ABBREVIATIONS

&	AND	FPS	FEET PER SECOND	QT	QUARRY TILE
@	AT	FRP	FIBERGLASS REINFORCED PANEL	QTY	QUANTITY
ø	DIAMETER	FRZ	FREEZE		
℄	CENTER LINE	FS	FLOOR SINK	(R)	RELOCATE
'	PLATE / PROPERTY LINE	FT	FOOT / FELT	R	RADIUS / RISER / RESISTANCE
"	FOOT / FEET	FTG	FOOTING	RA	RETURN AIR
#	INCH / INCHES	FURN	FURNACE / FURNITURE	RCP	REFLECTED CEILING PLAN
#	NUMBER			RECEPT	RECEPTACLE
=	EQUAL	G	GAS	REF	REFERENCE
		GAO	GAS & OIL	REFR	REFRIGERATOR
A	AIR	GA	GAUGE	REG	REGISTER
A/C	AIR CONDITIONING	GAL	GALLON	REINF	REINFORCED
ACP	ASPHALT CONCRETE PAVING	GALV	GALVANIZED	REQ	REQUIRED
ADJ	ADJACENT / ADJUSTABLE	GB	GRAB BAR	RET	RETURN
AFF	ABOVE FINISH FLOOR	GEN	GENERATOR	REV	REVISION
AGG	AGGREGATE	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	RM	ROOM
ALT	ALTERNATE	GI	GALVANIZED IRON	RND	ROUND
ALUM	ALUMINUM	GND	GROUND	RO	ROUGH OPENING
APPROX	APPROXIMATE	GPH	GALLONS PER HOUR	RPM	REVOLUTIONS PER MINUTE
ARCH	ARCHITECTURAL	GPM	GALLONS PER MINUTE	RT	RIGHT
AUTO	AUTOMATIC	GR	GRADE	RV	RELIEF VALVE
AV	ATTIC VENT	GSM	GALVANIZED SHEET METAL	RW	RETAINING WALL
AVG	AVERAGE	GSP	GALVANIZED SHEET PIPE	RWD	REDWOOD
		GYP	GYPSUM	RWL	RAIN WATER LEADER
BD	BOARD	GYP BD	GYPSUM BOARD		
BLDG	BUILDING			S	SOUTH / SANITARY
BLKG	BLOCKING	H2O	WATER	SA	SUPPLY AIR
BM	BEAM	HB	HOSE BIBB	SC	SOLID CORE
B/M	BENCH MARK	HC	HOLLOW CORE	SCD	SEAT COVER DISPENSER
BOT	BOTTOM	HD	HOLD DOWN	SCHED	SCHEDULED
		HDR	HEADER	SCR	SCREEN
C	CONDUIT	HDWD	HARDWOOD	SD	SOAP DISPENSER / STORM DRAIN
CAB	CABINET	HDWR	HARDWARE	SECT	SECTION
CB	CATCH BASIN / CIRCUIT BREAKER	HM	HOLLOW METAL	SF	SQUARE FOOT / SQUARE FEET
CBC	CALIFORNIA BUILDING CODE	HORIZ	HORIZONTAL	SHT	SHEET
CFM	CUBIC FEET PER MINUTE	HR	HOUR / HEAT WATER RETURN	SHTG	SHEATHING
CI	CAST IRON	HSE	HOUSE	SHWR	SHOWER
CLF	CHAIN LINK FENCE	HT	HEIGHT	SI	SQUARE INCH
CIR	CIRCLE	HTR	HEATER	SIM	SIMILAR
CJ	CONSTRUCTION JOINT	HVAC		SK	SINK
CL	CENTER LINE	HW	HOT WATER	SL	SLOPE
CLG	CEILING	HW	HOT DOMESTIC WATER	SM	SHEET METAL
CLO	CLOSET			SND	SANITARY NAPKIN DISPENSER
CLR	CLEAR	I	CURRENT	SNR	SANITARY NAPKIN RECEPTACLE
CMU	CONCRETE MASONRY UNIT	ID	INSIDE DIAMETER / INSIDE DIMENSION	SNTV	SANITARY NAPKIN DAMPON VENDOR
CO	CLEAN OUT	IN	INCH	SP	STRUCTURAL PLYWOOD
COL	COLUMN	INSUL	INSULATION	SPEC	SPECIFICATIONS
CONC	CONCRETE	INT	INTERIOR	SPKR	SPEAKER
COND	CONDENSER	INV	INVERT	SQ	SQUARE
CONT	CONTINUATION / CONTINUOUS			SQ FT	SQUARE FEET
CMP	CORRUGATED METAL PIPE	JB	JUNCTION BOX	SS	SANITARY SEWER / SERVICE SINK
CONT	CONTINUOUS	JAN	JANITOR	SST	STAINLESS STEEL
CORR	CORRIDOR	JT	JOINT	STA	STATION
COTG	CLEAN OUT TO GRADE	JST	JOIST	STD	STANDARD
COTF	CLEAN OUT TO FLOOR			STL	STEEL
CT	CERAMIC TILE	KIT	KITCHEN	STOR	STORAGE
CTR	CENTER	KM	KILOMETER	STRUCT	STRUCTURAL
CU FT	CUBIC FEET	KVA	KILO VOLT AMPERE	SURF	SURFACE
CY	CUBIC YARD			SUSP	SUSPENDED
CW	COLD WATER	L	LENGTH	SW	SANITARY WASTE
		LAV	LAVATORY / LAVATORY SINK	SWBD	SWITCHBOARD
(D)	DEMOLISH	LAM	LAMINATE	SYM	SYMBOL / SYMMETRICAL
D	DRYER / DAMPER	LB	POUND	SYMM	SYMMETRICAL
DBL	DOUBLE	LF	LINEAR FEET	SYS	SYSTEM
DET	DETAIL	LPG	LIQUID PETROLEUM GAS		
DF	DOUGLAS FIR / DRINKING FOUNTAIN	LSD	LIQUID SOAP DISPENSER	T	TREAD / TREE
DI	DRAIN INLET	LTG	LIGHTING	TAB	TOP AND BOTTOM
DIA	DIAMETER			TAG	TONGUE AND GROOVE
DIAG	DIAGONAL	MAX	MAXIMUM	TB	TOWEL BAR
DIM	DIMENSION	MC	MEDICINE CABINET	TEL	TELEPHONE
DISC	DISCONNECT	MECH	MECHANICAL	TEMP	TEMPERATURE / TEMPERED
DISP	DISPENSER / DISPOSAL	MEMB	MEMBRANE	TJ	TOOLED JOINT
DIST	DISTANCE	MEZZ	MEZZANINE	TNK	TANK
DN	DOWN	MFG	MANUFACTURER	TOF	TOP OF FOOTING
DR	DOOR	MICRO	MICROWAVE	TOC	TOP OF CURB
DS	DOWNSPOUT	MH	MANHOLE	TOG	TOP OF GRATE / TOP OF GRADE
DW	DISH WASHER	MIN	MINIMUM	TOH	TELEPHONE OVERHEAD
DWG	DRAWING	MIR	MIRROR	TOP	TOP OF PAVEMENT
DWR	DRAWER	MISC	MISCELLANEOUS	TOS	TOP OF SLAB
		MM	MILLIMETER	TOW	TOP OF WALL
(E)	EXISTING	MO	MASONRY OPENING	TPD	TOILET PAPER DISPENSER
E	EAST	MTD	MOUNTED	TS	TUBE STEEL
EA	EACH	MTL	METAL	TSCD	TOILET SEAT COVER DISPENSER
EA W	EACH WAY	MUL	MULLION	TTB	TELECOMMUNICATION TERMINATION BOARD
EDF	ELECTRICAL DRINKING FOUNTAIN			TTC	TELEPHONE TERMINAL CABINET
EF	EXHAUST FAN	(N)	NEW	TUC	TELEPHONE UNDERGROUND
EJ	EXPANSION JOINT	N	NORTH	TV	TELEVISION
EL	ELEVATION	NIC	NOT IN CONTRACT	TYP	TYPICAL
ELEC	ELECTRICAL	NO	NUMBER		
EN	EDGE NAILING	NTS	NOT TO SCALE	UGND	UNDERGROUND
ESH	ELECTRICAL OVERHEAD			UH	UNIT HEATER
EOP	EDGE OF PAVING	O/	OVER	UNFN	UNFINISHED
EOS	EDGE OF SLAB	OBS	OBSCURE	UON	UNLESS OTHERWISE NOTED
EQ	EQUAL	OC	ON CENTER	UR	URINAL
EQUIP	EQUIPMENT	OD	OUTSIDE DIAMETER		
ETC	ET CETERA	O/E	OR EQUAL	V	VOLT
EXH	EXHAUST	OFF	OFFICE	VAL	VALVE
EXIST	EXISTING	OH	OVERHEAD	VAR	VARIES
EXP	EXPANSION	OPP	OPPOSITE	VCT	VINYL COMPESSITION TILE
EXT	EXTERIOR			VD	VOLUME DAMPER
EUG	ELECTRICAL UNDERGROUND	P	POLE / POWER	VENT	VENTILATOR
		PL	PLATE / PROPERTY LINE	VERT	VERTICAL
FA	FIRE ALARM	P LAM	PLASTIC LAMINATE	VIF	VERIFY IN FIELD
FACP	FIRE ALARM CONTROL PANEL	PLAS	PLASTER	VOL	VOLUME
FD	FLOOR DRAIN / FIRE DAMPER	PLM	PLAM	VR	VAPOR REVERED / VENT RISER
FE	FIRE EXTINGUISHER	PLWD	PLYWOOD	VTR	VENT THROUGH ROOF
FEC	FIRE EXTINGUISHER CABINET	PNL	PANEL		
FF	FINISH FLOOR	PP	POWER POLE	W	WEST / WASHER / WATER / WIDTH
FG	FINISH GRADE / FLOOR GRILLE	PPP	PERFORATED PLASTIC PIPE	W/	WITH
FH	FIRE HYDRANT	PS	PIPE SLEEVE	W/O	WITHOUT
FIN	FINISH	PSF	POUNDS PER SQUARE FOOT	WC	WATER CLOSET
FIXT	FIXTURE	PSI	POUNDS PER SQUARE INCH	WCO	WALL CLEANOUT
FL	FLOW LINE / FLASHING	PSP	PERFORATED STEEL PIPE	WD	WOOD
FLR	FLOOR	PT	PAINT / STAIN	WH	WATER HEATER / WHARF HYDRANT
FLUOR	FLUORESCENT	PT	POINT / PRESSURE TREATED	WIND	WINDOW
FN	FIELD NAILING	PTD	PAPER TOWEL DISPENSER	WP	WATERPROOF
FND	FOUNDATION	PTDF	PRESSURE TREATED DOUGLAS FIR	WR	WATER RESISTANT
FO	FACE OF / FINISH OPENING	PTN	PARTITION	WT	WEIGHT
FOB	FACE OF BLOCK	PVMT	PAVEMENT	WV	WATER VALVE
FOC	FACE OF CONCRETE	PLYWD	PLYWOOD	WWF	WELDED WIRE FABRIC
FOF	FACE OF FINISH	PVC	POLYVINYL CHLORIDE		
FOM	FACE OF MASONRY			XFMR	TRANSFORMER
FOS	FACE OF STUD				
FPM	FEET PER MINUTE				

RESEARCH CENTER SITE PLAN (PARTIAL)

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to be provided in fire marshal submittal

NO SCALE

OCCUPANCY LOAD / EXITING PLAN

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to be provided in fire marshal submittal

BUILDING 101 MAJOR REPAIRS

INTERMOUNTAIN RESEARCH AND EXTENSION CENTER
2816 HAVALINA ROAD
TULELAKE, CA. 96134

PROJECT IS A REMODEL TO EXISTING (+/-)1,950 SF SINGLE STORY, SLAB ON GRADE WOOD FRAMED STRUCTURE WITH METAL ROOFING AND CEMENTITIOUS EXTERIOR SIDING. NEW OWRK ELEMENTS INCLUDE DEMOLITION, ELECTRICAL, MECHANICAL, PLUMBING, WINDOWS, DOORS, MILLWORK, PAINTING, FINISHES AND GENERAL CONSTUCTION. DOMESTIC WATER, PROPANE, WASTE WATER AND ELECTRICAL SERVICES ARE EXISTING/TO REMAIN/REWORK AS REQUIRED. NO NEW SQUARE FOOTAGE IS BEING ADDED TO THE STRUCTURE AS PART OF THIS PROJECT. ALL EXTERIOR FEATURES (INCLUDING WALKS, PAVING AND PARKING AREAS) ARE EXISTING TO REMAIN/NO WORK. ALL CONTENTS OF THE BUILDING WILL BE REMOVED PRIOR TO THE START OF THE CONSTRUCTION AND THE CONTRACTOR WILL HAVE EXCLUSIVE ACCESS TO THE STRUCTURE DURING THE FULL DURATION OF THE CONTRUCTION PROCESS.

VICINITY MAPS

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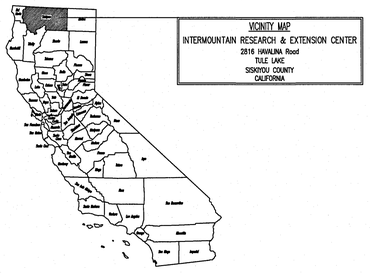
to be provided in fire marshal submittal



NO SCALE

GENERAL NOTES / STATEMENT OF COMFORMANCE

1. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE CONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, 2013 CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLIANT CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH CALIFORNIA CODE OF REGULATIONS TITLE 24, A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS DETAILING AND SPECIFYING THE REQUIRED WORK, SHALL BE SUBMITTED TO AND APPROVED BY UNIVERSITY OF CALIFORNIA, DIVISION OF AGRICULTURE & NATURAL RESOURCES, OFFICE OF FACILITIES PLANNING & MANAGEMENT BEFORE PROCEEDING WITH THE WORK.

2. DO NOT SCALE DIMENSIONS FROM THESE PLANS. FIGURED OR WRITTEN DIMENSIONS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. IT IS INTENDED THAT THE DRAWINGS, DETAILS AND SPECIFICATIONS SHOULD AGREE. SHOULD ANY DISCREPANCY OR APPARENT ERROR OCCUR THE CONTRACTOR SHALL NOTIFY THE STATE REPRESENTATIVE AT ONCE. UPON DISCOVERY OF CONFLICTS OR ERRORS THE STATE'S REPRESENTATIVE SHALL SEEK GUIDANCE FROM THE DESIGNER OF RECORD TO RESOLVE THE PROBLEM AND WHOSE DECISION SHALL BE FINAL. APPROVAL OF THESE PLANS DO NOT AUTHORIZE OR APPROVE ANY OMISSION OR DEVIATION FROM APPLICABLE REGULATIONS. FINAL APPROVAL IS SUBJECT TO FIELD INSPECTION. ONE SET OF APPROVED PLANS AND SPECIFICATIONS SHALL BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.

Statement of General Conformance
The drawings listed in Drawing Sheet Index have been prepared by other design professionals who are licenced to prepare such drawings in this state. They have been examined by me for:
1. Design intent and appears to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications prepared by me and
2. Coordination with my plans and specifications and is acceptable for incorporation into the construction of this project. The Statement of General Conformance "shall not be construed as relieving me of my rights, duties, and responsibilities under Sections 17302 and 81138 of the Education Code of Section 4-336, 4-341 and 4-344 of the Title 24, Part 1. (Title 24, Part1, Section 4-317 (b) I find that : All drawings or sheets listed on the cover or index sheet are in general conformance with the project design,and have been coordinated with the project plans and specifications.

Signature_____Date_____ Architect designated to be in general responsible charge

Print Name_____License Number_____ Expiration Date_____

PROJECT INFORMATION

PROJECT TITLE	BUILDING 101 MAJOR REPAIRS INTERMOUNTAIN RESEARCH & EXT CENTER 2816 HAVALINA ROAD TULELAKE, CA 96134
PROJECT NUMBER	17300A
CLIENT AGENCY	UNIVERSITY OF CALIFORNIA, AG & NATURAL RESOURCES

PROJECT TEAM

UNIVERSITY REPRESENTATIVE	SINAN AL ADHAMI SALADHAMI@UCANR.EDU OFFICE (530) 786-0197 CELL (916)595-6204
ARCHITECT:	SHAWN TIBOR
MECHANICAL, ELECTRICAL AND PLUMBING ENGINEER	SACRAMENTO ENGINEERING GROUP
CIVIL ENGINEER	NA
STRUCTURAL ENGINEER	NA

DRAWING SHEET INDEX

SHEET NO.	DESCRIPTION
	COVER SHEET
G1	TITLE SHEET – NOTES & ABBREVIATIONS
	CIVIL
	NOT USED
	ARCHITECTURAL
A1	DEMOLITION FLOOR PLAN
A2	PROPOSED FLOOR PLAN
A3	DOOR, WINDOWS, MILLWORK
	STRUCTURAL
	NOT USED
	MECHANICAL
M1.1	MECHANICAL LEGEND, NOTES, & SCHEDULES
M2.1	MECHANICAL FLOOR PLANS
	ELECTRICAL
E1.1	SCHEDULES AND LEGENDS
E2.1	LIGHTING PLAN
E2.2	ELECTRICAL PLAN
E3.1	TITLE 24
	PLUMBING
P1.1	PLUMBING LEGEND, NOTES, & SCHEDULES
P2.1	PLUMBING FLOOR PLAN – WASTE AND VENT
P2.2	PLUMBING FLOOR PLAN – HOT AND COLD WATER

BUILDING CODE INFORMATION

2022 CALIFORNIA BUILDING STANDARDS COMMISSION (CBSC), CALIFORNIA CODE OF REGULATIONS (CCR)
TITLE 24, IF APPLICABLE

PART 1	BUILDING STANDARDS ADMINISTRATIVE CODE
PART 2	CALIFORNIA BUILDING CODE (Based on the 2012 INTERNATIONAL BUILDING CODE)
PART 2.5	CALIFORNIA RESIDENTIAL BUILDING CODE (Based on the 2012 INTERNATIONAL RESIDENTIAL CODE)
PART 3	CALIFORNIA ELECTRICAL CODE (Based on the 2011 NATIONAL ELECTRICAL CODE)
PART 4	CALIFORNIA MECHANICAL CODE (Based on the)
PART 5	CALIFORNIA PLUMBING CODE (Based on the 2012 UNIFORM PLUMBING CODE)
PART 6	CALIFORNIA ENERGY CODE
PART 8	CALIFORNIA HISTORICAL BUILDING CODE
PART 9	CALIFORNIA FIRE CODE (Based on the 2012 INTERNATIONAL FIRE CODE)
PART 11	CALIFORNIA GREEN BUILDING STANDARDS CODE
PART 12	CALIFORNIA REFERENCE STANDARDS CODE

CHAPTER 7A CALIFORNIA'S WILDLAND-URBAN INTERFACE BUILDING CODE

CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 19, PUBLIC SAFETY, DIVISION 1 - STATE FIRE MARSHAL (SFM)
DIVISION OF THE STATE ARCHITECT (DSA), STRUCTURAL SAFETY SECTION, INTERPRETATION OF REGULATIONS

FEDERAL & NATIONAL CODES AND STANDARDS, IF APPLICABLE

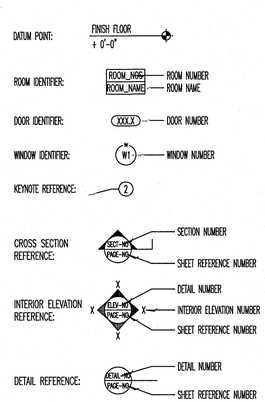
AMERICANS WITH DISABILITIES ACT (ADA), TITLE II OR TITLE III

TITLE II: UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS) OR ADA STANDARDS FOR ACCESSIBLE DESIGN (APPENDIX A OF CFR PART 36)

TITLE III: ADA STANDARDS FOR ACCESSIBLE DESIGN (APPENDIX A OF 28 CFR PART 36))

2022 NFPA 13	INSTALLATION OF SPRINKLER SYSTEMS
2022 NFPA 14	INSTALLATION OF STANDPIPE AND HOSE SYSTEMS
2022 NFPA 20	INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
2022 NFPA 22	WATER TANKS FOR PRIVATE FIRE PROTECTION
2022 NFPA 24	INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES
2022 NFPA 25	INSPECTION, TESTING, MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS
2022 NFPA 72	NATIONAL FIRE ALARM CODE

ARCHITECTURAL SYMBOLS



BUILDING DATA

OCCUPANCY TYPE:	B
CONSTRUCTION TYPE:	TYPE 5 / NO HR
NUMBER OF STORIES:	1
BUILDING HEIGHT:	16'
BUILDING AREA:	(+/-)1,950
ALLOWABLE FLOOR AREA (BASIC):	7,000 SF
AUTOMATIC FIRE SPRINKLERS:	none required
FIRE ALARM SYSTEM:	none required
SMOKE CONTROL SYSTEM:	none required
OCCUPANT LOAD:	SEE EXITING PLAN (THIS SHEET)

DOCUMENT DISCLAIMER

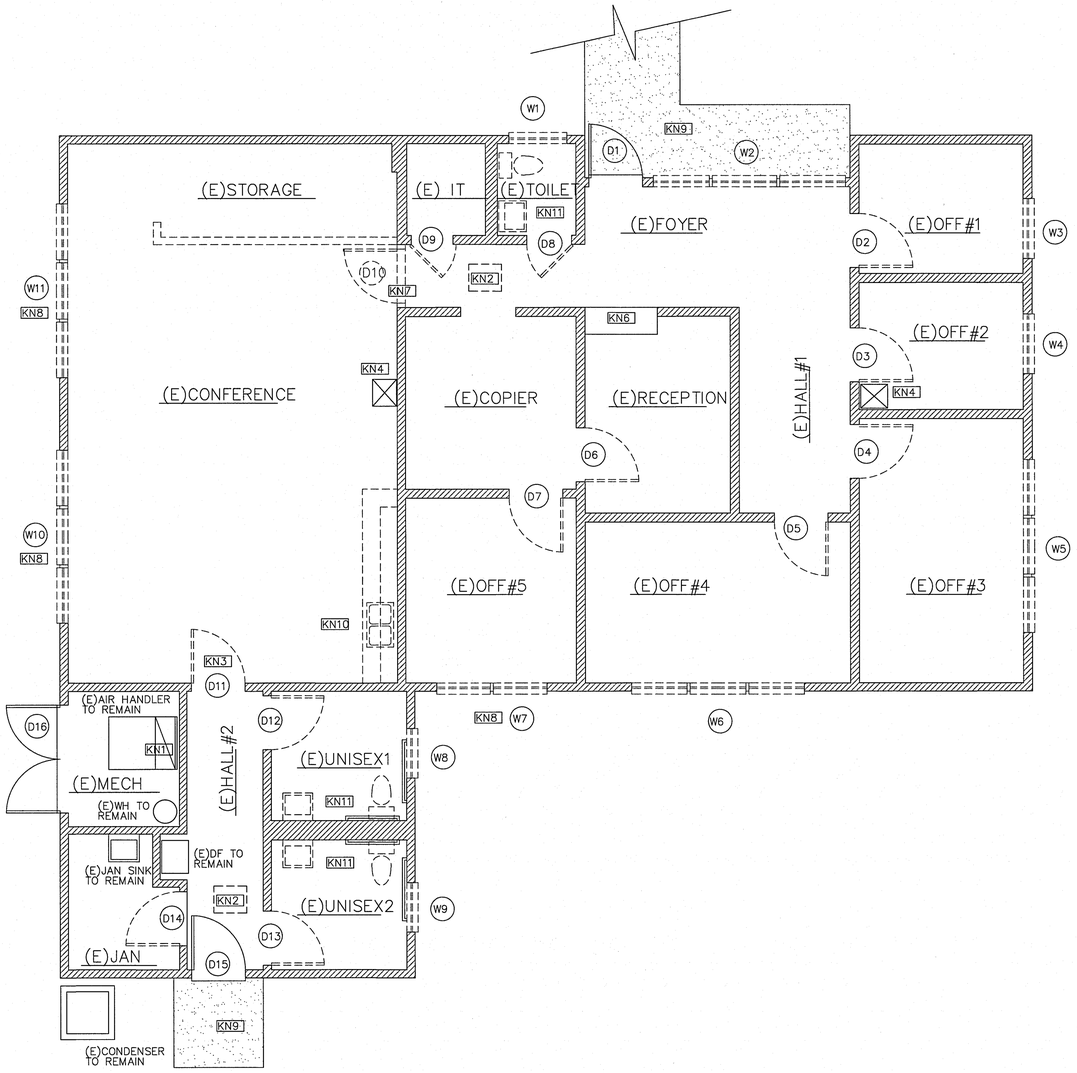
DO NOT SCALE DIMENSIONS FROM THESE PLANS. FIGURED OR WRITTEN DIMENSIONS ON THE DRAWINGS SHALL TAKE PRECEDENT OVER SCALED DIMENSIONS. IT IS INTENDED THAT THE DRAWINGS, DETAILS AND SPECIFICATIONS SHOULD AGREE. SHOULD ANY DISCREPANCY OR APPARENT ERROR OCCUR THE CONTRACTORS SHALL NOTIFY THE UNIVERSITY REPRESENTATIVE AT ONCE. UPON DISCOVERY OF CONFLICTS OR ERRORS THE UNIV. REPRESENTATIVE SHALL SEEK GUIDANCE FROM THE DESIGNER OF RECORD TO RESOLVE THE PROBLEM AND WHOSE DECISION SHALL BE FINAL. APPROVAL OF THIS PLAN DOES NOT AUTHORIZE OR APPROVE ANY OMISSION OF DEVIATION FROM APPLICABLE REGULATIONS. FINAL APPROVAL IS SUBJECT TO FIELD INSPECTION. ONE SET OF APPROVED PLANS AND SPECIFICATIONS SHALL BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.

COMPLIANCE REVIEW

SHEET TITLE
COVER SHEET

PROJECT
BUILDING 101 MAJOR REPAIRS
INTERMOUNTAIN RESEARCH AND EXTENSION CENTER - TULELAKE, CA

DRAWN STAFF CHECKED ST SCALE AS NOTED	UNIVERSITY OF CALIFORNIA DIVISION OF AGRICULTURE AND NATURAL RESOURCES FACILITIES PLANNING AND MANAGEMENT 2801 2ND STREET DAVIS, CALIFORNIA 95618	DATE 10.25.24 DRAWING NO. G1



WALL SYMBOL SCHEDULE

NOTE: NOT ALL SYMBOLS MAY APPLY TO THIS SHEET

- EXISTING WALL TO BE DEMOLISHED (INTERIOR AND EXTERIOR CONDITIONS)
  REMOVE ALL SECTIONS OF WALL INCLUDING PLATES AND PLATE ANCHORAGE. PATCH AREAS OF REMOVED TOP PLATE WITH NECESSARY BLOCKING AND GYSPUM BOARD TO RECIEVE NEW FINISH
- EXISTING WALL TO REMAIN (INTERIOR AND EXTERIOR CONDITIONS)
- NEW FRAMED WALL – 2x4 DF @ 16" OC #1 OR BETTER STUDS AND PLATE, SECURE PLATE TO SLAB WITH POWDER ACCUATED FASTENER AT 30" OC MAX. WHERE WALLS RUN PARALLEL WITH CEILING FRAMING PROVIDE 2x4 CROSS BLOCKING AT 30" OC. MAX. FULL R-13 BATT INSULATION (FOR SOUND) WITH 1/2" GYPSUM BOARD OVER. SEE OTHER NOTES FOR FINISH, PAINT, BASE, ETC.

DEMOLITION FLOOR PLAN

SCALE: 1/4" = 1' – 0"

GENERAL DEMOLITION NOTES

1. GYPSUM BOARD (EXCEPT WHERE REQUIRED TO BE PATCHED), PAINT, FLOORING AND TRIM IN (E) IT, (E) MECH. AND (E) JAN TO REMAIN. SEE MEP FOR SCHEDULED WORK IN THESE ROOMS – CONCEPT IS TO LEAVE ROOMS 'AS IS' UNLESS OTHERWISE NOTED
2. MAJOR OBJECTIVE OF THIS PROJECT IS TO UPDATE ALL ELECTRICAL (LIGHTS, SWITCHES, OUTLETS) SERVICE. DEMOLISH ALL ELECTRICAL WALL OUTLETS AND SWITCHES, PATCH TO PREPARE FOR NEW FINISH (NOTE: THIS IS THE BASIS OF THE BID, DURING CONSTRUCTION CONTRACTOR AND UNIVERSITY REPRESENTATIVE WILL EVALUATE THE LOCATIONS OF (E) AND PROPOSE OUTLETS AND SWITCHES FOR POSSIBLE REUSE OF EXISTING LOCATIONS.
3. REMOVE TOILET FITMENT (GRAB BARS, SOAP/PAPER DISPENSERS, MIRRORS, ETC) FROM UNISEX1 AND UNISEX2 AND STORE / RE-INSTALL IN FINISHED SPACE
4. DURING ELECTRICAL DEMOLITION, PULL OUT AND REMOVE ALL EXISTING BOXES (LIGHT, SWITCH, DATA) AND WIRING. EXISTING ABANDONED WIRING THAT IS CONCEALED AND NOT READILY REMOVED CAN BE ABANDONED IN PLACE.

KEY NOTES

NOTE: NOT ALL KEY NOTES APPLY TO THIS SHEET

- KN1 COORDINATE WITH MECHANICAL PLANS FOR REWORKED FILTRATION SYSTEM THIS AREA – BASIS FOR THE BID IS THAT THIS WILL REQUIRE ONLY SHEET METAL WORK (AS NOTED IN MECHANICAL PLANS)
- KN2 EXISTING ATTIC ACCESS SCUTTLE TO REMAIN, PAINT TO MATCH CEILING
- KN3 NOTE THE RESWINGING OF THIS DOOR FROM EXISTING TO NEW
- KN4 EXISTING EXPOSED FULL HEIGHT SHEET METAL HVAC RETURN TO REMAIN, PAINT TO MATCH ADJACENT WALL SURFACE.
- KN5 INSTALL NEW SURFACE MOUNTED FIRE EXTINGUISHER / 10 LB ABC AMEREX 441B, 4A-80BC
- KN6 EXISTING RECEPTION TRANSACTION COUNTER TO REMAIN, NO WORK. PROTECT DURING CONSTRUCTION OR 'REMOVE/STORE/RE-INSTALL'
- KN7 EXISTING DOOR #10, FRAME AND CASING TRIM TO BE REMOVED ALONG WITH 2X FRAMED WALL (BOTH SIDE) AND HEADER ABOVE. PATCH EXPOSED SURFACES AND PREP FOR TEXTURE / PAINT
- KN8 AREA OF EXTERIOR WALL TO BE REWORKED FOR NEW WINDOW CONFIGURATION: NEW 2X FRAMING, FULL BATT INSULATION, SHEATHING, WATERPROOFING, CEMENTITIOUS SIDING AND PAINT TO MATCH EXISTING. FINAL PRODUCT TO BLEND INTO EXISTING. ASSUME THE ENTIRE EXTERIOR WALL WILL REQUIRE PAINTING.
- KN9 EXISTING EXTERIOR FLATWORK TO REMAIN (NO WORK)
- KN10 DEMOLISH MILLWORK AND SINK. EXISTING SUPPLY, WASTE AND VENT TO BE RE-USED.
- KN11 DEMOLISH SINK AND TOILET, EXISTING SUPPLY, WASTE AND VENT TO BE RE-USED

PROJECT NORTH

DOOR AND WINDOW DEMOLITION NOTES

1. DEMOLISH ALL INTERIOR DOORS, FRAMES AND CASING TRIM / ALL EXTERIOR DOORS AND FRAMES ARE TO REMAIN (NO WORK)
2. DEMOLISH ALL WINDOWS (LEAVE FRAME AS REQUIRED/TO FACILITATE INSTALLATION OF 'RETROFIT' TYPE) AND CASING TRIM, UNLESS OTHERWISE NOTED, REMOVE AS REQUIRED TO INSTALL NEW WINDOWS WHILE LEAVING FRAME/FLASHING/WATERPROOFING/EXTERIOR TRIM INTACT.
3. DEMOLISH WINDOWS #7, #10 AND #11 AS WELL AS SURROUNDIG TRIM, SIDING AND FRAMING AS REQUIRED TO INSTALL NEW 'NAIL ON' TYPE WINDOWS #7 #10, #11 AND #12. GOAL OF THIS WORK IS TO RE-USE EXISTING WINDOW HEADERS.

FLOORING AND BASE DEMOLITION NOTES

1. REMOVE ALL WALL BASE AND MASTIC, REPAIR ANY GYPSUM WALL DAMAGE IN PREPARATION OF NEW WALL BASE INSTALLATION
2. REMOVE ALL FLOORING AND ALL UNDERLAYMENT, MASTIC, ETC TO PREPARE CONCRETE SLAB FLOOR FOR NEW FLOORING
3. SEE GENERAL DEMOLITION NOTE #1

CEILING SURFACES AND FIXTURES DEMOLITION NOTES

1. EXISTING CEILING MOUNTED SUPPLY AND RETURN HVAC REGISTERS TO BE DEMOLISHED. PROTECT DUCTING (TO REMAIN) AND SEAL FOR DUST EXCLUSION FOR DURATION OF THE CONSTRUCTION PROCESS. SEE MECHANICAL FOR QUANTITY, LOCATION AND FUNCTION OF NEW REGISTERS
2. DEMOLISH ALL CEILING LIGHTS, PROVIDE BLOCKING AND GYPSUM BOARD PATCH WHERE RECESSED / PREP FOR NEW FINISH. FOR BIDDING PURPOSES ASSUME 25 LIGHT FIXTURES.
3. CEILING INSULATION IS OF A BLOWN IN TYPE. WHILE PERFORMING WORK AND DISTURBED AREAS OF INSULATION THE CONTRACTOR IS TO CONFIRM THAT ALL AREAS ARE INSULATED AND THE INSULATION IS IN GOOD SHAPE AND APPROPRIATE TO RE-COVER. REPORT ALL AREAS OF COMPROMISED AND/OR MISSING INSULATION TO UNIVERSITY REPRESENTATIVE. UPON COMPLETION OF WORK CONFIRM THAT ALL INSULATION HAS BEEN RETURNED WITH EQUAL DISTRIBUTION ACROSS ENTIRE ATTIC SPACE
4. DEMOLISH AND REMOVE FROM ATTIC SPACE ALL WIRING, ETC THAT IS NOT SCHEDULED TO REMAIN / BE REUSED
5. SEE GENERAL DEMOLITION NOTE #2

WALL SURFACES DEMOLITION NOTES

1. ALL EXTERIOR WALL INSULATION IS TO REMAIN UNDISTURBED. WHILE PERFORMING WORK AND EXPOSING AREAS OF INSULATION THE CONTRACTOR IS TO CONFIRM THAT ALL AREAS ARE INSULATED AND THE INSULATION IS IN GOOD SHAPE AND APPROPRIATE TO RE-COVER. REPORT ALL AREAS OF COMPROMISED AND/OR MISSING INSULATION TO UNIVERSITY REPRESENTATIVE.
2. REMOVE ALL ACCOUSTICAL TILES (AND MASTIC) FROM WALLS (AND CEILING) IN UNISEX1 AND UNISEX2 TO PREPARE FOR TEXTURE AND PAINT.
3. REMOVE ALL MARLITE (AND MASTIC) FROM WALLS IN UNISEX1 AND UNISEX2 TO PREPARE FOR NEW MARLITE WAINSCOT
4. DEMOLISH ALL SWITCHES AND OUTLETS, PROVIDE BLOCKING AND GYPSUM BOARD PATCH AS REQUIRED / PREP FOR NEW FINISH. FOR BIDDING PURPOSES ASSUME 15 SWITCH LOCATIONS / 40 ELECTRICAL OUTLET LOCATIONS.
5. EXISTING THERMOSTAT UNITS AND LOCATIONS TO REMAIN UNCHANGED. REMOVE UNITS FOR PROTECTION DURING CONSTRUCTION AND REINSTALL/RETURN TO OPERATION AT CONCLUSION OF THE PROJECT.
6. SEE GENERAL DEMOLITION NOTE #2

LICENSED ARCHITECT SHAWN MICHAEL TIBON C 22264 Ren. 9-31-25 STATE OF CALIFORNIA

SHEET TITLE
DEMOLITION PLAN

PROJECT
BUILDING 101 MAJOR REPAIRS
INTERMOUNTAIN RESEARCH AND EXTENSION CENTER - TULELAKE, CA. 96134

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FACILITIES PLANNING AND MANAGEMENT
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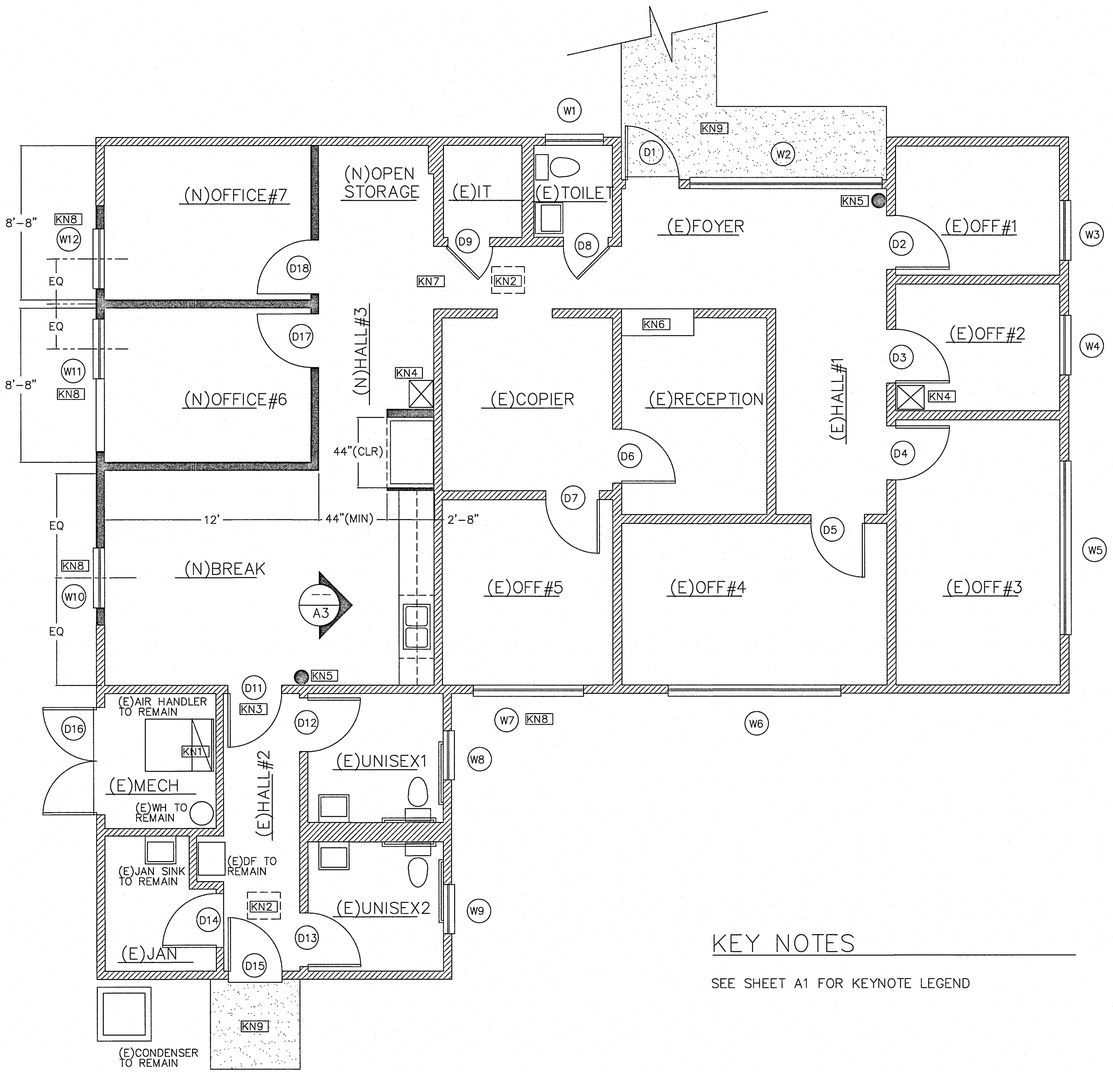

KEY NOTES

SEE SHEET A1 FOR KEYNOTE LEGEND

WALL SYMBOL SCHEDULE

NOTE: NOT ALL SYMBOLS MAY APPLY TO THIS SHEET

EXISTING WALL TO BE DEMOLISHED (INTERIOR AND EXTERIOR CONDITIONS)
REMOVE ALL SECTIONS OF WALL INCLUDING PLATES AND PLATE ANCHORAGE. PATCH AREAS OF REMOVED TOP PLATE WITH NECESSARY BLOCKING AND GYSPUM BOARD TO RECIEVE NEW FINISH

EXISTING WALL TO REMAIN (INTERIOR AND EXTERIOR CONDITIONS)

NEW FRAMED WALL – 2x4 DF @ 16" OC #1 OR BETTER STUDS AND PLATE, SECURE PLATE TO SLAB WITH POWDER ACCUATED FASTENER AT 30" OC MAX. WHERE WALLS RUN PARALLEL WITH CEILING FRAMING PROVIDE 2x4 CROSS BLOCKING AT 30" OC. MAX. FULL R-13 BATT INSULATION (FOR SOUND) WITH 1/2" GYPSUM BOARD OVER. SEE OTHER NOTES FOR FINISH, PAINT, BASE, ETC.

PROPOSED FLOOR PLAN

SCALE: 1/4" = 1' – 0"

GYPSUM WALLBOARD NOTES

1. 1/2" GYPSUM BOARD FOR ALL NEW CONSTRUCTION,
2. IN AREAS OF PATCH WORK, CONFIRM APPROPRIATE THICKNESS OF GYPSUM BOARD TO BE USED.
3. FLOAT/SKIM ALL AREAS AS NECESSARY TO PRODUCE LEVEL/FLAT/IN PLANE FINAL APPEARANCE.
4. ALL AREAS OF GYPSUM BOARD WALLS AND CEILINGS TO BE PREPARED AS REQUIRED TO RECIEVE A COHESIVE 'LIGHT KNOCK DOWN' FINISHED TEXTURE FOR A UNIFORM FINAL APPEARANCE THROUGHOUT THE PROJECT. (NOTE: THIS IS OF PARTICULAR IMPORTANCE TO THE UNIVERSITY, THIS WORK WILL BE CLOSELY EVALUATED BEFORE FINAL ACCEPTANCE)
5. USE WATER RESISTENT GYPSUM BOARD FOR ANY WORK WITHIN TOILET ROOMS AND WALL AREA DIRECTLY BEHIND BREAKROOM SINK

FLOORING

1. FLOORING IN (E)JAN, (E) MECH AND (E) IT ROOMS IS EXISTING TO REMAIN, LEAVE IN PLACE/NO DEMOLISH/NO INSTALLATION OF NEW FLOORING
2. (E)TOILET, (E)UNISEX1 AND (E)UNISEX2 TO RECEIVE NEW SHEET VINYL FLOOR WITH INTEGRAL 5" COVED BASE. INSTALL WITH APPROPRIATE MASTIC AND CONFIRM SURFACE IS APPROPRIATE FOR INSTALLATION (SMOOTHNESS, WATER CONTENT, ETC). UNIVERSITY REPRESENTATIVE TO SELECT COLOR FROM MANUFACTURE STANDARD COLOR PALETTE. MAXIMIUM OF ONE SEAM IN EACH ROOM
3. ALL ROOM AND FLOOR SURFACES NOT MENTIONED IN NOTE #1 AND #2 (ABOVE) IS TO RECIEVE WATERPROOF LAMINATED PLANK STYLE FLOOR. INSTALLED IN A FLOATING TYPE APPLICATION OVER MANUFACTURED SPECIFIED UNDERLAYMENT. UNIVERSITY REPRESENTATIVE TO SELECT COLOR FROM MANUFACTURES STANDARD COLOR PALETTE. COORDINATE WITH UNIVERSITY REPRESENTATIVE FOR LAYOUT AND ORIENTATION AND ANY NECESSARY POINTS OF TRANSITION.
4. FLOOR TO EXTEND UNDER BREAKROOM COUNTER AT ADA WHEEL CHAIR SINK ACCESS.
5. COORDINATE WALL BASE MATERIAL AND INSTALLATION TO ASSURE CLEAN WORKMANSHIP AT FLOOR/TRANSITION AND CONCEALMENT OF GAP SPACING IN ANY POSTION OF MOVEMENT.
6. USE PROPER THRESHOLD TRANSITIONS FOR CLEAN WORKMANSHIP AT FLOORING TRANSITIONS

PAINTING NOTES

1. IT IS THE INTENT OF THIS PROJECT TO PAINT, STAIN AND/OR FINISH ALL EXPOSED SURFACES OF THE ENTIRE INTERIOR. SURFACES NOT REQUIRED TO BE PAINTED INCLUDE; FACTORY FINISHED SURFACES, HINGES, EQUIPMENT, APPLIANCES, HARDWARE AND THE LIKE.
2. GYPSUM WALLBOARD (SEMI-GLOSS FINISH) RESTROOMS

FIRST COAT	ULTRA HIDE PVA PRIMER
SECOND COAT	ULTRA HIDE LATEX SEMI GLOSS
THIRD COAT	ULTRA HIDE LATEX SEMI GLOSS

GYPSUM WALLBOARD (EGG SHELL FINISH) NON RESTROOMS

FIRST COAT	ULTRA HIDE PVA PRIMER
SECOND COAT	ULTRA HIDE LATEX EGGSHELL
THIRD COAT	ULTRA HIDE LATEX EGGSHELL

DOORS

FIRST COAT	FACTORY SUPPLIED FINISH
SECOND COAT	ULTRA HIDE SEMI GLOSS
THIRD COAT	ULTRA HIDE LATEX SEMI GLOSS

CASEWORK AND COUNTERTOP NOTES

1. SEE MILLWORK PORTION OF SHEET A3 FOR ADDITIONAL NOTES AND DIMENSIONS
2. CONSTRUCT CASEWORK IN ACCORDANCE WITH WI 'MANUAL OF MILLWORK, CUSTOM GRADE
3. EXPOSED SURFACES TO BE CLAD WITH HIGH PRESSURE LAMINATE, .028". COLOR TO BE SELECTED BY UNIVERSITY REPRESENTATIVE FROM STANDARD COLOR GROUP.
4. CLAD INTERIOR SURFACES WITH MALAMINE, BAND ALL EDGES
5. PROVIDE FINISHED HARDWARE FOR ALL CASEWORK. CONSULT WITH UNIVERSTIY REPRESENTATIVE FOR STYLE, FINISH, ETC..

MARLITE WAINSCOT NOTES

1. 40" HIGH (MIN/ABOVE FINISHED FLOOR/COORDINATE WITH ELEMENT SUCH AS LIGHT SWITCHES) ON ALL SURFACES OF THE THREE TOILET ROOMS IN PROJECT. PROVIDE ALL TRIM AND EDGING. COLOR TO BE SELECTED BY UNIVERSITY REPRESENTIVE

WOOD DOOR AND METAL FRAME NOTES

1. SEE DOOR PORTION OF SHEET A3 FOR ADDITIONAL NOTES AND DIMENSIONS
2. 1 3/4" PARTICLE BOARD CORE, TYPE A, 5 PLY WITH MDO FACE VENEER. MDO APPROPRIATE FOR PAINTED FINISH. SHOP PRIME FACES AND VERTICAL EDGES WITH ONE COAT OF WOOD PRIMER
3. CLOSE GRAIN HARDWOOD VERTICAL EDGES. 1/2" MIN, BONDED
4. THERE ARE NO FIRE RATINGS ASSOCIATED WITH ANY NEW DOORS IN THIS PROJECT.
5. FRAMES TO BE PREMANUFACTURE/PREFINISHED METAL 'KNOCK DOWN' STYLE. COORDINATE HINGES/LOCKSETS AND OTHER HARDWARE. UNIVERSITY REPRESENTATIVE TO SELECT COLOR FROM STANDARD PALETTE. MANUFACTURE BY TIMELY OR EQUAL
6. CONTRACTOR TO VERIFY ALL DOOR/FRAME ASSEMBLY INSTALLATION LOCATIONS FOR (POSSIBLY VARIANCE WITHIN) WALL CONSTRUCTION ASSEMBLY PRIOR TO ORDERING

WINDOWS NOTES

1. SEE WINDOW PORTION OF SHEET A3 FOR ADDITIONAL NOTES AND DIMENSIONS

DOOR HARDWARE NOTES

1. SEE DOOR PORTION OF SHEET A3 FOR ADDITIONAL NOTES AND DIMENSIONS
2. ALL HARDWARE TO BE COMMERICAL GRADE, ALL HARDWARE TO BE COORDINATE WITH FINISH/COLOR
3. PROVIDE APPROPRIATE STOPS AT EACH DOOR
4. PROVIDE 3 KEYS FOR EACH DOOR WITH 2 LEVEL KEYING SYSTEM.

BASE NOTES

1. 4" TOP SET COVED RUBBER BASE. FIELD FIT CORNERS. CONTINUOUS ROLL (VERSUS SECTION LENGTHS) WITH NO BUTT JOINTS IN ANY STRAIGT RUN. UNIVERSTIY REPRESENTATIVE TO SELECT COLOR FROM MANUFACTURES STANDARD PALETTE. BURKE OR EQUAL

PROJECT NORTH

LICENSED ARCHITECT SHAWN MICHAEL IBER C 22284 Ren. 1-31-25 STATE OF CALIFORNIA

SHEET TITLE
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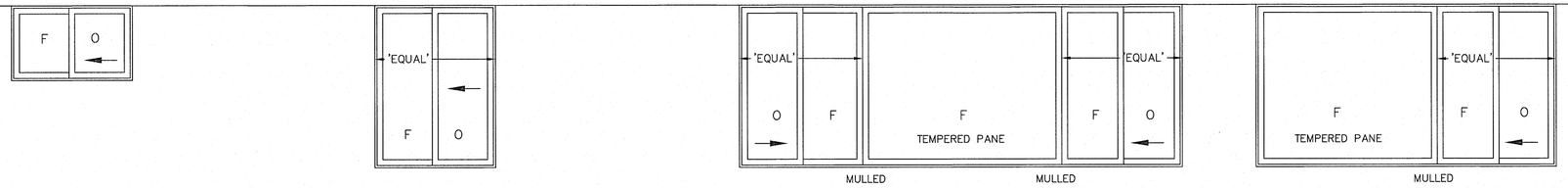


OBSCURE GLAZING

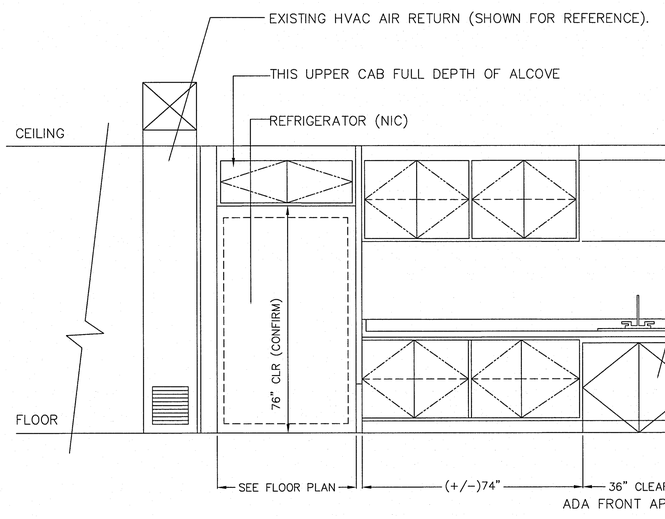
FLOOR	(A) WINDOW TYPE	(B) WINDOW TYPE	(C) WINDOW TYPE	(D) WINDOW TYPE
	(W1) +/– 3/3x2/2 VERIFY PRIOR TO ORDERING	(W3) +/– 3/4x4/4 VERIFY PRIOR TO ORDERING	(W2) +/– 10/8x4/4 VERIFY PRIOR TO ORDERING	(W7) +/– 6/2x4/4 VERIFY PRIOR TO ORDERING
	(W8) +/– 2/9x1/6 VERIFY PRIOR TO ORDERING	(W4) +/– 3/4x4/4 VERIFY PRIOR TO ORDERING	(W5) +/– 10/2x4/4 VERIFY PRIOR TO ORDERING	
	(W9) +/– 2/9x1/8 VERIFY PRIOR TO ORDERING	(W10) +/– 3/4x4/4 VERIFY PRIOR TO ORDERING	(W6) +/– 9/10x4/4 VERIFY PRIOR TO ORDERING	
		(W11) +/– 3/4x4/4 VERIFY PRIOR TO ORDERING		
		(W12) +/– 3/4x4/4 VERIFY PRIOR TO ORDERING		

WINDOW SCHEDULE

SCALE: 1/2" = 1' – 0"

1. ALL WINDOWS TO BE INSULATED, DUAL PANE, LOW E GLAZING
2. WITH EXCEPTION OF WINDOWS #10, #11 AND #12 ALL WINDOWS WILL BE SET INTO EXISTING WINDOW FRAMES WITH 'RETROFIT' TYPE. WATERPROOFING, FLASHING AND EXTERIOR TRIM SURROUND TO REMAIN / PROTECT DURING CONSTRUCTION.
3. WINDOWS #7, #10, #11 AND #12 TO HAVE SAME APPEARANCE AS OTHER WINDOWS BUT WILL NOT BE OF A 'RETROFIT' TYPE / TO BE STANDARD 'NAIL ON' TYPE. PROVIDE ALL NEW FLASHING, CAULKING AND EXTERIOR TRIM SURROUND TO MATCH EXISTING
4. VERIFY ALL DIMENSIONS PRIOR TO ORDERING
5. WINDOW ELEVATIONS DRAWN WITH PROFILE SHOWN FROM EXTERIOR VANTAGE POINT
6. UNIVERSITY REPRESENTATIVE TO SELECT WINDOW FRAME COLOR FROM STANDARD MANUFACTURE COLOR PALETTE
7. HEAD AND JAMB RETURNS TO BE 1/2" GYPSUM
8. ALL SILL RETURNS TO BE PAINT GRADE 3/4" WOOD WITH 1 1/2" EXTENSION PAST FACE OF JAMB WITH 1/2" RADIUSED CORNER.
9. ALL OPERABLE PANES TO HAVE INSECT SCREEN
10. PROVIDE 1" VINYL MINI BLINDS AT ALL WINDOWS, AT MULLED WIINDOW TYPES PROVIDE INDIVIDUAL BLINDS WITH CORD/WAND AT THE ACTIVE PANE. UNIVERSITY REPRESENTATIVE TO SELECT COLOR FROM MANUFACTURE STANDARD PALETTE

WINDOW GENERAL NOTES



COORDINATE GARBAGE DISPOSAL, INSTA HOT UNIT, WASTE AND SUPPLY LINES TO MAINTAIN ADA FRONT APPROACH SINK CLEARANCES

INSULATE HOT WATER SUPPLY AND WASTE LINES

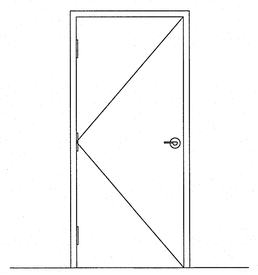
THIS CABINET DOOR TO HAVE INTEGRAL TOE KICK APRON TRIM

BREAKROOM MILLWORK

SCALE: 1/2" = 1' – 0"

1. SOLID SURFACE (CORIAN OR EQUAL) COUNTERTOP WITH EASED EDGE, 4" BACK AND SIDE SPLASHES
2. UPPER CABINETS TO BE 12" DEEP WITH (1) ADJUSTABLE SHELF / LOWER CABINETS TO BE 24" DEEP WITH (1) ADJUSTABLE SHELF
3. ALL MILLWORK CONSTRUCTED TO WI CERTIFICATION STANDARDS, STAMPING / CERTIFICATION NOT REQUIRED

MILLWORK GENERAL NOTES



DOOR SCHEDULE

SCALE: 1/2" = 1' – 0"

DOOR GENERAL NOTES

1. ASSUMPTION/BASIS OF BID: ALL DOORS ARE 3/0x7/0 WITH EXCEPTION OF DOORS #8 AMD #9 WHICH ARE 2/4x7/0 – THESE DIMENSIONS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING.
2. HARDWARE PACKAGE: 3 HINGES, COMMERCIAL GRADE SCHLAGE HARDWARE. BRUSHED NICKLE FINISH. CONSULT WITH UNVERSITY REPRESENTATIVE FOR HARDWARE FUNCTION TYPES AND KEYING FOR EACH DOOR
3. DOOR #11 TO HAVE 24"x30" TEMPERED SIINGLE PANE VISION PANEL, CONSULT WITH UNIVERSITY REPRESENTATIVE FOR GLASS TYPE (CLEAR OR OBSCURE)
4. DOORS #9 (MOUNTED LOW) AND #14 (MOUNTED HIGH) SHALL HAVE 18"x12" PAINTED FIXED LOUVER VENTS
5. DOORS #11, #12, #13 AND #14 SHALL HAVE 34"x12" STAINLESS STEEL MOP PLATES BOTH SIDES.

LICENSED ARCHITECT SHAWN MICHAEL TIBOR C 22284 Ren. 11.30.25 STATE OF CALIFORNIA

SHEET TITLE

DOOR, WINDOWS, MILLWORK

PROJECT

BUILDING 101 MAJOR REPAIRS

INTERMOUNTAIN RESEARCH AND EXTENSION CENTER - TULELAKE, CA. 96134

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MECHANICAL LEGEND

SYMBOL / ABBREVIATION	DESCRIPTION	SYMBOL / ABBREVATION	DESCRIPTION
R	DUCT RISE		DUCT DEMO
D	DUCT DROP	U/C	UNDERCUT DOOR
OSA	OUTSIDE AIR	D/L	DOOR LOUVER
SA	SUPPLY AIR	OSA	OUTSIDE AIR
RA	RETURN AIR	ø	DIAMETER OR PHASE
EXH	EXHAUST AIR	ABC	ABOVE CEILING
BD	BALANCE DAMPER	CLG	CEILING
12x10	DUCT (WxH)	AP	ACCESS PANEL
12x10L	ACOUSTICAL LINED DUCTING	CFM	CUBIC FEET PER MINUTE
	DUCT TRANSITION	(E), EXISTING	EXISTING TO BE FIELD VERIFIED BY CONTRACTOR
	SUPPLY, RETURN, EXHAUST RISER	FA, TA	FROM ABOVE, TO ABOVE
T S H C	THERMOSTAT, SENSOR, HUMIDISTAT, CO2	FB, TB	FROM BELOW, TO BELOW
R	RELOCATE, EXTEND/SHORTEN DUCT AS REQUIRED	AFF	ABOVE FINISHED FLOOR
POC	POINT OF CONNECTION	FF	FINISHED FLOOR
M	MOTORIZED DAMPER	/FT	PER FOOT
F	RADIATION FIRE DAMPER	NIMC	NOT IN MECHANICAL CONTRACT
FS	FIRE SMOKE DAMPER	NTS	NOT TO SCALE
SD	DUCT SMOKE DETECTOR	OBD	OPPOSED BLADE DAMPER
	AIRFLOW (OUTLET ARROW)	REF	REFERENCE
	AIRFLOW (INLET ARROW)	TYP	TYPICAL

GENERAL MECHANICAL NOTES

1. EQUIPMENT: ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND EQUAL IN QUALITY, TYPE, CAPACITY, EFFICIENCY, AND ACCESSORIES TO THE EQUIPMENT NOTED ON THE DRAWINGS. ADJUSTMENTS TO CONSTRUCTION AND ACCESSORIES ON SUBSTITUTED EQUIPMENT MAY BE REQUIRED TO ACHIEVE THIS EQUALITY, AND SHALL BE INCLUDED AT NO EXTRA COST TO THE OWNER. MAKE ANY CHANGES IN DUCTWORK, PIPING, FRAMING, ETC., AS REQUIRED TO ACCOMMODATE SUBSTITUTED EQUIPMENT.

2. INSTALLATION: INSTALL ALL EQUIPMENT AND MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH EDITION APPLICABLE CODES INCLUDING BUT NOT LIMITED TO:
   2022 CALIFORNIA MECHANICAL CODE (CMC)
   2022 CALIFORNIA ENERGY CODE (CEC) INCLUDING LOCAL AMENDMENTS
   CALIFORNIA CODE OF REGULATIONS (CCR)
   2022 CALIFORNIA BUILDING CODE (CALIFORNIA CODE OF REGULATIONS, TITLE 24)
   NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
   2022 CALIFORNIA FIRE CODE (CFC)
   2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
   WHERE HEAVIER GAUGES OF MATERIAL, LARGER SIZES OR MORE STRINGENT REQUIREMENTS THAN THE CODES ARE REQUIRED BY THE CONTRACT DOCUMENTS, SUCH INCREASED REQUIREMENTS SHALL APPLY.

3. SHEET METAL DUCTWORK: ALL SHEET METAL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE TO CMC STANDARDS AND SMACNA GUIDELINES WITH THE MORE STRINGENT BEING APPLIED. ALL DUCT JOINTS INCLUDING MECHANICAL FLANGED JOINTS SHALL BE SEALED WITH SILVER TAPE OR ARABOL AND CANVAS. SEAL THE JOINTS OF ALL DUCTS EXPOSED TO THE WEATHER WITH ARABOL AND CANVAS. PROVIDE ALL BRANCH DUCTS WITH VOLUME DAMPERS WITH LOCKING QUADRANTS LOCATED AT LEAST FIVE FEET (5') FROM THE GRILLE OR DIFFUSER SERVED, WITH LONG RADIUS ELBOWS. CONCEALED DAMPERS SHALL HAVE CABLE OPERATED MECHANISMS TO ALLOW ADJUSTMENTS WITH OUT DISTURBING THE STRUCTURE. ALL RECTANGULAR OR ROUND RIGID DUCTS SHALL BE OF SMACNA GAGE GALVANIZED STEEL OR ALUMINUM, UNLESS OTHERWISE NOTED ON THE DRAWINGS. PROVIDE FLAT SEAM CONSTRUCTION FOR ANY DUCTS EXPOSED IN OCCUPIED SPACE. NOTE: ALUMA-FLEX IS NOT ACCEPTABLE IN LIEU OF ROUND RIGID DUCTWORK. ALL DUCT OPENINGS SHALL BE SEALED AGAINST DUST AND DEBRISE UNTIL FINAL START-UP.

4. DUCT SUPPORTS: ALL PIPING AND DUCTWORK SHALL BE SUPPORTED IN ACCORDANCE WITH CMC STANDARDS OR SMACNA SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS. CONTRACTOR SHALL PROVIDE CALCULATIONS FOR SEISMIC SUPPORTS AND RESTRAINTS THAT ARE ACCEPTABLE TO THE REVIEWING AUTHORITY.

5. FLEXIBLE DUCT: FLEXIBLE DUCTS SHALL BE ATCO 30, GENFLEX F29, THERMAFLEX M-KE, OR APPROVED EQUAL. FLEXIBLE DUCTWORK SHALL NOT BE USED WHERE EXPOSED DUCTWORK OCCURS, FIRE RATED WALL, FLOOR OR CEILING ASSEMBLIES EXISTS, AND TEMPERATURES EXCEEDS 250°F. PER 2022 CMC 604.4.1, FACTORY-MADE FLEXIBLE AIR DUCTS SHALL NOT BE MORE THAN 5 FEET IN LENGTH AND SHALL NOT BE USED IN LIEU OF RIGID ELBOWS OR FITTINGS, AND FLEXIBLE AIR DUCTS SHALL BE PERMITTED TO BE USED AS AN ELBOW AT A TERMINAL DEVICE.

6. ALL DUCT SIZES ON PLANS ARE SIZED FOR HARD DUCT.

7. 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, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY.

8. INSULATION FOR INTERIOR DUCT: INSULATE ALL RIGID SUPPLY AND RETURN DUCTS WITH 1-1/2" THICK, 3/4 PCF DENSITY OUENS CORNING SOFTR OR EQUAL, FIBERGLASS DUCT WRAP, TYPE 75, WITH FOIL REINFORCED KRAFT VAPOR RETARDER FACING. BUTT JOINT PIECES WITH 2" MINIMUM TAP FLAP OVERLAPPING. WHEN IN CONDITIONED SPACE, DUCTS SHALL HAVE R-4.2 INSULATION. WHEN IN UNCONDITIONED SPACE, DUCTS SHALL HAVE R-8.0 INSULATION.

   INSULATION FOR EXTERIOR DUCT: SEAL ALL METAL JOINTS PER SMACNA & CEC, LINE WITH 2" CERTAINTEED TOUGHGARD, RIGID LINER BOARD. TAPE ALL INSULATED INTERIOR JOINTS. INSULATION SHALL BE PROTECTED FROM DAMAGE BY MOISTURE, UV AND PHYSICAL ABRASION. INSULATION EXPOSED TO WEATHER SHALL BE SUITABLE FOR OUTDOOR SERVICE, PROTECTED BY ALUMINUM, SHEET METAL, PAINTED CANVAS, OR PLASTIC COVER. CELLULAR FOAM INSULATION SHALL BE PROTECTED AS ABOVE OR PAINTED WITH A COATING THAT IS WATER RETARDANT AND PROVIDES SHIELDING FROM SOLAR RADIATION. THIS APPLIES TO REFRIGERANT LINE SETS AS WELL. DUCTS SHALL HAVE R-8.0 INSULATION.

9. DUCT LINER: LINE ALL RIGID SUPPLY AND RETURN DUCT DROPS FOR A MINIMUM OF 10' FROM THE UNIT WITH 1" THICK OUENS CORNING QUIETER ACOUSTICS OR EQUAL ACOUSTIC DUCT LINER. INSTALL WITH 100% COVERAGE ADHESIVE COMPLYING WITH ASTM C 916, AND FURTHER APPLY TO BUTTED ENDS. MECHANICAL FASTENERS SHALL BE APPLIED 3" FROM CORNERS AND 12" OC BETWEEN CORNER FASTENERS. ALL DUCT DIMENSIONS ON PLANS ARE CLEAR DIMENSIONS. SEAL BUTT ENDS OF EXPOSED INSULATION IN THE DUCTS WITH MANUFACTURERS RECOMMENDED SEALANT OR ADHESIVE.

10. CONTROLS: HEATING AND COOLING CONTROLS SHALL COMPLY WITH 2022 CEC, SUBCHAPTER 3, SECTION 120.2. ALL CONTROLS AND CONTROL WIRING ARE NOT SPECIFICALLY SHOWN BUT ARE REQUIRED FOR A COMPLETE AND WORKABLE SYSTEM AND SHALL BE SUPPLIED BY THE CONTRACTOR AND INSTALLED AT NO ADDITIONAL COST TO THE OWNER.

11. TESTING: ALL AIR SYSTEMS SHALL BE BALANCED BY A TRAINED MECHANICAL CONTRACTOR, USING AABC, SMACNA, OR NEBB PROCEDURES. AIR QUANTITIES SHALL BE ADJUSTED TO NOT MORE THAN 10% ABOVE OR 0% BELOW THE QUANTITIES SHOWN ON THE DRAWINGS. CONTRACTOR SHALL SUBMIT A COMPLETE AIR BALANCE REPORT INDICATING, AS A MINIMUM, THE AIR DELIVERY FOR EACH DIFFUSER, THE FINAL OPERATING DATA FOR THE SYSTEMS AND THE AIR CONDITIONING UNITS.

12. SUBMITTALS: SUBMIT FOR APPROVAL COPIES OF COMPLETE SUBMITTAL DATA ON SPECIFIED AND PROPOSED EQUIPMENT AND MATERIALS. SUBMITTALS SHALL INCLUDE EQUIPMENT SIZES, CAPACITY, MOTOR LOCATIONS, PERFORMANCE CURVES AND OTHER PERTINENT DATA. EACH SUBMITTAL SHALL INCLUDE IDENTIFICATION TAGS OR SYMBOLS TO MATCH THOSE ON DRAWINGS. PARTIAL SUBMITTALS OR SUBMITTALS WHICH ARE NOT MARKED WITH EQUIPMENT TAGS OR PERFORMANCE DATA WILL BE REJECTED. EQUIPMENT THAT IS NOT SUBMITTED IS TO BE USED AT THE CONTRACTORS OUN RISK REGARDLESS OF BRAND OR MODEL USED.

13. EQUIPMENT IDENTIFICATION: PROVIDE PERMANENT ENGRAVED PLASTIC NAME PLATED FOR ALL EQUIPMENT INSTALLED, INDICATING THE PLAN DESIGNATION OF THE UNIT (AC-1, REF, ETC.) AND ALSO THE BUILDING AREA SERVED (CLASSROOMS 2-4, CONFERENCE ROOM, ETC.). STAMPED METAL TAPES AFFLIED WITH SELF-CONTAINED ADHESIVE WILL NOT BE ACCEPTABLE. GLUE TO THE INSIDE COVER OF THE COMPRESSOR ACCESS PANEL, A COPY OF THE EQUIPMENT NAMEPLATE SUBMITTAL DATA.

14. CONTRACTOR SHALL VERIFY ALL WORK CONDITIONS PRIOR TO COMMENCING WORK, INCLUDING, BUT NOT LIMITED TO: DIMENSIONS, EQUIPMENT, STRUCTURAL ELEMENTS AND MATERIALS INDICATED AS EXISTING, AS WELL AS THE COORDINATED INSTALLATION OF ALL NEW WORK, MATERIALS, EQUIPMENT, ETC. COORDINATE THE LOCATION OF ALL ROOF MOUNTED EQUIPMENT WITH THE STRUCTURAL ENGINEER.

15. CONTRACTOR SHALL FIELD COORDINATE TERMINATION OF ENVIRONMENTAL AIR DUCT EXHAUST SO THAT THEY TERMINATE NOT LESS THAN 3 FEET FROM A PROPERTY LINE, 10 FEET FROM A FORCED AIR INLET, 10 FEET ABOVE A PUBLIC WALKWAY, AND 3 FEET FROM OPENINGS INTO THE BUILDING, AND DO NOT DISCHARGE ONTO A PUBLIC WALKWAY (2022 CMC 502.2.1).

16. SUBMITTAL NOTE: MECHANICAL SYSTEMS DESIGN REFLECT EQUIPMENT SPECIFIED. WHEN EQUIPMENT SUBSTITUTIONS OCCUR AND DUCT DESIGN, DUCT DROPS, GAS INPUT AND ELECTRICAL SERVICE VARIES FROM THAT SPECIFIED, THEN IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR FOR ALL ADDITIONAL ENGINEERING FEES WHEN SUBSTITUTED EQUIPMENT REFLECT A REVISION OR CHANGE ON OUR DRAWINGS.

17. INSTALLATION INSTRUCTIONS FOR ALL LISTED EQUIPMENT SHALL BE MADE AVAILABLE TO THE BUILDING INSPECTOR AT THE TIME OF INSPECTION.

18. ONLY PERMITTED PLANS SHALL BE USED FOR CONSTRUCTION OR BIDDING.

GRILLE SCHEDULE

SYMBOL	DESCRIPTION
	SUPPLY GRILLE, TITUS, MODEL MCD, MODULAR CORE DIFFUSER WITH ROUND NECK. BORDER TYPE 1 FOR SURFACE MOUNT APPLICATIONS. BORDER TYPE 3 FOR LAY-IN/T-BAR MOUNT APPLICATIONS.
	RETURN GRILLE, TITUS, MODEL 50F, EGGCRATE RETURN GRILLE. BORDER TYPE 1 FOR SURFACE MOUNT APPLICATIONS. BORDER TYPE 3 FOR LAY-IN/T-BAR MOUNT APPLICATIONS.

12X12 — NECK SIZE (INCHES X INCHES)
500 — AIR FLOW (CFM)

NOTE: SUBSTITUTIONS ALLOWED FOR MANUFACTURERS AND MODELS SIMILAR IN QUALITY AND PERFORMANCE. GRILLES SHALL BE SIZED FOR NOISE CRITERIA (NC) NOT TO EXCEED 20.

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REGISTERED PROFESSIONAL ENGINEER — JOHN C. WHITE — No. M-029816 — EXP. 6-30-2026 — MECHANICAL — STATE OF CALIFORNIA

Date Signed: October 25, 2024

INTERMOUNTAIN RESEARCH & EXTENSION CENTER
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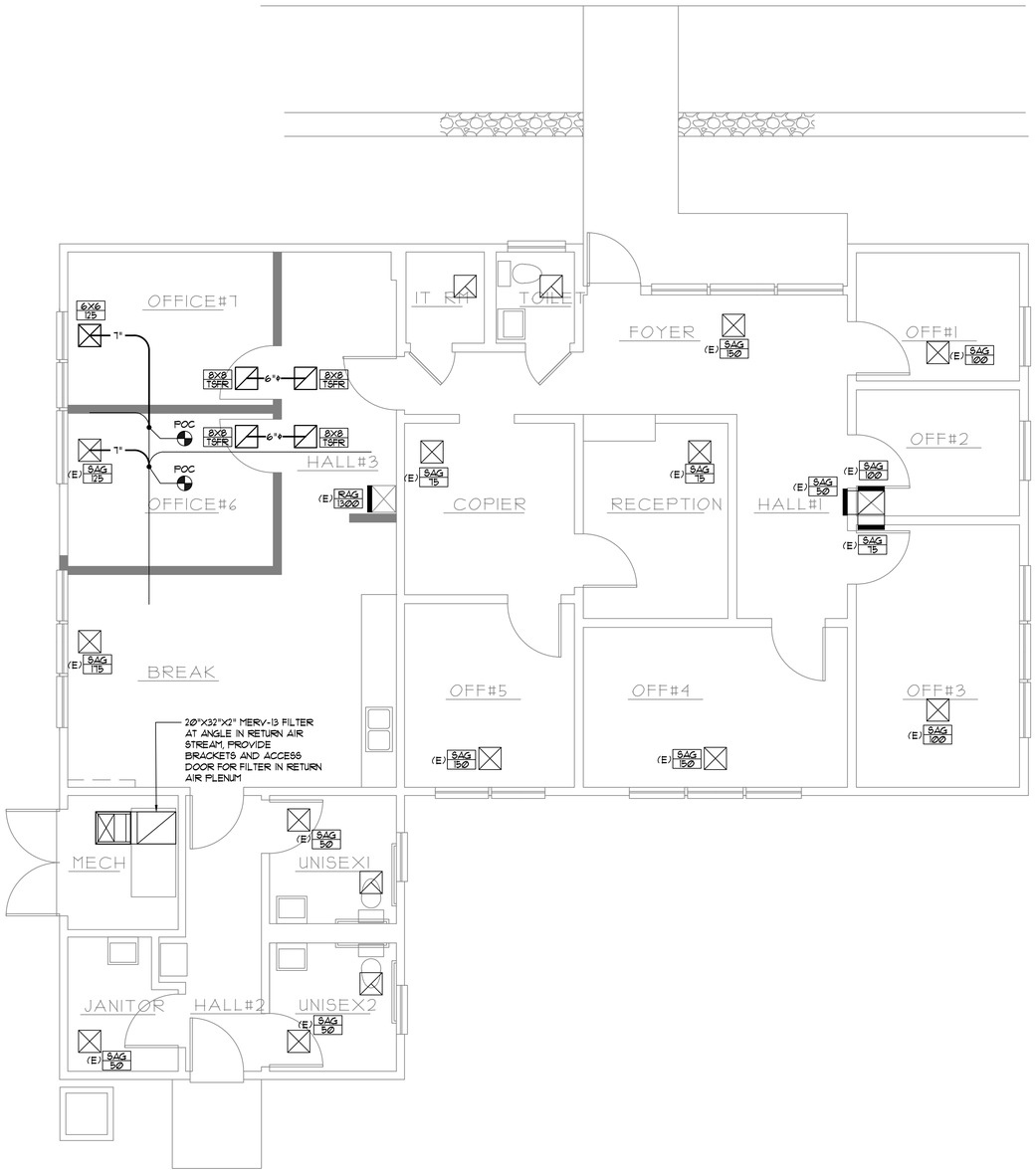
2816 HAVLINA ROAD
TULELAKE, CA 96134

REVISION	BY

MECHANICAL NOTES, LEGEND, & SCHEDULES

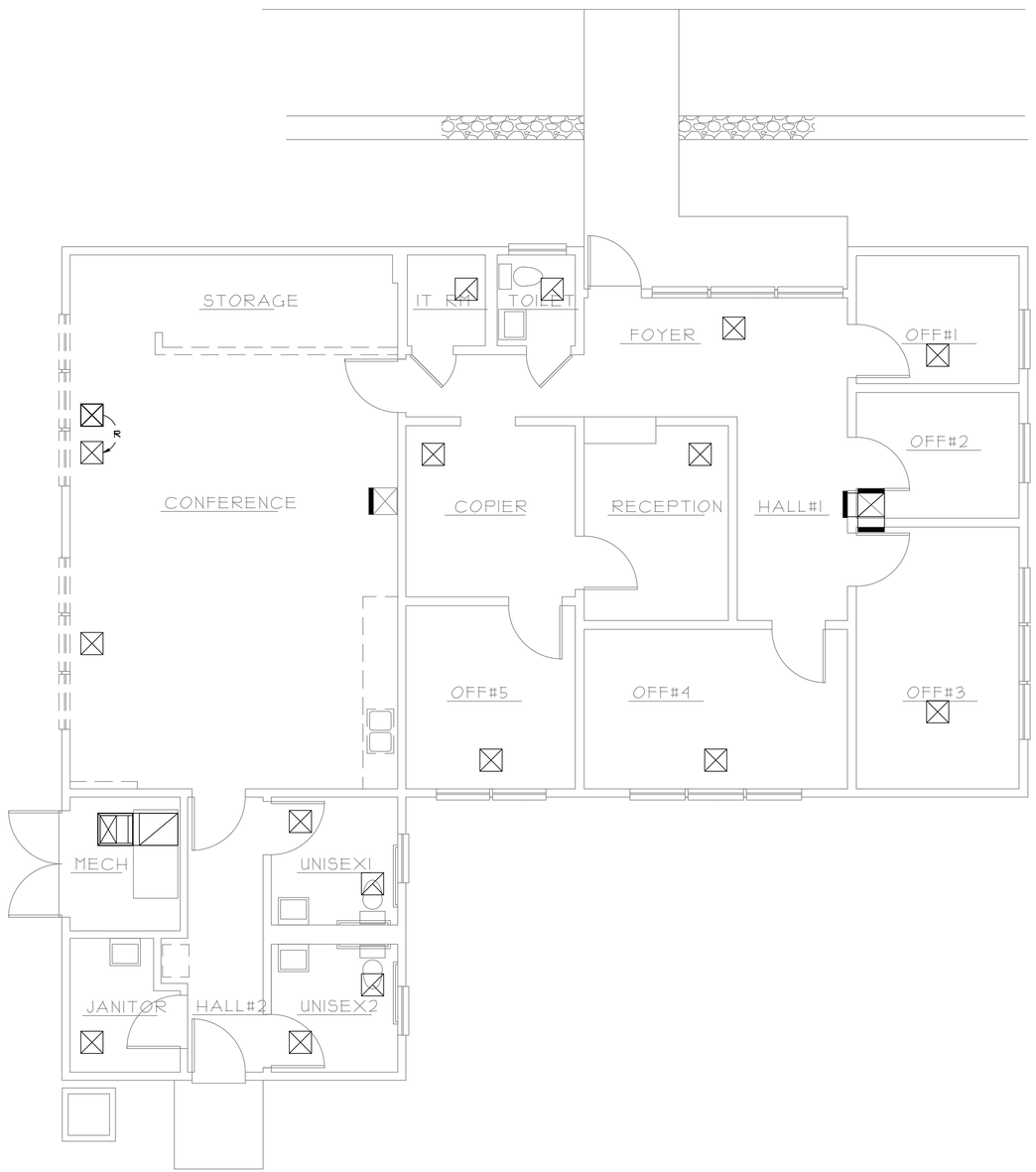
DATE	09.20.2023
SCALE	AS NOTED
DRAWN	MU/CZ
SEC JOB #	23412
SHEET	M1.1
OF	SHEETS



MECHANICAL FLOOR PLAN

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

1 / M2.1



MECHANICAL DEMOLITION PLAN

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

1 / M2.1

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MECHANICAL FLOOR PLANS

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GENERAL PLUMBING NOTES

1. GENERAL PLUMBING NOTES

ALL EQUIPMENT AND MATERIALS USED SHALL BE NEW AND SHALL BE EQUAL IN QUALITY, TYPE, CAPACITY AND ACCESSORIES TO THE EQUIPMENT NOTED ON THE DRAWINGS. ADJUSTMENTS TO CONSTRUCTION AND ACCESSORIES ON SUBSTITUTED EQUIPMENT MAY BE REQUIRED TO ACHIEVE THIS EQUALITY, AND SHALL BE INCLUDED AT NO EXTRA COST TO THE OWNER. MAKE ANY CHANGES IN PIPING, FRAMING, ETC., AS REQUIRED TO ACCOMMODATE SUBSTITUTED EQUIPMENT.

ALL PLUMBING FIXTURES, PIPES AND FITTINGS SHALL MEET THE STANDARDS REFERENCED IN 2022 CA PLUMBING CODE TABLE 1701.1 AND 2022 CA GREEN BUILDING STANDARDS CODE CHAPTER 6 PER 2022 CA GREEN BUILDING STANDARDS CODE SECTION 5.303.6.

INSTALL ALL EQUIPMENT AND MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES. APPLICABLE CODES SHALL INCLUDE, BUT NOT BE LIMITED TO THE 2022 EDITIONS OF THE CA MECHANICAL CODE, CA PLUMBING CODE, CA FIRE CODE, AND CA CODE OF REGULATIONS (CCR) TITLE 24 BUILDING ENERGY EFFICIENCY STANDARDS. WHERE HEAVIER GAGES OF MATERIAL, LARGER SIZES OR MORE STRINGENT REQUIREMENTS THAN THE CODES ARE REQUIRED BY THE CONTRACT DOCUMENTS, SUCH INCREASED REQUIREMENTS SHALL APPLY.

UNLESS SUBMITTED ELECTRONICALLY, PROVIDE SIX COPIES OF SUBMITTALS WITH MANUFACTURER'S OPERATING AND MAINTENANCE DATA FOR ALL ITEMS OF EQUIPMENT INSTALLED. INDICATE THE EXACT MODEL(S) OF EQUIPMENT, WHERE THE MANUFACTURER'S DATA INCLUDES MODELS OTHER THAN THOSE INSTALLED. BIND THE INFORMATION IN 3 RING BINDERS, WITH DIFFERENT TYPES OF EQUIPMENT INDEXED. PROVIDE A SHEET INDICATING THE CONTRACTOR'S (AND SUBCONTRACTOR'S) NAMES, ADDRESSES AND TELEPHONE NUMBERS. INCLUDE ALSO THE PREFERRED SOURCES OF SPARE PARTS FOR THE EQUIPMENT INSTALLED, INCLUDING ADDRESSES, TELEPHONE NUMBERS, ETC.

CONTRACTOR SHALL VERIFY ALL WORK CONDITIONS, PRIOR TO COMMENCING WORK, INCLUDING, BUT NOT LIMITED TO: PIPING SIZES, INVERT ELEVATIONS, POINTS OF CONNECTION, FIXTURES AND EQUIPMENT, STRUCTURAL ELEMENTS AND MATERIALS INDICATED AS EXISTING, AS WELL AS THE COORDINATED INSTALLATION OF ALL NEW WORK, MATERIALS, EQUIPMENT, ETC. VERIFY THE LOCATION AND REQUIRED PIPING CONNECTIONS OF ALL HVAC OR OTHER MECHANICAL EQUIPMENT. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO TRENCHING OR COMMENCING OTHER WORK. CONTRACTOR SHALL VERIFY SIZE OF EXISTING GAS METER IS ADEQUATE WITH PG&E BEFORE STARTING CONSTRUCTION.

MECHANICAL EQUIPMENT AND IDENTIFICATION TAGS SHOWN ON DRAWINGS ARE FOR THE COORDINATION OF UTILITIES ONLY, REFER TO MECHANICAL DRAWINGS FOR EQUIPMENT SPECIFICATIONS.

ALL FIELD TESTS SHALL BE OBSERVED BY THE AUTHORITY HAVING JURISDICTION.

2. GAS PIPING

MATERIALS:
BLACK STEEL, ASTM A-53, WITH MALLEABLE STEEL FITTINGS. PIPE SHALL BE COATED. PIPE SIZES 2½" AND OVER SHALL HAVE WELDED JOINTS, SIZES 2" AND SMALLER MAY BE THREADED OR WELDED, AT CONTRACTOR'S OPTION, EXCEPT THAT ALL PIPING UNDERGROUND SHALL BE WELDED REGARDLESS OF SIZE. CONTRACTOR MAY USE POLYETHYLENE PIPING WITH TRACE WIRE FOR UNDERGROUND PIPING ONLY.

INSTALLATION NOTES:
WRAP UNDERGROUND COUPLINGS IN 6ML TAPE. PAINT ALL EXPOSED PIPING WITH RUST INHIBITING PAINT. GAS PIPING BELOW GRADE SHALL BE WRAPPED AS DESCRIBED FOR WATER PIPING, OR, AT CONTRACTOR'S OPTION, MAY HAVE EXTRU-COAT OR SIMILAR COVERING. ALL FIELD JOINTS SHALL BE WRAPPED AS FOR BARE PIPING JOINTS. PLACE EXTRU-COAT GAS PIPING IN A SAND OR SIEVED EARTH BED, WITH SIMILAR COVERING TO A LEVEL OF 4" ABOVE TOP OF PIPE.

TESTING:
PRESSURE TEST ALL GAS PIPING FOR TWO HOURS AT 60 PSIG OR HIGHER. FIND LEAKS USING SOAP AND WATER OR SIMILAR MATERIALS AT ALL JOINTS. REPAIR ANY LEAKS FOUND BY REMAKING THE JOINT. DO NOT USE CAULKING OR SIMILAR METHODS TO CORRECT LEAKS. RESET AFTER REPAIRING LEAKS. UPON REPAIRING ANY LEAKS FOUND, RETEST THAT PORTION OF THE SYSTEM AS DESCRIBED ABOVE.

3. SANITARY SEWER, STORM WATER, VENT PIPING

MATERIALS:
SANITARY SEWER AND VENT: POLY VINYL CHLORIDE (PVC) OR ACRYLONITRILE-BUTADIENE-STYRENE (ABS) PLASTIC PIPE. ALL PIPE, COUPLINGS AND FITTINGS SHALL BE MANUFACTURED OF MATERIAL CONFORMING TO ASTM D1785, D2661, D2665, D2680, F628, SOLVENT CEMENT FOR PLASTIC PIPE SHALL CONFORM TO ASTM D2564, D2235, D3138. PLASTIC PIPING SHALL NOT BE USED IN PLENUMS.

SANITARY SEWER AND VENT EXPOSED OR IN RETURN AIR PLENUM OR SANITARY SEWER FROM URINALS: CAST IRON SOIL PIPE AND FITTINGS, ASPHALTIC COATED, CONFORMING TO CAST IRON SOIL PIPE INSTITUTE STANDARD #301 AND SO STAMPED. JOINTS SHALL BE HUBLESS PIPE AND FITTINGS SHALL CONFORM TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, THE CAST IRON SOIL PIPE INSTITUTE STANDARD 310 AND LOCAL CODE REQUIREMENTS. HUBLESS COUPLING GASKETS SHALL CONFORM TO ASTM STANDARD B302, B306, C564.

STORM WATER ABOVE GROUND SANITARY SEWER: SERVICE WEIGHT CAST IRON SOIL PIPE AND FITTINGS, NO-HUB OR EQUAL, OR SCHEDULE 40 GALVANIZED STEEL PIPE WITH BLACK CAST IRON DRAINAGE FITTINGS.

INSTALLATION NOTES:
CAREFULLY GRADE ALL SANITARY SEWER PIPING TO ENSURE A UNIFORM SLOPE IS ACHIEVED, WITHOUT ANY DIPS OR HIGH POINTS IN THE PIPING. UNLESS OTHERWISE NOTED, UNDER SLAB SANITARY SEWER PIPING SHALL BE SLOPED AT ¼" PER FOOT.

CAREFULLY TRENCH FOR ALL UNDERGROUND PIPING, AVOID OTHER UTILITIES, AND REPAIR ANY DAMAGES CAUSED BY THE WORK OF THIS CONTRACT. PROVIDE PROPER SHORING FOR ALL DEEP TRENCHES, AS REQUIRED BY THE SAFETY REGULATIONS OF THE STATE, AND BY OSHA. PROVIDE ALL REQUIRED BARRICADES, WARNING SIGNS, ETC. CAP ALL PIPING ENDS AT THE CLOSE OF THE DAY'S WORK TO PREVENT ENTRY OF FOREIGN MATERIALS. FLUSH PIPING OF ALL DEBRIS BEFORE CONNECTING TO FIXTURES.

EMBED ALL UNDERGROUND PIPING, IN SIEVED EARTH FOR A DEPTH OF 4" ABOVE THE PIPE, 12" MIN. COVER. SMOOTH THE TRENCHING BELOW THE PIPING FREE FROM ANY ROCKS OR SIMILAR OBSTRUCTIONS AND PROVIDE SPACE FOR BELLS OR MECHANICAL JOINTS FOR ALL SANITARY SEWER PIPING. LATERALLY BRACE PIPING TO PREVENT PIPE MOTION DURING BACK FILLING OPERATIONS. PROVIDE TRAPS FOR ALL FIXTURES. TRAPS FOR SINKS AND LAVATORIES SHALL BE BRASS, 17 GAGE MINIMUM THICKNESS WITH INTEGRAL CLEANOUT MODEL DEERBORN BRASS OR SIMILAR.

CLEANOUT FITTINGS SHALL BE NOT LESS IN SIZE: 1½" PIPE-1½" CLEANOUT, 2" PIPE-1½" CLEANOUT, 2½" PIPE-2½" CLEANOUT, 3" PIPE-2½" CLEANOUT, 4" AND LARGER PIPE-3½" CLEANOUT. WALL CLEAN OUT: WADE 8480-C CLEANOUT TEE W/ WALL ACCESS COVER, DURA-COATED CAST IRON BODY, GAS AND WATER TIGHT BRONZE PLUG AND STAINLESS STEEL WALL ACCESS COVER WITH SECURING SCREW. FLOOR CLEAN OUT: WADE 6000-STD GAS AND WATER-TIGHT TAPERED THREADED PLUG AND ROUND POLISHED NICKEL BRONZE SCORIATED ADJUSTABLE TOP.

PROVIDE WALL OR FLOOR CLEANOUT AT END OF ALL BRANCH FIXTURE RUNS.

PER CPC 906.2 EACH VENT SHALL TERMINATE NOT LESS THAN 10 FEET FROM, OR NOT LESS THAN 3 FEET ABOVE, AN OPENABLE WINDOW, DOOR OPENING, AIR INTAKE, OR VENT SHAFT, OR NOT LESS THAN 3 FEET IN EVERY DIRECTION FROM A LOT LINE, ALLEY AND STREET EXCEPTED. ABS AND PVC PIPING EXPOSED TO SUNLIGHT SHALL BE PROTECTED BY WATER BASED SYNTHETIC LATEX PAINT.

PROVIDE WRAP ON SANITARY PIPING UNDER ACCESSIBLE PLUMBING FIXTURES. PLUMBEREX "PRO-EXTREME" ONE-PIECE PROTECTOR WITH FULL ROTATION OPTION, AND 3-M DUAL LOCK FASTENERS SECURED WITH SELF LOCKING NYLON STRAPS. INSULATE RAIN WATER CONDUCTORS WHICH PASS THROUGH OCCUPIED AREAS WITH ½" THICK FIBERGLASS.

TESTING:
TEST ALL SANITARY SEWER PIPING FOR 8 HOURS BY CAPPING OR PLUGGING ALL JOINTS TO A LEVEL OF THE HIGHEST FIXTURE OR FITTING, FILLING THE SYSTEM WITH WATER, AND OBSERVING FOR LEAKS. TEST UNDERGROUND SECTION OF PIPE WITH A RISER TO ACHIEVE THE PRESSURE EQUIVALENT TO THE HIGHEST FIXTURE OR FITTING. REPAIR ANY LEAKS FOUND BY REMAKING THE JOINT. DO NOT USE CAULKING OR SIMILAR METHODS TO CORRECT LEAKS. UPON REPAIRING ANY LEAKS FOUND, RETEST THAT PORTION OF THE SYSTEM AS DESCRIBED ABOVE.

4. DOMESTIC WATER

DESCRIPTION:
TYPE K BELOW GRADE, TYPE L ABOVE GRADE, COPPER TUBING, HARD-TEMPER, WITH WROUGHT COPPER FITTINGS. SOLDERING / BRAZING MATERIAL SHALL BE LEAD FREE, SILVER SOLDER BELOW GRADE, 95-5 OR SIMILAR PLASTIC SLEEVE ALL UNDERGROUND PIPES. CAPPED OR PLUGGED OUTLETS SHALL BE SCHEDULE 40 SCREWED BRASS PIPING SHALL BE ASTM B42, B75, B88.

PEX PIPING: IF SUBSTITUTED, CONTRACTOR SHALL PROVIDE REVISED PIPING PLAN AND CALCULATIONS BASED UPON MANUFACTURERS RECOMMENDATIONS. PIPING SHALL BE PEX-A, ASTM F876, F877 PER TABLE 604.1.

CPVC PIPING: IF SUBSTITUTED, CONTRACTOR SHALL PROVIDE REVISED PIPING PLAN AND CALCULATIONS BASED UPON MANUFACTURERS RECOMMENDATIONS. PIPING SHALL BE ASTM D1785, D2564, D2846, F441 AND F438 SCHEDULE 40 PER TABLE 604.1.

INSTALLATION NOTES:
SLOPE ALL WATER PIPING TO ELIMINATE AIR.

PROVIDE WATER HAMMER ARRESTORS, AT END OF HOT AND COLD WATER BRANCHES SERVING QUICK ACTION VALVES, I.E. FLUSH VALVES, CLOTHES WASHERS, ETC. FIXTURES. A MECHANICAL SHOCK ABSORBER MAY BE UTILIZED FOR A BATTERY OF FIXTURES, PROVIDED THE ABSORBER IS SIZED FOR THE MAIN LINE SERVING THE BATTERY OF FIXTURES, SIMILAR TO PPP MODEL SC750.

PER CPC 609.9.2 CHLORINATE ALL NEW WATER PIPING FOR A PERIOD OF 24 HOURS, BY CHARGING WITH A CHLORINE SOLUTION TO ACHIEVE A 50 PPM STRENGTH AT THE FIXTURE FURTHEST FROM THE POINT OF APPLICATION. UPON COMPLETION OF CHLORINATION, FLUSH ALL PIPING UNTIL NO CHLORINE CAN BE DETECTED BY TASTE. AFTER CHLORINATION AND ALL TESTING HAS BEEN COMPLETED, CLEAN ALL FIXTURE STRAINERS.

PROVIDE STOPS FOR ALL FIXTURES. STOPS SHALL HAVE THREADED INLETS, SIMILAR TO NIBCO 7155A. STOPS WITH BRAZED, SOLDERED OR COMPRESSION INLET CONNECTIONS WILL NOT BE ALLOWED. PROVIDE 3 WAY HW ANGLE STOP FOR DISHWASHER.

PROVIDE ELBOWS AT ALL PIPING PENETRATIONS OF WALLS TO STOPS. ELBOWS SHALL HAVE NAILING EARS AND SHALL BE SECURELY FASTENED TO THE STRUCTURE. NIPPLES THROUGH THE WALLS SHALL BE IPS WEIGHT THREADED COPPER OR BRASS.

PROVIDE WRAP ON HOT AND COLD WATER PIPING UNDER ACCESSIBLE PLUMBING FIXTURES. PLUMBEREX "PRO-EXTREME" ONE-PIECE PROTECTOR WITH FULL ROTATION OPTION AND 3-M DUAL LOCK FASTENERS SECURED WITH SELF LOCKING NYLON STRAPS. WRAP ALL HOT WATER SUPPLY AND RETURN PIPING WITH K-FLEX INSUL-TUBE, FLEXIBLE ELASTOMERIC CLOSED-CELL THERMAL INSULATION OR EQUAL. FOR PIPE SIZES LESS THAN 1", INSULATION THICKNESS SHALL BE 1". FOR PIPE SIZES 1" AND LESS THAN OR EQUAL TO 1½", INSULATION THICKNESS SHALL BE 1½". FOR PIPE SIZES 2" AND GREATER, INSULATION THICKNESS SHALL BE 2". INSULATION HAS A FLAME-SPREAD INDEX OF LESS THAN 25 AND A SMOKE-DEVELOPED INDEX OF LESS THAN 50. TAPE ALL BUTTED JOINTS WITH TAPE AS RECOMMENDED BY THE MANUFACTURER. USE ENLARGED SECTIONS AT FITTINGS, WHERE REQUIRED, AND MITERED JOINTS AT ELBOWS, ETC.

TESTING:
TEST ALL WASTE AND VENT PIPING FOR A PERIOD OF NOT LESS THAN 2 HOURS BY CAPPING OR PLUGGING ALL JOINTS TO A LEVEL OF THE HIGHEST FIXTURE OR FITTING, FILLING THE SYSTEM WITH WATER, AND OBSERVING FOR LEAKS. TEST UNDERGROUND SECTION OF PIPE WITH A RISER TO ACHIEVE THE PRESSURE EQUIVALENT TO THE HIGHEST FIXTURE OR FITTING. TEST WATER PIPING WITH AIR AT 100 PSIG FOR EIGHT HOURS, OBSERVING FOR ANY VISIBLE LEAKS. TEST PIPING AGAIN WITH FIXTURES INSTALLED AT 60 PSIG. REPAIR ANY LEAKS FOUND BY REMAKING THE JOINT. DO NOT USE CAULKING, LEAD OR SIMILAR METHODS TO CORRECT LEAKS. UPON REPAIRING ANY LEAKS FOUND, RETEST.

5. CONDENSATE

DESCRIPTION:
TYPE DWV COPPER TUBING AND FITTINGS FOR ROOF APPLICATIONS (PVC PIPING WILL ONLY BE ACCEPTABLE INDOORS EXCEPT IN RETURN AIR PLENUMS)

INSTALLATION NOTES:
ROUTE CONDENSATE PIPING FROM EQUIPMENT TO NEAREST APPROVED RECEPTOR. ALL CONDENSATE SYSTEMS SHALL TERMINATE INTO THE STORM DRAINAGE SYSTEM, UNLESS NOTED OTHERWISE, AND SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES. CONNECT TO EQUIPMENT COMPLETE WITH VENTED P-TRAP.

6. ALL PIPING

INSTALLATION NOTES:
PROVIDE PERMANENT CLEVIS TYPE HANGERS FOR ALL PIPING. WIRE, ROPE, WOOD BLOCKING OR PERFORATED METAL TAPE WILL NOT BE ACCEPTED. PROVIDE PLASTIC WRAPPING OF PIPE WHERE DISSIMILAR METALS OCCUR, SUCH AS BETWEEN COPPER AND IRON PIPING AND SUPPORTS.

PROVIDE CHROME PLATED ESCUTCHEON PLATES ON ALL PIPES PASSING THROUGH WALLS OR CEILINGS. ALL EXPOSED PIPING SHALL BE CHROME PLATED.

CATHODIC PROTECTION: WRAP ALL COPPER OR STEEL WATER PIPING UNDER FLOOR OR BELOW GRADE WITH TWO LAYERS OF PABCO-WRAP, OR SIMILAR MATERIALS, INCLUDING ALL JOINTS. WRAP WATER, WASTE AND GAS PIPING THROUGH THE FLOOR SLAB WITH ½" THICK FIBERGLASS, 2" ABOVE AND BELOW THE SLAB SURFACES.

7. ONLY PERMITTED PLANS SHALL BE USED FOR CONSTRUCTION OR BIDDING.

PLUMBING LEGEND

SYMBOL / ABBREVIATION	DESCRIPTION	SYMBOL / ABBREVATION	DESCRIPTION
	SANITARY SEWER BELOW GRADE/SLAB UNLESS OTHERWISE SPECIFIED	WHA	WATER HAMMER ARRESTOR
GW	GREASE WASTE BELOW GRADE/SLAB UNLESS OTHERWISE SPECIFIED	TP	TRAP PRIMER
	VENT PIPING	FD	FLOOR DRAIN
-	COLD WATER PIPING	FS	FLOOR SINK
- -	HOT WATER PIPING	HB	HOSE BIBB
- - -	HOT WATER RETURN PIPING	POC	POINT OF CONNECTION
T	TEMPERED WATER PIPING	FF	FINISH FLOOR
G	GAS PIPING - PRESSURE NOTED	CLG	CEILING
CA	COMPRESSED AIR PIPING	US, UF, UG	UNDER SLAB/FLOOR/GROUND
FS	FIRE SPRINKLER PIPING	ABC	ABOVE CEILING
SD	STORM DRAIN PIPING	IE	INVERT ELEVATION
CD	CONDENSATE DRAIN PIPING	TDL	TOTAL DEVELOPED LENGTH
P&TR	PRESSURE AND TEMPERATURE RELIEF PIPING	(E), EXISTING	EXISTING TO BE FIELD VERIFIED BY CONTRACTOR
	EXISTING PIPING OR FIXTURE TO BE REMOVED	RD, OD	ROOF DRAIN, OVERFLOW DRAIN
	UNION	SS, SSD	SANITARY SEWER, SANITARY SEWER DROP
GV	GATE VALVE, IN RISER/DROP	GW, GWD	GREASE WASTE, GREASE WASTE DROP
GV/VB	GATE VALVE IN VALVE BOX	V, VR, VTR	VENT, VENT RISER, VENT THRU ROOF
CHV	CHECK VALVE	CW, CWD, CWR	COLD WATER, COLD WATER DROP, COLD WATER RISER
BV	BALANCING VALVE	HW, HWD, HWR	HOT WATER, HOT WATER DROP, HOT WATER RISER
CO, WCO	CLEANOUT, WALL CLEANOUT	HWR	HOT WATER RETURN
GCO, FCO	GRADE OR FLOOR CLEAN OUT	NTS	NOT TO SCALE
D	PIPE DROP/ PIPE TEE DROP	TYP	TYPICAL
R	PIPE RISER/ PIPE TEE RISER	NIPC	NOT IN PLUMBING CONTRACT
	REDUCER		

FIXTURE PIPING CHART

DESCRIPTION	SYMBOL	VENT (IN)	WASTE PIPE (IN)		CW PIPE (IN)		HW PIPE (IN)	
			BRANCH	OUTLET	BRANCH	OUTLET	BRANCH	OUTLET
WATER CLOSET, FV	WC	2	3	3	1¼	1	-	-
LAVATORY	L	1½	2	1½	¾	½	¾	½
SINK	S	1½	2	1½	¾	½	¾	½

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION
	PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL FIXTURES IN THIS SCHEDULE OR THEIR APPROVED EQUIVALENT. REFER TO ARCHITECTURAL DRAWINGS FOR ALL MOUNTING HEIGHTS OF FIXTURES. ALL WATER FIXTURES TO BE LEAD FREE. *FIXTURE COMPLIES WITH CALIFORNIA GREEN BUILDING STANDARDS DIVISION 5.3 FOR WATER EFFICIENCY AND CONSERVATION.
*WC	ACCESSIBLE WATER CLOSET: AMERICAN STANDARD #2467.100 CADET FloWise ELONGATED, FLOOR MOUNTED, WHITE VITREOUS CHINA, PRESSURE-ASSISTED SIPHON JET FLUSH ACTION, CLOSE-COUPLED FLUSHOMETER TANK, 1.1 GPF, TRIP LEVER ON "OPEN" SIDE WITH BOLT CAPS AND BEMIS 1055SSC OPEN FRONT SEAT LESS COVER. ALL COMPONENTS SHALL BE WHITE. UNIT SHALL CONFORM TO ADA AND TITLE 24 REQUIREMENTS FOR ACCESSIBLE INSTALLATIONS.
*L	LAVATORY: AMERICAN STANDARD #0355.012 LUCERNE WALL HUNG VITREOUS CHINA, FRONT OVERFLOW WITH MOEN #8413F05 CHROME PLATED SINGLE LEVER HANDLE FAUCET, 0.5 GPM AERATOR AND METAL GRID DRAIN ASSEMBLY. INSULATE HOT WATER AND WASTE PIPING. UNIT SHALL CONFORM TO ADA AND TITLE 24 REQUIREMENTS FOR ACCESSIBLE INSTALLATIONS.
*S	SINK: ELKAY #ELUHAD311850, 18 GAUGE TYPE 304 STAINLESS STEEL, SELF-RIMMING, 30¾"X18½" OVERALL DIMENSIONS, 16"X13½"X4⅞" BOWLS, REAR OUTLET, DOUBLE COMPARTMENT UNIT WITH 3-HOLE PUNCH FOR MOEN #8701 CHROME PLATED SINGLE LEVER FAUCET, PROVIDE WITH 1.8 GPM AERATOR AND COMPLETE WITH ELKAY MODEL LK-35 DUO STRAINER.
GD 1	GARBAGE DISPOSER: INSINKERATOR BADGER 5, CONTINUOUS FEED WITH 1/2 HP MOTOR, GALVANIZED STEEL GRINDER AND DISHWASHER DRAIN CONNECTION. 120 V/1/Ph/60 Hz, 6.9 AMP ELECTRICAL SERVICE.
IWH 1	INSTANTANEOUS WATER HEATER: CHRONOMITE #M-40/208 INSTANT-FLOW MICRO-STANDARD FLOW, UNDERCOUNTER MOUNTING, WITH 8.32 KW INPUT AT 208 V/1 Ph/60 Hz ELECTRICAL SERVICE, 40 AMPS BREAKER. USE 1.0 GPM FLOW RESTRICTOR. PRESET AT 104°F LEAVING TEMPERATURE.

WATER AND WASTE SERVICE CALCULATIONS

FIXTURE TYPE	NO.	WASTE		COLD WATER		HOT WATER		TOTAL WATER
		FU	TOTAL	FU	TOTAL	FU	TOTAL	FU
KITCHEN SINK (DOMESTIC)	1	3	3	1.125	1.125	1.125	1.125	1.5
LAVATORY (SINGLE)	3	1	3	0.75	2.25	0.75	2.25	3
SERVICE SINK	1	3	3	2.25	2.25	2.25	2.25	3
WATER CLOSET, 1.6 TANK	3	4	12	2.5	7.5	0	0	7.5
TOTAL FU			21.0		13.1		5.6	15.0
EQUIVALENT COLD WATER FLOW RATE (GPM):						12		
ADDITIONAL DEMAND LOAD (GPM)						0		
PRESSURE AVAILABLE AT MAIN (PSI):						50		
MINIMUM REQUIRED FIXTURE PRESSURE (PSI):						8		
ELEVATION RISE (FT):						3		
METER LOSS (PSI):						3		
BACKFLOW PREVENTER LOSS (PSI):						10		
ADDITIONAL LOSSES (PSI):						0		
EQUIVALENT PIPE LENGTH FROM METER TO MOST REMOTE FIXTURE (FT):						80		
FRICTION LOSS PRESSURE AVAILABLE (PSI):						27.70		
MAXIMUM ALLOWABLE FRICTION LOSS (PSI/100 FT):						34.62		
WATER FLOW VELOCITY (FPS):						7.95		
CALCULATED FRICTION HEAD LOSS (PSI/100 FT):						17.88		
MINIMUM REQUIRED 'WATER' PIPE SIZE (INCHES):						0.75		
MINIMUM REQUIRED 'WASTE' PIPE SIZE (INCHES):						3		
(CALCULATIONS PER THE UPC/CPC)								

WATER PIPE SIZING CHART

PIPE SIZES CALCULATED BASED ON UPC/CPC APPENDIX A

SIZE: TYPE L COPPER		CW MAX FLOW		CW FIXTURE UNIT VALUES		HW MAX FLOW		HWFU
NOMINAL DIAMETER	INTERNAL DIAMETER	GPM	FPS	FLUSH TANK	FLUSH VALVE	GPM	FPS	HOT WATER
3/8"	0.44	3.7	7.9	3	0	2.4	5.0	1
1/2"	0.545	5.8	8.0	6	0	3.6	5.0	3
3/4"	0.785	12.1	8.0	16	0	7.5	5.0	8

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REGISTERED PROFESSIONAL ENGINEER ROBERT C. HENRIKSEN No. M-029816 EXP. 6-30-2026 MECHANICAL STATE OF CALIFORNIA

Date Signed: October 25, 2024

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REVISION	BY

PLUMBING NOTES, LEGEND, & SCHEDULES

DATE 09.20.2023
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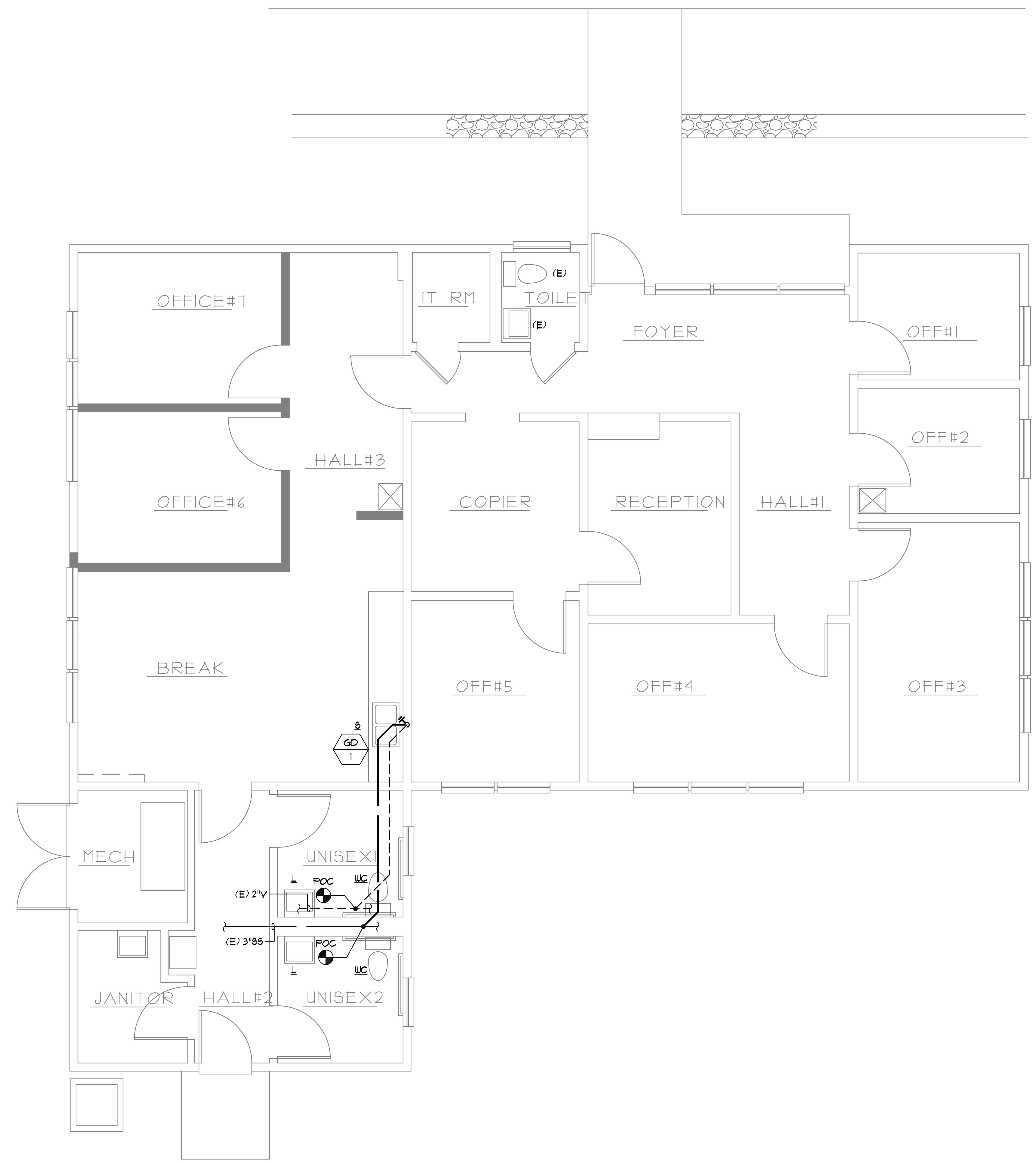

PLUMBING FLOOR PLAN - WASTE & VENT

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

1
P2.1

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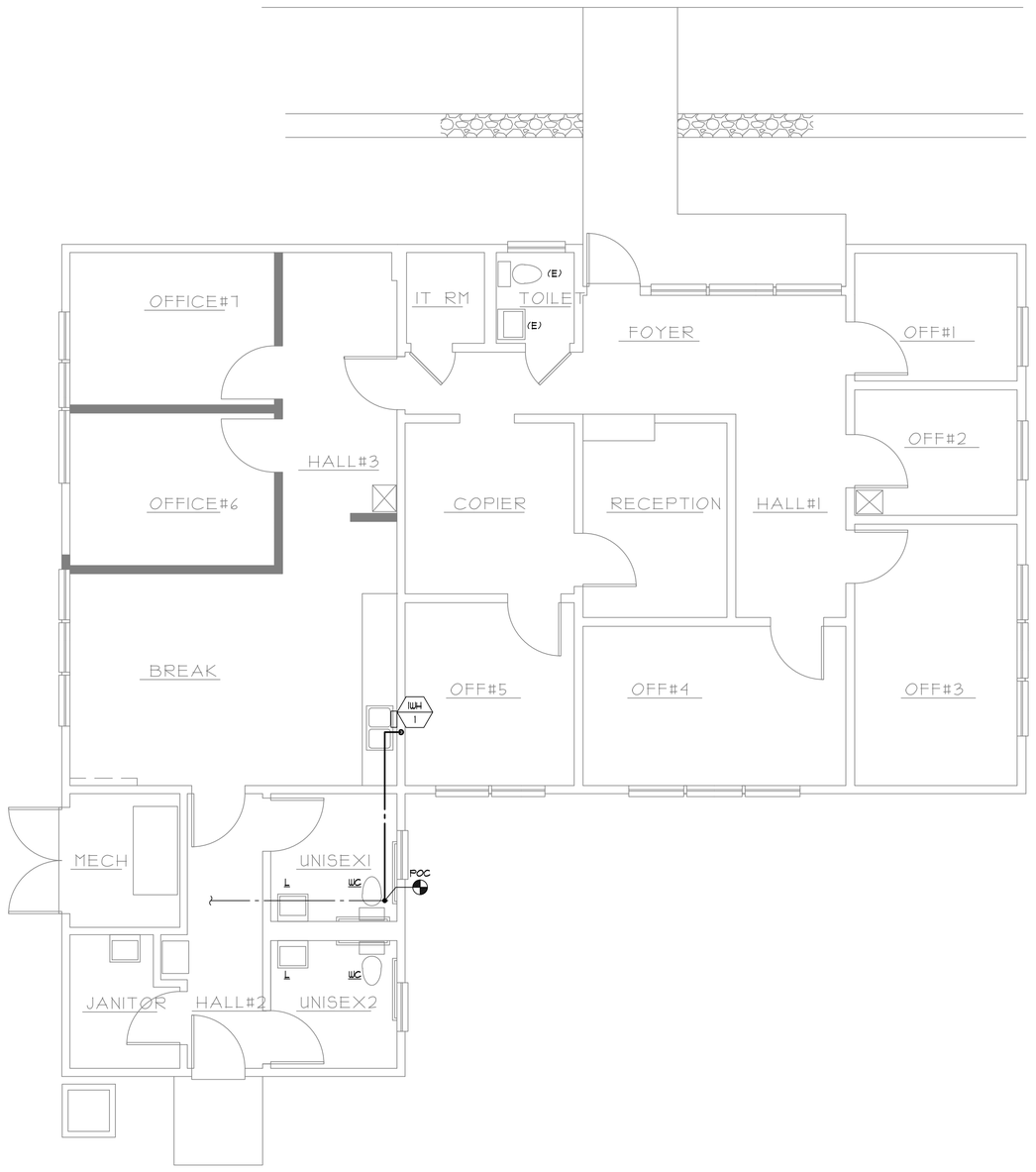
REGISTERED PROFESSIONAL ENGINEER
No. M-029816
EXP. 6-30-2026
MECHANICAL
STATE OF CALIFORNIA
Date Signed: October 25, 2024

INTERMOUNTAIN RESEARCH & EXTENSION CENTER
BLDG. 101
2816 HAVLINA ROAD
TULELAKE, CA 96134

REVISION	BY

PLUMBING FLOOR PLAN- WASTE & VENT

DATE	09.20.2023
SCALE	AS NOTED
DRAWN	MU/CZ
SEC JOB #	23412
SHEET	P2.1
OF	SHEETS



PLUMBING FLOOR PLAN - HOT & COLD WATER

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

1
P2.2

N

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PLUMBING FLOOR PLAN- HOT & COLD WATER

DATE	09.20.2023
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ABBREVIATIONS LIST

A	AMPERE	NTS	NOT TO SCALE
A.F.F.	ABOVE FINISHED FLOOR	PRI.	PRIMARY
AL	ALUMINUM	PVC	POLYVINYL CHLORIDE CONDUIT
B.C.	BARE COPPER		
C.	CONDUIT	SEC.	SECONDARY
C.O.	CONDUIT ONLY, WITH PULL LINE	TTB	TELEPHONE TERMINAL BOARD
		TTC	TELEPHONE TERMINAL CABINET
CU	COPPER	TYP.	TYPICAL
(E)	EXISTING	UG	UNDERGROUND
EMT	ELECTRICAL METALLIC TUBING	UON	UNLESS OTHERWISE NOTED
		V	VOLTS
GND.	GROUND	WP	WEATHERPROOF
H.I.D.	HIGH INTENSITY DISCHARGE	W	WIRE
J-BOX	JUNCTION BOX	WP	WEATHERPROOF
KVA	KILO VOLT AMP	W/	WITH
MH	METAL HALIDE	XFMR	TRANSFORMER
MSB	MAIN SWITCHBOARD	~	PHASE

WIRE AND CONDUIT LEGEND

- CONDUIT RUN CONCEALED IN WALL OR ABOVE CEILING.
- CONDUIT RUN UNDERFLOOR OR UNDERGROUND.
- HOME RUN, NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS IN HOME RUN.
- FLEXIBLE CONDUIT
- F — FACTORY WHIP
- NO CROSSBARS ON CONDUIT INDICATE \" CONDUIT WITH TWO #12 AWG CONDUCTORS, CROSSBARS INDICATE NUMBER OF #12 AWG CONDUCTORS IN CONDUIT. CONDUCTOR SIZE OTHER THAN #12 NOTED ON DRAWING. CONDUIT SIZE OTHER THAN \" NOTED ON DRAWING.
- CONDUIT UP.
- #10 #10 #10 G — EXAMPLE: THREE CIRCUITS IN HOME RUN - FOUR #10 AWG CONDUCTORS AND ONE #10 AWG GROUNDING CONDUCTOR IN [" CONDUIT, RUN CONCEALED IN WALL OR ABOVE CEILING.
  [" C.

H: \Elec\Drawings\Legends\ABBWC.dwg

ELECTRICAL SYMBOLS

- LIGHT FIXTURE - SURFACE MOUNTED
- RECESSED DOWNLIGHT
- LIGHT FIXTURE - WALL MOUNTED
- EXIT SIGN/EMERGENCY LIGHTING UNIT
- NOTE: LETTER INDICATES FIXTURE TYPE - SEE FIXTURE SCHEDULE. SHADING = EMERGENCY FIXTURE. PROVIDE UNSWITCHED HOT CONDUCTOR TO FEED EXIT AND EMERGENCY LIGHTING.
- $ — SINGLE POLE TOGGLE SWITCH, +44" UON
- $3 — THREE WAY TOGGLE SWITCH, +44" UON
- $D — DIMMER LIGHT SWITCH, +44" UON
- $MS — OCCUPANCY SENSOR, WALL MOUNTED, +44" UON
- OS — OCCUPANCY SENSOR, CEILING MOUNTED
- SWITCH SUBCRIPTS: a, b, c, etc. = DEVICE CONTROLLED.
- NON-FUSED DISCONNECT SWITCH, SIZE AS REQUIRED
- F — FUSED DISCONNECT SWITCH WITH TIME DELAY FUSES SIZED PER UNIT NAMEPLATE OR AS NOTED. DISCONNECT SHALL ACCEPT MAXIMUM RECOMMENDED FUSE SIZE.
- DUPLEX RECEPTACLE, NEMA 5-15R, +18" UON
- DOUBLE DUPLEX RECEPTACLE, NEMA 5-15R, +18" UON
- RECEPTACLE SUBSCRIPTS: GFCI = GROUND FAULT-CIRCUIT INTERRUPTER
- JUNCTION BOX, SIZE AND TYPE AS REQUIRED
- TELE/DATA OUTLET, +18" UON. RING AND STRING.
- EXHAUST FAN, N.I.E.S., CONNECT AS REQUIRED
- BRANCH CIRCUIT PANEL, SEE PANEL SCHEDULES
- IDENTIFICATION TAG FOR EQUIPMENT PROVIDED BY M.C. CONNECT EQUIPMENT AS INDICATED OR AS REQUIRED.
- NUMBERED NOTE TAG - SEE NUMBERED NOTES, SAME SHEET
- A / E1 — INDICATES DETAIL "A" AT SHEET "E1"

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	VOLT.	LAMPS	VA	MOUNTING	REMARKS
A	LITHONIA #BLWP4-40L-ADP-EZ1-LP840 OR EQUAL	120	40K LED	35	SURFACE CEILING	4' LED WRAPAROUND
A1	LITHONIA #BLWP4-40L-ADP-EZ1-LP840 OR EQUAL	120	40K LED	17	SURFACE CEILING	2' LED WRAPAROUND
	LITHONIA #LHQM-LED-G-M6 OR EQUAL	120	LED	5	SURFACE CEILING	LED EXIT SIGN/EMERGENCY LIGHTING UNIT COMBO WITH BACKUP BATTERY POWER

120/208 **VOLTS** 3 **PHASE** 4 **WIRE**

EXISTING PANEL A

MOUNTING: FLUSH

150 **AMP BUS** 10000 **ISC** **ENCLOSURE:** NEMA 1 ENCLOSURE

CKT	DESCRIPTION	TRIP	PO...	No...	A		B		C		Note	PO...	TRIP	DESCRIPTION	CKT
1	(E) WATER HEATER	30	2		2.3	4.0						3	70	(E) HEAT PUMP	2
3							2.3	4.0							4
5	(E) SEWER PUMP	20	1						1.2	4.0					6
7	(E) HEAT PUMP	30	3		1.8	0.9						2	20	(E) FAN COIL	8
9							1.8	0.9							10
11									1.8	1.2		1	20	(E) HEATER	12
13	(E) LIGHTING	20	1		0.6	0.6						1	20	(E) LIGHTING	14
15	RECEPTACLES	20	1				1.3	0.2				1	20	LIGHTING	16
17	(E) CONTROLS	20	1						0.2						18
SUBTOTAL					10.2		10.4		8.4						

LOAD		
LIGHTING	0.2 kVA	MAIN LUGS ONLY
POWER	1.3 kVA	
EXISTING	27.6 kVA	
TOTAL LOAD	29.0 kVA = 80.5 **AMPS**	

120/240 **VOLTS** 1 **PHASE** 3 **WIRE**

EXISTING PANEL B

MOUNTING: FLUSH

225 **AMP BUS** 10000 **ISC** **ENCLOSURE:** NEMA 1 ENCLOSURE

CKT	DESCRIPTION	TRIP	POLE	Note	A		B		Note	POLE	TRIP	DESCRIPTION	CKT
1	(E) RECEPTACLES	20	1		0.9	2.0				2	30	(E) HEATERS	2
3		30	1				0.0	2.0					4
5		30	1		0.0	2.0				2	30	(E) HEATERS	6
7	LIGHTING	20	1				0.3	2.0					8
9	LIGHTING	20	1		0.6	1.1				1	20	RECEPTACLES	10
11	LIGHTING	20	1				0.2	1.1		1	20	RECEPTACLES	12
13	(E) RECEPTACLES	20	1		0.9	0.7				1	20	RECEPTACLES	14
15		20	1				0.0	0.9		1	20	RECEPTACLES	16
17	RECEPT. - COUNTER	20	1		1.2	0.8				1	20	RECEPT. - IT	18
19	RECEPT. - COUNTER	20	1				1.2	0.8		1	20	RECEPT. - IT	20
21	RECEPT. - COUNTER	20	1		1.2	0.7				1	20	RECEPTACLES	22
23	(E) EXHAUST FAN	15	1				0.7	0.7		1	20	RECEPTACLES	24
25		30	1		0.0	0.2				1	20	RECEPTACLES	26
27	COPIER	20	1				1.2	0.2		1	20	RECEPTACLES	28
29	RECEPTS. - COPIER	20	1		0.2	4.0				2	40	IWH-1	30
31	REFRIGERATOR	20	1				0.6	4.0					32
33	GARBAGE DISPOSAL	20	1		0.2								34
35	RECEPTS. - BREAK	20	1				0.8						36
37													38
39													40
SUBTOTAL					16.6		16.7						

LOAD		
LIGHTING	1.1 kVA	
POWER	21.7 kVA	
EXISTING	10.5 kVA	
TOTAL LOAD	33.6 kVA = 138.9 **AMPS**	

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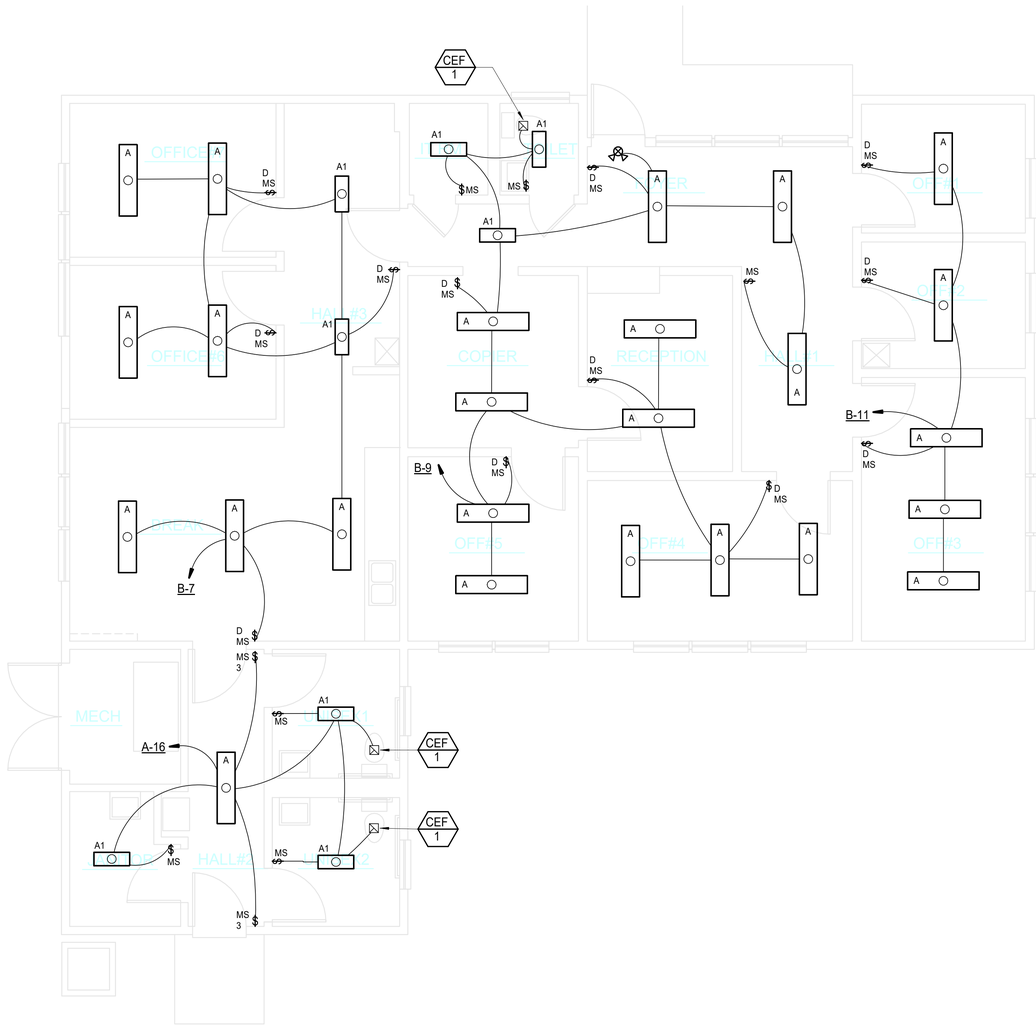
REVISION	BY

SCHEDULES + LEGENDS

DATE 11.01.2023
SCALE AS NOTED
DRAWN MU/CZ
SCE JOB # 232412
SHEET **E1.1**
SHEETS



1
E2.1

LIGHTING PLAN

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

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STATE OF CALIFORNIA

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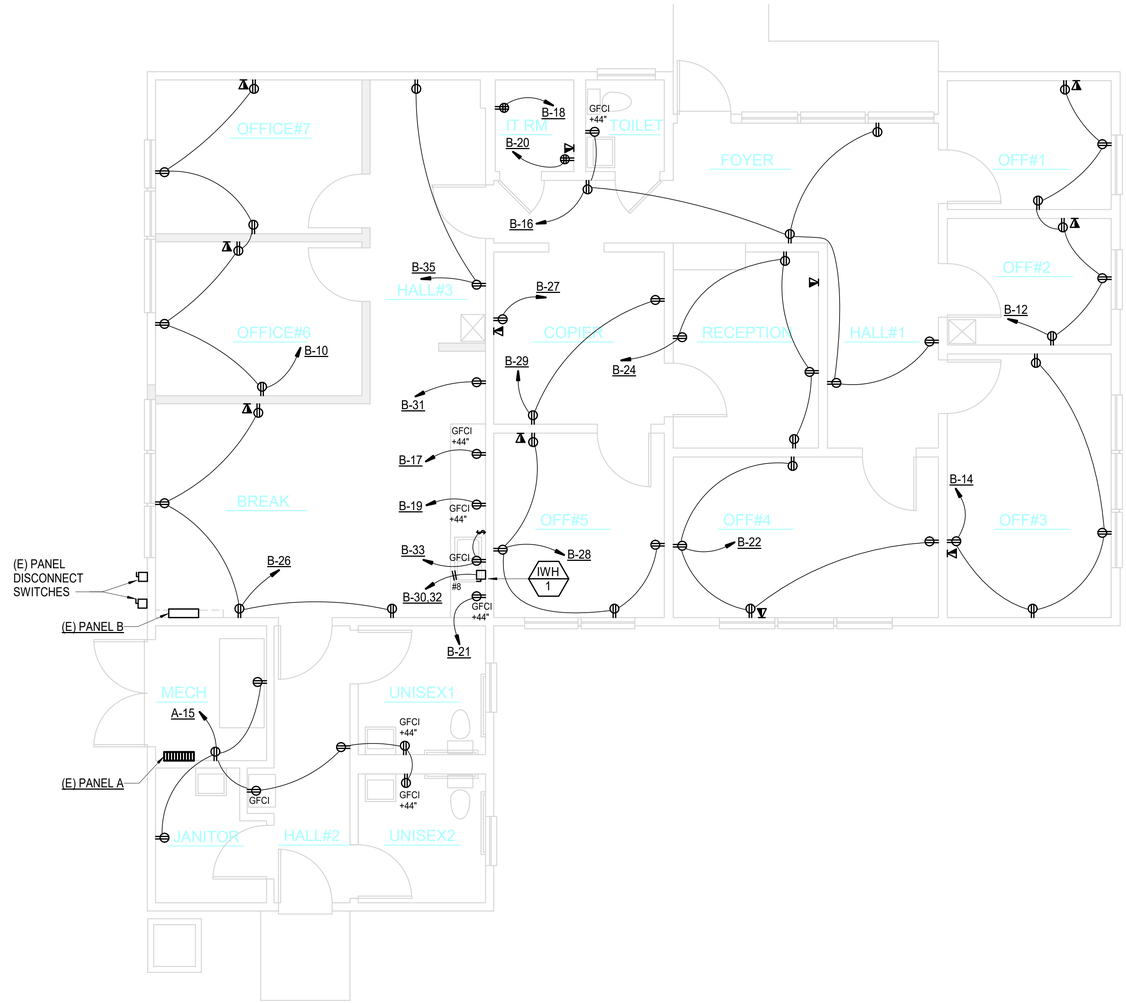
REVISION	BY

LIGHTING PLAN

DATE	11.01.2023
SCALE	AS NOTED
DRAWN	MU/CZ
JOB NO. #	232412
SHEET	E2.1
OF	SHEETS



1 E2.2 **ELECTRICAL PLAN**

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

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REVISION	BY

ELECTRICAL PLAN

DATE	11.01.2023
SCALE	AS NOTED
DRAWN	MU/CZ
JOB NUM #	232412
SHEET	E2.2
OF	SHEETS

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: Sierra Foothill Research and Extension Center Bldg. 101	**Report Page:** (Page 1 of 9)
Project Address:	**Date Prepared:** 2024-08-29T19:12:51-04:00

A. GENERAL INFORMATION

01	Project Location (city)	Browns Valley	04 Total Conditioned Floor Area (ft²)	1,900
02	Climate Zone	11	05 Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06 # of Stories (Habitable Above Grade)	1

● Office

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	Area Category Method	1900	N/A	0
☐ New Lighting System - Parking Garage	N/A	0	N/A	0
Total Area of Work (ft²)	1900			

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Sierra Foothill Research and Extension Center Bldg. 101	**Report Page:** (Page 2 of 9)
	Date Prepared: 2024-08-29T19:12:51-04:00

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 PAF 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		1,095.6			=	1,095.6	1,011		=	1011	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.

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CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 153810-0824-0006 | Report Generated: 2024-08-29 16:12:55

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Sierra Foothill Research and Extension Center Bldg. 101	**Report Page:** (Page 3 of 9)
	Date Prepared: 2024-08-29T19:12:51-04:00

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
A	4' LED Wraparound	No	NA	35	Mfr. Spec	25	No	875	☐	☐
A1	2' LED Wraparound	No	NA	17	Mfr. Spec	8	No	136	☐	☐
Total Designed Watts: CONDITIONED SPACES								1,011		

[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		
NA < 4,000W subject to multilevel	See Area/Space Level Controls	☐	☐

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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Sierra Foothill Research and Extension Center Bldg. 101	**Report Page:** (Page 4 of 9)
	Date Prepared: 2024-08-29T19:12:51-04:00

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
Office #1	Office (<=250 square feet)	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Office #2	Office (<=250 square feet)	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Office #3	Office (<=250 square feet)	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Office #4	Office (<=250 square feet)	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Office #5	Office (<=250 square feet)	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Office #6	Office (<=250 square feet)	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Office #7	Office (<=250 square feet)	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Break	Lounge	Readily Accessible	NA: Enclosed area w/ 1 luminaire <=2 Lamps	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Unisex 1	Restroom	Readily Accessible	NA: Restrooms	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Janitor Alcove	Storage - MF common areas	Readily Accessible	NA: Enclosed area w/ 1 luminaire <=2 Lamps	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐

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CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Sierra Foothill Research and Extension Center Bldg. 101	**Report Page:** (Page 5 of 9)
	Date Prepared: 2024-08-29T19:12:51-04:00

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Hall #1	Corridor	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Hall #2	Corridor	Readily Accessible	NA: Enclosed area <100SF	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Hall #3	Corridor	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Copier	Copy Room	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
I.T Room	Electrical Mechancial Telephone Room	Readily Accessible	NA: Enclosed area <100SF	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Unisex 2	Restroom	Readily Accessible	NA: Enclosed area <100SF	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Toilet	Restroom	Readily Accessible	NA: Enclosed area <100SF	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Reception	Office (<=250 square feet)	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Foyer	Main Entry Lobby	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
							13		
							Plan Sheet Showing Daylit Zones:		

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Conditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF

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CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Sierra Foothill Research and Extension Center Bldg. 101	**Report Page:** (Page 6 of 9)
	Date Prepared: 2024-08-29T19:12:51-04:00

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Office #1	Office (<=250 square feet)	0.65	66	42.9	No	No
Office #2	Office (<=250 square feet)	0.65	65	42.25	No	No
Office #3	Office (<=250 square feet)	0.65	135	87.75	No	No
Office #4	Office (<=250 square feet)	0.65	130	84.5	No	No
Office #5	Office (<=250 square feet)	0.65	100	65	No	No
Office #6	Office (<=250 square feet)	0.65	100	65	No	No
Office #7	Office (<=250 square feet)	0.65	100	65	No	No
Break	Lounge	0.55	240	132	No	No
Unisex 1	Restroom	0.65	140	91	No	No
Janitor Alcove	Storage - MF common areas	0.45	45	20.25	No	No
Hall #1	Corridor	0.4	170	68	No	No
Hall #2	Corridor	0.4	65	26	No	No
Hall #3	Corridor	0.4	131	52.4	No	No
Copier	Copy Room	0.5	90	45	No	No
I.T Room	Electrical Mechancial Telephone Room	0.4	22	8.8	No	No
Unisex 2	Restroom	0.65	51	33.15	No	No
Toilet	Restroom	0.65	23	14.95	No	No
Reception	Office (<=250 square feet)	0.65	89	57.85	No	No
Foyer	Main Entry Lobby	0.7	134	93.8	No	No
		TOTALS:	1,896	1,095.6	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.

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STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Sierra Foothill Research and Extension Center Bldg. 101	**Report Page:** (Page 7 of 9)
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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.

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.

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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

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.	Office #1; Office #2; Office #3; Office #4; Office #5; Office #6; Office #7; Break; Unisex 1; Janitor Alcove; Hall #1; Hall #2; Hall #3; Copier; I.T Room; Unisex 2 ; Toilet; Reception; Foyer

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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Sierra Foothill Research and Extension Center Bldg. 101	**Report Page:** (Page 9 of 9)
Project Address:	**Date Prepared:** 2024-08-29T19:12:51-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Rickert Henriksen	Documentation Author Signature:
Company: Sacramento Engineering Consultants	Signature Date: 8/29/2024
Address: 10555 Old Placerville Road	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Sacramento, CA 95827	Phone: (916) 368-4468

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 the building owner at occupancy.

Responsible Designer Name: Rickert Henriksen	Responsible Designer Signature:
Company: Sacramento Engineering Consultants	Date Signed: 8/26/2024
Address: 10555 Old Placerville Road	License: E10629
City/State/Zip: Sacramento, CA 95827	Phone: (916) 368-4468

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SACRAMENTO ENGINEERING CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER — ROBERT C. HENRIKSEN — No. E-10629 EXP. 6-30-2025 — STATE OF CALIFORNIA — ELECTRICAL

NTERMOUNTAIN RESEARCH AND EXTENSION CENTER
BLDG. 101
2816 HAVLINA ROAD
TULELAKE, CA 96134

REVISION	BY

TITLE 24

DATE	11.01.2023
SCALE	AS NOTED
DRAWN	MU/CZ
JOB NO. #	232412
SHEET	**E3.1**
OF	SHEETS