------|----------------|--------------|----------------|----------|
| MECHANICAL | PIPING (MP), M | ECHANICAL DU | JCTS (MD), PLU | JMBING F |
| MP | MD | PP | E | OPTI |
| MP | MD | PP | (E) | OPTI |

GENERAL NOTES

1 PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.

STRUCTURAL ENGINEER OF RECORD AND DSA.

2 UNLESS SPECIFICALLY SHOWN ON THESE DRAWINGS, NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, OR NOTCHED WITHOUT PRIOR AUTHORIZATION IN WRITING BY THE

02/02/2020 REVISED: 02/14/2020

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26. THE METHOD OF SHOWING BRACING AND ATTACHEMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND

PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

TION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. TION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) #<u>00043-13</u>

GENERAL SYMBOLS

EXISTING POINT OF CONNECTION - NEW CONNECTS TO EXISTING AREA NOT IN CONTRACT

POINT OF DISCONNECT - DEMOLITION REMOVED FROM

<u>POWER</u>

FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE UNO

JUNCTION BOX FOR FUTURE PROJECTOR POWER MOUNT 24-INCHES ABOVE SUSPENDED CEILING MOUNT TIGHT TO CEILING AT EXPOSED STRUCTURE

DUPLEX RECEPTACLE, HORIZ. MTD, ABOVE COUNTER

STRUCTURE WITH A WEATHERPROOF, IN-USE COVER

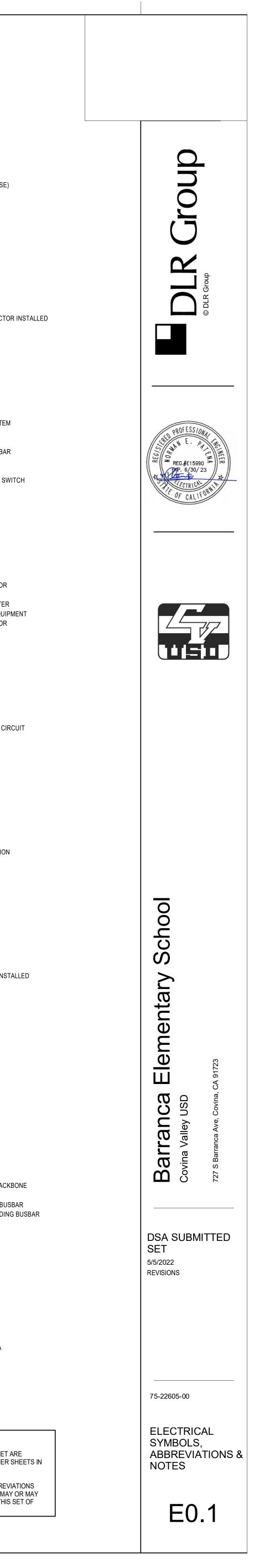
| | CIRCUIT HOME RUN | RECEPT | ACLES: MOUNT 18-INCHES AFF, UNO |
|----------------|---|----------------|---|
| 0 | CONDUIT TURNING UP | | AL LINE THROUGH SYMBOL OR DENOTED 'AC' |
| | CONDUIT TURNING DOWN | | ES MOUNT DEVICE ABOVE COUNTER. INDICATED AS 'MOUNT ABOVE COUNTER' MOUNT |
| | CONDUIT STUB-UP | BOTTON | 1 OF BOX 2-INCHES ABOVE TOP OF BACKSPLASH |
| [] | CONDUIT SLEEVE | EXISTS. | CHES ABOVE COUNTERTOP IF NO BACKSPLASH |
| | CONDUIT SEAL | LABELS | SHALL BE MACHINE PRINTED, UNO |
| | CONDUIT CONCEALED IN CEILING OR WALLS, POWER | \mapsto | SIMPLEX RECEPTACLE |
| * | | \Rightarrow | DUPLEX RECEPTACLE |
| \frown | OTHER (* = SEE ABBREVIATIONS) CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, POWEF | | DUPLEX RECEPTACLE, GFI TYPE |
| * | CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, OTHER (* = SEE ABBREVIATIONS) | | DUPLEX RECEPTACLE, MOUNT ABOVE COUNTER DUPLEX RECEPTACLE, GFI TYPE, MOUNT ABOVE COUNTER |
| i | EXPOSED CONDUIT, POWER | | FOURPLEX RECEPTACLE |
| ·* | EXPOSED CONDUIT, | | FOURPLEX RECEPTACLE, GFI TYPE FOURPLEX RECEPTACLE, MOUNT ABOVE COUNTE |
| - 530 - | OTHER (* = SEE ABBREVIATIONS) | | FOURPLEX RECEPTACLE, MOUNT ABOVE COUNTER |
| E-FRS-∃ | FIRE RATED SLEEVE | | MOUNT ABOVE COUNTER |
| Т | TRANSFORMER | - — | DUPLEX RECEPTACLE, FLUSH IN CEILING |
| XXX | BRANCH CIRCUIT PANELBOARD | | FOURPLEX RECEPTACLE, FLUSH IN CEILING |
| | MOUNT 72-INCHES TO TOP | ΗD | DUPLEX RECEPTACLE, HORIZONTALLY MOUNTED |
| XXX | DISTRIBUTION PANELBOARD MOUNT 72-INCHES TO TOP | ΗЩ | DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE |
| | | HB HB | DUPLEX RECEPTACLE, HORIZ. MTD, ABOVE COUNT DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE, |
| | EQUIPMENT CABINET, AS NOTED | I UN | MOUNT ABOVE COUNTER |
| | SWITCHBOARD | ≡ _R | WEATHER RESISTANT GFI DUPLEX RECEPTACLE, ROOF MOUNT 18-INCHES ABOVE ADJACENT |
| \boxtimes | MOTOR STARTER OR DRIVE | | STRUCTURE WITH A WEATHERPROOF, IN-USE COV WEATHER RESISTANT GFI DUPLEX RECEPTACLE, |
| | DISCONNECT SWITCH | ≡ | MOUNT 18-INCHES AFF WITH A WEATHERPROOF, IN-USE COVER |
| \square | COMBINATION STARTER / DISCONNECT SWITCH | ÷ | STD DUPLEX RECEPTACLE TO SERVE ELECTRIC WATER COOLER, MOUNT AT HEIGHT PER |
| CT | CURRENT TRANSFORMER ENCLOSURE | EWC | CEQUIPMENT MANUFACTURER'S INSTALLATION GUIDELINES. WIRE TO GFCI BKR IN PANELBOARD. |
| M | METER | | DUPLEX RECEPTACLE TO SERVE TELEVISION, MOUNT AT SAME HEIGHT AND WITHIN 8-INCHES |
| GEN | GENERATOR | ωŢV | OF ADJACENT TV OUTLET |
| ATS | AUTOMATIC TRANSFER SWITCH | | |
| | | - | DUPLEX RECEPTACLE, EMERGENCY |
| <u>+</u> | SYSTEM GROUND ELECTRODE | ⊕ | FOURPLEX RECEPTACLE, EMERGENCY |
| ΗŤ | THERMOSTAT | - | DUPLEX RECEPTACLE, LOWER SWITCH |
| Î | MUSHROOM SWITCH | Ð | DUPLEX RECEPTACLE, SWITCHED |
| МН | ELECTRICAL MANHOLE | ŧ | RANGE RECEPTACLE, MOUNT 8-INCHES AFF |
| HH | ELECTRICAL HAND HOLE | H | SPECIAL RECEPTACLE, DEEP WELL BOX |
| | MOTOR CONNECTION, HORSEPOWER AS INDICATED | ٩ | FLUSH FLOOR OUTLET BOX UNO |
| - | FUSE AND SWITCH ASSEMBLY | • | FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE UN |
| SF | ٨ | > 0 → | MULTI-DEVICE FLOOR BOX WITH DUPLEX |
| s _T | MANUAL CONTROLLER WITH THERMAL OVERLOAD | 00 | RECEPTACLE AND TELECOMMUNICATIONS OUTLETS |
| s _M | MANUAL CONTROLLER W/O THERMAL OVERLOAD | ⊢Û | USB ONLY RECEPTACLE |
| В | CIRCUIT BREAKER ENCLOSURE | =0 | RECEPTACLE WITH USB PORTS |
| PB | PULL BOX | - | |
| | EQUIPMENT CONNECTION | J | FLUSH JUNCTION BOX, CEILING MOUNTED |
| | CABLE TRAY, LADDER TYPE OR RUNWAY | J _P | JUNCTION BOX FOR FUTURE PROJECTOR POWER MOUNT 24-INCHES ABOVE SUSPENDED CEILING MOUNT TIGHT TO CEILING AT EXPOSED STRUCTU |
| | CABLE TRAY | | LABEL BOX COVER 'PROJECTOR POWER' |
| | MULTI-OUTLET ASSEMBLIES | S | JUNCTION BOX ABOVE SUSPENDED CEILING WITH FLEX CONNECTION |
| | MOUNT 18-INCHES AFF, UNO WHERE DENOTED 'AC', MOUNT ABOVE COUNTER | ΗĴ | FLUSH JUNCTION BOX, WALL MOUNTED |
| | | ΗJ | SURFACE JUNCTION BOX, WALL MOUNTED |
| | DIVIDED SURFACE RACEWAY MOUNT 18-INCHES AFF, UNO | J | SURFACE JUNCTION BOX, CEILING MOUNTED |
| | WHERE DENOTED 'AC', MOUNT ABOVE COUNTER | | |
| PUSHBUTTO | ON STATION: MOUNT 42-INCHES AFF UNO | ΗÐ | HAND DRYER, INSTALL HAND DRYER SPECIFIED IN DIV. 11 |
| • | SWITCH, PUSH BUTTON, SINGLE | | |
| • | | | |

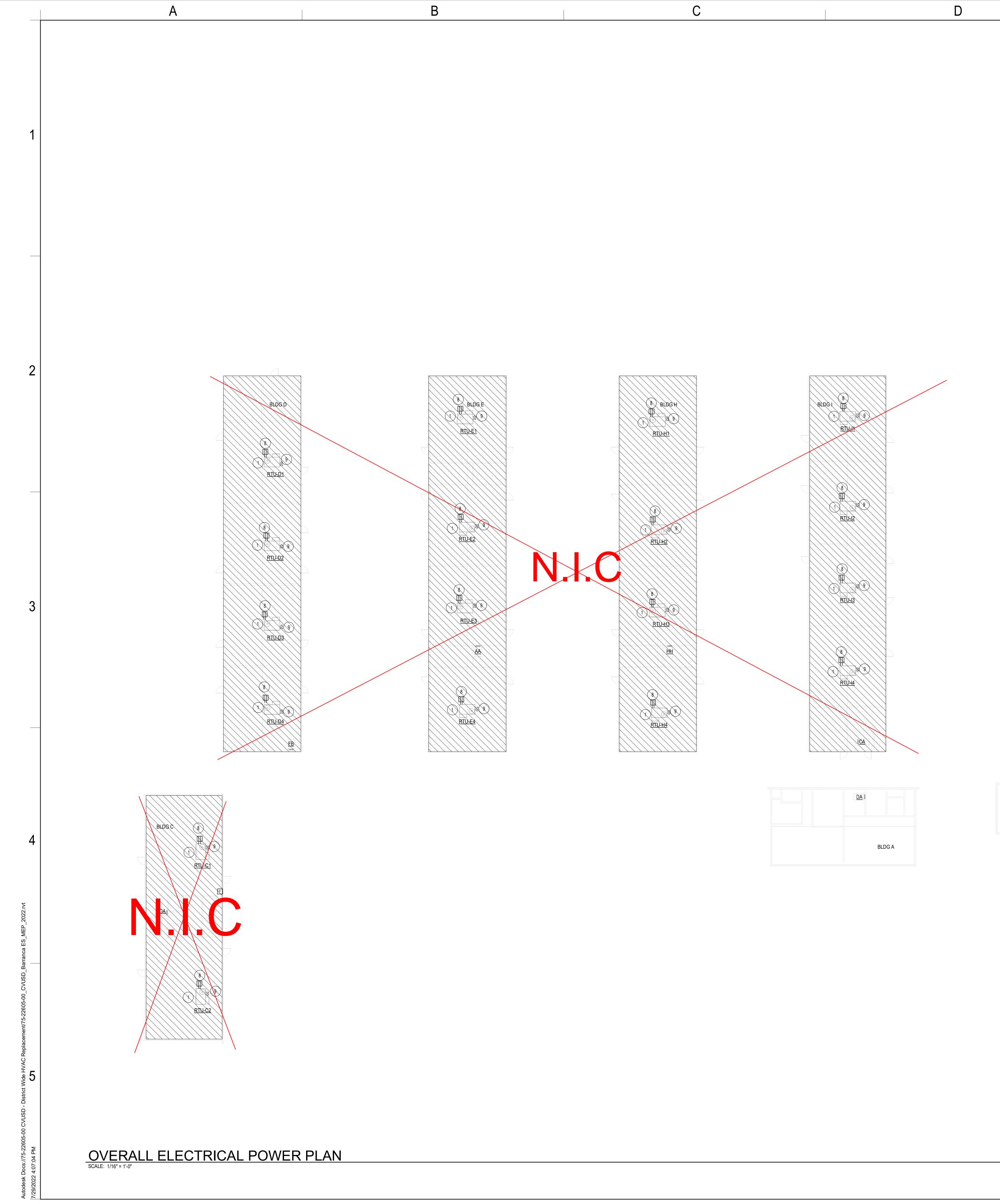
SWITCH, PUSH BUTTON, DOUBLE SWITCH, PUSH BUTTON, TRIPLE

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

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

SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.



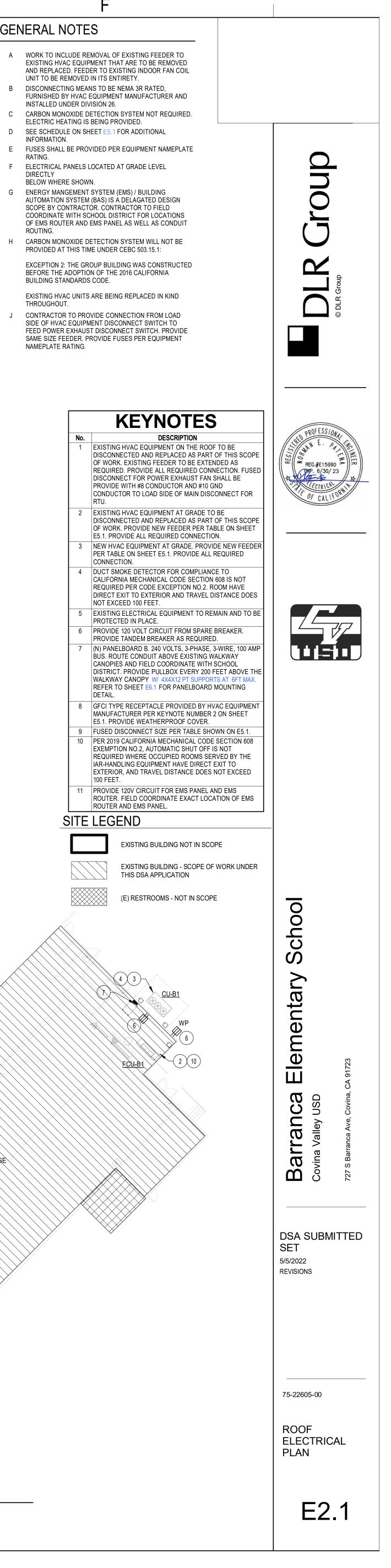


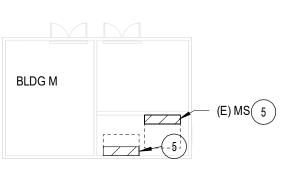
GENERAL NOTES

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- B DISCONNECTING MEANS TO BE NEMA 3R RATED,
- INSTALLED UNDER DIVISION 26. C CARBON MONOXIDE DETECTION SYSTEM NOT REQUIRED.
- ELECTRIC HEATING IS BEING PROVIDED. D SEE SCHEDULE ON SHEET E5.1 FOR ADDITIONAL
- INFORMATION. E FUSES SHALL BE PROVIDED PER EQUIPMENT NAMEPLATE RATING.
- F ELECTRICAL PANELS LOCATED AT GRADE LEVEL DIRECTLY BELOW WHERE SHOWN.
- G ENERGY MANGEMENT SYSTEM (EMS) / BUILDING AUTOMATION SYSTEM (BAS) IS À DELAGATED DESIGN SCOPE BY CONTRACTOR. CONTRACTOR TO FIELD COORDINATE WITH SCHOOL DISTRICT FOR LOCATIONS
- ROUTING. H CARBON MONOXIDE DETECTION SYSTEM WILL NOT BE PROVIDED AT THIS TIME UNDER CEBC 503.15.1:
- EXISTING HVAC UNITS ARE BEING REPLACED IN KIND THROUGHOUT.
- SIDE OF HVAC EQUIPMENT DISCONNECT SWITCH TO SAME SIZE FEEDER. PROVIDE FUSES PER EQUIPMENT NAMEPLATE RATING.

BLDG B MUTIPURROSE





| | FEED | DER SC | HEDUL | E - CO | PPER | | | |
|------------------------------------|---------------------------|-----------------------|-----------------------|---------------------------------|---------------------|----------------|--|--|
| MARK | # SETS | Ø & N | 010 | CONDUIT SIZE MARK SUFFIX | | | | |
| (AMPS) | # 3213 | Øan | GND | -4W | -3W | -21 | | |
| 15 | 1 | 12 | 12 | 3/4" | 3/4" | 3/4 | | |
| 20 | 1 | 12 | 12 | 3/4" | 3/4" | 3/4 | | |
| 25 | 1 | 10 | 10 | 3/4" | 3/4" | 3/4 | | |
| 30 | 1 | 10 | 10 | 3/4" | 3/4" | 3/4 | | |
| 35 | 1 | 8 | 10 | 3/4" | 3/4" | 3/4 | | |
| 40 | 1 | 8 | 10 | 3/4" | 3/4" | 3/4 | | |
| 45 | 1 | 6 | 10 | 1" | 3/4" | 3/4 | | |
| 50 | 1 | 6 | 10 | 1" | 3/4" | 3/4 | | |
| 60 70 | 1 | 4 | 10 8 | 1-1/4" 1-1/4" | 1" 1" | 3/4 3/4 | | |
| 80 | 1 | 3 | 8 | 1-1/4" | 1-1/4" | - 3/4 1' | | |
| 90 | 1 | 2 | 8 | 1-1/4" | 1-1/4" | 1" | | |
| 100 | 1 | 1 | 8 | 1-1/2" | 1-1/2" | 1-1/ | | |
| 110 | 1 | 1 | 6 | 1-1/2" | 1-1/2" | 1-1/ | | |
| 125 | 1 | 1 | 6 | 1-1/2" | 1-1/2" | 1-1/ | | |
| 150 | 1 | 1/0 | 6 | 2" | 1-1/2" | 1-1/ | | |
| 175 | 1 | 2/0 | 6 | 2" | 1-1/2" | 1-1/ | | |
| 200 | 1 | 3/0 | 6 | 2" | 2" | 1-1/ | | |
| 225 | 1 | 4/0 | 4 | 2-1/2" | 2" | 1-1/ | | |
| 250 | 1 | 250 | 4 | 2-1/2" | 2" | 1-1/ | | |
| 300 | 1 | 350 | 4 | 3" | 2-1/2" | 2" | | |
| 350 400 | 1 | 500 | 3 | 3-1/2" | 3" 3" | 2-1/ | | |
| 400 | 1 | 600 3/0 | 3 | 3-1/2" 2" | 3 2" | 2-1/ 1-1/ | | |
| 450 | 2 | 4/0 | 2 | 2-1/2" | 2" | 1-1/ | | |
| 500 | 2 | 250 | 2 | 2-1/2" | 2-1/2" | 2" | | |
| 600 | 2 | 350 | 1 | 3" | 2-1/2" | 2' | | |
| 700 | 2 | 500 | 1/0 | 3-1/2" | 3" | 2-1/ | | |
| 800 | 2 | 600 | 1/0 | 3-1/2" | 3" | 2-1/ | | |
| 1000 | 3 | 400 | 2/0 | 3" | 3" | 2-1/ | | |
| 1200 | 3 | 600 | 3/0 | 3-1/2" | 3-1/2" | 3" | | |
| 1600 | 4 | 600 | 4/0 | 3-1/2" | 3-1/2" | 3" | | |
| 2000 2500 | 5 6 | 600 600 | 250 350 | 4" 4" | 3-1/2" 3-1/2" | 3" 3" | | |
| 3000 | 8 | 500 | 400 | 4 3-1/2" | 3" | 2-1/ | | |
| 4000 | 10 | 600 | 500 | 4" | 3-1/2" | 2-1/ | | |
| | | | 000 | | 0 112 | Ŭ | | |
| Ø N GND -4W -3W -2W | FOUR W THREE TWO WI | ENT GRO /IRE + GR | OUND (3) ROUND (3 | CONDUCT Ø,N,GND) Ø,GND or | | כ) | | |
| NOTES | | | | | | | | |
| 1. | | CTOR AM | | ARE BAS | ED ON NE | С | | |
| 2. | CONDU | T SIZES A | | D ON A M | AXIMUM I | FILL | | |
| 3. | RATIO C SCHEDU | | L BE USE | D FOR FE | EDERS AI | ND | | |
| 4. | | | | E APPLICA H CIRCUI | | | | |
| 5. | INCLUDI SCHEDU | E AN EQU JLE IS VA | IPMENT (LID FOR T | GROUNDIN | NG COND N, THWN- | ucto 2, ani | | |
| 6. | CONDU | CTOR TYP | PES REQL | ee speci Jired. Type emt | | | | |
| | LFMC, H SPECIFI | IDPE, ANE CATIONS |) RNC-40 FOR RAC | RACEWAY CEWAY AF | rs. See Plicatic | NS. | | |
| 7. | | AL CONFI | | NS (1 OR | 2 SETS) A | ARE | | |
| 8. | | SIZES U | | | | | | |
| | | | | | | | | |

В

| | | PANEL: B LOCATION: ME BUS RATING: 20 MAIN BREAKER: 10 | 0.0 A | L ROC | DM B113 | | | | VOLTS PHASES WIRES SCCR | : 3 | a | | L | | FED FF TEGRAL | TING: SURFACE ROM: SPD: Type 1 RIES: SEE ONE-LINE |
|------------|-------------|--|-------------|-------|----------------------|---------------------|---------|----------|----------------------------------|-------------|-------------------|-----------------|-------------|----|------------------|--|
| скт | CIRCUIT D | ESCRIPTION | BKR TRIP | Р | BKR TYPE | LOAD TYPE | PHASE | A (VA) | PHASI | EB (VA) | PHASE C (V | A) LOAD TYPE | BKR TYPE | Р | bkr Trip | |
| 1 | | | | | | | 2,860 | | 0.000 | | | | | | | |
| 3 5 | CU-B1 | | 60 | 3 | | Motor | | | 2,860 | | 2,860 | | | | | |
| 7 | | | | | | | 1,552 | | | | 2,000 | | | | | |
| | FCU-B1 | | 40 | 3 | | Motor | | | 1,552 | | 4.550 | | | | | |
| 11 13 | | | | | | | | | | | 1,552 | | | | | |
| 15 | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | - | | | | | | | |
| 21 23 | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | |
| 27 | | | | | | | | | | | - | | | | | |
| 29 31 | | | | | | | | | | | | | | | | |
| 33 | | | | + | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | | |
| 39 41 | | | | | | | | | | | | | | | | |
| | | | | | | AL LOAD: Al AMPS | | | | 2 VA 8 A | 4412 VA 31.8 A | | | -1 | 1 | |
| LOA TYP | | CONNECTED LOAD (VA) | DEMAN D | | STIMATED MAND (V/ | | | DEM | AND FACT | or note | S | | BKR TYP | E | | PANEL TOTALS |
| L | LIGHTING | 0 VA | 0.00% | | 0 VA | CON | TINUOUS | LOAD @ | 125% | | | G = GF | CI (5mA) | | | |
| R | RECEPTACLES | 0 VA | 0.00% | | 0 VA | | | | REMAINDE | | | | FP (30mA) | | | CONNECTED LOAD: 13 kV |
| Κ | KITCHEN | 0 VA | 0.00% | | 0 VA | | | | en loads | , NEC AR | Г. 220 | | IUNT TRIP | | | ESTIMATED DEMAND: 13 kV |
| М | MOTOR | 0 VA | 0.00% | | 0 VA | | GEST MO | TOR, NEC | CART. 430 | | | LO = LO | OCK OUT | | | CONNECTED CURRENT: 31.8 A |
| | COOLING | 0 VA | 0.00% | | 0 VA | | | | | | | | | | | EMD CURRENT: 31.8 A |
| С | HEATING | 0 VA | 0.00% | | 0 VA | | | | | | | | | | | |
| Н | | | | | | | | | | | | | | | | |
| | OTHER | 0 VA 0 VA | 0.00% | | 0 VA 0 VA | | | | | | | | | | | |

Α

 JIT SIZE

 SUFFIX

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I,GND) N NEC IUM FILL rs and IALL ONDUCTOR. HWN-2, AND TIONS FOR

1 CKT 4 6 8 11 1 1 _____ _____ _____ 40 _____ . •

NA NA NA $\gamma\gamma\gamma\gamma\gamma$

RTU-H4 (BLDG. H) 230/3 22.6 22.6 30

RTU-I1 (BLDG. I) 230/3 22.6 22.6 30

RTU-I3 (BLDG. 1) 230/3 22.6 22.6

230/3 22.6 22.6 30

1 One-Line Diagram E5.1 NO SCALE **EXISTING UNIT**

С

ELECTRICAL TAGS V/PH MCA FLA MOCP PANEL/ CKT# DISCONNECT FEEDER SIZE NA 60 \sim $\gamma \gamma \gamma \gamma \gamma \gamma \gamma$ RTU-C1 (BLDG. C) 230/3 22.6 22.6 30 3#8, 2#14GND-1"C RTU-C1 (BLDG. C) GA-2,4,6 RTU-C2 (BLDG. C) 230/3 22.6 22.6 30 GA-1,3,5 3#8, 2#14GND-1"C 60 RTU-C2 (BLDG. C) FB-2,4,6 3#8, 2#14GND-1"C 60 RTU-D1 (BLDG. D) RTU-D1 (BLDG. D) 230/3 22.6 22.6 30 RTU-D2 (BLDG. D) 230/3 22.6 22.6 30 3#8, 2#14GND-1"C 60 RTU-D2 (BLDG. D) FB-8,10,12 RTU-D3 (BLDG. D) 230/3 22.6 22.6 30 FB-1,3,5 60 RTU-D3 (BLDG. D) 3#8, 2#14GND-1"C RTU-D4 (BLDG. D) 230/3 22.6 22.6 30 FB-7,9,11 3#8, 2#14GND-1"C 60 RTU-D4 (BLDG. D) RTU-E1 (BLDG. E) 230/3 22.6 22.6 30 RTU-E1 (BLDG. E) AA-1,3,5 3#8, 2#14GND-1"C 60 RTU-E2 (BLDG. E) 230/3 22.6 22.6 30 AA-2,4,6 3#8, 2#14GND-1"C 60 RTU-E2 (BLDG. E) RTU-E3 (BLDG. E) 230/3 22.6 22.6 30 RTU-E3 (BLDG. E) AA-7,9,11 3#8, 2#14GND-1"C 60 RTU-E4 (BLDG. E) 230/3 22.6 22.6 30 60 RTU-E4 (BLDG. E) AA-8,10,12 3#8, 2#14GND-1"C RTU-H1 (BLDG. H) 230/3 22.6 22.6 30 BA-1,3,5 3#8, 2#14GND-1"C 60 RTU-H1 (BLDG_H) 60 RTU-H2 (BLDG. H) RTU-H2 (BLDG. H) 230/3 22.6 22.6 30 BA-2,4,6 3#8, 2#14GND-1"C 60 RTU-H3 (BLDG. H) 230/3 22.6 22.6 30 BA-7,9,11 3#8, 2#14GND-1"C RTU-H3 (BLDG. H)

BA-8,10,12

CA-1,3,5

CA-7,9,11

CA-2,4,6

3#8, 2#14GND-1"C

3#8, 2#14GND-1"C

3#8, 2#14GND-1"C

3#8, 2#14GND-1"C

GENERAL NOTES:

1

3

4

RTU-I2 (BLDG. I)

CONTRACTOR TO FIELD VERIFY CIRCUITING AND FEEDER INFORMATION PRIOR TO EQUIPMENT REMOVAL. CONTRACTOR TO PROVIDE REQUIRED ADJUSTMENTS AS NEEDED. PROVIDE MECHANICAL UNIT WITH INTEGRAL CONVENIENCE RECEPTACLE. FEED FROM SPARE 20A/1P BREAKER IN NEAREST PANEL. ROUTE 2#12+1#12GND IN 1/2" EMT CONDUIT FROM PANEL TO RECEPTACLE. POWER NO MORE THAN 10 RECEPTACLES ON ONE CIRCUIT. FIELD VERIFY EXACT LOCATION OF NEAREST PANEL AND ROUTE OF NEW CIRCUIT FROM PANEL TO UNIT RECEPTACLE. CONTRACTOR TO DEMOLISH POWER CONNECTION FROM ALL ROOF TOP UNITS. DEMOLITION TO CONSIST OF REMOVAL OF POWER CONNECTION, CABLING, AND CONDUIT BACK TO SOURCE UNLESS NOTED OTHERWISE.

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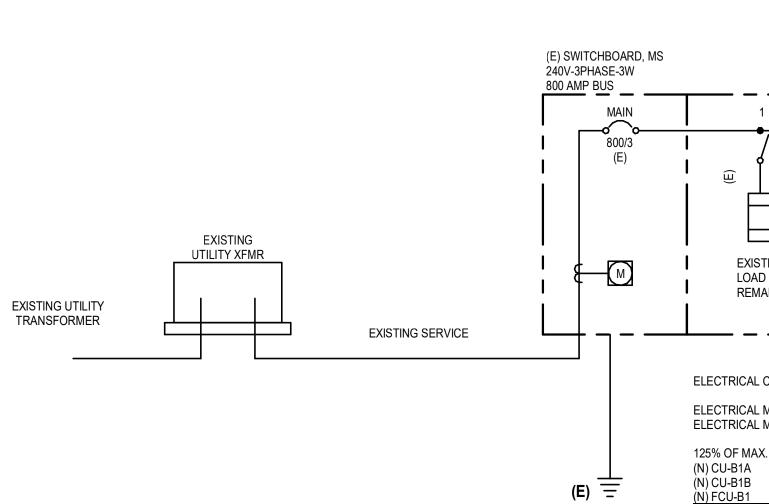
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FIELD COORDINATE EQUIPMENT MANUFACTURER FOR FAULT CURRENT LIMITING FUSE TYPES

30

| | | 800 AMP BUS | |
|---------------------------------|------------------|----------------------|--|
| | | MAIN 800/3 (E) | |
| EXISTING UTILITY TRANSFORMER | EXISTING SERVICE | | EXISTING LOAD TO REMAIN EXISTING LOAD TO REMAIN |
| | | (E) = | ELECTRICAL CALCULATION: ELECTRICAL METER DEMAND FOR PAST ELECTRICAL METER DEMAND IN AMPS (125% OF MAX. DEMAND PER CEC 220.87 (N) CU-B1A (N) CU-B1B (N) FCU-B1 (N) SWITCHBOARD TOTAL LOAD |
| | | | % UTILIZATION = 664.65 / 800 X 100% |



TAGS

CU-B1A

CU-B1B

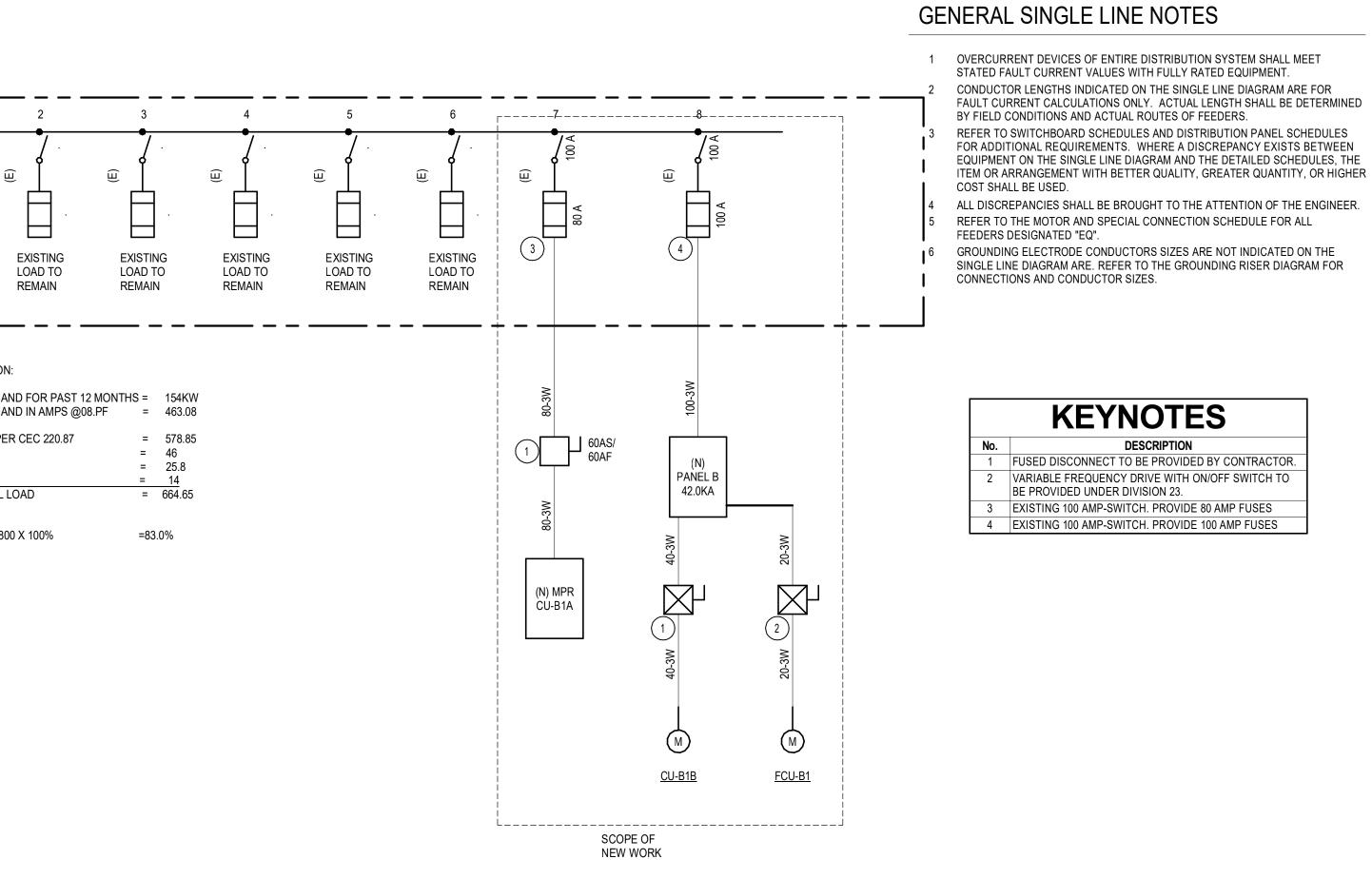
FCU-B1

RTU-H4 (BLDG. H)

RTU-I1 (BLDG. I)

RTU-I2 (BLDG. I)

RTU-I3 (BLDG. I)



Ε

| BARRANCA E.S. AC UNIT REPLACEMENT | | | | | | | | | | | | | | | |
|-----------------------------------|-------------------------|-------|-------|------|---------------|----------------|----------------------------|-----------|-------------|-----|----------|-------------------------------|-----------------------------|--|--|
| | | | | | | | NEW U | JNIT | | | | | | | |
| | | | | | | ELECTRICAL | | | | POV | VER EXHA | UST | NOTES | | |
| TAGS | DIRECT REPLACEMENT? Y/N | CFM | V-PH | MCA | MOCP | PANEL/ CKT# | DISCONNECT | REQUIRED? | Model# | MCA | MOCP | FEEDER SIZE | DISCONNECT | | |
| U-B1A | Ν | NA | 230/3 | 46 | 60 | MS-7 | 60A (60A FUSE) | | | | | NA | | | |
| U-B1B | Ν | NA | 230/3 | 25.8 | 40 | B-1,3,5 | 60A (40A FUSE) | | | | | NA | | | |
| CU-B1 | Ν | 6,000 | 230/3 | 14 | 20 | B-2,4,6 | 30A (20A FUSE) | | | | | NA | | | |
| 1 (BLDG. C) | Y | 1,600 | 230/3 | 26 | 30 | GA-2,4,6 | 60A (30A FUSE) | YES YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1*C | 20A (15A FUSE) | | |
| 2 (BLDG. C) | Υ | 1,600 | 230/3 | 26 | 30 | GA-1,3,5 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15 A F USE) | | |
| 1 (BLDG. D) | Υ | 1,600 | 230/3 | 26 | 30 | FB-2,4,6 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 2 (BLDG. D) | Y | 1,600 | 230/3 | 26 | 30 | FB-8,10,12 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 3 (BLDG. D) | Y | 1,600 | 230/3 | 26 | 30 | FB-1,3,5 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 4 (BLDG. D) | Y | 1,600 | 230/3 | 26 | 30 | FB-7,9,11 | 60A (30A FUS E) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 1 (BLDG. E) | Y | 1,600 | 230/3 | 26 | 30 | AA-1,3,5 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 2 (BLDG. E) | | 1,600 | JU/3 | 26 | 30 | AA-2,4,6 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 3 (BLDG. E) | | 1,600 | 230/3 | 26 | 30 | AA-7,9,11 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 4 (BLDG. E) | | 1,600 | 0/3 | 26 | 30 | AA-8,10,12 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 1 (BLDG_ H) | Y | 1,600 | 230/3 | 26 | 30 | BA-1,3,5 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 2 (BLDG. H) | Y | 1,600 | 230/3 | 26 | 30 | BA-2,4,6 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 3 (BLDG. H) | Y | 1,600 | 230/3 | 26 | 30 | BA-7,9,11 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 4 (BLDG. H) | Y | 1,600 | 230/3 | 26 | 30 | BA-8,10,12 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 1 (BLDG. I) | Y | 1,600 | 230/3 | 26 | 30 | CA-1,3,5 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15A FUSE) | | |
| 2 (BLDG. I) | Y | 1,600 | 230/3 | 26 | 30 | CA-7,9,11 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14 GND -1"C | 20A (15A FUSE) | | |
| 3 (BLDG. I) | Y | 1,600 | 230/3 | 26 | 30 | CA-2,4,6 | 60A (30A FUSE) | YES | PCD-SRT12CA | 4.9 | 8.8 | 3#8, 2#14GND-1"C | 20A (15 A FUSE) | | |
| ŧ(BLDG. IJ) | | 1,600 | 230/3 | 26 | <u>, 30 ,</u> | λ CA-8,10,12 λ | 60A (30A FUSE) | UYES | PCD_SRT12CA | 4,9 | ړ 8.8 ړ | 3#8, 2#14GND-1"G | 20A (15A FUSE) | | |





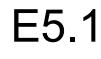


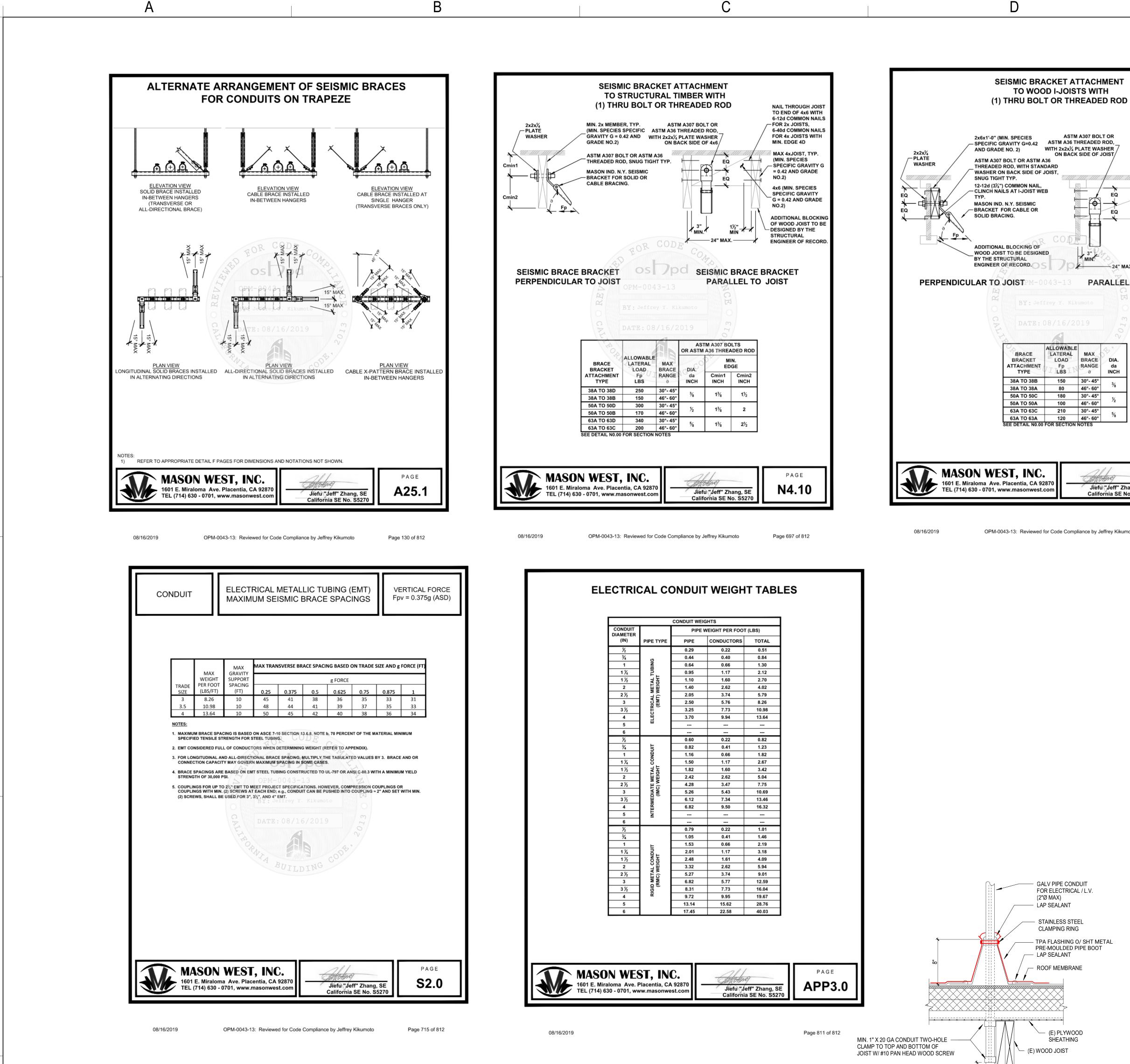


DSA SUBMITTED SET 5/5/2022 REVISIONS

75-22605-00

ELECTRICAL DIAGRAMS







| MASON WEST, INC. 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com | Jiefu "Jeff" Zhang, SE California SE No. S5270 | PAGE APP3.0 |
|--|---|-----------------------|

² ROOF PENETRATION DETAIL1 E6.1 NO SCALE

- (E) PLYWOOD

- (N) FULL DEPTH BLOCKING IF REQUIRED.

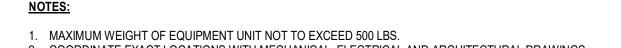
SHEATHING

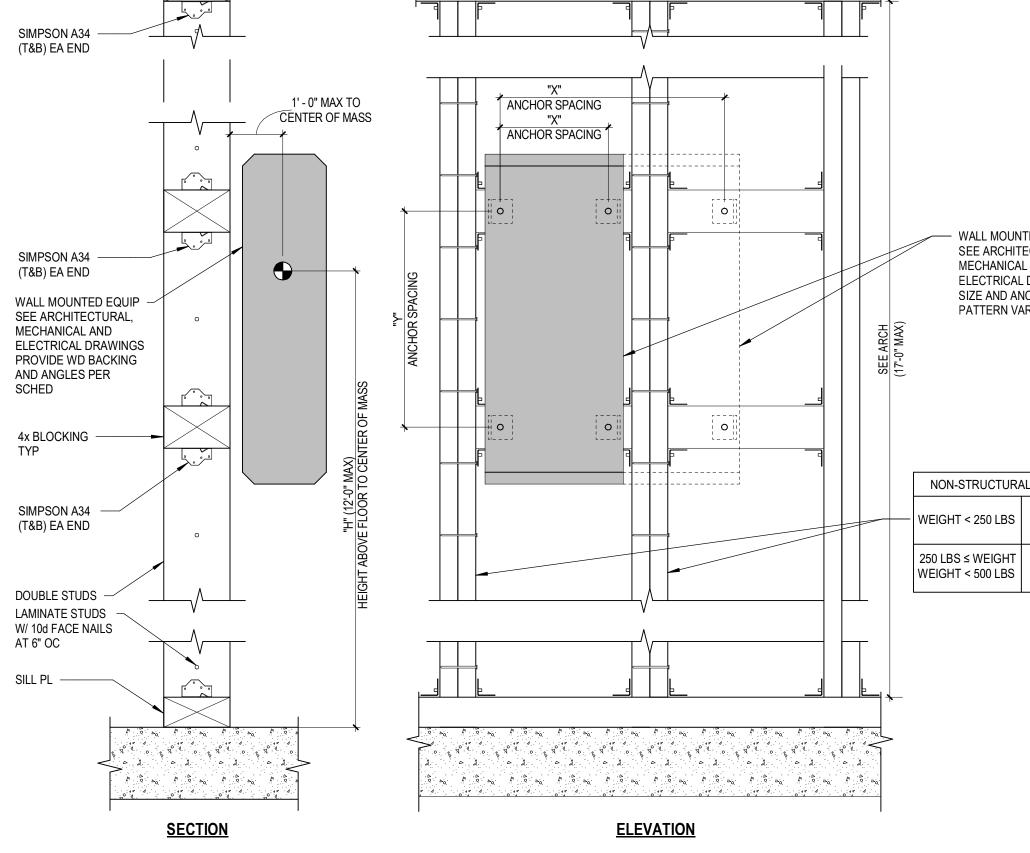
TYP WALL EQUIPMENT BACKING E6.1 NO SCALE

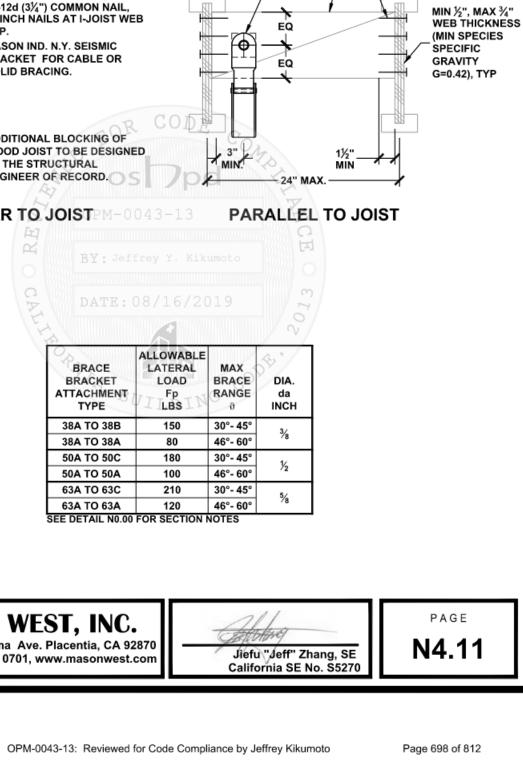
. MAXIMUM WEIGHT OF EQUIPMENT UNIT NOT TO EXCEED 500 LBS. 2. COORDINATE EXACT LOCATIONS WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS.

08/16/2019









DOUBLE TOP PL

4x8 (MIN. SPECIES

SPECIFIC GRAVITY

NO.2)

ASTM A307 BOLT OR

WITH 2x2x1/2 PLATE WASHER

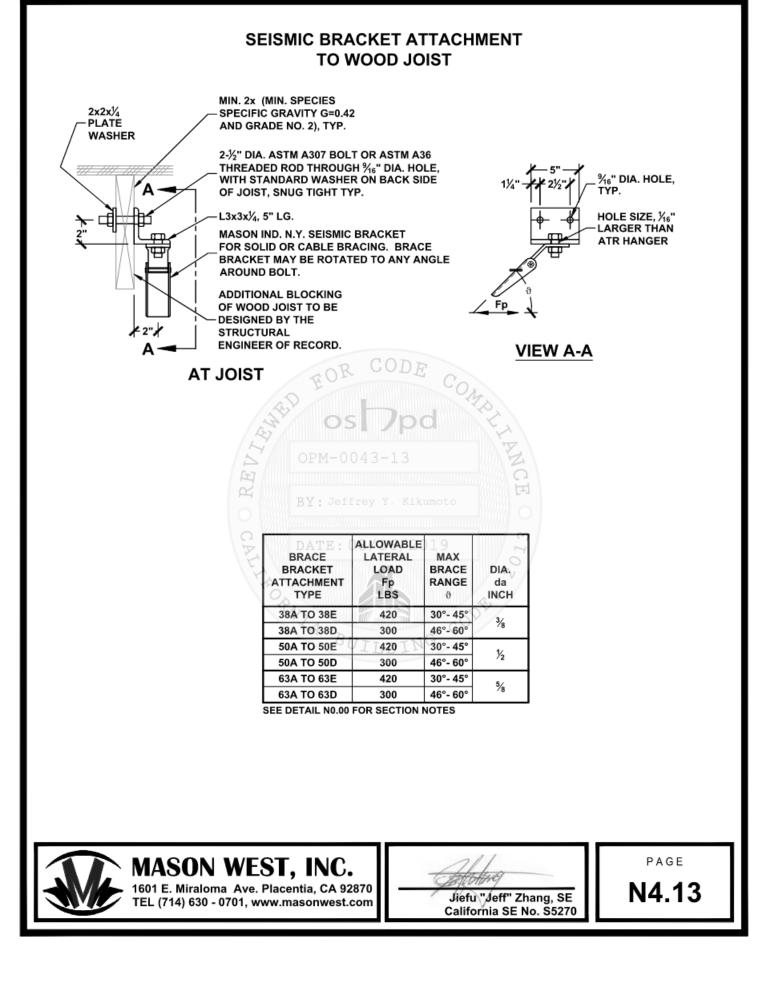
ON BACK SIDE OF JOIST

G = 0.42 AND GRADE

NAIL THROUGH JOIST

TO END OF 4x8 WITH

8-10d COMMON NAILS



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

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