MECHANICAL SPECIFICATIONS

PROVIDE EQUIPMENT INDICATED ON THE DRAWINGS, AND AS REQUIRED FOR A COMPLETE FUNCTIONING SYSTEM.

DEFINITIONS: FURNISH MEANS TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR INSTALLATION. INSTALL MEANS TO PLACE IN POSITION AND MAKE CONNECTIONS FOR SERVICE OR USE. PROVIDE MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.

WARRANTY: PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OR OWNER ACCEPTANCE OF THE COMPLETED PROJECT. PROVIDE A SEPARATE LINE ITEM DEDUCT AMOUNT ON THE PROPOSAL FORM TO DELETE WARRANTY SERVICE, AT THE OWNER'S OPTION.

PROVIDE OPERATION MANUALS, MAINTENANCE MANUALS AND SCHEMATICS FOR ALL MECHANICAL EQUIPMENT INSTALLED.

COORDINATION: COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.

ROOF PENETRATIONS SHALL COMPLY WITH "SMACNA" AND "NRCA" STANDARDS, AND WITH THE REQUIREMENTS OF THE EXISTING ROOFING WARRANTY, IF APPLICABLE. DO NOT PERFORM ROOFING PENETRATIONS IN A MANNER WHICH WOULD VOID OR OTHERWISE LIMIT THE EXISTING ROOF WARRANTY.

DUCT DIMENSIONS: UNLESS OTHERWISE NOTED, DUCT DIMENSIONS ON THE DRAWINGS ARE INSIDE CLEAR DIMENSIONS.

SHEET METAL DUCTWORK: PROVIDE SHEET METAL DUCTWORK FABRICATED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS, FOR 1" W.G. PRESSURE CLASS, SEAL CLASS "A". SHEET METAL SHALL BE GALVANIZED SHEET STEEL OF LOCK FORMING QUALITY, WITH G90 ZINC COATING. SHEET STEEL SHALL COMPLY WITH ASTM A653 STANDARD SPECIFICATION FOR STEEL SHEET METAL, ZINC COATED (GALVANIZED) OR ZINC-IRON ALLOY-COATED (GALVANNEALED) BY THE HOT DIP PROCESS, AND A924 STANDARD SPECIFICATION FOR GENERAL REQUIREMENTS FOR SHEET, METALLIC-COATED BY THE HOT DIP PROCESS. ALL ANGLE IRON USED FOR SUPPORT SHALL BE GALVANIZED. CONNECTIONS TO WALLS OR FLOOR SHALL BE AIR TIGHT WITH ANGLE IRON AND CAULKING, SEAL ALL DUCT SEAMS, TRANSVERSE AND LONGITUDINAL, AIR TIGHT. PROVIDE TURNING VANES AT ALL 90° ELBOWS.

TRAPEZE DUCT HANGERS: PROVIDE MINIMUM 1" X 2" X 1" X 18 GAUGE CHANNELS WITH MINIMUM 1" X 18 GAUGE STRAPS TO STRUCTURAL SUPPORT.

ROUND SHEET METAL DUCT: PROVIDE SPIRAL SEAM (ALL SIZES) OR SNAP LOCK (DUCT SIZES UP TO 10") GALVANIZED STEEL COMPLYING WITH SMACNA STANDARDS. SPIRAL SEAM DUCTWORK SHALL HAVE SMACNA SEAM TYPE RL-1.

FIBER GLASS DUCT BOARD IS AN ACCEPTABLE ALTERNATIVE IF APPROVED BY OWNER AND THE LOCAL BUILDING CODE OFFICIAL. PRODUCT AND INSTALLATION MUST MEET NAIMA STANDARDS AND OTHER APPLICABLE CODES AND REGULATIONS.

EXPOSED DUCTWORK: EXPOSED DUCTWORK SHALL BE CLEANED OF DEBRIS AND OIL, THEN WIPED DOWN WITH VINEGAR OR OTHER SURFACE PREPARING CHEMICAL TO PREPARE DUCT FOR PAINT.

DUCT SEALANT: PROVIDE POLYMERIC RUBBER TYPE SEALANT FOR USE ON BOTH INTERIOR LOCATED DUCTWORK AND DUCTWORK EXPOSED TO OUTDOOR CONDITIONS. SEALER SHALL HAVE HIGH BONDING STRENGTH FOR SURE, FIRST TIME SEALING OF JOINTS IN LOW, MEDIUM, AND HIGH PRESSURE DUCT SYSTEMS. SEALER SHALL BE HIGH IN SOLID CONTENT. PROVIDE A TWO PART TAPE SEALING SYSTEM, CONSISTING OF WOVEN FIBER TAPE IMPREGNATED WITH A GYPSUM MINERAL COMPOUND, AND A MODIFIED ACRYLIC/SILICONE ACTIVATOR THAT REACTS EXOTHERMICALLY WITH THE TAPE. TWO PART TAPE SEALING SYSTEM MUST BE RATED FOR BOTH INDOOR AND OUTDOOR APPLICATION. TAPE SHALL NOT CONTAIN ASBESTOS.

DUCT INSULATION: MATERIAL FOR SUPPLY AND RETURN AIR DUCT ABOVE CEILING INSIDE THE BUILDING SHALL HAVE THE EQUIVALENT THERMAL RESISTANCE OF MINIMUM R-6. THE REQUIRED R VALUES ARE FOR INSTALLED INSULATION WITH 25% COMPRESSION AT THE CORNERS. PROVIDE PINS AND WASHERS IN ACCORDANCE WITH SMACNA REQUIREMENTS AND AS REQUIRED TO PREVENT INSULATION FROM SAGGING. PROVIDE ADEQUATE INSULATION AT THE SUPPLY AIR DIFFUSERS TO PREVENT CONDENSATION.

FLEXIBLE DUCT : UL #181 LISTED, CLASS 1, AND CONTAIN A 0.1 PERM RATED POLYETHYLENE INNER LINER, WITH R-8 FIBERGLASS INSULATION. FLEXIBLE DUCTS SHALL BE SECURED TO RIGID SHEET METAL COLLARS AND AIR DIFFUSERS WITH NYLON TIES OR STAINLESS STEEL WORM GEAR STRAPS. SEAL ALL CONNECTIONS AND JOINTS AIRTIGHT. SUPPORT FLEXIBLE DUCTS FROM THE BUILDINGS STRUCTURE WITH MINIMUM 1" WIDE, 18 GAUGE, GALVANIZED STEEL STRAP AT MAXIMUM 4'-0" CENTERS. PROVIDE 4" WIDE SHEET METAL SADDLES AT EACH SUPPORT EACH STRAP. SAG OF FLEXIBLE DUCT BETWEEN HANGERS SHALL NOT EXCEED 1/2" PER FOOT OF SUPPORT SPACING. RADIUS FOR TURNS OF FLEXIBLE DUCTS SHALL BE A MINIMUM OF ONE DUCT DIAMETER. FLEXIBLE DUCT RUNS SHALL NOT EXCEED 10'-0" IN LENGTH AND SHALL BE THE SAME SIZE AS THE DIFFUSER NECK CONNECTION.

ROUND VOLUME DAMPERS: PROVIDE MINIMUM 20 GAUGE GALVANIZED STEEL FRAME AND BLADES, MINIMUM 3/8" SQUARE STEEL AXLE, MOLDED SYNTHETIC BEARINGS, WITH LOCKING POSITION REGULATOR. REGULATOR SHALL BE POSITIONED WITH SHEET METAL BRACKET BEYOND DUCT COVERING. WHERE POSITIONING REGULATOR IS NOT ACCESSIBLE, PROVIDE COUPLING AND EXTENSION ROD WITH REGULATOR FOR CEILING OR WALL INSTALLATION, AS REQUIRED.

RECTANGULAR VOLUME DAMPERS: PROVIDE MINIMUM 16 GAUGE GALVANIZED STEEL CHANNEL FRAME, 16 GAUGE GALVANIZED STEEL BLADES, MINIMUM ½" HEXAGONAL AXLE, BOLDED SYNTHETIC BEARINGS, WITH 3/8" SQUARE PLATED STEEL CONTROL SHAFT. LINKAGES SHALL BE CONCEALED IN THE FRAME. OPERATING SHAFT SHALL EXTEND BEYOND FRAME AND DUCT TO A LOCKING QUADRANT WITH ADJUSTABLE LEVER. MAXIMUM BLADE WIDTH SHALL NOT EXCEED 6".

DUCT TURNING VANES: PROVIDE FABRICATED TURNING VANES AND VANE RUNNERS, CONSTRUCTED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS". PROVIDE TURNING VANES CONSTRUCTED OF CURVED BLADES, SUPPORTED WITH BARS PERPENDICULAR TO BLADES, AND SET INTO SIDE STRIPS SUITABLE FOR MOUNTING IN DUCTWORK. FOLLOW SMACNA GUIDELINES FOR SPACING SUPPORT, AND CONSTRUCTION. ALL BLADES SHALL BE DOUBLE THICKNESS AIRFOIL TYPE.

FLEXIBLE DUCT CONNECTORS: PROVIDE U.L. LABELED 30 OUNCE NEOPRENE COATED FIBERGLASS FABRIC DUCT CONNECTORS.

DUCT ACCESS DOORS: PROVIDE HINGED ACCESS DOORS IN DUCTWORK WHERE REQUIRED FOR ACCESS TO EQUIPMENT. PROVIDE INSULATED ACCESS DOORS FOR INSULATED DUCTWORK. CONSTRUCT OF SAME OR THICKER GAUGE SHEET METAL AS DUCT IN WHICH IT IS INSTALLED. PROVIDE FLUSH FRAMES FOR UN-INSULATED DUCTS, AND EXTENDED FRAMES FOR EXTERNALLY INSULATED DUCTS. PROVIDE CONTINUOUS HINGE ON ONE SIDE, WITH ONE HANDLE-TYPE LATCH FOR ACCESS DOORS 12" HIGH AND SMALLER, AND TWO HANDLE-TYPE LATCHES FOR LARGER ACCESS DOORS.

HVAC CONTROL SYSTEM: PROVIDE ALL THE NECESSARY CONTROLS AND CONTROL WIRING IN CONDUIT COMPATIBLE TO SYSTEMS SHOWN ON EQUIPMENT SCHEDULE M2.0.

PROGRAMMABLE THERMOSTAT FOR EACH SYSTEM SHALL ENABLE THE SUPPLY FAN AND CYCLE THE COOLING AND HEATING STAGES TO MAINTAIN SPACE SET-POINT. SUPPLY FAN RUNS CONTINUOUSLY DURING THE OCCUPIED MODE.

EACH THERMOSTAT SHALL HAVE A DEAD BAND OF AT LEAST 5 DEGREES (ADJ) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING IS SHUT OFF.

EACH THERMOSTAT SHALL HAVE SETBACK AND SET-UP CAPABILITY DURING THE UNOCCUPIED MODE. FOR SETBACK, THE HEATING SHALL RESTART AND TEMPORARILY OPERATE ACCORDING TO A SET-POINT ADJUSTABLE DOWN TO 55 DEGREES. FOR SET-UP, THE COOLING SHALL RESTART AND TEMPORARILY OPERATE ACCORDING TO A SET-POINT ADJUSTABLE UP TO 85 DEGREES OR TO PREVENT HIGH SPACE HUMIDITY LEVELS.

EACH SYSTEM SHALL BE PROVIDED WITH A MOTORIZED OUTSIDE AIR DAMPER THAT WILL AUTOMATICALLY SHUT WHEN THE SYSTEM OR SPACES SERVED ARE NOT IN USE. VENTILATION OUTSIDE AIR DAMPERS SHALL BE CAPABLE OF AUTOMATICALLY CLOSING DURING PREOCCUPANCY BUILDING WARM-UP, COOL DOWN, AND SETBACK, EXCEPT WHEN VENTILATION REDUCES ENERGY COSTS (e.g., NIGHT PURGE) OR WHEN VENTILATION MUST BE SUPPLIED TO MEET CODE REQUIREMENTS.

COMMISSIONING/VERIFICATION: HVAC CONTROL SYSTEM SHALL BE TESTED TO ENSURE THAT CONTROL ELEMENTS ARE CALIBRATED, ADJUSTED, AND IN PROPER WORKING CONDITION, AND THAT THE SYSTEM MEETS THE DESIGN REQUIREMENTS.

TEST AND BALANCE: CONTRACT DIRECTLY A THIRD PARTY TO PROVIDE TEST AND BALANCE OF THE HVAC SYSTEM. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR SCHEDULING. TEST AND ADJUST ALL MECHANICAL SYSTEM AND EQUIPMENT TO ASSURE PROPER BALANCE AND OPERATION. PERFORM TESTS IN ACCORDANCE WITH NEBB PROCEDURAL STANDARDS-1999 OR AABC 2019, AND ASHRAE STANDARD 111. ELIMINATE NOISE AND VIBRATION, AND ASSURE PROPER FUNCTION OF CONTROLS. SUBMIT COMPLETED TEST AND BALANCE REPORT TO OWNER'S REPRESENTATIVE. BALANCING CONTRACTOR SHALL BE INDEPENDENT AND CERTIFIED WITH NEBB OR AABC. BALANCE ALL SYSTEMS WITHIN 5% OF AIR FLOW INDICATED ON DRAWINGS, AND REPORT ALL DISCREPANCIES TO THE HVAC CONTRACTOR FOR CORRECTION. MARK FINAL BALANCE POSITIONS ON DAMPERS WITH PERMANENT MARKER.

COMPLETION REQUIREMENTS: THE CONTRACTOR SHALL PROVIDE, WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, RECORD DRAWINGS AND AN OPERATING AND MAINTENANCE MANUAL TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE OWNER.

THE RECORD DRAWING SHALL BE OF THE ACTUAL INSTALLATION AND INCLUDE AS A MINIMUM THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF DUCT AND PIPE DISTRIBUTION SYSTEM INCLUDING SIZES, AND THE TERMINAL AIR OR WATER DESIGN FLOW RATES.

THE OPERATING AND MAINTENANCE MANUALS SHALL BE IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING: (A) SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE; (B) OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED; (C) NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY; (D) HVAC CONTROLS SYSTEMS MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SYSTEM SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SET-PIONTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS; (E) A COMPLETE NARRATIVE OF HOW EACH SYSTEM EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING SET-POINTS.

HVAC GENERAL NOTES

1. THE INTENT OF THESE PLANS AND SPECIFICATIONS IS TO INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND SERVICES NECESSARY TO FURNISH, INSTALL, TEST, AND ADJUST A COMPLETE WORKABLE HEATING, VENTILATION, AND AIR CONDITIIONING SYSTEM AS SHOWN, PRESCRIBED, OR REASONABLY IMPLIED BUT NOT LIMITED TO THAT EXPLICITLY INDICATED IN THE CONTRACT DOCUMENTS, BUT NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE INTENT THEREOF.
2. THE ENTIRE INSTALLATION SHALL CONFORM TO THE APPLICABLE CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION. IN THE EVENT OF CONFLICT BETWEEN SPECIFICATIONS, CODES, AND REGULATIONS, THE MORE RESTRICTIVE SHALL APPLY.
3. DRAWINGS FOR HVAC WORK ARE DIAGRAMATIC SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT, REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. PROVIDE ALL DUCTWORK, MATERIALS, CONNECTIONS, ACCESSORIES, FITTINGS, OFFSETS, TRANSITIONS, DAMPERS AS REQUIRED FOR A COMPLETE WORKABLE SYSTEM.
4. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND APPROVED LISTING. ALL EQUIPMENT, PIPING AND SUPPORTS SHALL BE RESTRAINED IN ACCORDANCE WITH THE LATEST EDITION OF THE "GUIDLINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS" BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA). ALL EQUIPMENT SHALL BE ANCHORED TO RESIST THE LATERAL FORCE REQUIREMENTS OF CHAPTER 16 OF THE 2019 CALIFORNIA BUILDING CODE.
5. COORDINATE THE INSTALLATION OF THE HVAC SYSTEM WITH ALL OTHER TRADES PRIOR TO FABRICATION OR INSTALLATION. COORDINATE THE LOCATIONS OF PENETRATIONS AND FINAL LOCATION OF ALL EQUIPMENT WITH THE GENERAL CONTRACTOR. PROVIDE EQUIPMENT WEIGHTS, EQUIPMENT DIMENSIONS, PLATFORM SIZES & LOCATIONS, CURB SIZES & LOCATIONS, CONCRETE PAD SIZES AND LOCATIONS AST REQUIRED. COORDINATE LOCATIONS OF GAS & CONDENSATE LINES WITH PLUMBING CONTRACTOR. COORDINTAE LOCATIONS OF POWER, DISCONNECTS, AND CONTROL CONDUIT WITH THE ELECTICAL CONTRACTOR. COORDINATE LOCATIONS OF ALL DIFFUSERS, REGISTERS, AND GRILLES WITH ARCHITECTURAL PLANS, ELECTRICAL LIGHTING PLANS AND ARCHITECTURAL ELEVATIONS.
6. DETAILS FOR EQUIPMENT PADS, PLATFORMS, AND FLASHINGS SHALL BE AS INDICATED BY THE ARCHITECTURAL/STRUCTURAL/CIVIL DRAWINGS, UNLESS NOTED OTHERWISE.
7. ALL EQUIPMENT, DUCTS, PIPING, SUPPORTS, AND OTHER DEVICES OUTSIDE OF THE BUILDING OR EXPOSED TO WEATHER, SHALL BE COMPLETELY WEATHER-PROOFED.
8. OUTSIDE AIR INTAKES SHALL BE AT LEAST 10 FT. AWAY OR 3 FT. BELOW ANY VENT OR EXHAUST DISCHARGE.
9. ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS. DUCTWORK SHALL BE CONSTRUCTED, ERECTED, INSULATED AND TESTED IN ACCORDANCE CHAPTER 6 OF THE 2019 CALIFORNIA MECHANICAL CODE.
10. ALL EXHAUST FANS SHALL BE EQUIPED WITH A BACK DRAFT DAMPER.
11. DUCT AND AIR TRANSFER PENETRATIONS THRU BUILDING ASSEMBLIES REQUIRING PROTECTION SHALL BE PROTECTED WITH FIRE DAMPERS, SMOKE DAMPERS, COMBINATION SMOKE/FIRE DAMPERS AND CEILING RADIATION DAMPERS IN ACCORDANCE WITH SECTION 607 OF THE CALIFORNIA MECHANICIAL CODE. DUCTS NOT REQUIRING DAMPERS SHALL COMPLY WITH SECTION 714 & 717 OF THE 2019 CALIFORNIA BUILDING CODE.
12. INSTALL SMOKED DETECTORS AND PROVIDE FOR SMOKE DETECTION AND AUTOMATIC SHUT-OFF OF ALL AIR HANDLING EQUIPMENT IN ACCORDANCE WITH SECTION 606 OF THE 2019 CALIFORNIA MECHANICAL CODE.
13. UNLESS NOTED OTHERWISE, ALL LINE VOLTAGE WIRING, CONDUIT, FINAL CONNECTIONS, DISCONNECTS, STARTERS, AND OVER CURRENT PROTECTION DEVICES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS INDICATED ON THESE MECHANICAL DRAWINGS AND/OR ELECTRICAL DRAWINGS AND/OR ELECTRICAL SECTION OF THE SPECIFICATIONS.
14. INSTALL ALL LOW VOLTAGE HVAC CONTROL WIRE AND DEVICES PER PLAN. ALL WIRE SHALL BE IN CONDUIT PROVIDED AND INSTALLED BY THE ELECTICAL CONTRACTOR UNLESS NOTEDED OTHERWISE.
15. PROVIDE OWNER WITH THREE COPIES OF A CERTIFIED AIR BALANCE REPORT PREPARED IN BY A THIRD PARTY CERTIFIED BY THE AABC OR NEBB. TEST, ADJUST AND BALANCE THE HVAC SYSTEM IN ACCORDANCE WITH AABC OR NEBB PROCEDURES. PROVIDE START-UP/TEST REPORTS FOR ALL AIR HANDLING EQUIPMENT, FANS, AND REFRIGERATION EQUIPMENT. TEST AND VERIFY PROPER OPERATION OF ALL MAKE-UP AIR/EXHAUST AIR INTERLOCK SYSTEMS AND THIER SEQUENCES OF OPERATION. BALANCE ALL AIR FLOWS WITHIN 5% OF DESIGN VALUES. PERMANENTLY MARK BALANCE POSITION OF ALL REGULATING DEVICES.
16. PROVIDE OWNER WITH THREE SETS OF AS-BUILT PLANS AND OPERATIONS AND MAINTENANCE MANUALS. CLEARLY IDENTIFY ALL EQUIPMENT WITH PERMANENT PLASTIC OR METAL LABELS/TAGS (PEN MARKING NOT ACCEPTABLE).
17. PROVIDE ONE YEAR WARRANTY ON ALL LABOR, PARTS AND MATERIALS.
18. ANY CHANGE OR DEVIATION FROM THESE PLANS OR SPECIFICATIONS SHALL REQUIRE THE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO COMMENCEMENT OF SUCH WORK.

19.0

a) DUCTS FOR DEMAND CONTROLLED VENTILATION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE FAN MANUFACTURER'S INSTALLATION INSTRUCTIONS, THE PROVISIONS ASHRAE 62.2, TABLE 5.3, OR THE AIRFLOW SHALL BE MEASURED AS REQUIRED BY AND IN COMPLIANCE WITH ASHRAE 62.2, 5.4.

b) DUCTS FOR KITCHEN COOKTOPS OR RANGES SHALL BE SHOWN OF METAL WITH A SMOOTH INTERIOR. [CMC 504.3].

1) IDENTIFY THE DETAILED REQUIREMENTS OF CMC DRYER DUCTS. SPECIFY--

a) DUCTS FOR DOMESTIC CLOTHES DRYERS SHALL BE INSTALLED IN ACCORDANCE WITH CMC 504.0.

b) DUCTS FOR DOMESTIC CLOTHES DRYERS SHALL BE RIGID METALLIC DUCTS WITH A MINIMUM MILL THICKNESS OF 16 (0.016-INCH), SHALL HAVE A MINIMUM 4-INCH DIAMETER AND A SMOOTH INTERIOR. THE COMBINED HORIZONTAL AND VERTICAL LENGTH OF THE DUCTS OF THE DUCTS SHALL BE 14-FEET, WHICH SHALL BE REDUCED BY 2-FEET FOR EVERY 90-DEGREE ELBOW IN EXCESS OF TWO ELBOWS.

c) LISTED CLOTHES DRYER TRANSITION DUCTS NOT MORE THAN 6-FEET IN LENGTH SHALL BE PERMITTED TO CONNECT THE DRYER TO THE EXHAUST DUCTS AS LONG AS THEY ARE NOT CONCEALED WITHIN CONSTRUCTION, AND THEY ARE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

LEGEND

AxB		DUCT WORK (WIDTHxDEPTH)
AxB		LINED DUCT WORK (WIDTHxDEPTH DIMENSIONS ARE FOR I.D.)
		SUPPLY DUCT, SECTION
		RETURN DUCT, SECTION
		EXHAUST DUCT, SECTION
R OR D		RISE OR DROP IN DIRECTION OF AIR FLOW
	FLEX. CONN.	FLEXIBLE CONNECTION
		DUCT TRANSITION, ROUND AND RECTANGULAR
		SPLITTER DAMPER
		EXTRACTOR AT BRANCH DUCT
		TURNING VANES
		FLEXIBLE DUCT
		SINGLE LINE DUCT WORK
	AVD	AUTOMATIC VOLUME DAMPER
	MVD	MANUAL VOLUME DAMPER
	BDD	BACKDRAFT DAMPER
	MD	MODULATING DAMPER
	AFD	AUTOMATIC FIRE DAMPER
	AD	ACCESS DOOR
	SD	SUPPLY DIFFUSER
	RR	RETURN REGISTER
	ER	EXHAUST REGISTER
	SWR	SIDE WALL SUPPLY REGISTER
	SWE	SIDE WALL RETURN OR EXHAUST
	LD	LINEAR DIFFUSER
D.L.	DL	DOOR LOUVER
U.C.	UC	UNDER CUT DOOR
	VAV	VARIABLE AIR VOLUME
T		THERMOSTAT
S		DUCT SMOKE DECTECTOR

SPECIAL NOTICE TO CONTRACTORS

1. ALL CONTRACTORS (GENERAL CONTRACTOR AND SUB-CONTRACTORS) BIDDING THIS PROJECT ARE REQUIRED TO VISIT THE JOB SITE AND VERIFY THE EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BID. CONTRACTORS ARE TO CAREFULLY REVIEW ALL CONSTRUCTION DOCUMENTS AND NOTE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED AT THE JOB SITE PRIOR TO SUBMISSION OF ANY BID. THE BUILDING OWNER REPRESENTATIVE LISTED BELOW MAY BE CONTACTED FOR ACCESS TO THE JOB SITE.
2. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING THE LOCATION AND CONDITION OF ALL POINTS OF CONNECTION, LOCATION AND CONDITION OF ALL BUILDING (ROOF/FLOOR/CEILING) PENETRATIONS, LOCATION AND CONDITION OF ALL UTILITIES AND BUILDING SYSTEMS INCLUDING, BUT NOT LIMITED TO, GAS, WATER, SEWER, VENT, ELECTRICAL, BUILDING MECHANICAL SYSTEMS, DUCT CONNECTIONS, EXHAUST/OUTSIDE AIR CONNECTIONS, SECURITY, FIRE ALARM, DATA, AND PHONE PRIOR TO SUBMISSION OF THEIR BID.
3. ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED SHALL BE BROUGHT TO THE ATTENTION, IN WRITING, TO THE ARCHITECT AND/OR ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
4. NO WORK SHALL BE DONE ON ANY PART OF THE BUILDING BEYOND THE POINT INDICATED IN EACH SUCCESSIVE INSPECTION WITHOUT FIRST OBTAINING THE WRITTEN APPROVAL OF THE CODE OFFICIAL. NO CONSTRUCTION SHALL BE CONCEALED WITHOUT BEING INSPECTED AND APPROVED.

CLIENT:

ADDRESS:

3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

NOTES:

1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
00	FOR APPROVAL	04/22	A.B

PROJECT:

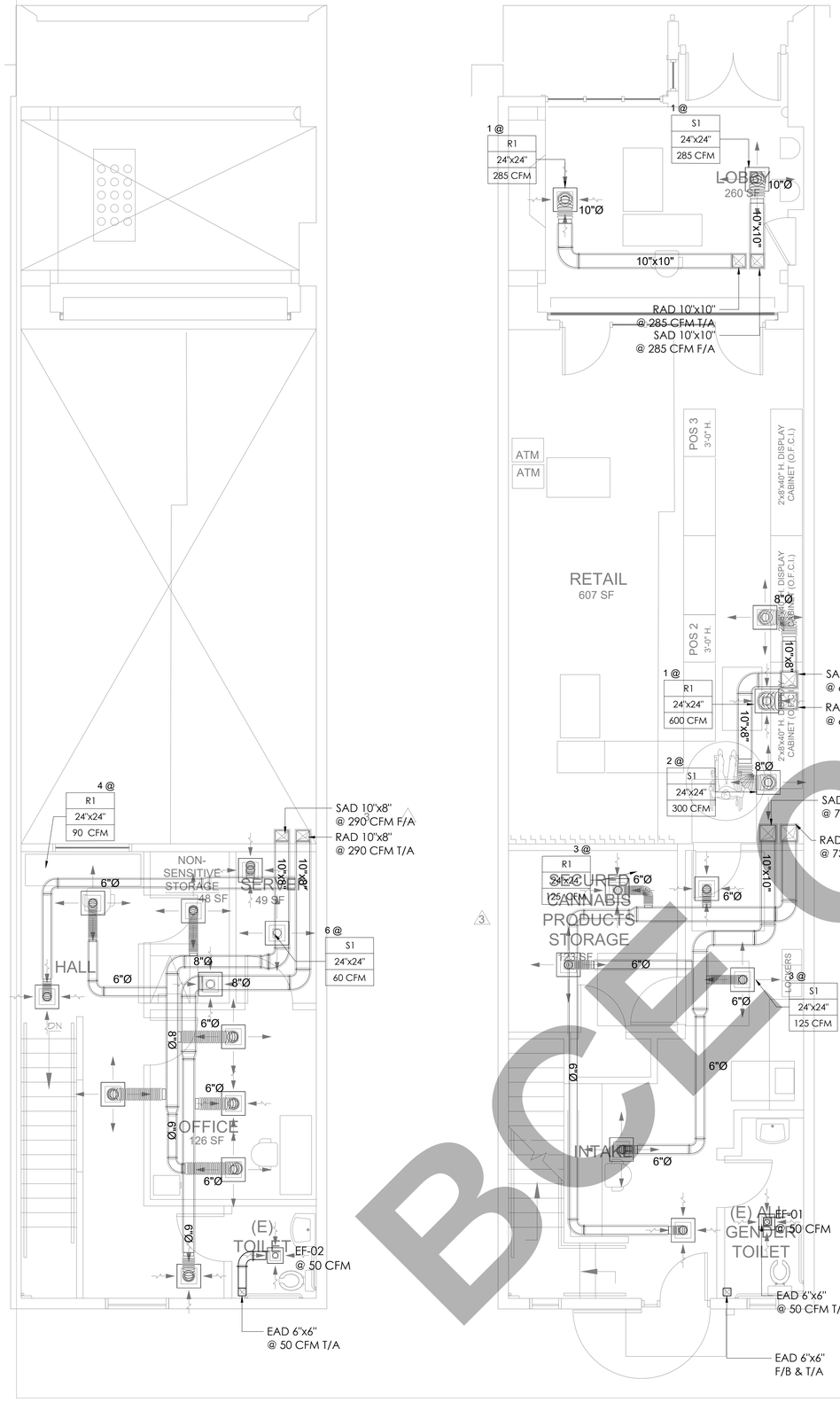
LAUREL VILLAGE

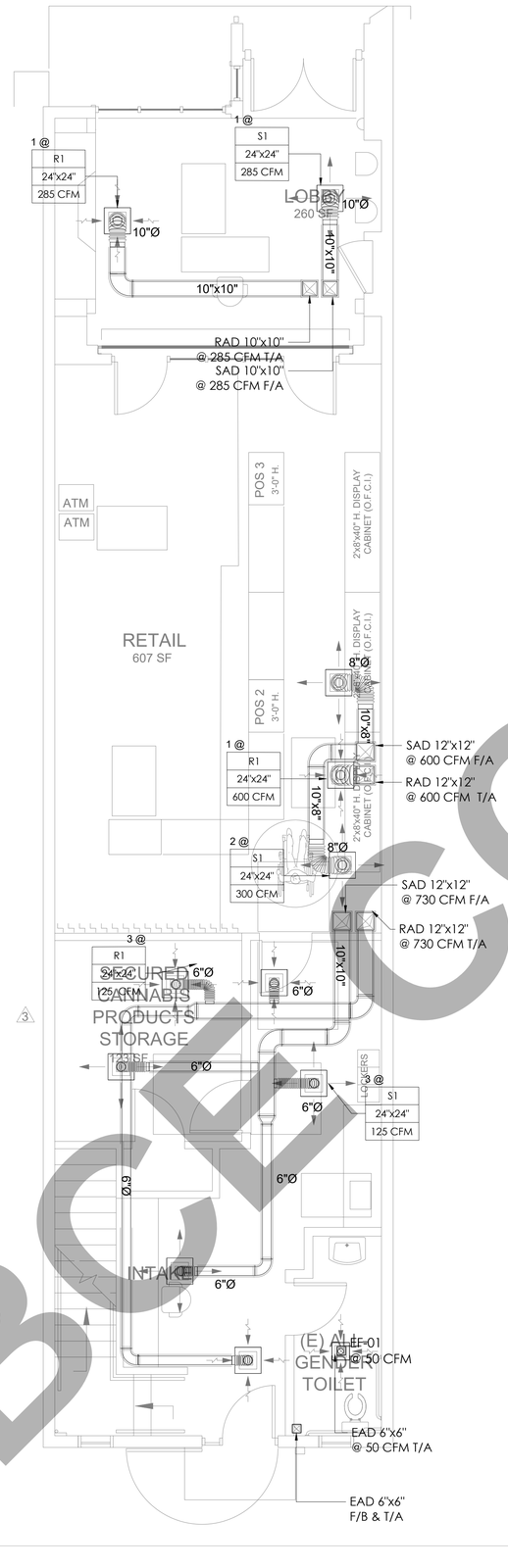
TITLE:

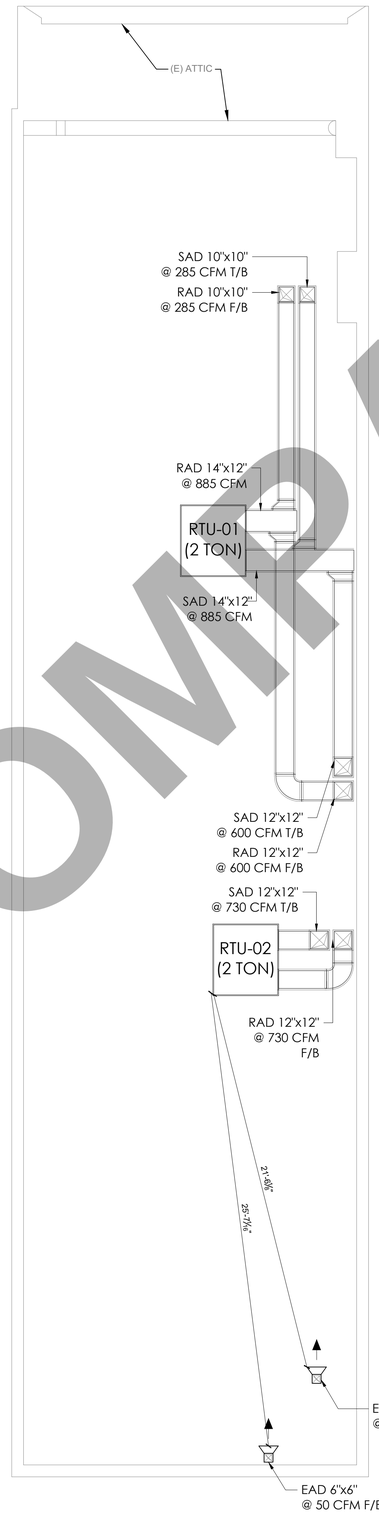
MECHANICAL LIST OF SYMBOLS AND GENERAL NOTES.

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.	REV.
M0.0	







GENERAL NOTES:

1. MECHANICAL CONTRACTOR TO COORDINATE ROUTING AND LOCATION OF MECHANICAL COMPONENTS AND EQUIPMENT WITH ALL OTHER TRADES AND EXISTING FIELD CONDITIONS PRIOR TO PERFORMING WORK.
2. CONTRACTOR TO CUT AND PATCH AS REQUIRED TO PERFORM THE WORK.
3. ACCESS DOORS ARE REQUIRED FOR ANY COMPONENT REQUIRING ACCESS ABOVE HARD LID CEILINGS. COORDINATE SIZE, LOCATION AND FINISH WITH ARCHITECT PRIOR TO PERFORMING WORK.
4. REFER TO THE DIAGRAMS THAT APPLY TO THIS SHEET WHICH PROVIDE GENERAL GUIDANCE FOR INSTALLATION THOUGH NOT ALL COMPONENTS AND ACCESSORIES MAY BE SHOWN.
5. PRIOR TO INSTALLATION, CONFIRM SPECIFIC LOCATION FOR ALL THERMOSTATS / SENSORS WITH ARCHITECT. MOUNT AT 48" A.F.F. OR IN ACCORDANCE WITH ADA REQUIREMENTS. PROVIDE LOCKING COVERS.
6. COORDINATE AND CONFIRM BORDER, FRAME, FINISH, AND LOCATION WITH ARCHITECT PRIOR TO ORDERING.
7. ANY PENETRATIONS THROUGH WALL STUDS, FLOOR JOISTS, OR ROOF TO BE IN ACCORDANCE WITH THE LATEST ADOPTED BUILDING CODE.
8. DUCT DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS.
9. CONTRACTOR TO CONFIRM ADEQUATE RETURN AIR PATH BACK TO MAIN AIR HANDLING UNIT.

TOILETS EXHAUST FANS SCHEDULE

TAG	MANUF. AND MODEL	AIR FLOW (CFM)	ESP (IN. W.C)	V/P/Hz	RPM	POWER (W)	SERVES
EF-01	WhisperGreen-FV-0511VK2	50	0.25	120/1/60	1266	9.6	TOILET
EF-02	WhisperGreen-FV-0511VK2	50	0.25	120/1/60	1266	9.6	ALL GENDER TOILET

ROOF TOP UNIT SCHEDULE

TAG	MANUFACTURER	MODEL	TOTAL COOLING (TONS)	HEATING UNIT INP./OUTP.(MBH)	AIRFLOW @0.5"W.G. (CFM)	EER	MCA	VOLT/PH/HZ
(E) RTU-01	CARRIER	48XP-024060	2.0	60.0 / 40.0	885	11.0	18.0	208/230-1-60
(N)RTU-02	CARRIER	48XP-024060	2.0	60.0 / 40.0	730	11.0	18.0	208/230-1-60

VENTILATION LOAD CALCULATION AS PER CMC 2019 - TABLE 402.1

RTU-01:

S.N.	Space	Area (ft2)	Occ./1000 ft2	CFM/ft2	CFM-A	No. of Occupacies	CFM/Pers.	CFM-B	TOTAL CFM
1	Lobby	211	10	0.06	**12.7**	2	5.0	**10.0**	**22.7**
2	Retail	644	15	0.12	**77.3**	10	7.5	**75.0**	**152.3**
3	**TOTAL =**	**855**	-	-	**89.9**	12	-	**85.0**	**174.9**

RTU-02:

S.N.	Space	Area (ft2)	Occ./1000 ft2	CFM/ft2	CFM-A	No. of Occupacies	CFM/Pers.	CFM-B	TOTAL CFM
1	SCP Storage	160	2	0.06	**9.6**	1	5.0	**5.0**	**14.6**
2	Intake	115	5	0.06	**6.9**	1	5.0	**5.0**	**11.9**
3	Back Entry	96	10	0.06	**5.8**	1	5.0	**5.0**	**10.8**
4	Break	173	25	0.06	**10.4**	4	5.0	**20.0**	**30.4**
5	Server	43	60	0.06	**2.6**	3	5.0	**15.0**	**17.6**
6	Office	85	5	0.06	**5.1**	0	5.0	**0.0**	**5.1**
7	NS Storage	109	2	0.06	**6.5**	1	5.0	**5.0**	**11.5**
8	**TOTAL =**	**781**	-	-	**46.9**	10	-	**55.0**	**101.9**

RTU-01 / CARRIER - 48XP-024060 CAN OPERATE UP TO 25% OA FROM THE SUPPLY FLOW.
THE NOMINAL RTU-01 FLOW RATE IS 885 CFM
MAX. OA THE RTU CAN DELIVER IS = 885 x 0.25 = 221.3 CFM
RTU-02 / CARRIER - 48XP-024060 CAN OPERATE UP TO 25% OA FROM THE SUPPLY FLOW.
THE NOMINAL RTU-02 FLOW RATE IS 730 CFM
MAX.OA THE RTU CAN DELIVER IS = 730 x 0.25 = 182.5 CFM
BOTH RTUs CAN OPERATE TO OVERCOME THE MIN. REQUIRED VENTILATION RATES.

CLIENT:

ADDRESS:

3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

NOTES:

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REV. NO.	DESCRIPTION	DATE	BY
00	FOR APPROVAL	04/22	A.B

PROJECT:

LAUREL VILLAGE

TITLE:

MECHANICAL LAYOUTS,ES, CALCULATIONS.

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		1/4"=1'=0"

DRAWING NO.

M 1 . 0

REV.

Air System Sizing Summary for RTU-01 (Existing)

Project Name: Laurel Village — 04/10/2022
Prepared by: — 10:42PM

Air System Information

Air System Name ..... RTU-01 (Existing)
Equipment Class ..... PKG ROOF
Air System Type ..... SZCAV
Number of zones 1
Floor Area ..... 882.0 ft²
Location ..... San Francisco, California

Sizing Calculation Information

Calculation Months ..... Jan to Dec
Sizing Data ..... Calculated
Zone CFM Sizing ..... Sum of space airflow rates
Space CFM Sizing ..... Individual peak space loads

Central Cooling Coil Sizing Data

Total coil load ..... 1.9 Tons
Total coil load ..... 22.3 MBH
Sensible coil load ..... 20.8 MBH
Coil CFM at Jul 1500 ..... 909 CFM
Max block CFM ..... 909 CFM
Sum of peak zone CFM ..... 909 CFM
Sensible heat ratio 0.932
CFM/Ton 488.1
ft²/Ton 473.9
BTU/(hr·ft²) 25.3
Water flow @ 10.0 °F rise ..... N/A
Load occurs at ..... Jul 1500
OA DB / WB ..... 83.0 / 63.0 °F
Entering DB / WB ..... 76.4 / 62.5 °F
Leaving DB / WB ..... 55.2 / 53.9 °F
Coil ADP ..... 52.9 °F
Bypass Factor 0.100
Resulting RH ..... 50 %
Design supply temp. ..... 58.0 °F
Zone T-stat Check ..... 1 of 1 OK
Max zone temperature deviation ..... 0.0 °F

Central Heating Coil Sizing Data

Max coil load ..... 14.6 MBH
Coil CFM at Des Htg ..... 909 CFM
Max coil CFM ..... 909 CFM
Water flow @ 20.0 °F drop ..... N/A
Load occurs at ..... Des Htg
BTU/(hr·ft²) 16.5
Ent. DB / Lvg DB ..... 62.8 / 77.6 °F

Supply Fan Sizing Data

Actual max CFM ..... 909 CFM
Standard CFM ..... 908 CFM
Actual max CFM/ft² ..... 1.03 CFM/ft²
Fan motor BHP ..... 1.00 BHP
Fan motor kW ..... 0.83 kW

Outdoor Ventilation Air Data

Design airflow CFM ..... 194 CFM
CFM/ft² ..... 0.22 CFM/ft²
CFM/person ..... 14.37 CFM/person

Air System Design Load Summary for RTU-01 (Existing)

Project Name: Laurel Village — 04/10/2022
Prepared by: — 10:42PM

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 83.0 °F / 63.0 °F			HEATING DATA AT DES HTG HEATING OA DB / WB 37.0 °F / 31.1 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	124 ft²	882	-	124 ft²	-	-
Wall Transmission	2164 ft²	2819	-	2164 ft²	4225	-
Roof Transmission	882 ft²	2297	-	882 ft²	1200	-
Window Transmission	124 ft²	343	-	124 ft²	1882	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	882 ft²	0	-	882 ft²	1782	-
Partitions	95 ft²	13	-	95 ft²	325	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	1103 W	3160	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	738 W	2338	-	0	0	-
People	14	2644	2768	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	725	138	10%	941	0
>> Total Zone Loads	-	15219	2906	-	10356	0
Zone Conditioning	-	15937	2906	-	10308	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Return Fan Load	909 CFM	0	-	909 CFM	0	-
Ventilation Load	194 CFM	1745	-1386	194 CFM	6865	0
Supply Fan Load	909 CFM	2827	-	909 CFM	-2827	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	2%	304	-	2%	207	-
>> Total System Loads	-	20814	1520	-	14553	0
Central Cooling Coil	-	20814	1521	-	0	0
Central Heating Coil	-	0	-	-	14553	-
>> Total Conditioning	-	20814	1521	-	14553	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Air System Sizing Summary for RTU-02 (New)

Project Name: Laurel Village — 04/10/2022
Prepared by: — 10:43PM

Air System Information

Air System Name ..... RTU-02 (New)
Equipment Class ..... PKG ROOF
Air System Type ..... SZCAV
Number of zones 1
Floor Area ..... 567.0 ft²
Location ..... San Francisco, California

Sizing Calculation Information

Calculation Months ..... Jan to Dec
Sizing Data ..... Calculated
Zone CFM Sizing ..... Sum of space airflow rates
Space CFM Sizing ..... Individual peak space loads

Central Cooling Coil Sizing Data

Total coil load ..... 1.1 Tons
Total coil load ..... 13.1 MBH
Sensible coil load ..... 12.4 MBH
Coil CFM at Aug 1400 ..... 516 CFM
Max block CFM ..... 516 CFM
Sum of peak zone CFM ..... 516 CFM
Sensible heat ratio 0.944
CFM/Ton 472.7
ft²/Ton 519.1
BTU/(hr·ft²) 23.1
Water flow @ 10.0 °F rise ..... N/A
Load occurs at ..... Aug 1400
OA DB / WB ..... 82.5 / 62.8 °F
Entering DB / WB ..... 75.7 / 61.3 °F
Leaving DB / WB ..... 53.5 / 52.2 °F
Coil ADP ..... 51.1 °F
Bypass Factor 0.100
Resulting RH ..... 45 %
Design supply temp. ..... 58.0 °F
Zone T-stat Check ..... 1 of 1 OK
Max zone temperature deviation ..... 0.0 °F

Central Heating Coil Sizing Data

Max coil load ..... 4.7 MBH
Coil CFM at Des Htg ..... 516 CFM
Max coil CFM ..... 516 CFM
Water flow @ 20.0 °F drop ..... N/A
Load occurs at ..... Des Htg
BTU/(hr·ft²) 8.3
Ent. DB / Lvg DB ..... 65.1 / 73.5 °F

Supply Fan Sizing Data

Actual max CFM ..... 516 CFM
Standard CFM ..... 516 CFM
Actual max CFM/ft² ..... 0.91 CFM/ft²
Fan motor BHP ..... 1.00 BHP
Fan motor kW ..... 0.83 kW

Outdoor Ventilation Air Data

Design airflow CFM ..... 73 CFM
CFM/ft² ..... 0.13 CFM/ft²
CFM/person ..... 16.16 CFM/person

Air System Design Load Summary for RTU-02 (New)

Project Name: Laurel Village — 04/10/2022
Prepared by: — 10:43PM

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Aug 1400 COOLING OA DB / WB 82.5 °F / 62.8 °F			HEATING DATA AT DES HTG HEATING OA DB / WB 37.0 °F / 31.1 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	36 ft²	505	-	36 ft²	-	-
Wall Transmission	659 ft²	896	-	659 ft²	1287	-
Roof Transmission	356 ft²	950	-	356 ft²	484	-
Window Transmission	36 ft²	91	-	36 ft²	546	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	254 ft²	-16	-	254 ft²	650	-
Partitions	620 ft²	89	-	620 ft²	1624	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	709 W	2004	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	826 W	2601	-	0	0	-
People	5	866	923	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	399	46	10%	459	0
>> Total Zone Loads	-	8385	969	-	5050	0
Zone Conditioning	-	8759	969	-	4865	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Return Fan Load	516 CFM	0	-	516 CFM	0	-
Ventilation Load	73 CFM	618	-232	73 CFM	2564	0
Supply Fan Load	516 CFM	2827	-	516 CFM	-2827	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	2%	168	-	2%	101	-
>> Total System Loads	-	12371	737	-	4703	0
Central Cooling Coil	-	12371	737	-	0	0
Central Heating Coil	-	0	-	-	4703	-
>> Total Conditioning	-	12371	737	-	4703	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

48XP(N)
Performance™ 13 SEER Single Packaged Air Conditioner and Gas Furnace System with Puron® (R–410A) Refrigerant
Single and Three Phase
2–5 Nominal Tons (Sizes 024–060)

Carrier
Turn to the Experts.

Installation Instructions

NOTE: Read the entire instruction manual before starting the installation.

NOTE: Installer: Make sure the Owner's Manual and Service Instructions are left with the unit after installation.

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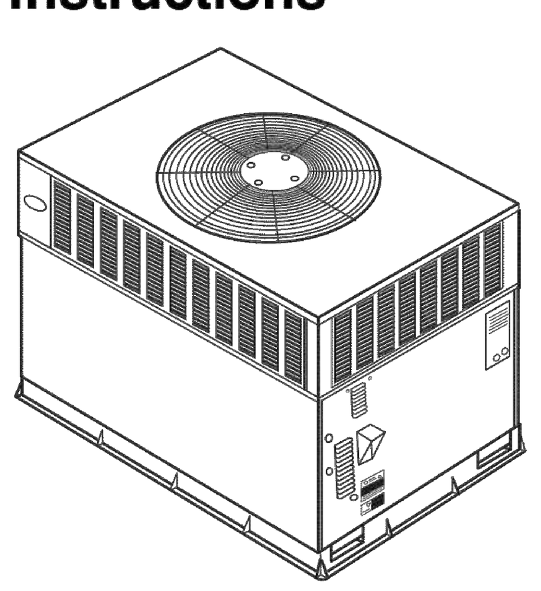

C99088

Fig. 1 - Unit 48XP

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause death, personal injury, or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory–authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Have a fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions included in literature and attached to the unit. consult local building codes, the current editions of the National Fuel Gas Code

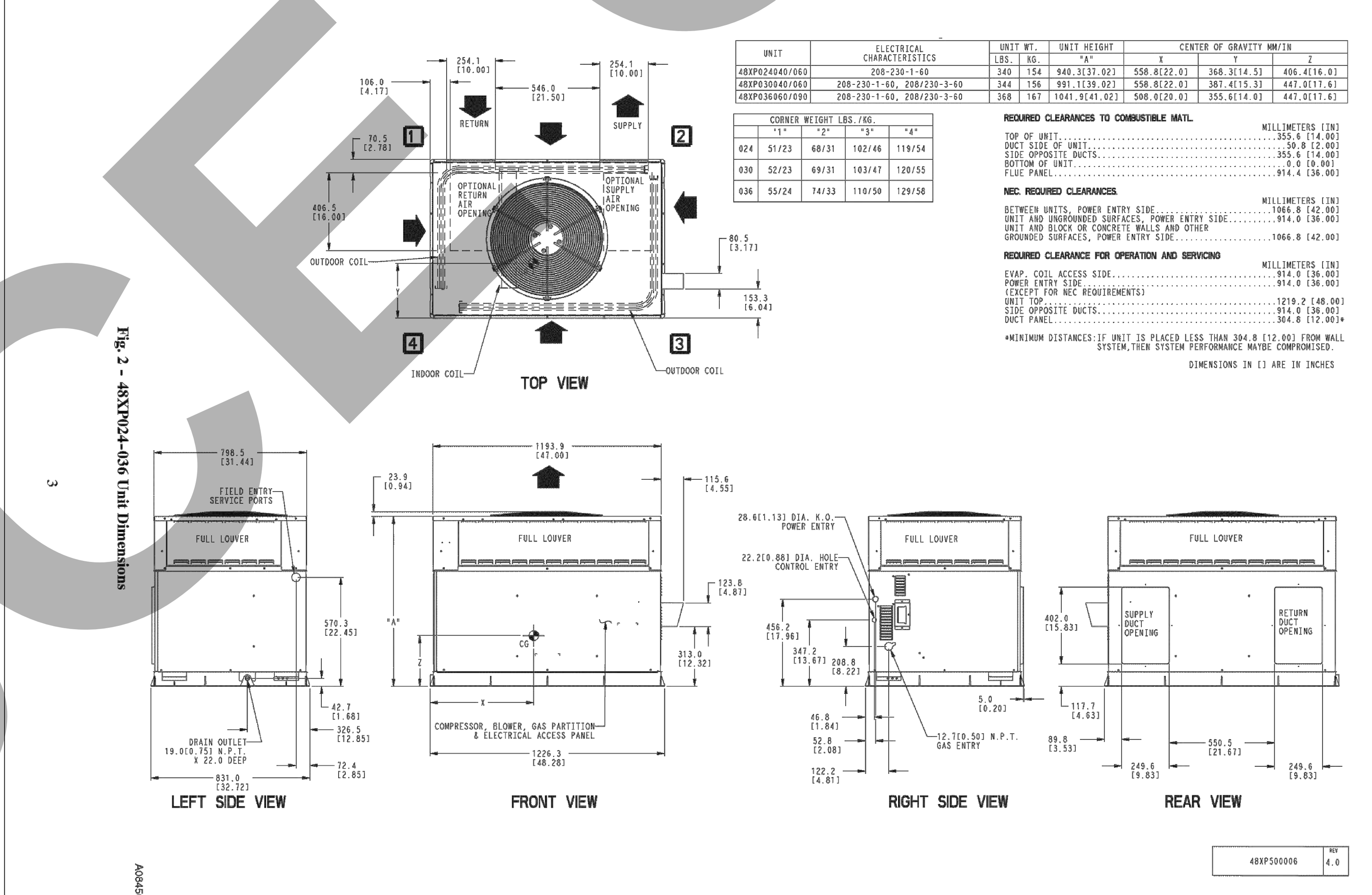

Fig. 2 – 48XP024-036 Unit Dimensions

48XP

Table 1 – Physical Data - Unit 48XP

UNIT SIZE 48XP	024040	024060	030040	030060	036060	036090	042060	042090
NOMINAL CAPACITY (ton)	2	2	2–1/2	2–1/2	3	3	3–1/2	3–1/2
SHIPPING WEIGHT (lb) (kg)	388 176	388 176	392 178	392 178	416 189	416 189	464 210	464 210
COMPRESSORS Quantity	Scroll 1							
REFRIGERANT (R–410A) Quantity (lb) (kg)	7.3 3.3	7.3 3.3	8.0 3.6	8.0 3.6	9.5 4.3	9.5 4.3	10.7 4.9	10.7 4.9
REFRIGERANT METERING DEVICE	TXV							
CONDENSER COIL Rows...Fins/in. Face Area (sq ft)	2...21 11.95	2...21 11.95	2...21 11.95	2...21 11.95	2...21 13.7	2...21 13.7	2...21 15.4	2...21 15.4
CONDENSER FAN Nominal Cfm Diameter (in.) (mm) Motor Hp (Rpm)	2350 22 559 1/8 (825)	2350 22 559 1/8 (825)	2350 22 559 1/8 (825)	2350 22 559 1/8 (825)	2800 22 559 1/8 (825)	2800 22 559 1/8 (825)	2800 22 559 1/8 (825)	2800 22 559 1/8 (825)
EVAPORATOR COIL Rows...Fins/in. Face Area (sq ft)	3...15 3.7	3...15 3.7	3...15 3.7	3...15 3.7	4...15 3.7	4...15 3.7	3...15 3.7	3...15 3.7
EVAPORATOR BLOWER Nominal Airflow (Cfm) Size (in.) (mm) Motor (hp)	770 10x10 254x254 1/2	770 10x10 254x254 1/2	960 10x10 254x254 1/2	960 10x10 254x254 1/2	1150 11x10 279x254 3/4	1150 11x10 279x254 3/4	1400 11x10 279x254 3/4	1400 11x10 279x254 3/4
FURNACE SECTION* Burner Orifice No. (Qty...Drill Size) Natural Gas Burner Orifice No. (Qty...Drill Size) Propane Gas	2...44 2...50	2...38 2...46	2...44 2...50	2...38 2...46	2...38 2...46	3...38 3...46	2...38 2...46	2...38 2...46
HIGH–PRESSURE SWITCH (psig) Cut–out Reset (Auto)	650 +/–15 420 +/–25							
LOSS–OF–CHARGE / LOW–PRESSURE SWITCH (Liquid Line) (psig) Cut–out Reset (auto)	20 +/–5 45 +/–10							
RETURN–AIR FILTERS Throwaway† (in.) (mm)	20x24x1 508x610x25						24x30x1 610x762x25	

*Based on altitude of 0 to 2000 ft (0–610 m).
†Required filter sizes shown are based on the larger of the ARI (Air Conditioning and Refrigeration Institute) rated cooling airflow or the heating airflow velocity of 300 ft/minute for high–capacity type. Air filter pressure drop for non–standard filters must not exceed 0.08 IN. W.C..

Table 1 – Physical Data - Unit 48XP (Continued)

UNIT SIZE 48XP	048090	048115	048130	060090	060115	060130
NOMINAL CAPACITY (ton)	4	4	4	5	5	5
SHIPPING WEIGHT (lb) (kg)	512 232	512 232	512 232	559 254	559 254	559 254
COMPRESSORS Quantity	Scroll 1					
REFRIGERANT (R–410A) Quantity (lb) (kg)	11.25 5.1	11.25 5.1	11.25 5.1	13.2 6.0	13.2 6.0	13.2 6.0
REFRIGERANT METERING DEVICE	TXV					
CONDENSER COIL Rows...Fins/in. Face Area (sq ft)	2...21 17.4	2...21 17.4	2...21 17.4	2...21 19.3	2...21 19.3	2...21 19.3
CONDENSER FAN Nominal Cfm Diameter (in.) (mm) Motor Hp (Rpm)	3300 22 559 1/4 (1100)	3300 22 559 1/4 (1100)	3300 22 559 1/4 (1100)	3300 22 559 1/4 (1100)	3300 22 559 1/4 (1100)	3300 22 559 1/4 (1100)
EVAPORATOR COIL Rows...Fins/in. Face Area (sq ft)	4...15 4.7	4...15 4.7	4...15 4.7	4...17 5.7	4...17 5.7	4...17 5.7
EVAPORATOR BLOWER Nominal Airflow (Cfm) Size (in.) (mm) Motor (hp)	1400 11x10 279x254 3/4 (1075)	1400 11x10 279x254 3/4 (1075)	1400 11x10 279x254 3/4 (1075)	1710 11x10 279x254 1.0 (1040)	1710 11x10 279x254 1.0 (1040)	1710 11x10 279x254 1.0 (1040)
FURNACE SECTION* Burner Orifice No. (Qty...Drill Size) Natural Gas Burner Orifice No. (Qty...Drill Size) Propane Gas	3...38 3...46	3...33 3...42	3...31 3...41	3...38 3...46	3...33 3...42	3...31 3...41
HIGH–PRESSURE SWITCH (psig) Cut–out Reset (Auto)	650 +/–15 420 +/–25					
LOSS–OF–CHARGE / LOW–PRESSURE SWITCH (Liquid Line) (psig) Cut–out Reset (auto)	20 +/–5 45 +/–10					
RETURN–AIR FILTERS Throwaway† (in.) (mm)	24x30x1 610x762x25					

*Based on altitude of 0 to 2000 ft (0–610 m).
†Required filter sizes shown are based on the larger of the ARI (Air Conditioning and Refrigeration Institute) rated cooling airflow or the heating airflow velocity of 300 ft/minute for high–capacity type. Air filter pressure drop for non–standard filters must not exceed 0.08 IN. W.C..

CLIENT:

ADDRESS:
3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

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REV. NO.	DESCRIPTION	DATE	BY
00	FOR APPROVAL	04/22	A.B

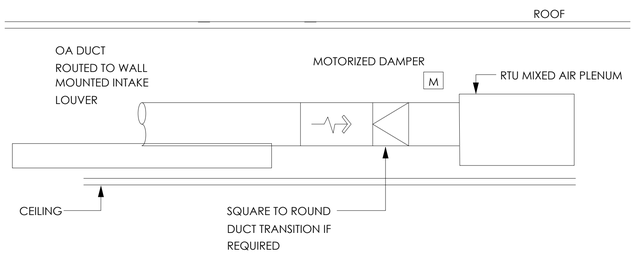
PROJECT: LAUREL VILLAGE

TITLE: MECHANICAL CALCULATION & CATALOGS

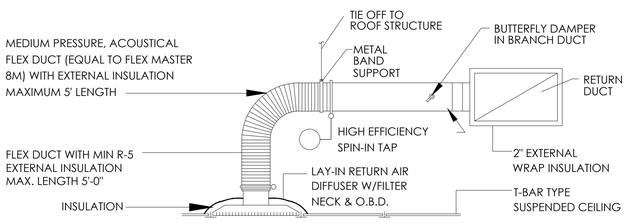
PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36
		NTS

DRAWING NO.: M 2 . 0

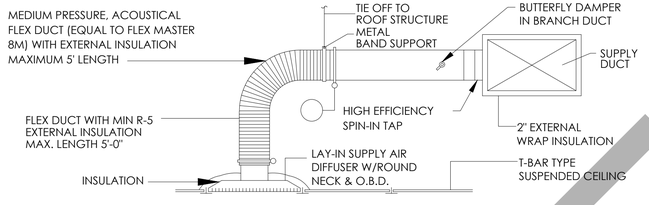
REV.:



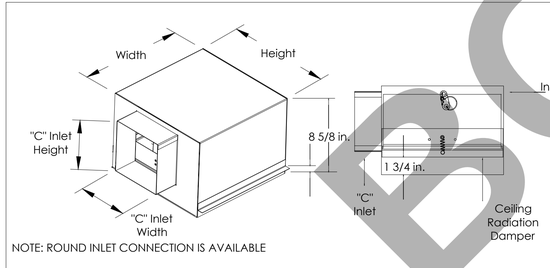
OUTSIDE AIR CONNECTION



RETURN AIR GRILLE BOX CONNECTION

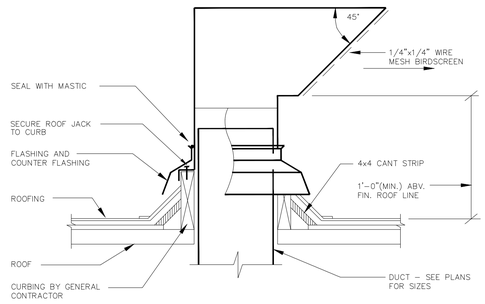


SUPPLY AIR DIFFUSER CONNECTION

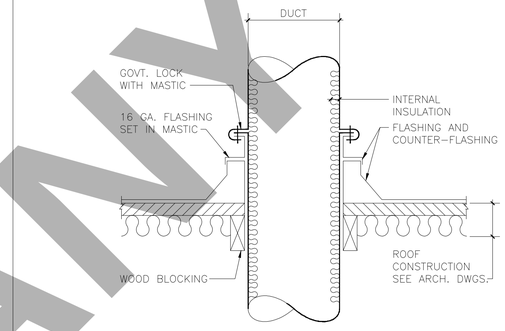


NOTE: ROUND INLET CONNECTION IS AVAILABLE

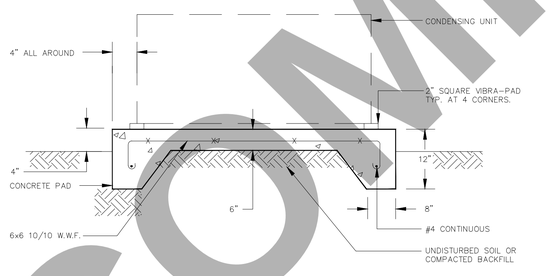
CEILING RADIATION DAMPER



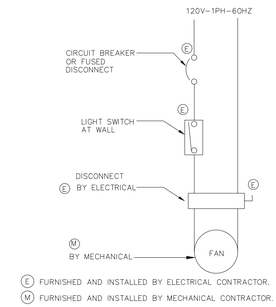
ROOF JACK DETAIL — SCALE NONE — 4



DUCT ROOF PENETRATION — SCALE NONE — 1

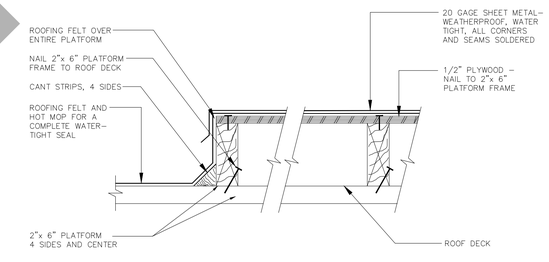


HEAT PUMP/CONDENSING UNIT MOUNTING DETAIL — SCALE NONE — 5



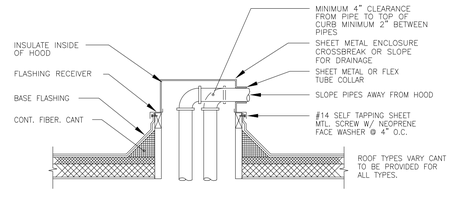
(E) FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
(M) FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.

TOILET EXHAUST FAN DIAGRAM — SCALE NONE — 2



NOTE: COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS AND DETAILS.

SECTION PLATFORM DETAIL — SCALE NONE — 6



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REV. NO.	DESCRIPTION	DATE	BY
00	FOR APPROVAL	04/22	A.B

PROJECT:

LAUREL VILLAGE

TITLE:

MECHANICAL GENERAL DETAILS

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.

M 3 . 0

REV.

ELECTRICAL SPECIFICATIONS

1.ELECTRICAL GENERAL NOTES

A. GC SHALL VERIFY ANY THIRD PARTY INSPECTIONS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION PRIOR TO BIDDING THIS PROJECT.
B. ALL LOW VOLTAGE WIRING TO BE IN CONDUIT UNLESS APPROVED OTHERWISE BY AUTHORITY HAVING JURISDICTION.
C. ALL EMERGENCY LIGHTS & EXIT SIGNS ARE TO BE CONNECTED TO THE UNSWITCHED PORTION OF THE ADJACENT LIGHTING CIRCUIT. ALL EMERGENCY FIXTURES TO REMAIN ACTIVE FOR 90 MINUTE MINIMUM.
D. ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE LABELED AND LISTED BY A CERTIFIED TESTING LABORATORY OR AGENCY.
E. ALL LIGHTING, DUCTWORK, SOFFITS, AND CEILING COMPONENT HEIGHTS ARE TO BE COORDINATED WITH THE ARCHITECT.
F. ATTENTION LIGHTING SUPPLIER AND CONTRACTOR: ENSURE ALL LIGHTING EXPOSED TO PLENUM IS PLENUM RATED.
G. COORDINATE THE MOUNTING OF ALL HIGH-BAY FIXTURES AND CEILING FANS WITH ARCHITECT PRIOR TO INSTALLATION.
H. . VERIFY MOUNTING HEIGHTS OF ALL FIXTURES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
I. FIRE ALARM CONTRACTOR SHALL VERIFY ALL BUILDING AND FIRE DEPARTMENT REQUIREMENTS REGARDING SHUT OFF OF ANY NECESSARY COMPONENTS UPON ACTIVATION OF THE FIRE ALARM. THIS INCLUDES, BUT IS NOT LIMITED TO:
   a. AUDIO/MUSIC SYSTEM(S)
   b. ROOFTOP UNITS
   c. TANNING EQUIPMENT
   d. EXERCISE FANS
J. PROVIDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR (SIZE PER NEC) IN PVC TYPE CONDUIT, POWER CIRCUITS, ISOLATED GROUND CIRCUITS, OR AS SHOWN ON PLANS. CONDUIT SHALL BE SIZED PER NEC BASED ON THIN 600 VOLT COPPER SINGLE CONDUCTORS, PLUS THE EQUIPMENT GROUNDING CONDUCTOR.
K. WIRING SHALL INCLUDE FINAL CONNECTION TO ALL EQUIPMENT IN CONFORMANCE WITH EQUIPMENT SUPPLIER WIRING DIAGRAMS.
L. CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE PANELBOARD IDENTIFICATION SCHEDULES.
M. BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG UNLESS NOTED OTHERWISE IN SCHEDULES. WHERE 20A BRANCH CIRCUITS HAVE #8 AND LARGER WIRE SPECIFIED, #10 AWG WIRE SHALL BE USED FOR THE FINAL CONNECTION (15 FOOT MAXIMUM).
N. WHERE BRANCH CIRCUITS ARE GROUPED, SIZE CONDUIT AND DERATE CURRENT CARRYING CONDUCTORS PER NEC.
O. PROVIDE HANDLE TIES ON ALL MULTIWIRE BRANCH CIRCUITS TO MEET NEC REQUIREMENTS.
P. SUPPORT FROM STRUCTURE: NO ATTACHMENT OF ANY TYPE SHALL BE MADE TO BRIDGING OR JOIST WEB MEMBERS. UTILIZE ONLY THE TOP AND BOTTOM CHORDS FOR SUPPORTING THE ELECTRICAL SYSTEM INSTALLATIONS. REFER TO STRUCTURAL PLANS.
Q. WHERE GROUPED CONDUITS ARE INSTALLED WITHIN THE JOIST SPACE, COORDINATE WITH SPRINKLER CONTRACTOR PRIOR TO INSTALLATION IN ORDER TO MAINTAIN REQUIRED CLEARANCES FROM SPRINKLERS.
R. SEAL PENETRATIONS IN FIRE RATED WALLS PER NEC 300.21.
S. ELECTRICAL EQUIPMENT, FIXTURES, DEVICES, AND OTHER ITEMS SHOWN IN THESE PLANS IN GREY HALFTONE ARE EITHER EXISTING TO REMAIN OR PART OF LANDLORD SHELL PACKAGE.
T. PROVIDE ARC-FLASH COORDINATION STUDY PER NEC.
U. PROVIDE (1) 1/2" CONDUIT AND (1) 4" SQUARE BOX WITH SINGLE GANG DEVICE RING FOR ALL THERMOSTAT LOCATIONS INDICATED ON MECHANICAL DRAWINGS. ROUTE CONDUIT FROM BOX TO ACCESSIBLE CEILING CAVITY. PROVIDE PLASTIC BUSHING ON EXPOSED CONDUIT ENDS. PROVIDE PULL STRING IN ALL EMPTY CONDUIT SYSTEMS. COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
V. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE LOW VOLTAGE CONTRACTOR TO CLARIFY SCOPE OF WORK BEFORE BID OR INSTALLATION
W. WIRING DEVICES: DEVICE MOUNTING HEIGHTS ARE FROM FINISHED FLOOR TO CENTER OF OUTLET BOX UNLESS NOTED OTHERWISE ON PLANS. COORDINATE THE STANDARD MOUNTING HEIGHTS WITH MASONRY:
   a. SWITCHES 42 " AFF
   b. RECEPTACLES 18" AFF
   c. VOICE/DATA 18" AFF

2. ELECTRICAL POWER NOTES

A. ALL REQUIRED DOCUMENTATION REGARDING THE DESIGN OF FIRE DETECTION, ALARM, AND COMMUNICATIONS SYSTEMS AND THE PROCEDURES FOR MAINTENANCE, INSPECTION, AND TESTING OF FIRE DETECTION, ALARM, AND COMMUNICATIONS SYSTEMS SHALL BE MAINTAINED AT AN APPROVED, SECURED LOCATION FOR THE LIFE OF THE SYSTEM PER IFC 901.6.2.1.
B. THE FIRE ALARM CONTROL PANEL DISCONNECTING MEANS SHALL HAVE A RED MARKING, SHALL ONLY BE ACCESSIBLE TO AUTHORIZED PERSONNEL, AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT". THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE IDENTIFIED AT THE FIRE ALARM CONTROL UNIT PER NFPA 72 4.4.1.4.2.2 AND 4.4.1.4.2.3.
C. ROUTE ALL CONDUIT TIGHT TO DECK IN ACCORDANCE TO NEC 300.4(E)
D. FIRE ALARM SYSTEM SHALL BE INSTALLED PER CURRENT NFPA STANDARDS.
E. ALL ELECTRICAL THAT MAY NEED TO BE MAINTAINED WHILE ENERGIZED SHALL BE FIELD MARKED WITH ARC FLASH LABELING AND BE FULLY VISIBLE TO QUALIFIED PERSONNEL PRIOR TO EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF EQUIPMENT.
F. SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. THE FIELD MARKINGS SHALL INCLUDE THE DATE THE FAULT CURRENT CALCULATIONS WERE PERFORMED AND BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.
G. FIRE ALARM DEVICE LOCATIONS ARE SHOWN FOR REFERENCE ONLY. THE ELECTRICAL CONTRACTOR SHALL INCLUDE A PRICE IN THE ELECTRICAL BID FOR A LANDLORD APPROVED FIRE ALARM SYSTEM, INCLUDING PLANS AND ALL ASSOCIATED DOCUMENTATION REQUIRED. THESE PLANS SHALL BE SUBMITTED TO THE LOCAL AUTHORITIES HAVING JURISDICTION BY A QUALIFIED AND LICENSED DESIGN-BUILD FIRE ALARM CONTRACTOR FOR A COMPLETE AND APPROVED FIRE ALARM SYSTEM. THE PLANS SHALL BE SIGNED AND SEALED BY THEIR LOCAL DESIGN ENGINEER AND SUBMITTED FOR PLAN REVIEW PRIOR TO RECEIVING SPECIFIC PERMITS FOR THIS WORK. THE FIRE ALARM CONTRACTOR SHALL ALSO SUBMIT ALL SHOP DRAWINGS, BATTERY CALCULATIONS, SPECIFICATION SHEETS, ETC. AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION TO THEIR LOCAL DESIGN ENGINEER FOR REVIEW AND APPROVAL.
H. COORDINATE WITH MECHANICAL INSTALLER TO PROVIDE AND INSTALL CONDUIT AND JUNCTION BOXES FOR MECHANICAL THERMOSTATS.

3. NETWORK CABLING REQUIREMENTS

A. EACH CAT 5 CABLE RUN MUST BE KEPT TO A MAXIMUM OF 295 FEET (90 METERS). INCLUDING PATCH CORDS, ENTIRE CHANNEL MAXIMUM LENGTH NOT TO EXCEED 328 FEET (100 METERS).
B. MAINTAIN PAIR TWISTING AS CLOSE AS POSSIBLE TO FINAL TERMINATION POINTS WITH MAXIMUM UNTWISTED SEGMENT OF 1/2".
C. WHERE NECESSARY, GRADUALLY BEND CABLE TO MAINTAIN THE MINIMUM BEND RADIUS OF 4 TIMES THE CABLE DIAMETER (APPROX. 1").
D. USE LOW TO MODERATE PRESSURE TO DRESS CABLES NEATLY WITH CABLE TIES.
E. USE LOW TO MODERATE FORCE WHEN PULLING CABLE. DO NOT EXCEED MAXIMUM OF 25 POUNDS OF FORCE.
F. USE CABLE PULLING LUBRICANT FOR CABLE RUNS THAT MAY EXCEED 25 POUNDS OF FORCE WHEN PULLING.
G. MAINTAIN 12" OF SEPARATION FROM POWER CABLES THAT MAY BE SOURCES OF EMI (ELECTRICAL CABLES, TRANSFORMERS, LIGHT FIXTURES, ETC.)
H. INSTALL PROPER CABLE SUPPORTS WITH MAXIMUM OF 5 FEET OF SEPARATION.
I. LEAVE EXCESS WIRE COILED IN THE CEILING OR NEAREST CONCEALED SPACE. MAINTAIN 5 FEET OF SLACK AT WORK OUTLET AND 10 FEET OF SLACK AT PATCH PANEL END.
J. FURNISH AND INSTALL GROMMETS WHEN PASSING THROUGH METAL STUDS AND OTHER POTENTIAL HAZARDS.
K. CONTRACTOR IS RESPONSIBLE FOR MEETING BOTH NATIONAL FIRE AND BUILDING CODES AND ANY LOCAL AMENDMENTS BY THE AUTHORITIES HAVING JURISDICTION AND MAINTAIN FIRESTOPS AT ALL CABLES THAT PENETRATE FIREWALLS. PLENUM RATED CABLES SHALL BE INSTALLED WHERE REQUIRED.
L. DO NOT SPLICE OR BRIDGE CABLE AT ANY POINT.
M. DO NOT INSTALL CABLE SUPPORTED FROM CEILING TILES.
N. DO NOT OVER TIGHTEN (25 POUNDS PER SQUARE INCH MAXIMUM) WITH USING CABLE OR PLASTIC TIES.
O. DO NOT USE OIL OR OTHER LUBRICANT NOT SPECIFICALLY DESIGNED FOR NETWORK CABLE PULLING.
P. DO NOT SUPPORT CABLES DIRECTLY FROM ELECTRICAL CONDUITS OR FIXTURES

4. GENERAL FIRE ALARM NOTES

A. THE INTENT OF THE FIRE ALARM SYSTEM DEVICES INDICATED ON THIS DRAWING ARE FOR PERFORMANCE SPECIFICATIONS AND LOCATIONS ONLY. THE SUCCESSFUL FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE COMPLETE PERMIT DRAWINGS, INCLUDING WIRING MEANS AND METHODS, BATTERY CALCULATIONS, DEVICE CUT SHEETS, ETC. FOR THE EQUIPMENT THEY SHALL PROVIDE. PROVIDE 15% SPARE CAPACITY FOR NEW SYSTEMS. COORDINATE FINAL REQUIREMENTS WITH ALL AUTHORITIES HAVING JURISDICTION.
B. THE FIRE ALARM SYSTEM SHALL BE MONITORED BY A UL LISTED CENTRAL STATION.
C. FIRE ALARM CONTRACTOR SHALL SUBMIT FIRE ALARM SUBMITTALS TO THE OWNER'S REPRESENTATIVE WITHIN 30 DAYS AFTER CONTRACT IS AWARDED.
D. WALL MOUNTED DEVICES SHALL BE 80" AFF TO BOTTOM OF DEVICE UNLESS NOTED OTHERWISE.
E. SURFACE MOUNTING OF FIRE ALARM CONDUIT IS NOT PERMITTED IN FINISHED AREAS.
F. BUILDING IS EQUIPPED WITH A FULLY AUTOMATIC SPRINKLER SYSTEM.
G. REMOVE ALL EXISTING FIRE ALARM SYSTEMS FROM PREVIOUS TENANTS PRIOR TO INSTALLING NEW EQUIPMENT.
H. ALL REQUIRED DOCUMENTATION REGARDING THE DESIGN OF FIRE DETECTION, ALARM, AND COMMUNICATIONS SYSTEMS AND THE PROCEDURES FOR MAINTENANCE, INSPECTION, AND TESTING OF FIRE DETECTION, ALARM, AND COMMUNICATIONS SYSTEMS SHALL BE MAINTAINED AT AN APPROVED, SECURED LOCATION FOR THE LIFE OF THE SYSTEM PER IFC 901.6.2.1.
I. THE FIRE ALARM CONTROL PANEL DISCONNECTING MEANS SHALL HAVE A RED MARKING, SHALL ONLY BE ACCESSIBLE TO AUTHORIZED PERSONNEL, AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT". THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE IDENTIFIED AT THE FIRE ALARM CONTROL UNIT PER NFPA 72 4.4.1.4.2.2 AND 4.4.1.4.2.3.
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5.ELECTRICAL ABBREVIATIONS:

ABC ABOVE COUNTER
AFF ABOVE FINISHED FLOOR
CF CEILING FAN
CP CIRCULATING PUMP
EC ELECTRICAL CONTRACTOR
ECB ENCLOSED CIRCUIT BREAKER
EDF ELECTRIC DRINKING FOUNTAIN
EF EXHAUST FAN
GC GENERAL CONTRACTOR
GFCI GROUND FAULT CIRCUIT INTERRUPT
GR GROUND
HC HVAC CONTRACTOR
JB JUNCTION BOX
PC PLUMBING CONTRACTOR
TTB TELEPHONE TERMINATION BOARD
UC UNDERCOUNTER
UH UNIT HEATER
UNO UNLESS NOTED OTHERWISE
VIF VERIFY IN FIELD
WH WATER HEATER
WP WEATHER PROOF DEVICE
WR WEATHER RESISTANT DEVICE
GFCI GROUND FAULT CIRCUIT INTERRUPTER

ELECTRICAL LEGEND

L1 — NEW SURFACE MOUNTED 3" DEEP LOW PROFILE WRAPAROUND 10"X48" LED LIGHT FIXTURE MODEL: LITHONIA FML4W

L2 — NEW 4'-0" L SURFACE MOUNTED LINKABLE LED STRIP LIGHT FIXTURE LITHONIA MODEL: RLNK

L3 — EXISTING LED TRACK LIGHTING

L4 — NEW MEDIUM SPOT LED TRACK HEAD LIGHTING FIXTURE 120V AC, 14W, ELV DIMMABLE, 40 DEGREE BEAM SPREAD MODEL: LUMENTURE T50-30H-1100-22-W-J CONTECH TRACKS LT-P

L5 — EXISTING RECESSED LED DOWNLIGHT FIXTURE

L6 — NEW 6" RECESSED LED DIMMABLE DOWNLIGHT FIXTURE 120V LITHONIA LDN6 35/15 (3500 K/1500 LUMENS) GZ10 STANDARD DRIVER DIMS TO 10% APERTURE - L06 DOWNLIGHT / TRIM - AR CLEAR FINISH - LSS SEMI-SPECULAR

L7 — EXISTING WALL SCONCE FIXTURE

L8 — CHANDLIER OUTLET

EX-1 (EXIT) — EXISTING CEILING / WALL MOUNTED ILLUMINATED EXIT SIGN ON 90 MIN BATTERY

EX-2 (EXIT) — EXISTING CEILING / WALL MOUNTED ILLUMINATED EXIT SIGN W/EMERGENCY BUGEYE LIGHT FIXTURE ON 90 MIN BATTERY

EX-3 (EXIT) — NEW CEILING / WALL MOUNTED ILLUMINATED EXIT SIGN W/EMERGENCY BUGEYE LIGHT FIXTURE ON 90 MIN BATTERY

EM-1 — NEW EMERGENCY BUGEYE LIGHT FIXTURE W/ 90 MIN BATTERY

EM-2 — EXISTING EMERGENCY BUGEYE LIGHT FIXTURE W/ 90 MIN BATTERY

EX-4 — NEW CEILING/WALL MOUNTED ILLUMINATED EXIT SIGN - CBC/CFC SEC.1011 ON 90 MIN BATTERY

J — HEAVY DUTY JUNCTION BOX, FLUSH IN CEILING FOR EXHAUST FANS

S — ONE WAY LIGHTING SWITCH
S_{OS} — ONE WAY LIGHTING SWITCH WITH OCCUPANCY SENSOR
S_D — ONE WAY LIGHTING SWITCH WITH DIMMER
S_T — ONE WAY LIGHTING SWITCH WITH TIMER
S_2 — TWO WAYS LIGHTING SWITCH
S_2^{OS} — TWO WAYS LIGHTING SWITCH WITH OCCUPANCY SENSOR
S_2^D — TWO WAYS LIGHTING SWITCH WITH DIMMER
S_2^T — TWO WAYS LIGHTING SWITCH WITH TIMER

SELF CONTAINED SMOKE/CARBON MONOXIDE (120 W/BATTERY BACKUP) - CEILING MOUNTED

DUPLEX RECEPTACLE - WALL MOUNTED @ +18" AFF UNLESS NOTED GFCI DENOTES: GROUD FAULT PROTECTION

YxXXA — NON-FUSED DISCONNECT SWITCH - SIZE AS INDICATED

FIXTURE TAG	DESCIRPTION	WATTAGE	QUANTITY
L1	SURFACE MOUNTED 3" DEEP LOW PROFILE WRAPAROUND 10"X48" LED LIGHT FIXTURE MODEL: LITHONIA FML4W 48 5000LM 840 ZT MVOLT	53.4	14
L2	4'-0" L SURFACE MOUNTED LINKABLE LED STRIP LIGHT FIXTURE LITHONIA MODEL: RLNK L48 120 35K 80CRI M4	20	8
L3	SAME AS EXISTING	15W/ft	15
L4	CONTECH TRACKS LT-P MEDIUM SPOT LED TRACK HEAD LIGHTING FIXTURE ELV DIMMABLE, MODEL: LUMENTURE T50-30H-1100-22-W-J	14	2
L5	SAME AS EXISTING	20	31
L6	6" RECESSED LED DIMMABLE DOWNLIGHT FIXTURE 120VLITHONIA LDN6 (3500 K/1500 LUMENS) LDN6 35/15 L06AR,	18	5
L7	EXISTING WALL SCONCE FIXTURE	20	3
L8	CHANDELIER	46	1

CLIENT:

ADDRESS:
3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

NOTES:

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3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	04/22	A.B

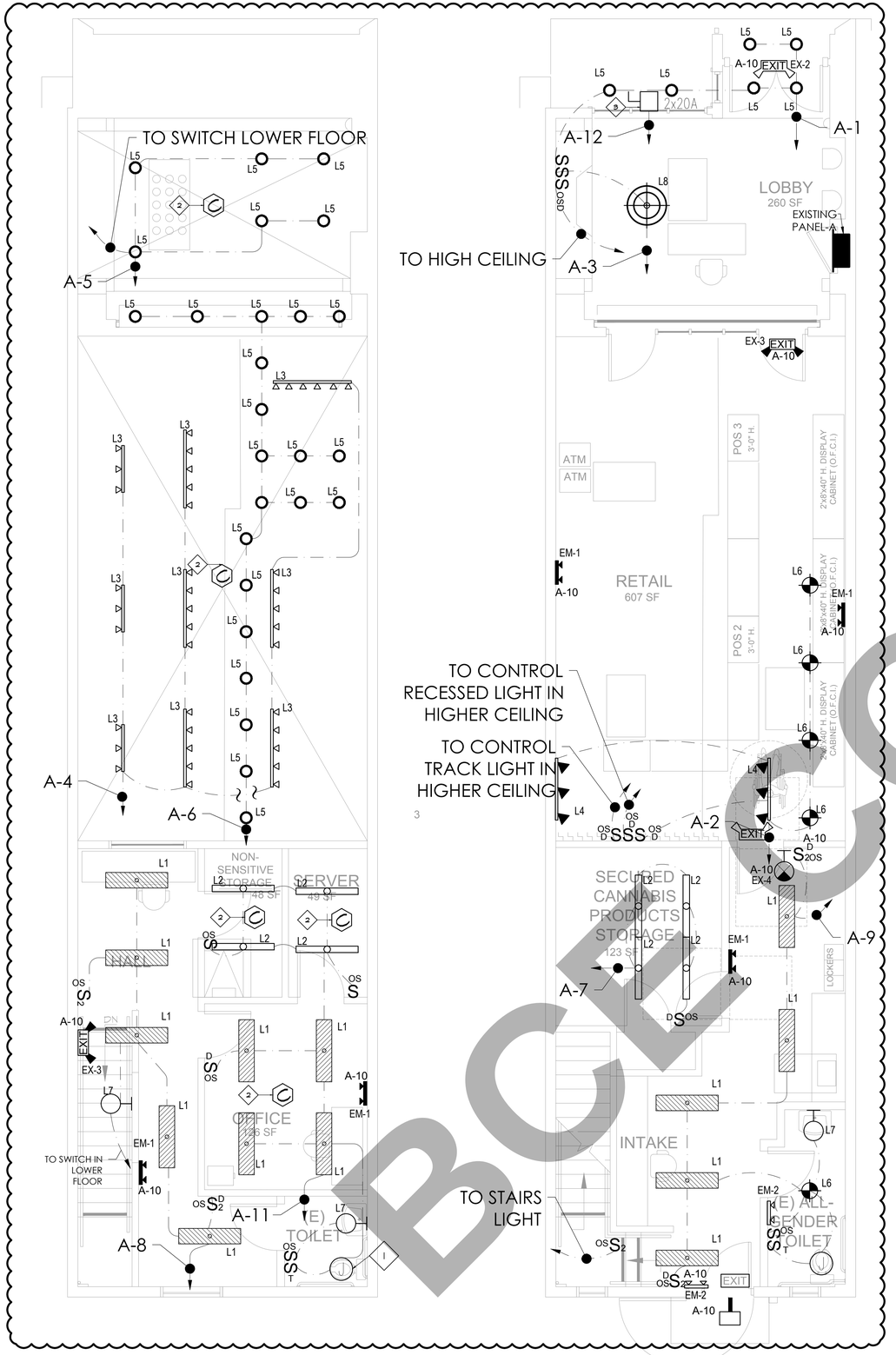
PROJECT: LAUREL VILLAGE

TITLE: **ELECTRICAL SYMBOLS AND GENERAL NOTES**

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO. **E.01**

REV.



SHEET NOTES:

1. PROVIDE HEAVY DUTY JUNCTION BOX, FLUSH IN CEILING FOR EXHAUST FANS
2. FURNISH AND INSTALL SMOKE OR COMBINATION SMOKE AND CARBON MONOXIDE DETECTOR AS REQUIRED. INTERLOCK WITH OTHER DETECTORS
3. PROVIDE DISCONNECT SWITCH AS SIZE INDICATED FOR SIGNAGE LIGHTING

GENERAL FIRE ALARM NOTES

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B. THE FIRE ALARM SYSTEM SHALL BE MONITORED BY A UL LISTED CENTRAL STATION.

C. FIRE ALARM CONTRACTOR SHALL SUBMIT FIRE ALARM SUBMITTALS TO THE OWNER'S REPRESENTATIVE WITHIN 30 DAYS AFTER CONTRACT IS AWARDED.

D. WALL MOUNTED DEVICES SHALL BE 80" AFF TO BOTTOM OF DEVICE UNLESS NOTED OTHERWISE.

E. SURFACE MOUNTING OF FIRE ALARM CONDUIT IS NOT PERMITTED IN FINISHED AREAS.

F. BUILDING IS EQUIPPED WITH A FULLY AUTOMATIC SPRINKLER SYSTEM.

G. REMOVE ALL EXISTING FIRE ALARM SYSTEMS FROM PREVIOUS TENANTS PRIOR TO INSTALLING NEW EQUIPMENT.

H. ALL REQUIRED DOCUMENTATION REGARDING THE DESIGN OF FIRE DETECTION, ALARM, AND COMMUNICATIONS SYSTEMS AND THE PROCEDURES FOR MAINTENANCE, INSPECTION, AND TESTING OF FIRE DETECTION, ALARM, AND COMMUNICATIONS SYSTEMS SHALL BE MAINTAINED AT AN APPROVED, SECURED LOCATION FOR THE LIFE OF THE SYSTEM PER IFC 901.6.2.1.

I. THE FIRE ALARM CONTROL PANEL DISCONNECTING MEANS SHALL HAVE A RED MARKING, SHALL ONLY BE ACCESSIBLE TO AUTHORIZED PERSONNEL, AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT". THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE IDENTIFIED AT THE FIRE ALARM CONTROL UNIT PER NFPA 72 4.4.1.4.2.2 AND 4.4.1.4.2.3.

J. ROUTE ALL CONDUIT TIGHT TO DECK IN ACCORDANCE WITH NEC 300.4(E).

K. FIRE ALARM SYSTEMS SHALL BE INSTALLED PER CURRENT NFPA STANDARDS.FIRE ALARM DEVICE LOCATIONS ARE SHOWN FOR REFERENCE ONLY. THE ELECTRICAL CONTRACTOR SHALL INCLUDE A PRICE IN THE ELECTRICAL BID FOR A LANDLORD APPROVED FIRE ALARM SYSTEM, INCLUDING PLANS AND ALL ASSOCIATED DOCUMENTATION REQUIRED. THESE PLANS SHALL BE SUBMITTED TO THE LOCAL AUTHORITIES HAVING JURISDICTION BY A QUALIFIED AND LICENSED DESIGN-BUILD FIRE ALARM CONTRACTOR FOR A COMPLETE AND APPROVED FIRE ALARM SYSTEM. THE PLANS SHALL BE SIGNED AND SEALED BY THEIR LOCAL DESIGN ENGINEER AND SUBMITTED FOR PLAN REVIEW PRIOR TO RECEIVING SPECIFIC PERMITS FOR THIS WORK. THE FIRE ALARM CONTRACTOR SHALL ALSO SUBMIT ALL SHOP DRAWINGS, BATTERY CALCULATIONS, SPECIFICATION SHEETS, ETC. AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION TO THEIR LOCAL DESIGN ENGINEER FOR REVIEW AND APPROVAL.

LIGHTING GENERAL NOTES

1. ALL JUNCTION BOXES, CONDUITS, AND AIRES SHALL BE SIZED PER NEC.
2. CONNECT ALL EXIT LIGHTS AHEAD OF ANY LOCAL OR AUTOMATIC SWITCHING DEVICE.
3. PROVIDE A CONSTANT HOT FROM PANEL BOARD DIRECTLY TO ALL EMERGENCY BATTERY PACKS/BALLASTS IN EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS. EMERGENCY LIGHTING FIXTURES SHALL TURN ON TO FULL BRIGHTNESS IN CASE OF POWER LOSS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION & MOONING HEIGHTS OF ALL LIGHTING FIXTURES SHOWN ON THIS DRAWING.
5. REFER TO DETAIL SHEET FOR SYMBOLS, SPECIFICATIONS, ABBREVIATIONS, AND LIGHTING FIXTURE SCHEDULE.
6. ALL DEVICES AND EQUIPMENT OUTSIDE THE SCOPE OF WORK ARE EXISTING TO REMAIN U.O.N.
7. CONTRACTOR SHALL PROVIDE AN ACCURATELY TYPED PANEL BOARD SCHEDULE FOR EACH PANEL BOARD.
8. ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROBLEMS PERTAINING TO CIRCUIT AVAILABILITY OR LOAD CAPACITY PRIOR TO INSTALLATION.
9. ALL EXTERIOR LUMINARIES AND ELECTRICAL DEVICES SHALL BE USED AS WEATHERPROOF TYPE.
10. ALL NEW CEILING OCCUPANCY SENSORS SHALL BE DUAL-TECHNOLOGY WITH 1000 SQFT COVERAGE AT 360 DEGREES U.O.N. ON THE DRAWING. COORDINATE EXACT LOCATION AND REQUIREMENTS OF ALL OCCUPANCY SENSORS SHOWN ON THIS DRAWING WITH MANUFACTURER REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR TO PROVIDE POWER PACKS AS REQUIRED.
11. CONTRACTOR SHALL CONFIRM COMPATIBILITY OF ALL LIGHTING CONTROL DEVICES/SWITCHES/DIMMERS WITH LIGHTING FIXTURES AND BALLASTS/DRIVERS PRIOR TO SUBMITTAL.
12. FIXTURE MARKED WITH SUBSCRIPT "(E)" IS EXISTING TO REMAIN, CONTRACTOR TO MAINTAIN CONTINUITY OF BRANCH CIRCUITS.
13. ALL CONDUIT RUNS IN OPEN PLENUM SPACE SHALL BE INSTALLED IN A NEAT MANNER PERPENDICULAR OR PARALLEL TO WALLS AND PAINTED AS DIRECTED BY OWNER.

LIGHTING KEY NOTES

1. PROVIDE WEATHERPROOF JUNCTION BOX WITH 20A 120V BRANCH CIRCUIT TO POWER EXTERIOR SIGNAGE.CONTRACTOR TO PROVIDE 1P-20A RATED TOGGLE SWITCH WITHIN SIGHT IN AN ACCESSIBLE AREA AS A DISCONNECT MEAN AND TO COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER/SIGN VENDOR PRIOR TO ROUGH-IN. EXTERIOR SIGNAGE SHALL BE CONTROLLED VIA WIRELESS SWITCH PACK OR AS DIRECTED BY OWNER.
2. LIGHTING FIXTURES SERVING RESTROOMS SHALL BE 120V RATED. CONNECTED TO THE SAME BRANCH CIRCUIT SERVING EXHAUST FAN, AND CONTROLLED AS SHOWN ON DETAIL SHEET.
3. INTERIOR AND EXTERIOR LIGHTING BRANCH CIRCUITS SERVING THE SPACE SHALL BE CONTROLLED VIA WIRELESS RELAY SWITCH PACKS, COORDINATE WITH OWNER/LIGHTING SYSTEM VENDOR FOR EXACT LOCATIONS/NUMBER OF HUBS/DEVICES, SCHEDULE, WIRELESS DIMMER SWITCHES FOR TRACK LIGHT LOCATIONS AND ALL OTHER SYSTEM REQUIREMENTS PRIOR TO BID AND COMMENCEMENT OF WORK. EXTERIOR LIGHTING FIXTURES SWITCH PACKS AND CONTROL SWITCHES SHALL BE MOUNTED NEXT TO THE PANEL WHERE BRANCH CIRCUIT IS ORIGINATED OR AS DIRECTED BY OWNER/ARCHITECT.
4. NEW EMERGENCY AND EXIT LIGHTING SHALL BE CONNECTED AHEAD OF LOCAL SWITCHING.
5. PROVIDE IN-LINE CURRENT LIMITER AS SHOWN FOR TRACK LIGHTING.

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3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	04/22	A.B

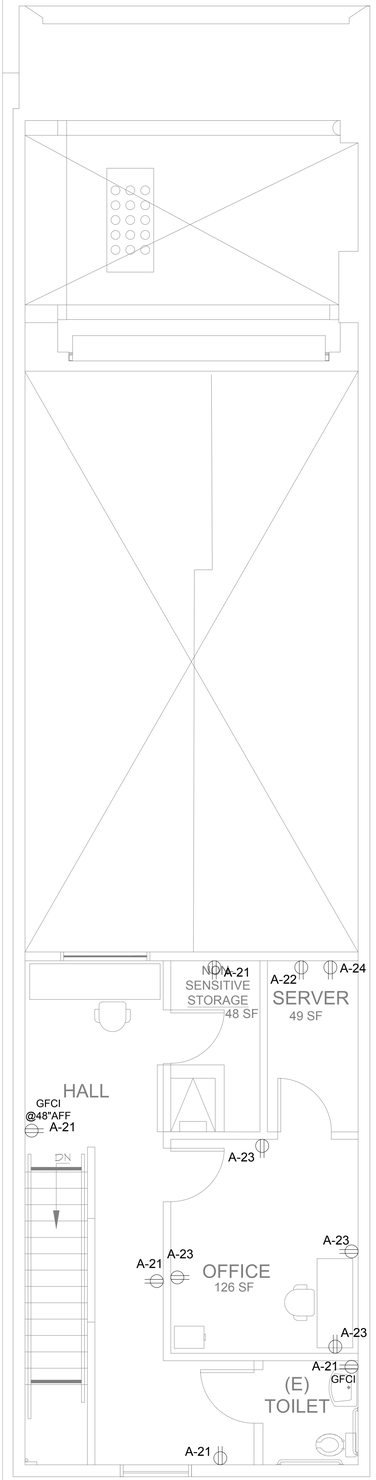
PROJECT: LAUREL VILLAGE

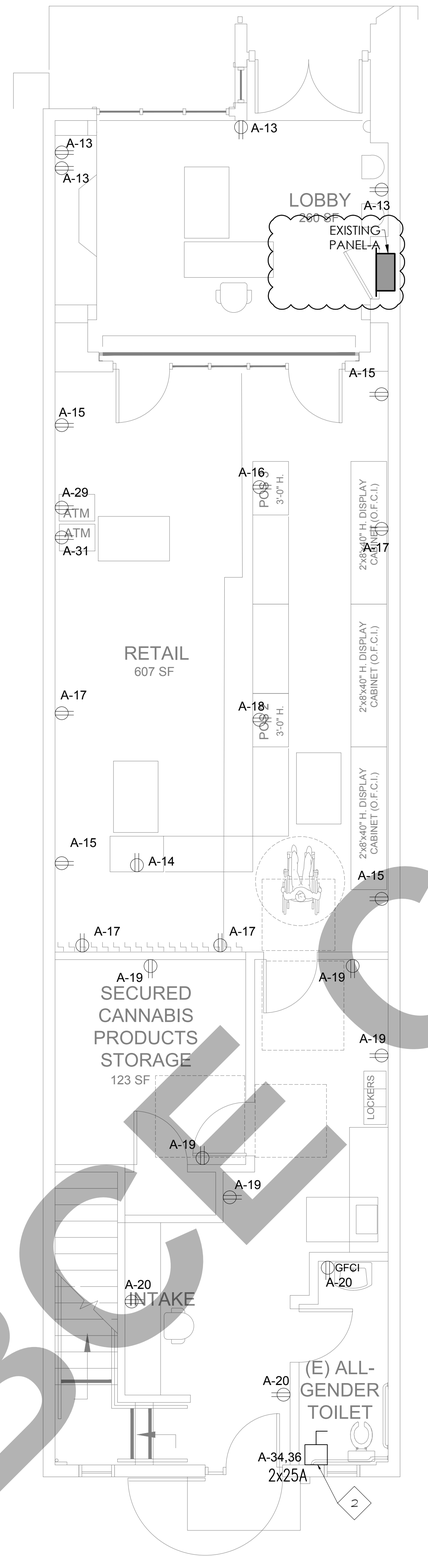
TITLE: **LIGHTING PLAN**

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		1/4"=1'

DRAWING NO. **E.02**

REV.





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SHEET NOTES:

1 -PROVIDE HEAVY DUTY JUNCTION BOX, FLUSH IN CEILING FOR EXHAUST FANS

2 -PROVIDE FUSED DISCONNECT SWITCH FOR RTU

3 -PROVIDE FUSED DISCONNECT SWITCH FOR ELECTRIC WATER HEATER

POWER KEY NOTES

1. PROVIDE (2) 2" EMPTY CONDUITS WITH PULL STRINGS FROM EXISTING TELEPHONE UTILITY SERVICE CABINET/BOARD TO NEW TELEPHONE BOARD LOCATION AS SHOWN, COORDINATE EXACT LOCATION WITH TENANT/ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
2. ABOVE FRONT WINDOW RECEPTACLE. CONTRACTOR TO COORDINATE EXACT LOCATION AND OTHER REQUIREMENTS WITH ARCHITECT/OWNER PRIOR TO INSTALLATION.
3. CONTRACTOR TO PROVIDE WIREMOLD CONCRETE WEATHERPROOF FLUSH FLOOR BOX RFB4 SERIES OR APPROVED EQUAL WITH (1) DUPLEX RECEPTACLES AND TELE/DATA CONNECTIVITY. COORDINATE WITH ARCHITECT/ OWNER/IT CONSULTANT FOR EXACT TYPE OF DEVICE AND OTHER REQUIREMENTS PRIOR TO PURCHASE AND INSTALLATION.
4. PROVIDE (1) 3/4" CONDUIT FOR POWER WIRING AND (2) 1-1/4" FOR LOW VOLTAGE CABLING WITH RING AND STRING FROM FLOOR BOX TO CLOSEST WALL AS SHOWN. COORDINATE EXACT LOCATION AND TERMINATION OF CONDUIT WITH ARCHITECT/IT CONSULTANT PRIOR TO COMMENCEMENT OF WORK.
5. JUNCTION BOX WITH 120v. BRANCH CIRCUIT FOR SECURITY PANEL/DOOR STRIKE AND ACCESS CONTROL, PROVIDE A JUNCTION BOX ABOVE CEIUNG IN AN ACCESSIBLE AREA, COORDINATE EXACT LOCATION, TERMINATION POINTS AND ALL REQUIREMENTS WITH OWNER/ARCHITECT/SECURITY ALARM VENDOR PRIOR TO INSTALLATION. CONNECT TO CIRCUIT B-27. MAKE FINAL CONNECTIONS AS REQUIRED. (TYPICAL)
6. CONTRACTOR TO PROVIDE 120V. 20A BRANCH CIRCUIT AND 2 PHONE LINES TO POWER FIRE ALARM CONTROL PANEL FROM NEW PANEL "B", COORDINATE EXACT LOCATION AND OTHER REQUIREMENTS WITH OWNER/FIRE ALARM CONTRACTOR PRIOR TO INSTALLATION.
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8. CONTRACTOR TO PROVIDE 120V. 20A BRANCH CIRCUIT AND TELE/DATA OUTLET FOR ATM MACHINE, COORDINATE EXACT LOCATION, ELECTRICAL CHARACTERISTICS OF EQUIPMENT, BREAKER/WIRING AND RECEPTACLE NEMA CONFIGURATION WITH OWNER/VENDOR PRIOR TO INSTALLATION.
9. PROVIDE POWER AND TV/DATA OUTLET FOR TV/MENU SCREEN, COORDINATE EXACT LOCATION AND ALL REQUIREMENTS WITH ARCHITECT/TECHNOLOGY DRAWINGS PRIOR TO INSTALLATION. TV OUTLET AND RECEPTACLE TO BE MOUNTED AT 60" A.F.F.
10. CONTRACTOR TO PROVIDE 120V. 20A RECEPTACLE IN AN ACCESSIBLE LOCATION FOR DISHWASHER POWER, PROVIDE 1P-20A TOGGLE SWITCH ABOVE COUNTER FOR CONTROL, COORDINATE SWITCH EXACT LOCATION AND OTHER REQUIREMENTS WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.
11. CONTRACTOR TO PROVIDE JUNCTION BOX WITH 120V. BRANCH CIRCUIT FOR THREAT DETECTION SYSTEM, COORDINATE EXACT LOCATION AND ALL REQUIREMENTS WITH OWNER/VENDOR PRIOR TO INSTALLATION, PROVIDE TRANSFORMER AS NEEDED.
12. CONTRACTOR TO PROVIDE DISCONNECT SWITCH FOR RECEIVING AREA OVERHEAD DOOR, COORDINATE EXACT LOCATION, CONTROL, ELECTRICAL CHARACTERISTICS AND OTHER REQUIREMENTS WITH OWNER/VENDOR PRIOR TO INSTALLATION.
13. PROVIDE DEDICATED BRANCH CIRCUIT FOR PRINTER. EXACT LOCATION, NEMA CONFIGURATION OF RECEPTACLE, WIRING AND BREAKER CHARACTERISTICS FOR EQUIPMENT TO BE VERIFIED WITH OWNER/ MANUFACTURER PRIOR TO ROUGH IN.
14. CONTRACTOR TO PROVIDE (2) 3" EMPTY CONDUITS WITH PULL STRING FROM IT ROOM HA A , (1) 3/4 E C D I I H I G F SECURITY ROOM TO HALLWAY, (1) 3" EMPTY CONDUIT WITH PULL STRING FROM IT ROOM TO SECURITY ROOM, AND (1) 3/4" EMPTY CONDUIT WITH PULL STRING FROM VAULT TO HALLWAY, COORDINATE TERMINATION POINTS AND OTHER REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION.
15. CONTRACTOR TO COORDINATE EXACT LOCATION. MOUNTING HEIGHT AND OTHER REQUIREMENTS OF ELECTRICAL OUTLETS/DEVICES IN VAULT WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.
16. JUNCTION BOX FOR CONNECTION TO ELECTRIC HAND DRYER. COORDINATE CONNECTION REQUIREMENTS PRIOR TO INSTALLATION.

POWER GENERAL NOTES

1. PROVIDE PULL STRINGS IN ALL EMPTY CONDUITS.
2. ALL JUNCTION BOXES, CONDUITS, AND WIRES SHALL BE SIZED PER NEC.
3. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL DEVICES SHOWN ON THE DRAWING. COORDINATE WITH OWNER FOR EXACT LOCATION AND OTHER REQUIREMENTS PRIOR TO ROUGH-IN.
4. ALL HOME RUNS SHALL BE 2#12+1#12 GND IN 3 4" CONDUIT U.O.N.
5. CIRCUIT NUMBERS INDICATED ARE FOR DESIGN PURPOSES ONLY. CONTRACTOR SHALL COORDINATE ACTUAL CIRCUIT NUMBERS AT THE TIME OF INSTALLATION AND TO PROVIDE AN ACCURATELY TYPED PANEL BOARD SCHEDULE FOR EACH PANEL BOARD.
6. ALL DEVICES AND EQUIPMENT OUTSIDE THE SCOPE OF WORK ARE EXISTING TO REMAIN U.O.N.
7. CONTRACTOR SHALL PROVIDE AN ACCURATELY TYPED PANEL BOARD SCHEDULE FOR EACH PANEL BOARD.
8. ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROBLEMS PERTAINING TO CIRCUIT AVAILABILITY OR LOAD CAPACITY PRIOR TO INSTALLATION.
9. CONTRACTOR SHALL REFER TO MECHANICAL/PLUMBING DRAWINGS FOR EXACT LOCATION OF EQUIPMENT AND SCHEDULES. CONTRACTOR SHALL PROVIDE ALL ELECTRICAL DISCONNECTS. BRANCH CIRCUITRY,CIRCUIT BREAKERS AND CONNECTIONS REQUIRED TO POWER EQUIPMENT.
10. CONTRACTOR TO COORDINATE EXACT LOCATION OF DISCONNECT SWITCHES, JUNCTION BOXES AND SINGLE POLE TOGGLE SWITCHES WITH MECHANICAL/PLUMBING CONTRACTORS PRIOR TO INSTALLATION.
11. ALL CONDUIT RUNS IN OPEN PLENUM SPACE SHALL BE INSTALLED IN A NEAT MANNER PERPENDICULAR OR PARALLEL TO WALLS AND PAINTED AS DIRECTED BY OWNER.

CLIENT:

ADDRESS:

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REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	04/22	A.B

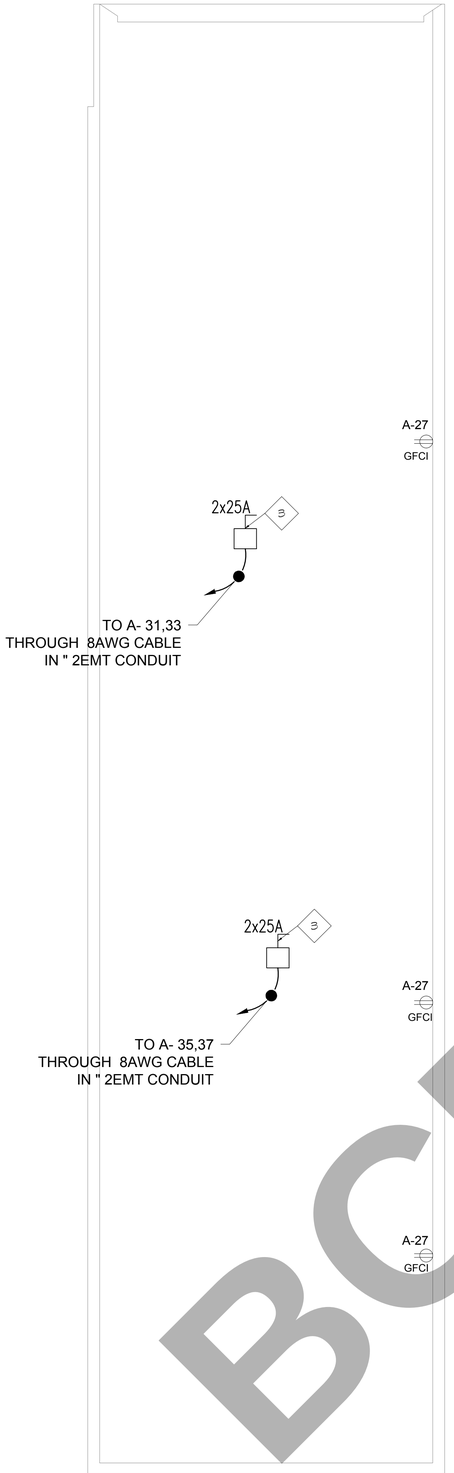
PROJECT: LAUREL VILLAGE

TITLE: **POWER PLAN**

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		1/4"=1'

DRAWING NO. **E.03**

REV.



SHEET NOTES:

1 -PROVIDE HEAVY DUTY JUNCTION BOX, FLUSH IN CEILING FOR EXHAUST FANS

2 -PROVIDE FUSED DISCONNECT SWITCH FOR RTU

3 -PROVIDE FUSED DISCONNECT SWITCH FOR ELECTRIC WATER HEATER

POWER KEY NOTES

1. PROVIDE (2) 2" EMPTY CONDUITS WITH PULL STRINGS FROM EXISTING TELEPHONE UTILITY SERVICE CABINET/BOARD TO NEW TELEPHONE BOARD LOCATION AS SHOWN, COORDINATE EXACT LOCATION WITH TENANT/ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
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REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	04/22	A.B

PROJECT: LAUREL VILLAGE

TITLE: **POWER PLAN ROOF FLOOR**

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		1/4"=1'

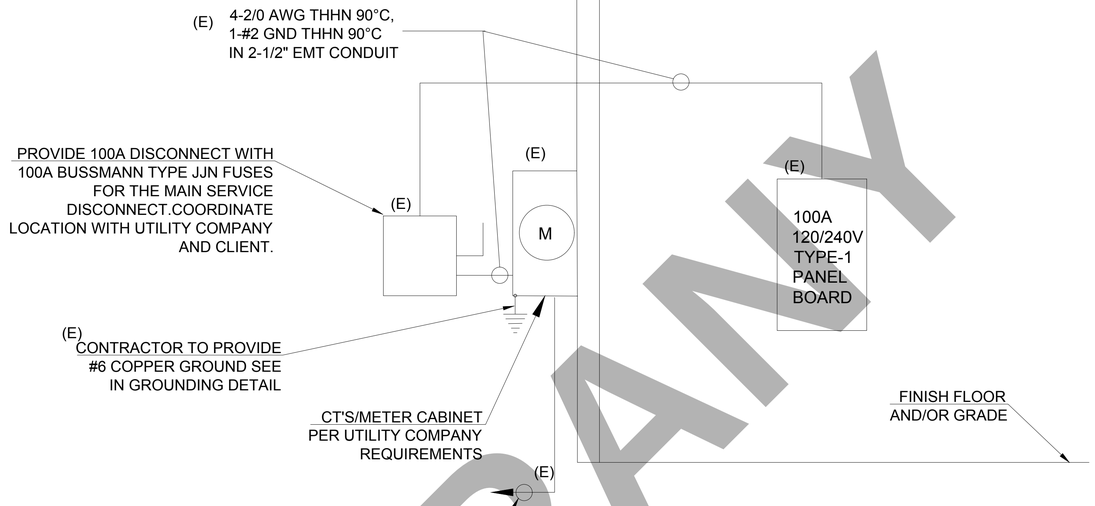
DRAWING NO. **E . 0 4**

REV.

GENERAL NOTES

A. ALL EXISTING COMPONENTS OF THIS ELECTRICAL DIAGRAM ARE TO REMAIN AS INSTALLED AND ARE SHOWN FOR REFERENCE ONLY.
B. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL FIRE PROTECTION
C. ASSOCIATION (NFPA) 70, NATIONAL ELECTRICAL CODE. ALL ITEMS ARE ON AN OR EQUAL BASIS.
D. ALL SINGLE PHASE BRANCH CIRCUITS (RECEPTACLES, LIGHTING, ETC.; ARE 1/2" CONDUIT OR EMT WITH THIN, 90C WIRING, UNLESS NOTED OTHERWISE. ALL OTHER CONDUIT AND WIRING SHALL BE AS INDICATED ON THE PLANS. ACTUAL ROUTING AND HOME RUN GROUPINGS ARE TO BE DETERMINED IN THE FIELD.
E. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC EXCEPT FOR DETAILS AND ELEVATIONS. DO NOT SCALE FROM DIAGRAMMATIC DRAWINGS. EXACT LOCATIONS OF DEVICES AND PANELS ARE TO BE DETERMINED AND ROUGHED-IN DURING CONSTRUCTION TO AVOID INTERFERENCE, TO MEET USER REQUIREMENTS, TO PROVIDE ADEQUATE MOUNTING, AND TO MEET NEC LINEAR ACCESS AND CLEARANCE REQUIREMENTS.
F. BACK TO BACK MOUNTING OF RECEPTACLES IS NOT PERMITTED.
G. IN ADDITION TO THE NEC REQUIREMENTS FOR GFCI PROTECTION FOR RECEPTACLES, THE FOLLOWING RECEPTACLES SHALL ALSO HAVE GFCI PROTECTION: (1)-ALL RECEPTACLES LOCATED WITHIN 8 FEET OF A SINK, (2)-ALL RECEPTACLES WHICH ARE PROVIDED FOR CONVENIENCE IN SERVICING HVAC EQUIPMENT REGARDLESS OF LOCATION.AS REQUIRED TO ACCOMMODATE CONDUCTOR PULLING EASE, FIELD LIFE SAFETY.
H. PROVIDE A LAMICOID NAMEPLATE (WHITE LETTERS ON BLACK BACKGROUND; ON EACH PANELBOARD, MOTOR STARTER,CONTACTOR, TRANSFORMER, ETC. LETTERS SHALL BE 0.75 INCH MAINIMUM.
I. CONTRACTOR SHALL CUT AS REQUIRED TO INSTALL ELECTRICAL EQUIPMENT REPAIR OF FLOOR OR WALLS SHALL BE COORDINATED WITH GENERAL CONTRACTOR CONTRACTOR SHALL ALSO REPAIR ALL OPENINGS LEFT DUE TO EQUIPMENT REMOVAL.
J. CONDUCTORS ARE COPPER UNLESS OTHERWISE SHOWN. ALL CONDUCTORS LARGER THAN #10 SHALL BE STRANDED.
K. PANELBOARDS SHALL CONTAIN A TYPEWRITTEN DIRECTORY WITH A PLASTIC COVER AFFIXED TO THE INSIDE DOOR.

L. ALL FIXTURES, DEVICES, CONDUIT, AND EQUIPMENT SHALL BE SECURED WITH APPROVED HANGERS AND ANCHORS AND IN ACCORDANCE WITH APPROVED STANDARDS OF INSTALLATION.
M. ALL BREAKERS SHOWN IN THE PANELBOARD SCHEDULE SHALL BE RATED AS SHOWN FOR BOTH CIRCUIT CAPACITY AND FAULT CURRENT INTERRUPTING CAPACITY.
N. ALL PANELBOARDS, DISCONNECT SWITCHES, MOTOR STARTERS, AND CONTACTORS SHALL BE NEMA 1, UNLESS OTHERWISE NOTED.
O. ELECTRICAL CONTRACTOR MUST BE AVAILABLE AT TIME OF DBS INSPECTION. COORDINATE WITH GENERAL CONTRACTON.
P. FIELD VERIFY THE AVAILABLE FAULT CURRENT AT THE LANDLORD'S EXISTING PANEL AND PROVIDE A NEW, FULLY RATED, PANEL TO MATCH EXISTING.
Q. CONTRACTOR TO MAKE FINAL CONNECTIONS IN EMS PANEL FOR LANDLORD PROVIDED LIGHTING CIRCUITS. 50% OF THE GENERAL LIGHTING CIRCUITS SHOULD BE ROUTED THROUGH THE CUSTOMER CONTROL ZONE .



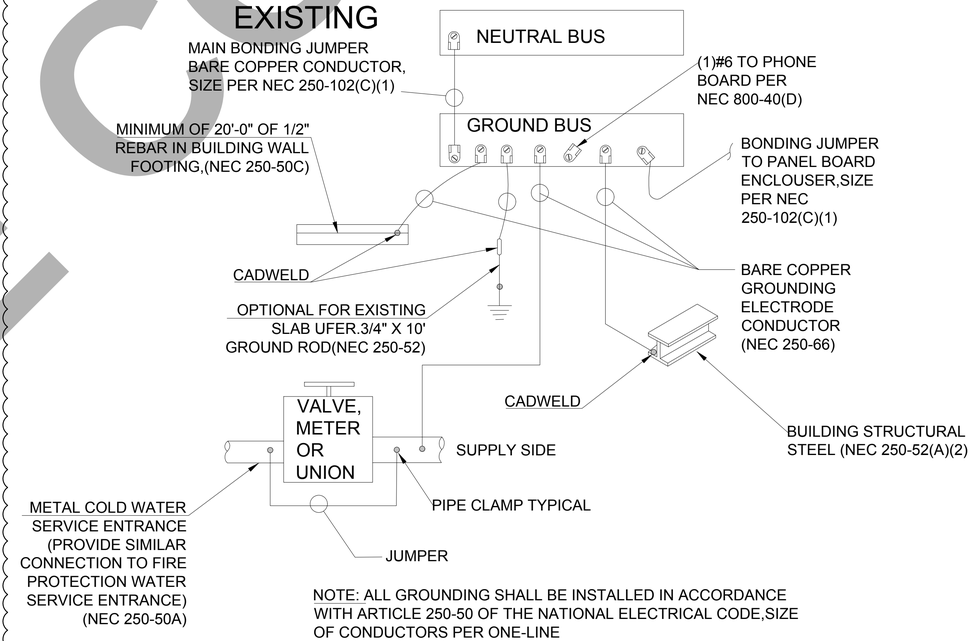
NOTES

1. CONTRACTOR TO INCLUDE IN THE CONTRACT ALL ONE TAP CHARGERS AND FEES FROM THE POWER COMPANY,AND COORDINATE WITH THE POWER COMPANY.
2. PROVIDE PLAQUE STATING LOCATION OF DISCONNECTING MEANS.
3. PANEL BOARD TO HAVE FULLY RATED BREAKERS UNLESS NOTED OTHERWISE.

CONTRACTOR TO PROVIDE 2" C,WITH 2# 3/0 CU,IN EACH,AND(1) EMPTY CONDUIT WITH PULL WIRE UNLESS UTILITY COMPANY STATES OTHERWISE, MINIMUM OF 36" BELOW GRADE, TO UTILITY TRANSFORMER. (CONTRACTOR MAY USE ALUMINUM WIRE ONLY FOR MAIN FEED FROM UTILITY TRANSFORMER TO MAIN SWITCH,ALL OTHER FEEDS MUST BE COPPER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SIZE WIRE AND GROUNDING APPROPRIATELY). IF ALUMINUM CONDUCTORS ARE USED THEN PROVIDE ANTI-OXIDANT PASTE LISTED FOR ALUMINUM CONDUCTORS AT TERMINAL WHERE ALUMINUM IS EXPOSED.PROVIDE CO/ALR LISTED TERMINALS IN WIREWAY FOR ALUMINIUM/COPPER SPLICE.

ONE LINE DIAGRAM

EXISTING



NOTE: ALL GROUNDING SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 250-50 OF THE NATIONAL ELECTRICAL CODE,SIZE OF CONDUCTORS PER ONE-LINE

GROUNDING DETAIL

CLIENT:

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REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	04/22	A.B

PROJECT: LAUREL VILLAGE

TITLE: **ONE LINE DIAGRAM AND GROUNDING**

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO. **E.05**

REV.

Branch Panel: A
Location:BACK LOBBY
Supply From: Utility Meter
Mounting:RECESSED

Enclosure Type 1

Volts: 120/240 Three
Phases: 3
Wires: 3+1

4-2/0 AWG THHN, 1-#2 GND THHN IN 2-1/2" EMT CONDUIT

A.I.C Rating: 10kA
Mains Type: MCCB
Mains Rating: 100A

CKT	CIRCUIT DESCIRPTION	TRIP	POLES	A		B		C		POLES	TRIP	CIRCUIT DESRIPTION	CKT
1	LIGHTING OUTDOOR	15A	1	300	200					1	15A	LIGHTING RETAIL AREA	2
3	CHANDELIER RECEPTION	15A	1			300	500			1	15A	LIGHTING RETAIL AREA	4
5	LIGHTING SPOTS	15A	1					200	300	1	15A	LIGHTING RETAIL AREA	6
7	LIGHTING SECURED CANNABIS PORUDTC STORAGE	15A	1	300	300					1	15A	LIGHTING HALL	8
9	LIGHTING BACK ENTRY/INTAKE	15A	1			300	200			1	15A	EMERGENCY AND EXIT LIGHTS	10
11	LIGHTING STORAGE-OFFICE-TOILET-SERVER	15A	1					450	300	1	15A	SIGNAGE	12
13	RECEPTACLES LOBBY	20A	1	720	300					1	20A	POS WORSTATION-1	14
15	RECEPTACLES RETAIL AREA	20A	1			720	300			1	20A	POS WORSTATION-2	16
17	RECEPTACLES RETAIL AREA	20A	1					720	300	1	20A	POS WORSTATION-3	18
19	RECEPTACLES SECURED STORAGE+INTAKE	20A	1	720	540					1	20A	RECEPTACLES BACK ENTRY+WC	20
21	RECEPTACLES HALL+TOILET	20A	1			720	500			1	20A	SERVER	22
23	RECEPTACLES OFFICE+TOILET	20A	1					720	500	1	20A	SERVER	24
25	SPARE	20A	1		2250					2	25A	WATER HEATER EWH-01	26
27	RECEPTACLES ON ROOF	20A	1			540	2250						28
29	ATM	20A	1					500	500	1	20A	ATM	30
31	RTU-01	25A	2	1100									32
33						1100	2250			2	25A	WATER HEATER EWH-02	34
35	RTU-02	25A	2					1100	2250				36
37				1100									38
39													40
41													42
	TOTAL CONNECTED LOAD (VA)			7830		9680		7840					
	TOTAL CONNECTED CURRENT (A)			65		81		65					

Legend:

Load Classification	Connected Load (VA)	Demand Factor	Estimated Demand (VA)	Panels Totals	
Lighting	3650	125.00%	4563		
Receptacle	8300	60.00%	4980	**Total Conn. Load (kVA):**	25.35
Kitchen Equipment Non Dwelling Unit	0	65.00%	0	**Total Est. Demand (kVA):**	22.9425
Mechanical Equipment	13400	100.00%	13400	**Total Conn. Current (A) Per 1 Phase:**	70.41667
PANELS	0	65.00%	0	**Total Est. Demand Current (A) Per 1 Phase:**	63.72917

Notes

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REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	04/22	A.B

PROJECT: LAUREL VILLAGE

TITLE: **LOAD SCHEDULE**

PROJ. NO. | PROJ. ENGR. | SCALE @ 24X36: NTS

DRAWING NO. **E.06** | REV.

PLUMBING SPECIFICATIONS

THE WORK INCLUDES MODIFICATION TO THE EXISTING PLUMBING SYSTEM AND PROVIDING NEW MATERIALS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING PLUMBING SYSTEM. THE WORK ALSO INCLUDES ROUGH-IN AND FINAL CONNECTIONS TO FOOD SERVICE EQUIPMENT AND BEVERAGE DISPENSING EQUIPMENT PROVIDED BY OTHERS. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND/OR ORDINANCES AND IS SUBJECT TO INSPECTION.

HOOK-UP CHARGES, PERMITS AND ALL OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING PLUMBING SYSTEM ARE INCLUDED AS A PART OF THIS SECTION.

WARRANTY: PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OR OWNER ACCEPTANCE OF THE COMPLETED PROJECT. PROVIDE A SEPARATE LINE ITEM DEDUCT AMOUNT ON THE PROPOSAL FORM TO DELETE WARRANTY SERVICE, AT THE OWNER'S OPTION.

THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, FIXTURES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD ROUGH-IN DRAWINGS FOR PLUMBING FIXTURE INSTALLATION REQUIREMENTS. COMPLY WITH ALL APPLICABLE ADA INSTALLATION REQUIREMENTS.

COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.

PIPING SYSTEMS - GENERAL: ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIALECTIC UNION. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION.

PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

FIXTURES/EQUIPMENT FURNISHED BY OTHERS: PLUMBING CONTRACTOR SHALL PROVIDE UTILITY CONNECTIONS REQUIRED SUCH AS WATER, GAS, AIR, SUPPLIES, WASTE OUTLET, TRAPS, ETC. AT ALL PLUMBING TYPE FIXTURES OR EQUIPMENT FURNISHED BY OWNER, GENERAL CONTRACTOR, FOOD SERVICE CONTRACTOR, EQUIPMENT SUPPLIER, ETC. INCLUDED ARE STOP VALVES, ESCUTCHEONS, AND CHROME PLATED BRASS TUBING WITH COMPRESSION FITTINGS.

SEWER AND WASTE PIPING: PROVIDE ALL DRAINS AND SEWERS WITHIN THE SPACE WITH CONNECTION TO THE EXISTING DRAINAGE SYSTEMS ON-SITE. SANITARY DRAINAGE PIPING ABOVE FLOOR SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE, FITTINGS AND CONNECTIONS. SANITARY DRAINAGE PIPING BELOW GRADE SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE WITH SOLVENT WELD FITTINGS MAY BE USED (WHERE PERMITTED BY CODE/LOCAL AUTHORITIES). ALL DRAINAGE PIPING SHALL BE UNIFORMLY PITCHED, 1/4" PER FOOT UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS, OR INDICATED ON THE DRAWINGS.

VENTS: PROVIDE A COMPLETE SYSTEM OF STANDARD WEIGHT CAST IRON NO-HUB VENT RISERS WHERE THE CEILING SPACE IS USED AS A RETURN AIR PLENUM OR USE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE (WHERE PERMITTED BY CODE/LOCAL AUTHORITIES) WHERE THERE IS A DUCTED RETURN AIR SYSTEM, DO NOT USE PVC PIPE IN RETURN AIR PLENUM SPACES. THE VENT SYSTEM SHALL BE CARRIED THROUGH THE ROOF WITH APPROPRIATE FLASHING.

CONDENSATE AND INDIRECT DRAIN PIPING:PIPING ABOVE FLOOR SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE, FITTINGS AND CONNECTIONS. PIPING BELOW GRADE SHALL BE CO-EXTRUDED PVC DWV(SCHEDULE 40) PIPE WITH SOLVENT WELD FITTINGS.

CLEANOUTS: PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE, CONFORMING TO CODE REQUIREMENTS. PROVIDE SUITABLE WALL OR FLOOR CLEANOUTS WITH ACCESSORIES TO OBSCURE FROM VIEW.

WATER DISTRIBUTION PIPING: LAYOUT WATER PIPING SO THAT THE ENTIRE SYSTEM CAN BE DRAINED. HOT AND COLD WATER PIPING SHALL BE 1/2" MIN. CPVC PIPE WITH SOLVENT FITTING. PROVIDE WATER HAMMER ARRESTERS AT EACH FIXTURE OR GROUP OF FIXTURES AS REQUIRED. INSTALL CHROME PLATED BRASS ESCUTCHEON PLATES AT ALL PENETRATIONS THROUGH FINISHED SURFACES (INCLUDING CABINET INTERIORS).

PIPE INSULATION: INSULATE (AS ALLOWED BY CODE) ALL LISTED SERVICE PIPING AS FOLLOWS. DOMESTIC COLD/HOT WATER, HOT WATER RETURN, STORM WATER PIPING, PROVIDE 1" PREFORMED FIBERGLASS, AS/SS-11, FLAME SPREAD 25, SMOKE DEVELOPED 50, ASTM C-547. FOR CONDENSATE PIPING PROVIDE 1/2" THICK INSULATION OF SAME CHARACTERISTICS AS LISTED FOR 1" ABOVE. WHERE PERMITTED BY LOCAL CODES, PROVIDE 1/2" SELF-ADHESIVE UNICELLULAR FOAM PIPE INSULATION WITH PRE-FORMED PVC FITTING COVERS - EQUAL TO SELF-ADHESIVE ARMSTRONG 2000 WITH K FACTOR OF 0.27 AT 75 DEGREES MEAN TEMPERATURE. INSULATE ANY EXPOSED CONDENSATE PIPING WITH WASTE TEMPERATURE BELOW 60 DEGREES F.

SHUTOFF VALVES, WITH UNIONS SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE, FOOD SERVICE EQUIPMENT ITEM OR OTHER EQUIPMENT ITEM, TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. VALVES SHALL BE EQUAL TO JENKINS #902-T BALL VALVE, CHROME-FINISHED BRONZE, TEFLON SEATS AND PACKING, 400 LB. W.O.G., SOLDER END.

ACCESS PANELS SHALL BE PROVIDED WHERE CONCEALED CONTROL DEVICES, VALVES, ETC. ARE CONCEALED WITHIN WALLS. WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN SUSPENDED CEILINGS, ACCESS PANELS ARE NOT REQUIRED.

PIPING SYSTEM- PVC SCHEDULE 40, SCHEDULE 80 AND CPVC PIPE WITH SOLVENT FITTINGS SHALL BE USED WHERE PEMITTED BY CODE/LOCAL AUTHORITIES.

INSTALLATION: THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. PROCEED AS RAPIDLY AS CONSTRUCTION WILL PERMIT. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SUPPLIES IN PROPER ALIGNMENT WITH FIXTURES. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL, FOR SANITARY JOINT, AND OMIT ESCUTCHEONS.

REPAIR EXISTING PLUMBING SYSTEM COMPONENTS DAMAGED BY CONSTRUCTION OPERATIONS AND RESTORE TO ORIGINAL CONDITIONS.

TEST WATER SYSTEM UNDER 150 PSIG HYDROSTATIC PRESSURE, FOR FOUR (4) HOURS MINIMUM. WHEN TESTING INDICATES MATERIALS OR WORKMANSHIP IS DEFICIENT, REPLACE OR REPAIR AS REQUIRED, AND REPEAT TEST UNTIL STANDARDS ARE ACHIEVED.

ROOF PENETRATIONS SHALL COMPLY WITH "SMACNA" AND "NRCA" STANDARDS, AND WITH THE REQUIREMENTS OF THE EXISTING ROOFING WARRANTY, IF APPLICABLE. DO NOT PERFORM ROOFING PENETRATIONS IN A MANNER WHICH WOULD VOID OR OTHERWISE LIMIT THE EXISTING ROOFING WARRANTY.

GENERAL NOTES

1. THE INTENT OF THESE PLANS AND SPECIFICATIONS IS TO INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND SERVICES NECESSARY TO FURNISH, INSTALL, TEST, AND ADJUST A COMPLETE WORKABLE PLUMBING INSTALLATION AS SHOWN, PRESCRIBED, OR REASONABLY IMPLIED BUT NOT LIMITED TO THAT EXPLICITLY INDICATED IN THE CONTRACT DOCUMENTS, BUT NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE INTENT THEREOF.

2. THE ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE 2019 CALIFORNIA PLUMBING CODE, 2019 CALIFORNIA BUILDING CODE, 2019 CALIFORNIA ENERGY CONSERVATION CODE AND ALL OTHER APPLICABLE CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION. IN THE EVENT OF CONFLICT BETWEEN SPECIFICATIONS, CODES, AND REGULATIONS, THE MORE RESTRICTIVE SHALL APPLY.

3. COORDINATE ENTIRE INSTALLATION OF THE PLUMBING SYSTEM WITH THE WORK OF OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS. REPORT ANY DISCREPANCIES, IN WRITING, TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.

4. CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS WITH ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT IN ACCORDANCE WITH THE SPECIFICATIONS.

5 PROVIDE ONE YEAR WARRANTY ON ALL PARTS AND LABOR.

6. THE DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW SCOPE. CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES TO PROVIDE THE BEST ARRANGEMENT OF ALL DUCT, PIPE, CONDUIT, ETC.

7. ALL CUTTING AND PATCHING OF THE EXISTING STRUCTURE SHALL BE PROVIDED UNDER OTHER SECTIONS OF THE WORK. PROVIDE NECESSARY REQUIREMENTS TO THE PROJECT SUPERINTENDENT.

8. ALL HOT WATER PIPING AND RECIRCULATION PIPING (EXCEPT RUNOUTS 12 FT. OR SHORTER TO INDIVIDUAL FIXTURES) SHALL BE INSULATED TO MEET THE REQUIREMENTS OF THE 2019 CALIFORNIA ENERGY CONSERVATION CODE

9. CONDENSATE DRAINS SHALL BE PROVIDED FOR EACH AIR CONDITIONING UNIT. HORIZONTAL CONDENSATE DRAINS ABOVE ANY CEILING SHALL BE INSULATED WITH MIN. 3/8" THICK CLOSED CELL INSULATION.

10. PIPING:
   A. WASTE, VENT, AND STORM DRAIN PIPING SHALL BE CO-EXTRUDED PVC SCHEDULE 40) PIPE
   B. WATER PIPE SHALL BE CPVC PIPE
   C. CONDENSATE PIPING SHALL BE CO-EXTRUDED PVC (SCHEDULE 40) PIPE
   D. INSIDE GAS PIPING SHALL BE BLACK IRON SCHEDULE 40 WITH MALLEABLE IRON FITTINGS. OUTSIDE SHALL BE GALVANIZED IRON SCHEDULE 40 WITH GALVANIZED FITTINGS. GAS LINE TO BE PAINTED GRAY IN COLOR. A 24 HOUR METERED GAS TEST SHALL BE REQUIRED.
   E. ALL PIPING NOT ENCLOSED IN CONDITION SPACE OR AT EXTERIOR WALLS SHALL BE INSULATED.
   F. PIPING: PVC SCHEDULE 40, SCHEDULE 80 AND CPVC PIPING WITH SOLVENT WELD FITTINGS SHALL BE USED WHERE PERMITTED BY CODE/LOCAL AUTHORITIES

11. ALL VENTS OR EXHAUSTS SHALL BE AT LEAST 10 FT. AWAY OR 3 FT. ABOVE ANY WINDOW, DOOR, OPENING, OR AIR INTAKE.

12. CLEANOUTS SHALL BE INSTALLED PER THE CALIFORNIA PLUMBING CODE.

13. PROVIDE WATER TIGHT FLASHINGS WHEREVER PIPES PASS THROUGH EXTERIOR WALLS, ROOFS, OR FLOORS.

14. PROVIDE ISOLATION FOR ALL PIPES THAT COME IN CONTACT WITH THE STRUCTURE.

15. LOCATION OF EXISTING UTILITIES AND POINTS OF CONNECTION ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICES PRIOR TO STARTING WORK OF THIS SECTION. IF INDICATED POINTS OF CONNECTION CANNOT BE MADE TO EXISTING UTILITIES AS FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLING ANY WORK WHICH MAY BE AFFECTED.

16. VALVES SHALL BE NIBCO, JENKINS, HAMMOND, RED & WHITE OR APPROVED EQUAL. SERVICE PRESSURE SHALL BE SUITABLE FOR SERVICE INTENDED. THE MAIN WATER SHUT OF VALVE SHALL BE A FULL PORT BALL TYPE AND APPROVED FOR SERVICE INTENDED.

17. CONTRACTOR SHALL PROVIDE ALL SHUT OFF VALVES AS NECESSARY TO ISOLATE ANY EQUIPMENT, PLUMBING ITEMS, OR FIXTURES, THAT MAY NEED SERVICING OR ARE SUBJECT TO FAILURE WHETHER OR NOT SUCH VALVES ARE SHOWN ON THE DRAWINGS.

18. PROVIDE HANGERS AND SUPPORTS AS REQUIRED. PLUMBERS TAPE AND WIRE ARE NOT ACCEPTABLE.

19. CONTRACTOR IS RESPONSIBLE FOR HIS OWN TRENCHING, BACKFILL, AND COMPACTION OF TRENCHES NECESSARY TO COMPLETE HIS SCOPE OF WORK. BACKFILLED TRENCHES SHALL BE RETURNED TO THEIR ORIGINAL GRADE UNLESS NOTED OTHERWISE.

20. CONTRACTOR SHALL AFFIX A MAINTENANCE LABEL TO ALL EQUIPMENT REQUIRING ROUTINE MAINTENANCE AND SHALL PROVIDE MAINTENANCE AND OPERATIONAL MANUALS IN ACCORDANCE WITH THE SPECIFICATIONS.

21. ALL EQUIPMENT THAT REQUIRES KEYS OR SPECIAL TOOLS TO OPERATE SHALL SUPPLY THE OWNER WITH TWO OF ANY SUCH KEYS OR TOOLS FOR EACH PIECE OF EQUIPMENT THAT REQUIRE THE SAME.

25. ANY CHANGE OR DEVIATION FROM THESE PLANS OR SPECIFICATIONS SHALL REQUIRE THE APPROVAL, IN WRITING, OF THE ENGINEER PRIOR TO COMMENCEMENT OF SUCH WORK.

26. ALL PLUMBING, ELECTRICAL, AND GAS LINES SHALL BE CONCEALED WITHIN THE THE BUILDING STRUCTURE TO AS GREAT EXTENT AS POSSIBLE. ALL LINES NOT CONCEALED SHALL BE SECURED 6" OFF THE FLOOR AND 3/4" FROM THE WALLS USING STANDOFF BRACKETS

27. AN APPROVED BACKFLOW PREVENTOR SHALL BE PROPERLY INSTALLED UPSTREAM OF ANY POTENTIAL HAZARD BETWEEN THE POTABLE WATER SUPPLY AND SOURCE OF COMTAMINATION.

28. WATER SUPPLY CARBONATORS SHALL BE PROTECTED BY AN APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTOR. THE RELIEF VALVE SHALL DRAIN IN-DIRECTLY TO A FLOOR SINK WITH A 1" MIN. AIR GAP.

PLUMBING LEGEND

SYMBOL	ABBREV	DESCRIPTION
	SS or W	NEW SEWER OR WASTE
	V	NEW VENT
	CW	NEW COLD WATER
	HW	NEW HOT WATER
	G	NEW GAS
	CD	NEW CONDENSATE DRAIN
CA	CA	COMPRESSED AIR
	FCO	FLOOR CLEANOUT
	WCO	WALL CLEANOUT
	FD	FLOOR DRAIN
	FS	FLOOR SINK
	TP	TRAP PRIMER & TRAP PRIMER PIPING
	SOV	SHUT-OFF VALVE
	CV	CHECK VALVE
	PRV	BACKFLOW PREVENTER W SOV'S
	T & P	
	DN	PIPE DOWN
	UP	PIPE UP
	POC	POINT OF CONNECTION
7	-	PLUMBING NOTE CALL-OUT
	ABV	ABOVE
	AFF	ABOVE FINISH FLOOR
	AP	ACCESS PANEL
	BEL	BELOW
	BLDG	BUILDING
	CLG	CEILING
	CONT	CONTINUATION
	EL	ELEVATION
	FIN	FINISH
	FL	FLOOR
	GR	GRADE
	NTS	NOT TO SCALE
	OC	ON CENTER
	S= %	SLOPE AT A PERCENTAGE
	SHT	SHEET
	TYP	TYPICAL
	VTR	VENT THRU ROOF

PLUMBING / GENERAL NOTES

BATHTUBS AND WHIRLPOOL BATHTUBS, THE MAX. HOT WATER TEMPERATURE DISCHARGING SHALL BE LIMITED TO 120 DEGREES. CPC 414/2019
BATHTUBS WASTE OPENING IN FLOOR OVER CRAWL SPACES SHALL BE PROTECTED BY A METAL SCREEN NOT EXCEEDING 12" OR SOLID COVER. CPC 313.12.4 2019
SHOWERS AND TUB-SHOWERS COMBINATIONS IN ALL BUILDINGS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE, THERMOSTATIC, OR COMBINATION OF BOTH THAT PROVIDE SCALD AND THERMAL SHOCK PROTECTION. VALVES SHALL BE ADJUSTED TO DELIVER A MAXIMUM MIXED WATER
SETTING OF 120 DEGREES FAHRENHEIT. THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED A SUITABLE CONTROL FOR MEETING THIS PROVISION. 418.0 CPC/2019
VERIFY AND WHERE WATER PRESSURE EXCEEDS 80 PSI AN APPROVED PRESSURE REGULATOR PRECEDED BY AN ADEQUATE STRAINER SHALL BE INSTALLED 608.2 CPC / 2019
1-INSTALL TEMPERATURE AND PRESSURE RELIEF VALVE WITH MINIMUM 34" DRAIN PIPE AND TERMINATE TO THE EXTERIOR OF THE BUILDING OVER WINDOW, DOOR OR VISIBLE LOCATION. DISCHARGE FROM A RELIEF VALVE INTO A WATER HEATER PAN SHALL BE PROHIBITED CPC 608.5. 510.8.
2-PROVIDE (ON THE PLANS) A GAS PIPING DIAGRAM OF THE GAS PIPING SYSTEM THAT INCLUDES ALL PIPE SIZES, PIPE LENGTHS AND BTU RATINGS.

3-SUBMIT GAS LOAD CALCULATIONS IN ACCORDANCE WITH CPC TABLE 12-B TO VERIFY THE PIPE SIZES ARE ADEQUATE FOR THE MAXIMUM DELIVERY CAPACITY OF CUBIC FEET OF GAS PER HOUR.
4- A WHOLE HOUSE HAS TEST IS REQUIRED UPON COMPLETION OF THE INSTALLATION, ALTERATION, OR REPAIR OF ANY GAS PIPING.
THE CITY SHALL BE NOTIFIED WHEN GAS PIPING IS READY FOR INSPECTION.
5- 2 GPM SHOWER FIXTURE, MAX.1.5 GPM BATHROOM FAUCET, MAX. 2 GPM KITCHEN FAUCET, AND MAX 1.28 WATER CLOSET TO CONFORM TO CITY GREEN REQUIREMENTS.

BATHROOMS: PROVIDE AN EXHAUST FAN (AT LEAST 50 CFM) DUCTED TO THE OUTSIDE (MINIMUM 4" DIAMETER FLEX DUCT WITH A MAXIMUM LENGTH OF 70")WITH A MINIMUM VENTILATION RATE OF 100 CFM, IDENTIFY THE REQUIREMENT FOR A BACKDRAFT DAMPER ON THE DUCT, AN ENERGY STAR COMPLIANT EXHAUST FAN THAT IS CONTROLLED BY A HUMIDITY SENSOR THAT IS CAPABLE OF BEING ADJUSTED BETWEEN ≤ 50-PERCENT TO 80-PERCENT HUMIDITY; AND A SEPARATE SWITCH FROM THE LIGHT UNLESS THE FAN IS ALLOWED TO OPERATE WITH THE LIGHT SWITCHED OFF.

6-NOTE THAT ALL PLUMBING VENTS SHALL TERMINATE NOT LESS THAN 6" ABOVE ROOF NOR LESS THAN 1' FROM ANY VERTICAL SURFACE. VENTS SHALL TERMINATE NOT LESS THAN 10' FROM OR 3' ABOVE ANY WINDOW, DOOR OPENING AIR INTAKE, OR VENT SHAFT NOR 3' FROM LOT LINE.
(2019 CPC 906) IF WATER PRESSURE EXCEEDS 80 PSI, AND EXPANSION TANK AND AN APPROVED PRESSURE REGULATOR SHALL BE INSTALLED. (2019 CPC608.2)
NON-REMOVABLE BACK FLOW PRE-VENTER OR BIBB-TYPE VACUUM BREAKER WILL BE INSTALLED ON ALL EXTERIOR HOSE BIBS. (2019 CPC603.4.7)
HOT WATER RE-CIRCULATING SYSTEM IS INSTALLED, THE ENTIRE LENGTH OF HOT WATER PIPES SHALL BE INSULATED. (2019 CALIFORNIA ENERGY REGULATIONS 150 (J)) HOT WATER PIPE FROM THE WATER HEATER TO THE KITCHEN WILL BE INSULATED. (2019 CALIFORNIA ENERGY REGULATIONS 151(F)8 D)

NOTES:
1-PROJECTS WHICH DISTURB LESS THAN ONE ACRE OF SOIL SHALL MANAGE STORM WATER DRAINAGE DURING CONSTRUCTION BY ONE OF THE FOLLOWING: A. RETENTION BASINS. B. WHERE STORM WATER IS CONVEYED TO A PUBLIC DRAINAGE SYSTEM, WATER SHALL BE FILTERED BY USE OF A BARRIER SYSTEM, WATTLE OR OTHER APPROVED METHOD.
2-SITE GRADING OR DRAINAGE SYSTEM WILL MANAGE ALL SURFACE WATER FLOWS TO KEEP WATER FROM ENTERING BUILDINGS (SWALES, WATER COLLECTION, FRENCH DRAINS, ETC.). CGC SECTION 4.106.3. EXCEPTION: ADDITIONS NOT ALTERING THE DRAINAGE PATH.
3-WHEN A SHOWER IS PROVIDED WITH MULTIPLE SHOWER HEADS, THE SUM OF FLOW TO ALL THE HEADS SHALL NOT EXCEED 1.8 GPM @ 80 PSI, OR THE SHOWER SHALL BE DESIGNED SO THAT ONLY ONE HEAD IS ON AT A TIME. CGC SECTION 4.303.1.3.2.
4-LANDSCAPE IRRIGATION WATER USE SHALL HAVE WEATHER OR SOIL BASED CONTROLLERS. CGC SECTION 4.304.1.
5-THE PLANS THAT A MINIMUM OF 65% OF CONSTRUCTION WASTE IS TO BE RECYCLED. CGC SECTION 4.408.1.
6-THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION WASTE MANAGEMENT PLAN, PER CGC SECTION 4.408.2.
7-THE BUILDER IS TO PROVIDE AN OPERATION MANUAL (CONTAINING INFORMATION FOR MAINTAINING APPLIANCES, ETC.) FOR THE OWNER AT THE TIME OF FINAL INSPECTION. CGC SECTION 4.410.1.
8-THE GAS FIREPLACE(S) SHALL BE A DIRECT-VENT SEALED- COMBUSTION TYPE. WOODSTOVE OR PELLET STOVES MUST BE US EPA PHASE II RATED APPLIANCES. CGC SECTION 4.503.1.

WATER SAVING STANDARDS.

THE WATER SAVING PERFORMANCE STANDARDS FOR A PLUMBING FIXTURE ARE THOSE ESTABLISHED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI). CURRENT REVISION, OR THE FOLLOWING STANDARDS, WHICHEVER ARE THE MORE RESTRICTIVE
1.THE MAXIMUM FLOW FROM A SINK OR LAVATORY FAUCET OR A FAUCET AERATOR SHALL NOT EXCEED 0 5 GALLONS OF WATER PER MINUTE AT A PRESSURE OF 60 POUNDS PER SQUARE INCH WHEN TESTED IN ACCORDANCE WITH ANSI TESTING PROCEDURES
2.THE MAXIMUM VOLUME OF WATER PER FLUSH FROM A TOILET SHALL NOT EXCEED AN AVERAGE OF 1 28 GALLONS WHEN TESTED IN ACCORDANCE WITH ANSI TESTING PROCEDURES
3. THE MAXIMUM VOLUME OF WATER PER FLUSH FROM A URINAL AND THE ASSOCIATED FLUSH VALVE, IF ANY, SHALL NOT EXCEED AN AVERAGE OF ONE GALLON WHEN TESTED IN ACCORDANCE WITH ANSI TESTING PROCEDURES

SPECIAL NOTICE TO CONTRACTORS

1. ALL CONTRACTORS (GENERAL CONTRACTOR AND SUB-CONTRACTORS) BIDDING THIS PROJECT ARE REQUIRED TO VISIT THE JOB SITE AND VERIFY THE EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BID. CONTRACTORS ARE TO CAREFULLY REVIEW ALL CONSTRUCTION DOCUMENTS AND NOTE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED AT THE JOB SITE PRIOR TO SUBMISSION OF ANY BID. THE BUILDING OWNER REPRESENTATIVE LISTED BELOW MAY BE CONTACTED FOR ACCESS TO THE JOB SITE.
2. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING THE LOCATION AND CONDITION OF ALL POINTS OF CONNECTION, LOCATION AND CONDITION OF ALL BUILDING (ROOF/FLOOR/CEILING) PENETRATIONS, LOCATION AND CONDITION OF ALL UTILITIES AND BUILDING SYSTEMS INCLUDING, BUT NOT LIMITED TO, GAS, WATER, SEWER, VENT, ELECTRICAL, BUILDING MECHANICAL SYSTEMS, DUCT CONNECTIONS, EXHAUST/OUTSIDE AIR CONNECTIONS, SECURITY, FIRE ALARM, DATA, AND PHONE PRIOR TO SUBMISSION OF THEIR BID.
3. ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED SHALL BE BROUGHT TO THE ATTENTION, IN WRITING, TO THE ARCHITECT AND/OR ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

CLIENT:

ADDRESS:
3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

NOTES:
1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
00	FOR APPROVAL	04/22	A.B

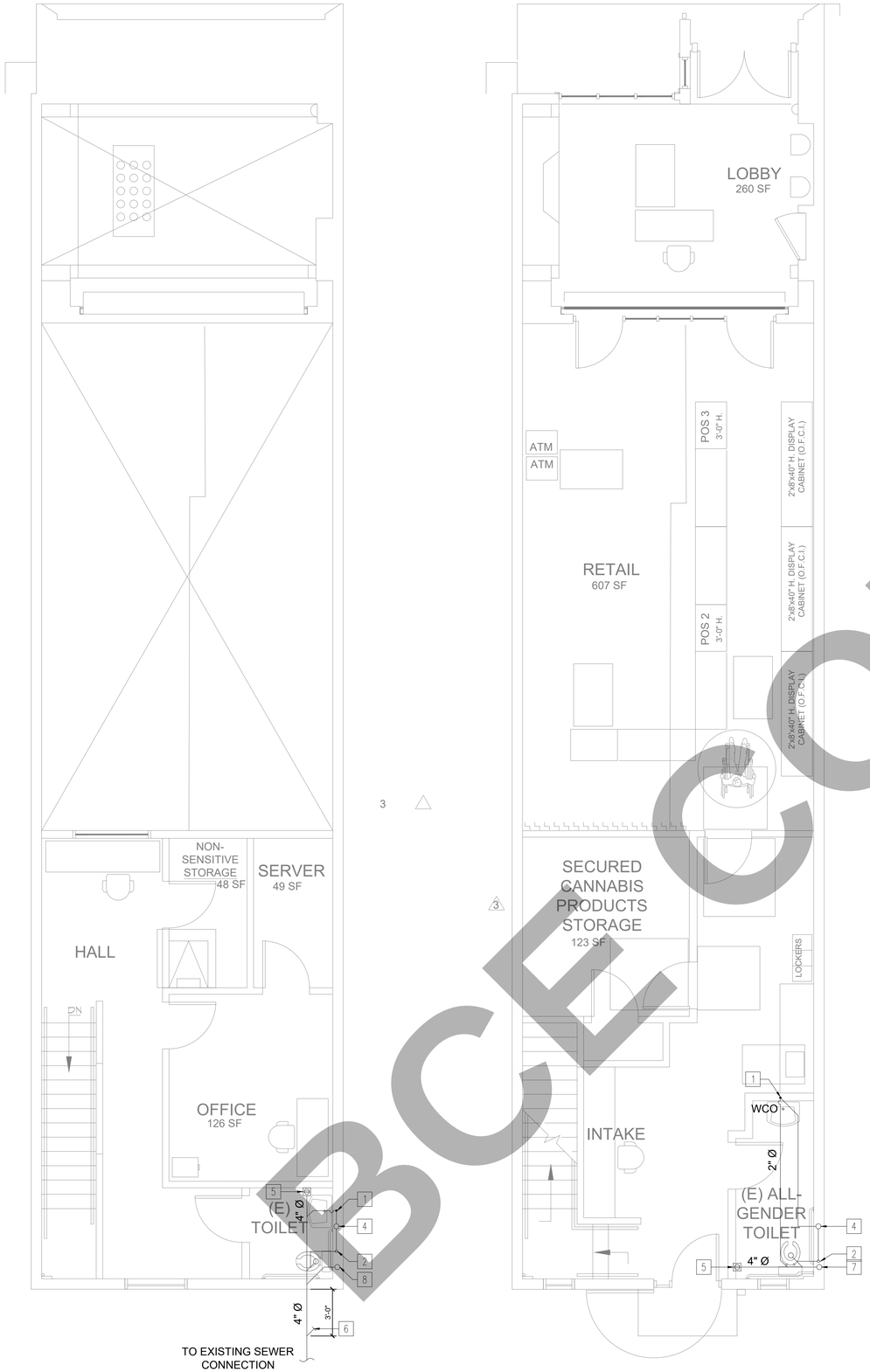
PROJECT:
LAUREL VILLAGE

TITLE:
PLUMBING LIST OF SYMBOLS AND GENERAL NOTES.

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.
P0.0

REV.



GENERAL NOTES:

1. PRIOR TO PERFORMING WORK, CONTRACTOR TO COORDINATE EXACT PIPE SIZES, INVERT ELEVATIONS, PRESSURES FOR LOCATIONS OF ANY SEWER, WATER PIPING AND WATER METER WITH CIVIL UTILITIES DRAWINGS, AND ANY OTHER ENGINEER AS APPLICABLE.
2. PRIOR TO PERFORMING WORK, CONTRACTOR TO COORDINATE PIPE ROUTING WITH ALL OTHER TRADES AND EXISTING FIELD CONDITIONS.
3. REFER TO MECHANICAL PLANS FOR PLUMBING SPECIFICATION OF MATERIAL, INSULATION AND INSTALLATION REQUIREMENTS.
4. CONTRACTOR IS RESPONSIBLE FOR ROUGH-IN COORDINATION AND LOCATIONS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS AND FIXTURES.
5. CONTRACTOR IS RESPONSIBLE FOR ANY REQUIRED CUTTING AND PATCHING.
6. ALL NOTCHING, BORING, AND CUTTING OF HOLES IN WALL STUDS AND FLOOR JOISTS SHALL BE PERFORMED BASED ON THE LATEST ADOPTED AND APPROVED EDITION OF THE BUILDING CODE.
7. ALL PLUMBING FIXTURES SHALL BE OF WATER CONSERVATION TYPE AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
8. ALL WATER PIPING SHALL BE INSTALLED ON INTERIOR SIDE OF THE BUILDING WALL INSULATION.
9. CONTRACTOR SHALL PROVIDE VALVES LOCATED ABOVE LAY-IN CEILING OR 24"x24" CEILING ACCESS PANEL COORDINATE FINAL LOCATION AND SIZE WITH ARCHITECT. PROVIDE BALANCING VALVES FOR HOT WATER RETURN SYSTEM AS REQUIRED.
10. ALL SANITARY DRAINAGE PIPING 3" AND SMALLER SHALL BE SLOPED AT ¼" PER FOOT. PIPING 4" AND LARGER SHALL BE SLOPED AT ⅛" PER FOOT.
11. ALL CONDENSATE DRAIN PIPING SHALL BE SLOPED AT ¼" PER FOOT AND PROVIDE ACCESSIBLE CLEANOUTS AT ALL CHANGES OF DIRECTION.
12. VENTS THAT TERMINATE AT THE ROOF SHALL BE A MINIMUM OF 10' FROM ANY FRESH AIR INTAKE.
13. REFER TO THE PLUMBING DIAGRAMS FOR GUIDANCE OF INSTALLATION INTENT. CONTRACTOR IS TO PROVIDE ALL COMPONENTS NECESSARY TO MEET THE DESIGN INTENT, WHETHER SHOWN IN DIAGRAM OR NOT.

PLUMBING SHEET NOTES

1 → WASTE DROP AND 2" VENT RISE.
2 → 2" VENT RISE TO HIGH LEVEL.
3 → 1-1/2" VENT RISE TO HIGH LEVEL.
4 → 3" VENT STACK TO ABOVE.
5 → 4" FLOOR CLEAN-OUT.
6 → OUTDOOR CLEAN-OUT.
7 → 4" WASTE STACK TO BELOW.
8 → 4" WASTE STACK FROM ABOVE.

PLUMBING PIPING MATERIAL SCHEDULE

PIPING SYSTEM	LOCATION	ACCEPTABLE PIPING MATERIAL
WASTE & VENT	BELOW AND ABOVE GRADE	ASTM D 2665 PVC SCHEDULE 40, SOCKET FITINGS DWV
	FROM SECOND TO FIRST FLOOR	ASTM A 888 CAST IRON, NO HUB SYSTEM

MINIMUM PIPE SIZE PER FIXTURE

FIXTURE UNIT	DR (INCH)	VENT (INCH)
SHOWER	3	2
WATER CLOSET	4	2
LAVATORY	1-1/2	2
KITCHEN SINK	2	2
DISHWASHER	1-1/2	2
BATHTUB	3	2
LAUNDRY MACHINE	1-1/2	2

CLIENT:

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3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
00	FOR APPROVAL	04/22	A.B

PROJECT:

LAUREL VILLAGE

TITLE:

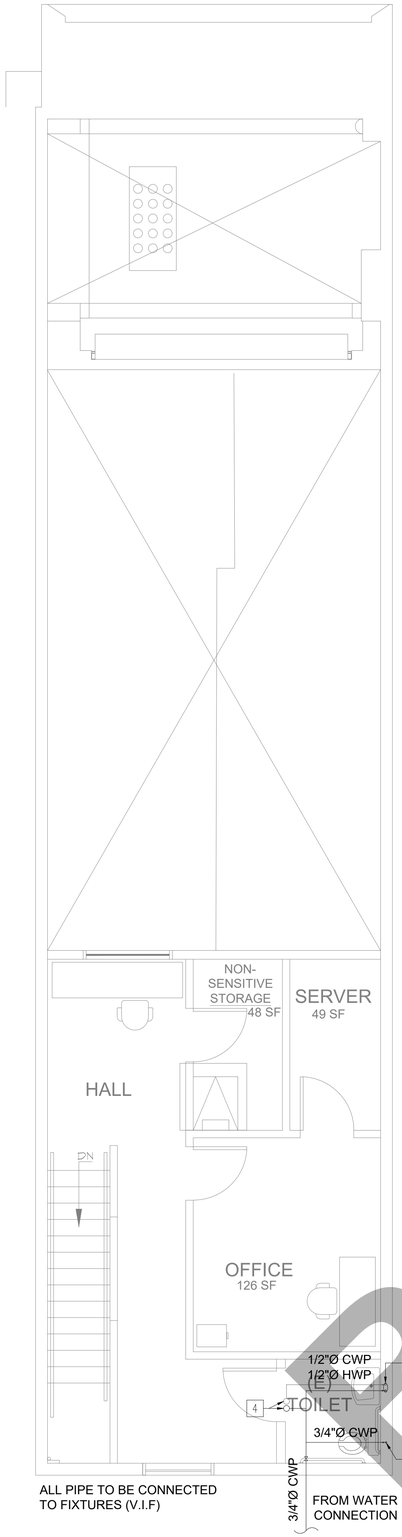
SANITARY LAYOUTS

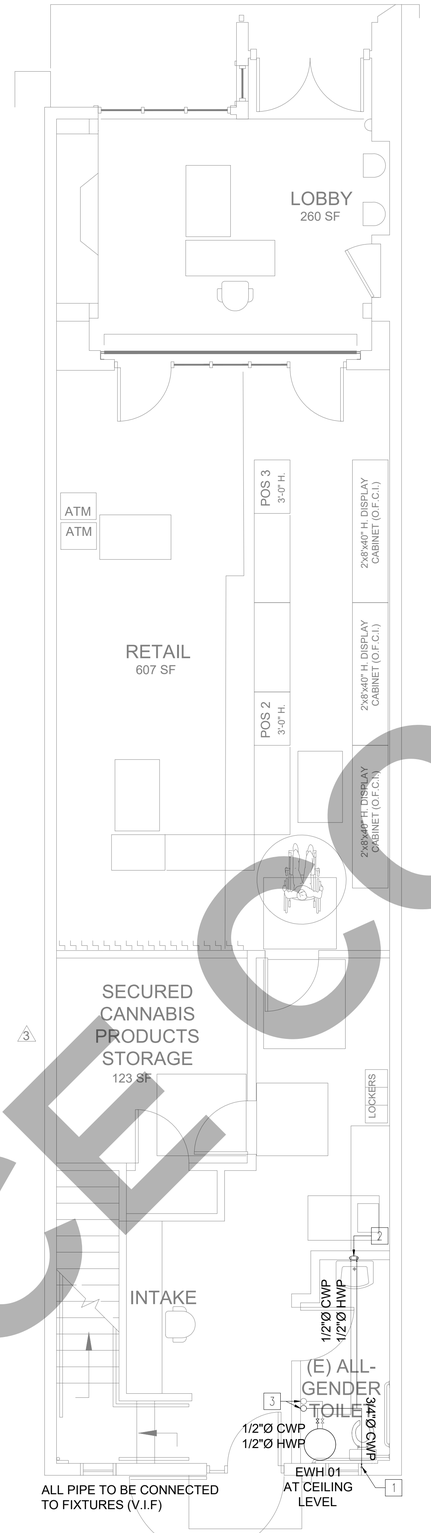
PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		1/4"=1'-0"

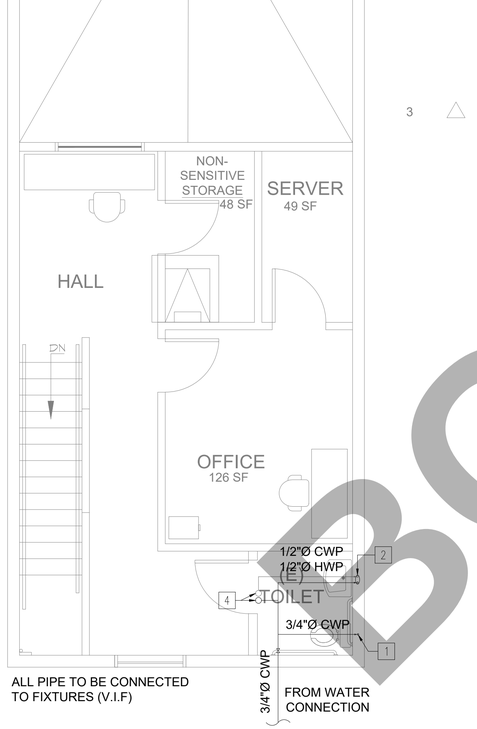
DRAWING NO.

P 1 . 0

REV.







GENERAL NOTES:

1. PRIOR TO PERFORMING WORK, CONTRACTOR TO COORDINATE EXACT PIPE SIZES, INVERT ELEVATIONS, PRESSURES FOR LOCATIONS OF ANY SEWER, WATER PIPING AND WATER METER WITH CIVIL UTILITIES DRAWINGS, AND ANY OTHER ENGINEER AS APPLICABLE.
2. PRIOR TO PERFORMING WORK, CONTRACTOR TO COORDINATE PIPE ROUTING WITH ALL OTHER TRADES AND EXISTING FIELD CONDITIONS.
3. REFER TO MECHANICAL PLANS FOR PLUMBING SPECIFICATION OF MATERIAL, INSULATION AND INSTALLATION REQUIREMENTS.
4. CONTRACTOR IS RESPONSIBLE FOR ROUGH-IN COORDINATION AND LOCATIONS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS AND FIXTURES.
5. CONTRACTOR IS RESPONSIBLE FOR ANY REQUIRED CUTTING AND PATCHING.
6. ALL NOTCHING, BORING, AND CUTTING OF HOLES IN WALL STUDS AND FLOOR JOISTS SHALL BE PERFORMED BASED ON THE LATEST ADOPTED AND APPROVED EDITION OF THE BUILDING CODE.
7. ALL PLUMBING FIXTURES SHALL BE OF WATER CONSERVATION TYPE AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
8. ALL WATER PIPING SHALL BE INSTALLED ON INTERIOR SIDE OF THE BUILDING WALL INSULATION.
9. CONTRACTOR SHALL PROVIDE VALVES LOCATED ABOVE LAY-IN CEILING OR 24"x24" CEILING ACCESS PANEL COORDINATE FINAL LOCATION AND SIZE WITH ARCHITECT. PROVIDE BALANCING VALVES FOR HOT WATER RETURN SYSTEM AS REQUIRED.
10. ALL SANITARY DRAINAGE PIPING 3" AND SMALLER SHALL BE SLOPED AT ¼" PER FOOT. PIPING 4" AND LARGER SHALL BE SLOPED AT ⅛" PER FOOT.
11. ALL CONDENSATE DRAIN PIPING SHALL BE SLOPED AT ⅛" PER FOOT AND PROVIDE ACCESSIBLE CLEANOUTS AT ALL CHANGES OF DIRECTION.
12. VENTS THAT TERMINATE AT THE ROOF SHALL BE A MINIMUM OF 10' FROM ANY FRESH AIR INTAKE.
13. REFER TO THE PLUMBING DIAGRAMS FOR GUIDANCE OF INSTALLATION INTENT. CONTRACTOR IS TO PROVIDE ALL COMPONENTS NECESSARY TO MEET THE DESIGN INTENT, WHETHER SHOWN IN DIAGRAM OR NOT.

PLUMBING SHEET NOTES

1 — DCW DROP IN WALL.

2 — DCW & DHW DROP IN WALL.

3 — DCW/DHW/DHWR FROM BELOW FLOOR.

3 — DCW/DHW/DHWR TO ABOVE FLOOR.

SCHEDULE No. 1

ELECTRIC WATER HEATER SCHEDULE

TAG	EWH-01
LOCATION	TOILET
MANUFACTURER	AO SMITH
MODEL	ENSB-30*
TYPE	ELECTRIC
RATED STORAGE (gal.)	30
RECOVERY (GPH @90°F)	21
STANDARD ELEMENT WATTAGE (W)	4500
WATER CONNECTION (.IN)	3/4
APPROX. WEIGHT (lbs)	95

PLUMBING PIPING MATERIAL SCHEDULE

PIPING SYSTEM	LOCATION	ACCEPTABLE PIPING MATERIAL
DOMESTIC WATER	BELOW GRADE	ASTM B 88 TYPE K SOLDERED COPPER
	ABOVE GRADE	PEX A COMPRESSION JOINT

BUILDING WATER LOAD		
DESCRIPTION	LOAD FU	PIPE SIZE PEX
DCW	7.0	3/4"
DHW	2.0	1/2"
TOT. COMBINED	9.0	3/4"

CLIENT:

ADDRESS:

3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

NOTES:

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REV. NO.	DESCRIPTION	DATE	BY
00	FOR APPROVAL	04/22	A.B

PROJECT:

LAUREL VILLAGE

TITLE:

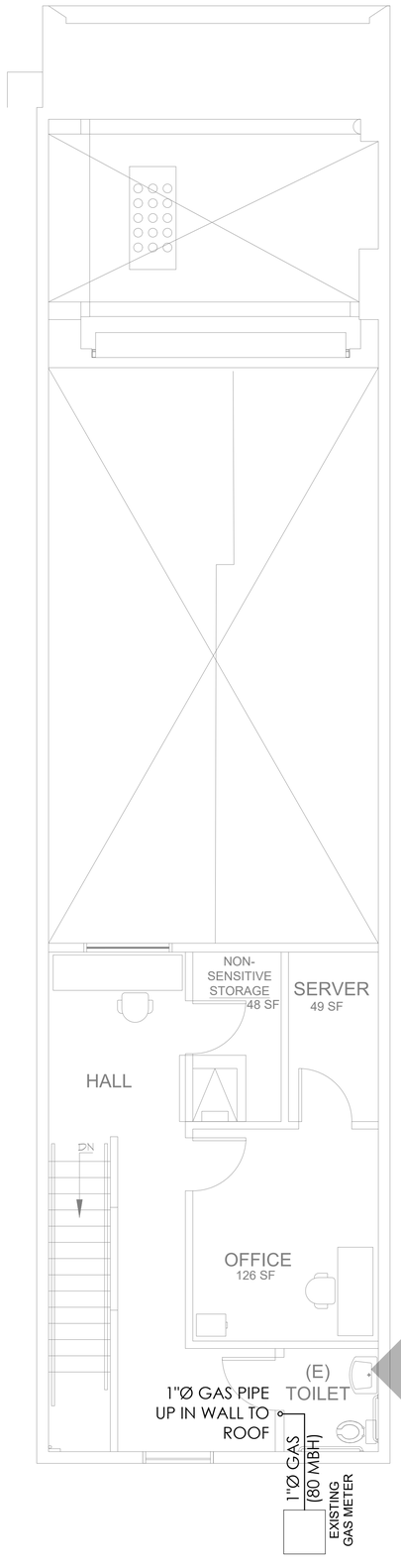
WATER SUPPLY LAYOUTS.

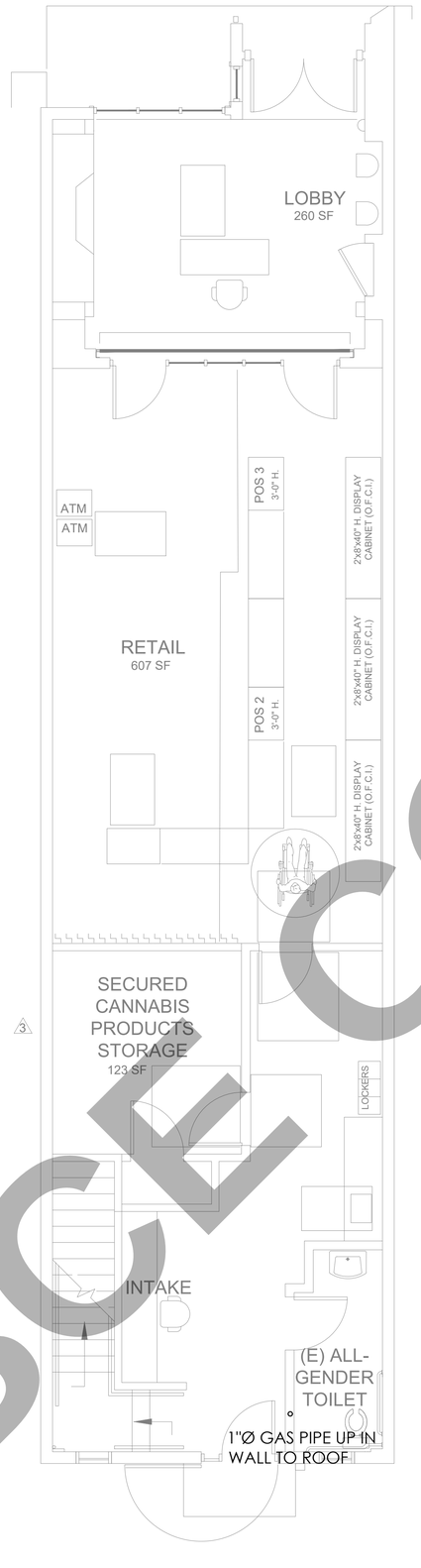
PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		1/4"=1'-0"

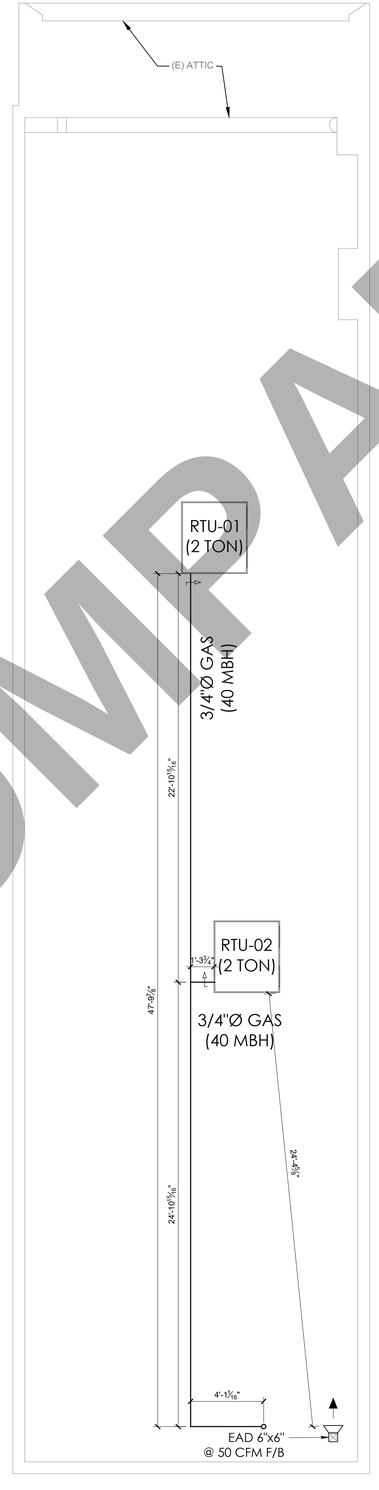
DRAWING NO.

P 2 . 0

REV.







ROOF

GAS PIPING INSTALLATIONS

TABLE 402.4(1)
SCHEDULE 40 METALLIC PIPE

Gas	Natural
Inlet Pressure	Less than 2 psi
Pressure Drop	0.3 in. w.c.
Specific Gravity	0.60

PIPE SIZE (inch)													
Nominal	½	¾	1	1¼	1½	2	2½	3	4	5	6	8	10	12
Actual ID	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	4.026	5.047	6.065	7.981	10.020	11.938
Length (ft)	**Capacity in Cubic Feet of Gas Per Hour**													
10	151	273	514	1,060	1,580	3,050	4,860	8,580	17,500	31,700	51,300	105,000	191,000	303,000
20	99	188	353	726	1,090	2,090	3,340	5,900	12,000	21,800	35,300	72,400	132,000	208,000
30	72	151	284	583	873	1,680	2,680	4,740	9,660	17,500	28,300	58,200	106,000	167,000
40	62	129	243	499	747	1,440	2,290	4,050	8,270	15,000	24,200	49,800	95,400	143,000
50	55	114	215	442	662	1,280	2,030	3,590	7,330	13,300	21,500	44,100	80,100	127,000
60	50	104	195	400	600	1,160	1,840	3,280	6,640	12,000	19,500	40,000	72,600	115,000
70	46	95	179	368	552	1,060	1,690	3,000	6,110	11,100	17,900	36,800	66,800	106,000
80	42	89	167	343	514	989	1,580	2,790	5,680	10,300	16,700	34,200	62,100	98,400
90	40	83	157	322	482	928	1,480	2,610	5,330	9,650	15,600	32,100	58,300	92,300
100	38	79	148	304	455	877	1,400	2,470	5,040	9,110	14,800	30,300	55,100	87,200
125	33	70	131	269	403	777	1,240	2,190	4,460	8,080	13,100	26,900	48,800	77,300
150	30	63	119	244	366	704	1,130	1,980	4,050	7,320	11,900	24,500	44,500	70,000
175	28	58	109	224	336	648	1,050	1,820	3,720	6,730	10,900	22,400	40,700	64,400
200	26	54	102	209	313	602	960	1,700	3,460	6,260	10,100	20,800	37,900	59,900
250	23	48	90	185	277	534	851	1,500	3,070	5,550	8,990	18,500	33,500	53,100
300	21	43	82	168	251	484	771	1,360	2,780	5,030	8,150	16,700	30,400	48,100
350	19	40	75	154	231	445	709	1,250	2,560	4,630	7,490	15,400	28,000	44,300
400	18	37	70	143	215	414	660	1,170	2,380	4,310	6,970	14,300	26,000	41,200
450	17	35	66	135	202	389	619	1,090	2,230	4,040	6,540	13,400	24,400	38,600
500	16	33	62	127	191	367	585	1,030	2,110	3,820	6,180	12,700	23,100	36,500
550	15	31	59	121	181	349	556	982	2,006	3,620	5,870	12,100	21,900	34,700
600	14	30	56	115	173	333	530	937	1,910	3,460	5,600	11,500	20,900	33,100
650	14	29	54	110	165	318	508	897	1,830	3,310	5,360	11,000	20,000	31,700
700	13	27	52	106	159	306	488	862	1,760	3,180	5,150	10,600	19,200	30,400
750	13	26	50	102	153	295	470	830	1,690	3,060	4,960	10,200	18,500	29,300
800	12	26	48	99	148	285	454	802	1,640	2,960	4,790	9,840	17,900	28,300
850	12	25	46	95	143	275	439	776	1,580	2,860	4,640	9,530	17,300	27,400
900	11	24	45	93	139	267	426	752	1,530	2,780	4,500	9,240	16,800	26,600
950	11	23	44	90	135	259	413	731	1,490	2,700	4,370	8,970	16,300	25,800
1,000	11	23	43	87	131	253	402	711	1,450	2,620	4,250	8,720	15,800	25,100
1,100	10	21	40	83	124	240	382	675	1,380	2,490	4,030	8,290	15,100	23,800
1,200	NA	20	39	79	119	229	364	644	1,310	2,380	3,850	7,910	14,400	22,700
1,300	NA	20	37	76	114	219	349	617	1,260	2,280	3,680	7,570	13,700	21,800
1,400	NA	19	35	73	109	210	335	592	1,210	2,190	3,540	7,270	13,200	20,900
1,500	NA	18	34	70	105	203	323	571	1,160	2,110	3,410	7,010	12,700	20,100
1,600	NA	18	33	68	102	196	312	551	1,120	2,030	3,290	6,770	12,300	19,500
1,700	NA	17	32	66	98	189	302	533	1,090	1,970	3,190	6,550	11,900	18,800
1,800	NA	16	31	64	95	184	293	517	1,050	1,910	3,090	6,350	11,500	18,300
1,900	NA	16	30	62	93	178	284	502	1,020	1,850	3,000	6,170	11,200	17,700
2,000	NA	16	29	60	90	173	276	488	1,000	1,800	2,920	6,000	10,900	17,200

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square inch = 6.895kPa, 1-inch water column = 0.2488 kPa,
1 British thermal unit per hour = 0.2931 W, 1 cubic foot per hour = 0.0283 m³/h, 1 degree = 0.01745 rad.

Notes:
1. NA means a flow of less than 10 cfh.
2. All table entries have been rounded to three significant digits.

THE TOTAL GAS PIPE LENGTH FROM GAS METER TO THE FARTHEST EQUIPMENT IS APPRX. 85 FEET.

ALL GAS PIPES ARE METALLIC SCHD. 40

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REV. NO.	DESCRIPTION	DATE	BY
00	FOR APPROVAL	04/22	A.B

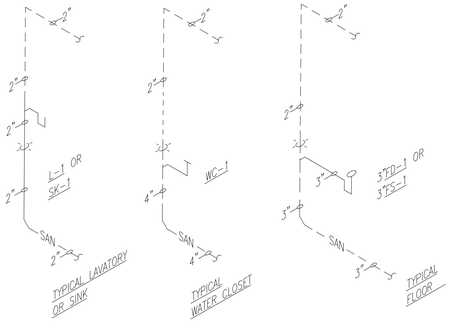
PROJECT:
LAUREL VILLAGE

TITLE:
GAS LAYOUTS.

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		3/16"=1'-0"

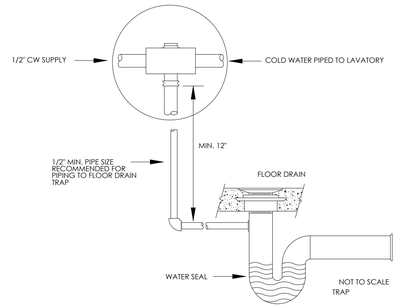
DRAWING NO.
P 3.0

REV.

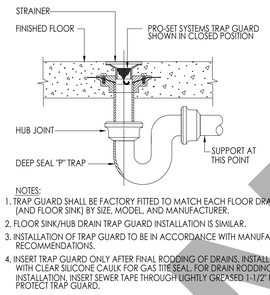


1 TYPICAL WASTE AND VENT RISERS

SCALE: NONE



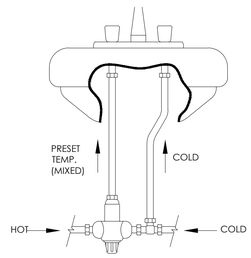
2 TRAP PRIMER



NOTES:
1. TRAP GUARD SHALL BE FACTORY FITTED TO MATCH EACH FLOOR DRAIN (AND FLOOR SINK) BY SIZE, MODEL AND MANUFACTURER.
2. FLOOR SINK/HUB DRAIN TRAP GUARD INSTALLATION IS SIMILAR.
3. INSTALLATION OF TRAP GUARD TO BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. INSERT TRAP GUARD ONLY AFTER FINAL RODDING OF DRAINS. INSTALL TRAP GUARD WITH CLEAR SILICONE CAULK FOR GAS TIGHT SEAL. FOR DRAIN RODDING AFTER INSTALLATION, INSERT SEWER TAPE THROUGH LIGHTLY GREASED 1-1/2" PVC PIPE TO PROTECT TRAP GUARD.

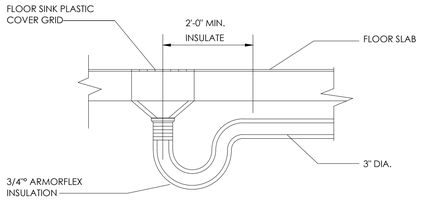
3 FLOOR DRAIN WITH TRAP SEAL PROTECTION

SCALE: NONE



ANTI-SCALD MIXING VALVE

NO SCALE

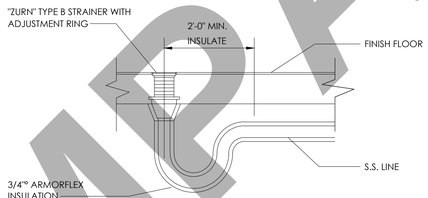


CONTRACTOR TO REFER TO PLUMBING DRAWINGS FOR SIZE AND LOCATION OF SANITARY SEWER LINE.

NOTE:
G.C. TO INSULATE ANY DRAIN OR P-TRAP UNDER SLAB THAT NORMALLY HOLDS WATER

FLOOR SINK DETAIL

NO SCALE



CONTRACTOR TO REFER TO PLUMBING DRAWINGS FOR SIZE AND LOCATION OF SANITARY SEWER LINE.

NOTE:
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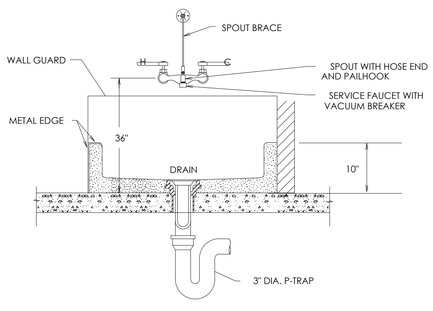
FLOOR DRAIN DETAIL

NO SCALE



MOP SINK DETAIL

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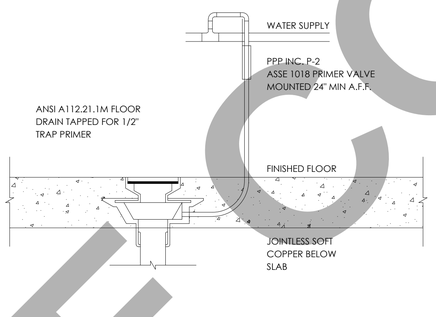
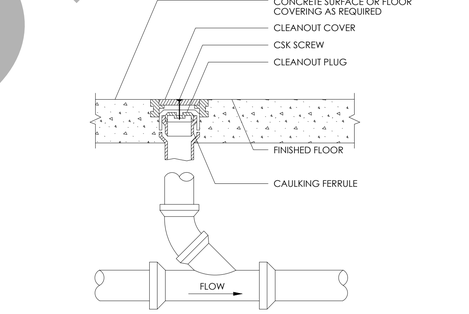


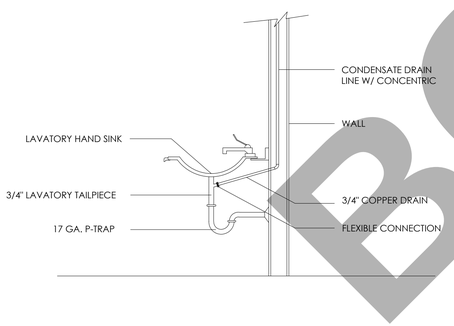
TRAP PRIMER DETAIL

NO SCALE



FLOOR CLEANOUT DETAIL

NO SCALE



CONDENSATE DETAIL

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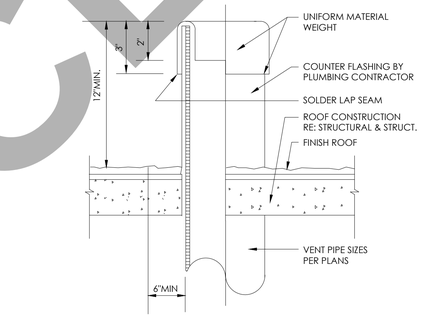
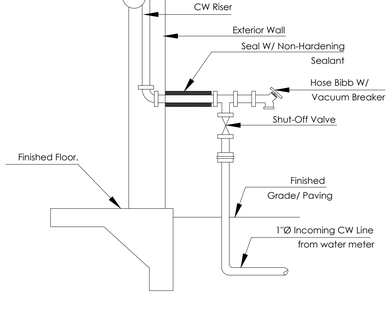


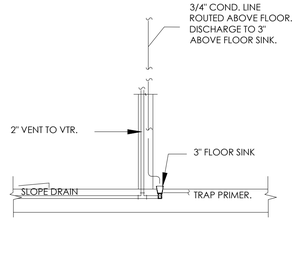
VENT THRU ROOF DETAIL

NO SCALE



WATER ENTRY DETAIL

NO SCALE



COND. ON FLOOR SINK DETAIL

NO SCALE

CLIENT:

ADDRESS:

3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

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REV. NO.	DESCRIPTION	DATE	BY
00	FOR APPROVAL	04/22	A.B

PROJECT:

LAUREL VILLAGE

TITLE:

PLUMBING GENERAL DETAILS.

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.

P 4 . 0

REV.

Project Name:	3415 California St TI	NRCC-PRF-01-E	Page 1 of 17
Project Address:	3415 California St San Francisco 94118	Calculation Date/Time:	13:00, Fri, Mar 03, 2023
Input File Name:	2849_3415 California St, San Francisco, CA 94118_Energy Analysis_V8_.cibd19x		

A. GENERAL INFORMATION

1	Project Location (city)	San Francisco	8	Standards Version	Compliance2019
2	CA Zip Code	94118	9	Compliance Software (version)	EnergyPro 8.3
3	Climate Zone	3	10	Weather File	OAKLAND_724930_CZ2010.epw
4	Total Conditioned Floor Area in Scope	1,773 ft²	11	Building Orientation (deg)	(N) 0 deg
5	Total Unconditioned Floor Area	0 ft²	12	Permitted Scope of Work	ExistingAlteration
6	Total # of Stories (Habitable Above Grade)	2	13	Building Type(s)	Nonresidential
7	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance					Building Components Complying Prescriptively	
Envelope (see Table G)	☒ Performance	Covered Process: Commercial Kitchens	☐ Performance		*The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).*	
	☐ Not Included		☒ Not Included			
Mechanical (see Table H)	☒ Performance	Covered Process: Computer Rooms	☐ Performance		Indoor Lighting (Unconditioned)§140.6	*NRCC-LTI-E*
	☐ Not Included		☒ Not Included		Outdoor Lighting §140.7	*NRCC-LTO-E*
Domestic Hot Water (see Table I)	☒ Performance	Covered Process: Laboratory Exhaust	☐ Performance		Sign Lighting §140.8	*NRCC -LTS-E*
	☐ Not Included		☒ Not Included		Mandatory Measures	
Lighting (Indoor Conditioned, see Table K)	☒ Performance				*Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)*	
	☐ Not Included				Electrical Power Distribution §110.11	*NRCC-ELC-E*
Solar Thermal Water Heating (see Table I)	☐ Performance				Commissioning §120.8	*NRCC-CXR-E*
	☒ Not Included				Solar Ready §110.10	*NRCC-SRA-E*

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C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ²-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	33.98	45.00	-11.02
Space Cooling	55.82	47.49	8.33
Indoor Fans	127.44	87.58	39.86
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	21.05	17.35	3.70
Indoor Lighting	83.52	123.02	-39.50
ENERGY STANDARDS COMPLIANCE TOTAL	**321.81**	**320.44**	**1.37 (0.4%)**

[1] *Notes: The number in parenthesis following the Compliance Margin in column 4. represents the Percent Better than Standard.*

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS[1]

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	81.63	81.63	--
Process	--	--	--
Other Ltg	--	--	--
Process Motors	--	--	--
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**403.44**	**402.07**	**1.4 (0.3%)**

[1] *Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.*

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C3. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	0.0	--	30.5	40.4	-9.9
Space Cooling	2.9	2.3	0.6	--	--	--
Indoor Fans	7.8	5.4	2.4	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	0.9	1.1	-0.2	7.0	--	7.0
Indoor Lighting	5.1	7.6	-2.5	--	--	-->
Compliance Total	**16.7**	**16.4**	**0.3**	**37.5**	**40.4**	**-2.9**
Receptacle	5.0	5.0	0.0	0.5	0.5	0.0
Process	--	--	--	--	--	--
Other Ltg	--	--	--	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	**21.7**	**21.4**	**0.3**	**38.0**	**40.9**	**-2.9**

D. EXCEPTIONAL CONDITIONS

This project uses the Simplified Geometry Performance Modeling Approach which is not capable of modeling daylighting controls and assumes the prescriptive Secondary Daylit Control requirements are met. PRESCRIPTIVE COMPLIANCE documentation (form NRCC-LTI-02-E) for the requirements of section 140.6(d) Automatic Daylighting Controls in Secondary Daylit Zones is required.

The user model includes space(s) that are designed to be served by mechanical cooling systems, but the cooling systems were not included in the simulation model. A cooling system has been modeled for both the proposed and standard cases.

The user model includes space(s) without sufficient cooling equipment. Cooling equipment has been added to the model to meet cooling loads.

E. HERS VERIFICATION

This Section Does Not Apply

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G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

Opaque Surfaces & Orientation	Total Gross Surface Area (ft²)	Total Fenestration Area (ft²)	Window to Wall Ratio (%)
North-Facing[1]	147 ft²	98 ft²	67.0%
East-Facing[2]	878 ft²	0 ft²	00.0%
South-Facing[3]	299 ft²	42 ft²	14.0%
West-Facing[4]	726 ft²	8 ft²	01.1%
Total	**2,049 ft²**	**148 ft²**	**07.2%**
Roof	1,330 ft²	0 ft²	00.0%

Notes:
[1] *North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).*
[2] *East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).*
[3] *South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).*
[4] *West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).*

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1 Surface Name	2 Surface Type	3 Area (ft²)	4 Framing Type	5 Cavity R-Value	6 Continuous R-Value	7 Units	8 Value	9 Description of Assembly Layers	10 Status[1]
R-0 Wall Metal Stud + WS_10	ExteriorWall	2049	NA	0	NA	U-Factor	0.407	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Gypsum Board - 1/2 in.	E
R-0 Wall Metal Stud + WS_101	InteriorWall	1781	NA	0	NA	U-Factor	0.337	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Gypsum Board - 1/2 in.	E
Slab On Grade_18	UndergroundFloor	1333	NA	0	NA	F-Factor	0.73	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0	E

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G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1 Surface Name	2 Surface Type	3 Area (ft²)	4 Framing Type	5 Cavity R-Value	6 Continuous R-Value	7 Units	8 Value	9 Description of Assembly Layers	10 Status[1]
Default Roof 2013-Present20	Roof	1330	Wood	30	NA	U-Factor	0.038	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 24in. OC, 3.5in., R-30 Gypsum Board - 1/2 in.	E
R-0 Floor No Crawlspace_84	InteriorFloor	440	NA	0	NA	U-Factor	0.183	Air - Cavity - Wall Roof Ceiling - 4 in. or more Plywood - 1/2 in. Carpet - 3/4 in.	E

[1] *Status: N - New, A – Altered, E – Existing*

G4. OPAQUE DOOR SUMMARY

1 Assembly Name	2 Overall U-factor	3 Status[1]
Metal Door74	0.700	A

G5. FENESTRATION ASSEMBLY SUMMARY

1 Fenestration Assembly Name / Tag or I.D.	2 Fenestration Type / Product Type / Frame Type	3 Certification Method[1]	4 Assembly Method	5 Area ft²	6 Overall U-factor	7 Overall SHGC	8 Overall VT	9 Status[2]
New Single Metal Clear_	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	49	1.19	0.83	0.77	N
Door Single Metal Clear_	VerticalFenestration GlazedDoor MetalFraming	Default Performance	SiteBuilt	49	1.25	0.80	0.53	E

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G5. FENESTRATION ASSEMBLY SUMMARY

1 Fenestration Assembly Name / Tag or I.D.	2 Fenestration Type / Product Type / Frame Type	3 Certification Method[1]	4 Assembly Method	5 Area ft²	6 Overall U-factor	7 Overall SHGC	8 Overall VT	9 Status[2]
Single Metal Clear	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	43	1.19	0.83	0.77	E
Single Metal Clear_	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	7	1.19	0.83	0.77	A

[1] *Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*
[2] *Status: N – New, A – Altered, E – Existing*

H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

1 Equipment Name	2 Equipment Type	3 Qty	4 Heating: Total Heating Output (kBtu/h)	5 Heating: Supp Heat Output (kBtuh)	6 Heating: Efficiency Unit	7 Heating: Efficiency	8 Cooling: Total Cooling Output (kBtu/h)	9 Cooling: Efficiency Unit	10 Cooling: Efficiency	11 Economizer Type (if present)	12 Status[1]
(E) HVAC System 1	SZAC (Packaged3Phase)	1	30	0	AFUE	80.0	29	SEER/EER	14.00/11.00	NoEconomizer	E
(N) HVAC System	SZAC (Packaged3Phase)	1	30	0	AFUE	80.0	29	SEER/EER	14.00/11.00	NoEconomizer	N

[1] *Status: N - New, A – Altered, E – Existing*

H2. FAN SYSTEMS SUMMARY

1 Name or Item Tag	2 Qty	3 Design OA CFM	4 Supply Fan CFM	5 Supply Fan Modeling Method	6 Supply Fan Power	7 Supply Fan Power Units	8 Supply Fan Control	9 Return Fan CFM	10 Return Fan Modeling Method	11 Return Fan Power	12 Return Fan Power Units	13 Return Fan Control	14 Status[1]
(E) HVAC System 1	1	193	885	BrakeHorsePower	0.510	bhp	ConstantVolume	NA	NA	NA	NA	NA	E
(N) HVAC System	1	185	730	BrakeHorsePower	0.510	bhp	ConstantVolume	NA	NA	NA	NA	NA	N

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H2. FAN SYSTEMS SUMMARY

1 Name or Item Tag	2 Qty	3 Design OA CFM	4 Supply Fan CFM	5 Supply Fan Modeling Method	6 Supply Fan Power	7 Supply Fan Power Units	8 Supply Fan Control	9 Return Fan CFM	10 Return Fan Modeling Method	11 Return Fan Power	12 Return Fan Power Units	13 Return Fan Control	14 Status[1]

[1] *Status: N - New, A – Altered, E – Existing*

H3. EXHAUST FAN SUMMARY

1 System ID	2 Zone Name	3 Qty	4 CFM	5 Motor BHP	6 Power Per Flow (W/cfm)	7 Total Static Pressure (in. H_2O)	8 Status[1]
1st Floor - Toilet35	2-1st Floor - Toilet	2	50	0.029	0.500	2.36	

[1] *Status: N - New, A – Altered, E – Existing*

H4. Wet System Equipment(boilers,chillers,cooling towers,etc.)

This Section Does Not Apply

H5. PUMPS

This Section Does Not Apply

H6. SYSTEM SPECIAL FEATURES

1 System Name	2 Equipment Type	3 Window Interlocks per §140.4(n)	4 Other Special Features and Controls
(N) Water Heater EWH-011 - SHW	Service Hot Water, Primary Only	NA	Fixed Temperature Control

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

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H7. NONRESIDENTIAL VENTILATION

1 Zone Name	2 Mechanical Ventilation: Ventilation Function	3 Mechanical Ventilation: # of people	4 Mechanical Ventilation: Supply OA CFM	5 Mechanical Ventilation: Exhaust CFM	6 Conditioned Area (sf)	7 DCV or Occupant Sensor Controls, or Both
1-Lobby	General - Corridors Retail - Sales	6.42	193	0	855	NA
2-1st Floor - Toilet	Exhaust - Toilets, private Misc - Warehouses Misc - All others General - Corridors Misc - Transportation waiting Office - Office space General - Unoccupied	9.12	185	100	918	NA

H8. HIGH-RISE RESIDENTIAL DWELLING UNIT AND HOTEL/MOTEL VENTILATION

This Section Does Not Apply

H9. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1 System ID	2 Zone Name	3 System Type	4 Qty	5 Rated Capacity (kBtuh): Heating	6 Rated Capacity (kBtuh): Cooling	7 Airflow (cfm): Design	8 Airflow (cfm): Min.	9 Airflow (cfm): Min. Ratio	10 Fan: Power	11 Fan: Power Units	12 Fan: Cycles	13 Fan: VSD
1-Lobby-Trm	1-Lobby	Uncontrolled	1	NA	NA	885	NA	0.00	0.510	bhp	NA	☐
2-1st Floor - Toilet-Trm	2-1st Floor - Toilet	Uncontrolled	1	NA	NA	730	NA	0.00	0.510	bhp	NA	☐

H10. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

H11. HEAT RECOVERY SUMMARY

This Section Does Not Apply

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I1. WATER HEATER EQUIPMENT SUMMARY

1 Name	2 Heater Element Type	3 Tank Type	4 Qty	5 Tank Vol (gal)	6 Rated Input	7 Rated Input Unit	8 Efficiency	9 Efficiency Unit	10 Tank Insulation R-value (Int/Ext)	11 Standby Loss Fraction	12 1st Hour Rating or Flow Rate (gal)	13 Heat Pump Type	14 Tank Location or Ambient Condition
A. O. SMITH ENSB-302	Electricity	Instantaneous	1	30.00	879.0	kW	0.92	Thrml. Eff.	NA	NA	NA	NA	NA

K1. INDOOR CONDITIONED LIGHTING GENERAL INFO

1 Occupancy Type [1]	2 Conditioned Floor Area [2] (ft²)	3 Installed Lighting Power (Watts)	4 Lighting Control Credits (Watts)	5 Additional (Custom) Allowance: Area Category Footnotes (Watts)	6 Additional (Custom) Allowance: Tailored Method (Watts)
Retail Sales Area (Retail Merchandise Sales)	644	934	0	0	0
Restrooms	55	38	0	0	0
Commercial/Industrial Storage (Warehouse)	269	118	0	0	0
Healthcare Facility and Hospitals (Exam/Treatment Room)	115	160	0	0	0
Concourse and Atria Area	73	107	0	0	0
Lounge, Breakroom, or Waiting Area	173	267	0	0	0
Electrical, Mechanical, Telephone Rooms	43	39	0	0	0
Office Area (>250 square feet)	85	214	0	0	0
All other	30	20	0	0	0
Building Totals:	**1,487**	**1,897**	**0**	**0**	**0**

CLIENT:

ADDRESS:
3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

NOTES:

1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	12/22	A.B

PROJECT:
LAUREL VILLAGE

TITLE:
T24-1

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36: NTS

DRAWING NO.: T 2 4 - 1

REV.

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K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
S-9-Server	Electrical, Mechanical, Telephone Rooms	NA	0.00 0.00 0.00 0.00 0.00	L2	39.4	2	39	0
S-10-Office	Office Area (>250 square feet)	NA	0.00 0.00 0.00 0.00 0.00	L1	213.6	4	214	0
S-11-NS Storage	Commercial/Industrial Storage (Warehouse)	NA	0.00 0.00 0.00 0.00 0.00	L2	39.4	2	39	0
S-12-Mezz - Toilet	All other	NA	0.00 0.00 0.00 0.00 0.00	L7	20.0	1	20	0

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K4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS

Building Level Controls

1	2
Mandatory Demand Response §110.12(c)	**Shut-Off Controls §130.1(c)**
NA	NA

Area Level Controls (includes all lighting controls installed in conditioned space to meet mandatory requirements per §130.1)

4	5	6	7	8	9	10
Area Description	**Area Category Primary Function Area**	**Area Controls 130.1(a)**	**Multi-Level Controls 130.1(b)**	**Shut-Off Controls 130.1(c)**	**Primary Daylighting 130.1(d)**	**Secondary Daylighting 140.5(d)**
Lobby	Corridor Area	Required	Required	Required	NA	NA
Retail	Retail Sales Area (Retail Merchandise Sales)	Required	Required	Required	NA	NA
SCP Storage	Commercial/Industrial Storage (Warehouse)	Required	Required	Required	NA	NA
Intake	Main Entry Lobby	Required	Required	Required	NA	NA
Stair	Stairwell	Required	Exempt	Required	NA	NA
Hall	Concourse and Atria Area	Required	Required	Required	NA	NA
1st Floor Toilet	Restrooms	Required	Exempt	Required	NA	NA
Lockers	Lounge, Breakroom, or Waiting Area	Required	Exempt	Required	NA	NA
Server	Electrical, Mechanical, Telephone Rooms	Required	Exempt	Required	NA	NA

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L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents bust be retained and 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/

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings
Plumbing	NRCI-PLB-01-E - Must be submitted for all buildings
Indoor Lighting	NRCI-LTI-01-E - Must be submitted for all buildings

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M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	Form/Title
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration
Indoor Lighting	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls
Mechanical	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap
	NRCA-MCH-03-A Constant Volume Single Zone HVAC
	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance

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[1] *See Table 140.6-C*
[2] *See NRCC-LTI-01-E for unconditioned spaces*
[3] *Lighting Information for existing spaces modeled is not included in the table*

K2. INDOOR CONDITIONED LIGHTING SCHEDULE

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft^2 in offices)

		Installed Watts (Conditioned)			
1	2	3	4	5	6
Name or Item Tag	**Complete Luminaire Description (i.e., 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)**	**Watts per luminaire**	**How Wattage is Determined**	**Total Number Luminaires**	**Installed Watts**
L1	L1 - Surface Mounted 3" Deep Low	53	According to §130.0(c)	14	747
L2	L2 - 4' Surface Mounted Led Strip	20	According to §130.0(c)	8	157
L3	L3 - Existing LED Track Lighting	12	According to §130.0(c)	40	480
L4	L4 - Led Track Head ELV Dimmable	14	According to §130.0(c)	6	84
L5	L5 - Existing Recessed LED Downlight	20	According to §130.0(c)	26	520
L6	L6 - 6" Recessed LED Dimmable	18	According to §130.0(c)	5	87
L7	L7 - Existing Wall Sconce Fixture	20	According to §130.0(c)	3	60
L8	L8- Chandelier LED Light	46	According to §130.0(c)	1	46

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
S-1-Lobby	Corridor Area	NA	0.00	L8	46.0	1	46	0

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K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00 0.00 0.00 0.00 0.00					
S-1-Lobby	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00	L5	220.0	11	220	0
S-2-Retail	Retail Sales Area (Retail Merchandise Sales)	NA	0.00 0.00 0.00 0.00 0.00	L5	300.0	15	300	0
S-2-Retail	Retail Sales Area (Retail Merchandise Sales)	NA	0.00 0.00 0.00 0.00 0.00	L3	480.0	40	480	0
S-2-Retail	Retail Sales Area (Retail Merchandise Sales)	NA	0.00 0.00 0.00 0.00 0.00	L6	70.0	4	70	0
S-2-Retail	Retail Sales Area (Retail Merchandise Sales)	NA	0.00 0.00 0.00 0.00 0.00	L4	84.0	6	84	0
S-3-1st Floor - Toilet	Restrooms	NA	0.00 0.00 0.00	L6	17.5	1	18	0

Project Name:	3415 California St TI	NRCC-PRF-01-E	Page 12 of 17
Project Address:	3415 California St San Francisco 94118	Calculation Date/Time:	13:00, Fri, Mar 03, 2023
Input File Name:	2849_3415 California St, San Francisco, CA 94118_Energy Analysis_V8_.cibd19x		

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00 0.00					
S-3-1st Floor - Toilet	Restrooms	NA	0.00 0.00 0.00 0.00 0.00	L7	20.0	1	20	0
S-4-SCP Storage	Commercial/Industrial Storage (Warehouse)	NA	0.00 0.00 0.00 0.00 0.00	L2	78.8	4	79	0
S-5-Intake	Healthcare Facility and Hospitals (Exam/Treatment Room)	NA	0.00 0.00 0.00 0.00 0.00	L1	160.2	3	160	0
S-6-Stair	Stairwell	NA	0.00 0.00 0.00 0.00 0.00	L7	20.0	1	20	0
S-7-Lockers	Concourse and Atria Area	NA	0.00 0.00 0.00 0.00 0.00	L1	106.8	2	107	0
S-8-Hall	Lounge, Breakroom, or Waiting Area	NA	0.00 0.00 0.00 0.00 0.00	L1	267.0	5	267	0

Project Name:	3415 California St TI	NRCC-PRF-01-E	Page 17 of 17
Project Address:	3415 California St San Francisco 94118	Calculation Date/Time:	13:00, Fri, Mar 03, 2023
Input File Name:	2849_3415 California St, San Francisco, CA 94118_Energy Analysis_V8_.cibd19x		

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Syed P. Alam	
Company: InnoDez, Inc.	Signature:**Syed Alam**
Address: 726 Foxbrough pl	Signature Date: 2023-03-03
City/State/Zip: Pleasanton CA 94566	CEA/ HERS Certification Identification (if applicable):
Phone: 9168321752	

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 Envelope Designer Name: Syed P. Alam		
Company: Innodez	Signature: **Syed Alam**	
Address: 726 Foxbrough Pl	Date Signed: **2023-03-03**	
City/State/Zip: Pleasanton CA 94566		
Phone: 916-813-1752	Title: **PE ENGINEER**	License #: 27087
Responsible Lighting Designer Name: Gregory Michael Dillett	Signature:**Gregory Dillett**	
Company: Innodez		
Address: 22 Chatel drive	Date Signed: **2023-03-03**	
City/State/Zip: Little Rock AR 72223		
Phone: 479-313-2632	Title: **PE ENGINEER**	License #: 21635
Responsible Mechanical Designer Name: Syed P. Alam	Signature: **Syed Alam**	
Company: Innodez		
Address: 726 Foxbrough Pl	Date Signed: **2023-03-03**	
City/State/Zip: Pleasanton CA 94566		
Phone: 916-813-1752	Title: **PE ENGINEER**	License #: 27087

CLIENT:

ADDRESS:

3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

CONFIDENTIALITY STATEMENT:

ALL DRAWINGS AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF THE DESIGNER AND THE SAME MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT CONSENT OF THE DESIGNER.

NOTES:

1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	12/22	A.B

PROJECT:

LAUREL VILLAGE

TITLE:

T24-2

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.

T 2 4 - 2

REV.

STATE OF CALIFORNIA
Nonresidential Building Commissioning
NRCC-CXR-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name:	3415 California St TI	Report Page: (Page 1 of 6)
Project Address:	3415 California St	Date Prepared: 3/3/2023

A. GENERAL INFORMATION

01	Project Location (city)	San Francisco	04	Building Size (ft²)	1773
02	Occupancy Type	Healthcare Facility	05	Nonresidential Conditioned Floor Area (ft²)	< 10,000 ft²
03	Project Type	Newly constructed	06	HVAC System Type	Unitary or packaged equipment each serving one zone

B. PROJECT SCOPE
Based on project information provided in Table A, Table B indicates which commissioning related requirements apply per §120.8. Table B is not editable by the user.

Commissioning Requirements per §120.8

01	Table F: Design Review Kickoff	§120.8(d1) and §120.8(d2	The design review kickoff meeting establishes who will play the role of the design reviewer, the project schedule and identify owner's requirements. This meeting should be conducted during schematic design.
02	Table G: Owner's Project Requirements (OPR)	§120.8(b)	This requirement does not apply.
03	Table H: Basis of Design (BOD)	§120.8(c)	This requirement does not apply.
04	Table I: Design Review	§120.8(d) and §120.8(e)	The design reviewer(s) reviews the construction documents for clarity, completeness, and adherence to the owner's goals. Commissioning measures must be included in the construction documents to facilitate the design review and commissioning process. For projects with >= 10,000 ft² of nonresidential conditioned floor area the design review is for adherence with the Owner's Project Requirements (OPR) and Basis of Design (BOD). This should be conducted during design.
05	Table J: Commissioning Plan	§120.8(f)	This requirement does not apply.
06	Table K: Functional Performance Testing	§120.8(g)	This requirement does not apply.
07	Table L: Documentation and Training	§120.8(h)	This requirement does not apply.
08	Table M: Commissioning Report	§120.8(i)	This requirement does not apply.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:11

STATE OF CALIFORNIA
Nonresidential Building Commissioning
NRCC-CXR-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name:	3415 California St TI	Report Page: (Page 2 of 6)
Project Address:	3415 California St	Date Prepared: 3/3/2023

C. COMPLIANCE RESULTS
Table C will indicate if the project data input into the compliance document is compliant with commissioning requirements per §120.8. This table is not editable by the user. If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01	02	03	04	05	06	07	08	09
Design Kickoff Review	Owner's Project Requirements	Basis of Design	Design Review	Commissioning Plan	Functional Performance Testing	Documentation and Training	Commissioning Report	Compliance Results
Table F	Table G	Table H	Table I	Table J	Table K	Table L	Table M	
Yes			Yes					COMPLIES
10	Design Reviewer(s) for the project include:							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.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:11

STATE OF CALIFORNIA
Nonresidential Building Commissioning
NRCC-CXR-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name:	3415 California St TI	Report Page: (Page 3 of 6)
Project Address:	3415 California St	Date Prepared: 3/3/2023

F. DESIGN REVIEW KICKOFF MEETING
This table indicates that the design reviewer meets the qualification requirements per Title 24, Part 1 Section 10-103(a)1 and demonstrates compliance with design review kickoff requirements per §120.8(d)2. This meeting should occur during the Schematic Design phase of the project.

Design Review Kickoff Meeting Details

01	Date of Design Review Kickoff Meeting		0001-01-01
02	Meeting Attendees: (one person may play multiple roles)		
☐	Owner/Facility Manager:	☒	Design Reviewer(s)
☐	Project Manager:	☐	Design Architect/ Engineer(s):
☐	Contractor:	☐	Certified Acceptance Test Tech(s):
☐	Commissioning Provider:	☐	Energy/ T24 Part 6 Consultant:

Design Reviewer Qualifications per Title 24 Part 1 Section 10-103(a)1

	The design reviewer(s) must be licensed professional engineers or licensed architects, or licensed contractors representing services performed by or under the direct supervision of a licensed engineer or architect, as specified in the provisions of Division 3 of the Business and Professions Code.	Do the Design Reviewer(s) meet these qualifications?	
03	In addition, for buildings with >= 10,000 ft² but < 50,000², the design reviewer(s) shall be a qualified in-house engineer or architect with no other project involvement or a third party engineer, architect, or contractor	Yes ●	No ○
04	The design reviewer(s) for this project will be:		

Preliminary Construction Schedule

		Start Date	Completion Date
05	Schematic Design	0001-01-01	0001-01-01
06	Design Development	0001-01-01	0001-01-01
07	Construction Documents	0001-01-01	0001-01-01
08	Construction	0001-01-01	0001-01-01
09	Building Turnover	0001-01-01	0001-01-01
	Project Goals Related to Energy Efficiency		
10	Operational Costs		
11	Desired Building Lifespan		
12	Equipment Lifecycle		
13	Project Energy Efficiency Goals		
14	Envelope Goals		

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:11

STATE OF CALIFORNIA
Nonresidential Building Commissioning
NRCC-CXR-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name:	3415 California St TI	Report Page: (Page 4 of 6)
Project Address:	3415 California St	Date Prepared: 3/3/2023

F. DESIGN REVIEW KICKOFF MEETING

15	HVAC System Goals	
16	Indoor Lighting System Goals	
17	Outdoor Lighting System Goals	
18	Water Heating System Goals	
19	Equipment and System Specifications	
20	Operations and Maintenance	

G. OWNER'S PROJECT REQUIREMENTS (OPR)
This section does not apply to this project.

H. BASIS OF DESIGN (BOD)
This section does not apply to this project.

I. CONSTRUCTION DOCUMENT DESIGN REVIEW CHECKLIST
This table is only completed if a design review document is not attached to permit application to demonstrate compliance with §120.8(b) and §120.8(e). For buildings with >= 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the Owner's Project Requirements (Table G.) and the Basis of Design Documents (Table H.). For buildings with < 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the goals documented in Table F. during the Design Review Kickoff.

		YES	NO
01	Attaching Completed Design Review Documentation?	●	○

J. COMMISSIONING PLAN
This section does not apply to this project.

K. FUNCTIONAL PERFORMANCE TESTING
This section does not apply to this project.

L. DOCUMENTATION AND TRAINING
This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:11

STATE OF CALIFORNIA
Nonresidential Building Commissioning
NRCC-CXR-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name:	3415 California St TI	Report Page: (Page 5 of 6)
Project Address:	3415 California St	Date Prepared: 3/3/2023

M. COMMISSIONING REPORT
This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
There are no Certificates of Installation applicable to commissioning requirements.

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Although there are no "CXR" Certificates of Acceptance required to document commissioning requirements, Certificates of Acceptance may be used to supplement functional performance testing required by §120.8(g).

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:11

STATE OF CALIFORNIA
Nonresidential Building Commissioning
NRCC-CXR-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name:	3415 California St TI	Report Page: (Page 6 of 6)
Project Address:	3415 California St	Date Prepared: 3/3/2023

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

Documentation Author Name: Syed P. Alam	Documentation Author Signature: Syed Alam
Company: InnoDez, Inc.	Signature Date: 2023-03-03
Address: 726 Foxbrough pl	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pleasanton CA 94566	Phone: 9168321752

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: Syed P. Alam	Responsible Designer Signature: Syed Alam
Company: Innodez	Date Signed: 2023-03-03
Address: 726 Foxbrough Pl	License: 27087
City/State/Zip: Pleasanton CA 94566	Phone: 916-813-1752

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:11

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name:	3415 California St TI	Report Page: (Page 1 of 4)
Project Address:	3415 California St	Date Prepared: 3/3/2023

A. GENERAL INFORMATION

01	Project Location (city)	San Francisco
02	Occupancy Types Within Project:	

● Healthcare Facility ● Office ● Retail ● Support Areas ● Warehouse ● : See Table I

B. PROJECT SCOPE
This table includes electrical systems that are within the scope of the permit application.

01	02	03	04	05
Electrical Service Designation/Description	Scope of Work[1]	Rating (kVA)	Utility Provided Metering System Exception to §130.5(a) [2]	System subject to CA Elec Code Article 517 Exception to §130.5(a)and (b)
	Add/Alt to feeders and branch circuits only	50	☐	☐
06 Demand Response Controls	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, §130.1 and §130.3 and compliance documents NRCC-MCH, NRCC-LTI and NRCC-LTS will indicate when demand response controls are required.			

[1] *FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c), no other requirements from 130.5 are required.*
[2] *Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.*

C. COMPLIANCE RESULTS
Results in this table are automatically calculated from data input and calculations in Tables F through I. 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
Service Electrical Metering §130.5(a) (See Table F)	AND	Separation for Monitoring §130.5(b) (See Table G)	AND	Voltage Drop §130.5(c) (See Table H)	AND	Controlled Receptacles §130.5(d) (See Table I)	
Yes	AND	Yes	AND	Yes	AND	Yes	COMPLIES

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:12

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name:	3415 California St TI	Report Page: (Page 2 of 4)
Project Address:	3415 California St	Date Prepared: 3/3/2023

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 is 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). For alterations, only the altered circuits must demonstrate compliance per §141.0(b)2Pii

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
	☒ Voltage drop less than 5%	☐	Permitted by CA Elec Code (Exception to 130.5(c))*	Attached		☐	☐

** 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.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:12

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name:	3415 California St TI	Report Page: (Page 3 of 4)
Project Address:	3415 California St	Date Prepared: 3/3/2023

J. 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 at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-ELC-01-E - Must be submitted for all buildings	☐	☐

K. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
There are no Certificates of Acceptance applicable to electrical power distribution requirements.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:12

CLIENT:

ADDRESS:
3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

NOTES:
1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	12/22	A.B

PROJECT:
LAUREL VILLAGE

TITLE:
T24-3

PROJ. NO.	PROJ. ENGR.	SCALE ● 24X36: NTS

DRAWING NO.
T 2 4 - 3

REV.

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name:	3415 California St TI	Report Page: (Page 4 of 4)
Project Address:	3415 California St	Date Prepared: 3/3/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Syed P. Alam	**Syed Alam**
Company: InnoDez, Inc.	Signature Date: **2023-03-03**
Address: 726 Foxbrough pl	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pleasanton CA 94566	Phone: 9168321752

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:
Gregory Michael Dillett	**Gregory Dillett**
Company: Innodez	Date Signed: 2023-03-03
Address: 22 Chatel drive	License: 21635
City/State/Zip: Little Rock AR 72223	Phone: 479-313-2632

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	3415 California St TI	Report Page: (Page 1 of 7)
Project Address:	3415 California St	Date Prepared: 3/3/2023

A. GENERAL INFORMATION

01	Project Location (city)	San Francisco	04	Total Conditioned Floor Area (ft²)	0
02	Climate Zone	3	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	2

● Healthcare Facility ● Office ● Retail ● Support Areas ● Warehouse ● : See Table I

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 or §141.0(b)2 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	0	Area Category Method	0
Total Area of Work (ft²)	0		0	

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	3415 California St TI	Report Page: (Page 2 of 7)
Project Address:	3415 California St	Date Prepared: 3/3/2023

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	Allowed Lighting Power per §140.6(b) (Watts)						Adjusted Lighting Power per §140.6(a) (Watts)			Compliance Results
	01	02	03	04		05	06	07	08	09
	Complete Building §140.6(c)1	Area Category §140.6(c)2	Area Category Additional §140.6(c)2G (+)	Tailored §140.6(c)3 (+)	=	Total Allowed (Watts)	Total Designed (Watts)	Adjustments PAF Lighting Control Credits §140.6(a)2 (-)	=	Total Adjusted (Watts) *Includes Adjustments	05 must be >= 08 §140.6
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)			
Conditioned					=				=		
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.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This section does not apply to this project.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	3415 California St TI	Report Page: (Page 3 of 7)
Project Address:	3415 California St	Date Prepared: 3/3/2023

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

*This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
		Field Inspector	
Mandatory Demand Response §110.12(c)	Shut-off controls §130.1(c)	Pass	Fail
Not Required <= 10,000 SF	See Area/Space Level Controls	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Sky lit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector	
								Pass	Fail
Lobby	Corridor Area	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	☐	☐
Retail	Retail Merchandise Sales	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	☐	☐
SCP Storage	Warehouse	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	☐	☐
Intake	Main Entry Lobby	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	☐	☐
Stair	Stairwell	Manual ON/OFF	Exempt*	Occupancy Sensor	N/A	N/A	No	☐	☐
Hall	Concourse and Atria	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	☐	☐
1st Floor Toilet	Restrooms	Manual ON/OFF	Exempt*	Occupancy Sensor	N/A	N/A	No	☐	☐
Lockers	Lounge Breakroom or Waiting Area	Manual ON/OFF	Exempt*	Occupancy Sensor	N/A	N/A	No	☐	☐

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	3415 California St TI	Report Page: (Page 4 of 7)
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H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Server	Electrical Mechancial Telephone Room	Manual ON/OFF	Exempt*	Occupancy Sensor	N/A	N/A	No	☐	☐
Office	Office 250 square feet or less	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	☐	☐
NS Storage	Warehouse	Manual ON/OFF	Exempt*	Occupancy Sensor	N/A	N/A	No	☐	☐
Mezz. Toilet	Restrooms	Manual ON/OFF	Exempt*	Occupancy Sensor	N/A	N/A	No	☐	☐

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2

Stair	Connected load < 0.5W/SQ.FT
1st Floor Toilet	Restroom
Lockers	Less than 100 Sqft
Server	Less than 100 Sqft
NS Storage	Connected load < 0.5W/SQ.FT
Mezz. Toilet	Restroom

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 .

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	3415 California St TI	Report Page: (Page 5 of 7)
Project Address:	3415 California St	Date Prepared: 3/3/2023

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 ORNAMENTAL/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 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.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	3415 California St TI	Report Page: (Page 6 of 7)
Project Address:	3415 California St	Date Prepared: 3/3/2023

T. 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 at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	3415 California St TI	Report Page: (Page 7 of 7)
Project Address:	3415 California St	Date Prepared: 3/3/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Syed P. Alam	**Syed Alam**
Company: InnoDez, Inc.	Signature Date: 2023-03-03
Address: 726 Foxbrough pl	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pleasanton CA 94566	Phone: 9168321752

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:
Gregory Michael Dillett	**Gregory Dillett**
Company: Innodez	Date Signed: 2023-03-03
Address: 22 Chatel drive	License: 21635
City/State/Zip: Little Rock AR 72223	Phone: 479-313-2632

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	3415 California St TI	Report Page: (Page 1 of 6)
Project Address:	3415 California St	Date Prepared: 3/3/2023

A. GENERAL INFORMATION

01	Project Location (city)	San Francisco	04	Total Illuminated Hardscape Area (ft²)	0	
02	Climate Zone	3				
03	Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):					
☐	LZ-0: Very Low - Undeveloped Parkland	☐	LZ-2: Moderate - Rural Areas	☐	LZ-4: High - Must be reviewed by CA Energy Commission for Approval	
☐	LZ-1: Low - Developed Parkland	☒	LZ-3: Moderately High - Urban Areas			

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My Project Consists of:

01	02	
☐ New Lighting System	Must Comply with Allowances from §140.7	
☒ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes ● No

03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☒ < 10% ☐ >= 10% and < 50% ☐ >= 50%	0	Maintain Existing Power Method per §141.0(b)2L

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

CLIENT:

ADDRESS:
3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

NOTES:

1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	12/22	A.B

PROJECT:
LAUREL VILLAGE

TITLE:
T24-4

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.
T 2 4 - 4

REV.

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	3415 California St TI	Report Page:	(Page 1 of 6)
Project Address:	3415 California St	Date Prepared:	3/3/2023

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. 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.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2I.												Compliance Results		
01		02		03		04		05		06		07		08	09
General Hardscape Allowance §140.7(d)1 (See Table I)	+	Per Application §140.7(d)2 (See Table J)	+	Sales Frontage §140.7(d)2 (See Table K)	+	Ornamental §140.7(d)2 (See Table L)	+	Per Specific Area §140.7(d)3 (See Table M)	OR	Existing Power Allowance §141.0(b)2I. (See Table N)	=	Total Allowed (Watts)	≥	Total Actual (Watts)	07 must be >= 08
0	+	----	+	----	+	----	+	----	OR	----	=	0	≥	0	COMPLIES
Cutoff Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H 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.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:11

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	3415 California St TI	Report Page:	(Page 2 of 6)
Project Address:	3415 California St	Date Prepared:	3/3/2023

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with §140.7, all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2I, only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire [1,2]	How is Wattage determined	Total number luminaires [3]	Luminaire Status [4]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumen output §130.2(b) *	Field Inspector	
									Pass	Fail
						Total Design Watts:	0			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX. Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/ft instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)*

G. CUTOFF REQUIREMENTS (BUG)

This section does not apply to this project.

H. OUTDOOR LIGHTING CONTROLS

This section does not apply to this project.

I. LIGHTING POWER ALLOWANCE (per §140.7)

This section does not apply to this project.

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:11

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	3415 California St TI	Report Page:	(Page 4 of 6)
Project Address:	3415 California St	Date Prepared:	3/3/2023

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This table includes all existing luminaires being replaced to establish the lighting power allowance per §141.0(b)2I.i or §141.0(b)2I.ii. Existing luminaires that are remaining or being moved should NOT be included.

Existing Conditions Wattage:

01	02	03	04	05	06	07	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire [1,2]	How is Wattage determined	# of Luminaires Being Reclaimed	Existing Watts	Field Inspector	
						Pass	Fail
				Total Existing Watts:			
				Allowance per §141.0(b)2I.i :			

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/ft instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*

O. 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 at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐
NRCI-LTO-02-E: Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:11

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	3415 California St TI	Report Page:	(Page 5 of 6)
Project Address:	3415 California St	Date Prepared:	3/3/2023

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

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 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	Field Inspector	
		Pass	Fail
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	☐	☐	

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:11

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	3415 California St TI	Report Page:	(Page 6 of 6)
Project Address:	3415 California St	Date Prepared:	3/3/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Syed P. Alam	**Syed Alam**
Company: InnoDez, Inc.	Signature Date: **2023-03-03**
Address: 726 Foxbrough pl	CEA/ HERS Certification Identification (if applicable): GSU VERS Certification Identification (if applicable):
City/State/Zip: Pleasanton CA 94566	Phone: 9168321752

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:
Gregory Michael Dillett	**Gregory Dillett**
Company: Innodez	Date Signed: 2023-03-03
Address: 22 Chatel drive	License: 21635
City/State/Zip: Little Rock AR 72223	Phone: 479-313-2632

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:11

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	3415 California St TI	Report Page:	(Page 1 of 6)
Project Address:	3415 California St	Date Prepared:	3/3/2023

This document is used to demonstrate compliance for nonresidential occupancies with requirements in §110.1, §110.3, §120.3, and §140.5, and with requirements in §141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in §110.1, §110.3, §120.3, §150.0 and §150.1(c)8, and with requirements §150.2 for additions.

A. GENERAL INFORMATION

01	Project Location (city)	San Francisco	02	Climate Zone	3
03	Occupancy Types Within Project (select all that apply):				
☒	Nonresidential	☐	High-Rise Residential	☐	Hotel/Motel
☐	State Building	☐	Healthcare Facility	☐	Other (Write In)

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in §140.5, §150.1(c)8, and §141.0(b)1, or §141.0(b)2N for additions or alterations. Solar water heating systems are documented on the NRCC-SRA compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03	
My project consists of (check all that apply):	System Type [1,2]	System Components	
☒ New system (DWH system being installed for the first time in newly constructed building)	Individual System (serving nonresidential spaces)	☒ Equipment	☒ Distribution	☒ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment	☐ Distribution	☐ Controls

[1] *FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*
[2] *Dwelling units refers to hotel/motel guest rooms and units in a high-rise residential occupancy.*

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:12

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	3415 California St TI	Report Page:	(Page 2 of 6)
Project Address:	3415 California St	Date Prepared:	3/3/2023

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. or the table indicates as not compliant for guidance.

01	02	03	04
Domestic Hot Water Equipment	Distribution Systems	Controls	Compliance Results
Table F	Table G	Table H	
Yes	Yes	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 is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:12

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	3415 California St TI	Report Page:	(Page 3 of 6)
Project Address:	3415 California St	Date Prepared:	3/3/2023

F. DOMESTIC HOT WATER EQUIPMENT

This table is used to demonstrate compliance with mandatory equipment requirements in §110.1 and §110.3. For high-rise residential and hotel/motel occupancies, compliance with prescriptive requirements in §150.1(c)8 must also be demonstrated and with §150.2 for addition and alteration scopes.

Equipment Schedule: Individual Systems

01	02	03	04	05	06
Name or Item Tag	Equipment Type	Volume (gal)	Max GPM/ First Hour Rating (FHR)	Rated Uniform Energy Factor (UEF)	Minimum Required Uniform Energy Factor (UEF) [1]
A. O. SMITH ENSB-30	Residential-Duty Commercial Electric Instantaneous (12-58.6kW)	<=30	0 <= GPM <1.7	0.8	0.8

[1] *FOOTNOTE: Compliant equipment may be found in the Modernized Appliance Efficiency Database System (MAEDBS) on the Energy Commission website: https://cacertappliances.energy.ca.gov/Pages/Search/AdvancedSearch.aspx*

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	☐	☐	☒	Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-12. Label required per §110.3(c)3
19	☐	☐	☒	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per §110.3(c)5
20	☐	☐	☒	Isolation valves for instantaneous water heater with input rating >6.8 kBTUH or 2 kW has been specified per §110.3(c)6

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:12

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	3415 California St TI	Report Page:	(Page 4 of 6)
Project Address:	3415 California St	Date Prepared:	3/3/2023

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in §120.3 and §140.5. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements §110.3(c), §120.3, §150.0, §150.1

Mandatory Pipe Insulation All Occupancies

12	☒	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per §120.3 : • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
13	☒	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 per §120.3(b) and §150.0(l)3

TABLE 120.3-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft² per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)		
			< 1	1 to < 1.5	1.5 to < 4
			Minimum Insulation Required		
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:12

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	3415 California St TI	Report Page:	(Page 5 of 6)
Project Address:	3415 California St	Date Prepared:	3/3/2023

H. DOMESTIC HOT WATER CONTROLS

This table is used to demonstrate compliance with control requirements in §110.3 for all occupancies. For high-rise residential and hotel/motel occupancies, compliance is also demonstrated with requirements in §150.1(c)8.

	Yes	No	Not Applicable	Requirement
01	☒	☐	☐	Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per §110.3(a).
02	☒	☐	☐	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per §110.3(c)1 unless covered by California Plumbing Code §1.1.0.
03	☐	☐	☒	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility.
04	☐	☐	☒	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per §150.1(c)8Bi. or §150.2 for additions or alterations.
05	☐	☐	☒	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per §150.1(c)8.
06	☐	☐	☒	For replacement single heat pump water heaters serving individual dwelling units in climate zone 1-15, design includes communication interface that meets demand responsive control requirements of §110.12(a) per §150.2(b)1Hii.

I. 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 at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-PLB-01-E - Must be submitted for all buildings	☐	☐

J.DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to service water heating requirements.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:12

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	3415 California St TI	Report Page:	(Page 6 of 6)
Project Address:	3415 California St	Date Prepared:	3/3/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Syed P. Alam	**Syed Alam**
Company: InnoDez, Inc.	Signature Date: 2023-03-03
Address: 726 Foxbrough pl	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pleasanton CA 94566	Phone: 9168321752

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:
Syed P. Alam	**Syed Alam**
Company: Innodez	Date Signed: 2023-03-03
Address: 726 Foxbrough Pl	License: 27087
City/State/Zip: Pleasanton CA 94566	Phone: 916-813-3752

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance | Report Version: 2019.1.003 Schema Version: rev 20200601 | Report Generated: 2023-03-03 13:05:12

CLIENT:

ADDRESS:
3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

CONFIDENTIALITY STATEMENT:

ALL DRAWINGS AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF THE DESIGNER AND THE SAME MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT CONSENT OF THE DESIGNER.

NOTES:

1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	12/22	A.B

PROJECT:
LAUREL VILLAGE

TITLE:
T24-5

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.
T 2 4 - 5

REV.

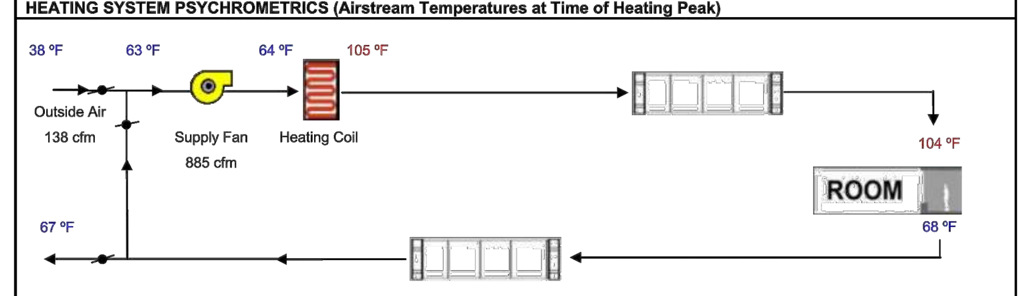
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: 3415 California St TI — Date: 3/3/2023
System Name: (E) HVAC System 1 — Floor Area: 855

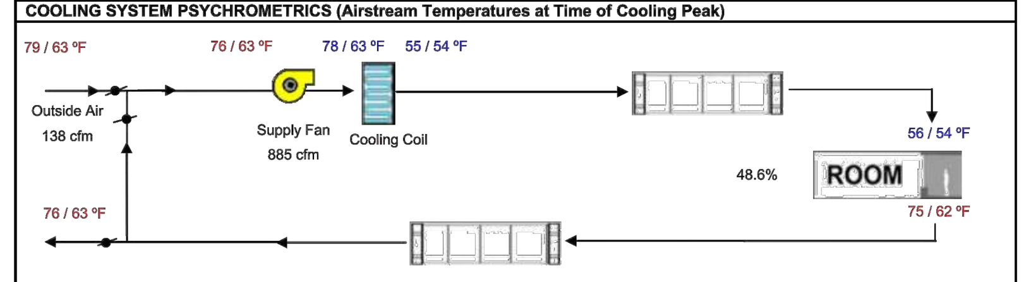
ENGINEERING CHECKS	
Number of Systems	1
Heating System	
Output per System	30,000
Total Output (Btuh)	30,000
Output (Btuh/sqft)	35.1
Cooling System	
Output per System	30,000
Total Output (Btuh)	30,000
Total Output (Tons)	2.5
Total Output (Btuh/sqft)	35.1
Total Output (sqft/Ton)	342.0
Air System	
CFM per System	885
Airflow (cfm)	885
Airflow (cfm/sqft)	1.04
Airflow (cfm/Ton)	354.0
Outside Air (%)	15.5%
Outside Air (cfm/sqft)	0.16
Note: values above given at ARI conditions	

SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	1,021	20,804	2,844	440	17,126
Return Vented Lighting		0			
Return Air Ducts		1,040			856
Return Fan		0			0
Ventilation	138	369	-325	138	4,317
Supply Fan		1,519			-1,519
Supply Air Ducts		1,040			856
TOTAL SYSTEM LOAD		24,772	2,519		21,637
HVAC EQUIPMENT SELECTION					
(E) Carrier 48XP-024060		27,962	2,538		30,000
Total Adjusted System Output (Adjusted for Peak Design conditions)		27,962	2,538		30,000
TIME OF SYSTEM PEAK		Jul 4 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



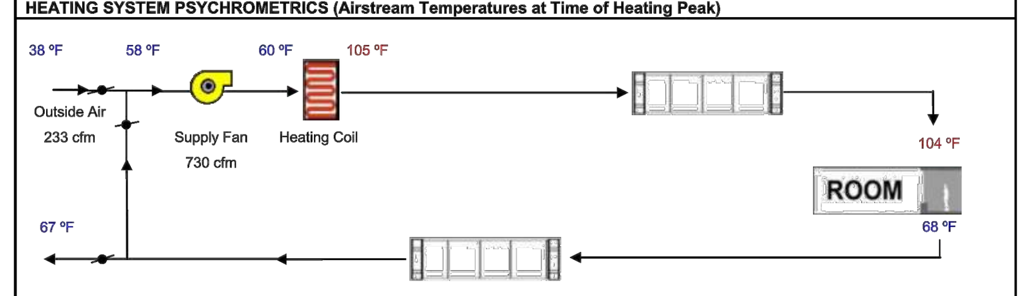
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: 3415 California St TI — Date: 3/3/2023
System Name: (N) HVAC System — Floor Area: 918

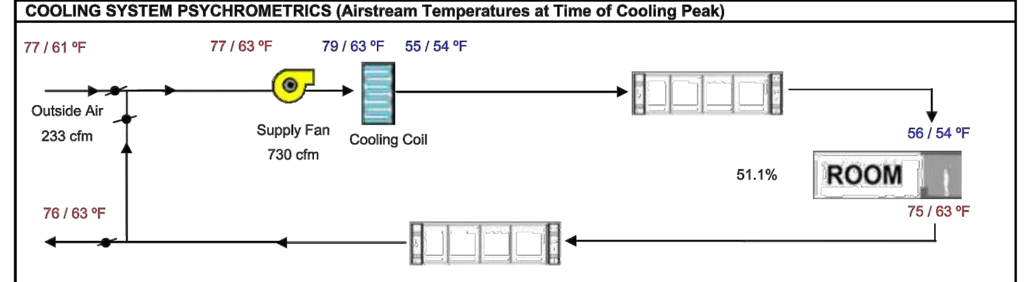
ENGINEERING CHECKS	
Number of Systems	1
Heating System	
Output per System	30,000
Total Output (Btuh)	30,000
Output (Btuh/sqft)	32.7
Cooling System	
Output per System	30,000
Total Output (Btuh)	30,000
Total Output (Tons)	2.5
Total Output (Btuh/sqft)	32.7
Total Output (sqft/Ton)	367.3
Air System	
CFM per System	730
Airflow (cfm)	730
Airflow (cfm/sqft)	0.80
Airflow (cfm/Ton)	292.0
Outside Air (%)	31.8%
Outside Air (cfm/sqft)	0.25
Note: values above given at ARI conditions	

SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	1,166	23,273	4,038	452	17,502
Return Vented Lighting		0			
Return Air Ducts		1,164			875
Return Fan		0			0
Ventilation	233	131	-1,787	233	7,240
Supply Fan		1,519			-1,519
Supply Air Ducts		1,164			875
TOTAL SYSTEM LOAD		27,249	2,251		24,974
HVAC EQUIPMENT SELECTION					
(N) Carrier 48XP-024060		28,493	2,340		30,000
Total Adjusted System Output (Adjusted for Peak Design conditions)		28,493	2,340		30,000
TIME OF SYSTEM PEAK		Sep 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, C.B.O., Director

INFORMATION SHEET

NO. M-04

DATE : January 1, 2023

SUBJECT : Mechanical (and Electrical & Plumbing)

TITLE : **2022 Title-24 Energy/Green Forms for Non-Residential, High-Rise Residential, and Hotel/Motel Buildings**

PURPOSE : The purpose of this Information Sheet is to provide Title-24 energy inspection forms for non-residential, high-rise residential, and hotel/motel buildings based on the 2022 California Energy Code (CEC) and green building compliance per 2022 San Francisco Green Building Code (SFGBC) and Administrative Bulletin 093 (AB-093).

REFERENCE :
- 2022 California Energy Code
- 2022 San Francisco Green Building Code
- Administrative Bulletin 093 (AB-093)
- Information Sheet GB-01

DISCUSSION : The 2022 California Energy Code (CEC) will take effect on January 1, 2023. Additional and updated compliance, installation, and verification forms apply to the new Energy Code. Compliance with AB-093 Attachment E for new construction and major alterations.

2022 California Energy Code Form Requirements for Non-residential

Non-Residential, High-Rise Residential, and Hotel/Motel Title-24 is comprised of Certificate of Compliance, Certificate of Installation, Certificate of Acceptance, and Certificate of Verification forms. Compliance documentation of the AB-093 is comprised of Attachment E. The Non-Residential Energy Inspection forms are included in the following attachments.

Effective Date of the Provisions of this Information Sheet

The provisions of this information sheet become effective for building permit applications submitted on or after January 1, 2023. The provisions of the AB-093 Attachment E form are required for new construction and major alteration permits that have a final certificate of occupancy after January 1, 2019.

Note: Refer to GB-01, Attachment H for projects required to exceed energy standards per San Francisco Green Building Code.

Patrick O'Riordan, C.B.O., Director — Date 1/10/23
Department of Building Inspection

Attachment Title-24 Energy Inspection Req. Non-Residential (Building)
Attachment Title-24 Energy Inspection Req. Non-Residential (Electrical)
Attachment Title-24 Energy Inspection Req. Non-Residential (Plumbing)

Energy Inspection Services
49 South Van Ness Ave – San Francisco CA 94103
Office (628) 652-3407 – www.sfgov.org/dbi (website)

City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, C.B.O., Director

NOTICE

TITLE-24 NON-RESIDENTIAL ENERGY/GREEN INSPECTION REQUIREMENTS (BUILDING)

Please note that Certificates of Installation and/or Acceptance and/or Verification are required for this project, as indicated on this form issued with this permit. Ensuring the accurate completion of this documentation is the direct responsibility of the engineer/architect of record. This documentation is required *in addition to* the called inspections performed by the Department of Building Inspection.

For questions regarding the details or extent of required documentation or testing, and if there are any field problems regarding documentation or testing, please call your District Building Inspector or 628-652-3400.

Before final building inspection is scheduled, documentation of energy compliance "Certificate of Installation, Acceptance, and Verification" and green building "Attachment E" must be completed and signed by the responsible person in charge. ***The permit will not be finalized without compliance with the energy inspection requirements.***

Energy Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email:** dbi.energyinspections@sfgov.org
3. **In person: 4th floor at 49 South Van Ness Ave.**

Note: We are moving towards a 'paperless' mode of operation. All special inspection submittals, including final letters, may be emailed (preferred).

Installation, Acceptance, and Verification certificates can be found on the California Energy Commission website at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency

Information Sheet M-06 provides submittal instructions for the Title-24 installation, verification, and acceptance energy certificates. M-06 may be found on the SFDBI website at https://sf.gov/resource/2022/information-sheets-dbi

Energy Inspection Services
49 South Van Ness Ave – San Francisco CA 94103
Office (628) 652-3407 – www.sfgov.org/dbi (website)

TITLE-24 NON-RESIDENTIAL ENERGY/GREEN INSPECTION (BUILDING)

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED DRAWING SET

JOB ADDRESS 3415 California St. San Francisco APPLICATION NO. 202202178229 ADDENDUM NO. ____

ENGINEER/ARCHITECT NAME SYED P. ALAM PHONE NO. 916-813-1752

Ensuring the completion of installation documentation as well as the required acceptance/verification testing is the direct responsibility of the undersigned. Installation documentation must be completed by the contractor performing the installation. Acceptance testing must be performed by an individual licensed to perform the specific testing needed. Verification testing must be completed by a certified HERS rater. Green Building Attachment E shall be completed as per SFGBC AB-093.

In accordance with the requirements of the 2022 California Energy Code, 2022 SFGBC and AB-093, the following documentation is required for the **building** elements in this project:

1. Installation

Envelope
- ☑ NRCI-ENV-E Envelope **(IB71)**

Mechanical
- ☑ NRCI-MCH-E Mechanical **(IB72)**

Process
- ☐ NRCI-PRC-E Covered Processes **(IB73)**

2. Acceptance

Envelope
- ☐ NRCA-ENV-02-F Fenestration Acceptance **(AB1)**
- ☐ NRCA-ENV-03-F Daylighting Design PAF Acceptance **(AB25)**

Process
- ☐ NRCA-PRC-01-F Compressed Air Systems **(AB15)**
- ☐ NRCA-PRC-02-F Commercial Kitchen Exhaust **(AB16)**
- ☐ NRCA-PRC-03-F Parking Garage Exhaust **(AB17)**
- ☐ NRCA-PRC-04-F Refrigerated Warehouse – Evaporator Fan Controls **(AB18)**
- ☐ NRCA-PRC-05-F Refrigerated Warehouse – Evaporative Condenser Controls **(AB19)**
- ☐ NRCA-PRC-06-F Refrigerated Warehouse – Air-cooled Condenser Controls **(AB20)**
- ☐ NRCA-PRC-07-F Refrigerated Warehouse – Variable Speed Compressor **(AB21)**
- ☐ NRCA-PRC-08-F Refrigerated Warehouse – Electric Resistance Underslab Heating System **(AB22)**
- ☐ NRCA-PRC-12-F Elevator Lighting & Ventilation Controls **(AB23)**
- ☐ NRCA-PRC-13-F Escalators & Moving Walkways Speed Controls **(AB24)**
- ☐ NRCA-PRC-14-F Lab Exhaust Ventilation System **(AB27)**
- ☐ NRCA-PRC-15-F Fume Hood Automatic Sash Closure System **(AB28)**
- ☐ NRCA-PRC-16-F Adiabatic Condensers and Condenser Fan Motor Variable Speed Control **(AB29)**

Mechanical
- ☑ NRCA-MCH-02-A Outdoor Air **(AB2)**
- ☑ NRCA-MCH-03-A Constant Volume Single Zone HVAC **(AB3)**
- ☐ NRCA-MCH-04-H HERS Air Distribution Duct Leakage Testing **(AB4)**
- ☐ NRCA-MCH-05-A Air Economizer Controls **(AB5)**
- ☐ NRCA-MCH-06-A Demand Control Ventilation (DVC) **(AB6)**
- ☐ NRCA-MCH-07-A Supply Fan Variable Flow Controls (VFC) **(AB7)**
- ☐ NRCA-MCH-11-A Automatic Demand Shed Controls **(AB8)**
- ☐ NRCA-MCH-12-A Fault Detection & Diagnostics for DX Units **(AB9)**
- ☑ NRCA-MCH-13-A Automatic Fault Detection & Diagnostics for Air Handling & Zone Terminal Units **(AB10)**
- ☐ NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Test **(AB11)**
- ☐ NRCA-MCH-15-A Thermal Energy Storage (TES) Systems **(AB12)**
- ☐ NRCA-MCH-16-A Supply Air Temperature Reset Controls**(AB13)**
- ☐ NRCA-MCH-18-A Energy Management Control System **(AB14)**
- ☐ NRCA-MCH-19-A Occupied Standby Acceptance **(AB26)**
- ☐ NRCA-MCH-20-A Multifamily Ventilation **(AB32)**
- ☐ NRCA-MCH-21-A Multifamily Leakage **(AB33)**
- ☐ NRCA-MCH-22-A System Duct Leakage **(AB34)**
- ☐ NRCA-MCH-23-A HRV ERV Verification **(AB35)**

3. Verification

Mechanical
- ☐ NRCV-MCH-04-H HERS Duct Leakage Diagnostic Test **(VB55)**
- ☐ NRCV-MCH-024-H HERS Enclosure Air Leakage Worksheet **(VB61)**
- ☐ NRCV-MCH-027-H HERS IAQ **(VB62)**
- ☐ NRCV-MCH-032-H HERS Local Mechanical Exhaust **(VB63)**

4. Green Building (For New Construction and Major Alterations)
- ☐ Green Building Attachment E **(GBC1)**

Required information:

Prepared by: Syed P. Alam (Digitally signed by Syed P. Alam DN: cn=Syed P. Alam, o=Innodez, ou=Innodez, email=syedalam44@yahoo.com, c=US Date: 2023.03.03 13:55:09 -08'00') **Date:** 2023.03.03
Engineer/Architect of Record Signature

Fax: (424) 414-0997 **Email:** syedalam44@yahoo.com

Review by: MOHSIN SHAIKH Phone: (628) 652-3717
DBI Engineer or Plan Checker

APPROVAL (Based on submitted reports)

DATE — DBI Building Inspector or Energy Inspection Services Staff

QUESTIONS ABOUT TITLE-24 ENERGY INSPECTION SHOULD BE DIRECTED TO:
Energy Inspection Services (628) 652-3407; or, dbi.energyinspections@sfgov.org

City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, C.B.O., Director

NOTICE

TITLE-24 NON-RESIDENTIAL ENERGY INSPECTION REQUIREMENTS (ELECTRICAL)

Please note that Certificates of Installation and/or Acceptance and/or Verification are required for this project, as indicated on this form issued with this permit. Ensuring the accurate completion of this documentation is the direct responsibility of the engineer/architect of record. This documentation is required *in addition to* the called inspections performed by the Department of Building Inspection.

For questions regarding the details or extent of required documentation or testing, and if there are any field problems regarding documentation or testing, please call your District Building Inspector or 628-652-3400.

Before final building inspection is scheduled, documentation of energy compliance "Certificate of Installation, Acceptance, and Verification" and green building "Attachment E" must be completed and signed by the responsible person in charge. ***The permit will not be finalized without compliance with the energy inspection requirements.***

Energy Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email:** dbi.energyinspections@sfgov.org
3. **In person: 4th floor at 49 South Van Ness Ave.**

Note: We are moving towards a 'paperless' mode of operation. All special inspection submittals, including final letters, may be emailed (preferred).

Installation, Acceptance, and Verification certificates can be found on the California Energy Commission website at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency

Information Sheet M-06 provides submittal instructions for the Title-24 installation, verification, and acceptance energy certificates. M-06 may be found on the SFDBI website at http://sfdbi.org/information-sheets

Energy Inspection Services
49 South Van Ness Ave – San Francisco CA 94103
Office (628) 652-3407 – www.sfgov.org/dbi (website)

TITLE-24 NON-RESIDENTIAL ENERGY INSPECTION (ELECTRICAL/LIGHTING)

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED DRAWING SET

JOB ADDRESS 3415 California St. San Francisco APPLICATION NO. 202202178229 ADDENDUM NO. ____

ENGINEER/ARCHITECT NAME Gregory Michael Dillett PHONE NO. 4793132632

Ensuring the completion of installation documentation as well as the required acceptance/verification testing is the direct responsibility of the undersigned. Installation documentation must be completed by the contractor performing the installation. Verification testing must be completed by a certified HERS rater.

In accordance with the requirements of the 2022 California Energy Code, the following documentation is required for the **electrical** elements in this project:

1. Installation

Indoor Lighting
- ☑ NRCI-LTI-E Indoor Lighting **(IE21)**

Outdoor Lighting
- ☑ NRCI-LTO-E Outdoor Lighting **(IE22)**

Sign Lighting
- ☐ NRCI-LTS-E Sign Lighting **(IE23)**

Electrical
- ☑ NRCI-ELC-E Electrical **(IE24)**

Solar
- ☐ NRCI-SPA-E Solar Access Requirements **(IE25)**

2. Acceptance

Indoor Lighting
- ☑ NRCA-LTI-02-A Lighting Controls **(AE1)**
- ☐ NRCA-LTI-03-A Automatic Daylighting Controls **(AE2)**
- ☐ NRCA-LTI-04-A Demand Responsive Lighting Controls **(AE3)**
- ☐ NRCA-LTI-05-A Institutional Tuning PAF **(AE5)**

Outdoor Lighting
- ☑ NRCA-LTO-02-A Outdoor Motion Sensor and Lighting Shut-Off Controls **(AE4)**

Required information:

Prepared by: Gregory Dillett (Digitally signed by Gregory Dillett DN: cn=Gregory Dillett, o=Innodez, ou=Innodez, email=gdillett@gmail.com, c=US Date: 2023.03.03 13:56:52 -08'00') **Date:** 2023.03.03
Engineer/Architect of Record Signature

Fax: (424) 414-0997 **Email:** gdillett@gmail.com

Review by: MOHSIN SHAIKH Phone: (628) 652-3717
DBI Engineer or Plan Checker

APPROVAL (Based on submitted reports)

DATE — DBI Electrical Inspector or Energy Inspection Services Staff

QUESTIONS ABOUT TITLE-24 ENERGY INSPECTION SHOULD BE DIRECTED TO:
Energy Inspection Services (628) 652-3407; or, dbi.energyinspections@sfgov.org

City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, C.B.O., Director

NOTICE

TITLE-24 NON-RESIDENTIAL ENERGY INSPECTION REQUIREMENTS (PLUMBING)

Please note that Certificates of Installation and/or Acceptance and/or Verification are required for this project, as indicated on this form issued with this permit. Ensuring the accurate completion of this documentation is the direct responsibility of the engineer/architect of record. This documentation is required *in addition to* the called inspections performed by the Department of Building Inspection.

For questions regarding the details or extent of required documentation or testing, and if there are any field problems regarding documentation or testing, please call your District Building Inspector or 628-652-3400.

Before final building inspection is scheduled, documentation of energy compliance "Certificate of Installation, Acceptance, and Verification" and green building "Attachment E" must be completed and signed by the responsible person in charge. ***The permit will not be finalized without compliance with the energy inspection requirements.***

Energy Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email:** dbi.energyinspections@sfgov.org
3. **In person: 4th floor at 49 South Van Ness Ave.**

Note: We are moving towards a 'paperless' mode of operation. All special inspection submittals, including final letters, may be emailed (preferred).

Installation, Acceptance, and Verification certificates can be found on the California Energy Commission website at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency

Information Sheet M-06 provides submittal instructions for the Title-24 installation, verification, and acceptance energy certificates. M-06 may be found on the SFDBI website at http://sfdbi.org/information-sheets

Energy Inspection Services
49 South Van Ness Ave – San Francisco CA 94103
Office (628) 652-3407 – www.sfgov.org/dbi (website)

TITLE-24 NON-RESIDENTIAL ENERGY INSPECTION (PLUMBING)

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED DRAWING SET

JOB ADDRESS 3415 California St. San Francisco APPLICATION NO. 202202178229 ADDENDUM NO. ____

ENGINEER/ARCHITECT NAME SYED P. ALAM PHONE NO. 916-813-1752

Ensuring the completion of installation documentation as well as the required acceptance/verification testing is the direct responsibility of the undersigned. Installation documentation must be completed by the contractor performing the installation. Verification testing must be completed by a certified HERS rater.

In accordance with the requirements of the 2022 California Energy Code, the following documentation is required for the **plumbing** work in this project:

1. Installation

Plumbing
- ☑ NRCI-PLB-E Plumbing **(IP16)**

2. Acceptance

Mechanical
- ☐ NRCA-MCH-08-A Valve Leakage Test **(AP1)**
- ☐ NRCA-MCH-09-A Supply Water Temperature Reset Controls **(AP2)**
- ☐ NRCA-MCH-10-A Hydronic System Variable Flow Controls **(AP3)**
- ☐ NRCA-MCH-17-A Condenser Water Temperature Reset Controls **(AP4)**

3. Verification

Plumbing
- ☐ NRCV-PLB-21-H High Rise Residential/Hotel/Motel Central Hot Water System Distribution **(VP1)**
- ☐ NRCV-PLB-22-H High Rise Residential/Hotel/Motel Single Dwelling Unit Hot Water System Distribution **(VP4)**

Required information:

Prepared by: Syed P. Alam (Digitally signed by Syed P. Alam DN: cn=Syed P. Alam, o=Innodez, ou=Innodez, email=syedalam44@yahoo.com, c=US Date: 2023.03.03 13:57:09 -08'00') **Date:** 2023.03.03
Engineer/Architect of Record Signature

Fax: (424) 414-0997 **Email:** syedalam44@yahoo.com

Review by: MOHSIN SHAIKH Phone: (628) 652-3717
DBI Engineer or Plan Checker

APPROVAL (Based on submitted reports)

DATE — DBI Plumbing Inspector or Energy Inspection Services Staff

QUESTIONS ABOUT TITLE-24 ENERGY INSPECTION SHOULD BE DIRECTED TO:
Energy Inspection Services (628) 652-3407; or, dbi.energyinspections@sfgov.org

CLIENT:

ADDRESS:
3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

NOTES:

1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	12/22	A.B

PROJECT: LAUREL VILLAGE

TITLE: T24-6

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO. T24-6 **REV.**

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
S-9-Server	Electrical, Mechanical, Telephone Rooms	NA	0.00 0.00 0.00 0.00 0.00	L2	39.4	2	39	0
S-10-Office	Office Area (>250 square feet)	NA	0.00 0.00 0.00 0.00 0.00	L1	213.6	4	214	0
S-11-NS Storage	Commercial/Industrial Storage (Warehouse)	NA	0.00 0.00 0.00 0.00 0.00	L2	39.4	2	39	0
S-12-Mezz - Toilet	All other	NA	0.00 0.00 0.00 0.00 0.00	L7	20.0	1	20	0

K4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS

Building Level Controls

1	2
Mandatory Demand Response §110.12(c)	**Shut-Off Controls §130.1(c)**
NA	NA

Area Level Controls (includes all lighting controls installed in conditioned space to meet mandatory requirements per §130.1)

4	5	6	7	8	9	10
Area Description	**Area Category Primary Function Area**	**Area Controls 130.1(a)**	**Multi-Level Controls 130.1(b)**	**Shut-Off Controls 130.1(c)**	**Primary Daylighting 130.1(d)**	**Secondary Daylighting 140.5(d)**
Lobby	Corridor Area	Required	Exempt	Required	NA	NA
Retail	Retail Sales Area (Retail Merchandise Sales)	Required	Required	Required	NA	NA
SCP Storage	Commercial/Industrial Storage (Warehouse)	Required	Exempt	Required	NA	NA
Intake	Healthcare Facility and Hospitals (Exam/Treatment Room)	Required	Exempt	Required	NA	NA
Stair	Stairwell	Required	Exempt	Required	NA	NA
Hall	Concourse and Atria Area	Required	Exempt	Required	NA	NA
1st Floor Toilet	Restrooms	Required	Exempt	Required	NA	NA
Lockers	Lounge, Breakroom, or Waiting Area	Required	Required	Required	NA	NA
Server	Electrical, Mechanical, Telephone Rooms	Required	Exempt	Required	NA	NA

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents bust be retained and 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/

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings
Plumbing	NRCI-PLB-01-E - Must be submitted for all buildings
Indoor Lighting	NRCI-LTI-01-E - Must be submitted for all buildings

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	Form/Title
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration
Indoor Lighting	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls
Mechanical	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap
	NRCA-MCH-03-A Constant Volume Single Zone HVAC
	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance

[1] *See Table 140.6-C*
[2] *See NRCC-LTI-01-E for unconditioned spaces*
[3] *Lighting information for existing spaces modeled is not included in the table*

K2. INDOOR CONDITIONED LIGHTING SCHEDULE

Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft^2 in offices)

		Installed Watts (Conditioned)			
1	2	3	4	5	6
Name or Item Tag	**Complete Luminaire Description (i.e., 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)**	**Watts per luminaire**	**How Wattage is Determined**	**Total Number Luminaires**	**Installed Watts**
L1	L1 - Surface Mounted 3" Deep Low	53	According to §130.0(c)	14	747
L2	L2 - 4' Surface Mounted Led Strip	20	According to §130.0(c)	8	157
L3	L3 - Existing LED Track Lighting	15	According to §130.0(c)	15	225
L4	L4 - Led Track Head ELV Dimmable	14	According to §130.0(c)	2	28
L5	L5 - Existing Recessed LED Downlight	20	According to §130.0(c)	25	500
L6	L6 - 6" Recessed LED Dimmable	18	According to §130.0(c)	5	87
L7	L7 - Existing Wall Sconce Fixture	20	According to §130.0(c)	3	60
L8	L8- Chandelier LED Light	46	According to §130.0(c)	1	46

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
S-1-Lobby	Corridor Area	NA	0.00	L8	46.0	1	46	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00 0.00 0.00 0.00					
S-1-Lobby	Corridor Area	NA	0.00 0.00 0.00 0.00 0.00 0.00	L5	220.0	11	220	0
S-2-Retail	Retail Sales Area (Retail Merchandise Sales)	NA	0.00 0.00 0.00 0.00 0.00 0.00	L5	280.0	14	280	0
S-2-Retail	Retail Sales Area (Retail Merchandise Sales)	NA	0.00 0.00 0.00 0.00 0.00 0.00	L3	225.0	15	225	0
S-2-Retail	Retail Sales Area (Retail Merchandise Sales)	NA	0.00 0.00 0.00 0.00 0.00 0.00	L6	70.0	4	70	0
S-2-Retail	Retail Sales Area (Retail Merchandise Sales)	NA	0.00 0.00 0.00 0.00 0.00 0.00	L4	28.0	2	28	0
S-3-1st Floor - Toilet	Restrooms	NA	0.00 0.00 0.00	L6	17.5	1	18	0

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaires	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
			0.00 0.00					
S-3-1st Floor - Toilet	Restrooms	NA	0.00 0.00 0.00 0.00 0.00	L7	20.0	1	20	0
S-4-SCP Storage	Commercial/Industrial Storage (Warehouse)	NA	0.00 0.00 0.00 0.00 0.00 0.00	L2	78.8	4	79	0
S-5-Intake	Healthcare Facility and Hospitals (Exam/Treatment Room)	NA	0.00 0.00 0.00 0.00 0.00 0.00	L1	160.2	3	160	0
S-6-Stair	Stairwell	NA	0.00 0.00 0.00 0.00 0.00 0.00	L7	20.0	1	20	0
S-7-Lockers	Concourse and Atria Area	NA	0.00 0.00 0.00 0.00 0.00 0.00	L1	106.8	2	107	0
S-8-Hall	Lounge, Breakroom, or Waiting Area	NA	0.00 0.00 0.00 0.00 0.00 0.00	L1	267.0	5	267	0

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Syed P. Alam	Signature: **Syed Alam**
Company: InnoDez, Inc.	
Address: 726 Foxbrough pl	Signature Date: 2023-02-21
City/State/Zip: Pleasanton CA 94566	CEA/ HERS Certification Identification (if applicable):
Phone: 9168321752	

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 Envelope Designer Name: Syed P. Alam	Signature: **Syed Alam**	
Company: Innodez		
Address: 726 Foxbrough Pl	Date Signed: **2023.02.21**	
City/State/Zip: Pleasanton CA 94566		
Phone: 916-813-1752	Title: **PE ENGINEER**	License #: 27087
Responsible Lighting Designer Name: Gregory Michael Dillett	Signature: **Gregory Dillett**	
Company: Innodez		
Address: 22 Chatel drive	Date Signed: **2023.02.21**	
City/State/Zip: Little Rock AR 72223		
Phone: 479-313-2632	Title: **PE ENGINEER**	License #: 21635
Responsible Mechanical Designer Name: Syed P. Alam	Signature: **Syed Alam**	
Company: Innodez		
Address: 726 Foxbrough Pl	Date Signed: **2023.02.21**	
City/State/Zip: Pleasanton CA 94566		
Phone: 916-813-1752	Title: **PE ENGINEER**	License #: 27087

CLIENT:

ADDRESS:

3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

NOTES:

1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	12/22	A.B

PROJECT:

LAUREL VILLAGE

TITLE:

T24-2

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.

T 2 4 - 2

REV.

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — 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, high-rise residential and hotel/motel occupancies. Additions and alterations to electrical service systems in these occupancies will also use this document to demonstrate compliance per §141.0(a) or §141.0(b)2F for alterations..

Project Name:	3415 California St TI	**Report Page:**	**(Page 1 of 4)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

A. GENERAL INFORMATION

01	Project Location (city)	San Francisco
02	Occupancy Types Within Project:	

● Healthcare Facility ● Office ● Retail ● Support Areas ● Warehouse ● : See Table I

B. PROJECT SCOPE

This table includes electrical systems that are within the scope of the permit application.

01	02	03	04	05
Electrical Service Designation/Description	Scope of Work[1]	Rating (kVA)	Utility Provided Metering System Exception to §130.5(a) [2]	System subject to CA Elec Code Article 517 Exception to §130.5(a)and (b)
	Add/Alt to feeders and branch circuits only	50	☐	☐
06 Demand Response Controls	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, §130.1 and §130.3 and compliance documents NRCC-MCH, NRCC-LTI and NRCC-LTS will indicate when demand response controls are required.			

[1] *FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c), no other requirements from 130.5 are required.*
[2] *Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.*

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. 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
Service Electrical Metering §130.5(a) (See Table F)	AND	Separation for Monitoring §130.5(b) (See Table G)	AND	Voltage Drop §130.5(c) (See Table H)	AND	Controlled Receptacles §130.5(d) (See Table I)	
Yes	AND	Yes	AND	Yes	AND	Yes	COMPLIES

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-ELC-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 2 of 4)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

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 is 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). For alterations, only the altered circuits must demonstrate compliance per §141.0(b)2Piii

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
	☒	Voltage drop less than 5%	☐	Permitted by CA Elec Code (Exception to 130.5(c))*	Attached		☐	☐

** 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.

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-ELC-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 3 of 4)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

J. 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 at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-ELC-01-E - Must be submitted for all buildings	☐	☐

K. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to electrical power distribution requirements.

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Electrical Power Distribution
NRCC-ELC-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-ELC-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 4 of 4)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Syed P. Alam	Documentation Author Signature: **Syed Alam**
Company: InnoDez, Inc.	Signature Date: **2023.02.21**
Address: 726 Foxbrough pl	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pleasanton CA 94566	Phone: 9168321752

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: Gregory Michael Dillett	Responsible Designer Signature: **Gregory Dillett**
Company: Innodez	Date Signed: 2023-02-21
Address: 22 Chatel drive	License: 21635
City/State/Zip: Little Rock AR 72223	Phone: 479-313-2632

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — 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.

Project Name:	3415 California St TI	**Report Page:**	**(Page 1 of 8)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

A. GENERAL INFORMATION

01	Project Location (city)	San Francisco	04	Total Conditioned Floor Area (ft²)	0
02	Climate Zone	3	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	2

● Healthcare Facility ● Office ● Retail ● Support Areas ● Warehouse ● : See Table I

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 or §141.0(b)2 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	0	Area Category Method	0
Total Area of Work (ft²)	0		0	

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 2 of 8)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

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	Allowed Lighting Power per §140.6(b) (Watts)						Adjusted Lighting Power per §140.6(a) (Watts)			Compliance Results
	01	02	03	04		05	06	07	08	09
	Complete Building §140.6(c)1	Area Category §140.6(c)2	Area Category Additional §140.6(c)2G (+)	Tailored §140.6(c)3 (+)	=	**Total Allowed** (Watts)	Total Designed (Watts)	Adjustments PAF Lighting Control Credits §140.6(a)2 (-)	= **Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 §140.6**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)		
Conditioned					=				=	
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.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This section does not apply to this project.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 3 of 8)**
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H. INDOOR LIGHTING CONTROLS (Not including PAFs)

*This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
Mandatory Demand Response §110.12(c)	Shut-off controls §130.1(d)	Field Inspector	
		Pass	Fail
Not Required <= 10,000 SF	See Area/Space Level Controls	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Sky lit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector	
								Pass	Fail
Lobby	Corridor Area	Manual ON/OFF	Exempt*	Occupancy Sensor	N/A	N/A	No	☐	☐
Retail	Retail Merchandise Sales	Manual ON/OFF	Dimmer	Occupancy Sensor	N/A	N/A	No	☐	☐
SCP Storage	Warehouse	Manual ON/OFF	Exempt*	Other	N/A	N/A	No	☐	☐
Intake	Exam/Treatment Room	Manual ON/OFF	Exempt*	Other	N/A	N/A	No	☐	☐
Stair	Stairwell	Manual ON/OFF	Exempt*	Other	N/A	N/A	No	☐	☐
Hall	Concourse and Atria	Manual ON/OFF	Exempt*	Other	N/A	N/A	No	☐	☐
1st Floor Toilet	Restrooms	Manual ON/OFF	Exempt*	Occupancy Sensor	N/A	N/A	No	☐	☐
Lockers	Lounge Breakroom or Waiting Area	Manual ON/OFF	Dimmer	Other	N/A	N/A	No	☐	☐

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 4 of 8)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Server	Electrical Mechancial Telephone Room	Manual ON/OFF	Exempt*	Other	N/A	N/A	No	☐	☐
Office	Office 250 square feet or less	Manual ON/OFF	Exempt*	Other	N/A	N/A	No	☐	☐
NS Storage	Warehouse	Manual ON/OFF	Exempt*	Other	N/A	N/A	No	☐	☐
Mezz. Toilet	Restrooms	Manual ON/OFF	Exempt*	Occupancy Sensor	N/A	N/A	No	☐	☐

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 5 of 8)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved. *EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2*	13
	Plan Sheet Showing Daylit Zones:
Lobby	Area < 150 SQ.FT
SCP Storage	Area < 150 SQ.FT
Intake	Connected load < 0.5W/SQ.FT
Stair	Connected load < 0.5W/SQ.FT
Hall	Connected load < 0.5W/SQ.FT
1st Floor Toilet	Area < 150 SQ.FT
Lockers	
Server	Area < 150 SQ.FT
Office	Area < 150 SQ.FT
NS Storage	Connected load < 0.5W/SQ.FT
Mezz. Toilet	Area < 150 SQ.FT

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 .

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

CLIENT:

ADDRESS:
3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

CONFIDENTIALITY STATEMENT:

ALL DRAWINGS AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF THE DESIGNER AND THE SAME MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT CONSENT OF THE DESIGNER.

NOTES:

1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	12/22	A.B

PROJECT:
LAUREL VILLAGE

TITLE:
T24-3

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.
T 2 4 - 3

REV.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	3415 California St TI	Report Page:	(Page 6 of 8)
Project Address:	3415 California St	Date Prepared:	2/21/2023

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 ORNAMENTAL/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 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.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	3415 California St TI	Report Page:	(Page 7 of 8)
Project Address:	3415 California St	Date Prepared:	2/21/2023

T. 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 at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector Pass	Field Inspector Fail
NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
There are no NRCA forms required for this project.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	3415 California St TI	Report Page:	(Page 8 of 8)
Project Address:	3415 California St	Date Prepared:	2/21/2023

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

Documentation Author Name: Syed P. Alam	Documentation Author Signature: **Syed Alam**
Company: InnoDez, Inc.	Signature Date: **2023.02.21**
Address: 726 Foxbrough pl	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pleasanton CA 94566	Phone: 9168321752

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: Gregory Michael Dillett	Responsible Designer Signature: **Gregory Dillett**
Company: Innodez	Date Signed: 2023-02-21
Address: 22 Chatel drive	License: 21635
City/State/Zip: Little Rock AR 72223	Phone: 479-313-2632

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	3415 California St TI	Report Page:	(Page 1 of 6)
Project Address:	3415 California St	Date Prepared:	2/21/2023

A. GENERAL INFORMATION

01	Project Location (city)	San Francisco	04	Total Illuminated Hardscape Area (ft²)	0
02	Climate Zone	3			
03	Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Rural Areas	☐	LZ-4: High - Must be reviewed by CA Energy Commission for Approval	
☐	LZ-1: Low - Developed Parkland	☒ LZ-3: Moderately High - Urban Areas			

B. PROJECT SCOPE
This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My Project Consists of:

01	02		
☐	New Lighting System	Must Comply with Allowances from §140.7	
☒	Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ◉ No	
03		04	05
% of Existing Luminaires Being Altered[1]		Sum Total of Luminaires Being Added or Altered	Calculation Method
☒ < 10% ☐ >= 10% and < 50% ☐ >= 50%		0	Maintain Existing Power Method per §141.0(b)2L

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	3415 California St TI	Report Page:	(Page 2 of 6)
Project Address:	3415 California St	Date Prepared:	2/21/2023

C. COMPLIANCE RESULTS
Results in this table are automatically calculated from data input and calculations in Tables F through I. 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.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L											Compliance Results		
01		02		03		04		05	OR	06	=	07	≥	08	09
General Hardscape Allowance §140.7(d)1 (See Table I)	+	Per Application §140.7(d)2 (See Table J)	+	Sales Frontage §140.7(d)2 (See Table K)	+	Ornamental §140.7(d)2 (See Table L)	+	Per Specific Area §140.7(d)2 (See Table M)		Existing Power Allowance §141.0(b)2L (See Table N)		**Total Allowed** (Watts)		**Total Actual** (Watts)	**07 must be >= 08**
0	+	---	+	---	+	---	+	---	OR	---	=	0	≥	0	COMPLIES
Cutoff Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H 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 project applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	3415 California St TI	Report Page:	(Page 3 of 6)
Project Address:	3415 California St	Date Prepared:	2/21/2023

F. OUTDOOR LIGHTING FIXTURE SCHEDULE
For new or altered lighting systems demonstrating compliance with §140.7 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1, 2]	How is Wattage determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumen output §130.2(b)[4]	Field Inspector Pass	Field Inspector Fail
					Total Design Watts:		0			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)*

G. CUTOFF REQUIREMENTS (BUG)
This section does not apply to this project.

H. OUTDOOR LIGHTING CONTROLS
This section does not apply to this project.

I. LIGHTING POWER ALLOWANCE (per §140.7)
This section does not apply to this project.

J. LIGHTING ALLOWANCE: PER APPLICATION
This section does not apply to this project.

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	3415 California St TI	Report Page:	(Page 4 of 6)
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K. LIGHTING ALLOWANCE: SALES FRONTAGE
This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL
This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA
This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)
This table includes all existing luminaires being replaced to establish the lighting power allowance per §141.0(b)2Li or §141.0(b)2Lii. Existing luminaires that are remaining or being moved should NOT be included.

Existing Conditions Wattage:

01	02	03	04	05	06	07	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How is Wattage determined	# of Luminaires Being Replaced[2]	Existing Watts	Field Inspector Pass	Field Inspector Fail
				Total Existing Watts			
				Allowance per §141.0(b)2L :			

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*

O. 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 at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector Pass	Field Inspector Fail
NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐
NRCI-LTO-02-E- Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	3415 California St TI	Report Page:	(Page 5 of 6)
Project Address:	3415 California St	Date Prepared:	2/21/2023

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
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 must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/tattcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector Pass	Field Inspector Fail
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	☐	☐	

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	3415 California St TI	Report Page:	(Page 6 of 6)
Project Address:	3415 California St	Date Prepared:	2/21/2023

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

Documentation Author Name: Syed P. Alam	Documentation Author Signature: **Syed Alam**
Company: InnoDez, Inc.	Signature Date: **2023.02.21**
Address: 726 Foxbrough pl	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pleasanton CA 94566	Phone: 9168321752

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: Gregory Michael Dillett	Responsible Designer Signature: **Gregory Dillett**
Company: Innodez	Date Signed: 2023-02-21
Address: 22 Chatel drive	License: 21635
City/State/Zip: Little Rock AR 72223	Phone: 479-313-2632

CLIENT:

ADDRESS:
3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

NOTES:
1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	12/22	A.B

PROJECT:
LAUREL VILLAGE

TITLE:
T24-4

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.: **T 2 4 - 4**
REV.:

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-PLB-E**

This document is used to demonstrate compliance for nonresidential occupancies with requirements in §110.1, §110.3, §120.3, and §140.5, and with requirements in §141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in §110.1, §110.3, §120.3, §150.0 and §150.1(c)8, and with requirements §150.2 for additions.

Project Name:	3415 California St TI	**Report Page:**	**(Page 1 of 6)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

A. GENERAL INFORMATION

01	Project Location (city)	San Francisco	02	Climate Zone	3
03	Occupancy Types Within Project (select all that apply):				
☒ Nonresidential	☐ High-Rise Residential	☐ Hotel/Motel			
☐ State Building	☐ Healthcare Facility	☐ Other (Write In)			

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in §140.5, §150.1(c)8, and §141.0(a), or §141.0(b)2N for additions or alterations. Solar water heating systems are documented on the NRCC-SRA compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03		
My project consists of (check all that apply):	System Type[1,2]	System Components		
☒ New system (DHW system being installed for the first time in newly constructed building)	Individual System (serving nonresidential spaces)	☒ Equipment	☒ Distribution	☒ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment	☐ Distribution	☐ Controls

[1] *FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*
[2] *Dwelling units refers to hotel/motel guest rooms and units in a high-rise residential occupancy.*

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

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STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-PLB-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 2 of 6)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. 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
Domestic Hot Water Equipment	Distribution Systems	Controls	**Compliance Results**
Table F	Table G	Table H	
Yes	Yes	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 is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003 Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-PLB-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 3 of 6)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

F. DOMESTIC HOT WATER EQUIPMENT

This table is used to demonstrate compliance with mandatory equipment requirements in §110.1 and §110.3. For high-rise residential and hotel/motel occupancies, compliance with prescriptive requirements in §150.1(c)8 must also be demonstrated and with §150.2 for addition and alteration scopes.

Equipment Schedule: Individual Systems

01	02	03	04	05	06
Name or Item Tag	Equipment Type	Volume (gal)	Max GPM/ First Hour Rating (FHR)	Rated Uniform Energy Factor (UEF)	Minimum Required Uniform Energy Factor (UEF)[1]
A. O. SMITH ENSB-30	Residential-Duty Commercial Electric Instantaneous (12-58.6kW)	<=30	0 <= GPM <1.7	0.8	0.8

[1] *FOOTNOTE: Compliant equipment may be found in the Modernized Appliance Efficiency Database System (MAEDBS) on the Energy Commission website: https://cacertappliances.energy.ca.gov/Pages/Search/AdvancedSearch.aspx*

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	☐	☐	☒	Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-12. Label required per §110.3(c)3
19	☐	☐	☒	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per §110.3(c)5
20	☐	☐	☒	Isolation valves for instantaneous water heater with input rating >6.8 kBTUH or 2 kW has been specified per §110.3(c)6

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003 Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-PLB-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 4 of 6)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in §120.3 and §140.5. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements §110.3(c), §120.3, §150.0, §150.1

Mandatory Pipe Insulation All Occupancies

12	☒	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per §120.3 : • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
13	☒	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 per §120.3(b) and §150.0(j)3

TABLE 120.3-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft² per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)		
			< 1	1 to < 1.5	1.5 to < 4
			Minimum Insulation Required		
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003 Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-PLB-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 5 of 6)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

H. DOMESTIC HOT WATER CONTROLS

This table is used to demonstrate compliance with control requirements in §110.3 for all occupancies. For high-rise residential and hotel/motel occupancies, compliance is also demonstrated with requirements in §150.1(c)8.

	Yes	No	Not Applicable	Requirement
01	☒	☐	☐	Construction documents require manufacturer certification that service water heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per §110.3(a)
02	☒	☐	☐	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per §110.3(c)1 unless covered by California Plumbing Code 613.0.
03	☐	☐	☒	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility.
04	☐	☐	☒	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per §150.1(c)8iii, or §150.2 for additions or alterations.
05	☐	☐	☒	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per §150.1(c)8.
06	☐	☐	☒	For replacement single heat pump water heaters serving individual dwelling units in climate zone 1-15, design includes communication interface that meets demand responsive control requirements of §110.12(a) per §150.2(b)1Hiii.

I. 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 at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCI-PLB-01-E - Must be submitted for all buildings	☐	☐

J.DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to service water heating requirements.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003 Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-PLB-E**

Project Name:	3415 California St TI	**Report Page:**	**(Page 6 of 6)**
Project Address:	3415 California St	**Date Prepared:**	2/21/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Syed P. Alam	Documentation Author Signature: **Syed Alam**
Company: InnoDez, Inc.	Signature Date: 2023-02-21
Address: 726 Foxbrough pl	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pleasanton CA 94566	Phone: 9168321752

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: Syed P. Alam	Responsible Designer Signature: **Syed Alam**
Company: Innodez	Date Signed: 2023-02-21
Address: 726 Foxbrough Pl	License: 27087
City/State/Zip: Pleasanton CA 94566	Phone: 916-813-1752

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003 Schema Version: rev 20200601 — Report Generated: 2023-02-21 10:14:48

Attachment NRB

TITLE-24 NON-RESIDENTIAL ENERGY/GREEN INSPECTION (BUILDING)

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED DRAWING SET

JOB ADDRESS 3415 California St. San Francisco APPLICATION NO. 202202178229 ADDENDUM NO. ____

ENGINEER/ARCHITECT NAME SYED P. ALAM PHONE NO. 916-813-1752

Ensuring the completion of installation documentation as well as the required acceptance/verification testing is the direct responsibility of the undersigned. Installation documentation must be completed by the contractor performing the installation. Acceptance testing must be performed by an individual licensed to perform the specific testing needed. Verification testing must be completed by a certified HERS rater. Green Building Attachment E shall be completed as per Administrative Bulletin 093 (AB-093).

In accordance with the requirements of the 2019 California Energy Code, 2019 SFGBC and AB-093, the following documentation is required for the **building** elements in this project:

1. Installation

Envelope
☑ NRCI-ENV-01-E Envelope **(IB35)**

Mechanical
☑ NRCI-MCH-01-E Mechanical **(IB36)**

Process
☐ NRCI-PRC-01-E Covered Processes **(IB37)**

2. Acceptance

Envelope
☑ NRCA-ENV-02-F Fenestration Acceptance **(AB1)**
☐ NRCA-ENV-03-F Daylighting Design PAF Acceptance **(AB25)**

Mechanical
☑ NRCA-MCH-02-A Outdoor Air **(AB2)**
☑ NRCA-MCH-03-A Constant Volume Single Zone HVAC **(AB3)**
☐ NRCA-MCH-04-H HERS Air Distribution Duct Leakage Testing **(AB4)**
☐ NRCA-MCH-05-A Air Economizer Controls **(AB5)**
☐ NRCA-MCH-06-A Demand Control Ventilation (DVC) **(AB6)**
☐ NRCA-MCH-07-A Supply Fan Variable Flow Controls (VFC) **(AB7)**
☐ NRCA-MCH-11-A Automatic Demand Shed Controls **(AB8)**
☐ NRCA-MCH-12-A Fault Detection & Diagnostics for DX Units **(AB9)**
☑ NRCA-MCH-13-A Automatic Fault Detection & Diagnostics for Air Handling & Zone Terminal Units **(AB10)**
☐ NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Test **(AB11)**
☐ NRCA-MCH-15-A Thermal Energy Storage (TES) Systems **(AB12)**
☐ NRCA-MCH-16-A Supply Air Temperature Reset Controls**(AB13)**
☐ NRCA-MCH-18-A Energy Management Control System **(AB14)**
☐ NRCA-MCH-19-A Occupied Standby Acceptance **(AB26)**
☐ NRCA-MCH-20-H Multifamily Ventilation **(AB30)**
☐ NRCA-MCH-21-H Multifamily Envelope **(AB31)**

Process
☐ NRCA-PRC-01-F Compressed Air Systems **(AB15)**
☐ NRCA-PRC-02-F Commercial Kitchen Exhaust **(AB16)**
☐ NRCA-PRC-03-F Parking Garage Exhaust **(AB17)**
☐ NRCA-PRC-04-F Refrigerated Warehouse – Evaporator Fan Controls **(AB18)**
☐ NRCA-PRC-05-F Refrigerated Warehouse – Evaporative Condenser Controls **(AB19)**
☐ NRCA-PRC-06-F Refrigerated Warehouse – Air-cooled Condenser Controls **(AB20)**
☐ NRCA-PRC-07-F Refrigerated Warehouse – Variable Speed Compressor **(AB21)**
☐ NRCA-PRC-08-F Refrigerated Warehouse – Electric Resistance Underslab Heating System **(AB22)**
☐ NRCA-PRC-12-F Elevator Lighting & Ventilation Controls **(AB23)**
☐ NRCA-PRC-13-F Escalators & Moving Walkways Speed Controls **(AB24)**
☐ NRCA-PRC-14-F Lab Exhaust Ventilation System **(AB27)**
☐ NRCA-PRC-15-F Fume Hood Automatic Sash Closure System **(AB28)**
☐ NRCA-PRC-16-F Adiabatic Condensers and Condenser Fan Motor Variable Speed Control **(AB29)**

3. Verification

Mechanical
☐ NRCV-MCH-04-H HERS Duct Leakage Diagnostic Test **(VB55)**
☐ NRCV-MCH-024-H HERS Enclosure Air Leakage Worksheet **(VB61)**
☐ NRCV-MCH-027-H HERS IAQ **(VB62)**
☐ NRCV-MCH-032-H HERS Local Mechanical Exhaust **(VB63)**

4. Green Building (For New Construction and Major Alterations)
☐ Green Building Attachment E **(GBC1)**

Required information:

Prepared by: SYED P. ALAM — **Date:** 2023.02.24
Engineer/Architect of Record Signature

Fax: _____ **Email:** syedalam44@yahoo.com

Review by: _____ Phone: (628) 652 -
DBI Engineer or Plan Checker

APPROVAL (Based on submitted reports)

DATE — DBI Building Inspector or Energy Inspection Services Staff

QUESTIONS ABOUT TITLE-24 ENERGY INSPECTION SHOULD BE DIRECTED TO: Energy Inspection Services (628) 652-3407; or, dbi.energyinspections@sfgov.org

Attachment NRP

TITLE-24 NON-RESIDENTIAL ENERGY INSPECTION (PLUMBING)

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED DRAWING SET

JOB ADDRESS 3415 California St. San Francisco APPLICATION NO. 202202178229 ADDENDUM NO. ____

ENGINEER/ARCHITECT NAME SYED P. ALAM PHONE NO. 916-813-1752

Ensuring the completion of installation documentation as well as the required acceptance/verification testing is the direct responsibility of the undersigned. Installation documentation must be completed by the contractor performing the installation. Acceptance testing must be performed by an individual licensed to perform the specific testing needed. Verification testing must be completed by a certified HERS rater.

In accordance with the requirements of the 2019 California Energy Code, the following documentation is required for the **plumbing** work in this project:

1. Installation

Plumbing
☑ NRCI-PLB-01-E Plumbing **(IP10)**
☐ NRCI-PLB-02-E High Rise Residential/Hotel/Motel Central Hot Water System Distribution **(IP11)**
☐ NRCI-PLB-03-E High Rise Residential/Hotel/Motel Single Dwelling Unit Hot Water System Distribution **(IP12)**
☐ NRCI-PLB-21-H HERS High Rise Residential/Hotel/Motel Central hot Water System Distribution **(IP13)**
☐ NRCI-PLB-22-H HERS High Rise Residential/Hotel/Motel Single Dwelling Unit Hot Water System Distribution **(IP14)**

Solar
☐ NRCI-STH-01-E Solar Water Heating System **(IP15)**

2. Acceptance

Mechanical
☐ NRCA-MCH-05-A Valve Leakage Test **(AP1)**
☐ NRCA-MCH-09-A Supply Water Temperature Reset Controls **(AP2)**
☐ NRCA-MCH-10-A Hydronic System Variable Flow Controls **(AP3)**
☐ NRCA-MCH-17-A Condenser Water Temperature Reset Controls **(AP4)**

3. Verification

Plumbing
☐ NRCV-PLB-21-H High Rise Residential/Hotel/Motel Central Hot Water System Distribution **(VP1)**
☐ NRCV-PLB-22-H High Rise Residential/Hotel/Motel Single Dwelling Unit Hot Water System Distribution **(VP4)**

Required information:

Prepared by: SYED P. ALAM — **Date:** 2023.02.24
Engineer/Architect of Record Signature

Fax: _____ **Email:** syedalam44@yahoo.com

Review by: _____ Phone: (628) 652 -
DBI Engineer or Plan Checker

APPROVAL (Based on submitted reports)

DATE — DBI Plumbing Inspector or Energy Inspection Services Staff

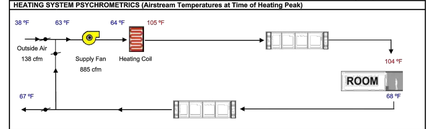
QUESTIONS ABOUT TITLE-24 ENERGY INSPECTION SHOULD BE DIRECTED TO: Energy Inspection Services 628) 652-3407; or, dbi.energyinspections@sfgov.org

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

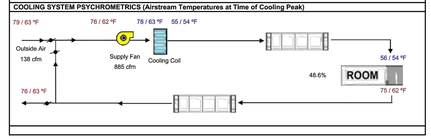
Project Name: 3415 California St TI			Date: 2/21/2023
System Name: (E) HVAC System 1			Floor Area: 855

ENGINEERING CHECKS		SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
			CFM	Sensible	Latent	CFM	Sensible
Number of Systems	1						
Heating System							
Output per System	30,000	**Total Room Loads**	962	19,675	2,844	440	17,126
Total Output (Btuh)	30,000	**Return Vented Lighting**		0			0
Output (Btuh/sqft)	35.1	**Return Air Ducts**		984			856
Cooling System		**Return Fan**		0			0
Output per System	30,000	**Ventilation**	138	378	-326	138	4,317
Total Output (Btuh)	30,000	**Supply Fan**		1,519			-1,519
Total Output (Tons)	2.5	**Supply Air Ducts**		984			856
Total Output (Btuh/sqft)	35.1						
Total Output (sqft/Ton)	342.0	**TOTAL SYSTEM LOAD**		23,540	2,518		21,637
Air System							
CFM per System	885	**HVAC EQUIPMENT SELECTION**					
Airflow (cfm)	885	(E) Carrier 48XP-024060		27,935	2,558		30,000
Airflow (cfm/sqft)	1.04						
Airflow (cfm/Ton)	354.0						
Outside Air (%)	15.5%	**Total Adjusted System Output** (Adjusted for Peak Design conditions)		27,935	2,558		30,000
Outside Air (cfm/sqft)	0.16						
Note: values above given at ARI conditions		**TIME OF SYSTEM PEAK**			Jul 4 PM		Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)

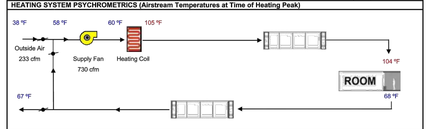


HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

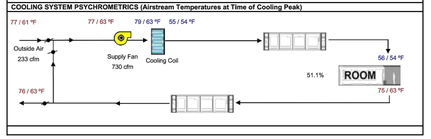
Project Name: 3415 California St TI			Date: 2/21/2023
System Name: (N) HVAC System			Floor Area: 918

ENGINEERING CHECKS		SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
			CFM	Sensible	Latent	CFM	Sensible
Number of Systems	1						
Heating System							
Output per System	30,000	**Total Room Loads**	1,166	23,273	4,036	452	17,502
Total Output (Btuh)	30,000	**Return Vented Lighting**		0			0
Output (Btuh/sqft)	32.7	**Return Air Ducts**		1,164			875
Cooling System		**Return Fan**		0			0
Output per System	30,000	**Ventilation**	233	131	-1,787	233	7,240
Total Output (Btuh)	30,000	**Supply Fan**		1,519			-1,519
Total Output (Tons)	2.5	**Supply Air Ducts**		1,164			875
Total Output (Btuh/sqft)	32.7						
Total Output (sqft/Ton)	367.3	**TOTAL SYSTEM LOAD**		27,249	2,251		24,974
Air System							
CFM per System	730	**HVAC EQUIPMENT SELECTION**					
Airflow (cfm)	730	(N) Carrier 48XP-024060		28,493	2,340		30,000
Airflow (cfm/sqft)	0.80						
Airflow (cfm/Ton)	292.0						
Outside Air (%)	31.8%	**Total Adjusted System Output** (Adjusted for Peak Design conditions)		28,493	2,340		30,000
Outside Air (cfm/sqft)	0.25						
Note: values above given at ARI conditions		**TIME OF SYSTEM PEAK**			Sep 3 PM		Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



CLIENT:

ADDRESS:
3415 CALIFORNIA ST. SAN FRANCISCO, CA 94118

CONFIDENTIALITY STATEMENT:

ALL DRAWINGS AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF THE DESIGNER AND THE SAME MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT CONSENT OF THE DESIGNER.

NOTES:

1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY
01	FOR APPROVAL	02/23	A.B
00	FOR APPROVAL	12/22	A.B

PROJECT:
LAUREL VILLAGE

TITLE:
T24-5

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.
T 2 4 - 5

REV.