VENTURA COLLEGE ADMIN BLDG ALTERATION

VENTURA COLLEGE, 4667 TELEGRAPH RD, VENTURA, CA 93003

PROJECT SCOPE

REMODEL PORTION OF AN EXISTING ADMINISTRATION BUILDING ON A COMMUNITY COLLEGE CAMPUS. WORK INCLUDES DEMOLITION OF NON-STRUCTURAL CEILINGS AND WALL FRAMING, NEW WALL FRAMING, NEW SUSPENDED CEILINGS, NEW WINDOWS IN A PORTION OF THE BUILDING, NEW POWER AND LIGHTING, NEW SPLIT HEAT PUMP HVAC SYSTEM AND NEW FINISHES.

PROJECT INFORMATION

SITE INFORMATION:

STREET ADDRESS:	4667 TELEGRAPH RD. VENTURA, 93003
LAND USE:	COMMUNITY COLLEGE
EXISTING USE:	BUSINESS
PROPOSED USE:	NO CHANGE IN USE

BUILDING INFORMATION:

NUMBER OF STORIES:	1
OCCUPANCY GROUP:	B
CONSTRUCTION TYPE:	VB
SPRINKLERED:	NO
MAX. HEIGHT ALLOWED: (PER 2022 CBC TABLE 504.3)	55'
MAX. HEIGHT PROPOSED:	NO CHANGE
ROOF RATING:	CLASS A
HIGH FIRE ZONE:	NO
GROSS AREA:	8580 SF (NO CHANGE)
PROJECT AREA:	1400 SF

PROJECT DIRECTORY

OWNER — VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
ADDRESS: 761 E. DAILY DR. CAMARILLO, CA 93010
CONTACT: BISHOY ELMAGARISY, ASST FACIL DIR
EMAIL: BELMAGARISY@VCCCD.EDU
P:805-289-6235

ARCHITECT — RRM DESIGN GROUP
ADDRESS: 422 E. MAIN ST. VENTURA, CA 93001
CONTACT: MARTIN HARTMANN
EMAIL: MHARTMANN@RRMDESIGN.COM
P:805-597-5292

MECHANICAL ENGINEER — AE GROUP MECHANICAL ENGINEERS, INC.
ADDRESS: 838 E. FRONT ST. VENTURA, CA 93001
CONTACT: RAVISH RAO
EMAIL: RAVISH@AENGGINC.COM
P:805-653-1722

ELECTRICAL ENGINEER — THOMA ELECTRIC
ADDRESS: 3562 EMPLEO ST. SUITE C SAN LUIS OBISPO, CA 93401
CONTACT: JEFF THOMA
EMAIL: JTHOMA@THOMAELEC.COM
P:(805) 543-3850

DEFERRED SUBMITTALS

1. NONE

BID ALTERNATES

1. NONE

SPECIAL INSTRUCTIONS

1. NONE

ACCEPTANCE TESTING

1. THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE.
2. LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).
3. MECHANICAL SYSTEM ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIRIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.
4. ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ARCHITECT OF RECORD OR THE OWNER'S AGENT.
5. A LISTING OF CERTIFIED ATT CAN BE FOUND AT" HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TEST-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE".
6. THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTIL THE CONSTRUCTIONINSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.
7. PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.

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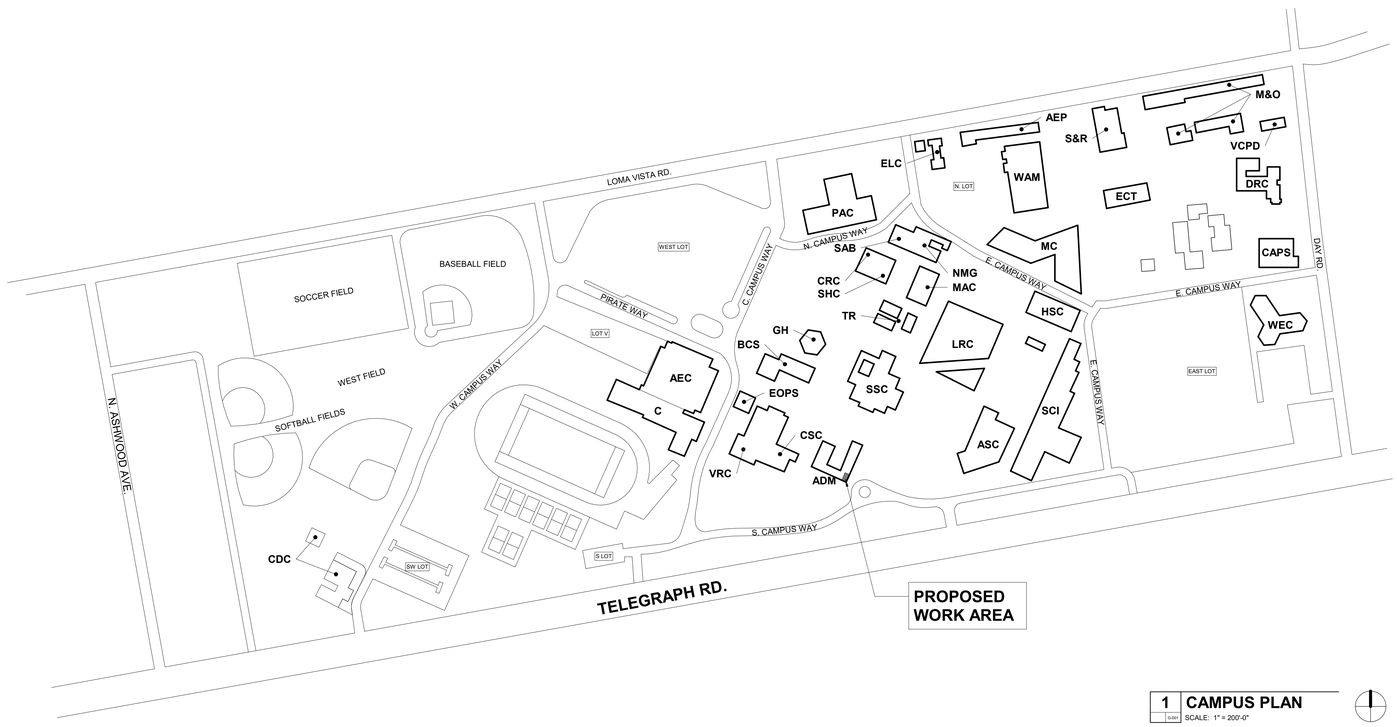
E-502 POWER DISTRIBUTION TITLE 24 COMPLIANCE DOCUMENTATION

Grand total: 39



1 CAMPUS PLAN
G-001 SCALE: 1" = 200'-0"

PROJECT GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE 2022 EDITION TITLE 24 CALIFORNIA CODE OF REGULATIONS (C.C.R.).
2. THE DRAWINGS AND SPECIFICATIONS AND ALL COPIES THEREOF, ARE LEGAL INSTRUMENTS OF SERVICE FOR THE USE OF THE OWNER AND AUTHORIZED REPRESENTATIVE ON THE DESIGNATED PROPERTY ONLY. OTHER USE, WITHOUT THE EXPRESSED WRITTEN PERMISSION OF THE ARCHITECT, IS PROHIBITED.
3. SPECIFICATIONS, DETAILS AND SCHEDULES WHICH MAY BE BOUND SEPARATELY, ARE PART OF THESE CONTRACT DOCUMENTS. DRAWINGS BY SEPARATELY CONTRACTED CONSULTING PROFESSIONALS (SUCH AS STRUCTURAL, INTERIORS OR LANDSCAPE) ARE SUPPLEMENTARY TO THE DESIGN DRAWINGS AND ARE PART OF THESE CONTRACT DOCUMENTS.
4. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY IF INFORMATION IS NOT SHOWN OR IS UNCLEAR. REPORT APPARENT DISCREPANCIES ON DRAWINGS AND/OR SPECIFICATIONS TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FOR ALL WORK.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND COORDINATING THE WORK FOR ALL UTILITIES AND SERVICES.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. QUESTIONS REGARDING THE SAME, OR THEIR EXACT MEANING, SHALL BE DIRECTED TO THE ARCHITECT.
8. CODE REQUIREMENTS: ALL WORK TO COMPLY WITH DIVISION OF THE STATE ARCHITECT REGULATIONS AND CURRENT EDITION OF TITLE 24 CODE OF REGULATIONS.
9. CONSTRUCTION IS TO COMPLY WITH ALL APPLICABLE REQUIREMENTS OF CALIFORNIA ADMINISTRATIVE CODE, TITLE 24.
10. EXISTING CONDITIONS: CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS DESIGNATED AS, OR REQUIRED TO, INTERFACE WITH NEW CONSTRUCTION. REPORT ANY DISCREPANCIES, DEFICIENCIES, OR CONDITIONS INCOMPATIBLE WITH PROPOSED CONSTRUCTION PRIOR TO PROCEEDING.
11. IT IS THE RESPONSIBILITY OF THE G.C. TO INSTALL ALL TEMPORARY BRACING AND SHORING TO ENSURE THE SAFETY OF THE WORK UNTIL IT IS IN ITS COMPLETED FORM. DO NOT REMOVE EXISTING STRUCTURAL SUPPORTS OR BEARING WALLS WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT OR STRUCTURAL ENGINEER.
12. DIMENSIONS/ NOTES/ DETAILS: DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CONDITIONS IN FIELD, AND IMMEDIATELY REPORT ANY DISCREPANCIES OR EXISTING AND PROPOSED VARIATIONS TO THE ARCHITECT. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND COORDINATING DIMENSIONS. ALL WRITTEN DIMENSIONS TO TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS, AND DETAILS. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER ANY GENERAL NOTES OR DETAILS. CONDITIONS NOT SPECIFICALLY DETAILED SHALL BE CONSTRUCTED AS SIMILAR CONDITIONS DETAILED AND/OR INDICATED ON THE DRAWINGS. ANY WORK INSTALLED IN CONFLICT WITH THE DESIGN DRAWINGS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.
13. ALL EXTERIOR DIMENSIONS ARE TO ASSUMED FACE OF PLYWOOD SHEATHING OR FACE OF MASONRY UNO. INTERIOR DIMENSIONS ARE TO FACE OF GYPSUM BOARD FINISH OR CENTERLINE OF WALL UNO.
14. GEOTECHNICAL REPORTS ARE NOT INCLUDED IN THE CONTRACT DOCUMENTS, BUT MAY BE MADE AVAILABLE TO THE CONTRACTOR FOR INFORMATION ONLY. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR ANY CONCLUSIONS THE CONTRACTOR MAY DRAW FROM SUCH INFORMATION. THE CONTRACTOR SHALL INVESTIGATE AND DETERMINE EXISTING SOILS AND SITE CONDITIONS UNDER WHICH CONTRACTOR WILL OPERATE IN PERFORMING THE WORK.
15. THE CONTRACTOR IS TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF DEMOLITION AND CONSTRUCTION, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR SHALL RESTRICT GENERAL PUBLIC ACCESS TO THE DEMOLITION, CONSTRUCTION, AND STORAGE AREAS.
16. HAZARDOUS MATERIALS ARE NOT TO BE STORED IN THE BUILDING, NOR USED IN CONSTRUCTION, IN QUANTITIES EXCEEDING THOSE SPECIFIED IN THE CBC.
17. DURING DEMOLITION AND CONSTRUCTION THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THE EXISTENCE AND PRECISE LOCATION OF UNDERGROUND PIPING AND OTHER STRUCTURES WHICH MAY BE AFFECTED BY CONSTRUCTION. PROMPTLY NOTIFY EACH UTILITY COMPANY, MUNICIPALITY, OR OTHER AGENCY OWNING OR OPERATING ANY AFFECTED FACILITIES OR STRUCTURES, AND REQUEST ENGINEERING INFORMATION AND MARKING OF FACILITIES IN FIELD, PRIOR TO COMMENCING ANY WORK ON THE SITE. REMOVE ALL ITEMS SPECIFIED TO BE ABANDONED, AND TAKE CARE TO PREVENT ANY DAMAGE TO, OR DISRUPTION OF, ITEMS TO REMAIN.
18. WHERE FIRE-RATED WALL OR CEILING ASSEMBLIES ARE PENETRATED BY RECESSED FIXTURES, MECHANICAL DUCTS, OR OTHER ITEMS, THE FIXTURES, DUCTS, OR OTHER ITEMS SHALL BE FIRE-RATED TO MATCH THE WALL OR CEILING ASSEMBLY.
19. U.N.O. ALL EXTERIOR DOORS SHALL LIMIT AIR INFILTRATION WHEN IN CLOSED POSITION AS FOLLOWS: PROVIDE WEATHERSTRIPPING AT HEAD, SILL AND JAMBS. INSTALL ASTRAGAL AT MEETING PORTION OF DOUBLE DOORS. DOORS REQUIRING VERTICAL TRACKS OR GUIDES SHALL USE CONTINUOUS MOUNTING ANGLE, AND SHALL BE SEALED TO LIMIT AIR LEAKAGE.
20. CONTRACTOR SHALL PROVIDE AND INSTALL ALL STIFFENERS, BRACING, BLOCKING, BACKING, HANGERS, BACK-UP PLATES, AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK, TOILET ROOM ACCESSORIES, FIXTURES, PARTITIONS, AND ALL WALL MOUNTED OR SUSPENDED MECHANICAL, KITCHEN, ELECTRICAL OR MISCELLANEOUS EQUIPMENT AND FURNISHING.
21. CONTRACTOR SHALL VERIFY EXACT SIZES AND LOCATIONS OF ALL MECHANICAL EQUIPMENT PADS, BASE STRUCTURES, ROOF OPENINGS, AS WELL AS POWER, WATER, DRAIN INSTALLATIONS AND STRUCTURAL STEEL SUPPORT LOCATIONS, WHEN APPLICABLE, WITH EQUIPMENT MANUFACTURERS BEFORE PROCEEDING WITH THE WORK. CHANGES TO ACCOMMODATE FIELD CONDITIONS OR APPROVED SUBSTITUTIONS SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
22. ALL PIPES, CONDUIT, WIRES, AND DUCTS SHALL BE CONCEALED FROM VIEW UNO. WHERE THESE ARE EXPOSED, THEY SHALL BE PAINTED TO MATCH THE BACKGROUND SURFACE.
23. ALL GLAZING INSTALLED IN HAZARDOUS LOCATIONS, AS DEFINED BY CBC CHAPTER 24, SHALL BE TEMPERED GLASS. SKYLIGHTS ARE TO BE TEMPERED GLASS OR FIBERGLASS AS SPECIFIED.
24. INSTALL SEALANT AT JOINTS AROUND WINDOW AND DOOR FRAMES, BETWEEN WALLS AND FOUNDATIONS, BETWEEN WALLS AND ROOF, BETWEEN WALL PANELS, AND AT PENETRATIONS OF UTILITIES THROUGH THE BUILDING ENVELOPE, TO LIMIT AIR INFILTRATION.
25. THE CONTRACTOR SHALL PROVIDE THE OWNER A LIST OF THE FEATURES, MATERIALS, COMPONENTS, AND MECHANICAL DEVICES INSTALLED IN THE BUILDING, AND INSTRUCTIONS ON HOW TO USE THEM EFFICIENTLY. THE INSTRUCTIONS SHALL BE CONSISTENT WITH SPECIFICATIONS SET FORTH BY THE EXECUTIVE DIRECTOR OF THE STATE ENERGY COMMISSION. THE ENERGY "CERTIFICATION OF COMPLIANCE" SHALL BE SUBMITTED AFTER THE INSTALLATION OF THE REQUIRED EQUIPMENT AND/OR MATERIAL, AND PRIOR TO ANY REQUEST FOR A FINAL INSPECTION.
26. ITEMS IN THESE DRAWINGS NOT SPECIFICALLY IDENTIFIED AS EXISTING ARE ASSUMED TO BE NEW.
27. ALL ASTM AND/OR ANSI DESIGNATIONS REFERRED TO ON THESE DRAWINGS SHALL BE THE LATEST ADOPTED OR REVISED SPECIFICATIONS.
28. MATERIAL AND EQUIPMENT NECESSARY FOR WORK SHALL NOT BE PLACED OR STORED ON PUBLIC PROPERTY SO AS TO OBSTRUCT A FREE AND CONVENIENT APPROACH TO AND USE OF ANY FIRE HYDRANT, FIRE OR POLICE ALARM BOX, UTILITY BOX, CATCH BASIN OR MANHOLE OR SO AS TO INTERFERE WITH THE FREE FLOW OF WATER IN STREET OR ALLEY GUTTER. PROTECTION AGAINST DAMAGE SHALL BE PROVIDED TO SUCH UTILITY FIXTURES DURING THE PROGRESS OF THE WORK, BUT SIGHT OF THEM SHALL NOT BE OBSTRUCTED.
29. WHERE NOT SPECIFICALLY DESCRIBED IN ANY OF THE NOTES OR SPECIFICATIONS, WORKMANSHIP SHALL CONFORM TO THE METHODS AND OPERATIONS OF BEST STANDARDS AND ACCEPTED PRACTICES OF THE RESPECTIVE TRADE.
30. CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED AND PLACED SO AS NOT TO ENDANGER THE PUBLIC, THE WORKERS OR ADJOINING PROPERTY FOR THE DURATION OF THE CONSTRUCTION PROJECT.
31. REQUIRED EXITS, EXISTING STRUCTURAL ELEMENTS, FIRE PROTECTION DEVICES AND SANITARY SAFEGUARDS SHALL BE MAINTAINED AT ALL TIMES DURING REMODELING, ALTERATIONS, REPAIRS OR ADDITIONS TO THE BUILDING UNLESS THE REQUIRED ELEMENTS OR DEVICES ARE BEING REMODELED, ALTERED, OR REPAIRED IN WHICH CASE ADEQUATE SUBSTITUTE PROVISIONS SHALL BE MADE.
32. SERVICE UTILITY CONNECTIONS SHALL BE DISCONTINUED AND CAPPED IN ACCORDANCE WITH THE APPROVED RULES AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
33. SANITARY FACILITIES SHALL BE PROVIDED DURING CONSTRUCTION, REMODELING, OR DEMOLITION ACTIVITIES IN ACCORDANCE WITH 2022 CPC.
34. AREAS OF CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE PROVIDED WITH NOT LESS THAN ONE APPROVED PORTABLE FIRE EXTINGUISHER PER 2022 CFC.
35. REQUIRED MEANS OF EGRESS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION, DEMOLITION, REMODELING, ALTERATIONS, AND ADDITIONS TO BUILDING UNLESS APPROVED TEMPORARY MEANS OF EGRESS SYSTEMS AND FACILITIES HAVE BEEN PROVIDED.
36. PENETRATIONS OF FIRE-RESISTANCE-RATED WALLS AND HORIZONTAL ASSEMBLIES SHALL BE PROTECTED AS REQUIRED IN CBC SECTIONS 714.4 AND 714.5.
37. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE AVAILABLE ON THE JOB SITE AT THE TIME OF INSPECTION.
38. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE SUPERVISION OF THE CONSTRUCTION WORK TO ENSURE THAT IT IS BUILT IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. THE ARCHITECT WILL PROVIDE ONLY PERIODIC OBSERVATION OF THE WORK. SEE DSA INSPECTION REQUIREMENTS LISTED IN NOTE 46.
39. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD & ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
40. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT AND THE STRUCTURAL ENGINEER WITH THE APPROVAL OF DSA REPRESENTATIVE.
41. ALL WELDING SHALL BE SPECIALLY INSPECTED BY AN AWS-CWI QUALIFIED INSPECTOR APPROVED BY DSA.
42. ALL BRACING OF DUCTS AND PIPINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE AND SMACNA GUIDELINES AS APPROVED BY DSA (CBC WILL GOVERN WHERE CONFLICTS OCCUR). THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND FIELD ENGINEER. A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY DSA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIMES.
43. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE APPROVED DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24 C.C.R., A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK.
44. CHANGES TO APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CHANGE ORDER APPROVED BY THE DIVISION OF THE STATE ARCHITECT AS REQUIRED BY SECTION 4-338, PART 1, T24 C.C.R.
45. A DSA CERTIFIED INSPECTOR WITH CLASS 3 SHALL BE EMPLOYED BY THE DISTRICT AND SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTION ARE DEFINED IN SECTION 4-342, PART 1, T24, C.C.R. THE PROJECT INSPECTOR IS TO BE CERTIFIED BY DSA TO INSPECT.
46. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE OWNER SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
47. ALL WORK (AS APPLICABLE) MUST MEET THE MANDATORY MEASURES OF THE 2022 CALIFORNIA GREEN BUILDING STANDARDS (CAL GREEN) CODE (TITLE 24, PART 11).
48. THE SEISMIC ANCHORAGE OF MECHANICAL AND ELECTRICAL EQUIPMENT SHALL CONFORM TO C.C.R. TITLE 24, 2022 CBC CHAPTER 16A. ANCHORAGE DETAILS SHALL BE SHOWN ON THE PLANS.
49. FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THIS CODE AND APPLICABLE PROVISIONS OF CFC CHAPTER 33.
50. FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY THE DSA.
51. 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).

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AND STANDARDS AS OF JANUARY 1, 2023

2022 CALIFORNIA BUILDING STANARDS CODE (CAL. CODE REGS., TITLE 24)
- PART 1 - CALIFORNIA ADMINISTRATIVE CODE (CAC)
- PART 2 - CALIFORNIA BUILDING CODE, VOLUMES 1 AND 2 (CBC)
- PART 3 - CALIFORNIA ELECTRICAL CODE (CEC)
- PART 4 - CALIFORNIA MECHANICAL CODE (CMC)
- PART 5 - CALIFORNIA PLUMBING CODE (CPC)
- PART 6 - CALIFORNIA ENERGY CODE (CEC)
- PART 7 - VACANT
- PART 8 - CALIFORNIA HISTORICAL BUILDING CODE (CHBC)
- PART 9 - CALIFORNIA FIRE CODE (CFC)
- PART 10 - CALIFORNIA EXISTING BUILDING CODE (CEBC)
- PART 11 - CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)
- PART 12 - CALIFORNIA REFERENCED STANDARDS CODE

CALIFORNIA CODE OF REGULATIONS TITLE 19, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

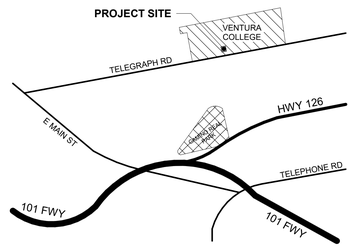
NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS:
- NFPA 10-21 STANDARD FOR PORTABLE FIRE EXTINGUISHERS
- NFPA 13-22 STANDARD FOR INSTALLATION OF SPRINKLER SYSTEMS
- NFPA 14-19 STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEM
- NFPA 24-19 INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES
- NFPA 25-13CA INSPECTION, TESTING, AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS
- NFPA 54-18 NATIONAL FUEL GAS CODE
- NFPA 72-22 NATIONAL FIRE ALARM AND SIGNALING CODE
- NFPA 80-19 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES
- NFPA 101-21 LIFE SAFETY CODE
- NFPA 105-19 STANDARD FOR SMOKE DOOR ASSEMBLIES AND OTHER OPENING PROTECTIVES
- NFPA 111-19 STANDARD ON STORED ELECTRICAL ENERGY EMERGENCY AND STANDBY POWER SYSTEMS
- NFPA 170-18 STANDARD FOR FIRE SAFETY AND EMERGENCY SYMBOLS
- NFPA 221-18 STANDARD FOR HIGH CHALLENGE FIRE WALLS, FIRE WALLS, AND FIRE BARRIER WALLS
- NFPA 241 STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATIONS, AND DEMOLITION OPERATIONS
- NFPA 252-17 STANDARD METHODS OF FIRE TESTS DOOR ASSEMBLIES
- NFPA 253-19 STANDARD METHOD OF TEST FOR CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS USING A RADIANT HEAT ENERGY SOURCE
- NFPA 257-17 STANDARD FOR FIRE TEST FOR WINDOW AND GLASS BLOCK ASSEMBLIES

REFERENCE 2022 CBC CHAPTER 35 AND 2022 CFC CHAPTER 80 FOR NFPA STANDARDS AND CA AMENDMENTS.

CAMPUS BUILDING LEGEND

	BUILDING NAME
ADM	ADMINISTRATION
AEC	ATHLETIC EVENT CENTER
AEP	AUTO EDUCATION PROGRAM
ASC	APPLIED SCIENCES CENTER
BCS	BOOKSTORE AND CAMPUS SERVICES
C	SMALL GYM
CAPS	CAPS MEDIA
CDC	CHILD DEVELOPMENT CENTER
CRC / SHC	CREATIVE RESOURCE CENTER / STUDENT HEALTH CENTER
CSC / VRC	CAMPUS STUDENT CENTER / VETERANS RESOURCE CENTER
DRC	DAY ROAD CENTER
ECT	ENVIRONMENTAL/CONSTRUCTION TECHNOLOGY
ELC	ENGLISH LEARNING CENTER/TESTING CENTER
EOPS	EXTENDED OPPORTUNITIES PROGRAMS & SERVICES
GH	GUTHRIE HALL
HSC	HEALTH SCIENCES CENTER
LRC	LIBRARY & LEARNING RESOURCE CENTER
M&O	MAINTENANCE & OPERATIONS
MAC	MEDIA ARTS CENTER
MC	MULTIDISCIPLINARY CENTER
NMG / SAB	NEW MEDIA GALLERY / STUDIO ARTS BUILDING
PAC	PERFORMING ARTS CENTER
S&R	SHIPPING AND RECEIVING WAREHOUSE
SCI	SCIENCES AND MATHEMATICS COMPLEX
SSC	STUDENT SERVICES CENTER
TR	TRAILERS
VCPD	VENTURA COLLEGE POLICE
WAM	WELDING, AUTO & MANUFACTURING
WEC	WRIGHT EVENT CENTER

VICINITY MAP



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CONSULTING ENGINEER

VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003

TITLE SHEET

NO.	REVISION	DATE
1		
2		
3		
4		
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6		

PROJECT MANAGER: MH
DRAWN BY: GK/CCS/DD/JM/SL
CHECKED BY: DS
DATE: 06/20/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: G-001

100% CD

8/1/2025 6:50:40 AM
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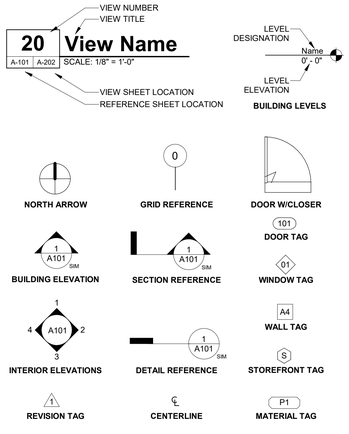
ABBREVIATIONS

A/C	AIR CONDITIONING
ABV	ABOVE
ACOUS	ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISH FLOOR
AL	ALUMINUM
ALT	ALTERNATE
ARCH	ARCHITECT(URAL)
BD	BOARD
BDRM	BEDROOM
BET	BETWEEN
BIT	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BLW	BELOW
BM	BEAM
BOT	BOTTOM
BUR	BUILT UP ROOF
CB	CATCH BASIN
CBC	CALIFORNIA BUILDING CODE
CEM	CEMENT
CFM	CUBIC FEET PER MINUTE
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CPT	CARPET
CT	CERAMIC TILE
CTR	CENTER
DBL	DOUBLE
DF	DRINKING FOUNTAIN
DIA	DIAMETER, DIAPHRAGM
DIM	DIMENSION
DN	DOWN
DR	DOOR
DS	DOWN SPOUT
DTL	DETAIL
DW	DISHWASHER
DWG	DRAWING
(E)	EXISTING
E	EAST
EA	EACH
EJ	EXPANSION JOINT
EL, ELEV	ELEVATION
ELEC	ELECTRIC
ENCL	ENCLOSURE
EQ	EQUAL
EQUIP	EQUIPMENT
EXH	EXHAUST
EXP	EXPANSION
EXT	EXTERIOR
FACP	FIRE ALARM CONTROL PANEL
FAU	FORCED AIR UNIT
FAWP	FLUID APPLIED WATERPROOFING
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN	FINISH
FIXT	FIXTURE
FLR	FLOOR
FLUOR	FLOURESCENT
FND	FOUNDATION
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FRP	FIBERGLASS REINFORCED PANELS
FT	FOOT OR FEET
FTG	FOOTING
GA	GAUGE, GAGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GWB	GYPSUM BOARD
GYP	GYPSUM
HB	HOSE BIBB
HC	HOLLOW CORE
HDWD	HARDWOOD
HDWR	HARDWARE
HGT	HEIGHT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HVAC	HEATING, VENTILATION, A/C
ID	INSIDE DIAMETER
IIC	IMPACT INSULATION CLASS
IN	INCH
INCAND	INCANDESCENT
INSUL	INSULATION, INSULATED
INT	INTERIOR
JC	JANITORS CLOSET
JT	JOINT
LAM	LAMINATE
LAV	LAVATORY
LBS	POUNDS
LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
LF	LINEAR FEET
LIN	LINEN CLOSET
LINO	LINOLEUM
LT(G)	LIGHT(ING)
LVL	LAMINATED VENEER LUMBER
LVT	LUXURY VINYL TILE
LW	LIGHTWEIGHT
MAX	MAXIMUM
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MEMB	MEMBRANE
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O.P.	OVERFLOW PIPE
OC	ON CENTER
OD	OVERFLOW DRAIN
OFF	OFFICE
OH	OPPOSITE HAND
OPG	OPENING
OPP	OPPOSITE
(P)	PROPOSED
PERM	PERIMETER
PERP	PERPENDICULAR
PG	PAINT GRADE
PL	PLATE, PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PP	POWER POLE
PR	PAIR
PRTN	PARTITION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	PRESSURE TREATED
PTD	PAINTED
PV	PHOTO VOLTAIC
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QTY	QUANTITY
R	RADIUS, RISER
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFRIGERATOR
REINF	REINFORCED
REQD	REQUIRED
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
RTU	ROOF TOP UNIT (MECH)
S	SOUTH
SAFB	SOUND ATTENUATION FIBER BATT
SAWP	SELF ADHEREING WATERPROOFING
SC	SCUPPER/SOLID CORE
SCHED	SCHEDULE
SEAL	SEALANT
SECT	SECTION
SF	SQUARE FOOT
SHT	SHEET
SHTHG	SHEATHING
SIM	SIMILAR
SM	SHEET METAL
SPEC	SPECIFICATION
SQ	SQURE
SS	SOLID SURFACE
SSTL	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUPSPENDED
SV	SHEET VINYL
SYM	SYMMMETRICAL
T	TREAD
T&G	TONGUE & GROOVE
TEL	TELEPHONE
TEMP	TEMPERED
TER	TERRAZZO
THK	THICK
THR	THRESHOLD
TJI	TRUSS JOIST I-JOIST
TO	TOP OF
TOS	TOP OF SLAB
TOW	TOP OF WALL
TRANS	TRANSFORMER
TV	TELEVISION
TYP	TYPICAL
UFAS	UNIFORM FEDERAL ACCESSIBILITY STANDARDS
UG	UNDERGROUND
UNFIN	UNFINISHED
UNO	ULNESS NOTED OTHERWISE
UV	UTRAVIOLET
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VTR	VENT TERMINATION PIPE
VWC	VINYL WALL COVERING
W	WEST
W/	WITH
W/D	WASHER DRYER
W/O	WITHOUT
WC	WATERCLOSET
WD	WOOD
WDW	WINDOW
WH	WATER HEATER
WI	WROUGHT IRON
WIN	WINDOW
WP	WATERPROOF(ING)
WR	WEATHER RESISTIVE
WRB	WATER RESISTIVE BARRIER
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

SYMBOLS



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SYMBOLS AND ABBREVIATIONS

NO.	REVISION	DATE
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PROJECT MANAGER: MH
DRAWN BY: GK/CCS/DD/JM/SL | CHECKED BY: DS
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PROJECT NUMBER: 3425-01-ED24
SHEET: G-002

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SAWN LUMBER

1. FRAMING SHALL MEET THE FOLLOWING MINIMUM STANDARD EXCEPT WHERE OTHERWISE NOTED:

SAWN LUMBER PROPERTIES				
USE	SIZE	SPECIES	GRADE	REFERENCE
MUDSILLS	2X4	D.F.	STANDARD OR BETTER PRESSURE TREATED	2022 CBC 2303.1.9
	2X6 AND LARGER	D.F.	NO. 2 OR BETTER PRESSURE TREATED	
	2X	D.F.	FOUNDATION GRADE	
HORIZONTAL FRAMING LUMBER				
ROOF JOISTS AND RAFTERS	2X	D.F.	NO. 2	WCLIB & WWPA
FLOOR JOISTS	2X	D.F.	NO. 2	
HEADERS AND BEAMS	4X	D.F.	NO. 2	
ANY OTHER HORIZONTAL	4X4 AND SMALLER	D.F.	NO. 2	
	6X6 AND LARGER	D.F.	NO. 1	
VERTICAL FRAMING LUMBER				
TOP PLATES	2X	D.F.	NO. 2	WCLIB & WWPA
STUDS	2X4 & 3X4	D.F.	STUD	
	2X6 & 2X8	D.F.	NO. 2	
POSTS	4X4 & 4X6 POSTS	D.F.	NO. 2	
	6X6 & LARGER POSTS	D.F.	NO. 1	
ALL OTHER FRAMING LUMBER				
ALL OTHER FRAMING LUMBER, UNO	ALL SIZES	D.F.	STANDARD & BETTER	WCLIB & WWPA

2. FLOOR JOISTS SHALL BE GRADE STAMPED “S-DRY” WHICH INDICATES A MOISTURE CONTENT NOT EXCEEDING 19 PERCENT.

3. ALL SOLE PLATES AND TOP PLATES SHALL BE GRADE STAMPED “KD” WHICH INDICATES KILN DRIED WITH A MOISTURE CONTENT NOT EXCEEDING 15 PERCENT AT BUILDINGS WITH 4 OR MORE STORIES.

4. STUD WALLS SHOWN ON PLANS ARE NONBEARING PARTITIONS WALLS, BEARING WALLS OR SHEAR WALLS BELOW THE FRAMING LEVEL, UNLESS NOTED OTHERWISE. STUDS SHALL BE SIZE AND SPACING AS NOTED IN THE DRAWINGS, SEE PLANS AND ARCHITECTURAL DRAWINGS. UNLESS OTHERWISE NOTED.

5. MINIMUM FRAMING NAILING SHALL CONFORM TO CBC TABLE 2304.10.2. ALL NAILS SHALL BE COMMON WIRE NAILS. PREDRILL NAIL HOLES TO 70% OF NAIL SHANK DIAMETER WHERE NAILING TENDS TO SPILT WOOD.

6. UNLESS OTHERWISE NOTED, ALL WOOD SILL PLATES UNDER BEARING, EXTERIOR, OR SHEAR WALLS IN CONTACT WITH CONCRETE OR MASONRY SHALL BE BOLTED TO THE CONCRETE OR MASONRY WITH 5/8” ∅ X 12” BOLTS W/ 0.229" X 3" X 3" PLATE WASHER (GALV) AT 4'-O"' O.C. BEGINNING AT 9" O.C. MAXIMUM FROM EACH END OF THE PLATES. THE BOLTS SHALL EXTEND A MINIMUM OF 7” INTO THE CONCRETE OR MASONRY. (POWDER DRIVEN PINS AT 1/3 OF THE BOLT SPACING OR 24” O.C. MAXIMUM MAY BE SUBSTITUTED FOR THE ANCHOR BOLTS AT INTERIOR NON-SHEAR WALLS ONLY).

7. PRESERVATIVE TREATMENT:
   A. WOOD MEMBERS SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH AITC 109-07, STANDARD FOR PRESERVATIVE TREATMENT, BASED ON THE SERVICE CONDITION PER THE USE CATEGORIES (UC#) SPECIFIED IN AWPA U1-20.
      a. UC1 - INTERIOR CONSTRUCTION, ABOVE GROUND, DRY - NO PRESERVATIVE TREATMENT REQUIRED.
      b. UC2 - INTERIOR CONSTRUCTION, ABOVE GROUND, WET - PRESERVATIVE TREATMENT REQUIRED IF THE HUMIDITY OR MOISTURE CONDENSATION IS 20% OR GREATER.
      c. UC3 - EXTERIOR CONSTRUCTION ABOVE GROUND - PRESERVATIVE TREATMENT REQUIRED.
   B. FOR ALL TREATED WOOD MEMBERS, ALL CUTS, HOLES OR INJURIES SUCH AS ABRASIONS OR HOLES FROM REMOVAL NAILS AND SPIKES WHICH MAY PENETRATE THE TREATED ZONE SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA M4-15. THE FOLLOWING FILED TREATMENTS SHALL BE USED:
      a. BORED HOLES: HOLES FOR CONNECTORS OR BOLTS MAY BE TREATED BY PUMPING COAL TAR ROOFING CEMENT MEETING ASTM D5643 INTO HOLES USING A GREASE GUN OR SIMILAR DEVICE.
      b. EXTERIOR: COPPER NAPHTHENATE.
      c. INTERIOR: INORGANIC BORON PRESERVATIVES LIMITED TO USE IN APPLICATIONS NOT IN CONTACT WITH GROUND AND CONTINUOUSLY PROTECTED FROM LIQUID WATER.
   C. ALL LUMBER IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED LUMBER WITH AWPA TREATMENT C2 USING EITHER ALKALINE QUAT (ACQ TYPE B AND D), COPPER AZOLE (CBA-A, CA-B), OR SODIUM BORATES (SBX). ANCHOR BOLTS, FASTENERS, AND METAL FRAMING CONNECTORS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED TO A RATING OF G-185 PER ASTM A653.

8. PROVIDE 2 STUDS UNDER ALL 4 X 10 AND LARGER BEAMS OR HEADERS AT SPANS 6 FEET OR LONGER, UNLESS OTHERWISE NOTED. WHERE POSTS OR MULTIPLE STUDS UNDER BEAMS OR HEADERS ARE CALLED FOR ON DRAWINGS THOSE POSTS OR MULTIPLE STUDS SHALL BE CARRIED TO THE FOUNDATION/PODIUM LEVEL.

9. PROVIDE THE FOLLOWING BLOCKING AS A MINIMUM, UNLESS SHOWN OTHERWISE: 2x FULL DEPTH SOLID BLOCKING BETWEEN JOISTS OVER SUPPORT. 2x FULL DEPTH SOLID BLOCKING BETWEEN JOISTS OVER AND BELOW PARTITION WALLS.

10. DOUBLE JOISTS UNDER PARTITIONS RUNNING PARALLEL TO JOISTS, UNLESS SUPPORTED BY A WALL BELOW OR SHOWN OTHERWISE. NAIL DOUBLED JOISTS WITH 16d AT 12” O.C., STAGGERED.

11. BRIDGING SHALL BE 2 X SOLID BLOCKS, INSTALLED AS FOLLOWS:
    ROOF JOISTS MORE THAN 10" DEPTH, 8'-O” O.C. MAXIMUM, NOT MORE THAN 8'-0' FROM SUPPORT.
    FLOOR JOISTS MORE THAN 10” DEPTH, 8'-O” O.C. MAXIMUM, NOT MORE THAN 8'-0' FROM SUPPORT.

12. JOIST HANGERS AND OTHER METAL FRAMING ACCESSORIES ARE REFERRED TO ON PLANS BY PARTICULAR TYPE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, STOCKTON, CALIFORNIA. ACCESSORIES OF OTHER MANUFACTURES WITH EQUIVALENT LOAD CARRYING CHARACTERISTICS MAY BE USED WITH APPROVAL BY SEOR.

13. FIRE STOPPING, BACKING FOR INTERIOR FINISHES, NONBEARING WALLS, AND OTHER NON-STRUCTURAL FRAMING ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS.

14. THE TOP OF NON-BEARING WALLS SHALL NOT BE IN CONTACT WITH JOISTS/TRUSSES/RAFTERS ABOVE. REFER TO THE REFERENCED DETAILS FOR REQUIRED GAP, 1/2" MINIMUM, UNLESS NOTED OTHERWISE IN DETAIL.

HARDWARE AND CONNECTIONS

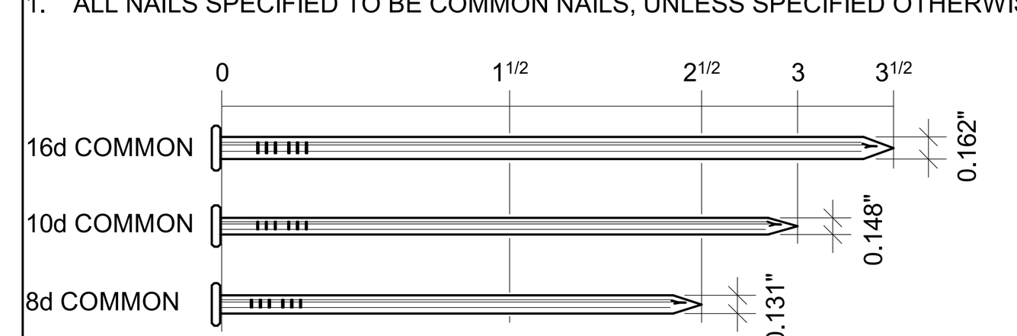
GENERAL:
USE ALL SPECIFIED FASTENERS AS SPECIFIED ON PLANS. IF NOT INDICATED ON PLANS PROVIDE FASTENERS PER MFR'S
APPROVED ICC-ESR REPORT OR PRODUCT LITERATURE

HOLDOWNS:
1. DO NOT OVER TIGHTEN NUTS ON TIE-DOWN ANCHOR RODS OR BOLTS. TIGHTEN ANCHOR ROD NUTS ONE-THIRD TO ONE HALF TURN BEYOND FINGER TIGHT
2. INSTALL ALL HOLDOWNS TIGHT TO END STUDS/POST, DO NOT USE FILLER BLOCKS. FOR MISALIGNED ANCHOR BOLTS, EXTEND THE ANCHOR ROD AT A 1:6 (HORIZ/VERT) USING A COUPLER WITH EQUIVALENT ANCHOR ROD AND INSTALL THE HOLDOWN HIGHER ON END STUD / POST
3. FOR HOLDOWNS THAT BOLT TO END POSTS, INSTALL THE HEAD OF THE BOLT TO THE BRACKET SIDE, AND ON THE SIDE OPPOSITE THE BRACKET, INSTALL A WASHER BETWEEN THE NUT AND THE STUD / POSTS

TIE DOWN & COLLECTOR STRAPS:
1. TIE DOWN AND COLLECTOR STRAPS SHALL BE INSTALLED STRAIGHT AND TRUE. DO NOT FOLD, BEND, KINK OR OTHERWISE ALTER CONNECTOR STRAPS
2. INSTALL TIE DOWN STRAPS DIRECT TO POST IN LIEU OF OVER SHEATHING. STRAPS MAY BE INSTALLED ON THE UNSHEATHED SIDE OF THE END STUDS / POSTS

FASTENER INFORMATION

1. ALL NAILS SPECIFIED TO BE COMMON NAILS, UNLESS SPECIFIED OTHERWISE.



COLD-FORMED STEEL (LIGHT GAGE METAL FRAMING)

1. ALL LIGHT GAGE METAL FRAMING CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 2211 OF THE CODE AND AISI S100-16 "SPECIFICATIONS FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" WITH S2-20 SUPPLEMENT.
2. MEMBER IDENTIFICATION SHALL BE AS SHOWN:
   A. MEMBER DEPTH:
      (EXAMPLE: 6" = 600/100 INCHES)
      ALL MEMBER DEPTHS ARE TAKEN IN 1/100 INCH INCREMENTS. FOR "T" SECTIONS, MEMBER DEPTH IS THE INSIDE TO INSIDE DIMENSION.
   B. STYLE:
      (EXAMPLE: STUD OR JOIST SECTION = "S")
      THE FOUR ALPHA CHARACTERS USED TO DESIGNATE THE TYPE OF SECTION ARE:
      · S = STUD OR JOIST SECTIONS
      · T = TRACK SECTIONS
      · U = CHANNEL SECTIONS
      · F = FURRING CHANNEL SECTIONS
   C. FLANGE WIDTH:
      (EXAMPLE: 1 5/8" = 1.625" = 162/100 INCHES)
      ALL MEMBER FLANGE WIDTH ARE TAKEN IN 1/100 INCH INCREMENTS.
   D. MATERIAL THICKNESS:
      (EXAMPLE: 0.054" = 54 MIL = 54/1,000 INCHES)
      MATERIAL THICKNESS IS THE MINIMUM BASE METAL THICKNESS IN MILS. MINIMUM BASE METAL THICKNESS REPRESENTS 95% OF THE DESIGN THICKNESS.

      (A) (B) (C) (D)
      600 S 162 - 54

3. ALL CALCULATED MEMBER PROPERTIES PER AISI SPECIFICATIONS ARE BASED ON THE FOLLOWING THICKNESSES:

MINIMUM THICKNESS	REFERENCE GAGE	DESIGN THICKNESS
33 MIL	20 GA - STRUCTURAL	0.0346"
43 MIL	18 GA	0.0451"
54 MIL	16 GA	0.0566"
68 MIL	14 GA	0.0713"
97 MIL	12 GA	0.1017"
118 MIL	10 GA	0.1242"

4. ALL LIGHT GAGE METAL FRAMING SHALL CONFORM WITH THE FOLLOWING:

GALVANIZED STUDS & TRACKS: 12 (97), 14 (68) OR 16 (54) GAGE (MILS)	ASTM A653 SQ, GR 50 (Fy = 50,000 PSI)
GALVANIZED STUDS & TRACKS: 18 (43), 20 (33) GAGE (MILS)	ASTM A653 SQ, GR 33 (Fy = 33,000 PSI)
GALVANIZED BACKING PLATES:	ASTM A653 SQ, GR 50 (Fy = 50,000 PSI)
GALVANIZED END CLOSURES, BRIDGING AND ACCESSORIES	ASTM A653 SQ, GR 33 (Fy = 33,000 PSI)

5. ALL LIGHT GAGE METAL FRAMING SHALL BE GALVANIZED.
6. DOUBLE VERTICAL STUDS SHALL BE STITCH WELDED TOGETHER ON BOTH FLANGES WITH 1/16" GROOVE WELDS x 1" LONG AT 12" ON CENTER, U.N.O. ON DRAWINGS.
7. TOP AND BOTTOM TRACK GAGE THICKNESS SHALL MATCH THE GAGE THICKNESS OF THE WALL STUDS, U.N.O.
8. MINIMUM STUD PROPERTIES SHALL BE PER AISI S100-16 WITH S2-20 SUPPLEMENT. THE FOLLOWING ARE ACCEPTABLE MANUFACTURERS:
   · CLARK DIETRICH (ICC ESR 4782 AND 4784P)
   · CEMCO (ICC ESR 3016)
   · APPROVED EQUAL
9. ALL SHEET METAL SCREWS SHALL PROTRUDE 1/4" MIN THROUGH METAL FRAMING.
10. THE CONTRACTOR IS PROHIBITED FROM USING TORCHES TO BURN HOLES IN TRACKS OR STUDS.
11. PUNCHED OPENINGS IN THE PARTITION WALL STUDS, EXTERIOR WALL STUDS AND ROOF/CEILING/FLOOR JOISTS NEED TO BE LOCATED A MINIMUM OF 1.5 TIMES THE DEPTH OF THE STUD FROM THE CONNECTION AT THE FLOOR, CONNECTION AT THE UNDERSIDE OF THE DECK, AND CONNECTIONS OF HEADERS AND SILLS TO JAMBS.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED BY AN APPROVED AND LICENSED FABRICATOR IN ACCORDANCE WITH AISC 360-16 AND CHAPTER 22 OF THE CODE.
2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION AS INDICATED BELOW (UNO):

STRUCTURAL STEEL MATERIALS	
SHAPE	ASTM/GRADE
W SHAPES, WT SHAPES	A992
PLATES (INCLUDING BASE PLATES)	A572 GR 50
ANGLES, CHANNELS	A36
HSS	A500 GRB
HIGH STRENGTH BOLTES (AS NOTED ON DRAWINGS)	A352/F1852, A490SC/F2280SC A325SC/F1852SC
ANCHOR RODS (UNLESS NOTED ON DRAWINGS)	F1554 GR36
COMMON/MACHINE BOLTS	A307 GR A

3. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STEEL FOR REVIEW AND APPROVAL BY THE AOR AND SEOR PRIOR TO FABRICATION.
4. BOLT HOLES USED IN STEEL SHALL BE 1/16" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED, EXCEPT AS NOTED.
5. ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE, MASONRY, SPRAY ON FIREPROOFING, OR ARE ENCASED BY BUILDING FINISH, SHALL BE LEFT UNPAINTED, EXCEPT AS REQUIRED FOR DESIGNATION OF PROTECTED ZONES.
6. PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED TO REINFORCED CONCRETE/MASONRY USING POST-INSTALLED ANCHORS, CONTRACTOR SHALL LOCATE ALL REINFORCEMENT AND CONFIRM CONSTRUCTABILTY OF ANCHOR LOCATIONS. SHOULD CONFLICTS WITH REINFORCEMENT OCCUR, CONTRACTOR SHALL COORDINATE AND SUBMIT ALTERNATE ANCHOR LOCATIONS AND REVISED STEEL FABRICATIONS TO SEOR FOR REVIEW AND APPROVAL. DO NOT CUT OR DAMAGE EXISTING REINFORCEMENT.
7. REFER TO ARCHITECTURAL DRAWINGS FOR STEEL FINISH. ALL STRUCTURAL STEEL AND MISCELLANEOUS METAL EXPOSED TO THE WEATHER SHALL BE HOT DIP GALVANIZED AFTER FABRICATION. PROTECT FIELD WELDS EXPOSED TO THE WEATHER VIA PRIME AND PAINT OR BRUSH / COLD GALVANIZING. REFER TO ARCH DRAWINGS FOR STEEL FINISH.
8. ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL CONFORM TO REQUIREMENTS
   OF AISC 303-22.
9. ALL WELDING IS TO BE DONE BY CERTIFIED WELDERS USING E70XX ELECTRODES (UNO). ALL WELDS SHALL BE IN CONFORMANCE WITH THE PROJECT SPECIFICATIONS AND THE CODE FOR WELDING IN BUILDING CONSTRUCTION (AWS D1.1-15) OF THE AMERICAN WELDING SOCIETY. SEE SPECIAL INSPECTIONS SECTION FOR WELDING INSPECTION REQUIREMENTS. ALL WELDING FOR ELEMENTS OF THE LATERAL FORCE RESISTING SYSTEM SHALL PER AWS D1.8-16.
10. THE CONTRACTOR SHALL SUBMIT ALL WELDING PROCEDURE SPECIFICATIONS FOR REVIEW AND APPROVAL BY SEOR. THE SUBMITTED WELDING PROCEDURES SHALL INCLUDE ONLY THOSE PROCEDURES RELEVANT TO THIS PROJECT. ALL WELDED JOINTS SHALL BE PREQUALIFIED PER AWS OR BE QUALIFIED BY TEST PER AWS. A PROCEDURE QUALIFICATION RECORD (PQR) SHALL BE INCLUDED WITH THE WPS IF THE WELDING PROCEDURE OR JOINT IS QUALIFIED BY TESTING. THE ELECTRODE MANUFACTURER AND PRODUCT/TRADE NAME SHALL BE IDENTIFIED IN THE WPS IN ADDITION TO THE AWS ELECTRODE CLASSIFICATION NAME. A COPY OF THE ELECTRODE MANUFACTURER'S TECHNICAL DATA SHEETS WITH THE RECOMMENDED WELDING PARAMETERS SHALL BE SUBMITTED WITH THE WPS.
11. 100 PERCENT ULTRASONIC TESTING IS REQUIRED FOR ALL COMPLETE JOINT PENETRATION GROOVE WELDS.
12. IF INTERMIXING OF WELD FILLER MATERIAL IS REQUIRED AT SPECIFIC WELDED JOINTS, AND IF ONE OF THE FILLER METALS IS FCAW-S, SUBMIT A WELDING PROCEDURE SPECIFICATION (WPS) AND QUALIFY BY TESTING.
13. DISCONTINUITIES IN WELDS CREATED BY ERRORS OR BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR ARC GOUGING AND FLAME CUTTING SHALL BE REPAIRED AS REQUIRED BY SEOR.

REINFORCING STEEL

1. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 19 OF THE CODE AND WITH THE PROVISIONS OF ACI 318-19, ASTM A706, GRADE 60 UNO. ASTM A615 GR 60 STEEL MAY BE SUBSTITUTED FOR ASTM A706 GR60 STEEL PER ACI 318-19 SECTION 20.2.2.5 PROVIDED THE FOLLOWING CONDITIONS ARE MET:
   A. THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI.
   B. THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRESS TO THE ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25.
   C. WHERE REINFORCEMENT COMPLYING WITH ASTM A615 IS TO BE WELDED, CHEMICAL TESTS SHALL BE PERFORMED TO DETERMINE WELDABILITY IN ACCORDANCE WITH SECTION 26.6.4 OF ACI 318-19.
2. BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
3. WELDED WIRE REINFORCEMENT (WWR), PLAIN OR DEFORMED, SHALL CONFORM TO ASTM A185. WELDED DEFORMED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A1064. ALL WWR FOR STAIR PANS AND ALL WWR FOR CONCRETE FILL ON METAL DECK TO BE PLAIN WWR. PROVIDE LAPS PER ACI 318-19 SECTION 25.5.3 OR 25.5.4 MINIMUM. WWR SHALL BE SUPPORTED ON APPROVED CHAIRS.
4. REINFORCING BAR LAP SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS. LAP ALL HORIZONTAL BARS AT CORNERS AND INTERSECTIONS. STAGGER ALL SPLICES UNLESS NOTED OTHERWISE ON PLANS.
   A. MINIMUM LAP SPLICE LENGTH FOR REINFORCING STEEL BARS IN CONCRETE SHALL BE PER ACI 318-19 SECTION 25.5.2 AND THE REINFORCING SCHEDULE ON THE DRAWINGS.
   B. MINIMUM LAP SPLICE LENGTH FOR REINFORCING STEEL BARS IN MASONRY SHALL BE PER TMS 042-16 SECTION 6.1.6.1.1 AND THE REINFORCING SCHEDULE ON THE DRAWINGS.
5. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE. ALL REINFORCING CONFORMING TO DIFFERING ASTM SPECIFICATIONS AND/OR OF DIFFERING GRADES SHALL BE CLEARLY MARKED TO DIFFERENTIATE THEM FROM OTHER REINFORCING STEEL IF CONCURRENTLY PRESENT ON SITE.
6. WHERE WELDING OF REINFORCING IS APPROVED BY THE STRUCTURAL ENGINEER, IT SHALL BE DONE BY AWS CERTIFIED WELDERS USING E80XX OR APPROVED ELECTRODES. WELDING PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF STRUCTURAL WELDING CODE- REINFORCING STEEL", AWS-D1.4-15. REINFORCING BARS TO BE WELDED SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706.
7. REINFORCING STEEL SHALL BE ACCURATELY PLACED, ADEQUATELY SUPPORTED AND SHALL BE SECURED AGAINST DISPLACEMENT, AND TIED BEFORE THE CONCRETE IS PLACED DURING CONSTRUCTION WITHIN PERMITTED TOLERANCES. ADEQUATE SUPPORTS ARE ALSO NECESSARY TO KEEP THE REINFORCING STEEL AT THE PROPER DISTANCE FROM THE FORMS. USE WIRE BAR SUPPORTS, PRECAST CONCRETE SUPPORTS, SPACERS, BOLSTERS, REINFORCEMENT OR OTHER MEANS OF SUPPORT PER THE "CRSI MANUAL OF STANDARD PRACTICE", LATEST EDITION.
8. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "CRSI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.
9. COMPLETE AND DETAILED REINFORCING PLACEMENT DRAWINGS SHALL BE PREPARED AND SUBMITTED TO THE ARCHITECT FOR APPROVAL BY THE SEOR PRIOR TO FABRICATION IN ACCORDANCE WITH THE SPECIFICATIONS AND APPLICABLE CODES. THESE DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO PLACING OF CONCRETE. THE REINFORCING PLACEMENT DRAWINGS SHALL INCLUDE ALL PRIMARY REINFOREMENT, LAP SPLICES, TIES, DOWELS, HEADED U-DOWELS, EMBED PLATES, ANCHOR BOLTS, ETC. AREAS OF CONGESTION SHALL BE DETAILED SUFFICIENTLY TO DEMONSTRATE THAT PLACEMENT OF REBAR MEETS SPACING REQUIREMENTS OF ACI 318-19.
10. MILL TEST REPORTS FOR GRADE 60 BARS SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD PRIOR TO PLACEMENT OF CONCRETE PER ACI 318-19 SECTION 26.13.2.3 OF THE CODE.
11. WHEN REQ'D, INSPECTION OF CONCRETE SHALL INCLUDE INSPECTION DURING INSTALLATION OF REINFORCING STEEL. INSPECTION SHALL BE SCHEDULED SO THAT PLACEMENT OF REINFORCING STEEL, CONDUIT, SLEEVES, AND EMBEDDED ITEMS MAY BE CORRECTED PRIOR TO PLACEMENT OF OVERLYING GRIDS OR REINFORCING STEEL.
12. CONCRETE PROTECTION FOR REINFORCEMENT

THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE (NON-PRESTRESSED):	MINIMUM COVER, IN.
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
B. CONCRETE EXPOSED TO EARTH OR WEATHER: NO.6 THROUGH NO.18 BAR NO.5 BAR, W31 OR D31 WIRE & SMALLER	 2 1 1/2"
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND SLABS, WALLS, JOISTS: NO.14 AND NO18 BARS NO. 11 BAR & SMALLER BEAMS, COLUMNS: PRIMARY REINFORCEMENT TIES, STIRRUPS, SPIRALS	 1 1/2" 3/4" 1 1/2"

13. MECHANICAL BAR SPLICE CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-19 SECTION 25.5.7 USE OF MECHANICAL CONNECTIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. SPLICES MUST BE TESTED AS INDICATED IN THE CONCRETE REINFORCEMENT SPECIFICATION. ACCEPTABLE PRODUCTS INCLUDE:

    LENTON STANDARD COUPLERS (IAPMO-ES 0129)
    LENTON FORM SAVERS, TYPE SA (IAPMO-ES 0129)
    LENTON WELDABLE HALF COUPLERS (IAPMO-ES 0129)
    LENTON LOCK COUPLERS PER (IAPMO-ES 0129)

    NOTE THAT REBAR ATTACHED TO PLATE USING LENTON WELDABLE HALF COUPLERS SHALL BE ASTM A706 PER IAPMO-ES 0129.

    ALL MECHANICAL BAR SPLICE CONNECTIONS IN SPECIAL STRUCTURAL WALLS, SPECIAL MOMENT FRAMES AND CONCRETE DIAPHRAGMS SHALL BE TYPE 2 CONFORMING TO THE REQUIREMENTS OF ACI 318-19 SECTION 18.2.7 & 18.12.7.4

EXISTING CONDITIONS

1. ALL INFORMATION SHOWN ON THE PLANS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE FROM PLANS SUPPLIED BY THE OWNER, BUT WITHOUT GUARANTEE OF ACCURACY.
2. WHERE ACTUAL CONDITIONS ARE NOT IN ACCORDANCE WITH THE INFORMATION PRESENTED, THE ARCHITECT AND/OR STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY. NO MODIFICATIONS OF THE PLANS FOR NEW CONSTRUCTION SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.

EXISTING UNDERGROUND UTILITIES

1. THE ARCHITECT AND ENGINEERS ARE NOT RESPONSIBLE FOR THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES WHETHER OR NOT SHOWN ON THE DRAWINGS. DRAWINGS, IF ANY, IS APPROXIMATE. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THE SITE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND/OR STRUCTURAL ENGINEER SHOULD ANY SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES WHICH MAY RESULT FROM HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES.
3. AN UNDERGROUND SERVICE ALERT INQUIRY IDENTIFICATION NUMBER MUST BE OBTAINED AT LEAST TWO WORKING DAYS BEFORE STARTING WORK WITH THIS PERMIT.
   A. FOR PROJECTS IN SOUTHERN CALIFORNIA TELEPHONE NO. 1-800-422-4133.
   B. FOR PROJECTS IN NORTHERN CALIFORNIA TELEPHONE NO. 1-800-227-2600.

DEMOLITION

1. ALL DEMOLITION SHALL BE CARRIED ON IN SUCH A WAY AS NOT TO DAMAGE EXISTING ELEMENTS, WHICH ARE TO REMAIN IN THE FINISHED STRUCTURE.
2. ALL ELEMENTS OF THE STRUCTURE, WHICH ARE TO REMAIN, AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDITIONAL COST. EXISTING ELEMENTS SHALL BE PROTECTED TO THE FULLEST EXTENT POSSIBLE, IN ORDER TO MITIGATE DAMAGE.
3. CONTRACTOR IS REPONSIBLE FOR REMOVAL AND REPLACEMENT OF ALL EXISTING ELEMENTS THAT ARE NECESSARY FOR THE INSTALLATION OF ALL NEW WORK.
4. WHERE EXISTING PARTITION WALLS ARE TO BE DEMOLISHED, CONTRACTOR SHALL VERIFY WALLS ARE NON-BEARING PRIOR TO DEMOLITION. IF WALLS ARE FOUND TO BE BEARING, CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY

CONCRETE

1. ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH CHAPTER 19 OF THE CODE AND WITH THE PROVISIONS OF ACI 318-19.
2. CONCRETE MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS:

MATERIAL	ASTM STANDARD
PORTLAND CEMENT (TYPE II)[A]	C150
CONCRETE AGGREGATES (HARDROCK)	C33
WATER[B]	C1602
COAL FLY ASH OR POZOLLAN (CLASS F)	C618
NATURAL OR MANUFACTURED SAND	C33
SLAG	C989

   A. FOR SOILS WITH HIGH CONCENTRATIONS OF SULFATES (EXPOSURES S2 OR S3 PER ACI 318-19 TABLE 19.3.2.1) PORTLAND CEMENT SHALL BE TYPE V. VERIFY WITH PROJECT GEOTECHNICAL REPORT.
   B. WATER SHOULD ONLY BE ADDED AT THE BATCH PLANT. IN NO CASE SHALL THE DESIGN WATER/ CEMENT RATIO BE EXCEEDED.
3. CONCRETE MIXES SHALL BE PROPORTIONED BASED ON SECTION 26.4.3 OF ACI 318-19, WHICH REFERENCES ACI 301-20 ARTICLE 4.2.3. MIX DESIGNS SHALL INCLUDE DOCUMENTATION OF MIX AVERAGE COMPRESSIVE STRENGTH THROUGH FIELD TEST DATA OR TRAIL MIXTURES IN ACCORDANCE WITH ACI 301-20 ARTICLE 4.2.3.4. SCHEDULE OF STRUCTURAL CONCRETE STRENGTHS AND LOCATIONS (UNO):

LOCATION IN STRUCTURE	MINIMUM STRENGTH (PSI)	DENSITY (PCF)	MAX SLUMP (IN+/-1)	MAX WATER/CEMENT RATIO	SLAG/FLY ASH[A] (MAX)
CONCRETE FOUNDATIONS, GRAE BEAMS, TIE BEAMS	3,000	150	4	0.5	0.25
CONCRETE BASEMENT WALLS/STEM WALLS	3,000	150	4	0.5	0.25
CONCRETE SLAB ON GRADE	3,000	150	4	0.5	0.25
STAIRS ON GRADE, CURBS AND OTHER NON-CSTRUCTURAL CONCRETE	3,000	150	4	0.5	0.25

   A. AS MEASURED BY CEMENTITIOUS WEIGHT
4. READY MIXED CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C94 OR C685.
5. DEPOSITING AND CONVEYING OF CONCRETE SHALL CONFORM TO SECTION 26.5 OF ACI 318-19 AND PROJECT SPECIFICATIONS.
6. ALL CONCRETE SURFACES AGAINST WHICH NEW CONCRETE IS TO BE PLACED SHALL BE CLEANED AND ROUGHENED TO 1/4" AMPLITUDE.
7. ALL REINFORCING BARS, ANCHOR BOLT HOLDOWNS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED AND TIED IN POSITION PRIOR TO PLACING CONCRETE. IN NO CASE SHALL ANY REINFORCING BARS, ANCHOR BOLTS, HOLDOWNS OR OTHER CONCRETE INSERTS BE "WET SET" OR "WET-STABBED" INTO CONCRETE DURING THE POUR.
8. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED WITHOUT SEOR APPROVAL. NOTIFY THE SEOR IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS. SEE THE DRAWINGS FOR ADDITIONAL RESTRICTIONS ON THE PLACEMENT OF OPENINGS IN SLABS AND WALLS.
9. PIPES EMBEDDED IN CONCRETE:
   A. CONCRETE
      a. PIPES LARGER THAN 1-1/2" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY SEOR.
      b. NO CONDUITS SHALL BE PLACED IN CONCRETE FILL OVER METAL DECK.
      c. PIPES SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS.
      d. DO NOT STACK CONDUITS, SPACE EMBEDDED PIPES AND CONDUITS AT A MINIMUM OF 3 DIAMETERS CLEAR FROM OTHER EMBEDDED PIPES/CONDUITS AND REBAR.

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CONSULTING ENGINEER

VENTURA COLLEGE ADMIN BLDG ALTERATION

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GENERAL NOTES

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REQUIRED VERIFICATION AND INSPECTIONS

CONCRETE CONSTRUCTION *CODE TABLE 1705.3*				
SPECIAL INSPECTION OR TEST	CONTINUOUS	PERIODIC	REFERENCE STANDARD	CBC STANDARD
1. INSPECTION REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	---	X	ACI 318: CH 20, 25.2, 25.3, 26.6.1-26.6.3	---
2. REINFORCEMENT BAR WELDING: A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706 B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16" AND C. INSPECT ALL OTHER WELDS	 --- --- X	 X X ---	AWS D1.4 ACI 318:26.6.4	---
3. INSPECT ANCHORS CASY IN CONCRETE	---	X	ACI 318: 26.7	---
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMEBERS[b] A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a	 X ---	 --- X	 ACI 318: 26.7.1 ACI 318: 26.7.1	 --- ---
5. VERIFY USE OF REQUIRED MIX DESIGN	---	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	---	ASTM C 172 ASTM C 31 ACI 318: 26.5, 26.12	---
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	---	ACI 318: 26.5	---
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	---	X	ACI 318: 26.5.3-26.5.5	---
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	---	X	ACI 318: 26.11.2	---
12. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	---	X	ACI 318: 26.11.1.2(b)	---
SPECIAL INSPECTIONS LISTED FOR CONCRETE ALSO APPLY TO GROUTING OPERATIONS.				

a. WHERE APPLICABLE, SEE SECTION 1705.13.

b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

REQUIRED VERIFICATION AND INSPECTIONS

STEEL *WELDING*			
INSPECTION TASKS PRIOR TO WELDING *(AISC 360-16 N.5.4-1)*	QC	QA	AWS 2015 D1.1 REFERENCE
1. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P	P	6.3
2. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P	6.2
3. WPS AVAILABLE	P	P	-
4. MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O	6.2
5. WELDER IDENTIFICATION SYSTEM	O	O	6.4
6. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) - JOINT PREPARATION - DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) - CLEANLINESS (CONDITION OF STEEL SURFACES) - TACKING (TACK WELD QUALITY AND LOCATION) - BACKING TYPE AND FIT (IF APPLICABLE)	O	O	6.5.2 5.22 5.15 5.18 5.10, 5.22.1.1
7. FIT-UP OF GROOVE WELDS OF HSS T-, Y-, AND K-JOINTS WITHOUT BACKING (INCLUDING GEOMETRY) - JOINT PREPARATION - DIMENSIONS (ALIGNMENT, ROOF OPENING, ROOF FACE, BEVEL) - CLEANLINESS (CONDITION OF STEEL SURFACES) - TACKING (TACK WELD QUALITY AND LOCATION)	P	O	- - - -
8. CONFIGURATION AND FINISH OF ACCESS HOLES	O	O	
9. FIT-UP OF FILLET WELDS - DIMENSIONS (ALIGNMENT, GAPS AT ROOT) - CLEANLINESS (CONDITION OF STEEL SURFACES) - TACKING (TACK WELD QUALITY AND LOCATION)	O	O	5.22.1 5.15 5.18
10. CHECK WELDING EQUIPMENT	O	---	6.2, 5.11
INSPECTION TASKS DURING WELDING *(AISC 360-16 N.5.4-2)*			
1. CONTROL AND HANDLING OF WELDING CONSUMABLES - PACKAGING - EXPOSURE CONTROL	O	O	6.2 5.3.1 5.3.2 (SMAW) 5.3.3 (SAW)
2. NO WELDING OVER CRACKED TACK WELDS	O	O	5.18
3. ENVIRONMENTAL CONDITIONS - WIND SPEED WITHIN LIMITS - PRECIPITATION AND TEMPERATURE	O	O	5.12.1 5.12.2
4. WPS FOLLOWED - SETTINGS ON WELDING EQUIPMENT - TRAVEL SPEED - SELECTED WELDING MATERIALS - SHIELDING GAS TYPE/FLOW RATE - PREHEAT APPLIED - INTERPASS TEMPERATURE MAINTAINED (MIN/MAX) - PROPER POSITIONS (F, V, H, OH)	O	O	6.3.3, 6.5.2, 5.5, 5.21 5.6, 5.7
5. WELDING TECHNIQUES - INTERPASS AND FINAL CLEANING - EACH PASS WITHIN PROFILE LIMITATIONS - EACH PASS MEETS QUALITY REQUIREMENTS	O	O	6.5.2, 6.5.3, 5.24 5.30.1
6. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P	-
INSPECTION TASKS AFTER WELDING *(AISC 360-16 N.5.4-3)*			
1. WELDS CLEANED	O	O	5.30.1
2. SIZE, LENGTH AND LOCATION OF WELDS	P	P	6.5.1
3. WELDS MEET VISUAL ACCEPATANCE CRITERIA - CRACK PROHIBITION - WELD/BASE-METAL FUSION - CRATER CROSS SECTION - WELD PROFILES - WELD SIZE - UNDERCUT - POROSITY	P	P	6.5.3 TABLE 6.1(1) TABLE 6.1(2) TABLE 6.1(3) TABLE 6.1(4), 5.24 TABLE 6.1(6) TABLE 6.1(7) TABLE 6.1(8)
4. ARC STRIKES	P	P	5.29
5. k-AREA	P	P	AISC 360-16 CA3.1c & J10.8
6. WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES[b]	P	P	-
7. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P	5.10, 5.31
8. REPAIR ACTIVITIES	P	P	6.5.3, 5.26
9. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P	6.5.4, 6.5.5
10. NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	O	O	-
STEEL *BOLTING*			
INSPECTION TASKS PRIOR TO BOLTING *(AISC 360-16 N.5.6-1)*	QC	QA	2014 RCSC SPEC. REFERENCE
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P	2.1, 9.1
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O	FIGURE C-2.1, 9.1 (SEE ASTM STANDARDS)
3. CORRECT FASTENERS SELECTED FOR THE JOINT DETAILS (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXLUDED FROM SHEAR PLANE)	O	O	2.3.2, 2.7.2, 9.1
4. CORRECT BOLTING DETAILS SELECTED FOR THE JOINT DETAIL.	O	O	4, 8
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS.	O	O	3, 9.1, 9.3
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED.	P	O	7, 9.2
7. PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS	O	O	2.2, 8, 9.1
INSPECTION TASKS DURING BOLTING *(AISC 360-16 N.5.6-2)*			
1. FASTENER ASSEMBLIES, PLACED IN ALL HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED	O	O	8.1, 9.1
2. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRE-TENSIONING OPERATION	O	O	8.1, 9.1
3. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O	8.2, 9.2
4. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES.	O	O	8.2, 9.2
INSPECTION TASKS AFTER BOLTING *(AISC 360-16 N.5.6-3)*			
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P	-

STATEMENT OF SPECIAL INSPECTIONS

1. THIS STATEMENT OF SPECIAL INSPECTIONS HAS BEEN PREPARED PURSUANT TO SECTION 1704.3 OF THE CODE . THIS SECTION DETAILS BOTH REQUIRED SPECIAL INSPECTIONS AND TESTS INCLUDING TESTING PER SECTION 1705 OF THE CODE. THE FOLLOWING SHALL BE OBSERVED DURING THEIR IMPLEMENTATION:

   A. GENERAL:
      a. STRUCTURAL VERIFICATIONS, INSPECTIONS AND TESTS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE CODE AND/OR THE APPLICABLE REFERENCE STANDARD.

   B. OWNER REQUIREMENTS:
      a. THE OWNER OR OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN SECTION 1705 OF THE CODE AND IN THIS STATEMENT OF INSPECTIONS.

   C. SPECIAL INSPECTOR QUALIFICATIONS:
      a. THE SPECIAL INSPECTIONS SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING HIS OR HER COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING. THE EXPERIENCE OR TRAINING SHALL BE CONSIDERED RELEVANT WHEN THE DOCUMENTED EXPERIENCE OR TRAINING IS RELATED IN COMPLEXITY TO THE SAME TYPE OF SPECIAL INSPECTION ACTIVITIES FOR PROJECTS OF SIMILAR COMPLEXITY AND MATERIAL QUANTITIES.

   D. CONTRACTOR REQUIREMENTS:
      a. SPECIAL INSPECTION IS IN ADDITION TO THE CONTRACTOR'S QUALITY CONTROL INSPECTIONS AND TESTING. THE CONTRACTOR'S QUALITY CONTROL INSPECTIONS AND TESTING SHALL OCCUR PRIOR TO SPECIAL INSPECTION AND REPORTS SHALL BE AVAILABLE TO THE SPECIAL INSPECTOR.

      b. THE CONTRACTOR SHALL ENSURE THAT THE WORK FOR WHICH SPECIAL INSPECTION IS REQUIRED REMAINS ACCESSIBLE AND EXPOSED FOR SPECIAL INSPECTION PURPOSES UNTIL COMPLETION OF THE REQUIRED SPECIAL INSPECTION.

      c. ANY CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE MAIN WIND OR SEISMIC FORCE RESISTING SYSTEM SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL INSPECTION REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

   E. SPECIAL INSPECTOR REPORT REQUIREMENTS:
      a. THE SPECIAL INSPECTOR SHALL KEEP RECORD OF INSPECTIONS

      b. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.

      c. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS.

      d. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.

      e. IF NOT CORRECTED DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD PRIOR TO THE COMPLETION OF THAT PHASE OF WORK.

      f. A FINAL REPORT DOCUMENTING SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED SHALL BE SUBMITTED TO THE BUILDING OFFICIAL.

SUBMITTALS

1. THE FOLLOWING SUBMITTALS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER:

   A. STEEL INCLUDING MISC. METALS
      a. SHOP DRAWINGS FOR FABRICATION AND ERECTION
      b. WELD PROCEDURES (INCLUDING PREQUALIFICATION RECORDS). TO BE SUBMITTED TO PROJECT CWI
      c. SHOP DRAWINGS FOR FABRICATION AND PLACEMENT

   B. REINFORCING STEEL

   C. CONCRETE MIX DESIGNS FOR ALL CONCRETE STRENGTHS 3,000 PSI AND ABOVE
   D. MASONRY INCLUDING BLOCKS, GROUT AND MORTAR

   E. ROUGH CARPENTRY: WOOD PRODUCT DATA AND MANUFACTURER'S CERTIFICATES

2. BEFORE SUBMITTING EACH SUBMITTAL, (INCLUDES SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS), THE CONTRACTOR SHALL HAVE:

   A. REVIEWED AND COORDINATED EACH SUBMITTAL WITH OTHER SUBMITTALS AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS. THIS INCLUDES THE CONTRACTOR REVIEWING AND VERIFYING THAT THE SUBMITTAL IS COORDINATED AMONG ALL CONSTRUCTION TRADES:

   B. DETERMINED AND VERIFIED ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS , SPECIFIED PERFORMANCE AND DESIGN CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION

   C. DETERMINED AND VERIFIED ALL INFORMATION RELATIVE TO THE CONTRACTOR'S RESPONSIBILITIES FOR MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS.

   D. REVIEWED AND VERIFIED THAT THE ARCHITECT'S OR ENGINEER'S COMMENTS FROM PREVIOUS SUBMITTAL ROUNDS HAVE BEEN ADDRESSED.

3. EACH SUBMITTAL SHALL BEAR A STAMP OR SPECIFIC WRITTEN CERTIFICATION THAT THE CONTRACTOR HAS SATISFIED THEIR OBLIGATIONS UNDER THE CONTRACT DOCUMENTS WITH RESPECT TO THE CONTRACTOR'S REVIEW AND APPROVAL OF THAT SUBMITTAL.

4. THE CONTRACTOR'S OBLIGATION TO PERFORM AND COMPLETE THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS SHALL BE ABSOLUTE:
   a. REVIEW AND APPROVAL OF SHOP DRAWINGS BY THE ARCHITECT AND/OR ENGINEER DOES NOT CONSTITUTE APPROVAL OF A CHANGE REQUEST, SUBSTITUTION OR MODIFICATION TO THE CONTRACT DRAWINGS.

   b. THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED OF CHANGE REQUESTS, SUBSTITUTIONS OR MODIFICATIONS TO THE CONTRACT DRAWINGS IN WRITING BEFORE AND SEPARATE FROM THE SUBMITTAL PRIOR TO SUBMISSION.

5. FABRICATION FOR ITEMS IN THESE DOCUMENTS SHALL NOT COMMENCE UNTIL THE SUBMITTAL HAS BEEN REVIEWED AND APPROVED BY THE ENGINEER.

6. THE CONTRACTOR SHALL ALLOW SUFFICIENT TIME FOR THE ENGINEER OF RECORD TO THOROUGHLY REVIEW SUBMITTAL PACKAGES (10 WORKING DAYS, MINIMUM).

TESTING CRITERIA FOR POST-INSTALLED ANCHORS IN CONCRETE / MASONRY

1. CONDUCT TESTING OF POST- INSTALLED ANCHORS PER SECTION 1901.3.4 OF THE CODE.

2. WHERE THE MANUFACTURER'S INSTALLATION INSTRUCTIONS OR APPLICABLE ICC-ES EVALUATION SERVICES REPORT CALL FOR THE APPLICATION OF AN INSTALLATION TORQUE, THE SPECIFIED TORQUE SHALL BE APPLIED WITH A CALIBRATED TORQUE WRENCH. THE SPECIFIED INSTALLATION TORQUE SHALL NOT BE EXCEEDED.

3. THE SPECIAL INSPECTOR SHALL BE ON THE JOBSITE DURING ANCHOR INSTALLATIONS AS REQUIRED PER CHAPTER 17 OF THE CODE, UNLESS OTHERWISE NOTED IN ICC-ES ESR, TO VERIFY ANCHOR, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, HOLE DIMENSIONS, ANCHOR SPACING, EDGE DISTANCES, SLAB THICKNESS, ANCHOR EMBEDMENT, AND INSTALLATION TORQUE.

4. TEST LOAD: REQUIRED TEST LOADS SHALL BE DETERMINED BY ONE OF THE FOLLOWING METHODS:
   A. TWICE THE MAXIMUM ALLOWABLE TENSION LOAD OR ONE AND A QUARTER (1 1/4) TIMES THE MAXIMUM DESIGN STRENGTH PROVIDED BY THE ICC REPORT OR DETERMINED PER ACI 318. THE TENSION TEST LOAD NEED NOT TO EXCEED 80 PERCENT OF THE NOMINAL YIELD STRENGTH OF THE ANCHOR (0.8 As Fy). SEE STRUCTURAL DETAILS FOR DESIGN-BASED TENSION TEST LOADS FOR ADHESIVE ANCHORS.
   B. THE MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE AS APPROVED BY THE ICC REPORT.

5. TENSION OR TORQUE TESTING OF POST-INSTALLED ANCHORS SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE IOR AND ENFORCEMENT AGENCY.

6. THE SPECIAL INSPECTOR SHALL SELECT ANCHORS FOR TESTING AT RANDOM.

7. TEST FREQUENCY:

APPLICATION	QUANTITY
STRUCTURAL	100% OF BOLTS
NON-STRUCTURAL (SUCH AS EQUIPMENT ANCHORAGE)	50%; ALTERNATE BOLTS IN A GROUP (TEST AT LEAST HALF OF THE ANCHORS IN GROUP)
SILL PLATE BOLTING	10% OF BOLTS

   EXCEPTIONS:

   A. UNDERCUT ANCHORS THAT ALLOW VISUAL CONFIRMATION OF FULL SET SHALL NOT REQUIRE TESTING.

   B. WHERE THE FACTORED DESIGN TENSION ON ANCHORS IS LESS THAN 100 LBS AND THOSE ANCHORS ARE CLEARLY NOTED ON THE APPROVED CONSTRUCTION DOCUMENTS.

   C. WHERE ADHESIVE ANCHOR SYSTEMS ARE USED TO INSTALL REINFORCING DOWEL BARS IN HARDENED CONCRETE, ONLY 25 PERCENT OF THE DOWELS SHALL BE TESTED IF ALL OF THE FOLLOWING CONDITIONS ARE MET:

      · THE DOWELS ARE USED EXCLUSIVELY TO TRANSMIT SHEAR FORCES ACROSS JOINTS BETWEEN EXISTING AND NEW CONCRETE.

      · THE NUMBER OF DOWELS IN ANY ONE MEMBER EQUALS OR EXCEEDS 12.

      · THE DOWELS ARE UNIFORMLY DISTRIBUTED ACROSS SEISMIC FORCE RESISTING MEMBERS (SUCH AS SHEAR WALLS, COLLECTORS, AND DIAPHRAGMS).

   D. TESTING OF SHEAR DOWELS ACROSS COLD JOINTS IN SLAB ON GRADE, WHERE THE SLAB IS NOT PART OF THE LATERAL FORCE-RESISTING SYSTEM SHALL NOT BE REQUIRED.

   E. TESTING IS NOT REQUIRED FOR POWER ACTUATED FASTENERS USED TO ATTACH TRACKS OF INTERIOR NON-SHEAR WALL PARTITIONS FOR SHEAR ONLY, WHERE THERE ARE AT LEAST THREE FASTENERS PER SEGMENT OF TRACK.

8. TEST METHODS: TEST LOADS MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY TRANSMIT A MEASURABLE TENSION LOAD TO THE ANCHOR. ACCEPTABLE METHODS INCLUDE:

   A. USE OF HYDRAULIC JACK, WHEREBY EITHER UNCONFINED OR CONFINED TESTING SHALL BE ACCEPTABLE;

   B. USE OF CALIBRATED SPRING LOADED DEVICES; OR

   C. USE OF A CALIBRATED TORQUE WRENCH FOR TORQUE-CONTROLLED EXPANSION ANCHORS.

9. TEST ACCEPTANCE CRITERIA: ACCEPTANCE CRITERIA FOR POST-INSTALLED ANCHORS SHALL BE BASED ON THE ICC REPORT OR MANUFACTURER'S WRITTEN INSTRUCTION AS ACCEPTABLE TO OSHPD. FIELD TESTS SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

   A. HYDRAULIC RAM METHOD: ANCHORS TESTED WITH A HYDRAULIC JACK OR SPRING LOADED DEVICES SHALL MAINTAIN THE TEST LOAD FOR A MINIMUM OF 15 SECONDS AND SHALL EXHIBIT NO DISCERNABLE MOVEMENT DURING THE TENSION TEST, E.G. AS EVIDENCED BY LOOSENING OF THE WASHER UNDER THE NUT. SCREW ANCHORS MAY BE LOOSENED A MAXIMUM ONE FULL TURN TO FACILITATE THE POSITIONING OF A TENSION TEST COLLAR.

   B. TORQUE WRENCH METHOD: ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH MUST ATTAIN THE SPECIFIED TORQUE WITHIN HALF (1/2) TURN OF THE NUT.

      EXCEPTIONS:

      · WEDGE OR SLEEVE TYPE: ONE-QUARTER (1/4) TURN OF THE NUT FOR A 3/8 INCH ANCHOR ONLY.

      · THREADED TYPE: ONE-QUARTER (1/4) TURN OF THE SCREW AFTER INITIAL SEATING OF THE SCREW HEAD.

10. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME TYPE, INSTALLED BY THE SAME TRADE, AND NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME INITIAL TEST FREQUENCY.

11. REQUIRED TORQUE TEST LOADS SHALL BE EQUAL TO THE MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE PROVIDED IN THE ICC-ESR FOR THE SPECIFIC ANCHOR. TEST TORQUE VALUES ARE SUMMARIZED IN THE TABLE BELOW:

SIMPSON		
LOCATION IN STRUCTURE	INSTALLATION TORQUE (FT-LBS) CONCRETE SUBSTRATE	
INCHES	SIMPSON STRONG-BOLT2 (ICC ES 3037)	SIMPSON TITEN HD (ICC ES ESR-2713)
1/4	4	24
3/8	30	50
1/2	60	65
5/8	90	100
3/4	150	150

HILTI				
NOMINAL ANCHOR DIAMETER		INSTALLATION TORQUE (FT-LBS) CONCRETE SUBSTRATE		
INCHES	METRIC	HILTI KWIK-BOLT TZ2 (ICC ES ESR-4266) CARBON STEEL	HILTI KWIK-BOLT TZ2 (ICC ES ESR-4266) STAINLESS STEEL	HILTI KH-EZ (ICC ES ESR-3027)
1/4	M6	--	--	18
3/8	M10	30	30	40
1/2	M12	50	40	50
5/8	M16	40	60	85
3/4	M20	110	125	95

POST-INSTALLED ANCHORS IN CONCRETE / MASONRY

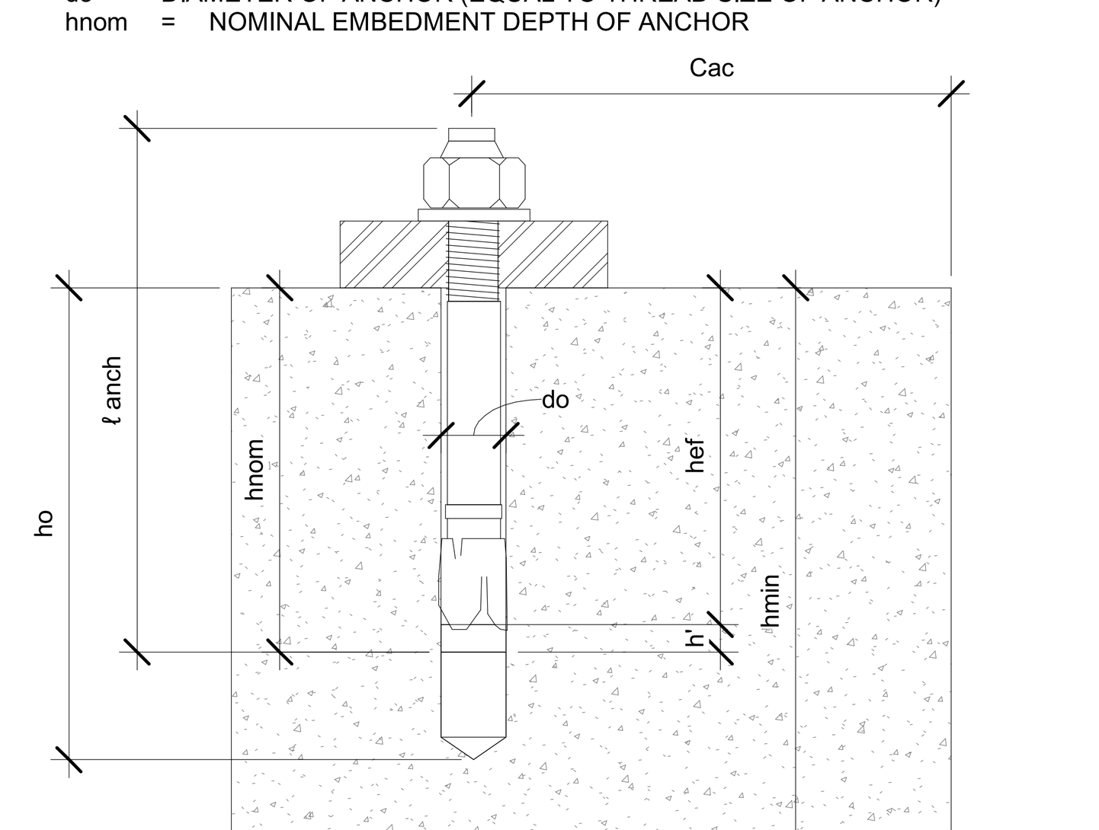
1. POST-INSTALLED ANCHOR CAPACITIES SHALL BE DETERMINED PER SECTION 1909A OF THE CODE USING STRENGTH DESIGN. POST INSTALLED ANCHORS IN CONCRETE USED FOR COMPONENT ANCHORAGE SHALL BE PREQUALIFIED FOR SEISMIC APPLICATIONS IN ACCORDANCE WITH ACI 355.2. POST INSTALLED ANCHORS IN MASONRY SHALL BE PREQUALIFIED FOR SEISMIC APPLICATIONS IN ACCORDANCE WITH APPROVED QUALIFICATION PROCEDURES.

2. INSTALLATION OF POST-INSTALLED ANCHORS SHALL BE IN ACCORDANCE WITH THE APPLICABLE ICC EVALUATION REPORT.

SUBSTRATE MATERIAL	ANCHOR TYPE	ANCHOR PRODUCT	ICC EVALUATION REPORT	ACCEPTANCE CRITERIA
CONCRETE	EXPANSION ANCHORS	SIMPSON STRONGBOLT 2	ICC ESR-3037	AC193
CMU	EXPANSION ANCHORS	SIMPSON STRONGBOLT 2	IAPMO ES ER 240	AC01 OR AC106
CONCRETE	SCREW ANCHOR	SIMPSON TITEN HD	ICC ESR-2713	AC193
CMU	SCREW ANCHOR	SIMPSON TITEN HD	ICC ESR-1056	AC106
CONCRETE	ADHESIVE ANCHORS	SIMPSON SET-3G	ICC ESR-4057	AC193
CMU	ADHESIVE ANCHORS	SIMPSON SET-3G	ICC ESR-4844	AC58
CONCRETE	POWER ACTUATED FASTENER**	SIMPSON PDPAW	ICC ESR-2138	AC70

3. EXPANSION ANCHOR EMBEDMENTS IN THE DRAWINGS ARE MINIMUM "EFFECTIVE EMBEDMENTS" (hef) AS SHOWN IN THE ICC REPORT CORRESPONDING TO THE ANCHOR.

   hef = EFFECTIVE EMBEDMENT DEPTH OF ANCHOR
   hmin = MINIMUM SUBSTRATE THICKNESS INTO WHICH ANCHOR IS EMBEDDED
   Cac= CRITICAL SUBSTRATE EDGE DISTANCE
   ho = MINIMUM HOLE DEPTH
   ℓanch = ANCHOR LENGTH
   h' = PROJECTION OF ANCHOR BEYOND EFFECTIVE EMBEDMENT DEPTH
   do = DIAMETER OF ANCHOR (EQUAL TO THREAD SIZE OF ANCHOR)
   hnom = NOMINAL EMBEDMENT DEPTH OF ANCHOR



4. LOCATE ALL EXISTING REINFORCEMENT BY NON-DESTRUCTIVE MEANS (X-RAY, PACOMETER, GPR, ETC.) PRIOR TO DRILLING OR INSTALLING POST-INSTALLED ANCHORS. COORDINATE POST-INSTALLED ANCHOR LOCATIONS WITH LOCATIONS OF EXISTING REINFORCEMENT. DO NOT CUT OR DAMAGE EXISTING REINFORCEMENT.

5. ALL POST-INSTALLED ANCHORS USED IN DRY INTERIOR CONDITIONS SHALL BE CARBON STEEL, U.N.O

6. ALL POST-INSTALLED ANCHORS USED AT EXTERIOR CONDITIONS, EXPOSED TO THE ELEMENTS, OR USED IN A DAMP ENVIRONMENT (I.E. KITCHENS) SHALL BE STAINLESS STEEL, U.N.O.

7. WHERE POST-INSTALLED MECHANICAL ANCHORS ARE USED FOR NON-VIBRATION ISOLATED MECHANICAL EQUIPMENT RATED OVER 10 HP, THEY SHALL BE QUALIFIED IN ACCORDANCE WITH ACI 355.2.

8. IF THE CONCRETE CRACKS DURING THE INSTALLATION OF AN ANCHOR, THE ANCHOR SHALL BE REMOVED OR ABANDONED.

9. ABANDONED ANCHORS AND ABANDONED ANCHOR HOLES:

   A. FILL ALL EMPTY ABANDONED ANCHOR HOLES WITH A DRY-PACK MORTAR.

   B. FOR ABANDONED EXPANSION ANCHORS WHICH CANNOT BE REMOVED WITHOUT DAMAGING THE SUBSTRATE, CUT/BURN OFF THE END OF THE BOLT FLUSH WITH THE FACE OF CONCRETE/MASONRY AND THEN DRIVE ABANDONED ANCHOR TO BOTTOM OF HOLE. FILL REMAINDER OF HOLE WITH A DRY-PACK MORTAR.

   C. FOR ABANDONED ADHESIVE OR UNDERCUT ANCHORS WHICH CANNOT BE REMOVED WITHOUT DAMAGING THE SUBSTRATE, BURN OFF THE END OF THE BOLT/ROD 1" BELOW THE SURFACE OF CONCRETE/MASONRY AND FILL REMAINDER OF HOLE WITH A DRY-PACK MORTAR.

   D. ABANDONED ANCHOR HOLES (WHETHER FILLED WITH DRY-PACK OR CONTAINING ABANDONED ANCHORS) MAY NOT BE LOCATED ANY CLOSER THAN 3x DIAMETER CENTER-TO-CENTER TO ANY ANCHOR IN SERVICE. ANCHORS NOT MEETING THIS MINIMUM SPACING MAY HAVE REDUCED CAPACITY AND SHALL BE REVIEWED WITH THE SEOR.

LIMITATIONS OF USE OF POWER ACTUATED FASTENERS:

PER SECTION 13.4.5 OF ASCE 7-16 POWER ACTUATED FASTENERS IN CONCRETE OR STEEL SHALL NOT BE USED FOR SUSTAINED TENSION LOADS OR FOR BRACE APPLICATIONS IN SEISMIC UNLESS APPROVED FOR SEISMIC LOADING. POWER ACTUATED FASTENERS IN MASONRY SHALL NOT BE PERMITTED UNLESS APPROVED FOR SEISMIC LOADING.
EXCEPTION: POWER ACTUATED FASTENERS IN CONCRETE USED FOR SUPPORT OF ACOUSTICAL TILE OR LAY-IN PANEL SUSPENDED CEILING APPLICATIONS AND DISTRIBUTED SYSTEMS WHERE THE SERVICE LOAD ON ANY INDIVIDUAL FASTENER DOES NOT EXCEED 90 LB.

WOOD STRUCTURAL PANELS (SHEATHING)

1. WOOD STRUCTURAL PANELS SHALL MEET THE FOLLOWING MINIMUM STANDARDS EXCEPT WHERE OTHERWISE NOTED:

WOOD STRUCTURAL PANEL PROPERTIES							
USE	PLY	BOND CLASSIFICATION[C]	SHEATHING GRADE	PERFORMANCE RATING	SPAN RATING	RATING[B]	REFERENCE[A]
ROOF	5	EXPOSURE 1	REFER TO TYPICAL DIAPHRAGM SCHEDULE			APA	2022 CBC 2303.1.5 (DOC PS 1-19 OR PS 2-18)
FLOOR	5	EXPOSURE 1				APA	
WALL[D]	5	EXPOSURE 1	REFER TO TYPICAL SHEAR WALL SCHEDULE			APA	

TABLE NOTES:
   A. WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS FOR THEIR TYPE IN ACCORDANCE WITH THE FOLLOWING VOLUNTARY STANDARDS BY THE ENGINEERED WOOD ASSOCIATION (APA):
      a. VOLUNTARY PRODUCT STANDARD, STRUCTURAL PLYWOOD, PS 1-09

      b. VOLUNTARY PRODUCT STANDARD, PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL-USE PANELS, PS 2-10

   B. WOOD STRUCTURAL PANELS SHALL BE IDENTIFIED BY THE APA TRADEMARK INDICATING CONFORMANCE TO THE APPLICABLE VOLUNTARY STANDARD

   C. WHERE PANELS ARE EXPOSED TO REPEATED WETTING AND REDRYING, LONG-TERM EXPOSURE TO WEATHER, OR CONDTIONS OF SIMILAR SEVERITY, "EXTERIOR" APA RATED PLYWOOD SHEATHING SHALL BE USED. C-D "EXPOSURE 1" APA RATED PLYWOOD SHEATHING (CDX) SHALL NOT BE USED FOR CONDITIONS INVOLVING LONG-TERM EXPOSURE TO WEATHER.
      a. EXCEPTION: WOOD STRUCTURAL PANEL ROOF SHEATHING EXPOSED TO THE OUTDOORS ON THE UNDERSIDE IS PERMITTED TO BE "EXPOSURE 1" TYPE.
      b. WOOD STRUCTURAL PANELS TO BE USED AS SIDING SHALL COMPLY WITH ANSI/APA PRP-210.

   D. ORIENTED STRAND BOARD (OSB) WITH EQUIVALENT CLASSIFICATION AND RATINGS MAY BE USED IN LIEU OF PLYWOOD FOR WOOD STRUCTURAL PANEL WALL SHEATHING.

B. STORAGE
   a. ALWAYS STORE THE PANELS UNDER COVER WHENEVER POSSIBLE
   b. WHEN STORING PANELS OUTSIDE STACK THEM ON A LEVEL SURFACE ON TOP OF STRINGERS OR OTHER BLOCKING, THREE STRINGERS MINIMUM.
   c. NEVER LEAVE PANELS IN CONTACT WITH THE GROUND
   d. COVER THE STACK WITH A PLASTIC TARP, ENSURING THAT THE BUNDLE IS WELL VENTILATED TO PREVENT MILDEW.
   e. IF MOISTURE ABSORPTION IS EXPECTED, CUT THE STEEL BAND TO PREVENT DAMAGE
   f. KEEP SANDED OR OTHER APPEARANCE GRADE PANELS AWAY FROM HIGH TRAFFIC AREAS

C. HANDLING
   a. ALWAYS PROTECT ENDS AND EDGES, ESPECIALLY TONGUE AND GROOVE PRODUCTS, FROM PHYSICAL DAMAGE.
   b. ACCLIMATIZE THE PANELS FOR 24 HOURS MINIMUM BEFORE INSTALLATION BY STANDING THE PANELS ON EDGE WITH A GAP BETWEEN EACH TO ALLOW FOR AIR CIRCULATION OR PER MANUFACTURER'S RECOMMENDATIONS.

3. PLYWOOD ORIENTATION
   A. ROOF AND FLOOR SHEATHING SHALL BE LAID WITH THE GRAIN OF THE OUTER PILES PERPENDICULAR TO THE FRAMING MEMBERS, SHALL BE CONTINUOUS OVER 2 JOIST BAYS MINIMUM AND END JOINTS SHALL BE JOINED OVER FRAMING AND STAGGERED. LEAVE A 1/8" GAP BETWEEN PANELS TO ALLOW FOR PANEL EXPANSION UNLESS RECOMMENDED OTHERWISE BY THE PANEL MANUF. REFER TO SPECIFIC DETAILS IN THE DRAWINGS FOR FURTHER PARAMETERS.

   B. PLYWOOD OR OSB WALL SHEATHING MAY BE APPLIED VERTICALLY OR HORIZONTALLY. ALL END JOINTS BE JOINED OVER FRAMING AND STAGGERED.

4. BLOCKING:
   A. ROOF: ALL ROOF SHEATHING SHALL BE BLOCKED UNLESS SPECIFICALLY ALLOWED ON PLANS. WHERE PERMITTED TO BE UNBLOCKED, ALL UNBLOCKED EDGES SHALL BE TONGUE AND GROOVE.

   B. ALL FLOOR SHEATHING SHALL BE BLOCKED UNLESS SPECIFICALLY ALLOWED ON PLANS. WHERE PERMITTED TO BE UNBLOCKED, ALL UNBLOCKED EDGES SHALL BE TONGUE AND GROOVE.

   C. WALLS: ALL SHEAR WALLS SHALL BE FULLY BLOCKED AT PLYWOOD EDGES.

5. FASTENERS

   A. USE SHEATHING NAILS SAME GAUGE AS COMMON WIRE NAILS WITH LENGTHS AT LEAST EQUAL TO SHEATHING THICKNESS PLUS REQUIRED PENETRATION PER AWS SDPWS TABLE 4.2A OR 4.3A (AS REQUIRED).

   B. EQUIVALENT PNEUMATIC DRIVE NAILS MAY BE USED IF FASTENER MANUFACTURER HAS RECEIVED ICC OR IAPMO APPROVAL FOR THE INTENDED USE. FASTENERS TO BE SUBSTITUTED SHALL BE EQUIVALENT IN LATERAL AND WITHDRAWAL STRENGTH TO THE SIZE OF COMMON NAIL SPECIFIED.

   C. USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL BY THE PROJECT ARCHITECT OR STRUCTURAL ENGINEER. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. MACHINE NAILING WILL NOT BE APPROVED IN 5/16" PLYWOOD OR OSB SHEATHING. IF NAIL HEADS PENETRATE THE OUTER PLY MORE T HAN WOULD BE NORMAL FOR A HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.

   D. TYPICAL NAILING SHALL BE 10d AT 6" O.C. AT ALL SUPPORTED EDGES AND OVER SHEAR WALLS, AND 10D AT 12" O.C. AT ALL INTERMEDIATE SUPPORTS, UNLESS OTHERWISE NOTED, SEE PLANS AND REFER TO SHEAR WALL SCHEDULE.

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VENTURA COLLEGE ADMIN BLDG ALTERATION

4667 TELEGRAPH RD, VENTURA, CA 93003

GENERAL NOTES

NO.	REVISION	DATE
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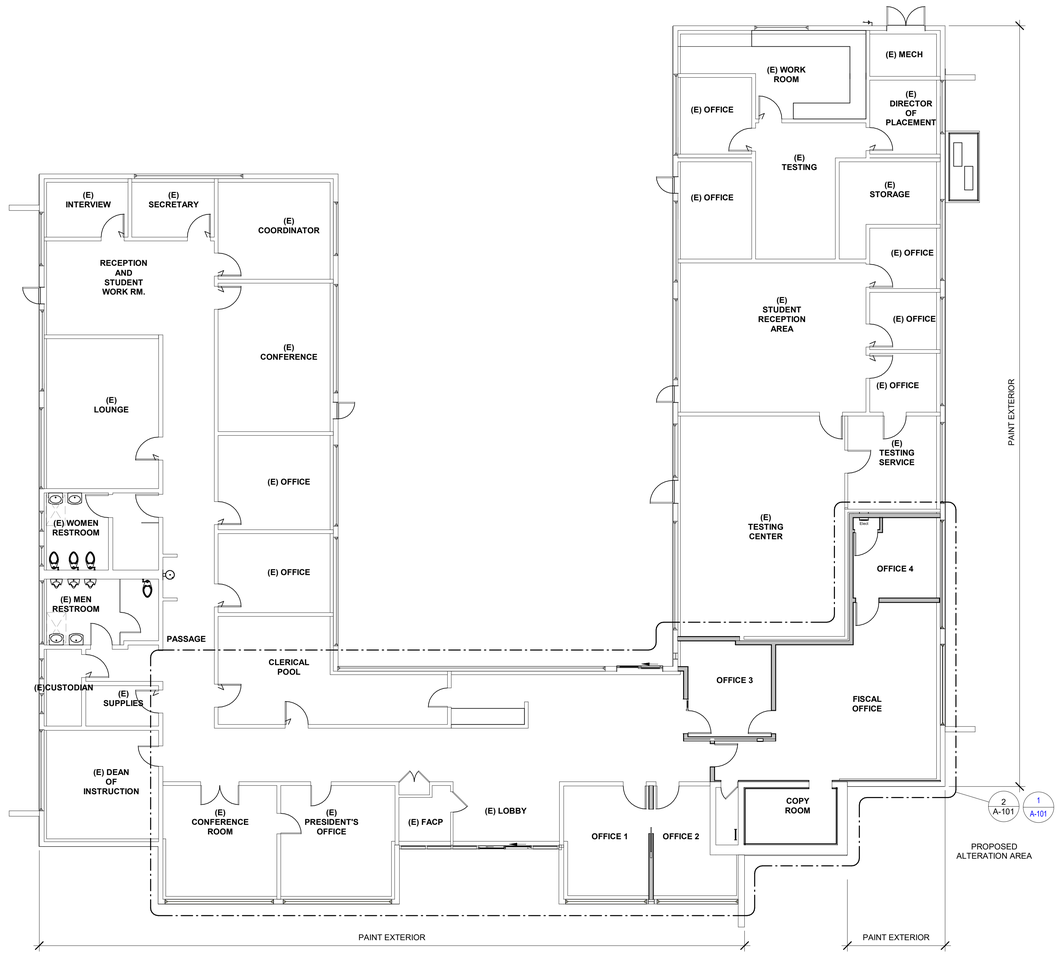
PROJECT MANAGER MH
DRAWN BY GK/CCS/DD/JM/SL **CHECKED BY** DS
DATE 06/20/2025
PROJECT NUMBER 3425-01-ED24
SHEET G-012

100% CD



1 ADMINISTRATION BUILDING FLOOR PLAN - OVERALL

A-301 | A-100 SCALE: 1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. SEE G-002 FOR SYMBOLS AND ABBREVIATIONS.
2. SEE MECHANICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. SEE G-011 AND G-012 FOR GENERAL FRAMING, FASTENING, AND CONSTRUCTION NOTES
5. **PENDING:** SELF-LEVELING COMPOUND NOTES

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OVERALL FLOOR PLAN

NO.	REVISION	DATE
1		
2		
3		
4		
5		

PROJECT MANAGER: MH
DRAWN BY: GK/CCS/DD/JM/SL | CHECKED BY: DS
DATE: 06/20/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: A-100

100% CD

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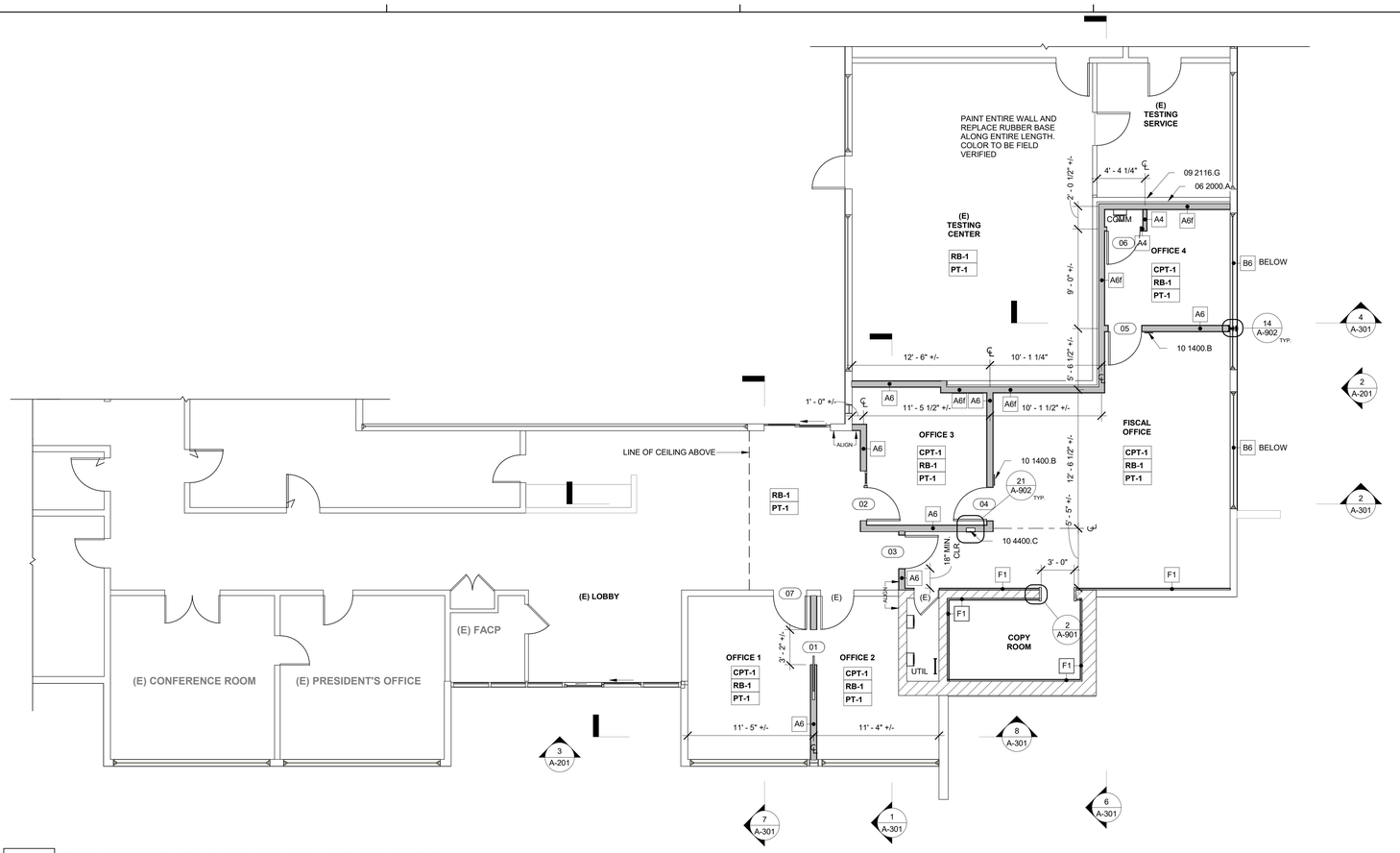
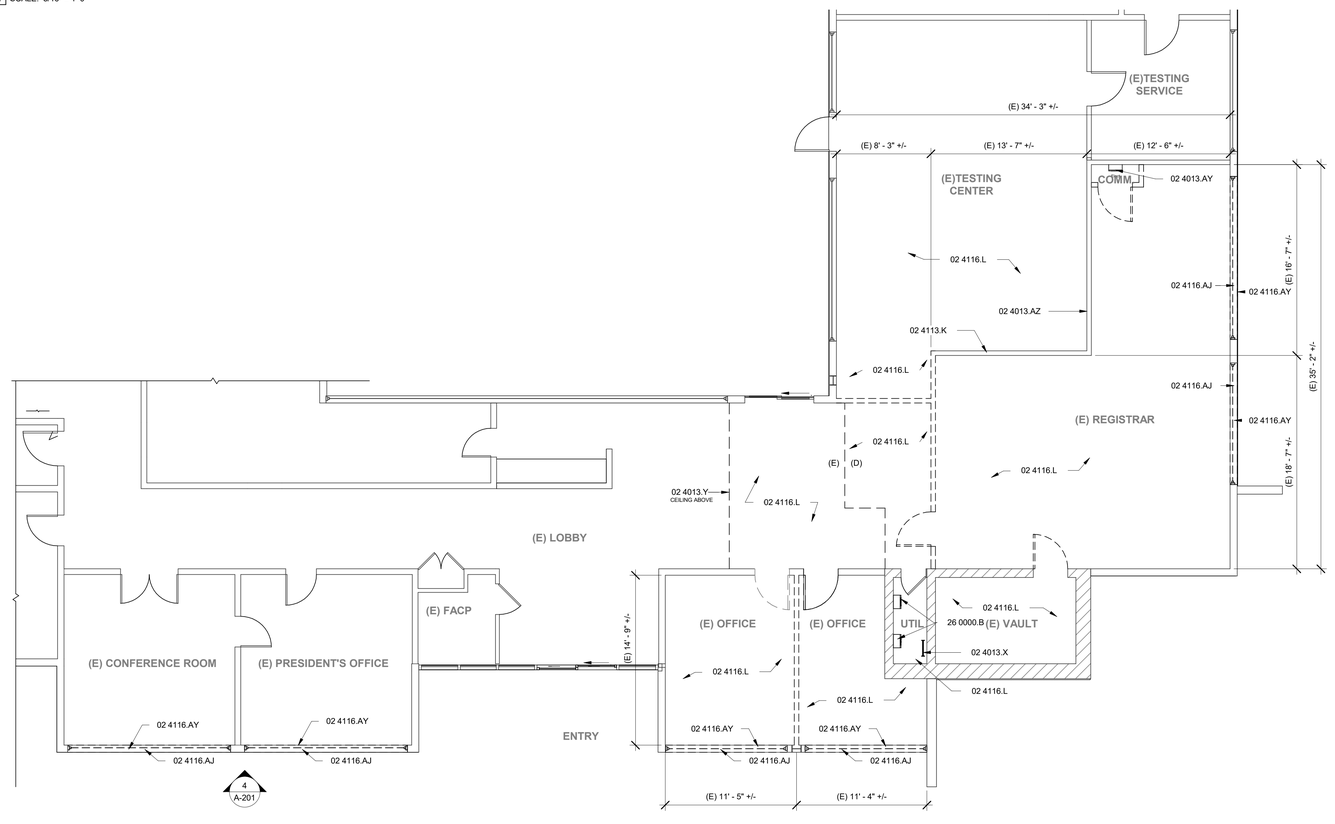


1 ENLARGED FLOOR PLAN - PROPOSED

A-301 | A-101 SCALE: 3/16" = 1'-0"



2 ENLARGED FLOOR PLAN - EXISTING/DEMO

A-100 | A-101 SCALE: 3/16" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. **SEE G-002 FOR SYMBOLS AND ABBREVIATIONS.**
2. **SEE MECHANICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.**
3. **SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.**
4. **SEE G-011 AND G-012 FOR GENERAL FRAMING, FASTENING, AND CONSTRUCTION NOTES**
5. **PENDING: SELF-LEVELING COMPOUND NOTES**

WALL TYPES

A6	600S162-33 W/ AT 16" O.C. ONE LAYER 5/8" TYPE X GYPSUM WALL BOARD BOTH SIDES.ACOUST BATT INSULATION INSIDE CAVITY, FULL HEIGHT
A6f	600S162-33 W/ AT 16" O.C. ONE LAYER 5/8" TYPE X GYPSUM WALL BOARD ONE SIDE.
A4	358S162-33 W/ AT 16" O.C. ONE LAYER 5/8" TYPE X GYPSUM WALL BOARD BOTH SIDES.ACOUST BATT INSULATION INSIDE CAVITY, FULL HEIGHT
B6	2X6 WOOD STUDS AT 16" O.C. W/ ONE LAYER 5/8" TYPE X GYPSUM BOARD INTERIOR AND 7/8" CEMENT PLASTER O/ PLYWOOD EXTERIOR REBUILD AS REQUIRED, MATCH EXISTING
F1	150F125-33 AT 16" O.C. W/ ONE LAYER 5/8" TYPE X GYPSUM WALL BOARD

WALL LEGEND

- EXISTING WOOD STUD WALL TO REMAIN
- EXISTING BRICK WALL TO REMAIN
- EXISTING WOOD STUD WALL, REMOVE
- PROPOSED STUD WALL

KEYNOTES

02 4013.AY	EXISTING IT EQUIPMENT, TO REMAIN, PROVIDE TEMPORARY SUPPORT AND PROTECTIONDURING CONSTRUCTION
02 4013.AZ	EXISTING WALL FINISH, TO REMAIN
02 4013.X	EXISTING ACCESS LADDER TO REMAIN
02 4013.Y	EXISTING SOFFIT TO REMAIN
02 4113.K	EXISTING RUBBER BASE TO BE REMOVED
02 4116.AJ	EXISTING WINDOW REMOVE
02 4116.AY	EXISTING CRIPPLE WALL REMOVE.
02 4116.L	EXISTING FLOORING REMOVE
06 2000.A	FULL HEIGHT PLYWOOD BACKER BOARD - 1/2" FIRE RETARDENT
09 2116.G	PAINT ENTIRE WALL AND REPLACE RUBBER BASE ALONG ENTIRE LENGTH. COLOR TO BE FIELD VERIFIED
10 1400.B	ROOM IDENTIFICATION SIGN
10 4400.C	SEMI-RECESSED FIRE EXTINGUISHER CABINET WITH EXTINGUISHER, 2A:10B:C RATING
26 0000.B	EXISTING ELECTRICAL PANEL. TO TRMAIN

FINISH PLAN GENERAL NOTES

1. **REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.**
2. **ALL FLOORING MATERIALS SHALL COMPLY WITH *2022 CBC SEC. 804.1.***
3. **ALL WALL AND CEILING FINISHES SHALL COMPLY WITH *2022 CBC TABLE 803.13* FOR MAXIMUM FLAME SPREAD AND SMOKE DENSITY.**

FINISH REQUIREMENTS

PER ***2022 CBC 803.13*** INTERIOR WALL AND CEILING FINISH SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN THAT SPECIFIED IN TABLE 803.13 FOR THE GROUP AND LOCATION DESIGNATED. REFER TO ***2022 CBC SEC. 803*** FOR ADDITIONAL INFORMATION.

INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY
(CBC 2022 TABLE 803.13)

DEGREE OF FIRE PROTECTION: NOT SPRINKLERED

GROUP	INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS	ROOMS AND ENCLOSED SPACES
B	A	B	C

CLASSIFICATIONS
CLASS A:
- FLAME SPREAD INDEX = 0-25
- SMOKE DEVELOPED INDEX = 0-450

CLASS B:
- FLAME SPREAD INDEX = 26-75
- SMOKE DEVELOPED INDEX = 0-450

CLASS C:
- FLAME SPREAD INDEX = 76-200
- SMOKE DEVELOPED INDEX = 0-450

ROOM FINISH SCHEDULE

GENERAL NOTES ON FINISHES:

1.REFER TO PAINT SPECS FOR SPECIFIC PREP AND FINISH REQUIREMENTS ACCORDING TO SUBSTRATES

CPT-1 CARPET TILE

RB-1 RESILIENT BASE MATCH EXISTING SHAPE AND COLOR, VERIFY IN FIELD

PT-1 INTERIOR FIELD COLOR, DUNN-EDWARDS SWISS COFFEE DEW341

ACT-1 ACOUSTICAL CEILING TILE

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FLOOR PLANS

NO.	REVISION	DATE

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SHEET A-101

100% CD

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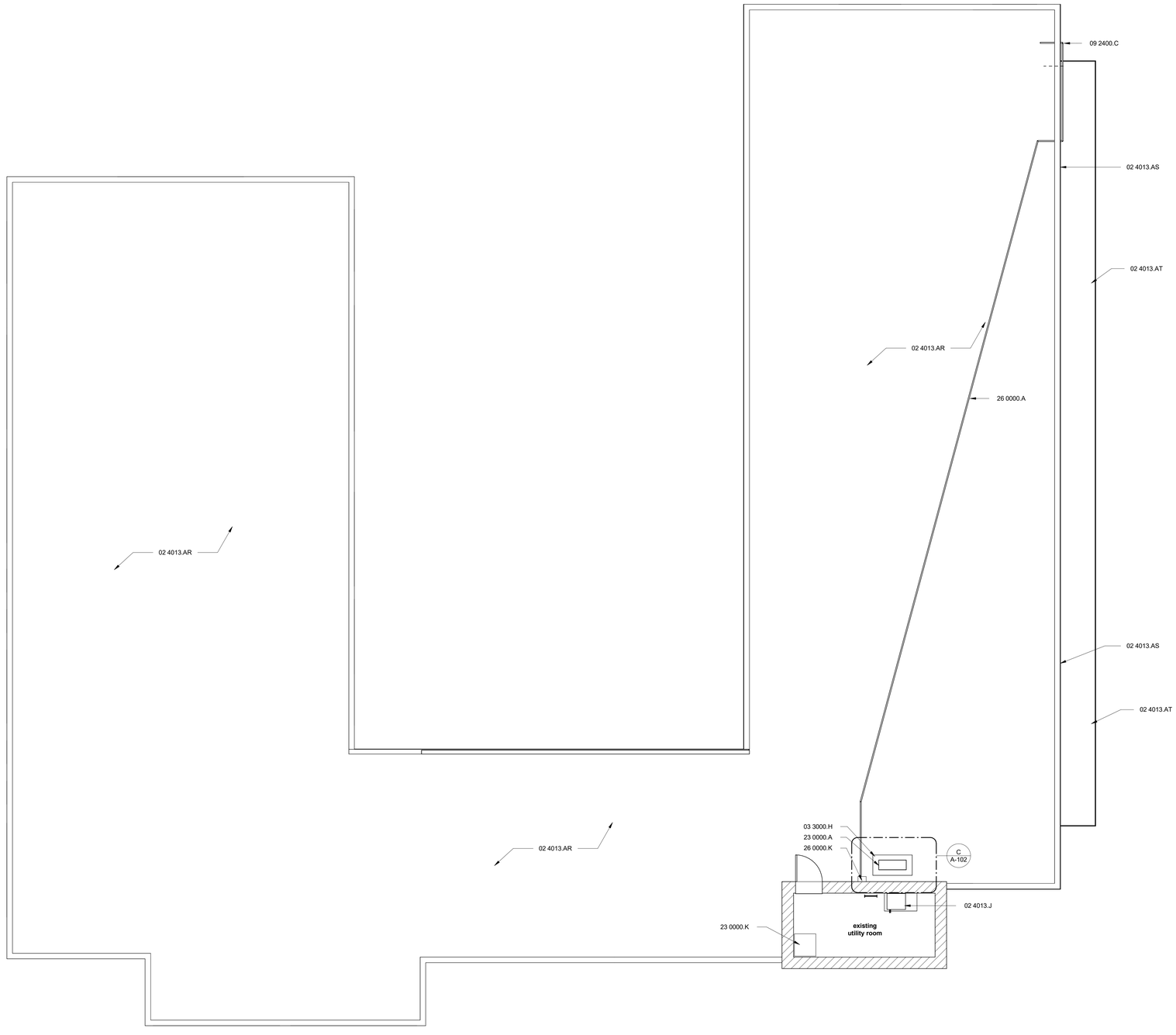
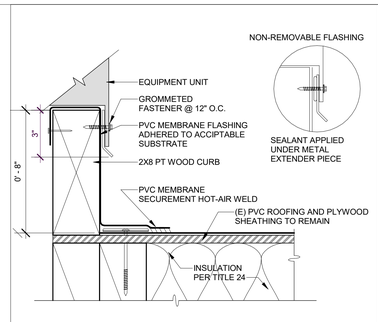


1 ROOF PLAN

A-102 SCALE: 3/16" = 1'-0"

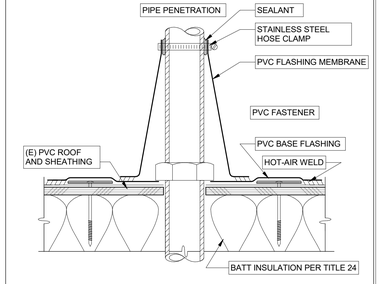
KEYNOTES

02 4013.AR	EXISTING PVC ROOF TO REMAIN. PROTECT TO PLACE.
02 4013.AS	EXISTING PARAPET WALL TO REMAIN. PROTECT IN PLACE
02 4013.AT	EXISTING AWNING ROOF BELOW TO REMAIN. PROTECT IN PLACE
02 4013.J	EXISTING EXISTING MECHANICAL EQUIPMENT TO REMAIN
03 3000.H	MECHANICAL EQUIPMENT PAD - SEE MECHANICAL DRAWINGS
09 2400.C	PATCH/ REPAIR/ SEAL/ PAINT ELECTRICFAL CONDUIT PENETRATION
23 0000.A	INTERIOR MECHANICAL EQUIPMENT. REFER TO MECHANICAL
23 0000.K	(E) MECHANICAL ACCESS SCUTTLE, TO REMAIN
26 0000.A	ELECTRICAL CONDUIT, SUPPORT WITH DURABLOCK AT 8'-0" O.C.
26 0000.K	ELECTRICAL DISCONNECT SWITCH



A CURB FLASHING

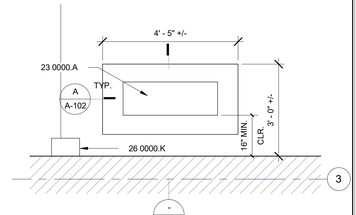
A102 A102 SCALE: 3" = 1'-0"



B CONE FLASHING

A-102 SCALE: 3" = 1'-0"

SEE DETAIL B/ A-102 FOR PIPE PENETRATIONS



C CONDENSER UNIT PLAN

A-102 A-102 SCALE: 1/2" = 1'-0"

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ROOF PLAN

NO.	REVISION	DATE

PROJECT MANAGER
MH
DRAWN BY: GK/CCS/DD/JM/SL | CHECKED BY: DS
DATE: 06/20/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: A-102

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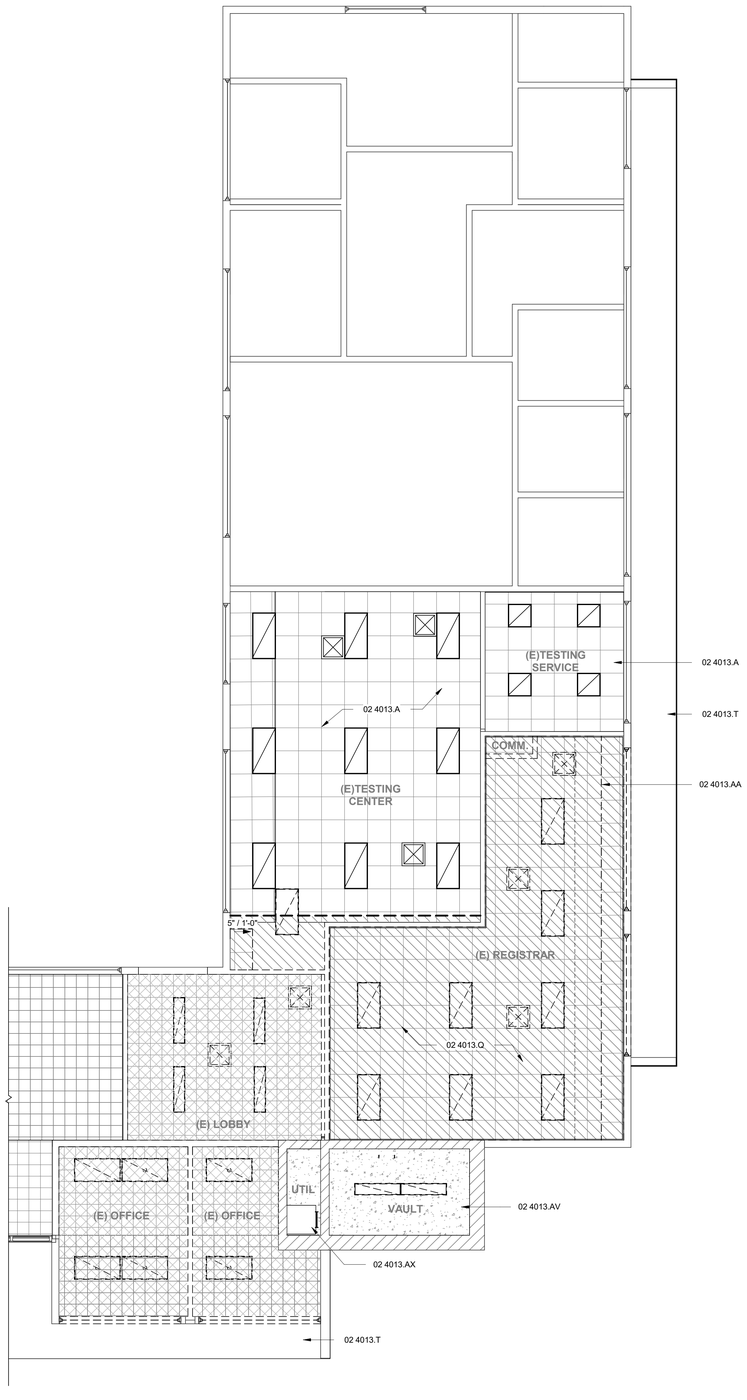

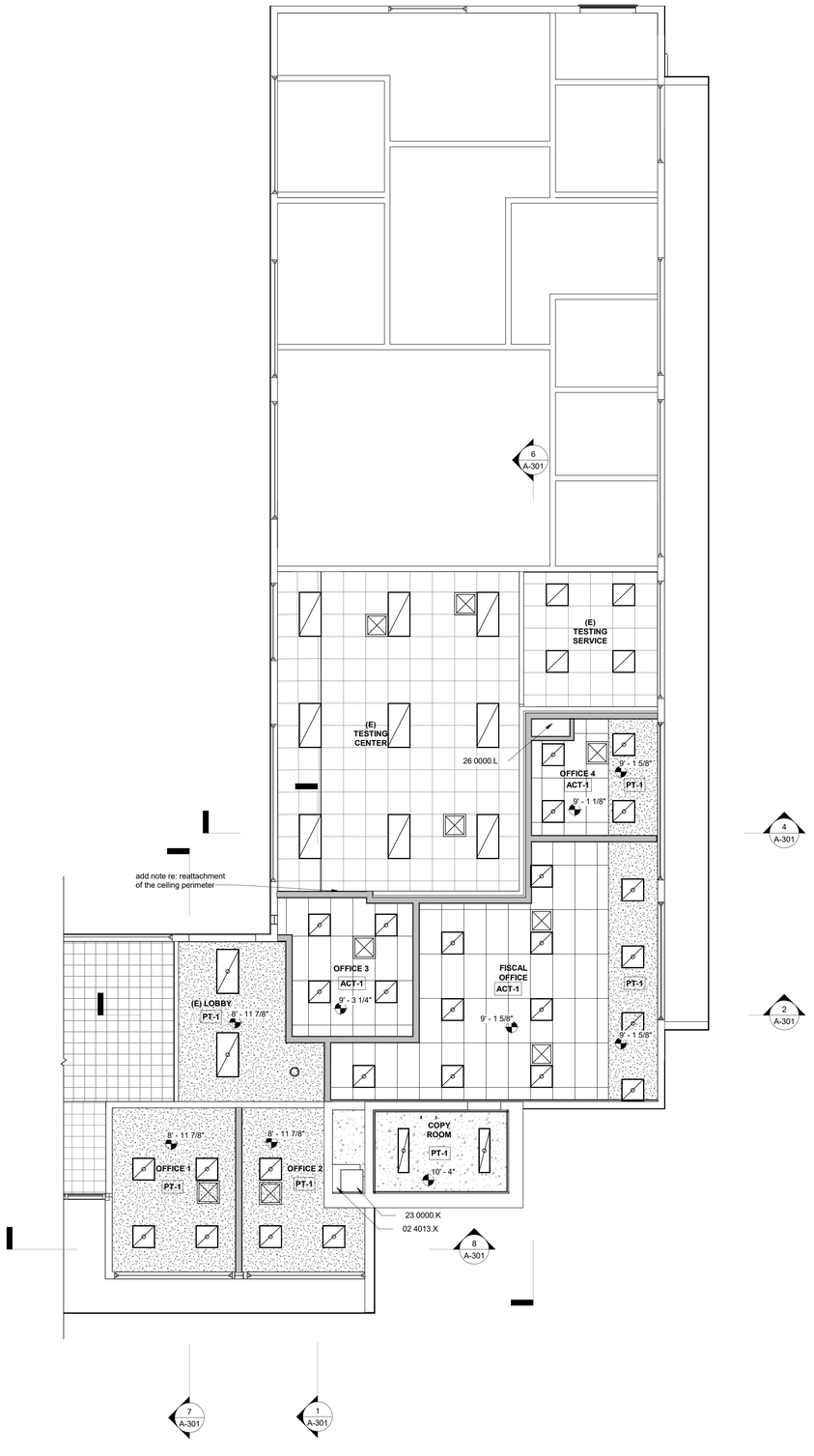

ROOM FINISH SCHEDULE

CPT 1 CARPET TILE

RB-1 RESILIENT BASE
MATCH EXISTING SHAPE AND COLOR, VERIFY IN FIELD

PT-1 INTERIOR FIELD COLOR, DUNN-EDWARDS SWISS COFFEE DEW341

ACT-1 ACOUSTICAL CEILING TILE

GENERAL NOTES ON FINISHES:

1.REFER TO PAINT SPECS FOR SPECIFIC PREP AND FINISH REQUIREMENTS ACCORDING TO SUBSTRATES

KEYNOTES

02 4013.A	EXISTING SUSPENDED CEILING BELOW EXISTING SUSPED WOOD FAMED CEILING TO REMAIN
02 4013.AA	EXISTING LINE OF CEILING TRANSITION, REMOVE
02 4013.AV	EXISTING CONCRETE CEILING TO REMAIN
02 4013.AX	EXISTING MECHANICAL SPACE ACCESS SCUTTLE TO REMAIN
02 4013.Q	EXISTING EXISTING CEILING TO BE REMOVED
02 4013.T	EXISTING AWNING TO REMAIN
02 4013.X	EXISTING ACCESS LADDER TO REMAIN
02 4013.Y	EXISTING SOFFIT TO REMAIN
23 0000.K	(E) MECHANICAL ACCESS SCUTTLE, TO REMAIN

LEGEND

- XX'-X" CEILING HEIGHT (SEE PLAN FOR ACTUAL HEIGHTS)
- (E) SUSPENDED ACOUSTIC TILE CEILING AND (E) WOOD-FRAMED SUSPENDED CEILING ABOVE, REMOVE ALL
- (E) 12x12 ACOUSTIC TILE OVER 5/8" GYPSUM BOARD CEILING FINISH, REMOVE FINISHES ONLY. WOOD FRAMING TO REMAIN
- 2x4 SUSPENDED ACOUSTIC TILE CEILING
- ONE LAYER 5/8" TYPE X GYPSUM BOARD APPLY TO EXISTING FRAMING, PAINT
- (E) ACOUSTIC TILE, TO REMAIN
- MECHANICAL EQUIPMENT, REFER TO MECHANICAL PLANS
- LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- (E) LIGHT FIXTURETO REMAIN
- (E) LIGHT FIXTURE REMOVE

2 RCP - EXISTING/DEMO
A-301 | A-111 SCALE: 3/16" = 1'-0"

1 CEILING PLAN - PROPOSED
A-301 | A-111 SCALE: 3/16" = 1'-0"

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REFLECTED CEILING PLANS

NO.	REVISION	DATE

PROJECT MANAGER
MH
DRAWN BY
GK/CCS/DD/JM/SL
CHECKED BY
DS
DATE
06/20/2025
PROJECT NUMBER
3425-01-ED24
SHEET
A-111

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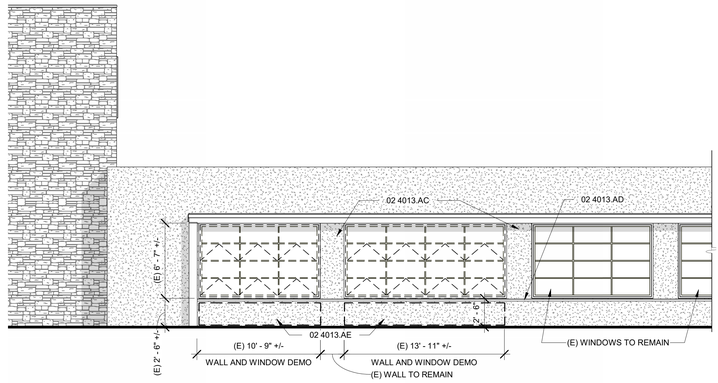
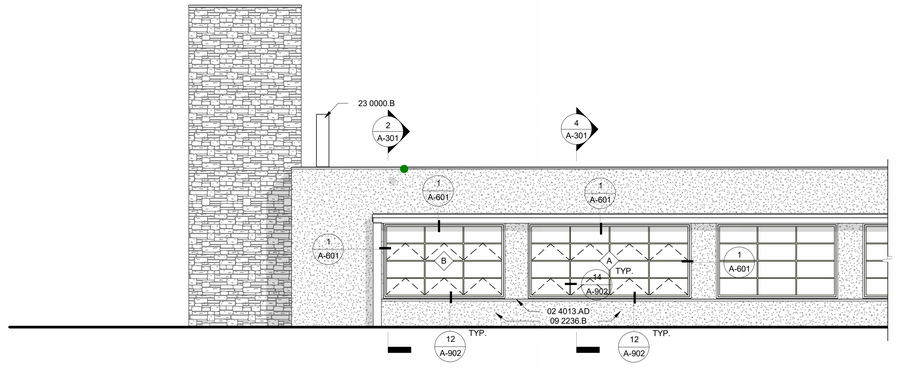


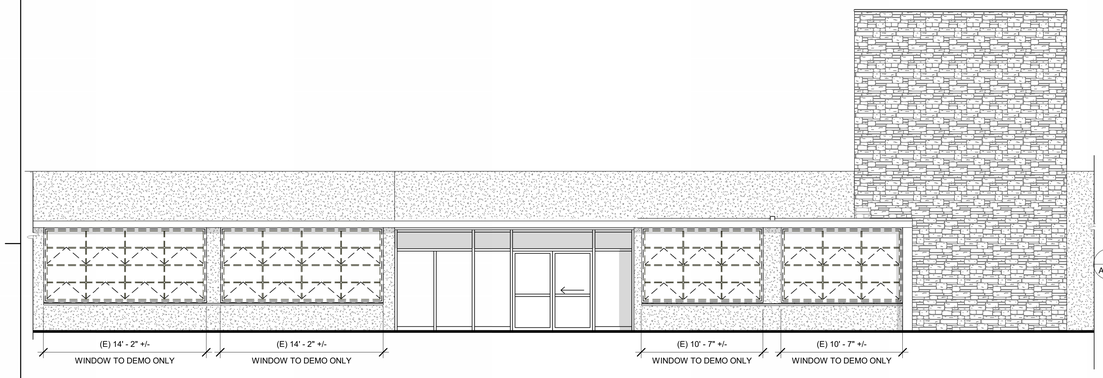
1 EAST ELEVATION EXISTING/DEMO

A-101 | A-201 SCALE: 3/16" = 1'-0"



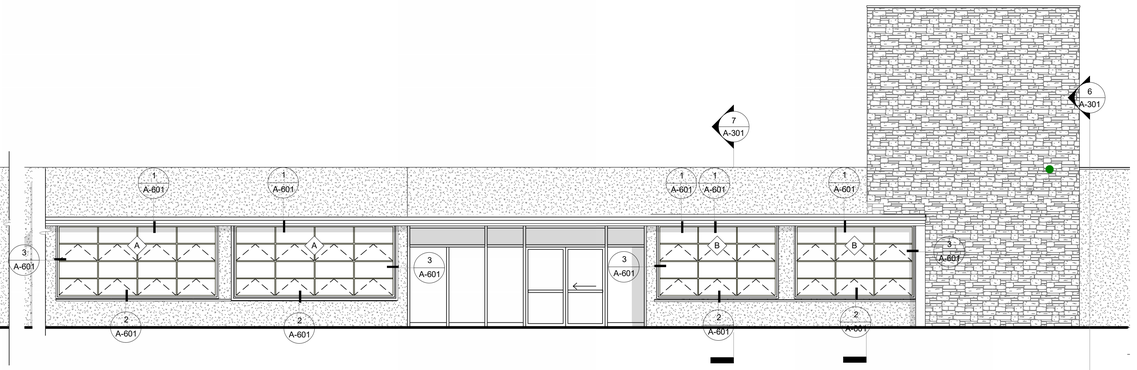
2 EAST ELEVATION PROPOSED

A-101 | A-201 SCALE: 3/16" = 1'-0"



4 SOUTH ELEVATION EXISTING/DEMO

A-101 | A-201 SCALE: 3/16" = 1'-0"



3 SOUTH ELEVATION PROPOSED

A-101 | A-201 SCALE: 3/16" = 1'-0"

FINISH SCHEDULE

XPT-1: EXTERIOR PAINT, DUNN-EDWARDS BUNGALOW TAUPE, DE172

XPT-2: EXTERIOR TRIM COLOR DUNN-EDWARDS BIG STONE BEACH, DE132

GENERAL NOTES ON FINISHES:

1.REFER TO PAINT SPECS FOR SPECITIC PREP AND FINISH REQUIREMENTS ACCORDING TO SUBSTRATES

WALL TYPES

B6	5 1/2" WOOD STUDS REBUILD AS REQUIRED, MATCH EXISTING

ELEVATION GENERAL NOTES

1. REFER TO GENERAL NOTES SHEET G-002 FOR SYMBOLS AND ABBREVIATIONS
2. FRAMING ELEVATIONS, INCLUDING FLOOR PLATES AND FLOOR LEVEL ELEVATIONS ARE MEASURED FROM BUILDING FINISH FLOOR, U.N.O.
3. SEE DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
4. REFER TO ROOF PLAN FOR ROOF PITCH AND OVERHANGS. FASCIA PER DETAILS.
5. SEE ROOF PLAN FOR APPROXIMATE DOWNSPOUT LOCATIONS, U.N.O.
6. REFER TO DOOR AND WINDOW SCHEDULES AND TYPES FOR DOOR AND WINDOW INFORMATION.
7. SEE ELECTRICAL DRAWINGS FOR EXTERIOR LIGHTING
8. SEE MECHANICAL DRAWINGS FOR GRILLES AND LOUVERS. PAINT TO MATCH ADJACENT FINISH.
9. CONTRACTOR TO VERIFY COLOR SCHEME WITH OWNER BEFORE PERFORMING THE WORK.

KEYNOTES

02 4013.AC	EXISTING PLASTER FINISH TO REMAIN, PATCH/ REPAIR/ PAINT.
02 4013.AD	EXISTING PLASTER PLANT-ON FURRING AND PLASTERED SILL TO REMAIN.
02 4013.AE	EXISTING PLASTER, REMOVE PLASTER SUFFICIENTLY TO ALLOW PEELING BACK OF WRB FOR LAPPING OVER WINDOW FLASHING; ADD SAWP MEMB.
09 2236.B	PLASTER FINISH, MATCH EXISTING ADJACENT WALL TEXTURE
23 0000.B	MECHANICAL UNIT CONDENSER. REFER TO MECHANICAL

LEGEND

?	MATERIAL TAG. REFER TO MATERIAL SCHEDULE FOR PRODUCT INFORMATION.
	WALL FINISH.

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BUILDING ELEVATIONS

NO.	REVISION	DATE

PROJECT MANAGER: MH
DRAWN BY: GK/CCS/DD/JM/SL | CHECKED BY: DS
DATE: 06/20/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: A-201

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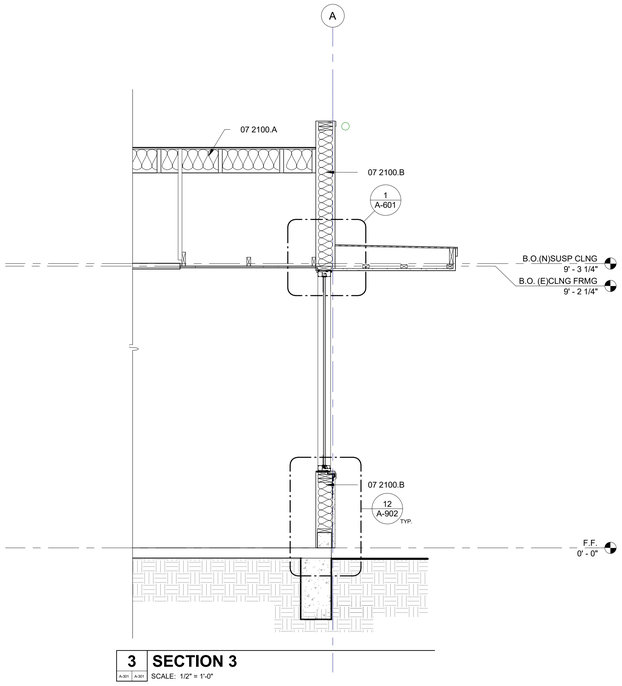
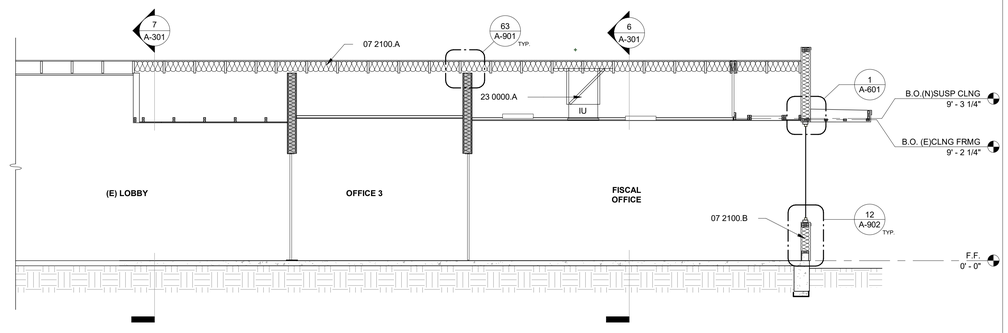
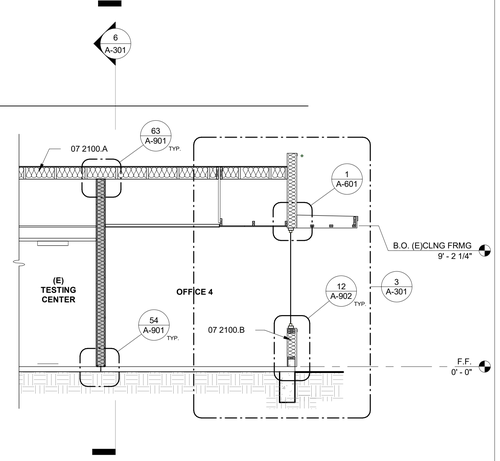


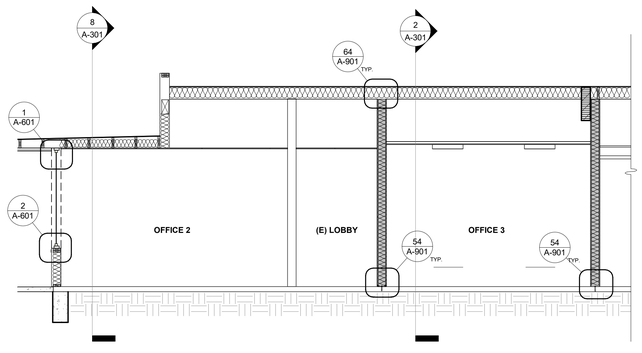
3 SECTION 3
A-301 | A-301 SCALE: 1/2" = 1'-0"



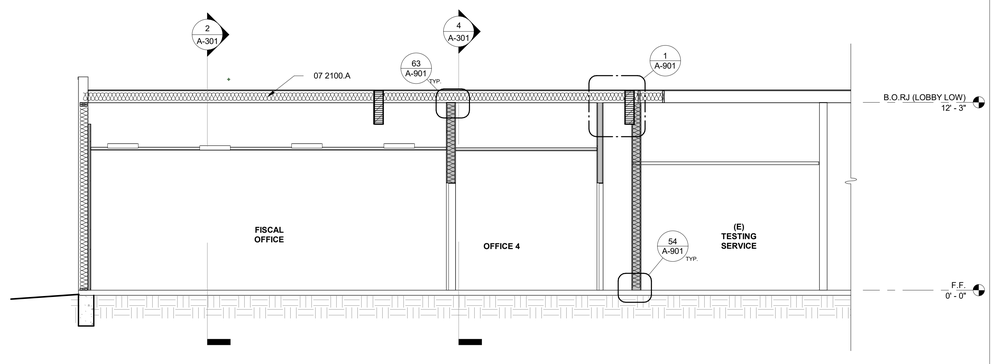
2 SECTION 2
A-301 | A-301 SCALE: 1/4" = 1'-0"



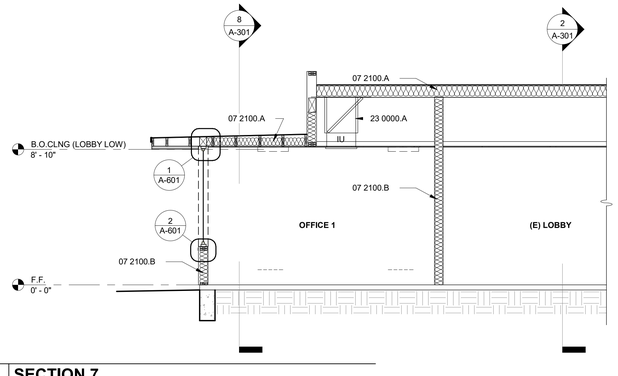
4 SECTION 4
A-301 | A-301 SCALE: 1/4" = 1'-0"



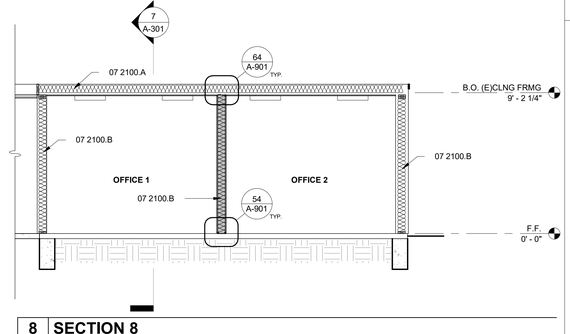
1 SECTION 1
A-301 | A-301 SCALE: 1/4" = 1'-0"



6 SECTION 6
A-301 | A-301 SCALE: 1/4" = 1'-0"



7 SECTION 7
A-301 | A-301 SCALE: 1/4" = 1'-0"



8 SECTION 8
A-301 | A-301 SCALE: 1/4" = 1'-0"

KEYNOTES

07 2100.A	ROOF BATT INSULATION. R-30 MIN. PER SPECIFICATIONS.
07 2100.B	EXTERIOR WALL BATT INSULATION. R-20 MIN. PER SPECIFICATIONS.
23 0000.A	INTERIOR MECHANICAL EQUIPMENT. REFER TO MECHANICAL

SECTIONS GENERAL NOTES

1. THE PURPOSE OF THESE DRAWINGS IS TO SHOW CONSTRUCTION MATERIALS/ASSEMBLIES. FOR SPECIFIC SIZES AND DETAILS REFER TO ARCHITECTURAL PLANS, ELEVATIONS, DETAILS, AND STRUCTURAL PLANS.
2. INSULATION: REFER TO TITLE 24 REPORT AND "INSULATION" NOTES ON SHEET FOR ADDITIONAL RATINGS, REQUIREMENTS, AND INFORMATION.
3. REFER TO FIREBLOCKING/DRAFTSTOPING NOTES ON SHEET G-101.
4. WOOD SHALL BE PROTECTED FROM DECAY AND TERMITES AS REQUIRED PER ***2022 CBC SECTION 2304.12***
5. FOUNDATION SILLS TO BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD. ***2022 CBC SECTION 2304.12.2***
6. PENETRATIONS OF FIRE-RESISTIVE WALLS, FLOOR-CEILIINGS SHALL BE PROTECTED AS REQUIRED PER ***2022 CBC SECTIONS 714.3 & 714.4.***
7. WALL ASSEMBLIES TO BE PER FLOOR PLAN.
8. DOORS, WINDOWS AND STOREFRONT SYSTEMS TO BE PER APPLICABLE SCHEDULE. REFER TO FLOOR PLANS FOR IDENTIFICATION.

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VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003

BUILDING SECTIONS

NO.	REVISION	DATE
1		
2		
3		
4		
5		

PROJECT MANAGER: MH
DRAWN BY: GK/CCS/OD/JM/SL | CHECKED BY: DS
DATE: 06/20/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: A-301

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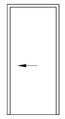
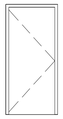
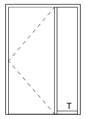
DOOR TYPES LEGEND



A.
SOLID CORE WOOD DOOR
WITH PLASTIC LAMINATE
FINISH, POCKET DOOR,
CASED WOOD FRAME



B.
SOLID CORE WOOD DOOR
WITH PLASTIC LAMINATE
FINISH, HOLLOW METAL
FRAME



C.
SOLID CORE WOOD DOOR
WITH PLASTIC LAMINATE
FINISH, HOLLOW METAL FRAME
W/ TEMPERED INSULATED
GLASS SIDELIGHT

PT-2: INTERIOR ACCENT COLOR DUNN-EDWARDS
CHOCOLATE CHUNK DE6070
LAMINATE COLOR TBD

DOOR SCHEDULE

NO.	TYPE	DOOR				FIRE RATING	DETAIL			REMARKS
		WIDTH	HEIGHT	THICKNESS	MATERIAL		HEAD	JAMB	SILL	
01	A	3' - 2"	7' - 0"	0' - 1 3/8"		NONE				
02	C	3' - 0"	7' - 0"	0' - 1 3/4"		NONE				
03	B	3' - 0"	7' - 0"	0' - 1 3/4"		NONE				
04	B	3' - 0"	7' - 0"	0' - 1 3/4"		NONE				
05	B	3' - 0"	7' - 0"	0' - 1 3/4"		NONE				
06	B	3' - 0"	7' - 0"	0' - 1 3/4"		NONE				
07	B	3' - 0"	7' - 0"	0' - 1 3/4"		NONE				

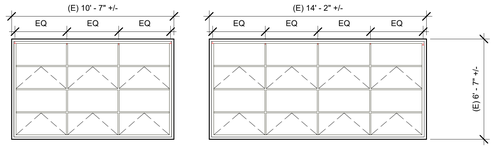
DOOR GENERAL NOTES

1. REFER TO FLOOR PLANS FOR DOOR LOCATIONS.
2. CONTRACTOR TO VERIFY EXACT ROUGH OPENING SIZES WITH DOOR MANUFACTURER SPECIFICATIONS PRIOR TO FABRICATION OF ROUGH OPENINGS.
3. CONTRACTOR TO VERIFY ACTUAL DOOR SIZES TO FIT FINISH OPENING PRIOR TO FABRICATION OF DOOR AND FINISH OPENING.
4. REFER TO DOOR TYPES LEGEND FOR GLAZING.
5. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS

DOOR REMARKS

1. EGRESS DOOR.
2. EQUIPPED W/PANIC HARDWARE.
3. INCLUDES SAFETY GLAZING.
4. FIRE-RATED DOOR ASSEMBLY. VISION PANELS OR LITES TO RECEIVE WIRE GLASS.
5. LOUVERED DOOR.
6. KICK-PLATE PROVIDED.

WINDOW TYPES LEGEND

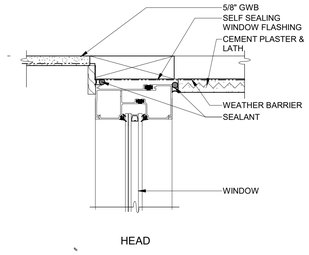


B
FIXED W/ AWNING WINDOWS

A
FIXED W/ AWNING WINDOWS

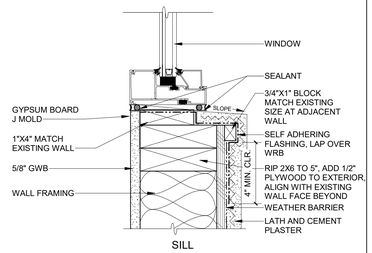
WINDOW SCHEDULE

TYPE	SIZE		HEAD HEIGHT	DETAILS			REMARKS
	WIDTH	HEIGHT		HEAD	JAMB	SILL	
A	14' - 2"	6' - 6 1/2"	9' - 0 1/2"	1/ A-601	3/ A-601	2/ A-601	
B	10' - 7"	6' - 6 1/2"	9' - 0 1/2"	1/ A-601	3/ A-601	2/ A-601	



HEAD

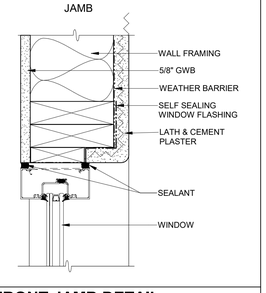
1 STORE FRONT HEAD DETAIL
A201 A401 SCALE: 3" = 1'-0"



SILL

NOTE: ALL WINDOW FLASHING SHALL COMPLY WITH MANUFACTURER/INDUSTRY STANDARDS AAMA 2400-02

2 STORE FRONT SILL DETAIL
A201 A401 SCALE: 3" = 1'-0"



3 STORE FRONT JAMB DETAIL
A201 A401 SCALE: 3" = 1'-0"

WINDOW GENERAL NOTES

1. REFER TO GENERAL NOTES ON SHEET G-101 FOR ADDITIONAL REQUIREMENTS
2. REFER TO FLOOR PLANS FOR WINDOW LOCATIONS.
3. CONTRACTOR TO VERIFY EXACT ROUGH OPENING SIZES WITH WINDOW MANUFACTURER SPECIFICATIONS PRIOR TO FABRICATION OF ROUGH OPENINGS.
4. CONTRACTOR TO VERIFY ACTUAL WINDOW SIZES TO FIT FINISH OPENING PRIOR TO FABRICATION OF WINDOW AND FINISH OPENING.
5. HEAD HEIGHT MEASURED FROM FF UNLESS NOTED OTHERWISE.
6. REFER TO ENERGY COMPLIANCE REPORTS FOR U-FACTOR, SHGC AND ADDITIONAL WINDOW REQUIREMENTS.
7. ALL GLAZING IS DOUBLE PANE UNLESS OTHERWISE NOTED.
8. PROVIDE SHOP DRAWINGS FOR ALL WINDOW UNITS
9. REFER TO WINDOW TYPES LEGEND FOR GLAZING.
10. REFER TO WINDOW SCHEDULE AND WINDOW TYPES LEGEND FOR FURTHER INFORMATION.
11. STOREFRONT SECTIONS ARE 2" AND CURTAINWALL SECTIONS ARE 2-1/2", UNO. REFER TO STOREFRONT TYPES LEGEND FOR FURTHER INFORMATION.
12. WINDOWS BETWEEN CONDITIONED AND UNCONDITIONED SPACES SHALL BE CAULKED, GASKETED, WEATHER-STRIPPED OR OTHERWISE SEALED.
13. SAFETY GLAZING NOTATED WITH "T"

WINDOW REMARKS

1. INCLUDES SAFETY GLAZING.
2. EGRESS WINDOW. MUST MEET CBC REQUIREMENTS.

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VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003

DOOR AND WINDOW SCHEDULES

NO.	REVISION	DATE
1		
2		
3		
4		
5		

PROJECT MANAGER
MH
DRAWN BY
GK/CCS/DD/JM/SL
CHECKED BY
DS
DATE
06/20/2025
PROJECT NUMBER
3425-01-ED24
SHEET
A-601

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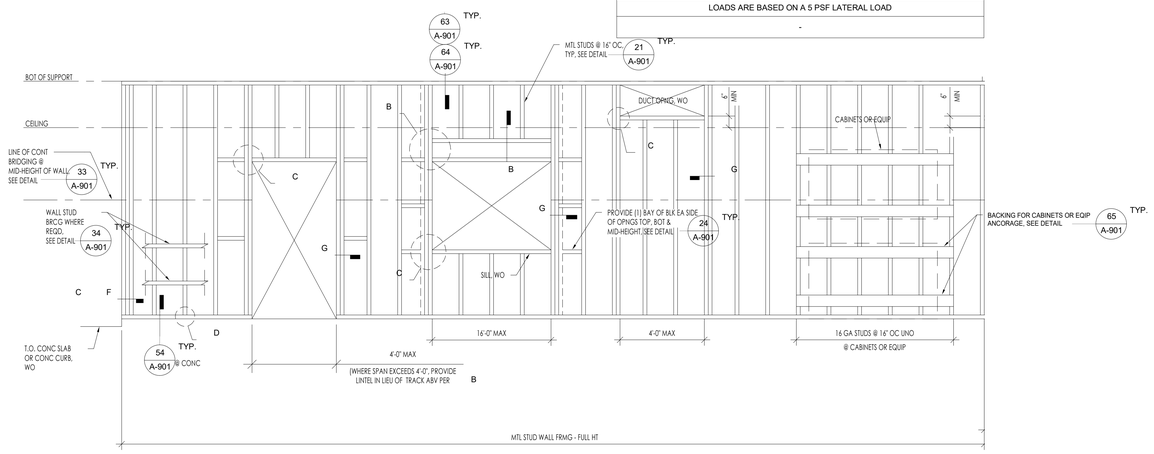
LOCATION	DESIGNATION	KSI	SPACING	MAX. HEIGHT
TYP. STUD	600S162-33	33	16" O.C. (STUD SPACING)	10' - 0"
-	-	-	-	-
THIS STUD TABLE IS BASED ON SSMA TABLES AND ICC-ES EVALUATION REPORT ERS-3064P				
HEIGHTS ARE BASED ON A DEFLECTION LIMIT OF L/240				
LOADS ARE BASED ON A 5 PSF LATERAL LOAD				
-				



62 METAL STUD FRAMING ELEVATION

A-901 A-901 NTS

DRAWN @ 3/8" = 1'-0"

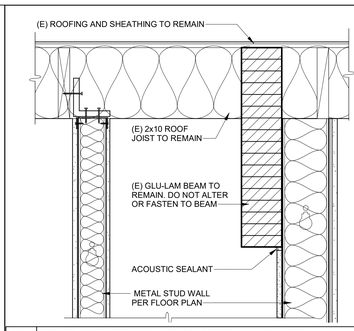
STUD SCHEDULE								
	DEPTH	GAUGE	B	AREA (IN²)	I (IN⁴)	S (IN³)	MAX SPACING OF STUD BRACING	SSMA DESIGNATOR
	2 1/2"	20	1 5/8"	.223	.236	.188	4'-0"	250S162-33
		18	1 5/8"	.289	.302	.242	4'-0"	250S162-43
		16	1 5/8"	.358	.370	.296	4'-0"	250S162-54
	4"	20	1 5/8"	.275	.692	.346	4'-0"	400S162-33
		18	1 5/8"	.375	.892	.446	4'-0"	400S162-43
		16	1 5/8"	.443	1.098	.549	4'-0"	400S162-54
	6"	20	1 5/8"	.344	1.793	.598	4'-0"	600S162-33
		18	1 5/8"	.447	2.316	.772	4'-0"	600S162-43
		16	1 5/8"	.556	2.860	.953	4'-0"	600S162-54
	8"	20	1 5/8"	.413	3.582	.896	4'-0"	800S162-33
		16	1 5/8"	.670	5.736	1.434	4'-0"	800S162-54
		14	2"	0.907	8.140	2.035	4'-0"	800S200-68
	10"	16	2"	.839	11.278	2.256	4'-0"	250S200-54
	12"	14	2"	1.192	21.947	3.658	4'-0"	1200S200-68

TRACK SCHEDULE							
	DEPTH	GAUGE	B	AREA (IN²)	I (IN⁴)	S (IN³)	SSMA DESIGNATOR
	2 1/2"	20	1 1/2"	.190	.221	.167	250T150-33
		18	1 1/2"	.248	.289	.217	250T150-43
		16	1 1/2"	.311	.368	.273	250T150-54
	4"	20	1 1/2"	.242	.622	.300	400T150-33
		18	1 1/2"	.315	.811	.390	400T150-43
		16	1 1/2"	.396	1.025	.489	400T150-54
	6"	20	1 1/2"	.311	1.590	.517	600T150-33
		18	1 1/2"	.405	2.072	.673	600T150-43
		16	1 1/2"	.509	2.611	.843	600T150-54
	8"	20	1 1/2"	.380	3.180	.781	800T150-33
		16	1 1/2"	.622	5.214	1.272	800T150-54
		14	1 1/2"	.783	6.594	1.599	800T150-68
	10"	16	1 1/2"	.735	9.061	1.777	250T150-54
	12"	14	1 1/2"	1.068	18.148	2.963	1200T150-68

NOTES:
1. FOR SIZE AND GAUGE OF STUDS, SEE ADJACENT TABLE ON DETAIL 62/ A-901
2. DIMENSIONS, PROPERTIES AND TYPES NOTED ARE BASED ON METAL STUDS AND TRACKS BY STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) ICBO NO 4943 UNO.

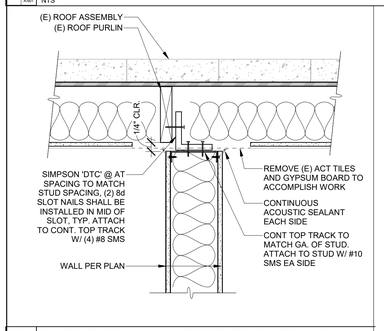
21 METAL STUD TABLE AND SCHEDULE

A-901 A-901 NTS



1 TOP OF WALL AT COMM. CLOSIT

A-901 A-901 SCALE: 1 1/2" = 1'-0"

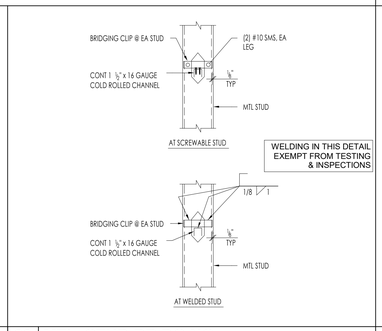


63 PARTITION WALL PERP TO PURLINS

A-901 A-901 SCALE: 1 1/2" = 1'-0"

43 WALL STUD BRACING LOCATION

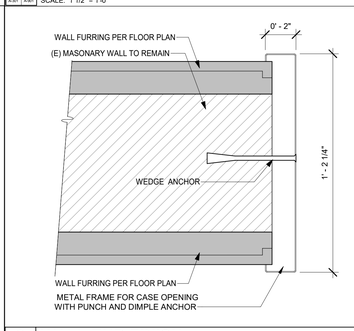
A-901 A-901 SCALE: 1" = 1'-0"



33 MTL. STUD BRIDGING

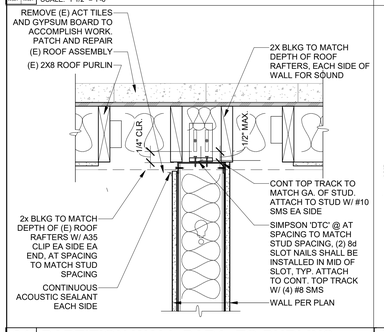
A-901 A-901 SCALE: 1" = 1'-0"

DRAWN @ 1" = 1'-0"



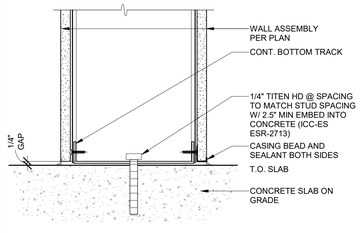
2 WALL END FINISH

A-901 A-901 SCALE: 3" = 1'-0"



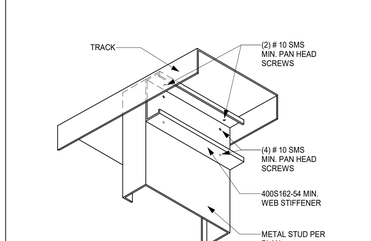
64 PARTITION WALL PARA. TO PURLINS

A-901 A-901 SCALE: 1 1/2" = 1'-0"



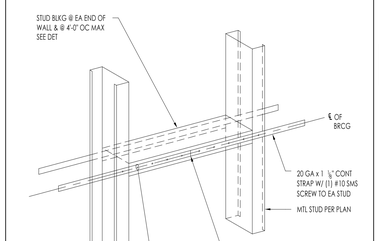
54 NON-BEARING PART BRAC'G BOTTOM

A-901 A-901 SCALE: 3" = 1'-0"



44 MTL. STUD WEB STIFFENER

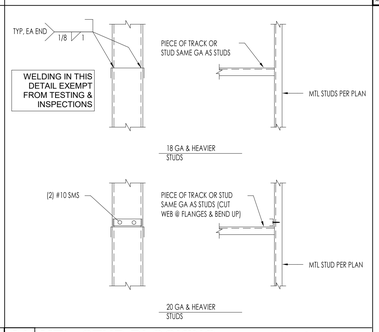
A-901 SCALE: 1" = 1'-0"



34 MTL. STUD BRACING

A-901 A-901 SCALE: 1" = 1'-0"

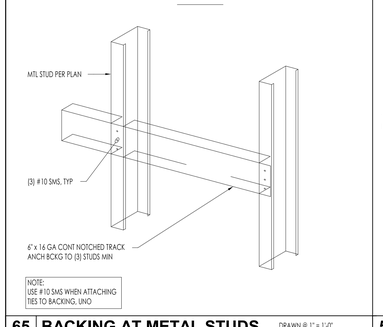
DRAWN @ 1" = 1'-0"



24 MTL. STUD BLOCKING

A-901 A-901 SCALE: 1" = 1'-0"

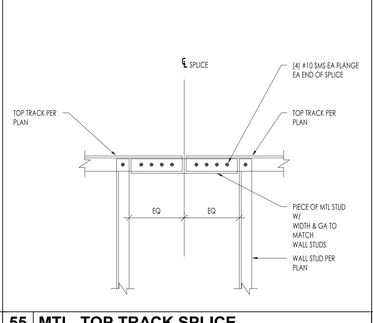
DRAWN @ 1" = 1'-0"



65 BACKING AT METAL STUDS

A-901 A-901 SCALE: 1" = 1'-0"

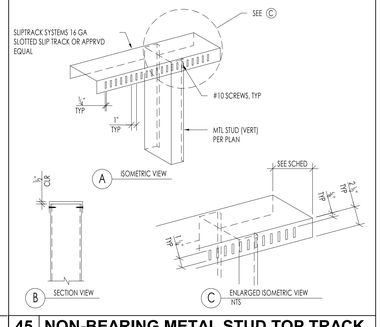
DRAWN @ 1" = 1'-0"



55 MTL. TOP TRACK SPLICE

A-901 NTS

DRAWN @ 1-1/2" = 1'-0"



45 NON-BEARING METAL STUD TOP TRACK

A-901 SCALE: 1" = 1'-0"

rrm design group
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CONSULTING ENGINEER

VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003
TYPICAL INTERIOR DETAILS

NO.	REVISION	DATE

PROJECT MANAGER: MH
DRAWN BY: GK/CCS/DD/JM/SL | CHECKED BY: DS
DATE: 06/20/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: A-901

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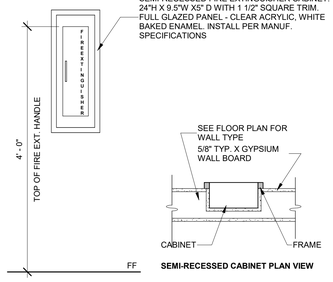
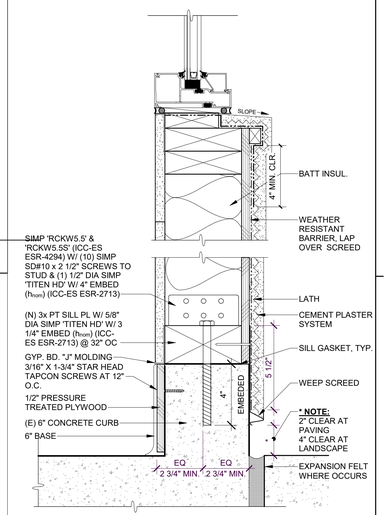
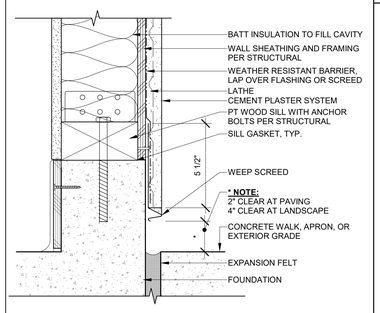
Autodesk Docs://3425 - Ventura College Admin Building Alterations/3425_Ventura_College_Admin_Building.rvt



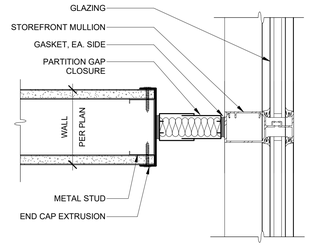
21 FIRE EXTINGUISHER CABINET
A301 A902 SCALE: 1" = 1'-0"



12 WALL UNDER REPLACED WINDOW
A301 A902 SCALE: 3" = 1'-0"



13 WEEP SCREED
A902 SCALE: 3" = 1'-0"



14 INTERIOR WALL END AT STOREFRONT
A301 A902 SCALE: 3" = 1'-0"

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CONSULTING ENGINEER

VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003

DETAILS

NO.	REVISION	DATE
1		
2		
3		
4		
5		

PROJECT MANAGER: MH
DRAWN BY: GK/CCS/DD/JM/SL | CHECKED BY: DS
DATE: 06/20/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: A-902

100% CD

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Autodesk Docs://3425 - Ventura College Admin Building Alterations/3425_Ventura_College_Admin_Building.rvt

ALL NOTES AND DETAILS ON SHEETS A-951 THROUGH A-956 ARE FROM DSA IR 25-2 REVISED 11/03/23 UNDER 2022 CBC

DSA **IR 25-2**

SUSPENDED LAY-IN PANEL CEILING: 2022 CBC

Disciplines: Structural

History: Revised 11/03/23 Under 2022 CBC
Last Revised 03/18/22 Under 2019 CBC
Original Issue 05/18/11

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

PURPOSE

This Interpretation of Regulations (IR) provides guidelines for the design and installation of metal suspension systems for lay-in ceilings on projects under DSA jurisdiction. This IR does not preclude the use of other systems, including proprietary systems as discussed in Section 4 below or custom designed systems, when approved by DSA.

SCOPE

This IR is applicable to the design, material requirements, gravity load support, seismic load resistance, and interface with mechanical and electrical appurtenances of metal suspension ceilings with lay-in panels. It covers ceiling systems whose total weight, including luminaires, services, and other devices, does not exceed 4 pounds per square foot (PSF). Heavier systems, faceted systems, ceilings that support lateral loads from partitions, and free-floating ceilings supported by chains or cables are beyond the scope of this IR and require project-specific design and details.

Appendix A below provides a library of details illustrating the requirements of this IR. The detail library is available in REVIT format for download via the link in Section 5.9.4 below. The project's design professional (DP) is responsible to select only the appropriate details that are applicable to the project-specific scope defined on the construction drawings. The design professional is also responsible to revise the library details to provide the project-specific information where required as noted in brackets with bold and italicized text, such as "***[DP TO SPECIFY…]***". It is not permitted to reproduce the body of this IR on the construction documents, except as described in Sections 5.9, 5.10, and Appendix A below.

The primary focus of this IR is typical flat/level ceilings with mineral or glass fiber tiles, troffer light fixtures, and mechanical registers that fit into the ceiling grid. Other types of installations are also addressed but require additional design and detailing by the design professional to produce a set of code compliant details that will be reviewed and approved by DSA. General guidance is provided for sloped ceilings (see Section 2.7 below) and linear luminaires (see Appendix B below).

BACKGROUND

Metal suspension ceiling systems with lay-in tiles are a common type of ceiling construction. Providing guidelines to clarify the design and construction of these systems in compliance with code prescribed requirements promotes consistency in detailing and construction documents, efficiency of plan review, and quality field installation.

California Building Code (CBC) Section 1617A.1.21 modifies American Society of Civil Engineers Standard 7 (ASCE 7), Section 13.5.6.2 by adding an exception to the end of Section 13.5.6.2.2 and adding Section 13.5.6.2.3. ASCE 7 Section 13.5.6.2.2 requires the design and installation to comply with American Society for Testing and Materials (ASTM) standard specifications C635, C636, and E580.

1. DESIGN AND INSTALLATION REQUIREMENTS

1.1 Ceiling System Components

Components shall comply with ASTM C635 and ASTM E580 Section 5.1.

1.1.1 The ceiling grid system shall be rated heavy duty per ASTM E580 Section 5.1.1 as defined by ASTM C635. Cross runners shall have a minimum load carrying capability of 16 pounds per linear foot per ASTM E580 Section 5.3.3.

1.1.2 Main runners, cross runners, splices, expansion devices, and intersection connectors shall be designed to carry a mean ultimate test load of not less than 180 pounds in compression and tension per ASTM E580 Section 5.1.2.

1.1.3 Hanger and brace wires shall conform to ASTM A641 and the material properties required by *IR 25-1: Maximum Allowable Load for Ceiling Wires*. Hanger and brace wires shall be #12-gauge (0.106-inch diameter) or larger.

1.2 Suspension System Installation

Installation of the suspension system shall comply with ASTM C636 and ASTM E580 Section 5.2.

1.2.1 Hanger wires shall be provided on a 4-foot by 4-foot grid spacing and shall be attached to main runners. Refer to Appendix A Detail 2.35 below for a graphical illustration. Splices in hanger wires shall develop 50 percent of the wire allowable load. Only one splice is permitted in the entire length of a hanger wire. Refer to Appendix A Detail 6.10 below for a graphical illustration.

1.2.2 Hanger wires shall be provided at the ends of all main and cross runners within 8-inches of the ceiling perimeter or within one-fourth of the length of the end runner, whichever is least. Perimeter hanger wires are not required when the length of the end runner is 8-inches or less. Refer to Appendix A Detail 2.60 below for a graphical illustration.

1.2.3 Ceiling grid members shall be attached to two adjacent walls (attached condition) per ASTM E580 Section 5.2.3 and Figure 4. Ceiling grid members shall be at least 3/4-inch clear of perimeter wall angles on the other walls (free condition) per ASTM E580 Section 5.2.3 and Figure 5. Refer to Appendix A Detail 2.60 below for a graphical illustration.

1.2.4 If a wall or multiple walls are specified in a plan configuration that is not orthogonal to the ceiling grid system, the runner to wall connections shall be as follows. If the following provisions cannot be met, then a project-specific layout of main and cross runners and their connections shall be designed and specified on the construction drawings.

1.2.4.1 At least two adjacent perimeter walls shall be connected to the ceiling grid as attached.

1.2.4.2 Main runners shall be oriented in the direction that facilitates at least one end being connected to a "attached" wall condition.

1.2.4.3 One end of each main runner should be free and clear of the wall as required by Section 1.2.3 above.

1.2.4.4 Opposite ends of some cross runner lines may have the same wall connection type (i.e., attached-attached or free-free). This is permitted with non-orthogonal configurations, but the number of cross runner lines with like connections at each end should be minimized.

1.2.5 The width of the perimeter supporting closure angle shall not be less than 2-inches except as allowed by Section 1.2.6 below. Closure angle shall be screwed or otherwise positively attached to the wall studs or other supporting structure (e.g., blocking).

1.2.6 The use of angles with widths less than 2-inches in conjunction with qualified proprietary

perimeter clips may be acceptable.

1.2.6.1 Proprietary perimeter clips shall be attached to the supporting closure angle with a minimum of two screws per clip.

1.2.6.2 Proprietary perimeter clips shall be installed around the entire ceiling perimeter except that a steel pop rivet may be used at the attached sides in lieu of clips when permitted by the evaluation report.

1.2.6.3 The proprietary perimeter clip shall be qualified by approved test criteria of ASCE Section 13.5.6.2.2.a. The qualified proprietary perimeter clip shall be in accordance with Section 4 below.

1.2.7 At the unattached walls (free condition) of the ceiling perimeter an interconnection between the runners to prevent lateral spreading per ASTM E580 Section 5.2.4 shall be provided. A metal stabilizer or a #16-gauge wire with a positive mechanical connection to the runner may be used and placed within 8-inches of the wall. Where the perpendicular distance from the wall to the first parallel runner is 8-inches or less, the stabilizer or #16-gauge wire is not required. Refer to Appendix A Detail 2.60 below for a graphical illustration. The use of proprietary perimeter clips to eliminate the need for stabilization is acceptable in accordance with Section 4 below.

1.3 Lateral Force Bracing Assembly Installation

Lateral force bracing assemblies consisting of a compression strut and four #12-gauge splayed bracing wires oriented 90 degrees (in plan) from each other are required for all ceiling areas. Refer to Appendix A Detail 2.35 below for a graphical illustration.

Exception: Lateral force bracing may be omitted for suspended ceiling systems with an area of 144 square feet or less when lateral restraint is provided at all perimeter walls in accordance with CBC Section 1617A.1.21, Item #4 and ASCE 7 Section 13.5.6, Exception 1.

1.3.1 Lateral force bracing assemblies shall be spaced per Table 1 below for all values of the component importance factor (I_p) of the ceiling. Refer to Appendix A Details 2.10, 2.11, and 2.12 below for graphical illustrations. In cases where the brace assembly spacing changes over the height of the building, each level of the reflected ceiling plan shall indicate the required spacing.

TABLE 1: LATERAL FORCE BRACE ASSEMBLY SPACING

Design Spectral Acceleration Parameter, (S_{DS})	Brace Assembly Spacing	
	$z/h \le 0.5$[a]	$z/h > 0.5$[a,b]
~~$S_{DS} \le 1.15$~~	~~12'-0" x 12'-0"~~	~~12'-0" x 12'-0"~~
$1.15 < S_{DS} \le 1.73$	~~12'-0" x 12'-0"~~	8'-0" x 12'-0"
~~$S_{DS} > 1.73$~~	~~8'-0" x 12'-0"~~	~~8'-0" x 8'-0"~~

Footnotes:
a. Where, as defined in ASCE 7 Section 13.3.1:
z = height in structure of point of attachment of ceiling with respect to the base.
h = average roof height of the structure with respect to the base.
b. It shall be permitted to use the brace assembly spacing for "z/h > 0.5" for the full building height.

1.3.2 There shall be a brace assembly located at a distance of not more than one-half of the spacing required by Table 1 above from each surrounding wall, expansion joint, and ceiling edge at any vertical offset. For example, where the brace spacing is 8-feet by 12-feet, the edge distance shall be 4-feet in the direction of the 8-foot spacing and 6-feet in the direction of the 12-foot spacing.

1.3.3 The slope of bracing wires shall not exceed 45 degrees from the horizontal plane and wires shall be taut. Splices in bracing wires shall develop the wire allowable load. Only one splice is permitted in the entire length of a single brace wire. Refer to Appendix A Detail 6.10 below for a graphical illustration.

1.3.4 Compression struts shall meet the following requirements:

1.3.4.1 The strut shall be sized to adequately resist the vertical component of the ceiling brace force in combination with the vertical seismic force prescribed by ASCE 7 Section 13.3.1.2 and have a maximum slenderness ratio (kl/r) not to exceed 300. The strut sizes and maximum lengths listed in Appendix A Detail 3.21 below are acceptable for ceilings complying with the requirements of this IR.

1.3.4.2 Struts shall not be more than one (horizontal) in six (vertical) out of plumb.

1.3.4.3 Struts shall be separated at least 6-inches from all unbraced ducts, pipes, conduit, etc.

1.3.5 Ceiling sections in different planes or at different elevations shall have independent positive bracing systems to resist lateral movement and seismic loads per ASTM E580 Section 5.2.8.6.

1.3.6 Proprietary lateral force bracing assemblies may be acceptable in accordance with Section 4 below. The manufacturer, model number, and evaluation report number of the proprietary lateral force bracing assemblies shall be specified. Details of the attachment of the proprietary assembly to ceiling grid members and floor/roof structure in accordance with the evaluation report shall be provided on the construction documents.

1.4 Attachment of Hanger and Bracing Wires

The construction documents shall require hanger and bracing wires to be installed in accordance with this section.

1.4.1 Hanger wires shall be fastened with not less than three tight turns in 3-inches per ASTM E580 Section 5.2.7.2. Hanger wire loops shall be tightly wrapped and sharply bent to prevent any vertical movement or rotation of the member within the loops. Refer to Appendix A Detail 4.10 below for a graphical illustration.

1.4.2 Bracing wires shall be fastened with not less than four tight turns in 1-1/2-inches per ASCE Section 13.5.6.2.3, Item #4 as added by CBC Section 1617A.1.21. Bracing wire loops shall be tightly wrapped and sharply bent to prevent any vertical movement or rotation of the member within the loops. Refer to Appendix A Detail 4.10 below for a graphical illustration.

1.4.3 Hanger and bracing wire anchorage to the structure shall be installed in such a manner that the axis of the anchor and clip aligns closely with the direction of the wire. For example, bracing wire ceiling clips shall be bent as shown in the details in Appendix A below and rotated as required to align closely with the direction of the wire; lag screws or wood screws shall be installed so they align closely with the direction of the wire, etc.

1.4.4 Ceiling hanger and bracing wires shall be separated at least 6-inches from all unbraced ducts, pipes, conduit, etc. per ASCS 7 Section 13.5.6.2.3, Item #5 as added by CBC Section 1617A.1.21.

1.4.5 Hanger and bracing wires shall not attach to or bend around obstructions including but not limited to piping, ductwork, conduit, and equipment. Provide trapeze or other supplementary support members at obstructions to facilitate compliance with hanger spacing requirements. Brace assemblies must be configured or located to avoid obstructions while maintaining compliance with the maximum brace assembly spacing requirements.

1.4.6 Additional hangers, struts, and brace assemblies shall be provided as required at all

oreaks, soffits, or discontinuous areas.

Hanger wires that are out of plumb more than one (horizontal) in six (vertical) shall have -sloping wires. See ASTM C636 Figure 1 and Appendix A Detail 4.40 below for able counter-sloping methods.

Hanger wire connection to the structure above shall be capable of carrying not less 90-pound allowable load per ASTM E580 Section 5.2.7.2.

Attachment of the bracing wires to the structure above and to the main runners shall be te for the load imposed. The ceiling weight (W_p) shall not be taken as less than 4 PSF for ing seismic forces (F_p).

Post-installed anchors (e.g., expansion anchors, screw anchors, power-actuated rs, etc.) shall have a current evaluation report in accordance with *IR A-5: Acceptance of ts, Materials and Evaluation Reports*. The specified embedment of post-installed anchors itted to be less than the minimum embedment noted in the Appendix A details below, d it complies with the evaluation report and the design professional specifies the anchor monstrates its structural adequacy.

Power-actuated fasteners in concrete are not permitted for bracing wires.

The DSA-approved construction documents shall address the protection of prestressing s when post-installed anchors are specified in prestressed concrete. The construction ents shall require field verification of the existing prestressing tendon or strand locations ude the following:

1 Notes on plans and details indicating where nondestructive scanning is required, and reme caution should be exercised while drilling.

2 Minimum clearance dimensions between post-installed anchors and prestressing

3 Notes giving direction in the event of damage to existing prestressing steel, including oppage and immediate notification of the design professional.

xpansion Joint and Seismic Separation Joints

nstruction documents shall specify joints in the ceiling system in accordance with this

Expansion joints shall be provided in the ceiling at intersections of corridors and at s of corridors and lobbies or other similar areas. Refer to Appendix A Details 2.30 and low for graphical illustrations.

For ceiling areas exceeding 2,500 square feet, a seismic separation joint shall be d to divide the ceiling into areas not exceeding 2,500 square feet in accordance with E580 Section 5.2.9. Refer to Appendix A Detail 2.45 below for a graphical illustration.

uminaires, Services, and Other Devices

naires, services, and other devices shall be mounted in a manner that will not mise ceiling performance in accordance with ASTM E580 Sections 5.3 and 5.4.

Ceiling panels shall not support any luminaires, services, or other devices.

Penetrations through the ceiling for sprinkler heads and other similar devices that are not ly tied to the ceiling system in both horizontal directions shall provide one of the following TM E580 Section 5.2.8.5:

2-inch oversized ring, sleeve, or adapter through the ceiling tile to allow free movement

of 1-inch in all horizontal directions.

1.6.2.2 Flexible sprinkler hose fitting that can accommodate 1-inch of ceiling movement.

1.6.3 Slack safety wires shall be considered hanger wires for installation and testing requirements.

1.6.4 Where Section 1.7.5 or 1.8.4 below require independent vertical support, the following provisions apply:

1.6.4.1 The specified design (including attachment to the structure above) shall be capable of supporting four times the weight of the luminaire or service.

1.6.4.2 Additional slack safety wires are not required.

1.7 Luminaires

All luminaires shall be positively attached to the ceiling suspension systems by mechanical means per California Electrical Code (CEC) Article 410.36 and this section.

1.7.1 A minimum of two screws or approved fasteners capable of resisting a horizontal force equal to the weight of the fixture are required at each light fixture per ASTM E580 Section 5.3.1. See Section 2.1.1 below for pendant luminaires.

1.7.2 Surface-mounted luminaires shall be attached to the main runner with at least two positive clamping devices on each fixture. The clamping device shall completely surround the supporting ceiling runner and be made of steel with a minimum thickness of #14-gauge. Rotational spring catches are not permitted. A #12-gauge slack safety wire shall be connected from each clamping device to the structure above. Provide additional supports when luminaires measure 8-feet or longer or exceed 56 pounds. Maximum spacing between supports shall not exceed 8-feet.

1.7.3 Luminaires weighing less than or equal to 10 pounds may be supported directly on the ceiling runners, but they shall have a minimum of one #12-gauge slack safety wire connected from the luminaire housing to the structure above.

1.7.4 Luminaires weighing greater than 10 pounds but less than or equal to 56 pounds may be supported directly on the ceiling runners, but they shall have a minimum of two #12-gauge slack safety wires connected from the luminaire housing at diagonal corners to the structure above.

Exception: All luminaires greater than 2-feet wide by 4-feet long and no more than 8-feet long weighing less than 56 pounds shall have a #12-gauge slack safety wire at each corner.

1.7.5 All luminaires weighing greater than 56 pounds shall be independently supported by no less than four taut #12-gauge hanger wires (one at each corner) attached from the luminaire housing to the structure above or other approved hangers.

1.8 Services within the Ceiling

All flexible sprinkler hose fitting mounting brackets, ceiling-mounted air terminals, solar daylight tubes, or other services shall be positively attached to the ceiling suspension systems by mechanical means to resist a horizontal force equal to the weight of the component.

1.8.1 Screws or approved fasteners are required. A minimum of two attachments are required at each component.

1.8.2 Flexible sprinkler hose fittings, ceiling-mounted air terminals, and other services weighing less than or equal to 20 pounds shall have one #12-gauge slack safety wire attached from the terminal or service to the structure above.

1.8.3 Flexible sprinkler hose fittings, ceiling-mounted air terminals, and other services weighing

more than 20 pounds but less than or equal to 56 pounds shall have two #12-gauge slack safety wires (at diagonal corners) connected from the terminal or service to the structure above.

1.8.4 Flexible sprinkler hose fittings, ceiling-mounted air terminals, and other services weighing more than 56 pounds shall be independently supported directly from the structure above by no less than four taut #12-gauge hanger wires attached from the terminal or service to the structure above or other approved hangers.

1.9 Other Devices within the Ceiling

Miscellaneous lightweight devices weighing 20 pounds or less, such as strobe lights, occupancy sensors, speakers, exit signs, etc., shall be attached to the ceiling grid per Section 1.8.1 above. In addition, devices weighing more than 10 pounds shall have one #12-gauge slack safety wire anchored to the structure above per Section 1.8.2 above.

2. ADDITIONAL REQUIREMENTS

2.1 Alternate Luminaire Types

2.1.1 Where pendant luminaires are specified in areas with a suspended ceiling, the construction documents shall include complete support details complying with *IR 16-9: Pendant Luminaires*.

2.1.2 Where recessed linear luminaires are specified in areas with a suspended ceiling, refer to Appendix B below for design and construction guidelines.

2.2 Fire-Resistance-Rated Ceilings

The construction documents shall include a manufacturer's installation detail and specify a tested assembly number for fire-resistance-rated ceiling assemblies from a nationally recognized testing laboratory.

2.2.1 The components and installation details shall conform in every respect with the listed detail and number. Details shall clearly depict all components, including insulation materials, framing, and attachment of the design so that the assembly can be constructed and inspected accordingly.

2.2.2 Pop rivets, screws or other attachments are not acceptable unless specifically detailed in the listed construction detail(s), or an approved listing by a State Fire Marshal recognized laboratory.

2.3 Acoustical Ceiling Tile Panel Clearance

For ceiling installations utilizing acoustical tile panels of mineral or glass fiber, it is not mandatory to provide 3/4-inch clearance between the acoustical tile panels and the wall on the sides of the ceiling which are free to slip. See Section 2.4 below for other panel types. Clearance between the ceiling grid members and the walls as required by Section 1.2.3 above is required regardless of the ceiling tile material.

2.4 Other Panel Types

Panels other than mineral fiber and glass fiber acoustical tile shall weigh no more than 0.5 PSF and be positively attached to the ceiling runners by mechanical means, such as bolts, cables, carabiners, d-shaped rings, screws, or rivets. Each attachment shall have an allowable design strength to support the weight of the panel acting in any direction. A minimum of two attachments are required for each panel. For ceiling installations utilizing panels other than mineral or glass fiber, 3/4-inch clearance shall be provided between the ceiling panel and the wall on the sides of the ceiling area which are free to slip.

2.4.1 Other types of attachment, such as clips, snap-in devices, perforated lips, clamping

devices, or spring-loaded devices or hooks, can be accepted when qualified by an evaluation report per IR A-5. The attachment device shall be seismically qualified in accordance with ASCE 7 Section 13.2.5 or 13.2.6.

2.4.2 An alternate means of compliance per California Administrative Code (CAC) Section 4-304 may be used to achieve approval on a project-by-project basis of other means of attachment without an evaluation report per IR A-5. See *Procedure (PR) 18-01: Request for Alternate Design, Materials and Methods of Construction*. The alternate means of attachment shall have an allowable design strength to support the weight of the panel acting in any direction and shall be capable of maintaining that strength if the ceiling grid is distorted or out of level.

2.4.3 In lieu of direct restraint attachments, it is permitted to provide a secondary means of supporting the panel in case of panel dropout or dislodgement due to ceiling grid distortion or the ceiling grid becoming out-of-level. The secondary attachment shall have an allowable design strength to support two times the weight of the panel acting in any direction. A slack wire or cable connecting each panel to the ceiling grid or structure above are examples of secondary means of support.

2.4.4 Special attachment details complying with one of the methods outlined above shall be provided for the ceiling perimeter condition, where panels are cut or altered and where nonstandard panel sizes or edge conditions occur.

2.5 Exits

Ceilings over exit paths shall be installed in accordance with ASCE 7 Section 13.5.6.2.3, Item 1 as added by CBC Section 1617A.1.21. A main or cross runner shall be installed on all sides of each ceiling panel, luminaire, and service device. Splices or intersection of such runners shall be attached with through connectors such as pop rivets, screws, pins, plates with end tabs, or other approved connectors.

2.6 Free-Floating Ceilings

Free-floating ceilings (i.e., ceilings not attached to any walls) supported by wires in accordance with this IR shall be braced in accordance with Section 1.3 above, regardless of the ceiling area, unless it can be demonstrated the anticipated ceiling movement will not cause failure of the ceiling components or failure of mechanical, electrical, plumbing, or fire and life safety components and systems within the area of anticipated movement. The anticipated movement can be assumed as the hanger supports swinging to a 45-degree angle from vertical in any plan direction.

The perimeter of free-floating ceilings shall be supported by a continuous runner which is spliced in accordance with ASTM E580 Section 5.1.2.

2.7 Sloped Ceilings

Sloped ceilings with acoustical mineral or glass fiber tiles, surrounded on all sides by partition walls are permitted in accordance with the requirements of this section. Sloped ceilings not meeting the requirements of this section shall be custom designed and detailed.

2.7.1 The slope of the ceiling shall not exceed the manufacturer's published maximum slope recommendation nor 25 degrees from horizontal, whichever is less. The ceiling shall be square or rectangular in plan. The structure above the sloped ceiling may be flat or sloped in a different direction.

2.7.2 The slope shall occur across a single plane. The slope of the ceiling is to be uniform from the intersection of the wall at the lowest end of the ceiling to the intersection of the wall at the uppermost end of the ceiling. A gable or multifaceted ceiling profile can be accomplished within the parameters of these provisions by replacing a full height wall with a soffit at the ridge or

each slope transition line. The design must demonstrate the soffit construction provides strength and stiffness in the plane of the ceiling equivalent to a full height wall.

2.7.3 Specific detailing of the sloped ceiling system is required. The requirements for a level ceiling in this IR also apply to sloped ceilings. The library of details in Appendix A below does not include details specific to sloped ceilings, but the details provided for level ceilings can be modified to meet the requirements of this section. The design professional shall review manufacturer technical guides for recommended installation to assist in the development of site-specific details.

2.7.4 DSA may require structural calculations to demonstrate the adequacy of the lateral bracing system.

2.7.5 Sloped ceilings shall comply with the following detailing requirements:

2.7.5.1 Attachment of proprietary perimeter clips to the walls shall comply with Section 1.2.6 above.

2.7.5.2 Main runners are to be installed parallel (up/down) to the direction of the ceiling slope.

2.7.5.3 Runners at the bottom/lower end of the slope shall be installed as the attached side per Section 1.2.3 above.

2.7.5.4 Runners at the top/higher end of the slope shall be installed as the free side per Section 1.2.3 above.

2.7.5.5 Perimeter wall angles at the top and bottom of the slope are to be shimmed or installed with adjustable wall mounting brackets such that the bottom leg of the angle aligns with the plane of the ceiling. This is to ensure the 90-degree angle of the wall trim in relation to the runner is maintained. Bending the leg(s) of the wall angle to match the slope of the ceiling is prohibited.

2.7.5.6 Hanger wires, including slack wires, are to be installed vertical and plumb.

2.7.5.7 Compression struts are to be installed vertical and plumb in compliance with Section 1.3.4.2 above.

2.7.5.8 Brace wires are to be installed a maximum of 45 degrees from the horizontal plane.

2.7.5.9 Shims between the tiles and the grid are required to ensure panels are centered to resist sliding out.

2.7.5.10 Panel edge hold down clips are to be installed along the top of the grid to the ceiling tiles as follows:

2.7.5.10.1 For ceiling slope less than or equal to 15 degrees from horizontal: Clips are to be installed at each main runner and cross runner around the perimeter of the ceiling in the first bay adjacent to the walls. See Appendix A Detail 2.90 below.

2.7.5.10.2 For ceiling slope greater than 15 degrees but less than or equal to 25 degrees from horizontal: Clips are to be installed per the illustration in Appendix A Detail 2.90 below.

2.7.5.11 A minimum 3/4" horizontal clearance of the runners to the wall angle is to be maintained at the free sides.

2.7.5.12 The use of a 7/8-inch wall angle requires proprietary seismic clips. Each seismic clip shall be attached to the wall angle with two screws.

2.7.6 Sloped free floating ceilings are beyond the scope of this IR. The design professional is responsible to provide project-specific design (including supporting calculations) and details.

CEILING SYSTEM ALTERATION

Existing Grid Cut or Altered

hen any portion of an existing grid system is cut or altered and any one of the conditions scribed in the subsections below applies, the entire ceiling in the affected space shall be aluated and upgraded as required to meet the requirements of the current CBC and this IR. th DSA concurrence, other existing lateral bracing systems may be deemed equivalent to a 4-ay brace wire and compression post lateral force bracing system.

1.1 The existing ceiling does not have lateral bracing assemblies (i.e., 4-way brace wires and mpression post).

1.2 The existing ceiling has lateral bracing assemblies (i.e., 4-way brace wires and mpression post) with spacing greater than 12-feet on center in either principal axis.

1.3 The area cut or altered exceeds 10 percent of the entire ceiling area. The "entire" ceiling the affected space is defined as the area of ceiling bounded by four walls or a combination of alls and expansion joints or seismic separation joints.

2 Existing Grid Not Cut or Altered

aluation and associated upgrade to the ceiling grid, suspension system, and lateral force acing assemblies is not required when the ceiling grid is not cut or altered, and the scope of ork is limited to the following:

2.1 Replacement of existing ceiling panels with like panels of equal or lesser weight.

2.2 Replacement of luminaires or air terminals with like units (i.e., equal size and equal or sser weight) placed in the same locations.

2.3 Replacement of only the internal lighting components (e.g., lens, ballast, or lamps) within isting luminaires and the attachment of the luminaire's outer enclosure to existing grid is not ered.

3 Reuse of Existing Ceiling Wires

isting ceiling hanger and bracing wires may be reused provided the following requirements e met:

3.1 Wire gauge and spacing complies with the current applicable codes and this IR.

3.2 DSA-approved construction drawings include a detail specifying the splice between a w and existing wire. Acceptable wire splice details are provided in Appendix A Detail 6.10 low.

3.3 Wires are tested in accordance with Section 6.2 below.

ACCEPTANCE OF EVALUATION REPORTS

iling grid systems and components with valid evaluation reports issued by qualified aluation agencies, in accordance with IR A-5 are accepted by DSA, provided the system or mponent meets the requirements of CBC Section 1617A.1.21, ASTM C635, ASTM C636, and STM E580 Section 5. Where a qualified evaluation report is utilized, the installation shall mply with all the requirements specified in the evaluation report (e.g., connections, member es, perimeter details, special clips to wall angles, rigid braces, etc.).

accordance with IR A-5, DSA will accept Department of Health Care Access and Information CAi) Preapproved Details (OPD) "2013 CBC Standard Suspended Ceiling Details for oustical Tile or Lay-in Panel Ceilings" and HCAi Preapproval of Manufacturer Certification PM).

5. CONSTRUCTION DOCUMENTS

The construction documents shall clearly specify all suspended ceiling systems, support details, and lateral bracing requirements.

5.1 General Requirements

The items listed in this section shall be specified in the construction documents where applicable to the project scope. This list includes items common to most projects but may not include all information required for all projects. Additional information and details may be required on the construction documents for project-specific specialty conditions, configurations, products, etc.

Except as indicated in Sections 5.9 and 5.10 and Appendix A below, it is not permitted to reproduce this IR on the construction documents as a means of compliance.

5.2 Ceiling Systems

An acceptable ceiling grid system (or multiple systems) shall be specified on the construction documents. Each system specified must be classified as heavy duty and shall have a valid evaluation report in accordance with IR A-5. The construction documents shall specify the following for each specified grid system:

5.2.1 Manufacturer.

5.2.2 Product name.

5.2.3 Evaluation report number.

5.2.4 Main runner part, model, or catalog number.

5.2.5 Cross runner part, model, or catalog number.

5.2.6 Seismic wall clip (if used).

When manufacturer specific information (e.g., proprietary seismic wall clips, adjustable wall molding brackets, panel hold downs clips, etc.) is stated in the specifications, details on the construction drawings shall be provided and coordinated to reflect the same manufacturer specific information.

5.3 Ceiling Suspension System

The ceiling suspension system and its anchorage to the structure shall be fully detailed. Where proprietary devices, clips, wall angles, brackets, etc. are specified, the details on the construction documents shall clearly specify the installation information necessary to show compliance with all evaluation report requirements.

5.4 Ceiling Lateral Force Bracing

The ceiling lateral force bracing system, including bracing wires, compression struts, and anchorage to the structure shall be fully detailed on the construction documents. The bracing assembly spacing at each floor level shall be clearly specified.

When a proprietary lateral force bracing system with a valid approval per IR A-5 (e.g., HCAI OPM), the manufacturer's system-specific information and details (e.g., ceiling grid clip, bracing members, connectors, etc.) shall be included on the construction documents.

5.5 Expansion Joints and Seismic Separations Joints

Expansion joints and seismic separation joints shall be fully detailed, and their locations shall be shown on the reflected ceiling plans.

5.6 Luminaires, Services and Other Devices

Details specifying required support and bracing of all luminaires, services, and other devices shall be provided as required to comply with this IR. Where pendant luminaires are to be installed in areas with a suspended ceiling, the construction documents shall include complete support details complying with IR 16-9.

5.7 Supplementary Support Members

Details of trapeze or other supplementary support members necessary to maintain typical hanger spacing while avoiding obstructions shall be shown on the construction documents.

5.8 Partition Bracing

Partition bracing shall be shown on the construction documents and be independent of the ceiling system.

5.9 Ceiling Notes and Details in Appendix A

The ceiling notes and details provided in Appendix A below are deemed to meet the general requirements of this IR. These notes and details shall not be used for construction or inspection except when incorporated in DSA-approved construction documents.

5.9.1 Use of the notes and details in Appendix A is not mandated by DSA; they are provided only as a convenience to the design professional for incorporation into the construction documents.

5.9.2 Use of other notes and details created by the design professional is always acceptable provided they comply with the CBC and this IR.

5.9.3 While the Appendix A notes and details do not cover every condition that may occur on every project, they are intended to cover conditions common to most projects with suspended ceilings. It is anticipated their use will facilitate a more efficient design, plan review, and construction process.

5.9.4 An electronic drawing file of the Appendix A details in Revit LT[TM] 2024 format is available for download.

5.9.4.1 DSA provides this electronic drawing file to the design professional for convenience only. DSA is not responsible for issues of compatibility with particular computer systems or conversion to other file formats.

5.9.4.2 The requirements of this IR are in no way changed or modified by providing the design professional with this electronic drawing file.

5.9.4.3 The electronic drawing file may not be currently up to date or in conformance with the published IR. The design professional shall verify and coordinate the information with the latest published IR.

5.9.4.4 Information contained in the file may be changed or updated by DSA, and DSA has no responsibility to notify or supply the registered design professional with these changes.

5.10 Ceiling Notes and Details: Conditions of Use

The conditions and requirements for use of the ceiling notes and details in Appendix A below are as follows:

5.10.1 The details give no consideration to suitability for use in a specific application, compatibility with other building systems, appropriate use of materials or design, appearances, etc. The design professionals listed on the form *DSA 1: Application for Approval of Plans and Specifications* shall review all such qualities, features, and properties to ensure code

compliance, appropriate integration with other building systems, and proper design for the project-specific conditions.

5.10.2 When the details in Appendix A below are used, they shall be incorporated into the construction drawings submitted for DSA review and approval. Incorporation by reference alone is not permitted. Only the notes and details applicable to the scope of the project shall be incorporated in the construction documents (e.g., do not include wood connection details in the construction drawings for a concrete structure, do not include essential services building details in the construction documents for a school project, etc.).

5.10.3 Provided the content of the details is not changed, it is left to the discretion of the design professional to reconfigure (i.e., renumber, resize, etc.) the details for integration into the construction drawings.

Exception: The design professional (DP) is required to provide additional information on all details where so indicated in brackets with bold and italicized text, such as "***[DP TO SPECIFY…]***". These brackets and notes to the design professional shall be removed from the details and replaced with the applicable information.

5.10.4 These details submitted as part of the construction documents during the plan review process will be subject to plan review as follows:

5.10.4.1 It is expected no plan review comment will be made on a detail incorporated into the construction documents that is unaltered and found applicable to the project for which it is submitted.

5.10.4.2 Where a detail requires the designer to provide additional information to complete the detail before applying it to the drawings, plan review will be limited to the following:

5.10.4.2.1 A review of the additional information provided.

5.10.4.2.2 A review to determine if the detail, with the additional information, is applicable to the project for which it is submitted.

5.10.4.3 Where a detail incorporated into the construction documents has been altered beyond that described above, it will be subject to a full review for both detail content and applicability to the project for which it is submitted.

5.10.5 Where conditions not covered by the details in Appendix A below occur, project-specific design and details shall be provided by the design professional. This includes, but is not limited to, pendant luminaires, projector supports, projector screens, ceiling fans, free-floating ceilings, etc.

6. TESTING

All field testing shall be performed in the presence of the project inspector or a special inspector.

6.1 New Installations

Post-installed anchors in concrete used to support new ceiling systems shall be tested in accordance with this section.

6.1.1 Anchors for hanger wires shall be tested at a frequency of 10 percent. Power-actuated fasteners in concrete shall be field tested for 200 pounds in tension. Test loads for other post-installed anchors shall be tested in accordance with CBC Section 1910A.5.

6.1.2 Anchors for bracing wires shall be tested at a frequency of 50 percent in accordance with CBC Section 1910A.5.

6.2 Reuse of Existing Ceiling Hanger Wires and Bracing Wires

Existing hanger and bracing wires to be reused in the construction of new ceilings shall be tested in accordance with this section.

6.2.1 All existing ceiling hanger wire assemblies shall be field tested to 200 pounds. If existing hanger wires are spaced no more than 4'-0" on center each way and the first 20 tests pass, the testing frequency can be reduced to 50 percent.

6.2.2 All existing bracing wire assemblies shall be field tested to 440 pounds at a 45-degree angle from horizontal and in the plan direction the wire will be reused. If the first 20 tests pass, the testing frequency can be reduced to 50 percent.

6.2.3 Where a new wire is spliced to an existing wire, each spliced wire shall be field tested to the loads given for existing assemblies above.

6.2.4 The testing frequency reductions given in Section 6.2.1 and 6.2.2 above are not permitted for existing nonconforming buildings subject to rehabilitation in accordance with CAC Section 4-307.

REFERENCES:

2022 California Code of Regulations (CCR) Title 24
Part 2: California Building Code (CBC), Section 1617A.1.21.
Part 3: California Electrical Code (CEC), Article 410.36.

This IR is intended for use by DSA staff and by design professionals to promote statewide consistency for review and approval of plans and specifications as well as construction oversight of projects within the jurisdiction of DSA, which includes State of California public schools (K–12), community colleges and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is subject to revision at any time. Please check DSA's website for currently effective IRs. Only IRs listed on the webpage at www.dgs.ca.gov/dsa/publications at the time of project application submittal to DSA are considered applicable.

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CONSULTING ENGINEER

VENTURA COLLEGE ADMIN BLDG ALTERATION

4667 TELEGRAPH RD, VENTURA, CA 93003

SUSPENDED CEILING NOTES

NO.	REVISION	DATE
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PROJECT MANAGER: MH
DRAWN BY: GK/CCS/DD/JM/SL
CHECKED BY: DS
DATE: 06/20/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: A-911

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ALL NOTES AND DETAILS ON SHEETS A-951 THROUGH A-956 ARE FROM DSA IR 25-2 REVISED 11/03/23 UNDER 2022 CBC

1. CEILING SYSTEM GENERAL NOTES

1.01 Ceiling system components shall comply with ASTM C635 and Section 5.1 of ASTM E580.

1.02 The ceiling grid system shall be rated heavy duty as defined by ASTM C635.

1.03 Ceiling systems. The following ceiling system(s) is/are part of the scope of this project:

Manufacturer:	***[DP to specify]***
Product Name:	***[DP to specify]***
Evaluation Report Number:	***[DP to specify]***
Main Runner Part, Model, or Catalog Number:	***[DP to specify]***
Cross Runner Part, Model, or Catalog Number:	***[DP to specify]***

1.04 Seismic Wall Clip:

Manufacturer's Model: ***[DP to specify if used]***

1.05 Ceiling panels shall not support any luminaires, air terminals, or devices.

1.06 For acoustical tile panels of any material other than mineral or glass fiber, a ¾" clearance shall be provided between the panel and the wall on the sides of the ceiling free to slip. Clearance between ceiling grid runners and walls shall comply with the details on these drawings regardless of ceiling tile material.

2. MATERIALS

2.01 Ceiling wire shall be Class 1 zinc coated (galvanized) carbon steel conforming to ASTM A641. Wire shall be #12 gauge (0.106" diameter) with soft temper and minimum ultimate tensile strength = 70 ksi.

2.02 Galvanized sheet steel (including that used for metal stud compression struts) shall conform to ASTM A653, or other equivalent sheet steel listed in Section A3.1 of the North American Specification for the Design of Cold-Formed Steel Structural Members, (AISI S100). Material 43 mil (18 gauge) thick and lighter shall have minimum yield strength of 33 ksi. Material 54 mil (16 gauge) thick and heavier shall have a minimum yield strength of 50 ksi.

2.03 Electrical metallic tube (EMT) shall conform to ANSI C80.3/UL 797 carbon steel with G90 galvanizing. EMT shall have minimum yield strength of 30 ksi and minimum ultimate strength of 48 ksi.

3. ATTACHMENT OF HANGER AND BRACING WIRES

3.01 All ceiling hanger and bracing wires shall be separated at least 6 inches from all unbraced ducts, pipes, conduit, etc.

3.02 Hanger and bracing wires shall not attach to or bend around obstructions including but not limited to piping, ductwork, conduit, and equipment.

3.03 Hanger wires that are more than one (horizontal) in six (vertical) out of plumb shall have counter-sloping wires.

ARMSTRONG
PRELUDE XL WITH SEISMIC RX SUSPENSION SYSTEM
ICC ESR 1308
7301
XL7341
BERC 2 CLIP

Detail Title:		Detail No.
CEILING NOTES		1.00

3.04 Slack safety wires shall be considered hanger wires for installation and testing requirements.

3.05 Hanger and bracing wire anchorage to the structure shall be installed such that the direction of the anchorage aligns with the direction of the wire. Bracing wire ceiling clips shall be bent as shown in the details and rotated as required to align with the direction of the wire. Screws in wood shall be installed to align with the direction of the wire.

4. FASTENERS AND WELDING

4.01 Sheet metal screws shall comply with ASTM C1513 and ASME B18.6.3. Penetration of screws through joined material shall not be less than three exposed threads.

4.02 Expansion anchors shall be: ***[DP to specify manufacturer, product, evaluation report number, and test load for each size specified per CBC 1910A.5.4.]***

4.03 Power-Actuated Fasteners shall be: ***[DP to specify manufacturer, product, evaluation report number.]***

4.04 If not otherwise specified in the evaluation report, power-actuated fasteners installed in steel shall be installed so the entire pointed end of the fastener is driven through the steel member.

4.05 Power-actuated fasteners in concrete or masonry are not permitted for bracing wires.

4.06 Concrete reinforcement and prestressing tendons shall be located by non-destructive means prior to installing post-installed anchors.

4.07 Welding shall be in accordance with AWS D1.3 using E60XX series electrodes.

5. TESTING

5.01 All field testing shall be performed in the presence of the project inspector.

5.02 Post-installed anchors in concrete used to support hanger wires shall be tested at a frequency of 10 percent. Power-actuated fasteners in concrete shall be field tested for 200 pounds in tension. All other post-installed anchors in concrete shall be tested in accordance with CBC Section 1910A.5.

5.03 Post-installed anchors in concrete used to attach bracing wires shall be tested at a frequency of 50 percent and in accordance with CBC Section 1910A.5.

6. LUMINAIRES

6.01 All luminaires shall be positively attached to the ceiling suspension systems by mechanical means to resist a horizontal force equal to the weight of the luminaire. A minimum of two screws or approved fasteners are required at each luminaire per ASTM E580 Section 5.3.1.

6.02 Surface-mounted luminaires shall be attached to the main runner with at least two positive clamping devices. The clamping device shall completely surround the supporting ceiling runner and be made of steel with a minimum thickness of #14 gauge. Rotational spring catches are not permitted. A #12 gauge slack safety wire shall be connected from each clamping device to the structure above. Additional supports shall be provided when a luminaire is 8 feet or longer or exceeds 56 pounds. Maximum spacing between supports shall not exceed 8 feet.

Detail Title:	REV: 09/21/2015	Detail No.
CEILING NOTES	REV: 03/2022	1.00
	REV: 11/2023	

NOT APPLICABLE

6.03 Luminaires weighing less than or equal to 10 pounds supported directly on the ceiling runners shall have a minimum of one #12 gauge slack safety wire connected from the fixture housing to the structure above.

6.04 Luminaires weighing greater than 10 pounds but less than or equal to 56 pounds supported directly on the ceiling runners shall have a minimum of two #12 gauge slack safety wires connected from the fixture housing at diagonal corners to the structure above.

Exception: All luminaires greater than two by four feet weighing less than 56 pounds shall have a #12 gauge slack safety wire at each corner.

6.05 All luminaires weighing greater than 56 pounds shall be independently supported from the structure above. See support details on these drawings for more information.

7. SERVICES WITHIN THE CEILING

7.01 All flexible sprinkler hose fitting mounting brackets, ceiling-mounted air terminals, or other services shall be positively attached to the ceiling suspension systems by mechanical means. Screws or other fasteners specified on the drawings are required. A minimum of two attachments are required at each component.

7.02 Ceiling-mounted services weighing less than or equal to 20 pounds shall have one #12 gauge slack safety wire attached from the terminal or service to the structure above.

7.03 Ceiling-mounted services weighing more than 20 pounds but less than or equal to 56 pounds shall have two #12 gauge slack safety wires (at diagonal corners) connected from the terminal or service to the structure above.

7.04 Ceiling-mounted services weighing more than 56 pounds shall be independently supported from the structure above. See support details on these drawings for more information.

8. OTHER DEVICES WITHIN THE CEILING

8.01 All lightweight miscellaneous devices, such as strobe lights, occupancy sensors, speakers, exit signs, etc., shall be attached to the ceiling grid. Devices weighing more than 10 pounds shall have a #12 gauge slack safety wire anchored to the structure above. Devices weighing more than 20 pounds shall be independently supported from the structure above.

Detail Title:	REV: 09/21/2015	Detail No.
CEILING NOTES	REV: 03/2022	1.00
	REV: 11/2023	

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VENTURA COLLEGE ADMIN BLDG ALTERATION

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SUSPENDED CEILING NOTES

NO.	REVISION	DATE
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3		
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5		

PROJECT MANAGER: MH
DRAWN BY: GK/CCS/DD/JM/SL | CHECKED BY: DS
DATE: 06/20/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: A-912

8/12/2025 6:50:39 AM
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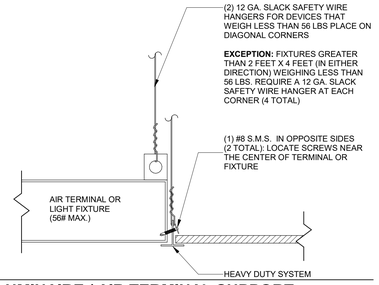
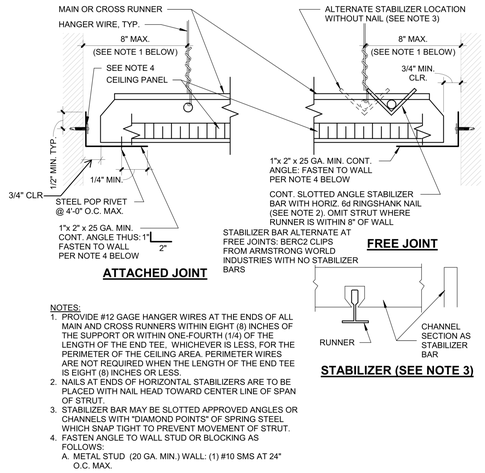
ALL NOTES AND DETAILS ON SHEETS A-951 THROUGH A-956 ARE FROM DSA IR 25-2 REVISED 11/03/23 UNDER 2022 CBC

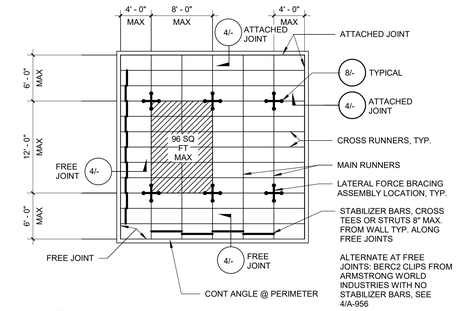


1 LUMINAIRE / AIR TERMINAL SUPPORT
A913 SCALE: 3" = 1'-0"



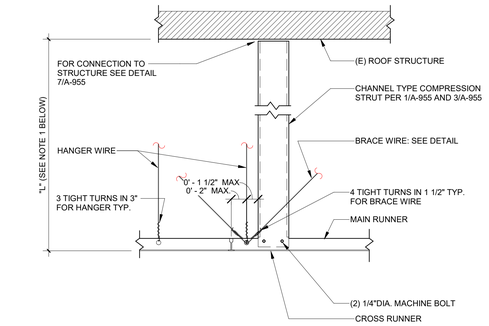
NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE. WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA, PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
2. NAILS AT ENDS OF HORIZONTAL STABILIZERS ARE TO BE PLACED WITH NAIL HEAD TOWARD CENTER LINE OF SPAN OF STRUT.
3. STABILIZER BAR MAY BE SLOTTED APPROVED ANGLES OR CHANNELS WITH "DIAMOND POINTS" OF SPRING STEEL WHICH SNAP TIGHT TO PREVENT MOVEMENT OF STRUT.
4. FASTEN ANGLE TO WALL STUD OR BLOCKING AS FOLLOWS:
   A. METAL STUD (20 GA. MIN.) WALL: (1) #10 SMS AT 24" O.C. MAX.

5 CEILING PERIMETER
A913 NTS



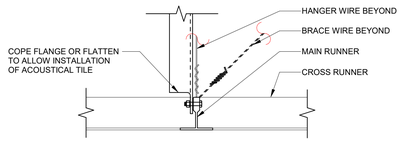
NOTE:
BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 96 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.

4 TYP. CEILING PLAN 8'X12' BRACE ASSEMBLY SPACING
A913 SCALE: 1/8" = 1'-0"

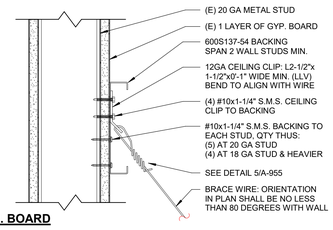


NOTES:
1. DIMENSION "L" SHALL NOT EXCEED THE ALLOWABLE LENGTH GIVEN IN THE TABLE ON FOR THE COMPRESSION STRUT SECTION USED.

2 COMPRESSION STRUT - CHANNEL TYPE
A913 SCALE: 1 1/2" = 1'-0"

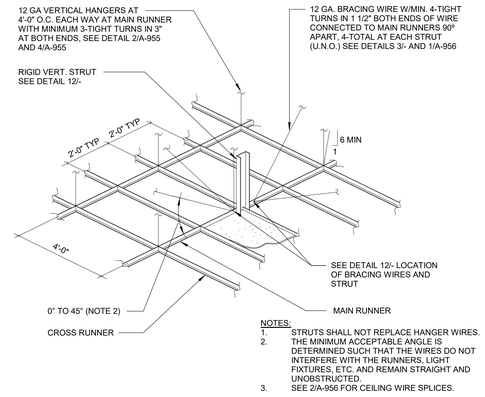


3 SECTION
A913 NTS



WALL WITH GYP. BOARD

7 BRACING WIRE TO METAL STUD WALL
A913 NTS



NOTES:
1. STRUTS SHALL NOT REPLACE HANGER WIRES.
2. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.
3. SEE 2/A-956 FOR CEILING WIRE SPLICES.

6 SUSPENSION & LATERAL BRACING ASSEMBLY
A913 NTS

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SHEET: A-913

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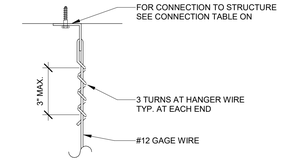
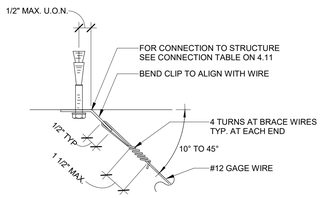


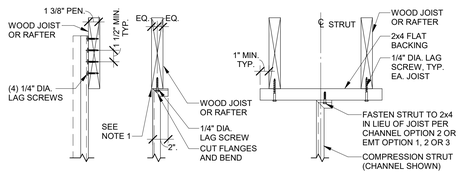
HANGER WIRE



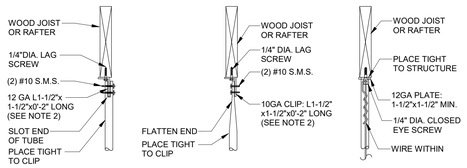
BRACE WIRE

2 HANGER AND BRACING WIRE CONNECT.

A2.1 SCALE: 3" = 1'-0"



CHANNEL STRUT: OPTION 1 | **CHANNEL STRUT: OPTION 2** | **CHANNEL OR EMT STRUT: BETWEEN JOIST**

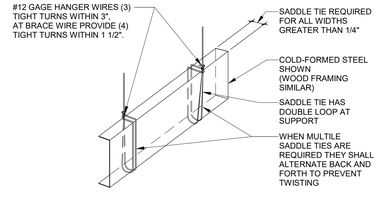


EMT STRUT: OPTION 1 | **EMT STRUT: OPTION 2** | **EMT STRUT: OPTION 3**

NOTES:
1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF WOOD MEMBER.
2. VERTICAL LEG OF MEMBER TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER.
3. PEN. = MINIMUM PENETRATION OF LAG SCREW THREADS INTO THE WOOD MEMBER.
4. NO. 14 WOOD SCREW MAY BE USED IN LIEU OF 1/4" LAG SCREW.

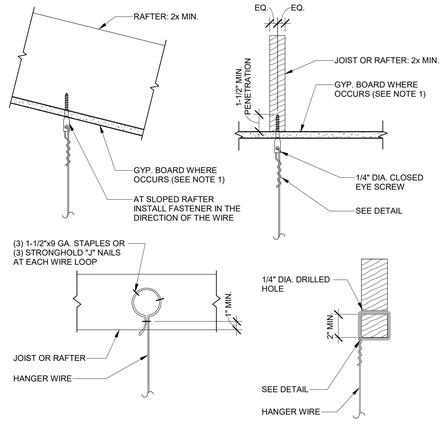
7 STRUT CONNECTION TO SAWN TIMBER W/O GYP.

A2.1 NTS



5 TYPICAL SADDLE TIE DETAIL

A2.1 SCALE: 3" = 1'-0"



NOTES:
1. WHEN FIRE RATED GYP. BOARD IS INSTALLED ON THE BOTTOM FLANGES, USE SCREW EYES W/ SUFFICIENT LENGTH TO AVOID DAMAGING THE FIRE RATED GYP. BOARD AND MEET MIN. PENETRATION.

4 HANGER WIRE CONNECTION TO SAWN TIMBER

A2.1 SCALE: 1 1/2" = 1'-0"

ALL NOTES AND DETAILS ON SHEETS A-951 THROUGH A-956 ARE FROM DSA IR 25-2 REVISED 11/03/23 UNDER 2022 CBC

STRUCTURAL SYSTEM OF FLOOR/ ROOF ABOVE SUSPENDED CEILING	APPLICABLE DETAIL
~~BARE METAL DECK~~	~~N/A~~
~~CONCRETE OVER METAL DECK~~	~~N/A~~
~~CONCRETE SLAB, BEAM, OR JOIST~~	~~N/A~~
~~STRUCTURAL STEEL~~	~~N/A~~
~~SAWN TIMBER WITH GYPSUM BOARD~~	~~N/A~~
SAWN TIMBER WITHOUT GYPSUM BOARD	
~~WOOD I-JOIST~~	~~N/A~~

6 COMPRESSION STRUT CONNECTION TABLE

A2.1 NTS

STRUCTURAL SYSTEM OF FLOOR/ ROOF ABOVE SUSPENDED CEILING	APPLICABLE HANGER WIRE DETAIL	APPLICABLE BRACE WIRE DETAIL
~~BARE METAL DECK~~	~~N/A~~	~~N/A~~
~~CONCRETE OVER METAL DECK~~	~~N/A~~	~~N/A~~
~~CONCRETE SLAB, BEAM, OR JOIST~~	~~N/A~~	~~N/A~~
~~STRUCTURAL STEEL~~	~~N/A~~	~~N/A~~
~~METAL STUD WALL~~	~~N/A~~	~~N/A~~
SAWN TIMBER	4/-	1/A-956
~~WOOD I-JOIST~~	~~N/A~~	~~N/A~~
~~WOOD CHORD TRUSS~~	~~N/A~~	~~N/A~~
~~OPEN WEB STEEL JOIST~~	~~N/A~~	~~N/A~~

1 HANGER & BRACE WIRE CONN. TABLE

A2.1 SCALE: 12" = 1'-0"

COMPRESSION STRUT EMT SECTION	MAXIMUM LENGTH
1/2" DIAMETER EMT (0.042" WALL THICKNESS)	3' - 11"
3/4" DIAMETER EMT (0.049" WALL THICKNESS)	6' - 4"
1" DIAMETER EMT (0.057" WALL THICKNESS)	9' - 9"
1 1/4" DIAMETER EMT (0.065" WALL THICKNESS)	12' - 9"
1 1/2" DIAMETER EMT (0.065" WALL THICKNESS)	14' - 9"
2" DIAMETER EMT (0.065" WALL THICKNESS)	18' - 10"

COMPRESSION STRUT CHANNEL SECTION	MAXIMUM LENGTH
250S125-33	5' - 10"
250S137-33	6' - 10"
362S137-33	8' - 0"
250S137-43	8' - 10"
400S137-43	10' - 10"

3 COMPRESSION STRUT TABLE

A2.1 SCALE: 12" = 1'-0"

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PROJECT MANAGER: MH
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SHEET: A-914

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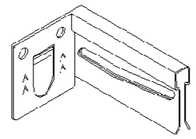
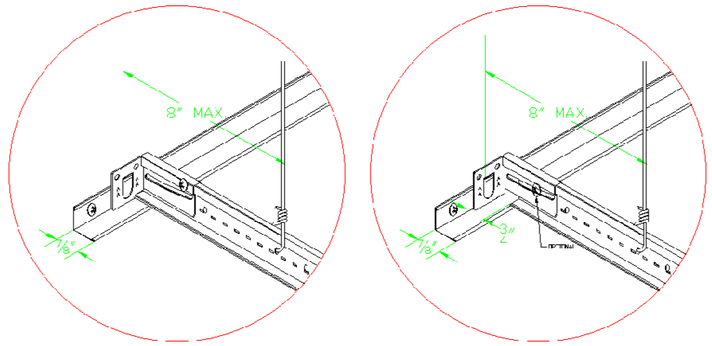
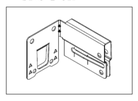
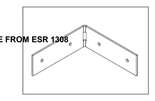




STEEL AND ALUMINUM BERC-2 CLIP



XTAC CLIP



THE FOLLOWING DETAILS ARE FROM ESR 1308

BERC2 AND AL BERC-2 TIGHT WALL INSTALLATION (ATTACHED GRID CONDITION)

BERC-2 AND AL BERC-2 CLEARANCE WALL INSTALLATION (UNATTACHED GRID CONDITION)

OPTIONAL TIGHT WALL INSTALLATION (ATTACHED GRID CONDITION)

OPTIONAL TIGHT WALL INSTALLATION (ATTACHED GRID CONDITION)

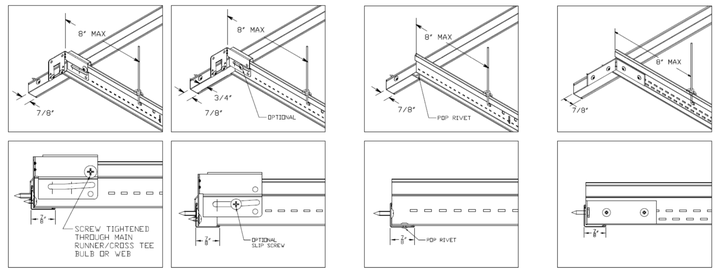


FIGURE 2—BERC-2, AL BERC-2, and XTAC CLIPS

3 BERC2 CLIP-ESR 1308
NTS

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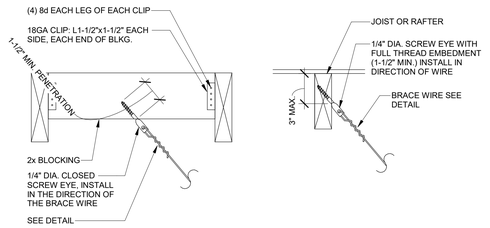
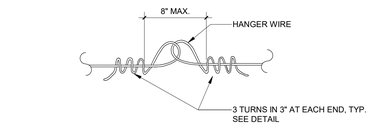
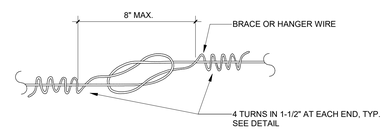


2 BRACE WIRE CONNECTION TO SAWN TIMBER
NTS



HANGER WIRE ONLY



HANGER OR BRACE WIRE

NOTES:
1. WIRE SPLICES ARE SHOWN LOOSELY TIED FOR ILLUSTRATIVE PURPOSES ONLY AND SHALL BE DRAWN TIGHT TO COMPLETE INSTALLATION WHEN CONSTRUCTED.
2. WIRE LOOPS SHALL BE TIGHTLY WRAPPED AND SHARPLY BENT TO PREVENT ANY VERTICAL MOVEMENT OR ROTATION WITHIN THE LOOPS.
3. EACH HANGER AND BRACE WIRE SHALL BE SPLICED NO MORE THAN ONCE ALONG ITS LENGTH.

1 6.10 - CEILING WIRE SPLICES
SCALE: 3" = 1'-0"

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SHEET: A-915

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MECHANICAL NOTES

1. SCOPE OF WORK: WORK INCLUDES THE FOLLOWING: FURNISH AND INSTALL ALL EQUIPMENT AND CONTROLS SHOWN ON THE MECHANICAL AND ARCHITECTURAL DRAWINGS AND DESCRIBED IN THESE NOTES, THE BOOK SPECIFICATIONS AND THE CONTRACT DOCUMENTS. WORK INCLUDES BUT IS NOT LIMITED TO: REMOVE AND INSTALLING OF DUCTWORK, AND AIR DISTRIBUTION AND STARTUP AND COMMISSIONING OF CONTROL SYSTEMS AS DESCRIBED IN THE CONTRACT DOCUMENTS. INCLUDED ARE ALL DEVICES NEEDED TO MAKE COMPLETE AND FUNCTIONAL SPACE CONDITIONING SYSTEMS AND CONTROLS. CONTRACTOR SHALL FURNISH AND INSTALL, MAKE OPERABLE, AND TEST ALL SYSTEMS AND MECHANICAL EQUIPMENT SHOWN ON THE PLANS AND DESCRIBED IN THE SPECIFICATIONS AND CONTRACT DOCUMENTS. IN CONNECTION THEREWITH, CONTRACTOR SHALL ALSO FURNISH AND INSTALL ALL NECESSARY DEVICES, HARDWARE, AND SYSTEMS REQUIRED TO MAKE SAID EQUIPMENT PROPERLY AND SAFELY OPERABLE, INCLUDING BUT NOT LIMITED TO, MOUNTING HARDWARE, INSULATION, DUCT SYSTEMS, REGISTERS/DIFFUSERS, CONTROL SYSTEMS, AND PATCHING AND PAINTING.

2. EXAMINATION OF SITE AND CONTRACT DOCUMENTS. EACH BIDDER SHALL, AT ITS SOLE COST AND EXPENSE, INSPECT THE SITE OF THE PROPOSED WORK TO BECOME FULLY ACQUAINTED WITH CONDITIONS RELATING TO THE WORK AND TO FULLY UNDERSTAND THE FACILITIES, DIFFICULTIES AND RESTRICTIONS ATTENDING THE EXECUTION OF THE WORK UNDER THE CONTRACT DOCUMENTS AND COST THEREOF. BIDDERS SHALL THOROUGHLY REVIEW AND BE FAMILIAR WITH THE CONTRACT DOCUMENTS, INCLUDING WITHOUT LIMITATION, THE SPECIFICATIONS AND THE DRAWINGS. THE FAILURE OR OMISSION OF ANY BIDDER TO RECEIVE OR EXAMINE ANY OF THE CONTRACT DOCUMENTS, FORMS, INSTRUMENTS, ADDENDA, OR OTHER DOCUMENTS OR TO INSPECT THE SITE SHALL NOT RELIEVE SUCH BIDDER FROM ANY OBLIGATIONS WITH RESPECT TO THE BID PROPOSAL, THE CONTRACT OR THE WORK REQUIRED UNDER THE CONTRACT DOCUMENTS. THE OWNER ASSUMES NO RESPONSIBILITY OR LIABILITY TO ANY BIDDER FOR, NOR SHALL THE OWNER BE BOUND BY, ANY UNDERSTANDINGS, REPRESENTATIONS OR AGREEMENTS OF THE OWNER'S AGENTS, EMPLOYEES OR OFFICERS CONCERNING THE CONTRACT DOCUMENTS OR THE WORK MADE PRIOR TO EXECUTION OF THE CONTRACT.

3. INTERPRETATION OF DRAWINGS, SPECIFICATIONS OR CONTRACT DOCUMENTS. IF ANY BIDDER IS IN DOUBT AS TO THE TRUE MEANING OF ANY PART OF THE DRAWINGS, THE SPECIFICATIONS OR OTHER PORTIONS OF THE CONTRACT DOCUMENTS; FINDS DISCREPANCIES, ERRORS OR OMISSIONS THEREIN; OR FINDS VARIANCES IN ANY OF THE CONTRACT DOCUMENTS WITH APPLICABLE RULES, REGULATIONS, ORDINANCES AND/OR LAWS, A WRITTEN REQUEST FOR AN INTERPRETATION OR CORRECTION THEREOF MAY BE SUBMITTED TO THE ENGINEER. IT IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE BIDDER TO SUBMIT SUCH REQUEST IN SUFFICIENT TIME FOR THE PREPARATION OF A RESPONSE THERETO AND DELIVERY OF SUCH RESPONSE TO ALL BIDDERS PRIOR TO THE SCHEDULED CLOSING FOR RECEIPT OF BID PROPOSALS. ANY REQUEST OF ANY BIDDER, PURSUANT TO THE FOREGOING SENTENCE THAT IS MADE LESS THAN SEVEN DAYS PRIOR TO THE SCHEDULED CLOSING DATE FOR THE RECEIPT OF BID PROPOSALS SHALL BE DEEMED UNTIMELY. ANY INTERPRETATION OR CORRECTION OF THE CONTRACT DOCUMENTS WILL BE MADE ONLY BY WRITTEN ADDENDUM DULY ISSUED BY THE OWNER OR THE ENGINEER. A COPY OF ANY SUCH ADDENDUM WILL BE MAILED OR OTHERWISE DELIVERED TO EACH BIDDER RECEIVING A SET OF THE CONTRACT DOCUMENTS. NO PERSON IS AUTHORIZED TO RENDER AN ORAL INTERPRETATION OR CORRECTION OF ANY PORTION OF THE CONTRACT DOCUMENTS TO ANY BIDDER, AND NO BIDDER IS AUTHORIZED TO RELY ON ANY SUCH ORAL INTERPRETATION OR CORRECTION. FAILURE TO REQUEST INTERPRETATION OR CLARIFICATION OF THE DRAWINGS, THE SPECIFICATIONS OR OTHER PORTIONS OF THE CONTRACT DOCUMENTS PURSUANT TO THE FOREGOING SHALL BE DEEMED TO BE A WAIVER OF ANY DISCREPANCY, DEFECT, OR CONFLICT THEREIN.

4. DIMENSIONS. ALL DIMENSIONS SHALL HAVE PREFERENCE OVER SCALE. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS BEFORE PROCEEDING WITH WORK. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON WORKING DRAWINGS. ALL SIZES OF EQUIPMENT AND MATERIALS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.

5. CODES AND STANDARDS: ALL WORK SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), 2022 CALIFORNIA BUILDING CODE, THE 2022 CALIFORNIA MECHANICAL CODE, THE 2022 CALIFORNIA PLUMBING CODE, THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, 2022 CALIFORNIA ELECTRIC CODE, THE STATE OF CALIFORNIA, EQUIPMENT MANUFACTURER'S RECOMMENDED PROCEDURES, AND STANDARD CONSTRUCTION PRACTICES. NOTE: ALL MECHANICAL EQUIPMENT SHALL BE IN STRICT ACCORDANCE WITH THE EQUIPMENT SCHEDULE, AND SHALL BE NEW AND FREE FROM DEFECTS. CONTRACTOR SHALL OBTAIN APPROVED INSPECTIONS FOR ALL WORK AS REQUIRED BY OWNER AND LOCAL JURISDICTION. CONTRACTOR SHALL MAINTAIN IN EFFECT ALL INSURANCE REQUIRED BY STATE LAWS, LOCAL JURISDICTION AND GENERAL CONTRACTOR/OWNER. WHERE CONFLICT OR VARIATION EXISTS AMONGST CODES, SPECIFICATIONS OR DRAWINGS, THE MOST STRINGENT SHALL GOVERN.

NOTE: WHERE TWO OR MORE CODES CONFLICT, THE MOST RESTRICTIVE SHALL APPLY. NOTHING IN THESE PLANS AND SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO APPLICABLE CODES.

6. CONSTRUCTION OBSERVATION: IN ADDITION TO THE REQUIREMENT FOR OBTAINING INSPECTIONS BY THE LOCAL JURISDICTION, CONTRACTOR SHALL NOTIFY ENGINEER AT APPROPRIATE TIMES DURING THE CONSTRUCTION PROCESS SO THAT ENGINEER CAN VISIT SITE TO BECOME GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF CONTRACTOR'S WORK AND TO DETERMINE IF THE WORK IS PROCEEDING IN GENERAL ACCORDANCE WITH THE CONTRACT DOCUMENTS.

7. SUBMITTALS REQUIRED: PRIOR TO ORDERING EQUIPMENT AND MATERIALS, CONTRACTOR SHALL FURNISH TO ENGINEER / OWNER SUBMITTALS AND SHOP DRAWINGS OF ALL EQUIPMENT AND MATERIALS PROPOSED FOR USE IN THIS PROJECT. ORDERING OF EQUIPMENT AND MATERIALS SHALL ONLY PROCEED AFTER SATISFACTORY REVIEW OF ALL SUBMITTALS BY CONTRACTOR / ENGINEER / OWNER. COPIES OF ALL OWNER'S MANUALS, WARRANTIES AND OTHER WRITTEN INFORMATION REGARDING SYSTEMS SHALL BE PRESENTED TO OWNER PRIOR TO THE COMPLETION OF THE PROJECT.

8. UNIT LOCATIONS: EQUIPMENT AND SYSTEM LOCATIONS SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL STRUCTURAL MEMBERS AND EXISTING CONDITIONS IN THE FIELD, AND LOCATE UNITS AND DUCTWORK TO AVOID INTERFERENCE. ANY SIGNIFICANT DEVIATIONS FROM THE PLANS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER. ALLOW CLEARANCE FOR DUCTWORK AND PIPING. ALL CLEARANCES REQUIRED BY UNIT MANUFACTURER SHALL BE MAINTAINED. ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH CODES AND THE RECOMMENDED INSTALLATION PROCEDURES PUBLISHED BY THE MANUFACTURER.

9. DUCTWORK: CONTRACTOR SHALL INSTALL DUCTWORK IN THE APPROXIMATE LOCATIONS SHOWN ON THE DRAWINGS. ALL DUCTWORK SHALL BE SECURELY ANCHORED TO THE BUILDING IN AN APPROVED MANNER THAT WILL RENDER IT ABSOLUTELY FREE FROM VIBRATION AND LATERAL MOVEMENT. ALL NECESSARY TRANSITIONS AND OFFSETS TO AVOID STRUCTURE & OTHER TRADES ARE NOT INTENDED TO BE SHOWN AND IT IS THE INTENT OF THIS PARAGRAPH THAT ALL TRANSITIONS AND OFFSETS REQUIRED TO INSTALL THE DUCTWORK TO AVOID OTHER TRADES AND STRUCTURE BE PROVIDED BY THE CONTRACTOR WITHOUT COST TO THE OWNER.

10. MATERIALS - DUCTWORK: ALL DUCTWORK FOR HVAC SYSTEMS SHALL BE GALVANIZED STEEL CONFORMING TO ASTM SPEC A525.

ALL ROUND DUCTWORK SHALL BE GALVANIZED CONSTRUCTION WITH GAUGES AND CONNECTIONS AS FOLLOWS: UP TO 14" DIAMETER (INCLUDING FITTINGS) - 26 GAUGE WITH 2" CRIMP JOINT. OVER 14" TO 23" DIAMETER (INCLUDING FITTINGS) - 24 GAUGE WITH 2" CRIMP JOINT. OVER 23" TO 37" DIAMETER - 22 GAUGE. WHERE NECESSARY TO MAKE FIELD CONNECTIONS BETWEEN PLAIN END DUCT, SLIP JOINT CONNECTORS SHALL BE PROVIDED. JOINT CONNECTION AND SEALING: SHEET METAL SCREW ALL FIELD MADE JOINTS WITH A MINIMUM OF THREE SCREWS. SPACING OF SCREWS NOT TO EXCEED TWELVE INCHES ON CENTER. COVER ALL FIELD MADE JOINTS WITH HARDCAST "IRON-GRIP 601" PREMIUM FLEXIBLE WATER BASED DUCT SEALANT. FITTINGS AT RECTANGULAR DUCT TAKEOFF SHALL BE SPIN-IN TYPE, COMPLETE WITH LOCKING TYPE VOLUME DAMPERS AT ALL LOCATIONS WHETHER SHOWN ON THE PLANS OR NOT.

RECTANGULAR DUCTWORK SHALL BE MADE FROM GALVANIZED STEEL SHEETS. DUCT CONSTRUCTION, AND REINFORCING SHALL BE PER TABLE 6-1 OF THE 2022 CALIFORNIA MECHANICAL CODE. DUCTWORK SHALL BE OF THE FOLLOWING GAUGES: UP TO 12" - 26 GAUGE. 13"-30" - 24 GAUGE. EXTERIOR DUCTWORK SHALL BE GALVANIZED COATED MEETING THE ASTM G-90 REQUIREMENTS. SEE BOOK SPECIFICATIONS FOR CONNECTION REQUIREMENTS. RECTANGULAR DUCTING SHALL BE CONNECTED WITH DUCTMATE 35 CONNECTORS.

ALL DUCT DIMENSIONS ARE INTERNAL CLEAR.

CURVED ELBOWS SHALL HAVE CENTRALIZE RADIUS NOT LESS THAN THE WIDTH OF THE DUCT. WHERE ABRUPT TURNS AND ELBOWS ARE USED, TURNING VANES SHALL BE PROVIDED. TAKEOFFS FROM MAIN DUCTS SHALL BE MADE WITH 45 DEGREE ANGLES WITH VOLUME DAMPERS WHERE SHOWN. ALL PANELS SHALL BE CROSS BROKEN TO ENSURE RIGIDITY.

11. COMMISSIONING: CONTRACTOR SHALL CONFIRM THAT BUILDING SYSTEMS HAVE BEEN INSTALLED, PROPERLY STARTED, AND CONSISTENTLY OPERATED IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS, THAT ALL SYSTEMS ARE COMPLETE AND FUNCTIONING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AT SUBSTANTIAL COMPLETION, AND THAT CONTRACTOR HAS PROVIDED OWNER ADEQUATE SYSTEM DOCUMENTATION AND TRAINING. COMMISSIONING INCLUDES DEFERRED AND/OR SEASONAL TESTS AS APPROVED BY OWNER.

12. GREEN CODE. ALL REQUIREMENTS OF THE 2022 CALIFORNIA GREEN CODE SECTION 5.410 SHALL BE COMPLIED WITH, INCLUDING COMMISSIONING, FUNCTIONAL PERFORMANCE TESTING, AND DOCUMENTATION AND TRAINING FOR ALL HVAC SYSTEMS. PROVIDE TRAINED CONTROL TECHNICIAN FOR 4 HOURS TO DEMONSTRATE TO ENGINEER THAT ALL ELEMENTS ARE FUNCTIONING PROPERLY.

13. AS-BUILT DRAWINGS SHALL BE GIVEN TO THE OWNER PRIOR TO ACCEPTANCE OF THE PROJECT. INCLUDED IN THE AS-BUILTS SHALL BE DOCUMENTATION AND TWO COPIES OF THE ANNOTATED PROGRAMMING ON MAGNETIC MEDIA AND PRINTED SHEETS.

14. DUCT SUPPORTS AND HANGERS: DUCT SUPPORTS SHALL BE PER THE 2022 CALIFORNIA MECHANICAL CODE. RECTANGULAR DUCTS WITH A MAXIMUM SIZE NOT EXCEEDING 30" AND ALL ROUND DUCTS SHALL BE SUPPORTED WITH ONE INCH WIDE 18 GAUGE HANGER STRAPS. SUPPORTS SHALL BE LOCATED ON TWO OPPOSITE SIDES OF THE DUCT, SHALL BE METAL SCREWED TO THE SIDES AND BOTTOM OF THE DUCT, SHALL BE SPACED AT NOT MORE THAN 7'-8" ON CENTERS AND SHALL BE LATERALLY BRACED. SECURE STRAPS TO STRUCTURAL FRAMING PER SMACNA STDS.

15. DUCT INSULATION: CONCEALED SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED WITH 2" THICK, THREE QUARTER POUND PER CUBIC FOOT FOIL SCRIMP VAPOR BARRIER FACED FIBERGLASS FLEXIBLE DUCT INSULATION. INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. INSULATION SHALL HAVE A MINIMUM INSULATION OF R-8. SUPPLY AND RETURN AIR PLENUMS AND OTHER DUCTWORK WHERE INDICATED SHALL BE INTERNALLY LINED WITH 1" THICK LINER. LINER SHALL BE 1-1/2 POUND PER CUBIC FOOT DENSITY GLASS FIBER DUCT LINER WITH A VINYL COATING, WITH A FLAME SPREAD OF LESS THAN .25 AS PER NFPA NO 90A.

16. VOLUME DAMPERS: LOCKING SHEET METAL VOLUME DAMPERS SHALL BE INSTALLED AT THE POINT OF TAKEOFF FROM MAIN DUCTING AT ALL LOCATIONS SHOWN ON PLANS AND ELSEWHERE AS NECESSARY FOR PROPER BALANCING OF THE SYSTEM. BALANCING AT DIFFUSERS OR RETURN AIR GRILLES ONLY WILL NOT BE PERMITTED. PROVIDE & LOCATE YOUNG REGULATORS OR ACCESS DOORS AS REQUIRED FOR BALANCING AFTER FINISH SURFACES ARE INSTALLED.

17. BALANCING: FOLLOWING INSTALLATION, CONTRACTOR SHALL START UP AND BALANCE ALL HVAC SYSTEMS TO CONFORM TO AIR VOLUMES INDICATED ON PLANS. COPIES OF BALANCING RECORDS SHALL BE FURNISHED TO BUILDING OWNER AND PROJECT ENGINEER. SEE BOOK SPECIFICATIONS FOR FURTHER REQTS.

18. VIBRATION ISOLATION: INSTALL FLEXIBLE CONNECTIONS BETWEEN MECHANICAL EQUIPMENT AND DUCTWORK. SEE MECHANICAL DETAILS & SPECIFICATIONS FOR SPECIFIC TYPE.

19. COORDINATION: MECHANICAL CONTRACTOR SHALL COORDINATE WORK WITH GENERAL CONTRACTOR AND ALL RELATED TRADES. COORDINATION OF EXACT LOCATIONS AND ELEVATIONS TO AVOID CONFLICTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

20. CLEANUP: EVERY DAY, AND AFTER ALL WORK HAS BEEN COMPLETED, CONTRACTOR SHALL CLEAN ENTIRE JOBSITE OF ALL DEBRIS ASSOCIATED WITH MECHANICAL SYSTEMS. EXPOSED PARTS WHICH ARE TO BE PAINTED SHALL BE THOROUGHLY CLEANED READY FOR PAINTING.

21. WIRING: ALL WIRING SHALL BE PERFORMED IN ACCORDANCE WITH NEC REQTS. ALL WIRING SHALL BE IN CONDUIT. ALL INTERIOR LOW VOLTAGE AND CONTROL WIRING SHALL BE IN WIREMOLD AND IN FAN ROOMS SHALL BE IN CONDUIT. EXPOSED CONDUIT SHALL BE INSTALLED IN A SQUARE, PLUMB, AND LEVEL MANNER WITH THOUGHT GIVEN TO THE FINAL APPEARANCES. PROVIDE TO ENGINEER SHOP DRAWING FOR CONTROL TRANSFORMER CONFIGURATIONS DETAILING CIRCUITS TO BE USED, LOAD CALCULATIONS, WIRE SIZES, AND LOCATIONS. WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT NATIONAL ELECTRICAL CODE AND ELECTRICAL SPECIFICATIONS. ALL TRANSFORMERS SHALL BE PROTECTED BY PROPERLY SIZED CIRCUIT BREAKER OR FUSE(S). ALL TRANSFORMERS SHALL HAVE RESETABLE BREAKER ON THE LOAD SIDE. ALL LOW VOLTAGE CONTROL & COMMUNICATIONS WIRING SHALL BE DONE ACCORDING TO MANUFACTURERS INSTALLATION MANUAL. PROVIDE SUBMITTALS ON WIRE AND ENCLOSURES.

22. EXISTING CONDITIONS: THE CONTRACTOR SHALL PROMPTLY INFORM THE PROJECT MANAGER IN WRITING OF ANY EXISTING CONDITION THAT COMPROMISES SAFETY INCLUDED BUT NOT LIMITED TO; ELECTRICAL, DUCT, PIPE OR EQUIPMENT SUPPORT, OR STRUCTURAL. IF ANY DEVICE, ELECTRICAL OR MECHANICAL, DOES NOT FUNCTION PROPERLY, THE CONTRACTOR SHALL PROMPTLY INFORM THE PROJECT MANAGER IN WRITING OF THE NATURE OF THE FAILURE, ANY PROPOSED REMEDY, AND THE COST OF REPAIR OR REPLACEMENT. CONTRACTOR SHALL INSPECT ALL VISIBLE EQUIPMENT AND PROVIDE A WRITTEN REPORT ON ANY DEFICIENCY.

23. WARRANTY: THE CONTRACTOR SHALL WARRANT THAT ALL SYSTEMS, SUBSYSTEMS, COMPONENT PARTS, AND DATABASE SOFTWARE ARE FULLY FREE FROM DEFECTIVE DESIGN, MATERIALS, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER.

24. ALL MECHANICAL SYSTEMS SHALL BE CLEARLY & PERMANENTLY LABELED. LABEL SHALL DETAIL THE AREA SERVED & UNIT TAG.

25. CORRECTION OF WORK: THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK THE OWNER OR ENGINEER FINDS DEFECTIVE OR FAILING TO CONFORM TO THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BEAR ALL COSTS REQUIRED BY THE CONTRACT DOCUMENTS, IF ANY OF THE WORK IS FOUND TO BE DEFECTIVE OR NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL CORRECT IT PROMPTLY AFTER RECEIPT OF A WRITTEN NOTICE FROM THE OWNER TO DO SO.

26. ALL REFRIGERANT PIPING AND CONTROL WIRING SHALL BE SIZED AND INSTALLED PER MANUFACTURER'S REQUIREMENTS. VERIFY SIZE OF EXISTING PIPING TO BE ADEQUATE. CONFIRM BEFORE ORDERING MATERIALS AND BEGINNING INSTALLATION. PIPE SHALL BE US MANUFACTURED TYPE ACR WITH BRAZED FITTINGS. KEEP PIPING CLEAN AND FREE FROM DEBRIS AND CORROSION PRIOR TO INSTALLATION. ALL BRAZING SHALL BE PERFORMED WITH A NITROGEN (OR INERT GAS) SHIELD, PER ASHRAE STANDARDS BY QUALIFIED CRAFTSMEN. TEST PIPING PER MANUFACTURER'S REQUIREMENTS. REFRIGERANT PIPING AT EXTERIOR AND INSIDE MECHANICAL ROOMS SHALL BE HARD COPPER WITH BRAZED FITTINGS. PIPING SHALL BE INSTALLED STRAIGHT, PLUMB, & LEVEL IN A NEAT AND ORGANIZED FASHION. REFRIGERANT PIPE WEIGHT MUST NOT BEAR ON COIL NIPPLES. PIPE INSULATION MUST BE INSTALLED STRICTLY IN ACCORDANCE WITH INSULATION MANUFACTURES INSTALLATION INSTRUCTIONS. INSULATION THICKNESS SHALL BE PER THE 2022 BUILDING ENERGY EFFICIENCY STANDARDS, REQUIREMENTS FOR PIPE INSULATION AND TABLE 120.3-A. REFRIGERANT LIQUID PIPE SHALL HAVE MINIMUM OF (R-7.7 OR 1") INSULATION AND REFRIGERANT GAS (SUCTION) PIPE SHALL HAVE A MINIMUM OF (R-11.5 OR 1-1/2") INSULATION. (NOTE: AT FAN COIL & OUTDOOR UNIT INSULATION THICKNESS MAY BE REDUCED TO 1/2" WALL TO ALLOW FOR UNIT ACCESS. LAST 5 FEET ONLY FOR FAN COIL AND ONLY 30" FROM OUTDOOR UNIT.) ALL EXTERIOR INSULATION SHALL BE COVERED WITH ALUMINUM WITH 3/16" CORRUGATED 0.016 JACKETING WITH FORMED ALUMINUM FITTINGS. INSTALL FLEXIBLE CONNECTIONS AT OUTDOOR UNITS.

GREEN BUILDING NOTES

1. GENERAL CONTRACTOR SHALL ESTABLISH A CONSTRUCTION WASTE MANAGEMENT PLAN FOR THE DIVERTED MATERIALS, OR MEET LOCAL CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE, WHICHEVER IS MORE STRINGENT. WASTE MANAGEMENT PLAN SHALL:
A.) IDENTIFY THE MATERIALS TO BE DIVERTED FROM DISPOSAL BY EFFICIENT USAGE, RECYCLING, REUSE ON THE PROJECT OR SALVAGE FOR FUTURE USE OR SALE.
B.) DETERMINE IF MATERIAL WILL BE SORTED ON-SITE OR MIXED
C.) IDENTIFY DIVERSION FACILITIES WHERE MATERIALS COLLECTED WILL BE TAKEN.
D.) SPECIFY THE AMOUNT OF MATERIALS DIVERTED WHICH SHALL BE CALCULATED BY WEIGHT OR VOLUME, BUT NOT BOTH.

2. RECYCLE WASTE MATERIAL BEING REMOVED FROM SITE TO THE GREATEST EXTENT POSSIBLE. RECORD ALL AMOUNTS DISPOSED AND ALL AMOUNTS RECYCLED.

3. COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION: AT THE TIME OF ROUGH INSTALLATION, OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUCT OR DEBRIS WHICH MAY COLLECT IN THE SYSTEM. PER THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, C.G.B.S.C., SECTION 5.504.3

GENERAL NOTES

1. CUTTING, BORING SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED ON THE DRAWINGS OR ACCEPTED BY THE ARCHITECT & THE ENGINEER.

2. ALL WELDING SHALL BE SPECIALLY INSPECTED BY AN AWS-CWI QUALIFIED INSPECTOR APPROVED BY THE ENGINEER.

3. ALL BRACING OF DUCTS AND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES AS APPROVED BY THE ENGINEER.

WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT & THE MECHANICAL ENGINEER.

A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY THE ENGINEER SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIMES.

CONTROL NOTES

1. INSTALL NEW PELICAN WIRELESS THERMOSTATS. INSTALL NEW SUPPLY AIR SENSORS AND PROBES.

2. INSTALL WIRELESS REPEATERS AS NEEDED FOR PROPER COMMUNICATION BETWEEN DEVICES. PROVIDE POWER FROM EXISTING SOURCES AS NEEDED.

3. INSTALL ROUTER AT IT ROOM. PROVIDE PATCH CABLE. COORDINATE WITH CAMPUS IT DEPARTMENT FOR NEW IP ADDRESS.

4. FUNCTION TEST ALL NEW CONTROLS. PROVIDE REPORT OF TESTING.

5. PROVIDE 2 HOURS OF TRAINING TO OWNER.

ABBREVIATIONS

ABBREV.	ABBREVIATIONS
ABV.	ABOVE
APPROX.	APPROXIMATELY
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BLDG	BUILDING
BLW.	BELOW
BTM	BOTTOM
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CL	CENTERLINE
CLG	CEILING
CONC	CONCRETE
COND	CONDENSATE
CONT	CONTINUED
DIA	DIAMETER
DN	DOWN
DSA	DIVISION OF THE STATE ARCHITECT
DWG	DRAWING
(E)	EXISTING
EA	EACH
EL,ELEV	ELEVATION
ELEC	ELECTRIC
EQ	EQUIPMENT
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
FIN	FINISHED
FLR	FLOOR
FRM	FROM
G	GAS
GDW	GYPSUM DRYWALL
GPM	GALLONS PER MINUTE
GSM	GALVANIZED STEEL METAL
HP	HORSE POWER
HWR	HOT WATER RETURN (HYDRONIC)
HWS	HOT WATER SUPPLY (HYDRONIC)
MIN.	MINIMUM
MAX.	MAXIMUM
MTL	METAL
(N)	NEW
OC	ON CENTER
POC	POINT OF CONNECTION
PSI	POUNDS PER SQUARE INCH
RAG	RETURN AIR GRILLE
RAR	RETURN AIR REGISTER
SD	SMOKE DETECTOR (SEE EQUIP. SCHEDULE)
SHT	SHEET
SMS	SHEET METAL SCREW
SR	SIDEWALL REGISTER
SOV	SHUT-OFF VALVE
SPEC	SPECIFICATIONS
STL	STEEL
UGND	UNDERGROUND
VD	VOLUME DAMPER (LOCKING)
VTR	VENT TO ROOF
VAV	VARIABLE AIR VOLUME BOX
VFD	VARIABLE FREQUENCY DRIVE
WC	WATER COLUMN
WCO	WALL CLEAN-OUT
(TYP)	TYPICAL

SEE MECH. SCHEDULE FOR DESCRIPTIONS

SYMBOL	DESCRIPTION
	VOLUME DAMPER
T 1	THERMOSTAT
	RETURN AIR PLENUM (LINED)
	SUPPLY AIR PLENUM (LINED)
X 1	EQUIPMENT TAG SEE MECH. SCHEDULE
	ROUND DUCTWORK
	RECTANGULAR DUCTWORK
	(E) RECTANGULAR DUCTWORK

PUMP SCHEDULE

TAG	TYPE	MAKE & MODEL	ELECTRICAL DATA VOLTAGE HZ FLA KW	WEIGHT (LBS)	NOTES
CP 1	CONDENSATE PUMP	BLUE DIAMOND MAXIBLUE	THE INDOOR UNIT SHALL SUPPLY POWER TO THE PUMP	1.8	1) 1/4" REINFORCED TUBING TO 3/4" COPPER CONNECTION. 2) INCLUDE RESERVOIR AND DRAINSTIK SENSING OPTION WIRED TO INDOOR UNIT FOR SHUT-DOWN.

ADMINISTRATION BUILDING SPLIT SYSTEM SCHEDULE

TAG	TYPE	SERVING ROOM	MAKE & MODEL	COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	SEER	CFM	ANCHORAGE DETAIL	OPERATING WEIGHT (LBS)	ELECTRICAL DATA			ACCESSORIES
										POWER	MCA	MOCP	
OU 1	OUTDOOR UNIT	ADMIN. OFFICES	SAMSUNG AM048NXMDCR	48,000	54,000	21.0	-	1/M-501	214	208-1-60	29	50	SEACOAST COATING
IU 1	INDOOR UNIT	JAMES OFFICE	SAMSUNG AM012NNNDCH/AA (CASSETTE)	12,000	13,500	-	370	2/M-501	27	208-1-60	0.26	15	(N) SAMSUNG PC4SUFMUN PANEL, MWR-WG00UN WIRED T-STAT, & MIM-B14 EXTERNAL CONTACT CONTROL FOR CONDENSATE PUMP.
IU 2	INDOOR UNIT	KELLY OFFICE	SAMSUNG AM009NNNDCH/AA (CASSETTE)	9,500	10,500	-	350	2/M-501	27	208-1-60	0.24	15	(N) SAMSUNG PC4SUFMUN PANEL, (N) SAMSUNG T-STAT W/ SAMSUNG MIM-B14 EXTERNAL CONTACT CONTROL FOR CONDENSATE PUMP.
IU 3	INDOOR UNIT	TAMISHIAH OFFICE	SAMSUNG AM005NNNDCH/AA (CASSETTE)	5,000	6,000	-	300	2/M-501	26	208-1-60	0.24	15	(N) SAMSUNG PC4SUFMUN PANEL, (N) SAMSUNG T-STAT W/ SAMSUNG MIM-B14 EXTERNAL CONTACT CONTROL FOR CONDENSATE PUMP.
IU 4 A&B	INDOOR UNIT	FISCAL OFFICE	SAMSUNG AM007NNNDCH/AA (CASSETTE)	7,500	8,700	-	318	2/M-501	27	208-1-60	0.24	15	(N) SAMSUNG PC4SUFMUN PANEL, (N) SAMSUNG T-STAT W/ SAMSUNG MIM-B14 EXTERNAL CONTACT CONTROL FOR CONDENSATE PUMP.
IU 5	INDOOR UNIT	DAVID OFFICE	SAMSUNG AM005NNNDCH/AA (CASSETTE)	5,000	6,000	-	300	2/M-501	26	208-1-60	0.24	15	(N) SAMSUNG PC4SUFMUN PANEL, (N) SAMSUNG T-STAT W/ SAMSUNG MIM-B14 EXTERNAL CONTACT CONTROL FOR CONDENSATE PUMP.

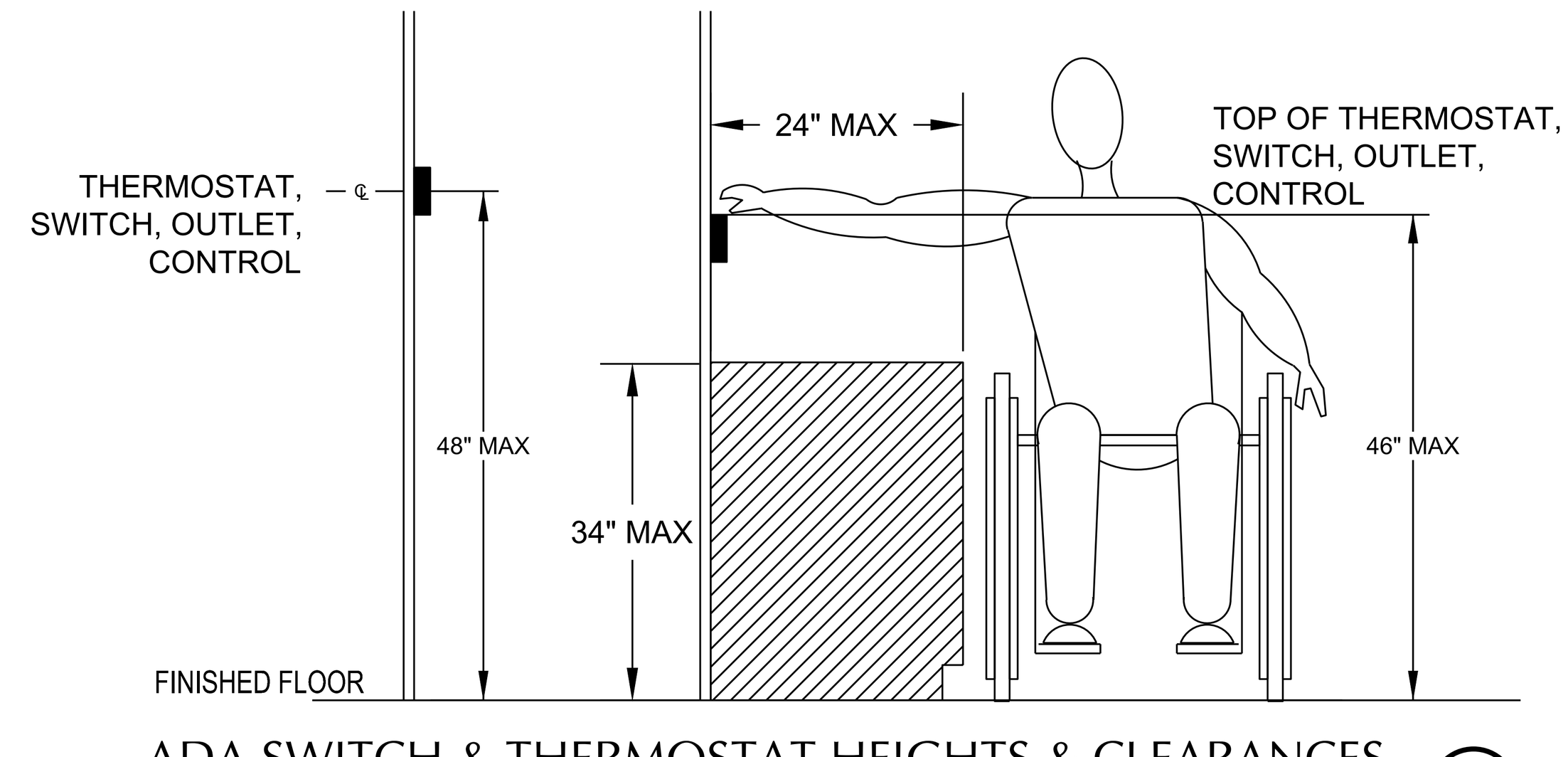
MODE CONTROL UNIT SCHEDULE

TAG	TYPE	MAKE & MODEL	OPERATING WEIGHT (LBS)	ELECTRICAL DATA		
				POWER	MCA	MOCP
HRC 1	MODE CONTROL UNIT	SAMSUNG MCU-R4NEK0UN	47	208-1-60	2	15
MCU 1	MODE CONTROL UNIT	SAMSUNG MCU-S1NE1UN	25	208-1-60	2	15

AIR DISTRIBUTION SCHEDULE

CDS	SUPPLY AIR DIFFUSER. KRUEGER MODEL 6600, PERFORATED FACE, STEEL, WHITE. 24"x24", T-BAR OR SURFACE MOUNT. NECK SIZE ON PLANS.
RAS	RETURN AIR REGISTER. KRUEGER MODEL 6690, PERFORATED FACE, STEEL, WHITE. 24"x24", T-BAR OR SURFACE MOUNT. NECK SIZE ON PLANS.

PROVIDE MIN. 30 X 48 CLEAR FLOOR SPACE AT EACH LOCATION FOR PARALLEL OR PERPENDICULAR ACCESS



ADA SWITCH & THERMOSTAT HEIGHTS & CLEARANCES (1)

SCALE: NONE

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4667 TELEGRAPH RD, VENTURA, CA 93003

MECHANICAL NOTES

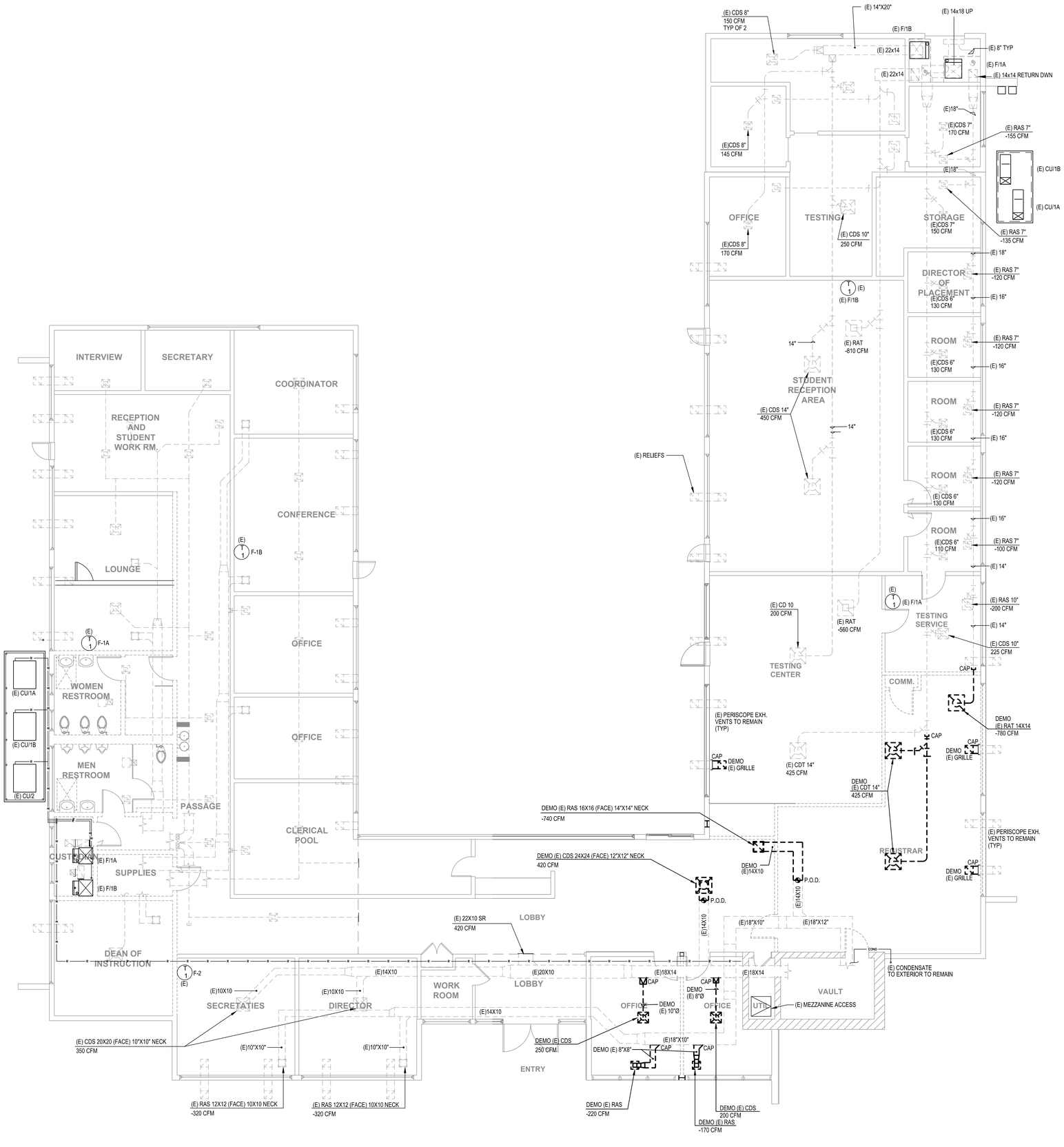
NO.	REVISION	DATE
△		
△		
△		
△		
△		

PROJECT MANAGER: MH
DRAWN BY: TP/HM | CHECKED BY: HM/RR
DATE: 07/31/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: M-001

100% CD

MECHANICAL LEGEND

	(E) RECTANGULAR DUCTWORK TO REMAIN
	(E) RECTANGULAR DUCTWORK TO BE DEMOLISHED
	(E) ROUND DUCTWORK TO REMAIN
	(E) ROUND DUCTWORK TO BE DEMOLISHED
R	(E) REFRIGERANT LINES
P.O.D.	POINT OF DISCONNECTION



1 **ADMINISTRATION BUILDING** EXISTING/DEMO MECHANICAL FLOOR PLAN
M-101 SCALE: 3/16" = 1'-0"

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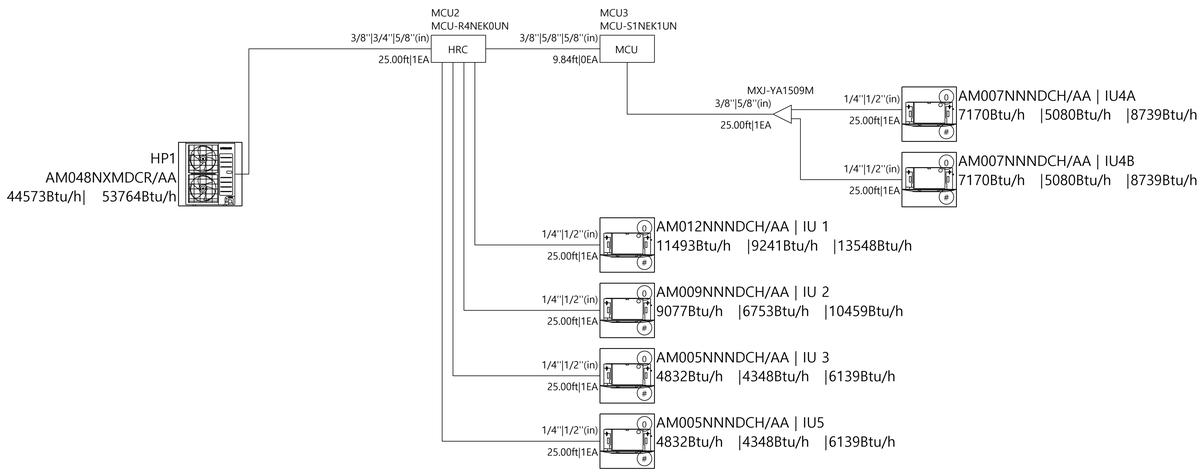
EXISTING/DEMO MECHANICAL FLOOR PLAN

NO.	REVISION	DATE

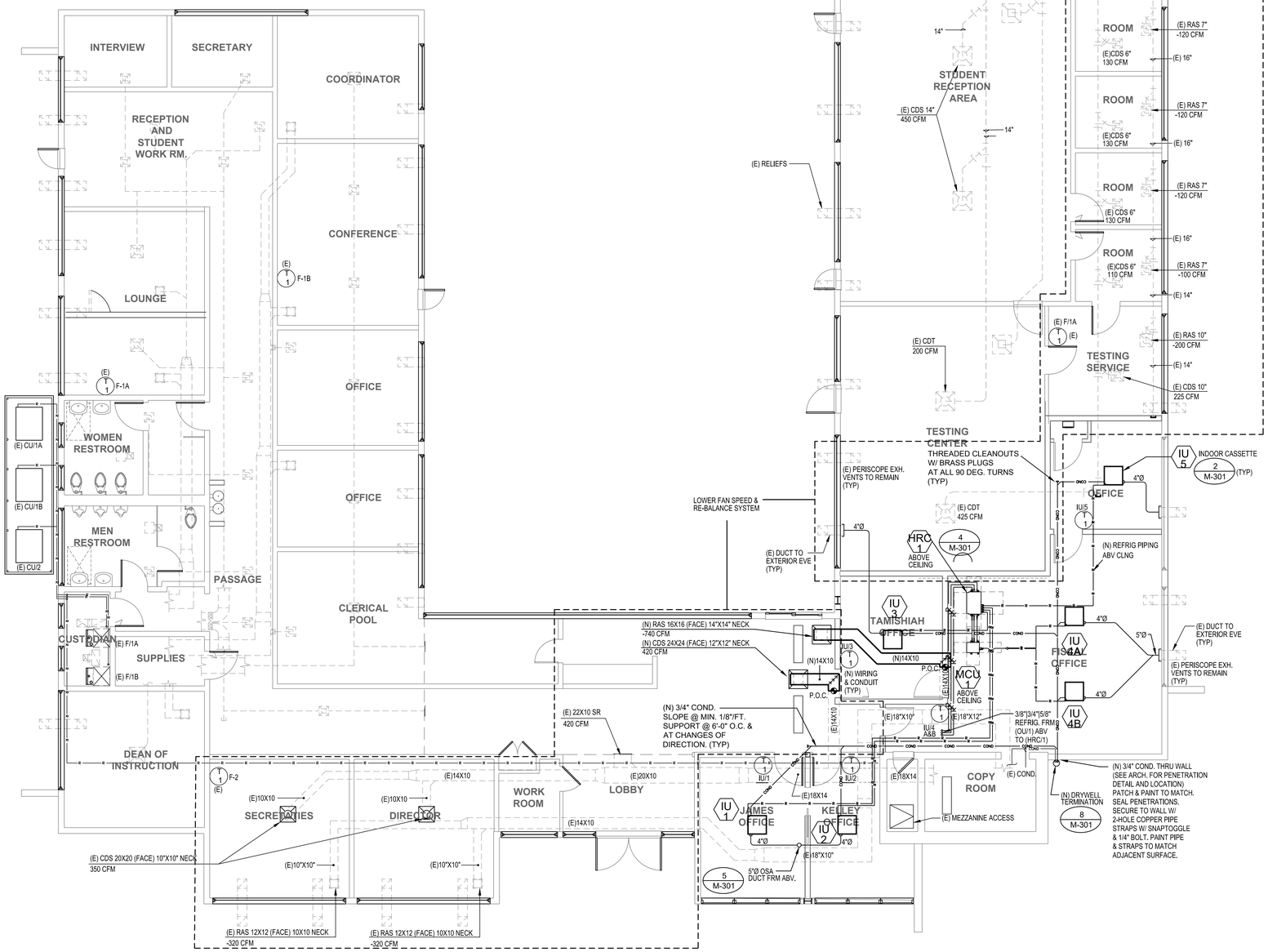
PROJECT MANAGER: MH
DRAWN BY: TP/HM
CHECKED BY: HM/RR
DATE: 07/31/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: M-101

100% CD



MECHANICAL LEGEND

	(E) RECTANGULAR DUCTWORK TO REMAIN
	(E) RECTANGULAR DUCTWORK TO BE DEMOLISHED
	(E) ROUND DUCTWORK TO REMAIN
	(E) ROUND DUCTWORK TO BE DEMOLISHED
R	(E) REFRIGERANT LINES
R	(N) REFRIGERANT LINES
X	EQUIPMENT TAG SEE MECH. SCHEDULE
P.O.C.	POINT OF CONNECTION



1 ADMINISTRATION BUILDING MECHANICAL FLOOR PLAN

M-201 SCALE: 3/16" = 1'-0"

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MECHANICAL FLOOR PLAN

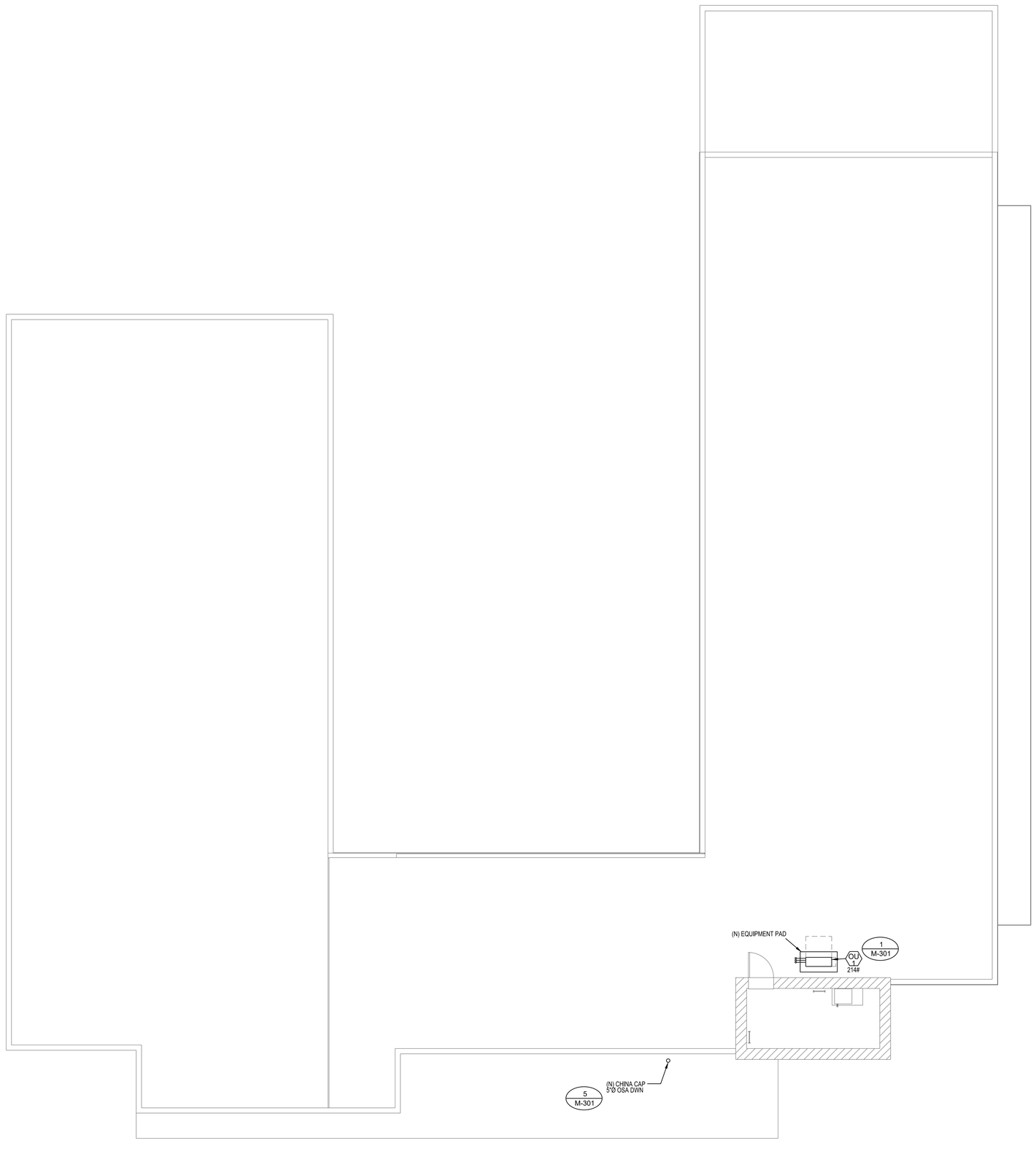
NO.	REVISION	DATE

PROJECT MANAGER: MH
DRAWN BY: TP/HM | CHECKED BY: HM/RR
DATE: 07/31/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: M-201

100% CD

MECHANICAL LEGEND

	(E) RECTANGULAR DUCTWORK TO REMAIN
	(E) RECTANGULAR DUCTWORK TO BE DEMOLISHED
	(E) ROUND DUCTWORK TO REMAIN
	(E) ROUND DUCTWORK TO BE DEMOLISHED
R	(E) REFRIGERANT LINES
R	(N) REFRIGERANT LINES
X	EQUIPMENT TAG SEE MECH. SCHEDULE
P.O.C.	POINT OF CONNECTION



1 M-202 **ADMINISTRATION BUILDING** MECHANICAL ROOF PLAN
SCALE: 3/16" = 1'-0"

rrm design group
rrmdesign.com | (805) 543-1794

CONSULTING ENGINEER

AE Group
Mechanical Engineers
838 East Front Street
Ventura, California 93001
(805) 653-1722
hugh@aegroupme.com

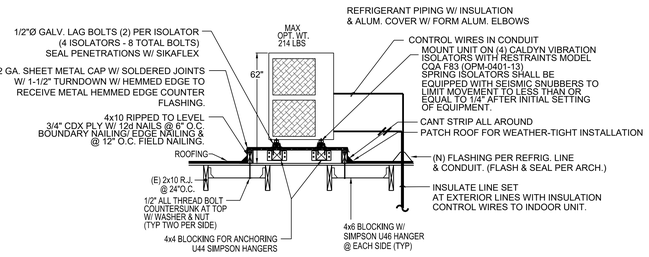
VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003

MECHANICAL ROOF PLAN

NO.	REVISION	DATE

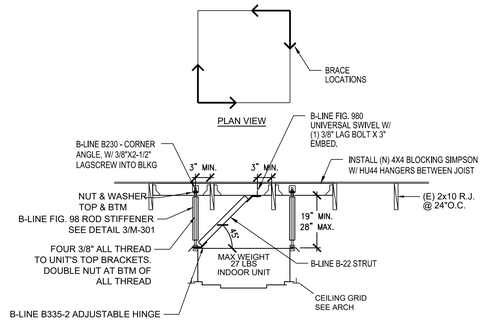
PROJECT MANAGER MH
DRAWN BY TP/HM | **CHECKED BY** HM/RR
DATE 07/31/2025
PROJECT NUMBER 3425-01-ED24
SHEET M-202

100% CD



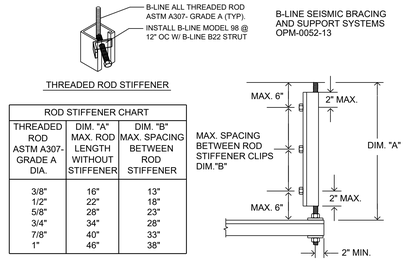
OUTDOOR UNIT ANCHORAGE DETAIL 1

SCALE: NONE



INDOOR UNIT ANCHORAGE DETAIL 2

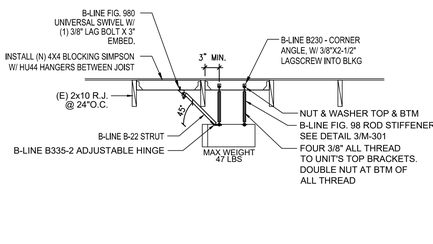
SCALE: NONE



ROD STIFFENER CHART		
THREADED ROD ASTM A307-GRADE A DIA.	DIM. "A" MAX. ROD LENGTH WITHOUT STIFFENER	DIM. "B" MAX. SPACING BETWEEN ROD STIFFENER
3/8"	16"	13"
1/2"	22"	18"
5/8"	28"	23"
3/4"	34"	28"
7/8"	40"	33"
1"	46"	38"

ROD STIFFENER DETAIL 3

SCALE: NONE



HR CHARGER & MODE CONTROL UNIT ANCHORAGE DETAIL 4

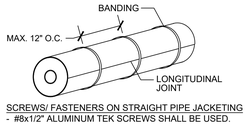
SCALE: NONE

CHINA CAP INTAKE DETAIL 5

SCALE: NONE

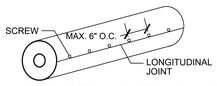
BANDING ON STRAIGHT PIPE JACKETING

- BUTT/ END JOINTS SHALL BE SECURED WITH BANDS AND SEALS CENTERED DIRECTLY OVER JOINT. THIS INCLUDES JOINTS BETWEEN TWO STRAIGHT SECTIONS OF JACKETING, WHERE STRAIGHT MEETS AN ELBOW, AND OR OTHER CIRCUMFERENTIAL JOINTS.
- STRAIGHT SECTIONS OF JACKETING SHALL BE NEATLY SECURED WITH BANDS AND SEALS WITH A MAXIMUM SPACING OF 12" ON CENTER. FOR A 36" JACKET SECTION, TWO BANDS SHALL BE INSTALLED EVENLY SPACED BETWEEN THE BANDS OVER THE TWO END JOINTS.
- SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.



SCREWS/ FASTENERS ON STRAIGHT PIPE JACKETING

- #8x1/2" ALUMINUM TEK SCREWS SHALL BE USED.
- SCREWS SHALL BE INSTALLED ALONG THE LONGITUDINAL JOINTS AT A MAXIMUM SPACING OF 6" O.C. FOR STRAIGHT PIPE JACKETING SECTIONS.
- SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.



REFRIGERANT PIPING JACKETING INSTALLATION 6

SCALE: NONE

NOTES:
1. SLOPE 1/8" PER FOOT TO DRAIN
2. INSULATE ALL INTERIOR CONDENSATE PIPING
3. ALL CONDENSATE PIPING SHALL BE TYPE L COPPER W/ SOLDERED WROT COPPER OR BRASS FITTINGS

CONDENSATE PIPING DETAILS 7

SCALE: NONE

DRYWELL DETAIL 8

SCALE: NONE

CONDENSATE PIPE SUPPORT DETAILS 8

SCALE: NONE

CONCEALED DUCT SUPPORT DETAILS 9

SCALE: NONE

REFRIGERANT PIPE DETAILS 10

SCALE: NONE

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VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD. VENTURA, CA 93003

MECHANICAL DETAILS

NO.	REVISION	DATE

PROJECT MANAGER
MH
DRAWN BY TP/HM
CHECKED BY HM/RR
DATE 07/31/2025
PROJECT NUMBER 3425-01-ED24
SHEET M-301

100% CD

STATE OF CALIFORNIA

Envelope Component Approach

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-ENV-E**
This document is used to demonstrate compliance with mandatory requirements in 110.8(g) and 120.7(b)/ 160.1 for newly constructed nonresidential, hotel/ motel, multifamily and mixed-use buildings, and 141.0(b)1/ 180.2 for alterations, related to roof, wall and floor assemblies. It is also used to demonstrate compliance with prescriptive requirements in 140.3/ 170.2 for newly constructed buildings, and 141.0/ 180.1/ 180.2 for additions and alterations, related to roof, wall, floor, door, fenestration and daylighting requirements.			
Project Name: Ventura College Admin. Building		**Report Page:**	**(Page 1 of 7)**
Project Address:	4667 Telegraph Rd.	**Date Prepared:**	6/10/2025

A. GENERAL INFORMATION

01	Project Location (city)	Ventura	05	# of Stories (Habitable Above Grade)	1
02	Zipcode	93003	06	Total Conditioned Floor Area (ft^2)	1086
03	Climate Zone	6	07	Total Unconditioned Floor Area (ft^2)	0
04	Occupancy Types Within Project: (select all that apply): If one occupancy constitutes >= 80% of the conditioned floor area, the entire building envelope may be designed to comply with the provisions of that occupancy per 100.0(f).		08	☐	Project includes unconditioned enclosed space(s) > 5,000 ft^2 under a roof with a ceiling height of at least 15 ft.[1]

- Office

[1] *FOOTNOTE: Enclosed spaces > 5,000 ft^2 directly under roof with ceiling height > 15 ft in climate zones 2 through 15 are required to meet the minimum daylighting requirements defined in 140.3(c)/ 170.2(b). Compliance with 140.3(c)/ 170.2(b) is documented in Table L. This is the only prescriptive requirement which applies to unconditioned spaces.*

B. PROJECT SCOPE

This table specifies project envelope components within the permit application demonstrating compliance using the prescriptive paths outlined in 140.3/ 170.2 and 141.0(a)1/ 180.1 and 141.0(b)1 and 2/ 180.2 for additions and alterations.

My project consists of (check all that apply)	Component Types					
01	02					
☐ New Construction or Newly Conditioned Space	☐	Roof	☐	Walls	☐	Exterior Opaque Doors
☐ One or more enclosed spaces > 5,000 ft^2 directly under roof with ceiling height > 15ft			☐	Floors	☐	Fenestration/ Glazed Doors[1]
☐ Addition of conditioned space	☐	Roof	☐	Walls	☐	Exterior Opaque Doors
☐ One or more enclosed spaces > 5,000 ft^2 directly under roof with ceiling height > 15ft						
☐ Addition is <=700 ft^2			☐	Floors	☐	Fenestration/ Glazed Doors[1]
☐ Addition is >700 ft^2						
☒ Alteration of conditioned space	☐	Roof Assembly	☒	Walls		
☐ One or more enclosed spaces > 5,000 ft^2 directly under roof with ceiling height > 15ft and lighting system installed for the first time	☐	Roofing Material[2]	☐	Floors	☒	Fenestration

STATE OF CALIFORNIA

Envelope Component Approach

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-ENV-E**
Project Name: Ventura College Admin. Building		**Report Page:**	**(Page 2 of 7)**
		Date Prepared:	6/10/2025

B. PROJECT SCOPE

[1] *FOOTNOTE: Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on table K with fenestration.*

[2] *Roof recovers and replacements must also check "Roof Assembly" box and document compliance with insulation requirements in Table F. Roof recoats may document compliance with roof material only in Table G.*

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through L. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see the applicable table referenced below.

Opaque Envelope Components					Fenestration	Daylighting Spaces > 5,000ft^2	Compliance Results
Roof Assembly	Roofing Materials	Walls	Floors	Doors			
01	02	03	04	05	06	07	08
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	COMPLIES
Yes	Yes	Yes			Yes		

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

F. ROOF ASSEMBLY SCHEDULE

This section does not apply to this project.

G. RATED ROOFING MATERIAL (COOL ROOF)

This section does not apply to this project.

STATE OF CALIFORNIA

Envelope Component Approach

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-ENV-E**
Project Name: Ventura College Admin. Building		**Report Page:**	**(Page 3 of 7)**
		Date Prepared:	6/10/2025

H. WALL ASSEMBLY SCHEDULE

This table demonstrates compliance with prescriptive wall assembly requirements in 140.3(a)/ 170.2(a) for new constructions, 141.0(a)/ 180.1 for additions and 141.0(b)1B/ 180.2 for alterations.

01	Indicate wall types included in the project:[1]	☐ Framed	☐ Mass (new only)	☐ Concrete Sandwich Panel (new only)	☐ SIPS	☐ ICF (new only)
		☐ Metal Panels	☐ Metal Building	☐ Spandrel/ Curtain Wall	☐ Straw Bale	☐ Log Home (new only)

[1] *FOOTNOTES: Wall types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.*

I. FLOOR ASSEMBLY SCHEDULE

This section does not apply to this project.

J. EXTERIOR DOOR SCHEDULE

This section does not apply to this project.

K. FENESTRATION AND GLAZED DOOR SCHEDULE

This table demonstrates compliance with prescriptive fenestration requirements in 140.3(a)5/ 170.2(a)3 for new constructions, 141.0(a)/ 180.1 for additions, or 141.0(b)2A/ 180.2 for alterations. Exterior doors that are more than 25% glass in area are considered Glazed Doors and should be documented on this table with fenestration.

01	Indicate fenestration types included in the project:[1]	☒ Vertical (alterations)	☐ Vertical (new)	☐ Skylights	☐ Glazed Doors (new only)

[1] *FOOTNOTES: Fenestration types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.*

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

01	☒	Calculate Area-Weighted Average U-factor for Vertical Fenestration and Glazed Doors[1]
02	☒	Calculate Area-Weighted Average (R)SHGC for Vertical Fenestration and Glazed Doors[1]
03	☒	Calculate Area-Weighted Average VT for Vertical Fenestration and Glazed Doors[1]

STATE OF CALIFORNIA

Envelope Component Approach

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-ENV-E**
Project Name: Ventura College Admin. Building		**Report Page:**	**(Page 4 of 7)**
		Date Prepared:	6/10/2025

K. FENESTRATION AND GLAZED DOOR SCHEDULE

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

04	05	06	07	08	09		10	11	12	13
Tag/Plan Detail ID	Fenestration Type	Occupancy & Status	U-factor/ (R)SHGC Compliance Method	VT Compliance Method	Calculation Method for Performance Values per Design[2]		Product Performance Unit	Required Product Performance	Product Performance per Design	Area ft^2
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : Alt. (Replacement > 150ft2)	Table141.0-A	Equation 140.3-B (new only)	NFRC Certified		U-factor (max)	0.47	0.47	69
					☒	Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.31	0.31	
							VT (min)	0.29	0.5	
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : Alt. (Replacement > 150ft2)	Table141.0-A	Equation 140.3-B (new only)	NFRC Certified		U-factor (max)	0.47	0.47	69
					☒	Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.31	0.31	
							VT (min)	0.29	0.5	
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : Alt. (Replacement > 150ft2)	Table141.0-A	Equation 140.3-B (new only)	NFRC Certified		U-factor (max)	0.47	0.47	69
					☒	Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.31	0.31	
							VT (min)	0.29	0.5	
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : Alt. (Replacement > 150ft2)	Table141.0-A	Equation 140.3-B (new only)	NFRC Certified		U-factor (max)	0.47	0.47	26.6
					☒	Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.31	0.31	
							VT (min)	0.29	0.5	
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : Alt. (Replacement > 150ft2)	Table141.0-A	Equation 140.3-B (new only)	NFRC Certified		U-factor (max)	0.47	0.47	66
					☒	Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.31	0.31	
							VT (min)	0.29	0.5	

Overhang Details for RSHGC per 140.3/ 170.2

26	27	28	29	30	31	32
SHGC of Window						RSHGC
0.31						0.214
0.31						0.214
0.31						0.177

STATE OF CALIFORNIA

Envelope Component Approach

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-ENV-E**
Project Name: Ventura College Admin. Building		**Report Page:**	**(Page 5 of 7)**
		Date Prepared:	6/10/2025

K. FENESTRATION AND GLAZED DOOR SCHEDULE

Overhang Details for RSHGC per 140.3/ 170.2

26	27	28	29	30	31	32
SHGC of Window						RSHGC
0.31						0.177
0.31						0.177

[1] *FOOTNOTES: If any individual fenestration product is non-compliant, products may show compliance using an area-weighted calculation. Chromogenic glazing is not included in area-weighted calculations. Area-weighted calculation shown in separate area-weighted table below.*

[2] *The NA6 Default Calculation can only be used for alterations or dwelling units in buildings with <= 3 habitable stories. Alterations are limited to 200ft^2 of site built glazing and dwelling units are limited to 250ft^2 or 5% of conditioned floor area. If the fenestration does not meet these conditions, the only options for determining fenestration values are NFRC Certification or the Default Tables in 110.6.*

[3] *Overhangs must extend past the left and right window the same distance as the depth of the overhang or greater to show an affect on the RSHGC. If an overhang does not meet this requirement, the affect of the overhang will be ignored.*

[4] *Projecting includes casement and awning windows.*

Area-Weighted Average U-factor, SHGC, VT Compliance Calculation for Vertical Fenestration And Glazed Doors

01	02	03	04	05
Product Performance Unit	Total Area of Fenestration (ft^2)	Area-weighted Calculation for Fenestration		Compliance Results Using Area-Weighted Calculation Option
		Required	Designed	
U-Factor	299.6	0.47	0.47	COMPLIES
(R)SHGC	299.6	0.31	0.194	COMPLIES
VT	299.6	0.29	0.5	COMPLIES

L. DAYLIGHT IN LARGE ENCLOSED SPACES

This section does not apply to this project.

STATE OF CALIFORNIA

Envelope Component Approach

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-ENV-E**
Project Name: Ventura College Admin. Building		**Report Page:**	**(Page 6 of 7)**
		Date Prepared:	6/10/2025

M. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

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

N. 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, form user must provide an explanation in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/. Individuals who perform the field testing and verification work, and provide the information required for completion of the fenestration Certificate of Acceptance documentation are not required to be licensed professionals. However, the person who signs the Certificate of Acceptance document to certify compliance with the acceptance requirements shall be licensed as specified in Standards Section 10-103(a)4 and NA7.3.1

Form/Title	Systems/Spaces To Be Field Verified
NRCA-ENV-02-F must be submitted for all new, added or altered site built fenestration.	Fenestration;

O. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

STATE OF CALIFORNIA

Envelope Component Approach

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-ENV-E**
Project Name: Ventura College Admin. Building		**Report Page:**	**(Page 7 of 7)**
Project Address:	4667 Telegraph Rd.	**Date Prepared:**	6/10/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Tony Perez	Documentation Author Signature:
Company: AE Group Mechanical Engineers, Inc.	Signature Date: 2025-06-10
Address: 838 E. Front St.	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Ventura Ca 93001	Phone: 805-653-1722

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

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

Responsible Designer Name:	Responsible Designer Signature:
Company:	Date Signed: 2025-06-10
Address:	License:
City/State/Zip:	Phone:

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.			
Project Name: Ventura College Admin. Building		**Report Page:**	**(Page 1 of 10)**
Project Address:	4667 Telegraph Rd.	**Date Prepared:**	6/10/2025

A. GENERAL INFORMATION

01	Project Location (city)	Ventura	04	Total Conditioned Floor Area	1086
02	Climate Zone	6	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

- Office

B. PROJECT SCOPE

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

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

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
Project Name: Ventura College Admin. Building		**Report Page:**	**(Page 2 of 10)**
		Date Prepared:	6/10/2025

C. COMPLIANCE RESULTS

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

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

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
OU/1	1	Multi-zone	Alteration		☐

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
Project Name: Ventura College Admin. Building		**Report Page:**	**(Page 3 of 10)**
		Date Prepared:	6/10/2025

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

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

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available[1] 140.4(a) and 170.2(c)1	Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
OU/1	Variable Refrigerant Flow	VRF heat pump, air cooled	NA: Altered per 141.0(b)2E and 180.2(b)2	50.88	54	0	43.23	36.06	44.97	40.22

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

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

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

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

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

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Heating Mode				Cooling Mode		
		Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
OU/1	<65,000	47 °Fdb/ 43 °Fwb OSA	HSPF	7.7	10.7	SEER	13.0	21

STATE OF CALIFORNIA

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G. PUMPS

This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS

This section does not apply to this project.

I. SYSTEM CONTROLS

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

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft^2)	Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D
OU/1	Multi-zone w/ DDC to zone	<= 25,000 ft^2	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided

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

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J. VENTILATION AND INDOOR AIR QUALITY

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

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

Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems

04		05		06		07
System Name	OU/1	System Design OA CFM Airflow[1]	150	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]
						Provided

08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	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		
IU/1	Office space	167		2	30	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
IU/2	Office space	131.5		2	30	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type

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VENTURA COLLEGE ADMIN BLDG
ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003

ENERGY
NOTES

NO.	REVISION	DATE
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PROJECT MANAGER
MH

DRAWN BY
TP/HM

CHECKED BY
HM/RR

DATE
07/31/2025

PROJECT NUMBER
3425-01-ED24

SHEET
EN-001

100% CD

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J. VENTILATION AND INDOOR AIR QUALITY

IU/3	Office space	142		2	30	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
IU/4A&B	Office space	515.5		2	30	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
IU/5	Office space	130		2	30	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				150	18	Ventilation for this System Complies?		Yes

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

[2] *Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*

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

[4] *See Standards Tables 120.1-A and 120.1-B.*

[5] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*

[6] *120.2(e)3 requires systems serving rooms that are required by 130.1(c) 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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L. DISTRIBUTION (DUCTWORK and PIPING)

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

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

Duct Leakage Testing

The answers to the questions below apply to the following duct systems:		OU/1	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No
			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes

11	No	The scope of the project includes only duct systems serving healthcare facilities
12	No	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A
18		All ductwork is an extension of an existing duct system
19		Ductwork serving individual dwelling unit
20		< 25 ft of new or replacement space conditioning ducts installed
21	R-8	Duct Insulation R-value
22		
23		

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M. COOLING TOWERS

This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

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

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

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

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

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	Samsung AM048NXMDCR;
NRCA-MCH-11-A Automatic Demand Shed Controls	Samsung AM048NXMDCR;
NRCA-MCH-16-A Supply Air Temperature Reset Controls	Samsung AM048NXMDCR;
NRCA-MCH-18-A Energy Management Control Systems	Samsung AM048NXMDCR;

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

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Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01		02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Yes	Plan sheet or construction document location
		M-Sheets

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Project Name: Ventura College Admin. Building	**Report Page:**	**(Page 10 of 10)**
Project Address: 4667 Telegraph Rd	**Date Prepared:**	6/10/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Tony Perez	Documentation Author Signature:
Company: AE Group Mechanical Engineers, Inc.	Signature Date: 2025-06-10
Address: 838 E. Front St.	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Ventura Ca 93001	Phone: 805-653-1722

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

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

Responsible Designer Name: Ravish Rao	Responsible Designer Signature:
Company:	Date Signed: 2025-06-10
Address:	License:
City/State/Zip:	Phone:

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ENERGY NOTES

NO.	REVISION	DATE
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PROJECT MANAGER
MH

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CHECKED BY HM/RR

DATE
07/31/2025

PROJECT NUMBER
3425-01-ED24

SHEET
EN-002

100% CD

GENERAL POWER PLAN NOTES

A. U.O.N. INSTALL SEPARATE NEUTRALS FOR EACH BRANCH CIRCUIT.

B. FUSING: ALL FUSIBLE SAFETY DISCONNECT SWITCHES SHALL BE PROVIDED WITH DUAL-ELEMENT TIME DELAY TYPE FUSES SIZED AND RATED PER EQUIPMENT MANUFACTURERS' RECOMMENDATIONS. VERIFY WITH EQUIPMENT NAMEPLATE BEFORE INSTALLATION.

C. MOTOR OVERLOAD PROTECTION: WHERE REQUIRED BY NEC ARTICLE 430 PART C AND NOT SHOWN ON PLAN OR PROVIDED INTEGRAL WITH EQUIPMENT, PROVIDE AND INSTALL THERMAL OVERLOAD PROTECTION FOR ALL MOTORS.

D. SPARE CONDUIT FOR RECESSED PANELS: PROVIDE (1) 3/4" SPARE CONDUIT STUB UP TO ACCESSIBLE ABOVE CEILING SPACE AND/OR ACCESSIBLE SPACE BELOW FOR EVERY (3) SPARE BREAKER SPACES AS INDICATED ON PANEL SCHEDULES.

E. DEVICE LOCATIONS SHOWN ARE SCHEMATIC AND APPROXIMATE. EXACT LOCATIONS SHALL BE FIELD VERIFIED DURING ROUGH-IN WITH ARCHITECT, OWNER REPRESENTATIVE, ARCHITECTURAL ELEVATIONS, CASEWORK SHOP DRAWINGS, FURNITURE, ETC. AND SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICT WITH OTHER EQUIPMENT.

F. ELECTRICAL AND COMMUNICATIONS OUTLETS SHOWN IN FIRE RATED, OR SOUND RATED (STC) ASSEMBLIES SHALL BE PROVIDED WITH PUTTY PADS LISTED FOR THE APPLICATION.

G. ELECTRICAL AND COMMUNICATIONS OUTLETS SHOWN IN THE SAME LOCATION, SHALL BE MOUNTED ON OPPOSITE SIDES OF THE SAME STUD. COORDINATE BETWEEN ELECTRICAL AND COMMUNICATIONS PLANS. ALTERNATIVELY, A DEVICE BRACKET MAY BE USED BETWEEN STUDS WITH 4-INCH SEPARATION BETWEEN POWER AND LOW VOLTAGE BOXES. ELECTRICAL AND COMMUNICATIONS OUTLETS MOUNTED BACK-TO-BACK IN WALLS WILL NOT BE ACCEPTABLE--MAINTAIN AT LEAST ONE STUD BETWEEN OUTLETS TO AVOID EXCESSIVE SOUND TRANSMISSION.

H. WHERE OUTLETS ARE SHOWN TO BE MOUNTED ABOVE COUNTER / CASEWORK, PLACE BOTTOM OF OUTLETS 1" ABOVE COUNTER / CASEWORK BACKSPLASH, UNLESS DIRECTED OTHERWISE BY ARCHITECT.

I. CONTROLLED RECEPTACLES; INSTALLED PER REQUIREMENTS OF 2022 BUILDING ENERGY EFFICIENCY STANDARDS / EFFICIENCY STANDARDS, CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 6. SECTION 130.5 (D) - ELECTRICAL POWER DISTRIBUTION SYSTEMS AS CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND / OR CONTROLLED RECEPTACLES. SHALL BE PROVIDED WITH AN APPROVED MEANS OF INCLUDING A PERMANENT AND DURABLE MARKING IDENTIFYING THE CONTROLLED RECEPTACLES OR CIRCUITS TO DIFFERENTIATE THEM FROM UNCONTROLLED RECEPTACLES OR CIRCUITS. WHERE SHOWN ON ASSOCIATED FLOOR PLANS, AND OR REQUIRED BY THE STANDARDS; A DUPLEX NOTED TO BE CONTROLLED SHALL BE 'SPLIT-WIRED', SO THE TOP OUTLET SHALL BE SWITCHED AND THE BOTTOM OUTLET SHALL BE UNSWITCHED. A DOUBLE DUPLEX (FOURPLEX) NOTED TO BE CONTROLLED SHALL HAVE ONE OF THE DUPLEX RECEPTACLES SHALL BE CONTROLLED AND THE OTHER DUPLEX RECEPTACLE SHALL BE UNSWITCHED.

GENERAL LIGHTING PLAN NOTES

A. LIGHTING FIXTURE LOCATIONS SHOWN ARE SCHEMATIC. REFER TO ARCHITECTURAL PLANS (REFLECTED CEILING, ELEVATIONS, ETC.) FOR EXACT LOCATIONS AND MOUNTING HEIGHTS PRIOR TO ROUGH-IN.

B. COORDINATE MOUNTING HEIGHTS OF WALL AND PENDANT MOUNT LUMINAIRES WITH ARCHITECT PRIOR TO ROUGH-IN.

C. REFER TO ARCHITECT'S REFLECTED CEILING PLAN(S) FOR CEILING HEIGHTS, TYPES, FINISHES, ETC. IN EACH AREA. VERIFY FLANGE TYPES, TRIM KITS, STEM LENGTHS, ETC. FOR ALL FIXTURES PRIOR TO SUBMITTALS.

D. CONFIRM LOCATION OF ALL DOORS SWINGS WITH ARCHITECTURAL PLANS PRIOR TO ROUGH-IN OF SWITCHES.

E. PROVIDE UNSWITCHED HOT LEG OF ROOM LIGHTING BRANCH CIRCUIT TO EACH BATTERY POWERED EMERGENCY LIGHT AND EXIT SIGN FOR CONTINUOUS CHARGING.

F. CONTRACTOR TO ESTABLISH LOCATIONS OF ALL RECESSED LIGHTING FIXTURES PRIOR TO MECHANICAL DUCTWORK INSTALLATION.

GENERAL SITE PLAN NOTES

A. TRENCHING AND BACKFILLING FOR ALL CONDUIT SYSTEMS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL CONDUITS SHALL HAVE MINIMUM COVER REQUIREMENTS AS SPECIFIED IN CEC 300.5. MORE STRINGENT DEPTH REQUIREMENTS MAY BE IMPOSED BY PROJECT SPECIFICATION. JOINT TRENCHING MAY BE UTILIZED WHERE PRACTICABLE AND WERE PERMITTED BY THIS SPECIFICATION.

B. LOCATIONS OF EXISTING UNDERGROUND (UG) UTILITY SYSTEMS SHALL BE DETERMINED BY CALLING UNDERGROUND SERVICE ALERT (USA). WHEN PLANNING UNDERGROUND WORK, AND BEFORE YOU DIG, CONTACT UNDERGROUND SERVICE ALERT (USA) AT LEAST 48 HOURS PRIOR TO EXCAVATION (WEEKENDS EXCLUDED) FOR THE LOCATION OF UNDERGROUND GAS AND ELECTRIC LINES OR EQUIPMENT.

C. MAINTAIN REQUIRED CLEARANCES FROM ALL SANITARY SEWER, WATER AND STORM DRAIN PIPING. REFER TO CIVIL PLANS FOR EXACT LOCATIONS AND DEPTHS OF PIPING.

CALIFORNIA GREEN CODE GENERAL NOTES

- CONTRACTOR TO INCLUDE PARTICIPATION IN THIRD PARTY COMMISSIONING AND BUILDING TESTING/COMMISIONING AS REQUIRED BY CAL GREEN CODE. REFER TO PROJECT COMMISSION SPECIFICATIONS FOR FURTHER INFORMATION. SUPPORT SERVICES ASSOCIATED WITH BUILDING COMMISSIONING INCLUDE BUT ARE NOT LIMITED TO: DEMONSTRATING SYSTEM PERFORMANCE, PRE AND POST INSTALLATION DOCUMENTATION OF LIGHTING CONTROL SYSTEMS COMPONENT INSTALLATION, ADJUSTING LIGHTING CONTROL EQUIPMENT SETTINGS AS DIRECTED FOR OPTIMUM PERFORMANCE AND OWNER DEFINED TIME SETTINGS.
- AS SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS, INCLUDE PROVISIONS FOR FUTURE ELECTRIC VEHICLE CHANGING STATIONS.
- AS SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS, INCLUDE PROVISIONS FOR FUTURE ROOF MOUNT PHOTOVOLTAIC ARRAY.
- REFER TO PROJECT COMMISSIONING SPECIFICATIONS ON ARCHITECTURAL SHEETS FOR FURTHER REQUIREMENTS.

GENERAL DEMOLITION PLAN NOTES

A. REFER TO ARCHITECTURAL DEMOLITION SHEETS FOR ADDITIONAL INFORMATION.

B. EQUIPMENT SHOWN TO BE REMOVED IS SHOWN FOR REFERENCE ONLY. INFORMATION WAS OBTAINED FROM ORIGINAL BUILDING DRAWINGS AND LIMITED FIELD INVESTIGATION AND MAY NOT REPRESENT ALL ELECTRICAL DEMOLITION. FIELD VERIFY CONDITIONS AND DISCONNECT/REMOVE ALL EQUIPMENT AS REQUIRED TO MEET THE INTENT OF THAT SHOWN ON THE LIGHTING AND POWER/SIGNAL DRAWINGS.

C. ALL ELECTRICAL EQUIPMENT, EXCEPT LIGHT SWITCHES, SHOWN ON DRAWING (OR REQUIRED) TO BE DEMOLISHED SHALL BE DISCONNECTED, REMOVED AND DISPOSED OF BY ELECTRICAL CONTRACTOR (UNLESS OTHERWISE DEEMED SALVAGEABLE BY OWNER). SALVAGEABLE EQUIPMENT SHALL BE TURNED OVER TO OWNER. NO EQUIPMENT (RACEWAYS, BOXES, CABLING, ETC.) SHALL BE ABANDONED IN PLACE AND COVERED BY NEW CONSTRUCTION.

D. ANY LIGHT SWITCHES THAT ARE NO LONGER IN USE, WHETHER SHOWN ON THE DEMOLITION PLAN OR NOT, ARE TO HAVE THE DEVICE AND WIRING REMOVED, AND A BLANK COVER PLATE INSTALLED.

E. SCHEDULE ANY OUTAGES WITH OWNER PRIOR TO DE-ENERGIZATION OF ANY BRANCH CIRCUITS OR FEEDERS.

F. DISCONNECTION/REMOVAL OF EXISTING COMMUNICATIONS SYSTEMS COMPONENTS SHALL BE SCHEDULED WITH OWNER AND COORDINATED WITH THEIR VENDORS.

G. SALVAGE ALL REMOVED COMPONENTS (SPEAKERS, GRILLES, TELEPHONE INSTRUMENTS, RADIO HANDSETS, ETC.) TO THE OWNER, OR PROPERLY DISPOSE OF AT OWNER DISCRETION.

H. INFORMATION SHOWN FOR LOAD DESCRIPTIONS ON EXISTING PANELS WAS GAINED FROM ORIGINAL BUILDING ELECTRICAL PLANS AND SHALL BE FIELD VERIFIED. CONFIRM LOAD ON EACH CIRCUIT OF ALL EXISTING PANELS AND PROVIDE UPDATED TYPEWRITTEN CIRCUIT DIRECTORY (IN PLASTIC SLEEVE) FOR EACH EXISTING PANELBOARD.

I. ANY LOADS REMOVED DURING DEMOLITION SHALL HAVE CONDUCTORS REMOVED BACK TO NEXT REMAINING DEVICE OR TO EXISTING PANELS. ABANDONED BREAKERS SHALL BE LABELED "SPARE".

J. PROVIDE BLANK FILLER PLATES IN DEADFRONTS OF EXISTING PANELBOARDS UPON COMPLETION OF PROJECT WHERE BREAKERS HAVE BEEN REMOVED.

K. PROVIDE NEW PLASTIC, LAMINATED ENGRAVED NAMEPLATES FOR EACH EXISTING PANEL TO MATCH NEW PANELS.

GENERAL COMMUNICATION PLAN NOTES

A. SIGNAL AND COMMUNICATIONS SYSTEMS RACEWAYS AND BOXES: PROVIDE AND INSTALL 5" SQUARE ("RANDL, INC"; TRUE 5" SQUARE BOX) RECESSED JUNCTION BOX WITH 1-GANG RING AND FACEPLATE (SUITABLE FOR MINIMUM (4) INSTALLED JACK POSITIONS) AND (1) 1-1/4" MINIMUM CONDUIT STUB TO ACCESSIBLE CEILING SPACE ABOVE OR UNDER FLOOR SPACE BELOW AS APPLICABLE AT EACH WALL TELECOMMUNICATIONS (VOICE, VOICE/DATA, DATA) OUTLET AND TELEVISION OUTLET LOCATION SHOWN ON THE PLANS UNLESS OTHERWISE NOTED. PROVIDE PATHWAYS BETWEEN COMMUNICATIONS EQUIPMENT ROOM LOCATIONS AND ACCESSIBLE CEILINGS FOR ROUTING OF DATA CABLES. WHERE NO ACCESSIBLE CEILING SPACE EXISTS, EC SHALL RUN (1) 1-1/4" MINIMUM CONDUIT FROM EACH OUTLET (FLOOR OR WALL) TO THE MDF / COMMUNICATIONS EQUIPMENT ROOM. UNDER ALL CONDITIONS, RACEWAY SHALL BE SIZED SUCH THAT CABLE FILL RATIO IS NO GREATER THAN 40%.

PROVIDE 1-1/4" CONDUIT MINIMUM FOR FLOOR BOX TELECOM AND A/V, AS SHOWN ON TELECOM PLANS.

IN ACCESSIBLE CEILING SPACES, PENETRATIONS THROUGH WALLS SHALL BE MADE WITH EMT, APPROPRIATELY SIZED FOR APPLICATION, NOT TO EXCEED 40% CABLE FILL, AND APPROPRIATELY FIRESTOPPED BASED ON WALL TYPE. IN ACCESSIBLE CEILING SPACES, J-HOOKS OR OTHER APPROVED HANGARS MAY BE USED WHERE CABLE TRAY IS NOT SHOWN.

BEFORE CONSTRUCTION, COORDINATE AND VERIFY ALL TELECOMMUNICATIONS OUTLET LOCATIONS WITH OWNER OR ARCHITECT.

B. PROVIDE EQUIPMENT RACKS/ CABINET, PATCH PANELS, CABLING, TERMINAL BLOCKS & COMPLETE OUTLET ASSEMBLIES.

C. TELEPHONE WIRING: EACH TELEPHONE OUTLET LOCATION SHOWN ON THE PLANS SHALL HAVE A 4 PAIR, 24 GAUGE CONTINUOUS CABLE (CATEGORY 6--CORDATA OR BERKTEK WITH GRAY JACKET) HOMERUN TO THE TELEPHONE TERMINAL BOARD. TERMINATE AT OUTLET LOCATION WITH OWNER APPROVED JACK. VERIFY LOCATIONS WITH OWNER OR ARCHITECT PRIOR TO CONSTRUCTION.

D. TELEVISION PREWIRE: EACH TELEVISION OUTLET SHOWN ON THE PLANS SHALL HAVE AN RG6U (WITH QUAD SHIELD) COAXIAL CABLE OR A 4 PAIR, 24 GAUGE CONTINUOUS CABLE (CATEGORY 6) HOMERUN PREWIRED TO THE CATV TERMINAL BOARD. LABEL AND LEAVE ADEQUATE SLACK FOR UTILITY CONNECTION. VERIFY CABLING WITH OWNER PRIOR TO PREWIRE.

E. VOICE/DATA WIRING: EACH VOICE/DATA OUTLET LOCATION SHOWN ON THE PLANS SHALL HAVE (2) 4 PAIR, 24 GAUGE, CATEGORY 6A, UTP CABLES (BERKTEK LANMARK 10G2 PLENUM RATED WITH BLUE JACKET) HOMERUN TO THE MDF/IDF, UNLESS NOTED OTHERWISE. TERMINATE AT OUTLET LOCATION WITH OWNER APPROVED JACK. VERIFY SYSTEM REQUIREMENTS WITH OWNER OR ARCHITECT PRIOR TO CONSTRUCTION.

F. DEVICE LOCATIONS SHOWN ARE SCHEMATIC AND APPROXIMATE. EXACT LOCATIONS SHALL BE FIELD VERIFIED DURING ROUGH-IN WITH ARCHITECTURAL ELEVATIONS, CASEWORK SHOP DRAWINGS, FURNITURE, ETC. AND SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICT WITH OTHER EQUIPMENT.

G. AVOID UNDERGROUND TELECOM CONDUIT RUNS UNLESS NECESSARY. WHERE UNDERGROUND CONDUIT IS USED, TELECOM CABLES SHALL BE WET LISTED.

H. WHERE EQUIPMENT IS NOTED AS PROVIDED BY OWNER, EC SHALL COORDINATE AT CONTRACT NOTICE TO PROCEED, ACQUIRE ALL EQUIPMENT REQUIRED FROM OWNER STAFF. UNLESS OTHERWISE DIRECTED BY OWNER STAFF, ALL OWNER FURNISHED EQUIPMENT SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR.

I. EC IS PERMITTED TO ROUTE DATA/COMMUNICATIONS WIRING ON J-HOOKS WHEN LOCATED IN ABOVE ACCESSIBLE CEILING SPACES. WHERE DATA/COMMUNICATIONS WIRING IS REQUIRED TO BE ROUTED THROUGH NON-ACCESSIBLE CEILING SPACES, EC SHALL PROVIDE CONDUIT CHASES THROUGH THE ENTIRE NON-ACCESSIBLE CEILING SPACE FOR PULLING OF CABLING.

GENERAL NOTES

1. CODE COMPLIANCE: ALL WORK SHALL CONFORM TO AND BE PERFORMED IN ACCORDANCE WITH CODES, STANDARDS, AND ORDINANCES AS SET FORTH BY THE AUTHORITIES HAVING JURISDICTION AND THEIR LATEST ADOPTED EDITIONS (IN EFFECT AT TIME OF BUILDING PERMIT APPLICATION) OF THE FOLLOWING PUBLICATIONS:

   A. CALIFORNIA CODE OF REGULATIONS TITLE 24; INCLUDES 2022 CALIFORNIA ELECTRICAL CODE, 2022 CALIFORNIA FIRE CODE, 2022 CALIFORNIA BUILDING CODE, ETC. WITH LOCAL AMENDMENTS AS APPLICABLE.

   B. AMERICANS WITH DISABILITIES ACT (ADA).

2. SAFETY: THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL EQUIPMENT IN A SAFE AND RESPONSIBLE MANNER. KEEP DEAD FRONT EQUIPMENT IN PLACE WHILE EQUIPMENT IS ENERGIZED. CONDUCT ALL CONSTRUCTION OPERATIONS IN A SAFE MANNER FOR EMPLOYEES AS WELL AS OTHER WORKPERSONS OR ANYONE VISITING THE JOB SITE. PROVIDE BARRIERS, FLAGS, TAPE, ETC. AS REQUIRED FOR SAFETY. THE CONTRACTOR SHALL HOLD ALL PARTIES HARMLESS OF NEGLIGENT SAFETY PRACTICES, WHICH MAY CAUSE INJURY TO OTHERS ON OR NEAR THE JOB SITE.

3. FIRE RATED ASSEMBLIES SHALL MAINTAIN RATINGS AS SPECIFIED IN THE CALIFORNIA BUILDING CODE CHAPTER 7. CONTRACTOR SHALL PROVIDE AND INSTALL PHYSICAL ENCLOSURE AROUND FIXTURES, PANELS, ETC. AS REQUIRED. ALL ASSEMBLIES TO BE PENETRATED SHALL BE INSTALLED WITH APPLICABLE THROUGH-PENETRATION FIRESTOP SYSTEM AS DETERMINED BY UL CLASSIFICATION. BEFORE CONSTRUCTION, VERIFY AND COMPLY WITH REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION.

4. MOUNTING HEIGHTS SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

   +15" AFF: RECEPTACLES, TELEPHONE, TV & DATA OUTLETS. (MEASURED BOTTOM OF OUTLET BOX)
   +46" AFF: OUTLET ABOVE COUNTER (MEAUSRED TOP OF OUTLET BOX)
   +48" AFF: LIGHT SWITCHES. (MEASURED TOP OF OUTLET BOX)
   +48" AFF: FIRE ALARM MANUAL PULL STATIONS, T-STATS. (MEASURED TOP OF OUTLET BOX)
   THE LOWER OF +80" AFF TO BOTTOM OF LENS, OR 6" BELOW CEILING: FIRE ALARM VISUALS.

   ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHT AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE OUTLET BOX NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE OUTLET BOX TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM. [CBC 11B-308.1.1]

   ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM [CBC 11B-308.1.2]

   BEFORE ROUGH-IN, VERIFY ALL MOUNTING HEIGHTS AND EXACT LOCATIONS FOR ALL EQUIPMENT ELECTRICAL CONNECTIONS, STUB-UPS, RECEPTACLES, OUTLETS, ETC. WITH ARCHITECT OR OWNER. PLACE DEVICES LOCATED ABOVE COUNTERS, SHELVING, ETC. AND IN BATHROOMS SO AS NOT TO CONFLICT WITH EDGES OF WAINSCOTING, COUNTER SPLASH, SHELVING, ETC. ARCHITECTURAL SHEETS SHALL GOVERN.

5. LABEL PANELS, CABINETS, BACKBOARDS, MAIN DEVICES, SAFETY SWITCHES, CONTACTORS AND OTHER SPECIFICALLY DESIGNATED EQUIPMENT SHOWN ON PLANS. USE ENGRAVED LAMINATED PLASTIC NAMEPLATES ATTACHED BY SCREWS OR RIVETS. FOR FEEDERS, NEATLY AND INDELIBLY LABEL CONDUIT DESTINATIONS ON BOTH VISIBLE ENDS OF CONDUIT RUNS WHERE CONDUITS TERMINATE AT DESIGNATED ENCLOSURES, STRUCTURES OR EQUIPMENT (INCLUDING PULL AND SPLICE BOXES).

6. EQUIPMENT ANCHORAGE NOTE
   ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE ANCHORED OR BRACED TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED IN THE 2022 CBC, SECTIONS 1613A AND 1616A AND ASCE 7-10 SECTIONS 13.3, 13.4 & 13.6.

   THE ATTACHMENT OF THE FOLLOWING ITEMS SHALL BE DESIGNED TO RESIST THE FORCES PRESCRIBED ABOVE, BUT NEED NOT BE DETAILED ON THE PLANS PER 2022 CBC SECTION 1616A.1.18:

   A. FURNITURE(EXCEPT STORAGE CABINETS AS NOTED IN 2022 CBC TABLE 13.5-1)
   B. TEMPORARY OR MOVABLE EQUIPMENT WITH EXCEPTIONS NOTED IN 2022 CBC SECTION 1616A.1.18 ITEM 2.
   C. ARCHITECTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS IN SEISMIC DESIGN CATEGORIES D, E, OR F THAT MEET ALL OF THE CRITERIA LISTED IN 2022 SECTION 1616A.1.18 ITEM 3.
   D. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUPPORTED BY VIBRATION ISOLATORS.
   E. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL

   FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL/ELECTRICAL ENGINEER.

   PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

   PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.8, 13.6.7, AND 13.6.5.5, ITEM 6, RESPECTIVELY.

   THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS WITH AN OPA#, SUCH AS MASON INDUSTRIES (OPA 349), OR ISAT (OPA 485) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

   COPIES OF THE MANUAL SHALL BE ON THE JOBSITE PRIOR TO STARTING HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

   THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL SYSTEMS

1. MECHANICAL UNIT CONDUITS: TO PREVENT DAMAGE DUE TO VIBRATION, BOTH POWER AND CONTROL WIRING CONDUITS FEEDING EXTERIOR MECHANICAL UNITS SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR WITH LIQUID TIGHT FLEXIBLE TYPE AT FINAL CONNECTION TO UNIT AND BETWEEN ROOF JACK AND DISCONNECT SWITCH WHERE DISCONNECT IS MOUNTED ON UNIT.

2. MECHANICAL CONTROLS ROUGH-IN: PROVIDE AND INSTALL J-BOX, RING AND CONDUIT (SIZE ALL AS REQUIRED) FROM EACH MECHANICAL CONTROLS LOCATION TO CONTROLLED MECHANICAL UNITS.

3. T-STAT J-BOXES: PROVIDE AND INSTALL 4" SQUARE JUNCTION BOX WITH 1-GANG RING AND 1/2" CONDUIT TO ACCESSIBLE CEILING SPACE ABOVE AT EACH THERMOSTAT LOCATION.

4. EXHAUST FANS SHALL BE PROVIDED & INSTALLED BY MECHANICAL CONTRACTOR WITH WIRING CONNECTIONS MADE BY ELECTRICAL CONTRACTOR.

5. MECHANICAL EQUIPMENT CONTROLS: MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOW VOLTAGE WIRE AND CONNECTIONS (BELOW 120 VOLT) TO AND FROM ALL MECHANICAL CONTROL DEVICES. ALL LOW VOLTAGE CONTROL WIRE SHALL BE IN CONDUIT, UNLESS OTHERWISE NOTED.

6. PULLROPES: ANY RACEWAY WITHOUT CABLE OR WIRE SHALL BE INSTALLED WITH MINIMUM 200 POUND TEST PULL LINE AND LARGER IF REQUIRED BY SERVING UTILITY COMPANY. ANY NEW OR EXISTING COMMUNICATION OR SIGNAL RACEWAY ROUTED BETWEEN BUILDINGS, SIGNAL CABINETS, AND/OR SIGNAL CLOSETS WITH FUTURE CAPACITY SHALL BE INSTALLED WITH MINIMUM 200 POUND TEST PULL LINE AS WELL AS THE CALLED FOR CABLE.

EXISTING BUILDINGS

1. ASBESTOS: IF DURING THE COURSE OF WORK THE CONTRACTOR OBSERVES THE EXISTENCE OF ASBESTOS, OR ASBESTOS-BEARING MATERIALS, THE CONTRACTOR SHALL IMMEDIATELY TERMINATE FURTHER WORK ON THE PROJECT AND NOTIFY THE OWNER OF THE CONDITION. THE OWNER WILL, AFTER CONSULTATION WITH THE OWNER'S REPRESENTATIVE, DETERMINE A FURTHER COURSE OF ACTION.

2. ANY DEMOLITION WORK SHOWN WAS PREPARED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER DOES NOT REPRESENT THAT ALL ITEMS WHICH MAY REQUIRE DEMOLITION HAVE BEEN SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CAREFULLY EXAMINE THE SITE AND THE CONTRACT DOCUMENTS AND TO PERFORM ALL DEMOLITION AND RECONSTRUCTION WHICH MAY BE REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.

3. EXISTING CONDITIONS: INFORMATION SHOWN FOR EXISTING CONDITIONS WAS PRIMARILY GAINED FROM "AS BUILT" DRAWINGS AND/OR LIMITED FIELD INVESTIGATION. BEFORE BID, VISIT SITE TO VERIFY EXISTING CONDITIONS AND MAKE ALLOWANCE FOR VARIATIONS FROM THAT SHOWN.

4 EXISTING CONDUCTORS: INTERCEPT, EXTEND, REROUTE, REPULL CONDUCTORS, SPLICE AND OTHERWISE MODIFY EXISTING CONDUCTORS OF ALL SYSTEMS AS REQUIRED TO MAINTAIN AND/OR ESTABLISH PROPER FUNCTION AND SATISFY DESIGN INTENT. REMOVE ABANDONED CONDUCTORS.

5. EXISTING COMMUNICATIONS, DATA AND CATV AND OTHER LOW VOLTAGE TYPE SYSTEM OUTLET LOCATIONS SHOWN ON THE PLAN TO BE RELOCATED SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR. MODIFY EXISTING SYSTEM AS REQUIRED FOR FULL FUNCTION (SAME AS EXISTING) IN NEW LOCATION.

6. WHERE EXISTING BUILDING CONSTRUCTION, MECHANICAL UNITS AND OTHER EQUIPMENT IS SHOWN TO BE REMOVED, DISCONNECT AND REMOVE ALL ASSOCIATED ELECTRICAL INSTALLATION.

7. CLOSELY COORDINATE OUTAGE AND FACILITY DISRUPTION TIME WITH ARCHITECT AND OWNER. MINIMUM 72-HOUR NOTICE IS REQUIRED BEFORE ANY CIRCUIT SHUTDOWN OR DISRUPTION OF FACILITY PERSONNEL FUNCTIONING.

LEGEND

NOTE: INTERPRET IN CONTEXT

LIGHT FIXTURES

- CEILING SURFACEMOUNT
- WALL SURFACEMOUNT
- PENDANT MOUNT
- RECESSED DOWNLIGHT
- RECESSED WALLWASH
- RECESSED FIXTURE
- SURFACE FIXTURE
- STRIP FIXTURE
- TRACK LIGHT
- DIRECTIONAL FLOOD
- EMERGENCY FIXTURE
- POLE LIGHT
- POLE LIGHT- DECORATIVE
- UPLIGHT- FLUSH IN GRADE
- BOLLARD
- TANDEM-WIRED LAMPS
- UNDERCABINET LIGHT
- WALL SURFACEMOUNT LINEAR TYPE
- PENDANT LINEAR FIXTURE
- RECESSED WALLMOUNT
- WALLPACK
- EXIT LIGHT- WALL
- EXIT LIGHT- CEILING (ARROW INDICATES DIRECTION)
- A — LETTER ADJACENT INDICATES FIXTURE TYPE

SWITCHES

- $ — SPST
- $2 — DPST
- $3 — 3-WAY
- $4 — 4-WAY
- $D — DIMMER
- TIMER SWITCH
- $T — W/THERMAL OVERLOAD
- $P — W/PILOT LIGHT
- $K — KEY OPERATED
- $$ — DUAL LEVEL SWITCHING
- ,a — SWITCHLEG DESIGNATION
- OS — OCCUPANCY SENSOR

POWER/COMM.

- SINGLE RECEPT.
- DUPLEX RECEPT.
- DUPLEX- HALF SWITCHED
- DOUBLE DUPLEX, HALF SWITCHED
- DOUBLE DUPLEX
- SPECIAL CONFIGURATION
- FLOORMOUNT 208V, 1Ø RECEPT
- DUPLEX- FLOOR OUTLET
- GFI — GROUND FAULT CIRCUIT INTERRUPT
- MOUNTED ABOVE COUNTER
- J — JUNCTION BOX
- TELEPHONE OUTLET
- DATA OUTLET
- PHONE/DATA COMBO OUTLET
- MOUNTED ABOVE COUNTER
- TV — TELEVISION OUTLET
- SAFETY DISCONNECT
- DROP CORD RECEPT
- JC — ABOVE-CLGMOUNT J-BOX
- TV — TV OUTLET-FLOORMOUNT
- TELEPHONE FLOOR OUTLET
- DATA FLOOR OUTLET
- PHONE/DATA COMBO FLOOR OUTLET
- IDF — INTERMEDIATE DISTRIBUTION FRAME
- MDF — MAIN DISTRIBUTION FRAME
- AP — ACCESS POINT

MISCELLANEOUS

- MOTOR
- T — THERMOSTAT
- CIRCUIT BREAKER
- FUSIBLE SWITCH
- GROUND
- Ø — PHASE
- CLOCK
- S — CLOCK/SPEAKER COMBINATION
- WALL MOUNTED CLOCK
- PUSHBUTTON
- FLUSHMOUNT PANEL
- SURFACEMOUNT PANEL
- FLUSHMOUNT CABINET
- SURFACEMOUNT CABINET
- DM — DAMPER MOTOR
- H — HUMIDISTAT
- M — MAGNETIC CONTACTOR
- COMBINATION STARTER

CONDUIT/WIRE

- NEW
- UNDERGROUND
- NEW POWER HOMERUN (3 HOTS & NEUT SHOWN)
- ISOLATED GROUND
- E — EXISTING TO REMAIN
- (E) POWER HOMERUN
- WIRE LINE- CONTINUES
- CONDUIT STUB (W/MARKER)
- VERTICAL CONDUIT RUN
- CONDUIT SEAL
- FLEXIBLE CONNECTION
- LV — LOW VOLTAGE
- SURFACEMOUNT RACEWAY
- INDICATES LINE CONTINUES
- CORD W/PLUG

SOUND

- S — SPEAKER- CLG FLUSHMOUNT
- S — SPEAKER- WALLMOUNT
- S WP — WEATHERPROOF SPEAKER
- M — MICROPHONE INPUT
- A — AUXILIARY INPUT
- HS — HEADSET OUTLET
- V — VOLUME CONTROL
- V S — SPEAKER- CLG FLUSHMOUNT VANDAL-RESISTANT
- S — CLOCK/SPEAKER WALLMOUNT SEMI-FLUSH

CONVENTIONS

- X — NUMBERED SHEET NOTES: REFERS TO NOTES ON SAME SHEET AS REFERENCE
- 1 / - — DETAIL REFERENCE:
  - -DETAIL DESIGNATION
  - -SHEET NUMBER REFERENCE
- 3103 — FEEDER SCHEDULE DESIGNATION (EXAMPLE: 3103 = 310 AMPERE, 600V, 3 CURRENT CARRYING CONDUCTORS, PREFIXES: 'M' INDICATES MEDIUM VOLTAGE, 'CO14' INDICATES CONDUIT ONLY, QUANTITY (1) AND SIZE (4"))
- PLUMB-1 — PLUMBING EQUIPMENT TAG. REFER TO PLUMBING SHEETS FOR COORDINATION.
- Y / X — MECHANICAL EQUIPMENT DESIGNATION:
  - Y = EQUIPMENT TYPE
  - X = EQUIPMENT NUMBER
  - REFER TO MECHANICAL SHEETS FOR COORDINATION.

ABBREVIATIONS

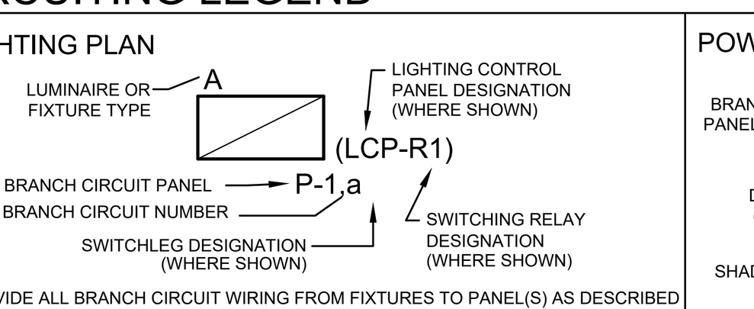
A	AMPERE
AB	AMP BREAKER
ABAND	ABANDONED
ABV	ABOVE
AC	ALTERNATING CURRENT
AC-#	AIR CONDITIONER
ADJ	ADJACENT
AF	AMP FUSE, AMP FRAME
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AIC	AMPERES INTERRUPTING CAPACITY
AI	ALUMINUM
AS	AMP SWITCH RATING
ATS	AUTOMATIC TIME SWITCH
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIBLE/AUDIO VISUAL
AWG	AMERICAN WIRE GAGE
BFG	BELOW FINISH GRADE
BIL	BASIC IMPULSE LEVEL
BLDG	BUILDING
C	CONDUIT
-C-	CATV CONDUIT
CAB'T	CABINET
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER, CODE BLUE
CBC	CA. BUILDING CODE
CEC	CA. ELECTRICAL CODE CA. ENERGY COMMISSION
CF	COMPACT FLUORESCENT
CFC	CALIFORNIA FIRE CODE
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CLG	CEILING
CL	CENTER LINE
CKT	CIRCUIT
CNT'R	CONTRACTOR
C.O.	CONDUIT ONLY (W/PULLROPE)
COND	CONDUIT, CONDUCTOR
CR	CRITICAL BRANCH
CSFM	CALIFORNIA SFM
CT	CURRENT TRANSFORMER
Cu	COPPER
CU-#	CONDENSING UNIT
D	DEPTH
DC	DIRECT CURRENT
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DPST	DOUBLE POLE SINGLE THROW
DW	DISHWASHER
EM	EMERGENCY
(E)	EXISTING
EA	EACH
EB	ELECTRONIC BALLAST
EC	ELECTRICAL CONTRACTOR
EC-#	EVAPORATIVE COOLER
EF-#	EXHAUST FAN
EL	EVENING LIGHT
ELEC	ELECTRICAL
EM	EMERG BATTERY BACKUP EMERGENCY BALLAST
EMERG	EMERGENCY
EOL	END OF LINE
EQUIP'T	EQUIPMENT
ES	ENERGY SAVING
(EXN)	(E) IN (N) LOCATION
(EXR)	(E) TO BE (R)
EXT	EXTERIOR
F	FLUORESCENT
(F)	FUTURE
F-#	FURNACE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAT	FIRE ALARM TERMINAL
FAU	FORCED AIR UNIT

FBO	FURNISHED BY OTHERS
FC-#	FAN COIL
FLA	FULL LOAD AMPS
FLR	FLOOR
FLUOR	FLUORESCENT
FS	FUSIBLE SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
G	GROUNDING CONDUCTOR
GC	GENERAL CONTRACTOR
GD	GARBAGE DISPOSAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
GWS	GANG WITH SWITCH
H	HEIGHT, HIGH
HACR	HEATING, AC & REFRIG
HID	HIGH INTENSITY DISCHARGE
HO	HIGH OUTPUT
HOA	HAND-OFF-AUTO
hp	HORSEPOWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
IC	INTERCOM
ID	IDENTIFICATION
IDF	INTERMEDIATE DISTRIBUTION FRAME
IF	INSIDE FROST
IG	ISOLATED GROUND
J-BOX	JUNCTION BOX
k	QUANTITY 1000
kVA	KILOVOLTAMPS
kW	KILOWATT
LC	LIGHTING CONTACTOR
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LS	LIFE SAFETY BRANCH
LT	LIGHT
LTG	LIGHTING
LV	LOW VOLTAGE
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CKT AMPS
MCB	MAIN CIRCUIT BREAKER
MCTB	MAIN CATV TERMINAL BOARD
MCTC	MAIN CATV TERMINAL CABINET
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
MFR	MANUFACTURER
MFS	MAIN FUSIBLE SWITCH
MH	METAL HALIDE
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OCP
MSB	MAIN SWITCHBOARD
MT	MOUNT
MT HT	MOUNTING HEIGHT
MTS	MANUAL TRANSFER SWITCH
MTTB	MAIN TELEPHONE TERMINAL BOARD
MTTC	MAIN TELEPHONE TERMINAL CABINET
MW	MICROWAVE
N	NEUTRAL (GROUNDED CONDUCTOR)
(N)	NEW
N3R	NEMA 3R
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NAT'L ELEC MANUFACTURER'S ASSOC
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NPF	NORMAL POWER FACTOR
NTS	NOT TO SCALE
OC	ON CENTER

OCP	OVERCURRENT PROTECTION
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OH	OVERHEAD
OSA	OFFICE of the STATE ARCHITECT
OSHPD	OFFICE of STATEWIDE HEALTH PLANNING & DEVELOPMENT
OVLD	OVERLOAD
P	POLE
PA	PUBLIC ADDRESS
PB	PULLBOX
PC	PULL CHAIN
PC	PHOTOCELL
PC	PLUMBING CONTRACTOR
ph	PHASE
PNL	PANEL
POC	POINT OF CONNECTION
-PP-	POWER PRIMARY
-PS-	POWER SECONDARY
PV	PHOTOVOLTAIC
(R)	RELOCATE(D)
RECEPT	RECEPTACLE
REF	REFRIGERATOR
REQ'D	REQUIRED
RLA	RATED LOAD AMPS
RM	ROOM
RMC	RIGID METAL CONDUIT
RMV	REMOVE
RPLC	REPLACE
RS	RAPID START
SC	SIGNAL CABINET
SCC	SHORT CKT CURRENT
SFM	STATE FIRE MARSHAL
SHT	SHEET
SL	SLIMLINE, SWITCH LEG
SPEC	SPECIFICATION
SPST	SINGLE POLE SINGLE THROW
SQ	SQUARE
STR'G	STORAGE
SURF	SURFACE
SVC	SERVICE
SW	SWITCH
T	TRANSFORMER, TERMINAL
-T-	TELEPHONE CONDUIT
(TBR)	TO BE REMOVED
TC	TIME CLOCK
TEL	TELEPHONE
TELCO	TELEPHONE COMPANY
TS	TIME SWITCH
TSO	TIME SWITCH OVERRIDE
TSP	TWISTED SHIELDED PAIR
TTB	TELEPHONE TERMINAL BOARD
TTC	TELEPHONE TERMINAL CABINET
TX	TRANSFORMER
TYP	TYPICAL
TYP SIM	TYPICAL SIMILAR
UC	UNDERCABINET, UNDERCOUNTER
UG	UNDERGROUND
UGPS	UNDERGROUND PULL SECTION
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
USA	UG SVC ALERT 800-642-2444
V	VOLT
VA	VOLT AMPERES
VAC	VOLT ALTERNATING CURRENT
VHO	VERY HIGH OUTPUT
VOLT	VOLTAGE
VR	VANDAL-RESISTANT
W	WIDTH, WATT, WIRE
WH-#	WATER HEATER
WP	WEATHERPROOF (NEMA 3R)
XFMR	TRANSFORMER
+48	INDICATES MOUNTING HEIGHT AFF

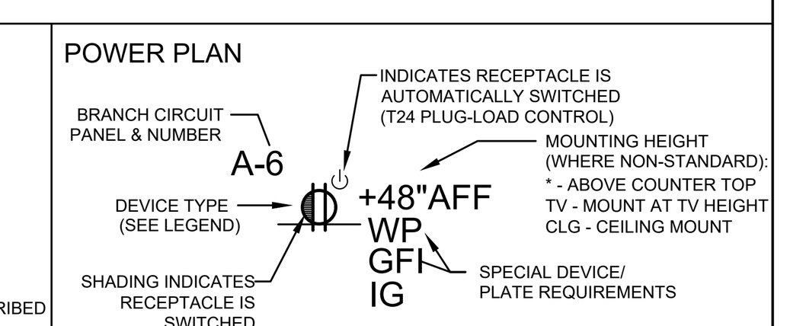
CIRCUITING LEGEND

LIGHTING PLAN



- PROVIDE ALL BRANCH CIRCUIT WIRING FROM FIXTURES TO PANEL(S) AS DESCRIBED BY CIRCUIT NUMBERS SHOWN.
- BRANCH CIRCUITS SHALL HAVE A SEPARATE NEUTRAL .
- PROVIDE ALL WIRING BETWEEN FIXTURES AND CONTROL DEVICES AND/OR LOW VOLTAGE CONTROL CABLING AS DESCRIBED IN REFERENCE NOTES AND/OR SHOWN BY SWITCHLEG DESIGNATIONS
- FLEXIBLE CONDUIT WHIPS, MAY BE USED TO CONNECT LIGHTS TO JUNCTION BOX.
- BRANCH WIRING WITHIN ROOM SHALL BE 3/4" CONDUIT MINIMUM,WITH MAX. 40% FILL INCLUDING HOTS, SWITCH LEGS AND 0-10V CONDUCTORS.
- HOME RUN CONDUITS SHALL BE 3/4" CONDUIT MINIMUM, MAXIMUM OF (3) BRANCH CIRCUITS PER CONDUIT.
- EXIT AND BATTERY POWERED EMERGENCY LIGHT FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED BRANCH CIRCUIT CONDUCTOR.

POWER PLAN



- PROVIDE ALL BRANCH CIRCUIT WIRING FROM DEVICES TO PANEL(S) PER DESIGNATIONS/CIRCUIT NUMBERS.
- HOME RUN CONDUITS SHALL BE MINIMUM 3/4"C, MAX OF (3) BRANCH CIRCUITS PER CONDUIT.
- BRANCH CIRCUIT SHALL HAVE A SEPARATE NEUTRAL.
- SEE GENERAL ELECTRICAL NOTE #4 FOR WIRING DEVICE MOUNTING HEIGHTS.

NOTE:
FOR CLARIFICATION, SOME HOMERUNS HAVE NOT BEEN SHOWN ON THE DRAWINGS, CONTRACTOR TO PROVIDE ALL REQUIRED HOMERUNS, REFER TO SINGLE LINE DIAGRAMS AND PANEL SCHEDULES FOR ALL CONDUCTORS SIZES.

DSA FILE #: 00-00
PROJECT TRACKING #: 00000-00

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VENTURA COLLEGE ADMIN BLDG ALTERATION

4667 TELEGRAPH RD, VENTURA, CA 93003

GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS

NO.	REVISION	DATE
△		
△		
△		
△		
△		

PROJECT MANAGER: JM
DRAWN BY: JM
CHECKED BY: -
DATE: 06/22/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: E-001

(E) PANEL A [6]

BUS RATING: 200A 120/208V, 3PH, 4W
MAIN: 200A MAIN C.B.
SPACES: 36 FULL SIZE BOLT-ON CB SPACES
AIC RATING: KAIC PANEL

SURFACE MOUNT, NEMA 1
LOCATION: ELECTRICAL ROOM
WITH EQUIPMENT GND BUS

CKT %VD	DIST (FT)	NOTES	LOAD TYPE	CKT	DESCRIPTION	TRIP	POLES	COND SIZE	CONNECTED VA PHASE A	PHASE B	PHASE C	COND SIZE	POLES	TRIP	DESCRIPTION	CKT	LOAD TYPE	NOTES	DIST (FT)	CKT %VD
		1	L	1	(E) LIGHTS	15	1		1200				1	15	(E) LIGHTS	2	L	1		
		1	L	3	(E) LIGHTS	15	1		950	1100			1	15	(E) LIGHTS	4	L	1		
		1	L	5	(E) LIGHTS	15	1			1000	1000		1	15	(E) LIGHTS	6	L	1		
		1	L	7	(E) LIGHTS	15	1		1000		1080		1	15	(E) LIGHTS	8	L	1		
		1	L	9	(E) LIGHTS	15	1		800	1000			1	15	(E) LIGHTS	10	L	1		
		1	L	11	(E) LIGHTS	15	1			800	1000		1	15	(E) LIGHTS	12	L	1		
		1	L	13	(E) LIGHTS	15	1		900		800		1	20	(E) RECEPTACLES	14	R	1		
		1	L	15	(E) LIGHTS	15	1		900	900			1	20	(E) RECEPTACLES	16	R	1		
		1	L	17	(E) LIGHTS	15	1			900	1080		1	20	(E) RECEPTACLES	18	R	1		
		1	R	19	(E) RECEPTACLES	20	1		900	850	900		1	20	(E) MOTOR (1) (1/2 HP)	20	N	1		
		1	R	21	(E) RECEPTACLES	20	1		850	900			1	20	(E) MOTOR (1) (1/2 HP)	22	N	1		
		1	R	23	(E) RECEPTACLES	20	1			900	950		1	20	(E) MOTOR (1) (1/2 HP)	24	N	1		
		1		25	(E) SPARE	20	1		0				3	50	(E) PANEL "C"	26		1		
		1		27	(E) SPARE	20	1			0			3		"	28		1		
		1		29	(E) SPARE	40	2				0		3		"	30		1		
		1		31	"		2						1	40	(E) CATHODIC RECEPTACLE	32		1		
		1		33	(E) MARQUE SIGN	30	2						1	20	(E) SPARE	34		1		
		1		35	"		2						1	20	(E) SPARE	36		1		
								CON:	7500	7450	7610									
								25%:	1213	1200	1240									
								SUB:	0	0	0									
								TOT:	8713	8650	8850									
								AMPS	73	72	74									

NOTES:
1. EXISTING CIRCUIT BREAKER & LOAD, TO REMAIN
2. EXISTING CIRCUIT BREAKER SPACE, TO REMAIN.

LOAD (VA)	LOAD TYPE LEGEND	
5400	R	RECEPTACLE
14610	L	LIGHTING (125% OF CONNECTED LOAD CEC 215.2)
0	M	MECHANICAL
0	K	KITCHEN APPLIANCE
2550	N	NON-CONTINUOUS MISC.
0	C	CONTINUOUS MISC. (125% OF CONNECTED LOAD CEC 215.2)

(E) PANEL B

BUS RATING: 200A 120/208V, 3PH, 4W
MAIN: MAIN LUGS ONLY
SPACES: 42 FULL SIZE BOLT-ON CB SPACES
AIC RATING: KAIC PANEL

SURFACE MOUNT, NEMA 1
LOCATION: OUTSIDE MEN'S RR
WITH EQUIPMENT GND BUS

CKT %VD	DIST (FT)	NOTES	LOAD TYPE	CKT	DESCRIPTION	TRIP	POLES	COND SIZE	CONNECTED VA PHASE A	PHASE B	PHASE C	COND SIZE	POLES	TRIP	DESCRIPTION	CKT	LOAD TYPE	NOTES	DIST (FT)	CKT %VD
		1	L	1	(E) LIGHTS	15	1		900				1	15	(E) LIGHTS	2	L	1		
		1	L	3	(E) LIGHTS	15	1		1000	980			1	15	(E) LIGHTS	4	L	1		
		1	L	5	(E) LIGHTS	15	1			900	1000		1	15	(E) LIGHTS	6	L	1		
		1	L	7	(E) LIGHTS	15	1		850		800		1	15	(E) LIGHTS	8	L	1		
		1	L	9	(E) LIGHTS	15	1		800	1110			1	15	(E) LIGHTS	10	L	1		
		1	L	11	(E) LIGHTS	15	1			700	600		1	15	(E) LIGHTS	12	L	1		
		1	R	13	(E) RECEPTACLES	20	1		900		1050		1	20	(E) RECEPTACLES	14	R	1		
		1	R	15	(E) RECEPTACLES	20	1		900	1050			1	20	(E) RECEPTACLES	16	R	1		
		1		17	(E) SPARE	15	1			900			1	20	(E) RECEPTACLES	18	R	1		
		1		19	(E) SPARE	15	1		1250				2	20	(E) WATER HEATER	20	M	1		
		1	R	21	(E) RECEPTACLES	15	1			180			2		"	22	M	1		
		1	R	23	(E) RECEPTACLES	20	1			1250	900		1	20	(E) MOTOR (1) (1/2 HP)	24	N	1		
		1	R	25	(E) RECEPTACLES & TIMECLOCK	20	1		900		850		1	20	(E) MOTOR (1) (1/2 HP)	26	N	1		
		1		27	(E) WALL HEATERS	20	1		850	900			1	20	(E) SPARE	28		1		
		1		29	(E) WALL HEATERS	20	1				900		1	20	(E) SPARE	30		1		
		1		31	(E) SPARE	20	1		3200				3	40	(E) KITCHEN UNIT, STOVE	32	K	1		
		1		33	(E) REC ALL	20	1			900			3		"	34	K	1		
		1		35	(E) REC ALL	20	1			3200	900		3		"	36	K	1		
		2		37	(E) SPACE						3200				(E) SPACE	38		2		
		2		39	(E) SPACE										(E) SPACE	40		2		
		2		41	(E) SPACE										(E) SPACE	42		2		
								CON:	11550	12070	11100									
								25%:	888	923	863									
								SUB:	0	0	0									
								TOT:	12438	12993	11963									
								AMPS	104	108	100									

NOTES:
1. EXISTING CIRCUIT BREAKER & LOAD, TO REMAIN
2. EXISTING CIRCUIT BREAKER SPACE, TO REMAIN.

LOAD (VA)	LOAD TYPE LEGEND	
6830	R	RECEPTACLE
10690	L	LIGHTING (125% OF CONNECTED LOAD CEC 215.2)
2500	M	MECHANICAL
9600	K	KITCHEN APPLIANCE
1700	N	NON-CONTINUOUS MISC.
0	C	CONTINUOUS MISC. (125% OF CONNECTED LOAD CEC 215.2)

(E) PANEL C [6]

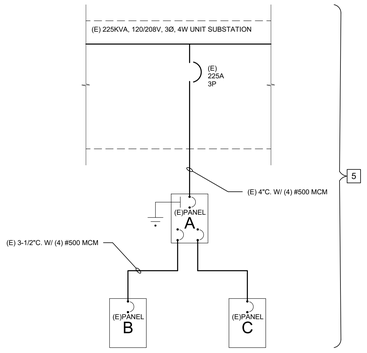
BUS RATING: 50A 120/208V, 3PH, 4W
MAIN: MAIN LUGS ONLY
SPACES: 12 FULL SIZE BOLT-ON CB SPACES
AIC RATING: KAIC PANEL

SURFACE MOUNT, NEMA 1
LOCATION: ELECTRICAL ROOM
WITH EQUIPMENT GND BUS

CKT %VD	DIST (FT)	NOTES	LOAD TYPE	CKT	DESCRIPTION	TRIP	POLES	COND SIZE	CONNECTED VA PHASE A	PHASE B	PHASE C	COND SIZE	POLES	TRIP	DESCRIPTION	CKT	LOAD TYPE	NOTES	DIST (FT)	CKT %VD
		1		1	(E) TO EXIST WIRES	20	1						1	20	(E) COPIER	2	N	1		
		1		3	(E) THRU LARGE	20	1						1	20	(E) COPIER	4	N	1		
		1		5	(E) PANEL W LEFT	20	1						1	20	(E) FIRE ALARM CONTROL PANEL	6	N	1		
		1	R	7	(E) RECEPT WALL BY FLOOR DUCT	20	1						1	20	(E) COPIER	8	N	1		
		1	N	9	(E) AUTO SLIDE DOORS	20	1						1	20	(E) COPIER	10	N	1		
		1		11	?	20	1						1	20	(E) COPIER	12	N	1		
								CON:	0	0	0									
								25%:	0	0	0									
								SUB:	0	0	0									
								TOT:	0	0	0									
								AMPS	0	0	0									

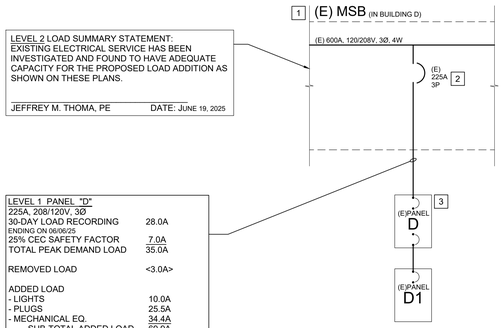
NOTES:
1. EXISTING CIRCUIT BREAKER & LOAD, TO REMAIN

LOAD (VA)	LOAD TYPE LEGEND	
0	R	RECEPTACLE
0	L	LIGHTING (125% OF CONNECTED LOAD CEC 215.2)
0	M	MECHANICAL
0	K	KITCHEN APPLIANCE
0	N	NON-CONTINUOUS MISC.
0	C	CONTINUOUS MISC. (125% OF CONNECTED LOAD CEC 215.2)



LEVEL 2 LOAD SUMMARY STATEMENT:
EXISTING ELECTRICAL SERVICE HAS BEEN INVESTIGATED AND FOUND TO HAVE ADEQUATE CAPACITY FOR THE PROPOSED LOAD ADDITION AS SHOWN ON THESE PLANS.

JEFFREY M. THOMA, PE DATE: JUNE 19, 2025



LEVEL 1 PANEL "D"
225A, 208/120V, 3Ø

30-DAY LOAD RECORDING ENDING ON 06/06/25	28.0A
25% CEC SAFETY FACTOR	7.0A
TOTAL PEAK DEMAND LOAD	35.0A
REMOVED LOAD	<3.0A>
ADDED LOAD	
- LIGHTS	10.0A
- PLUGS	25.5A
- MECHANICAL EQ.	34.4A
SUB-TOTAL ADDED LOAD	69.9A
TOTAL PANEL CALC. LOAD:	101.9A

(E) PANEL D

BUS RATING: 225A 120/208V, 3PH, 4W
MAIN: 225A MAIN C.B.
SPACES: 42 FULL SIZE BOLT-ON CB SPACES
AIC RATING: KAIC PANEL

SURFACE MOUNT, NEMA 1
LOCATION: MECHANICAL ROOM
WITH EQUIPMENT GND BUS

CKT %VD	DIST (FT)	NOTES	LOAD TYPE	CKT	DESCRIPTION	TRIP	POLES	COND SIZE	CONNECTED VA PHASE A	PHASE B	PHASE C	COND SIZE	POLES	TRIP	DESCRIPTION	CKT	LOAD TYPE	NOTES	DIST (FT)	CKT %VD
		1	M	1	(E) CONDENSER "A"	40	3						1	20	(E) RECEPTACLES	2	R	1		
		1	M	3	"		3						1	20	(E) RECEPTACLES	4	R	1		
		1	M	5	"		3						1	20	(E) RECEPTACLES	6	R	1		
		1	M	7	(E) CONDENSER "B"	40	3						1	20	(E) SPARE	8		1		
		1	M	9	"		3						1	20	(E) SPARE	10		1		
		1	M	11	"		3						1	20	(E) MECHANICAL ROOM LIGHT	12	L	1		
0.47%	25	3	M	13	(N) OU-1, OUTDOOR UNIT	50	2	8	3016				1	20	(E) FA	14	N	1		
0.47%	25	3	M	15	"		2	8		3016			1	20	(E) FURNACE "A"	16	M	1		
0.30%	125	3	M	17	(N) IU-1, IU-2, IU-3, IU-4A, IU-4B & IU-5, INDOOR UNITS	15	2	12			152		1	20	(E) FURNACE "B"	18	M	1		
0.30%	125	3	M	19	"		2	12	152				1	20	(E) SPARE	20		1		
0.89%	135	3	M	21	(N) MCU-1, MODE CONTROL UNIT, HRC-1	15	2	12		416			1	20	(E) OUTDOOR GFI RECEPTACLE	22	R	1		
0.89%	135	3	M	23	"		2	12			416		1	20	(E) HVAC CONTROLS	24	M	1		
		1		25	(E) SPARE	20	1						1	20	(E) RECEPTACLES	26	R	1		
2.48%	125	3	R	27	(N) OFFICE3 RECEPTACLES	20	1	12		720			1	20	(E) RECEPTACLES	28	R	1		
2.70%	130	3	L	29	(N) ADMIN BLDG REMODEL LIGHTS	20	1	10			1204		1	20	(E) RECEPTACLES	30	R	1		
		1		31	(E) SPARE	20	1						2	20	(E) COPIER (CANNON)	32	N	1		
2.77%	140	3	R	33	(N) FISCAL OFFICE RECEPTACLES	20	1	12		720			2		"	34	N	1		
1.68%	85	3	R	35	(N) OFFICE 4 RECEPTACLES	20	1	12			720 1000	10	1	20	(N) COPIER	36	N	3	130	2.24%
		1	N	37	(E) PANEL "D1"	100	3						1	20	(E) SPARE	38		1		
		1	N	39	"		3						1	20	(E) SPARE	40		1		
		1	N	41	"		3						1	20	(E) SPARE	42		1		
								CON:	3168	4872	3492									
								25%:	0	0	301									
								SUB:	0	0	0									
								TOT:	3168	4872	3793									
								AMPS	26	41	32									

NOTES:
1. EXISTING CIRCUIT BREAKER & LOAD, TO REMAIN
2. EXISTING CIRCUIT BREAKER SPACE, TO REMAIN.
3. CIRCUIT MODIFIED BY PROJECT.

LOAD (VA)	LOAD TYPE LEGEND	
2160	R	RECEPTACLE
1204	L	LIGHTING (125% OF CONNECTED LOAD CEC 215.2)
7167.68	M	MECHANICAL
0	K	KITCHEN APPLIANCE
1000	N	NON-CONTINUOUS MISC.
0	C	CONTINUOUS MISC. (125% OF CONNECTED LOAD CEC 215.2)

□ REFERENCE NOTES

1. EXISTING 600A, 120/208V, 3Ø, 4W SWITCHGEAR, LOCATED IN BUILDING "D", TO REMAIN.
2. EXISTING 225A CIRCUIT BREAKER, TO REMAIN.
3. EXISTING PANEL "D", 225A, 120/208V, 3Ø, 4W, IN ADMIN BUILDING, TO REMAIN, REFER TO PANEL SCHEDULE FOR FURTHER INFORMATION.
4. PANEL SCHEDULES FOR EXISTING PANELS "A", "B" AND "C" SHOWN FOR REFERENCE ONLY. NO CHANGE IN LOADS.
5. EXISTING, PARTIAL SINGLE LINE DIAGRAM, SHOWN FOR REFERENCE ONLY.
6. PROJECT WORK RESULTS IN NET REDUCTION IN LOAD ON PANEL.

DSA FILE #: 00-00
PROJECT TRACKING #: 00000-00

rrm design group
rrmdesign.com | (805) 543-1794

CONSULTING ENGINEER

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THOMA #25-8028

VENTURA COLLEGE ADMIN BLDG ALTERATION

4667 TELEGRAPH RD, VENTURA, CA 93003

ELECTRICAL SINGLE LINE DIAGRAM AND PANEL SCHEDULE

NO.	REVISION	DATE
1		
2		
3		
4		
5		

PROJECT MANAGER: JM
DRAWN BY: JM
CHECKED BY: -
DATE: 06/22/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: E-002

LUMINAIRE SCHEDULE

FOR VENTURA COLLEGE, ADMIN BLDG RE-MODEL

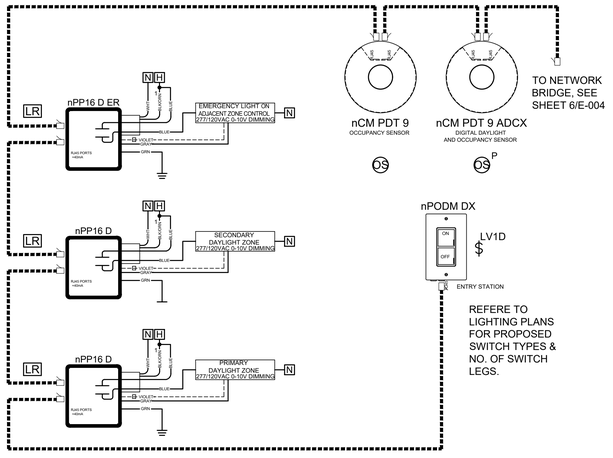
T E# 25-8028

TYPE	ILLUSTRATION	MANUFACTURER	CATALOG NUMBER	VOLTAGE	TOTAL INPUT WATTS (W)	LAMP TYPE	NOMINAL LUMEN OUTPUT (L)	LAMP COLOR TEMP (K)	MOUNTING TYPE	DESCRIPTION	REMARKS
A1		LITHONIA LIGHTING	2BLT4-40L-ADP-GZ10-LP835-WH	120/277	31	LED	4197	3500	RECESSED	2'x4' RECESSED LED TROFFER WITH CURVED, RIBBED DIFFUSER, DRYWALL GRID ADPATER AND 0-10V DIMMING	PROVIDE DRYWALL GRID ADPATER, "DGA"
A2		LITHONIA LIGHTING	2BLT2-33L-ADP-GZ10-LP835-WH	120/277	27	LED	3300	3500	RECESSED	2'x2' RECESSED LED TROFFER WITH CURVED, RIBBED DIFFUSER, AND 0-10V DIMMING	
A2D		LITHONIA LIGHTING	2BLT2-33L-ADP-GZ10-LP835-WH	120/277	27	LED	3300	3500	RECESSED	2'x2' RECESSED LED TROFFER WITH CURVED, RIBBED DIFFUSER, DRYWALL GRID ADAPTER AND 0-10V DIMMING	PROVIDE DRYWALL GRID ADPATER, "DGA"
B1		LITHONIA LIGHTING	STL4-48L-GZ10-LP835	120/277	35	LED	3834	3500	SURFACE	1'x4' LED SURFACE MOUNT LUMINAIRE WITH 0-10V DIMMING TO 10% AND WHITE FINISH	
D1		LITHONIA LIGHTING	LDN6-35/15-L06-AR-LSS-TRW-MVOLT-GZ10 LRP-1-RW-TBD-120/277-EL N	120/277	18	LED	1514	3500	RECESSED	6" DIAMETER, LED DOWNLIGHT WITH 0-10V DIMMING TO 10%, CLEAR TRIM WITH SEMI-SPECULAR FINISH AND WHITE PAINTED FLANGE	
X1		LITHONIA LIGHTING	LRP-1-RW-TBD-120/277-EL N	120/277	3	LED	N/A	N/A	SURFACE	SINGLE FACE EXIT SIGN WITH RED LETTERS ON WHITE BACKGROUND WITH 90 MINUTE BATTERY BACK UP	

NOTES

- LUMINAIRE SUPPLIED VOLTAGE TO BE VERIFIED BY ELECTRICAL CONTRACTOR.
- STANDARD, NON-PREMIUM FINISHES TO BE VERIFIED WITH ARCHITECT PRIOR TO ORDER.

1 LUMINAIRE SCHEDULE
NTS



4 LIGHTING CONTROL: LARGE ROOM
NTS

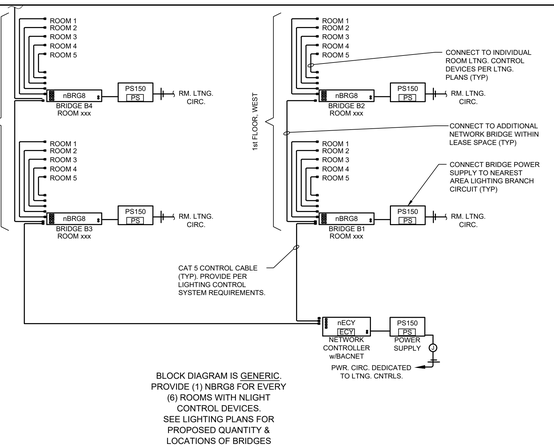
LIGHTING CONTROLS SYMBOL LEGEND		
SYMBOL	PRODUCT # nLIGHT (U.O.N.)	DESCRIPTION
LV1D	nPOD DX	1 CHANNEL ON/OFF TOGGLE WITH DIMMING LOW VOLTAGE; ON / OFF / RAISE / LOWER CONTROL
LR#	nPP16 D	16 AMP RELAY PACK WITH 0-10V DIMMING CONTROL; CHASE NIPPLE MOUNTING
RR	nPP20 PL T24	20 AMP RELAY PACK FOR PLUG LOAD CONTROL; CHASE NIPPLE MOUNTING
OS	nCM PDT 9	STANDARD RANGE 360° SENSOR-CEILING MOUNT, LOW VOLTAGE, DUAL TECHNOLOGY (PDT) OCCUPANCY SENSOR
P OS	nCM PDT 9 ACDX	STANDARD RANGE 360° SENSOR-CEILING MOUNT, LOW VOLTAGE DUAL TECHNOLOGY (PDT), DAYLIGHT, OCCUPANCY SENSOR
nBRGE	BRIDGE KIT, nBG	SYSTEM NETWORK BRIDGE, 8-PORT.
		CAT 5E CABLING, WHITE COLOR

NOTES:
A. VERIFY QUANTITY OF DEVICES REQUIRED TO PROVIDE COMPLETE COVERAGE AND CONTROL PER ROOM DIMENSIONAL REQUIREMENTS AND CONTROL FUNCTIONS SHALL SHOWN ON LIGHTING PLANS AND POWER PLANS.
B. PROVIDE A SHOP DRAWING OF THE BUILDING FLOOR PLANS WITH LAYOUT OF CONTROL DEVICES.

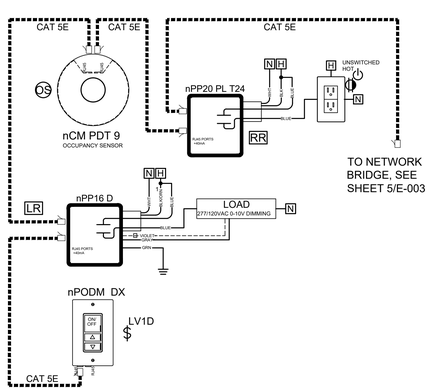
GENERAL NOTES

1. LIGHTING CONTROL NETWORK SYSTEM BASIS OF DESIGN IS ACUITY NLIGHT. ENGINEER AND OWNER APPROVED EQUAL SYSTEMS THAT ARE T24 ENERGY COMPLIANT WILL BE ACCEPTABLE.
2. QUANTITY AND LOCATION OF ALL SENSORS ARE SHOWN FOR DESIGN INTENT. LIGHTING CONTROL MANUFACTURER SHALL SUBMIT COMPLETE SHOP DRAWING SHOWING PREFERRED LOCATION AND QUANTITY OF SENSORS REQUIRED FOR OPTIMUM SYSTEM PERFORMANCE.
3. PROVIDE OCCUPANCY SENSOR, WALL OR CEILING MOUNTED AS SHOWN ON THIS PLAN WITH TYPE AND MODEL THAT CAN ACCOMMODATE THE SPACE REQUIREMENT FOR THE ROOM OR AREA.
4. FOR THE LIGHTING CONTROL SYSTEM: OPEN CABLE INSTALLATION OF CAT 5E IN ACCESSIBLE CEILING SPACE IS ACCEPTABLE. CONDUIT SLEEVES SHALL BE PROVIDE AT ANY AREAS WITH INACCESSIBLE OR HARD LID CEILINGS. CAT 5E CABLES SHALL BE WHITE IN COLOR.
5. OPEN CABLE INSTALLATION OF CAT 5E IN ACCESSIBLE CEILING SPACE SHALL BE INSTALLED IN AN ORGANIZED WORKMAN LIKE MANNER WITH J-HOOKS AND/OR CABLE SUPPORTS AT 6FT O.C. MAXIMUM.
6. 0-10V CONTROL CABLE SHALL BE 600V RATED #18 THWN CU. OR AS PER LIGHTING CONTROL MANUFACTURERS REQUIREMENTS. INSTALLED IN LIGHTING BRANCH CIRCUIT CONDUITS.
7. LOCATE CONTROL RELAYS ABOVE CEILINGS IN A CONSISTENT MANNER AT EACH ROOM TYPE. TYPICALLY LOCATE THE RELAYS ABOVE THE LIGHTING CONTROL SWITCH(ES).
8. PROVIDE USERS WITH LIGHTING CONTROL SYSTEM SENSORVIEW (OR APPROVED EQUAL) SOFTWARE ACCESS.
9. PROVIDE OWNER USERS WITH 4-HOUR TRAINING SESSION OF LIGHTING CONTROL SYSTEM FUNCTIONALITY, SYSTEM SETTINGS, DEMONSTRATE PROGRAMMING OF THE PROJECT SYSTEM, AVAILABLE ADJUSTMENTS, ETC. PROVIDE A FOLLOW UP TRAINING SESSION WITHIN 12-MONTHS AFTER OWNER TAKES OCCUPANCY OF BLDG.

2 LIGHTING CONTROL SYBMOL LEGEND
NTS



5 BLOCK DIAGRAM: INT. LTG CONTROL SYSTEM NETWORK
NTS



3 LIGHTING CONTROL: TYP. SMALL TO MEDIUM SIZE ROOM

DSA FILE #: 00-00
PROJECT TRACKING #: 00000-00

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CONSULTING ENGINEER

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THOMA #25-8028

VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003

LUMINAIRE SCHEDULE AND CONTROL DIAGRAMS

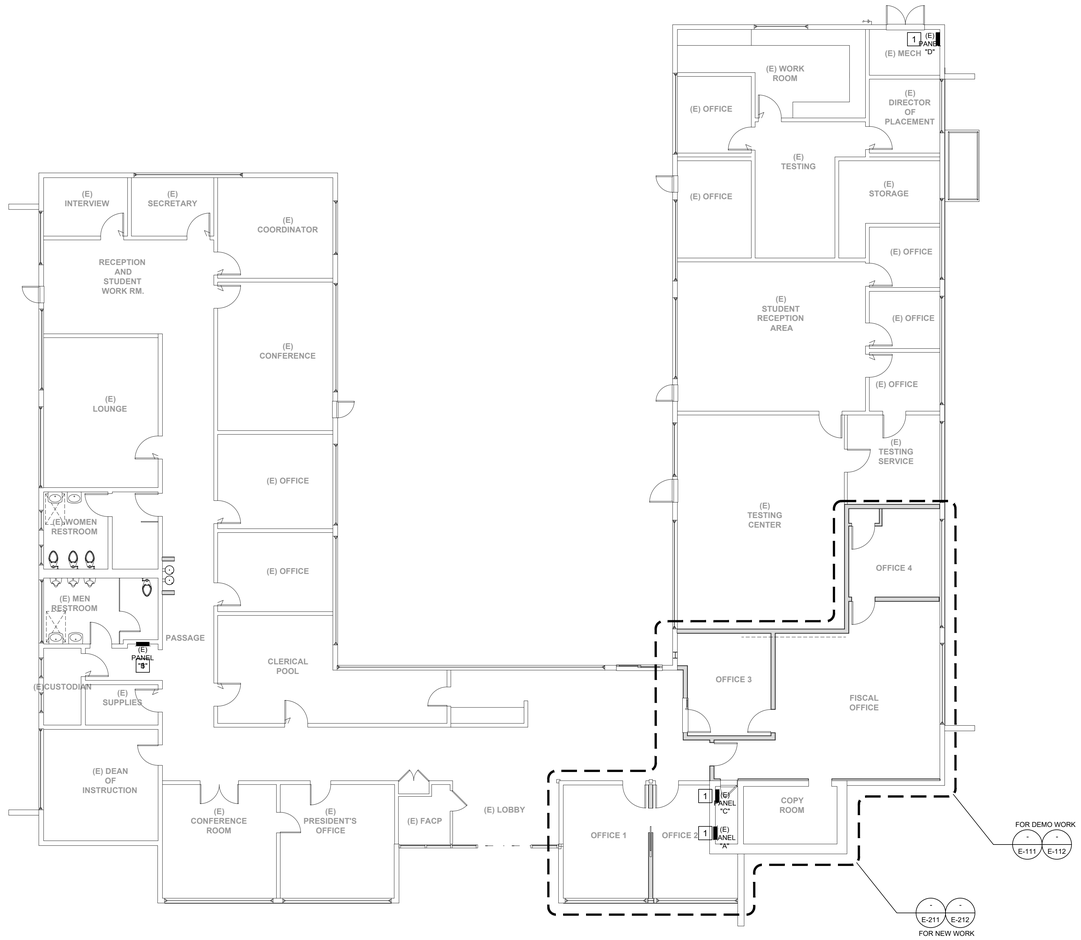
NO.	REVISION	DATE

PROJECT MANAGER: JM
DRAWN BY: JM
CHECKED BY:
DATE: 06/22/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: E-003

3/26/2025 7:21:33 PM
Autodesk Docs://3425 - Ventura College Admin Building Alterations/3425_Ventura_College_Admin_Building.rvt
K:\ENG\2025\25-8028\25-8028 E-003 LUMINAIRE SCHEDULE.dwg - JMinkel - Jul 24, 2025 - 2:28pm

☐ REFERENCE NOTES

1. EXISTING BRANCH CIRCUIT PANELBOARDS, TO REMAIN, TYP.



OVERALL ELECTRICAL FLOOR PLAN

NORTH

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

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THOMA #25-8028

VENTURA COLLEGE ADMIN BLDG ALTERATION

4667 TELEGRAPH RD, VENTURA, CA 93003

OVERALL ELECTRICAL FLOOR PLAN

NO.	REVISION	DATE
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PROJECT MANAGER
JM

DRAWN BY JM | **CHECKED BY** -

DATE 06/22/2025

PROJECT NUMBER
3425-01-ED24

SHEET
E-101

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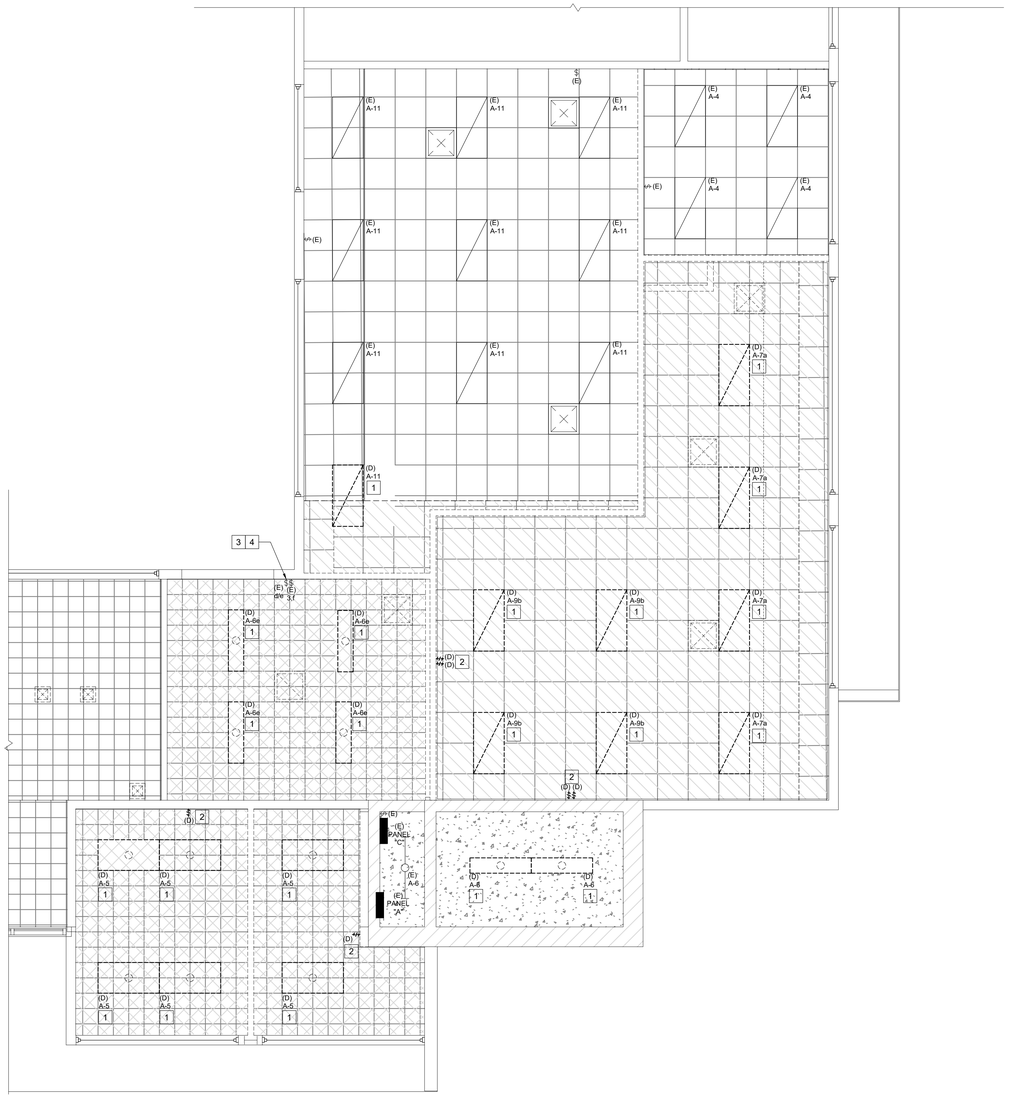
☐ REFERENCE NOTES

1. DISCONNECT EXISTING LUMINAIRE(S) FROM POWER SOURCE AND REMOVE. EC SHALL MAINTAIN CIRCUIT INTEGRITY FOR EXISTING LUMINAIRES TO REMAIN. REMOVE EXISTING, UN-USED CONDUCTORS BACK TO ORIGIN.
2. DISCONNECT AND REMOVE EXISTING LUMINAIRE CONTROL SWITCH(ES).
3. EC SHALL DISCONNECT EXISTING SWITCH LEG "e" FOR LOBBY LUMINAIRES FROM EXISTING SWITCH.
4. EC SHALL REMOVE EXISTING TWO GANG SWITCH J-BOX AND PREP FOR NEW THREE GANG SWITCH J-BOX. EXISTING SWITCHES, TYP. OF (2), TO REMAIN AND BE INSTALLED IN NEW 3 GANG SWITCH J-BOX. REFER TO E-211.



LIGHTING DEMOLITION FLOOR PLAN

SCALE: 1/4" = 1'-0"

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DEMOLITION LIGHTING FLOOR PLAN

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JM

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REFERENCE NOTES

1. EC SHALL PROVIDE TEMPORARY SUPPORT FOR EXISTING, WALL MOUNTED, LOW VOLTAGE COMMUNICATIONS EQUIPMENT WHILE EXISTING WALL TO BE DEMOLISHED AND RE-BUILT IN PLACE FROM FLOOR TO DECK ABOVE. EC SHALL PROVIDE SIMILAR TEMPORARY SUPPORT FOR DUPLEX RECEPTACLE IN ADJACENT WALL FOR SAME PURPOSE. LOW VOLTAGE EQUIPMENT DOWNTIME TO BE AS MINIMAL AS FEASIBLE. OUTAGES TO BE COORDINATED WITH OWNER, MINIMUM 48 HOUR NOTICE PROVIDED TO OWNER.
2. EC SHALL DISCONNECT AND REMOVE EXISTING DEVICE AND PULL WIRING/CABLES BACK TO POINT OF ORIGIN AND REMOVE. EXISTING, ASSOCIATED SURFACE MOUNTED RACEWAY(S) TO BE REMOVED WITH DEVICE(S). EC SHALL UPDATE PANEL SCHEDULE(S) WHEN CIRCUITS ARE NO LONGER IN USE AS SPARE. REMAINING DEVICES ARE EXISTING TO REMAIN U.O.N. EC SHALL MAINTAIN CIRCUIT INTEGRITY FOR EXISTING DEVICES.
3. EC SHALL DISCONNECT AND REMOVE EXISTING DEVICE. EXISTING, ASSOCIATED SURFACE MOUNTED RACEWAYS TO BE REMOVED AND REPLACED WITH IN-WALL CONDUITS. EC SHALL PULL EXISTING CONDUCTORS INTO NEW CONDUIT AND RE-CONNECT NEW DEVICE TO EXISTING BRANCH CIRCUIT. EC SHALL MAINTAIN CIRCUIT INTEGRITY FOR EXISTING DEVICES.

ELECTRICAL DEMOLITION FLOOR PLAN

SCALE: 1/4" = 1'-0"

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DEMOLITION ELECTRICAL FLOOR PLAN

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PROJECT MANAGER: JM
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PROJECT NUMBER: 3425-01-ED24
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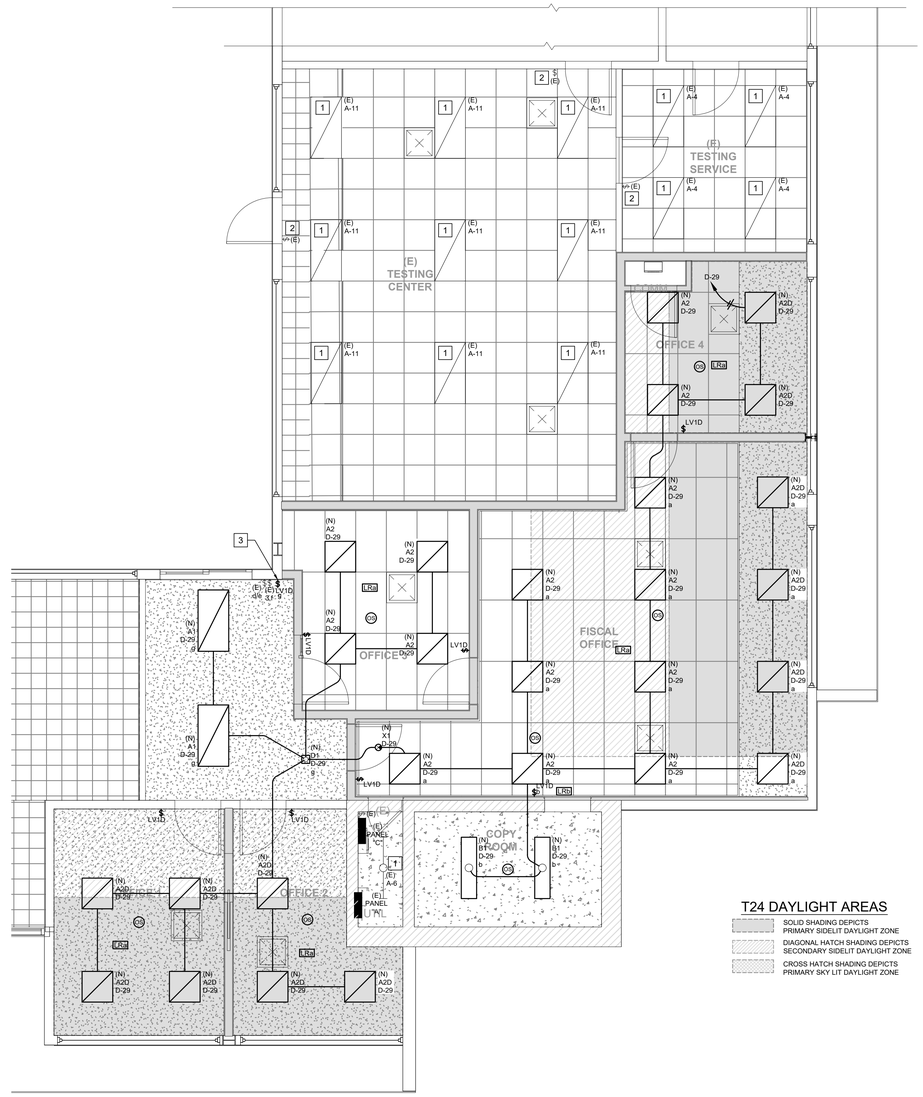
REFERENCE NOTES

1. EXISTING LUMINAIRES TO REMAIN.
2. EXISTING LIGHTING CONTROLS, TO REMAIN.
3. PROVIDE 3 GANG SWITCH J-BOX TO ACCOMMODATE NEW LOW VOLTAGE SWITCH. PROVIDE LOW VOLTAGE SWITCH AS SHOWN.



GENERAL LIGHTING PLAN NOTES

A. LIGHTING FIXTURE LOCATIONS SHOWN ARE SCHEMATIC. REFER TO ARCHITECTURAL PLANS (REFLECTED CEILING, ELEVATIONS, ETC.) FOR EXACT LOCATIONS AND MOUNTING HEIGHTS PRIOR TO ROUGH-IN.

B. COORDINATE MOUNTING HEIGHTS OF WALL AND PENDANT MOUNT LUMINAIRES WITH ARCHITECT PRIOR TO ROUGH-IN.

C. REFER TO ARCHITECT'S REFLECTED CEILING PLAN(S) FOR CEILING HEIGHTS, TYPES, FINISHES, ETC. IN EACH AREA. VERIFY FLANGE TYPES, TRIM KITS, STEM LENGTHS, ETC. FOR ALL FIXTURES PRIOR TO SUBMITTALS.

D. CONFIRM LOCATION OF ALL DOORS SWINGS WITH ARCHITECTURAL PLANS PRIOR TO ROUGH-IN OF SWITCHES.

E. PROVIDE UNSWITCHED HOT LEG OF ROOM LIGHTING BRANCH CIRCUIT TO EACH BATTERY POWERED EMERGENCY LIGHT AND EXIT SIGN FOR CONTINUOUS CHARGING.

F. HARD LID ACCESS PANELS TO BE PROVIDED BY EC, AS NEEDED. COORDINATE LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

NEW LIGHTING FLOOR PLAN

SCALE: 1/4" = 1'-0"

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NEW LIGHTING FLOOR PLAN

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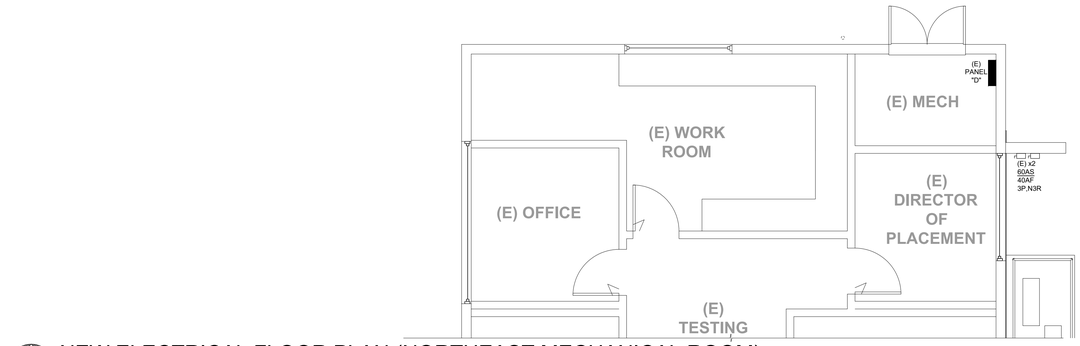
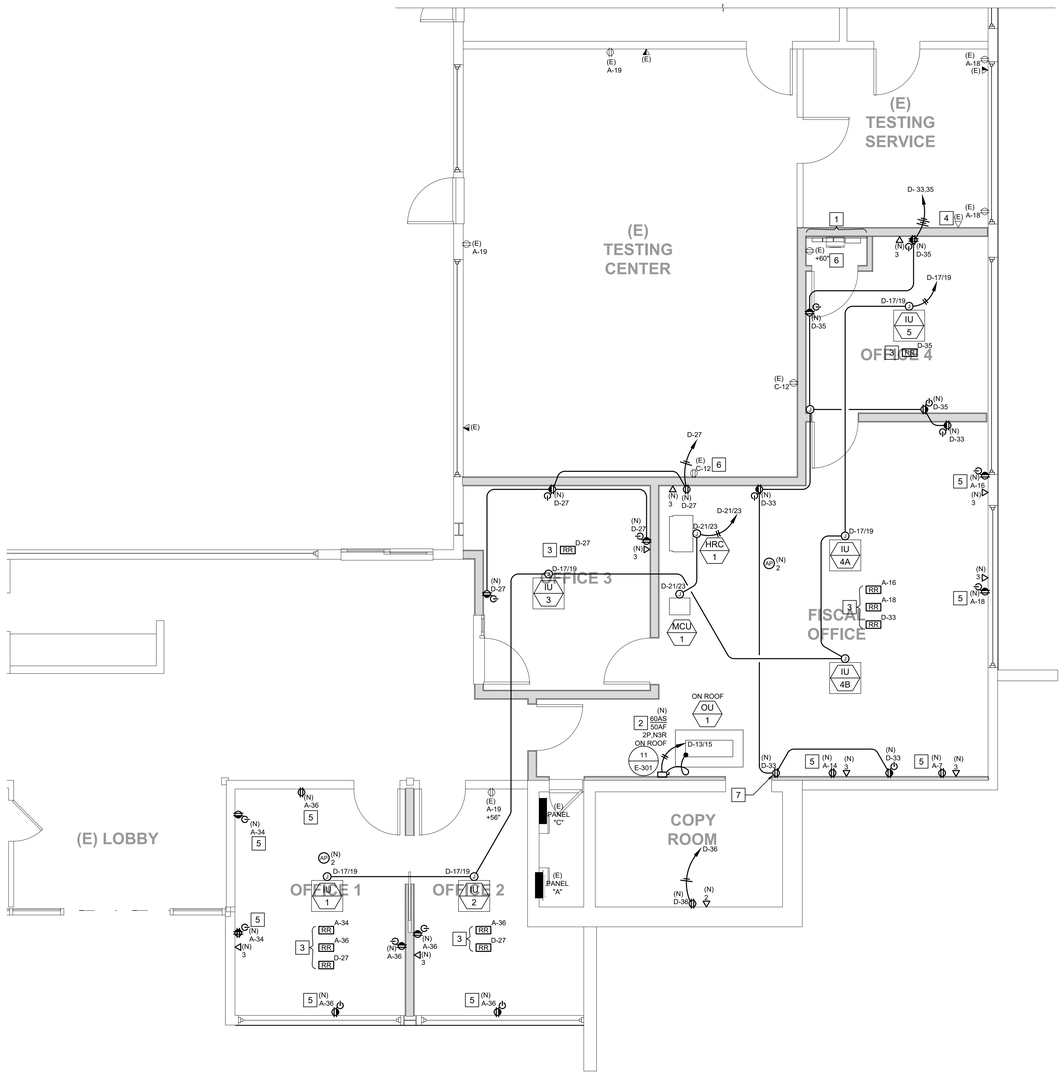


NEW ELECTRICAL FLOOR PLAN (NORTHEAST MECHANICAL ROOM)

SCALE: 1/4" = 1'0"

NORTH



NEW ELECTRICAL FLOOR PLAN (PROJECT AREA)

SCALE: 1/4" = 1'0"

NORTH

REFERENCE NOTES

1. EC SHALL RE-INSTALL EXISTING WALL MOUNTED IDF IN PREVIOUS LOCATION AS SHOWN ON PLAN. EC SHALL PROVIDE NEW CAT6A CABLING TO ALL NEW DATA RECEPTACLES IN PROJECT AREA. EXISTING CATEGORY CABLING TO EXISTING DATA RECEPTACLES TO REMAIN.
2. EC SHALL INSTALL DISCONNECT SWITCH FOR NEW MECHANICAL UNIT, REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION AND 11/E-301 FOR MOUNTING.
3. EC SHALL INSTALL RECEPTACLE RELAYS ABOVE NEW CEILING. EC TO PROVIDE ACCESS PANEL ADJACENT TO RELAYS AT GYP. BOARD CEILINGS AS REQUIRED.
4. EC SHALL ADJUST INSTALLATION OF EXISTING J-BOX AND ASSOCIATED DATA RECEPTACLE TO ACCOMMODATE NEW WALL CONSTRUCTION. PROVIDE NEW CATEGORY CABLING AS REQUIRED, SPLICING OF CATEGORY CABLING IS NOT PERMITTED.
5. EC SHALL CONNECT NEW DEVICE TO EXISTING BRANCH CIRCUIT FROM DEMOLISHED RECEPTACLE. EXTEND BRANCH CIRCUIT CONDUCTORS AS REQUIRED. WHERE APPLICABLE, EC SHALL INTERCEPT EXISTING BRANCH CIRCUIT WIRING AND ROUTE THROUGH NEW RECEPTACLE RELAY TO PROVIDE CONTROLLED RECEPTACLE PER CEC 130.5(e). REFER TO E-112 FOR DEMOLITION ELECTRICAL FLOOR PLAN.
6. EC SHALL ADJUST INSTALLATION OF EXISTING J-BOX AND ASSOCIATED ELECTRICAL RECEPTACLE TO ACCOMMODATE NEW WALL CONSTRUCTION. EXTEND BRANCH CIRCUIT CONDUCTORS AS REQUIRED.
7. PROVIDE SURFACE MOUNTED, 120V GFI, WEATHERPROOF W.I.U., RECEPTACLE ON ROOF. REFER TO 10/E-301.

GENERAL POWER PLAN NOTES

A. U.O.N. INSTALL SEPARATE NEUTRALS FOR EACH BRANCH CIRCUIT.

B. FUSING: ALL FUSIBLE SAFETY DISCONNECT SWITCHES SHALL BE PROVIDED WITH DUAL-ELEMENT TIME DELAY TYPE FUSES SIZED AND RATED PER EQUIPMENT MANUFACTURERS' RECOMMENDATIONS. VERIFY WITH EQUIPMENT NAMEPLATE BEFORE INSTALLATION.

C. MOTOR OVERLOAD PROTECTION: WHERE REQUIRED BY NEC ARTICLE 430 PART C AND NOT SHOWN ON PLAN OR PROVIDED INTEGRAL WITH EQUIPMENT, PROVIDE AND INSTALL THERMAL OVERLOAD PROTECTION FOR ALL MOTORS.

D. SPARE CONDUIT FOR RECESSED PANELS: PROVIDE (1) 3/4" SPARE CONDUIT STUB UP TO ACCESSIBLE ABOVE CEILING SPACE AND/OR ACCESSIBLE SPACE BELOW FOR EVERY (3) SPARE BREAKER SPACES AS INDICATED ON PANEL SCHEDULES.

E. DEVICE LOCATIONS SHOWN ARE SCHEMATIC AND APPROXIMATE. EXACT LOCATIONS SHALL BE FIELD VERIFIED DURING ROUGH-IN WITH ARCHITECT, DISTRICT REPRESENTATIVE, ARCHITECTURAL ELEVATIONS, CASEWORK SHOP DRAWINGS, FURNITURE, ETC. AND SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICT WITH OTHER EQUIPMENT.

F. ELECTRICAL AND COMMUNICATIONS OUTLETS SHOWN IN FIRE RATED, OR SOUND RATED (STC) ASSEMBLIES SHALL BE PROVIDED WITH PUTTY PADS LISTED FOR THE APPLICATION.

G. ELECTRICAL AND COMMUNICATIONS OUTLETS SHOWN IN THE SAME LOCATION, SHALL BE MOUNTED ON OPPOSITE SIDES OF THE SAME STUD. COORDINATE BETWEEN ELECTRICAL AND COMMUNICATIONS PLANS. ALTERNATIVELY, A DEVICE BRACKET MAY BE USED BETWEEN STUDS WITH 4-INCH SEPARATION BETWEEN POWER AND LOW VOLTAGE BOXES.

H. CONTROLLED RECEPTACLES; INSTALLED PER REQUIREMENTS OF 2022 BUILDING ENERGY EFFICIENCY STANDARDS / EFFICIENCY STANDARDS, CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 6. SECTION 130.5 (D) - ELECTRICAL POWER DISTRIBUTION SYSTEMS AS CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND / OR CONTROLLED RECEPTACLES. SHALL BE PROVIDED WITH AN APPROVED MEANS OF INCLUDING A PERMANENT AND DURABLE MARKING IDENTIFYING THE CONTROLLED RECEPTACLES OR CIRCUITS TO DIFFERENTIATE THEM FROM UNCONTROLLED RECEPTACLES OR CIRCUITS. WHERE SHOWN ON ASSOCIATED FLOOR PLANS, AND OR REQUIRED BY THE STANDARDS; A DUPLEX NOTED TO BE CONTROLLED SHALL BE 'SPLIT-WIRED', SO THE TOP OUTLET SHALL BE SWITCHED AND THE BOTTOM OUTLET SHALL BE UNSWITCHED. A DOUBLE DUPLEX (FOURPLEX) NOTED TO BE CONTROLLED SHALL HAVE ONE OF THE DUPLEX RECEPTACLES SHALL BE CONTROLLED AND THE OTHER DUPLEX RECEPTACLE SHALL BE UNSWITCHED.

GENERAL COMM. PLAN NOTES

A. SIGNAL AND COMMUNICATIONS SYSTEMS RACEWAYS AND BOXES: PROVIDE AND INSTALL 5" SQUARE RECESSED JUNCTION BOX WITH 1-GANG RING AND (1) 1-1/4" CONDUIT STUB TO ACCESSIBLE CEILING SPACE ABOVE OR UNDER FLOOR SPACE BELOW AS APPLICABLE AT EACH WALL TELECOMMUNICATIONS (VOICE, VOICE/DATA, DATA) OUTLET AND TELEVISION OUTLET LOCATION SHOWN ON THE PLANS UNLESS OTHERWISE NOTED. PROVIDE PATHWAYS BETWEEN COMMUNICATIONS EQUIPMENT ROOM LOCATIONS AND ACCESSIBLE CEILINGS FOR ROUTING OF DATA CABLES. WHERE NO ACCESSIBLE CEILING SPACE EXISTS, EC SHALL RUN (1) 1-1/4" CONDUIT FROM EACH OUTLET (FLOOR OR WALL) TO THE MDF / COMMUNICATIONS EQUIPMENT ROOM.

PROVIDE 1-1/4" CONDUIT MINIMUM FOR FLOOR BOX TELECOM AND A/V, AS SHOWN ON TELECOM PLANS.

BEFORE CONSTRUCTION, COORDINATE AND VERIFY ALL TELECOMMUNICATIONS OUTLET LOCATIONS WITH OWNER OR ARCHITECT.

B. PROVIDE EQUIPMENT RACKS/ CABINET, PATCH PANELS, CABLING, TERMINAL BLOCKS & COMPLETE OUTLET ASSEMBLIES.

C. TELEPHONE WIRING: EACH TELEPHONE OUTLET LOCATION SHOWN ON THE PLANS SHALL HAVE A 4 PAIR, 24 GAUGE CONTINUOUS CABLE (CATEGORY 6--CORDATA OR BERKTEK WITH GREY JACKET) HOMERUN TO THE TELEPHONE TERMINAL BOARD. TERMINATE AT OUTLET LOCATION WITH OWNER APPROVED JACK. VERIFY LOCATIONS WITH OWNER OR ARCHITECT PRIOR TO CONSTRUCTION.

D. TELEVISION PREWIRE: EACH TELEVISION OUTLET SHOWN ON THE PLANS SHALL HAVE AN RG6U (WITH QUAD SHIELD) COAXIAL CABLE OR A 4 PAIR, 24 GAUGE CONTINUOUS CABLE (CATEGORY 6) HOMERUN PREWIRED TO THE CATV TERMINAL BOARD. LABEL AND LEAVE ADEQUATE SLACK FOR UTILITY CONNECTION. VERIFY CABLING WITH OWNER PRIOR TO PREWIRE.

E. VOICE/DATA WIRING: EACH VOICE/DATA OUTLET LOCATION SHOWN ON THE PLANS SHALL HAVE (2) 4 PAIR, 24 GAUGE, CATEGORY 6, UTP CABLES (CORDATA OR BERKTEK WITH BLUE JACKET) HOMERUN TO THE MDF. TERMINATE AT OUTLET LOCATION WITH OWNER APPROVED JACK. VERIFY SYSTEM REQUIREMENTS WITH OWNER OR ARCHITECT PRIOR TO CONSTRUCTION.

F. DEVICE LOCATIONS SHOWN ARE SCHEMATIC AND APPROXIMATE. EXACT LOCATIONS SHALL BE FIELD VERIFIED DURING ROUGH-IN WITH ARCHITECTURAL ELEVATIONS, CASEWORK SHOP DRAWINGS, FURNITURE, ETC. AND SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICT WITH OTHER EQUIPMENT.

G. WHERE EQUIPMENT IS NOTED AS PROVIDED BY OWNER, EC SHALL COORDINATE AT CONTRACT NOTICE TO PROCEED, ACQUIRE ALL EQUIPMENT REQUIRED FROM OWNER STAFF. UNLESS OTHERWISE DIRECTED BY OWNER STAFF, ALL OWNER FURNISHED EQUIPMENT SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR.

H. REFER TO COMMUNICATIONS RISER DIAGRAM, E-401, FOR FURTHER INFORMATION.

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VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003
NEW ELECTRICAL FLOOR PLAN

NO.	REVISION	DATE
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PROJECT MANAGER: JM
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DATE: 06/22/2025
PROJECT NUMBER: 3425-01-ED24
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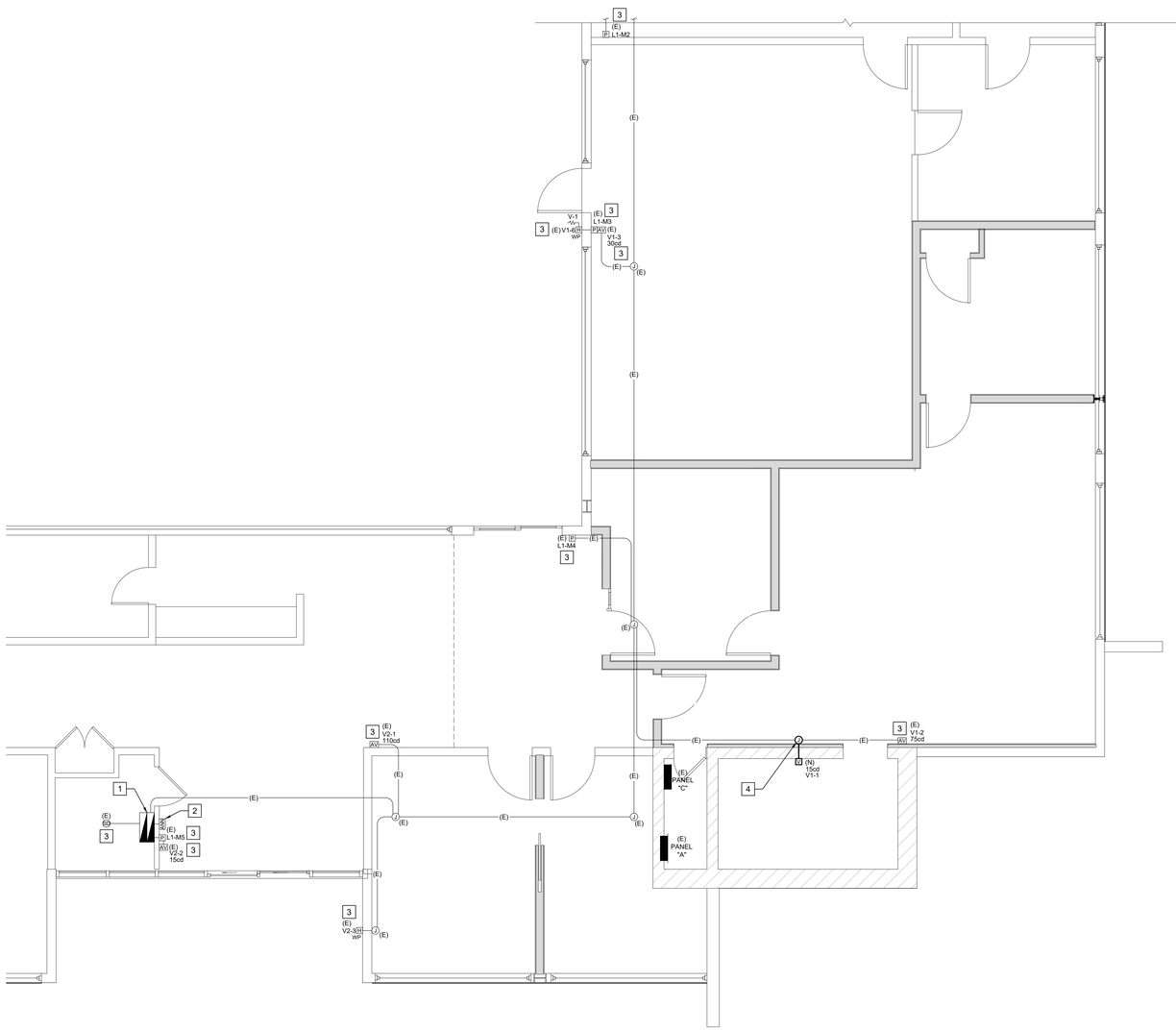
REFERENCE NOTES

1. EXISTING FIRE ALARM CONTROL PANEL, TO REMAIN.
2. EXISTING FIRE ALARM ANNUNICATOR PANEL, TO REMAIN.
3. EXISTING FIRE ALARM DEVICES, TO REMAIN.
4. INTERCEPT EXISTING FIRE ALARM CONDUIT. INTERCEPT AND EXTEND CONDUCTORS TO NEW FIRE ALARM STROBE. SEE FIRE ALARM RISER DIAGRAM SHEET E-214.



NEW FIRE ALARM FLOOR PLAN

SCALE: 1/4" = 1'0"

NORTH

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NEW FIRE ALARM FLOOR PLAN

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DATE
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PROJECT NUMBER
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SHEET
E-213

GL-2 FIRE ALARM NOTES CHECKLIST:

1. APPLICABLE STANDARD NFPA 72, AS ADOPTED AND AMENDED IN CBC CHAPTER 35
2. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM, HAS BEEN APPROVED BY DSA.
3. UPON COMPLETION OF SYSTEM INSTALLATION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.
4. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
5. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
6. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND /OR TESTING.
7. ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER APPROVED LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE PROJECT SPECIFICATIONS WITHIN THE FIRE ALARM SECTION.
8. WALL MOUNTED VISIBLE NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
9. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THAN 6" TO A HORIZONTAL STRUCTURE.
10. AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (DBA) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR FIVE DBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIABLE SPACE WITHIN THE BUILDING.
11. AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN.

    2.16 APPLICABLE CODES: ENSURE THE CURRENT CODES ARE LISTED ON THE PLANS.

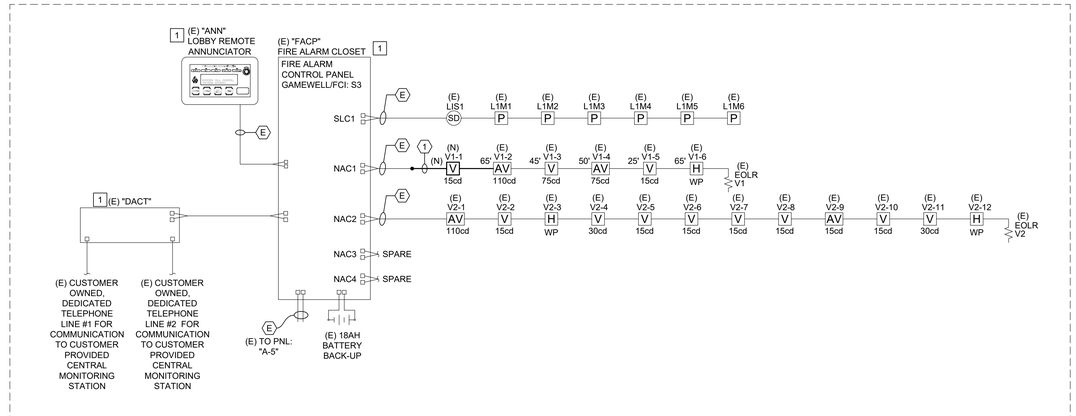
12. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
13. VISIBLE DEVICES SHOULD NOT EXCEED TWO FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN ONE FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELLA. VISIBLE DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
14. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATIONS.
15. ALL FIRE ALARM WIRING SHALL BE FPL OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE TYPE THHN OR THWN.
16. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZED PER CEC.
17. SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
18. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
19. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
20. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL." CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS.
21. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED "SYSTEM RECORD OF COMPLETION" PER NFPA 72, FIGURE 17.8.2.
22. FIRE ALARM CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR.
23. MICROPHONES ASSOCIATED WITH EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS (EVAC) SHALL BE ACCESSIBLE FOR USE, INSTALLED IN COMPLIANCE WITH CBC SECTIONS 11B-305 AND 11B-308.
24. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2.
25. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
26. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.

REFERENCE NOTES

1. EXISTING FIRE ALARM CONTROL PANEL AND ASSOCIATED ACCESSORIES, TO REMAIN.

FIRE ALARM SYMBOLS LEGEND:

DEVICES SYMBOL	QTY.	MODEL #	CSFM #
	1	(E) FIRE ALARM CONTROL PANEL GAMEWELL/FCI: S3	7165-1703:0176
DACT	1	(E) DIGITAL COMMUNICATOR GAMEWELL/FCI: E3	
ANN	2	(E) REMOTE ANNUNCIATOR GAMEWELL/FCI: LCD-SLP	7165-1703:0176
DOC	1	(E) DOCUMENT BOX	
SD	1	(E) ADDRESSABLE SMOKE DETECTOR GAMEWELL/FCI: ASD-PL2F WITH B210LP BASE	7272-1703:0121 7300-1703:0103
P	6	(E) PULL STATION GAMEWELL/FCI: MS-7AF	7150-1703:0103
AV (**cd)	5	(E) WALL MOUNT MULTI-CANDELA HORN/STROBE SYSTEM SENSOR:P2W	7125-1653:0188
V (**cd)	10	(E) WALL MOUNT STROBE SYSTEM SENSOR: SW	7125-1653:0186
V (**cd)	1	(N) WALL MOUNT STROBE SYSTEM SENSOR: SWL	7125-1653:0504
H WP	3	(E) WEATHERPROOF HORN SYSTEM SENSOR: HRK	7125-1653:0188
		(E) END OF LINE RESISTOR (EOLR) *SIZE PER MANUFACTURES RECOMMENDATIONS.	--



GENERAL NOTES

1. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN A MINIMUM 1" CONDUIT.
2. A120 VAC WIRING WILL BE MINIMUM #12 AWG
3. WIRING SHALL NOT BE LOOPED THROUGH DEVICE TERMINALS. CONDUCTORS MUST BE CUT AND WIRED "IN" AND "OUT" SO THAT ADEQUATE SUPERVISION OF THE CIRCUIT CAN BE MAINTAINED.
4. ALL DEVICES POLARITY MUST BE OBSERVED.
5. FIRE ALARM CONDUIT AND WIRING INSTALLATION SHALL COMPLY WITH CALIFORNIA ELECTRICAL CODE #760.
6. THIS IS A COMPLETE FIRE ALARM SUBMITTAL: If an alternate system is proposed, Contractor shall submit a separate set of engineered plans, specifications, and engineering calcs. for prior approval to the Owner, Division of State Architect (DSA), Architect, and Engineer including but not necessalriy limited to:
   a. All CSFM listing numbers and Manufacturers model numbers for all system components proposed for this system.
   b. Complete Riser Diagram with point to point wiring diagrams including battery and voltage drop calculations for the entire system.
   c. Indication of conductor type(s), power-limited or non-power limited system.
   d. Information as required to demonstrate compliance with all applicable code(s) and to obtain approval of all Authority(ies) having Jurisdiction (AHJ). In the event of a substitution, installation shall not begin until separate approval has been obtained and all of the above has been accepted and signed by the (AHJ) and the Architect, see Specification Section 01631 regarding substitutions. If routing differs significantly from these plans, approval of the Engineer must be obtained before installation. After construction, provide an accurate set of field record drawings to Owner.
7. FIRE ALARM SYSTEM SHALL BE SURVIVABILITY LEVEL-0.
8. CONTRACTOR SHALL REVIEW ARCHITECTURAL, MECHANICAL, PLUMBING, CIVIL, THEATRICAL LIGHTING, FIRE PROTECTION, FOOD SERVICE AND ALL OTHER PROJECT DRAWINGS AND SPECIFICATIONS, CONFIRM ALL REQUIRED FIRE ALARM CONNECTION AND INCLUDE WITH BID.

CABLING SCHEDULE

1. (N)(2)#12 THHN-STND OR CABLING AS PER MANUFACTURERS RECOMMENDATIONS.

E. EXISTING CONDUCTORS, TO REMAIN.

** CONDUIT SIZE SHOWN IS MINIMUM, UNLESS OTHERWISE NOTED ON PLANS, REFER TO FLOOR PLAN FOR ADDITIONAL FIRE ALARM CONDUIT SIZE REQUIREMENTS. EC SHALL SUBMIT CABLE MAKE/MODEL/CSFM LISTING (OR APPROVED EQUAL) WITH FIRE ALARM PROJECT DATA.

SYSTEM DESCRIPTION

SYSTEM TYPE: MANUAL

INDICATING CIRCUIT CLASS: 'B'

THE FIRE ALARM SYSTEM SHALL BE OF A TYPE THAT UPON ACTIVIATION INITIATES BUILDING FIRE ALARM NOTIFICATION.

SIGNAL DEVICE CIRCUITING LEGEND

DEVICE SYMBOL — V
SIGNAL CIRCUIT # — N1 - 1 — DEVICE #

INITIATING DEVICE CIRCUITING LEGEND

P — DEVICE SYMBOL
1.08 — DEVICE ADDRESS NUMBER
SIGNAL LINE CIRCUIT #

FIRE ALARM SYSTEM NOTES

- FIRE ALARM SYSTEM SHALL BE SUPERVISED BY AN APPROVED, UL LISTED CENTRAL STATION (UUFX) OR REMOTE STATION (UUJS) MONITORING COMPANY. (REF: CFC, 907.2.3.5)
- DOCUMENTATION CABINET TO BE INSTALLED PROXIMAL TO THE FACU. (NFPA 72, 7.7.2.1)
- ALL RECORD DOCUMENTATION SHALL BE STORED IN THE DOCUMENTAION CABINET. (NFPA 72, 7.7.2.2)
- THE DOCUMENTATION CABINET TO BE PROMINENTLY LABELED "SYSTEM RECORD DOCUMENTS". (NFPA 72, 7.7.2.4)

APPLICABLE CODES

- 2022 CALIFORNIA ADMINISTRATIVE CODE - PART 1, TITLE 24, CCR
- 2022 CALIFORNIA BUILDING CODE - PART 2, TITLE 24, CCR
- (2021 INTERNATIONAL BUILDING CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA ELECTRICAL CODE - PART 3, TITLE 24, CCR
- (2020 NATIONAL ELECTRICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA FIRE CODE - PART 9, TITLE 24, CCR
- (2022 INTERNATIONAL FIRE CODE AND 2022 CALIFORNIA AMENDMENTS)
- NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE, 2022 EDITION

FACP BATTERY CALCULATIONS

PROJECT: Ventura College Admin. Alteration - (E)FACP
Based on 24 Hour Standby

Device	Manufacturer	#	QTY	Standby Amps	Total Standby Amps	Alarm Amps	Total Alarm Amps
(E) FA Control Panel "SLP-E3"	Gamewell/FCI	SLP-E3	1	0.10000	0.10000	0.18000	0.18000
(E)-Digital Communicator	Gamewell/FCI	DACT-E3	1	0.01800	0.01800	0.01800	0.01800
(E)-Interface Module	Gamewell/FCI	RPT-E3	1	0.01300	0.01300	0.01300	0.01300
(E)-Annunciator	Gamewell/FCI	LCD-E3	2	0.03000	0.06000	0.06500	0.13000
(E)-Remote LED Driver Module	Gamewell/FCI	24V RP	1	0.05000	0.05000	0.05000	0.05000
(E) Addressable Photo Sensor	Gamewell/FCI	ASD-PL2F	1	0.00030	0.00030	0.00650	0.00650
(E)Pull Station	Gamewell/FCI	MS-7AF	6	0.000375	0.00225	0.00060	0.00360
(E) Notification Circuit			1	0.00000	0.00000	1.55600	1.55600
(N)Wall Mount Strobe	System Sensor	SWL	1	0.08800	0.08800	0.08800	0.08800
				Total	0.332	Total	2.04510

Total Standby Amps =	0.332 x	24	Hours =	7.957 Amp-Hours
Total Alarm Amps =	2.045 x	0.25 (15 minutes)	Hours =	0.511 Amp-Hours
Total Amp-Hours required after 24 hours standby and 15 minutes alarm.				8.468 Amp-Hours
Total Battery Amp-Hours required: Total Amp-Hours required x 1.25 =				10.59 Amp-Hours
Total Amp-Hours Supplied=				18 Amp-Hours
Spare Capacity=				7.414 Amp-Hours

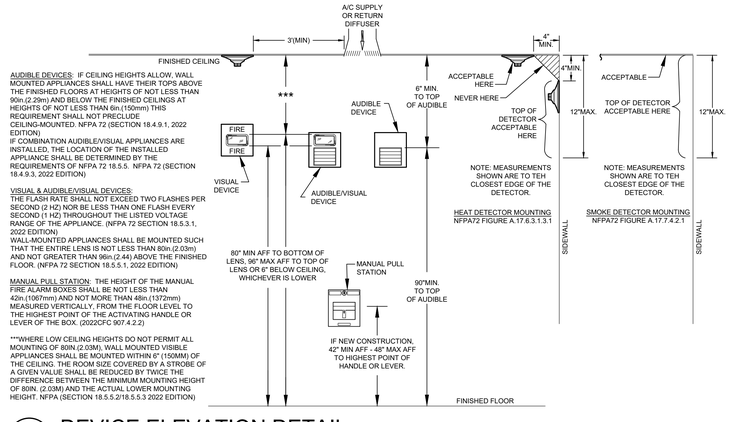
VOLTAGE DROP (VD) CALCULATION

PROJ. NAME: Ventura College Admin. Alteration
SIG. CKT #: V1

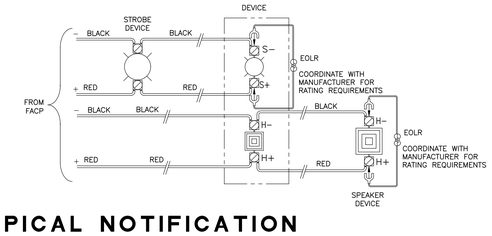
DEVICE #	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
GAUGE WIRE	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT.)	60	10	45	50	25	65	0	0	0	0
AMPS @ DEVICE	0.088	0.198	0.158	0.154	0.066	0.044	0	0	0	0
AMPS DEVELOPED	0.708	0.62	0.422	0.264	0.11	0.044	0	0	0	0
VOLT. DROP	0.135	0.020	0.060	0.042	0.009	0.009	0.000	0.000	0.000	0.000

FORMULA X FEET X OHMS / FT	
SIGNAL CIRCUIT =	V1
TOTAL CKT V.D.=	0.275
TOTAL CKT.AMPS.=	0.708
CKT VOLTAGE=	20.4
VOLTAGE AT FINAL DEVICE=	20.125
% VOLTAGE DROP=	1.348

WIRE SIZE	RESIS. /M FT.	CIRC MILS
6	0.5	26240
10	1.21	10380
12	1.59	6530
14	2.52	4110
16	4.02	2580
18	6.39	1620
20	10.1	1020
22	16.2	640
24	25.7	404



1 DEVICE ELEVATION DETAIL
SCALE: N.T.S.



2 TYPICAL NOTIFICATION CIRCUIT WIRING DIAGRAM
SCALE: N.T.S.

EXISTING SEQUENCE OF OPERATIONS

ACTIVATE AUDIBLE AND VISUAL ALARM NAC DEVICES THROUGHOUT	ANNUNCIATE AT 24 HOUR CENTRAL MONITORING STATION (supervisory)	ANNUNCIATE AT 24 HOUR CENTRAL MONITORING STATION (trouble)	ANNUNCIATE AT 24 HOUR CENTRAL MONITORING STATION (alarm)	ANNUNCIATE AT FIRE ALARM REMOTE ANNUNCIATOR (supervisory)	ANNUNCIATE AT FIRE ALARM REMOTE ANNUNCIATOR (trouble)	ANNUNCIATE AT FIRE ALARM REMOTE ANNUNCIATOR (alarm)	ANNUNCIATE AT FIRE CONTROL PANEL (supervisory)	ANNUNCIATE AT FIRE CONTROL PANEL (trouble)	ANNUNCIATE AT FIRE CONTROL PANEL (alarm)	FUNCTION / DEVICE
YES	NO	YES	YES	NO	YES	YES	NO	YES	YES	MANUAL PULL STATIONS
YES	NO	YES	YES	NO	YES	YES	NO	YES	YES	AREA SMOKE
NO	NO	YES	NO	NO	YES	NO	NO	YES	NO	120 VAC POWER FAILURE
NO	YES	NO	NO	YES	NO	NO	YES	NO	NO	DISABLE NAC CIRCUIT

DSA FILE #: 00-00
PROJECT TRACKING #: 00000-00

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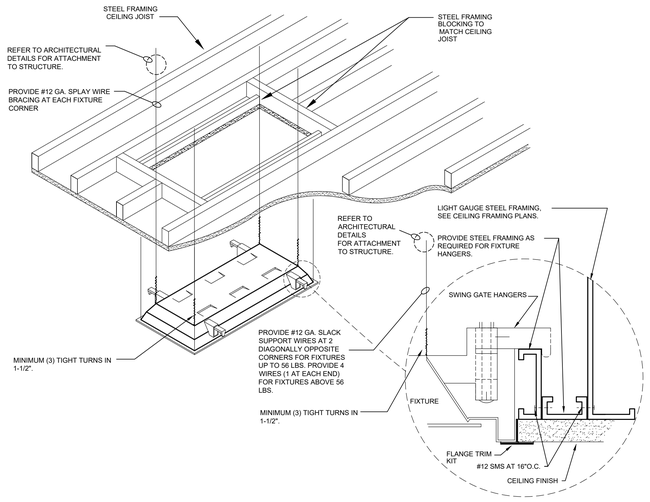
VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003
FIRE ALARM RISER DIAGRAM

NO.	REVISION	DATE

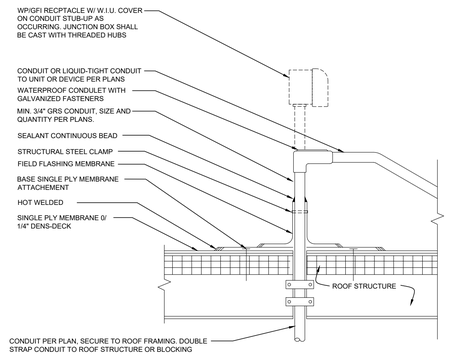
PROJECT MANAGER: JM
DRAWN BY: JM
CHECKED BY: -
DATE: 06/22/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: E-214

3/26/2026 7:21:13 PM
Autodesk Docs://3425 - Ventura College Admin Building Alterations/3425_Ventura_College_Admin_Building.rvt

K:\ENG\2025\25-8028\25-8028 E-213-E-214_NEW FA FLR PLN-RISER.dwg - JMinkel - Jul 24, 2025 - 2:29pm

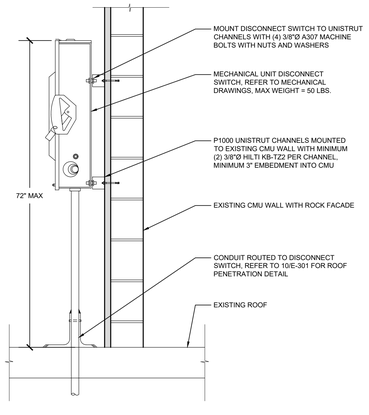


9 TYPICAL RECESSED TROFFER AT HARD LID
SCALE: NTS

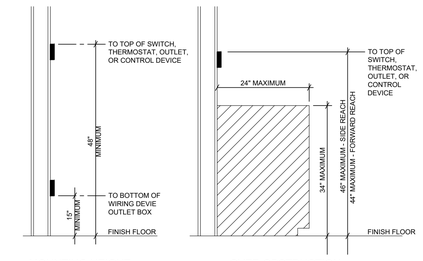


NOTE:
COORDINATE LOCATIONS AND REQUIREMENTS WITH ROOFING INSTALLER.

10 TYPICAL ROOF PENETRATION DETAIL
SCALE: NTS



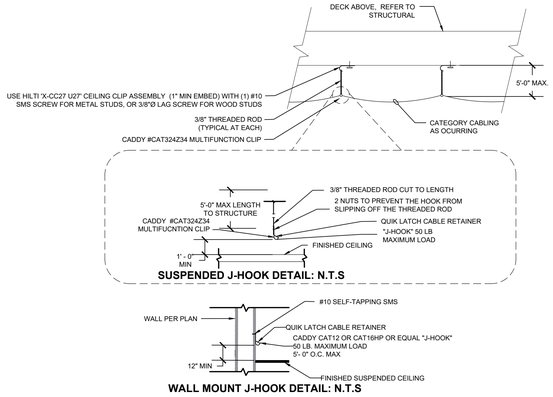
11 DISCONNECT SWITCH MOUNTING DETAIL
SCALE: NTS



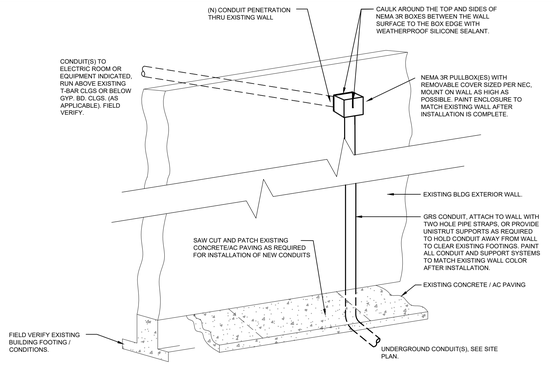
ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHT AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE OUTLET BOX NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE OUTLET BOX TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM. [CBC 11B-308.1.1]

ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM [CBC 11B-308.1.2]

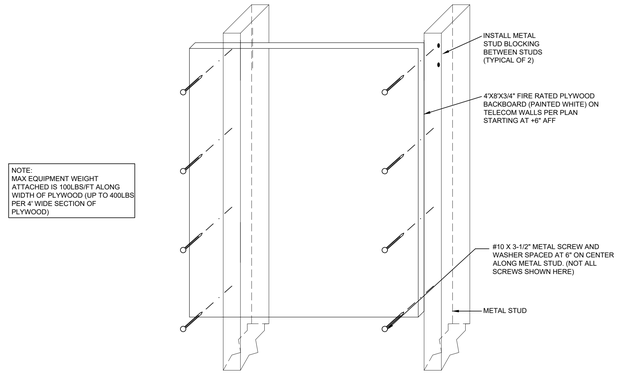
5 TYPICAL ADA DEVICE MOUNTING HEIGHT DETAIL
SCALE:



6 TYPICAL J-HOOK MOUNTING DETAIL
SCALE:

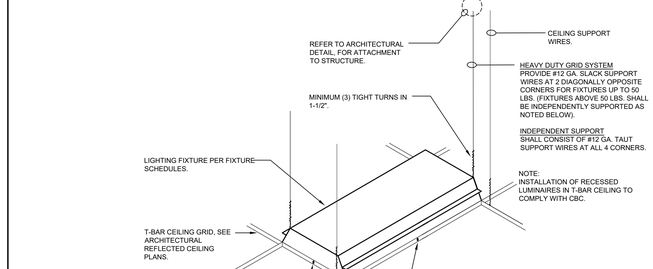


7 TYPICAL CONDUIT ENTRY AT EXISTING BUILDING DETAIL
SCALE:

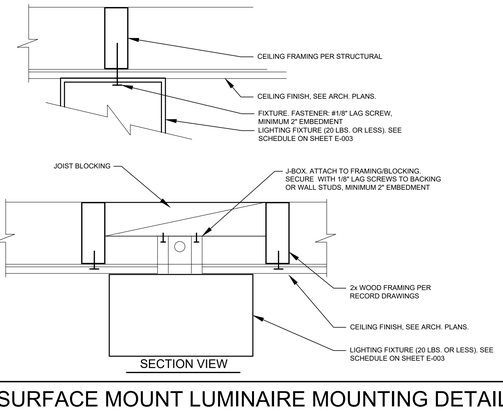


NOTE:
MAX EQUIPMENT WEIGHT ATTACHED IS 100LBS/FT ALONG WIDTH OF PLYWOOD (UP TO 400LBS PER 4' WIDE SECTION OF PLYWOOD)

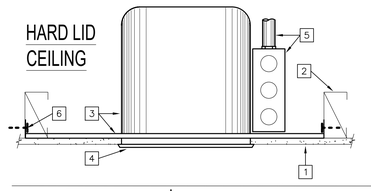
8 FIRE TREATED BACKBOARD MOUNTING DETAIL
SCALE:



1 RECESSED TROFFER MOUNTING DETAIL
SCALE:

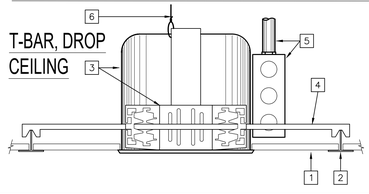


2 TYPICAL SURFACE MOUNT LUMINAIRE MOUNTING DETAIL
SCALE:



☐ REFERENCE NOTES

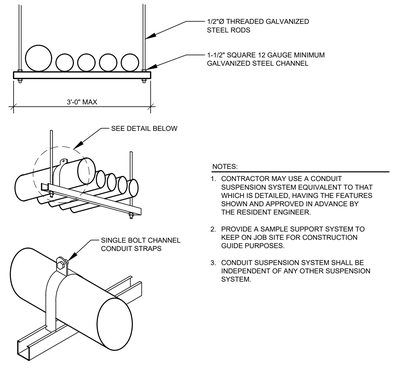
1. CEILING FINISH MATERIAL, SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR TYPE AND DEPTH.
2. PROVIDE STEEL FRAMING ABOVE AS REQUIRED TO MATCH CEILING FRAMING, SEE FRAMING PLANS FOR REQUIRED FRAMING.
3. RECESSED HOUSING WITH EXPANDABLE MOUNTING BARS.
4. FIXTURE TRIM TO MOUNT FLUSH WITH CEILING. ATTACH TO FIXTURE ROUGH-IN HOUSING PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. OUTLET BOX / BRANCH CIRCUIT
6. ATTACH EXPANDABLE MOUNTING BARS WITH #10 X 1" SMS, PROVIDE A MINIMUM OF (2) PER MOUNTING BAR.



☐ REFERENCE NOTES

1. CEILING MATERIAL
2. T-BAR CEILING RUNNER.
3. RECESSED LIGHT HOUSING WITH QUICK MOUNTING BRACKET ON BOTH SIDES.
4. T-BAR FIXTURE HANGING BAR.
5. OUTLET BOX / BRANCH CIRCUIT
6. #12 LIGHT FIXTURE SUPPORT WIRE (MIN. 2 PER FIXTURE). CONNECT TO FIXTURE WITH MINIMUM OF 4 TIGHT TURNS AND TO STRUCTURE ABOVE PER ARCHITECTURAL ATTACHMENT DETAILS.

3 TYPICAL DOWNLIGHT MOUNTING DETAIL
SCALE:



NOTES:

1. CONTRACTOR MAY USE A CONDUIT SUSPENSION SYSTEM EQUIVALENT TO THAT WHICH IS DETAILED, HAVING THE FEATURES SHOWN AND APPROVED IN ADVANCE BY THE RESIDENT ENGINEER.
2. PROVIDE A SAMPLE SUPPORT SYSTEM TO KEEP ON JOB SITE FOR CONSTRUCTION GUIDE PURPOSES.
3. CONDUIT SUSPENSION SYSTEM SHALL BE INDEPENDENT OF ANY OTHER SUSPENSION SYSTEM.

4 TYPICAL CONDUIT SUPPORT DETAIL
SCALE:

DSA FILE #: 00-00
PROJECT TRACKING #: 00000-00

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THOMA #25-8028

VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003

ELECTRICAL DETAILS

NO.	REVISION	DATE
1		
2		
3		
4		
5		

PROJECT MANAGER: JM
DRAWN BY: JM
CHECKED BY:
DATE: 06/22/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: E-301

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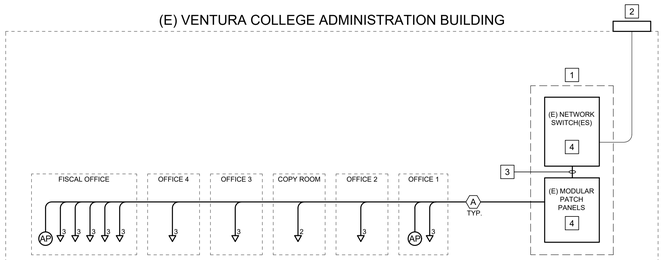


REFERENCE NOTES

1. EXISTING WALL MOUNTED IDF, TO REMAIN.
2. EXISTING INCOMING COMMUNICATIONS SERVICE AT TERMINAL CABINET AT BUILDING EXTERIOR.
3. PROVIDE CAT 6A JUMPERS - TO MATCH CABLE PLANT (2M MAX).
4. CONTRACTOR SHALL COORDINATE WITH OWNER IT STAFF FOR INSTALLATION AND SCHEDULING OF NEW EQUIPMENT TO BE PROVIDED BY THE IT DEPT, AS APPLICABLE.

COMMUNICATIONS LEGEND

(AP) = INTERIOR WIRELESS ACCESS POINT (PROVIDED BY OWNER, INSTALLED BY EC). PROVIDE (N) (2) CAT6A CABLES EACH TERMINATED IN 2-PORT BISCUIT IN ACCESSIBLE CEILING. ALL CAT6A MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE BLUE.

▽n = DATA OUTLET AT LOCATION SHOWN IN PLAN. 'n' = NUMBER OF CAT6 DATA DROPS. ALL CAT6A MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE BLUE.

GENERAL NOTES

A. CATEGORY CABLING, MODULAR JACKS, AND PATCH CABLES SHALL MATCH COLOR OF (N) CABLE PLANT AS FOLLOWS:
- CAT6A = BLUE IN COLOR.

B. CAT6A CABLES, TOTAL LENGTH FROM IDF TO ENDPOINT SHALL NOT BE MORE THAN 295'-0"; CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY LENGTHS IN EXCESS OF 295'-0".

C. OWNER TO PROVIDE VOIP (VOICE OVER INTERNET PROTOCOL) PHONE HAND SETS AT EACH NEW LOCATION.

D. CABLING TYPES SHALL BE SUITABLE AND RATED FOR THE APPLICATION INSTALLED (PLENUM, UNDERGROUND, ETC.).

E. ALL FIBER OPTIC CABLES SHALL BE FUSION SPLICED TO PRE-TERMINATED/POLISHED PIG-TAILS IN APPROVED FIBER SPLICE ENCLOSURES AND SPLICE TRAYS.

F. RISER DIAGRAM SHOWS NEW WORK ONLY.

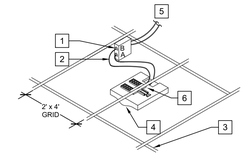
CABLING SCHEDULE

SYMBOL	DESCRIPTION
(A)	LEVITON 'SST' INDOOR, PLENUM RATED CAT6A CABLING, BLUE IN COLOR

1 COMMUNICATIONS RISER DIAGRAM

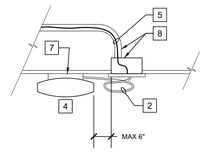
NTS

NOTE: WIRELESS ACCESS POINT DEVICE WEIGHS LESS THAN 4-LBS.



T-BAR MOUNT

(PROVIDE MOUNTING AS APPROPRIATE FOR CEILING TYPE)



HARD LID MOUNT

(PROVIDE MOUNTING AS APPROPRIATE FOR CEILING TYPE)

REFERENCE NOTES

1. 2-PORT BISCUIT SECURELY MOUNTED IN TO LEVITON QUICKPORT CEILING BRACKET (49223-CBC OR APPROVED EQUAL) IN ACCESSIBLE CEILING SPACE. EC SHALL PROVIDE LABELS FOR EACH CABLE AT BISCUIT, AND SHALL TERMINATE (FEMALE) AND TEST BOTH CABLES, AND PROVIDE TEST RESULTS TO OWNER.
2. (2) BLUE, CAT6A PATCH CABLES BETWEEN NEW WIRELESS ACCESS POINT AND CAT6A TERMINATION BISCUIT. ETHERNET "0" PATCH CABLE SHALL BE INSERTED INTO LOWEST "PoE" PORT ON WIRELESS ACCESS POINT, AND 'A' CABLE ON BISCUIT. ETHERNET "1" SHALL BE PLUGGED INTO FOLLOWING PORTS ON EITHER END. MAX LENGTH 0.5-METER WHEN EXPOSED, MAX LENGTH 2-METER WHEN ABOVE ACCESSIBLE CEILING.
3. T-BAR CEILING. PENETRATIONS THROUGH CEILING TILES SHALL BE SEALED SO AS TO MAINTAIN FIRE RATING OF CEILING TILE IF APPLICABLE.
4. WIRELESS ACCESS POINT, TO BE PROVIDED BY OWNER AND INSTALLED BY ELECTRICAL CONTRACTOR. EC SHALL NOTIFY OWNER OF ACCESS POINT QUANTITIES AND LOCATIONS A MINIMUM OF 6-WEEKS PRIOR TO INSTALLATION DATE. PROVIDE LABEL ON WAP WITH FACILITY STANDARD LABELING.
5. (2) BLUE CAT6A CABLES FROM IDF TO TERMINATION. ALL CAT6A CABLE AND TERMINATION HARDWARE (INCLUDING MODULAR JACKS, PATCH CABLES, ETC.) SHALL BE BLUE IN COLOR.
6. WAP MANUFACTURER PROVIDED T-BAR MOUNTING CLIP. ADHERE STRICTLY TO MANUFACTURER PROVIDED INSTALLATION INSTRUCTIONS.
7. WAP MANUFACTURER PROVIDED SURFACE-MOUNT HARDWARE. ADHERE STRICTLY TO MANUFACTURER PROVIDED INSTALLATION INSTRUCTIONS.
8. 5-SQUARE, FLUSH-MOUNTED BACK-BOX WITH MUD-RING, CONDUIT, AND 2-PORT FACEPLATE PER T-001 ROUGH-N REQUIREMENTS.

2 INDOOR WIRELESS ACCESS POINT

SCALE: NTS

DSA FILE #: 00-00
PROJECT TRACKING #: 00000-00

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cad@thomaelec.com
THOMA #25-8028

VENTURA COLLEGE ADMIN BLDG ALTERATION

4667 TELEGRAPH RD, VENTURA, CA 93003

COMMUNICATIONS RISER DIAGRAM

NO.	REVISION	DATE
1		
2		
3		
4		
5		

PROJECT MANAGER: JM
DRAWN BY: JM
CHECKED BY: -
DATE: 06/22/2025
PROJECT NUMBER: 3425-01-ED24
SHEET: E-401

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Ventura College Admin BLDG Re-Model	**Report Page:** (Page 7 of 8)
		Date Prepared: 6/21/2025

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	Lobby, Main Entry; Copy Room; Office Area (<250sf); Office Area (>250sf);

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
This document is used to demonstrate compliance with mandatory requirements in 130.5, for electrical systems in newly constructed nonresidential and hotel/motel occupancies and 160.6 and 160.9 for electrical systems in newly constructed multifamily occupancies. Additions and alterations to electrical service systems in nonresidential and hotel/motel occupancies will also use this document to demonstrate compliance per 141.0(a) or 141.0(b)2P for alterations. For multifamily addition or alterations compliance will be documented per 180.1(a) or 180.2 (b)4Bvii		
Project Name:	Ventura College Admin BLDG Re-Model	**Report Page:** (Page 1 of 4)
Project Address:	4667 Telegraph Road	**Date Prepared:** 6/21/2025

A. GENERAL INFORMATION

01	Project Location (city)	Ventura	02	Climate Zone	6
			03	Occupancy Types Within Project:	All Other OccupanciesOffice

B. PROJECT SCOPE

This table includes electrical systems that are within the scope of the permit application.

01	02	03	04	05	06	07
Electrical Service Designation/ Description	Scope of Work[1]	Rating[2] (kVA)	Utility Provided Metering System Exception to 130.5(a)/ 160.6(a)[3]	System subject to CA Elec Code Article 517 Exception to 130.5(a)and (b)	Demand Response Controls	Provides power to dwelling units/common living areas only in multifamily occupancy
MSB	Add/Alt to feeders and branch circuits only	216	☐	☐	Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections 120.2/ 160.3, 130.1/ 160.5, and 130.3/ 160.5, and mechanical, indoor lighting, and sign lighting Certificate of Compliance documents will indicate when demand response controls are required.	☐

[1] *FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c)/160.6(c), no other requirements from 130.5/160.6 are required.*
[2] *If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.*
[3] *Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.*

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.		
Project Name:	Ventura College Admin BLDG Re-Model	**Report Page:** (Page 1 of 8)
Project Address:	4667 Telegraph Road	**Date Prepared:** 6/21/2025

A. GENERAL INFORMATION

01	Project Location (city)	Ventura	04	Total Conditioned Floor Area (ft²)	1,505
02	Climate Zone	6	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Office ● All Other Occupancies

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☐ New Lighting System				
☐ New Lighting System - Parking Garage				
☒ Altered Lighting System	Area Category Method	1505	Area Category Method	0
Total Area of Work (ft²)	1505		0	

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Ventura College Admin BLDG Re-Model	**Report Page:** (Page 8 of 8)
Project Address:	4667 Telegraph Road	**Date Prepared:** 6/21/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Jeffrey M. Thoma	
Company: Thoma Electric, Inc	Signature Date: 2025-06-21
Address: 3562 Empelo Street	CEA/ HERS Certification Identification (if applicable): E20823
City/State/Zip: San Luis Obispo CA 93401	Phone: 805-543-3850

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

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

Responsible Designer Name:	Responsible Designer Signature:
Jeffrey M. Thoma	
Company: Thoma Electric, Inc.	Date Signed: 2025-06-21
Address: 3852 Empleo Street	License: E20823
City/State/Zip: San Luis Obispo CA 93401	Phone: 805-543-3850

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Ventura College Admin BLDG Re-Model	**Report Page:** (Page 5 of 8)
		Date Prepared: 6/21/2025

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Copy Room	Copy Room	0.5	129	64.5	No	No
Office Area (<250sf)	Office (<=250 square feet)	0.65	656	426.4	No	No
Office (>250sf)	Office (>250 square feet)	0.6	545	327	No	No
		TOTALS:	1,505	940.4	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Ventura College Admin BLDG Re-Model	**Report Page:** (Page 2 of 8)
		Date Prepared: 6/21/2025

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)					Compliance Results
	01	02	03	04		05		06	07		08	09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)	=	**Total Allowed** (Watts)	≥	Total Designed (Watts)	Adjustments P&F Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)	=	**Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 140.6 / 170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)				(See Table F)	(See Table P)			
Conditioned		940.4	0		=	940	≥	879	0	=	879	COMPLIES
Unconditioned					=		≥			=		
Controls Compliance (See Table H for Details)												COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)												

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Ventura College Admin BLDG Re-Model	**Report Page:** (Page 6 of 8)
		Date Prepared: 6/21/2025

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

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

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Ventura College Admin BLDG Re-Model	**Report Page:** (Page 3 of 8)
		Date Prepared: 6/21/2025

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
A1	A1 - LED - 31W	No	NA	31	Mfr. Spec	2	No	62	☐	☐
A2	A2 - LED - 27W	No	NA	27	Mfr. Spec	16	No	432	☐	☐
A2D	A2D - LED - 27W	No	NA	27	Mfr. Spec	11	No	297	☐	☐
B1	B1 - LED - 35W	No	NA	35	Mfr. Spec	2	No	70	☐	☐
D1	D1 - LED - 18W	No	NA	18	Mfr. Spec	1	No	18	☐	☐
							Total Designed Watts: CONDITIONED SPACES	879		

[1] *FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*

[2] *Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
		Pass	Fail
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C		

DSA FILE #: 00-00
PROJECT TRACKING #: 00000-00

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THOMA #25-8028

VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003
INTERIOR TITLE 24 COMPLIANCE DOCUMENTATION

NO.	REVISION	DATE
1		
2		
3		
4		
5		

PROJECT MANAGER JM
DRAWN BY JM
CHECKED BY -
DATE 06/22/2025
PROJECT NUMBER 3425-01-ED24
SHEET E-501

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name: Ventura College Admin BLDG Re-Model	**Report Page:**	**(Page 4 of 4)**
Project Address: 4667 Telegraph Road	**Date Prepared:**	6/21/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Jeffrey M. Thoma	
Company:	**Signature Date:**
Thoma Electric, Inc	
Address:	**CEA/ HERS Certification Identification (If applicable):**
3562 Empelo Street	E20823
City/State/Zip:	**Phone:**
San Luis Obispo CA 93401	805-543-3850

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

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

Responsible Designer Name:	Responsible Designer Signature:
Jeffrey M. Thoma	
Company:	**Date Signed:**
Thoma Electric, Inc.	2025-06-21
Address:	**License:**
3852 Empelo Street	E20823
City/State/Zip:	**Phone:**
San Luis Obispo CA 93401	805-543-3850

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E

This document is used to demonstrate compliance with mandatory requirements in 130.5, for electrical systems in newly constructed nonresidential and hotel/motel occupancies and 160.6 and 160.9 for electrical systems in newly constructed multifamily occupancies. Additions and alterations to electrical service systems in nonresidential and hotel/motel occupancies will also use this document to demonstrate compliance per 141.0(a) or 141.0(b)2P for alterations. For multifamily addition or alterations compliance will be documented per 180.1(a) or 180.2 (b)4Bvii

Project Name: Ventura College Admin BLDG Re-Model	**Report Page:**	**(Page 1 of 4)**
Project Address: 4667 Telegraph Road	**Date Prepared:**	6/21/2025

A. GENERAL INFORMATION

01	Project Location (city)	Ventura	02	Climate Zone	6
			03	Occupancy Types Within Project:	All Other OccupanciesOffice

B. PROJECT SCOPE

This table includes electrical systems that are within the scope of the permit application.

01	02	03	04	05	06	07
Electrical Service Designation/ Description	Scope of Work[1]	Rating[2] (kVA)	Utility Provided Metering System Exception to 130.5(a)/ 160.6(a)[3]	System subject to CA Elec Code Article 517 Exception to 130.5(a)and (b)	Demand Response Controls	Provides power to dwelling units/common living areas only in multifamily occupancy
MSB	Add/Alt to feeders and branch circuits only	216	☐	☐	Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections 120.2/ 160.3, 130.1/ 160.5, and 130.3/ 160.5, and mechanical, indoor lighting, and sign lighting Certificate of Compliance documents will indicate when demand response controls are required.	☐

[2]FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c)/160.6(c), no other requirements from 130.5/160.6 are required.
[2] If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.
[3] Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Ventura College Admin BLDG Re-Model	**Report Page:** (Page 2 of 4)
	Date Prepared: 6/21/2025

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through J. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01		02		03		04	05	06
Service Electrical Metering 130.5(a)/ 160.6(a) (See Table F)	AND	Separation for Monitoring 130.5(b)/ 160.6(b) (See Table G)	AND	Voltage Drop 130.5(c)/ 160.6(c) (See Table H)	AND	Controlled Receptacles 130.5(d)/ 160.6(d) (See Table I)	Electric Ready 160.9 (See Table J)	**Compliance Results**
Yes	AND	Yes	AND	Yes	AND	Yes		COMPLIES

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

F. SERVICE ELECTRICAL METERING

This section does not apply to this project.

G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This section does not apply to this project.

H. VOLTAGE DROP

This table includes entirely new or complete replacement electrical power distribution systems, or alterations that add, modify or replace both feeders and branch circuits to demonstrate compliance with 130.5(c)/ 160.6(c). For alterations, only the altered circuits must demonstrate compliance per 141.0(b)2Pii/ 180.2(b)4Bviic.

01	02	03	04	05	
Electrical Service Designation/Description	Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method	Location of Voltage Drop Calculations[1]	Sheet Number for Voltage Drop Calculations in Construction Documents	Field Inspector	
				Pass	Fail

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Ventura College Admin BLDG Re-Model	**Report Page:** (Page 3 of 4)
	Date Prepared: 6/21/2025

H. VOLTAGE DROP

MSB	☒	Voltage drop less than 5%	☐	Permitted by CA Elec Code (Exception to 130.5(c))*	In construction documents	E-002, ELECTRICAL SINGLE LINE DIAGRAM AND PANEL SCHEDULES	☐	☐

** NOTES: If "Permitted by CA Elec Code *" is selected under Compliance Method above, please indicate where the exception applies in the space provided below.*

[1] FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority Having Jurisdiction. Select "attached" if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".

I. CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND CONTROLLED RECEPTACLES

This section does not apply to this project.

J. ELECTRIC READY BUILDINGS

This section does not apply to this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

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

DSA FILE #: 00-00
PROJECT TRACKING #: 00000-00

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CONSULTING ENGINEER

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THOMA ELECTRIC, INC.
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Phone: (805) 543-3850
Fax: (805) 543-3829
cad@thomaelec.com
THOMA #25-8028

VENTURA COLLEGE ADMIN BLDG ALTERATION
4667 TELEGRAPH RD, VENTURA, CA 93003
POWER DISTRUBTION TITLE 24 COMPLIANCE DOCUMENTATION

NO.	REVISION	DATE
1		
2		
3		
4		
5		

PROJECT MANAGER JM
DRAWN BY JM
CHECKED BY -
DATE 06/22/2025
PROJECT NUMBER 3425-01-ED24
SHEET E-502