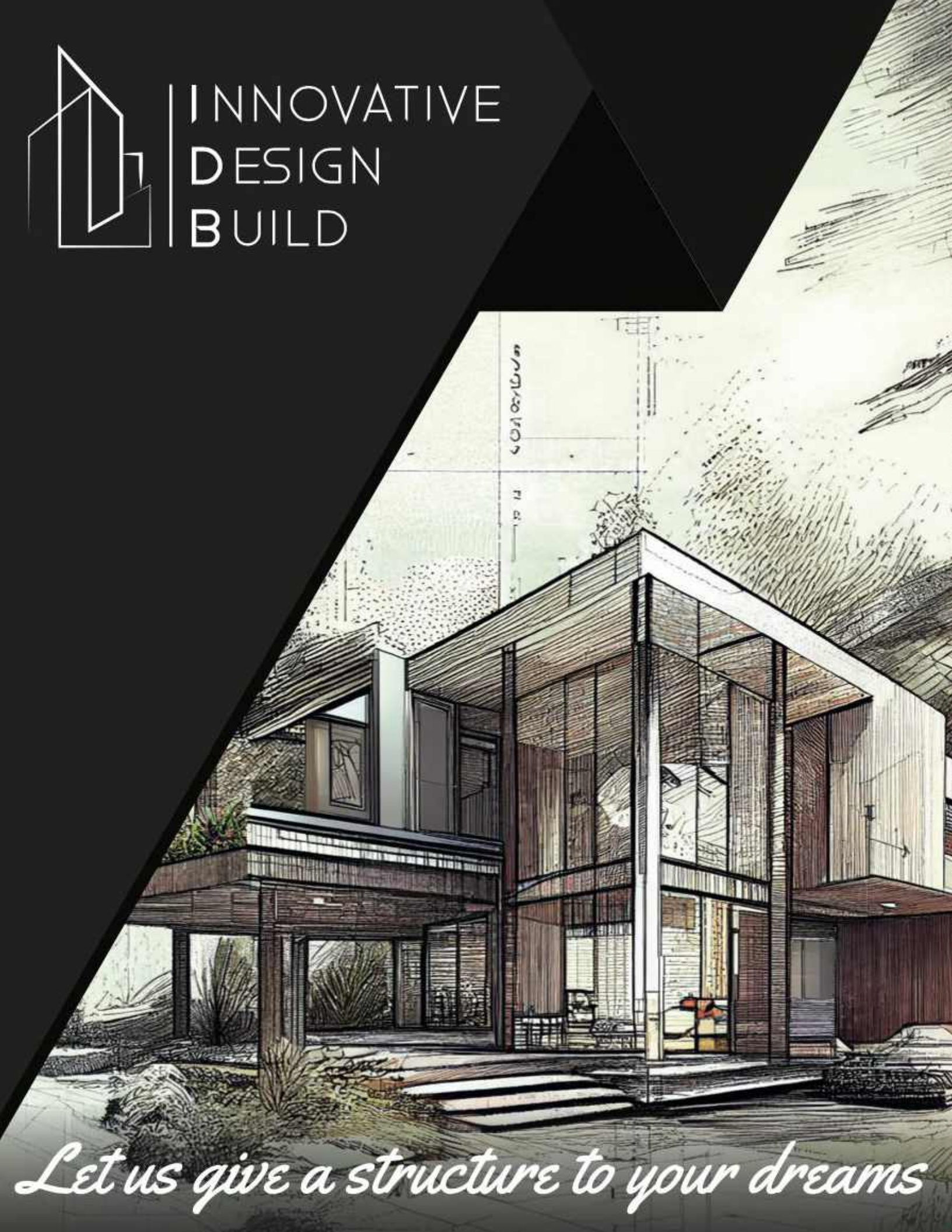
INNOVATIVE DESIGN BUILD



Let us give a structure to your dreams

Jordan Ben-Arye
4525 Thousand Oaks Ct
San Jose, CA, 95136
Info@idesignbuildca.com
(805) 256-8735
07/20/2024

Project address: 332 Barton Way,
Menlo Park, CA 94025

Project Description for 332 Barton Ave, Menlo Park , CA 94025

To Whom It May Concern,
I am writing to provide a detailed description of the proposed project at 332 Barton Ave, Menlo Park, with the aim of seeking approval and cooperation for our plans.

Purpose of the Proposal:
The purpose of this proposal is to extend the living space of the existing property by an additional 190 square feet. This includes a first-floor addition of 190 sqft, along with a 60 sqft remodel of other areas. Additionally, a new second-floor patio featuring a trellis covering 133 sqft is planned, accessible via a sliding door from the master bedroom.

Scope of Work:
The project entails:
- 190 sqft first-floor addition
- 60 sqft remodel of existing areas
- Construction of a new second-floor patio with a trellis covering 133 sqft

Architectural Style, Materials, Colors, and Construction Methods:
Our design and construction will meticulously match the existing architectural style, materials, colors, and construction methods of the current property. This ensures seamless integration and aesthetic harmony with the neighborhood.

Basis for Site Layout:
Attached to this letter are the full set of plans that illustrate the proposed site layout, including all necessary details for a comprehensive understanding of the project.

Existing and Proposed Uses:
The property at 332 Barton Ave is currently utilized as a single-family home. The proposed additions and modifications will serve to enhance the functionality and comfort of the residence while maintaining its residential character.

Outreach to Neighboring Properties:
To ensure transparency and community engagement, we have already undertaken outreach efforts. A letter outlining our proposed project was distributed to neighboring properties, along with contact information should they have any questions or concerns. Despite these efforts, we

did not receive any responses from the neighbors. A copy of this letter is enclosed for your reference.

In conclusion, we are committed to executing this project with utmost care and consideration for the existing property and its surroundings. We seek your approval and support for our proposal and welcome any feedback or suggestions you may have.

Thank you for your attention to this matter. Please feel free to contact me at (805) 256-8735 or Info@idesignbuildca.com should you require any further information or wish to discuss this project in more detail.

Sincerely,

Jorden Ben-Arye

Enclosures:
- Full set of plans
- Copy of outreach letter.

VICINITY MAP

GENERAL INFORMATION

PROPERTY ADDRESS:	332 BARTON WAY MENLO PARK CA
APN:	062343130
DESCRIPTION OF WORK:	<N>ADDITION 190 SQ.FT. FIRST FLOOR WITH 60 SQ.FT. OTHER REMODEL AREA <N> SECOND FLOOR PATIO WITH A TRELLIS 133 SQ.FT.
ARCHITECT OR DESIGNER OF RECORD:	GED. DESIGN 367 SANTANA HEIGHTS UNIT 3089 SAN JOSE CA 95128 4086030233 GNOVITSKY@GMAIL.COM
ZONING:	R1-S
OCCUPANCY GROUP:	R3
TYPE OF CONSTRUCTION:	V-B
STORIES:	TWO STORY NON SPRINKLERED
LOT SIZE:	5,006 SQ.FT.

FLOOR CALCULATION

CODE & REGULATION

(E) FIRST FLOOR	1,046 SQ.FT.
(E) GARAGE	283 SQ.FT.
(E) SECOND FLOOR	771 SQ.FT.
TOTAL BUILDINGS ON SITE	
TOTAL:	2,100 SQ.FT.
NEW ADDITION	
<N> LIVING AREA FRONT	190 SQ.FT.
<N> TOTAL LIVING AREA ON SITE	2,007 SQ.FT.
<N> TOTAL BUILDING AREA ON SITE	2,290 SQ.FT.
F.A.R. CALCULATION FOR THE LOT	FOOTPRINT MAX 2,800
LOT COVERAGE MAX	2,002
LOT COVERAGE PROPOSED 1,519 SQ.FT.	30.3%

SITE BUILDING INFORMATION

SETBACK:	REQUIRED:	PROPOSED:
FRONT	20'-0"	20'-4"
SIDE	5'-0"	-
REAR	20'-0"	-
MAX. HEIGHT	28-0"	-

CODE & REGULATION

ALL WORK TO COMPLY WITH THE 2022 C.R.C., C.M.C., C.P.C. & 2022 C.E.C., CALIFORNIA TITLE 24 AMENDMENTS, CITY OF MENLO PARK AND COUNTY OF THE SAN MATEO

2022 CALIFORNIA RESIDENTIAL CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA FIRE CODE
2022 CALIFORNIA ENERGY CODE
2022 CALIFORNIA GREEN BUILDING CODE

OTHER PLAN NOTES

.

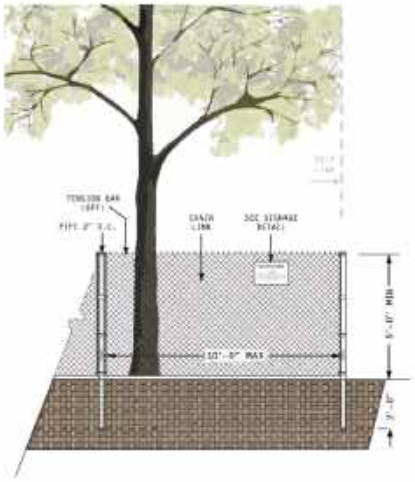
ARCHITECTURAL

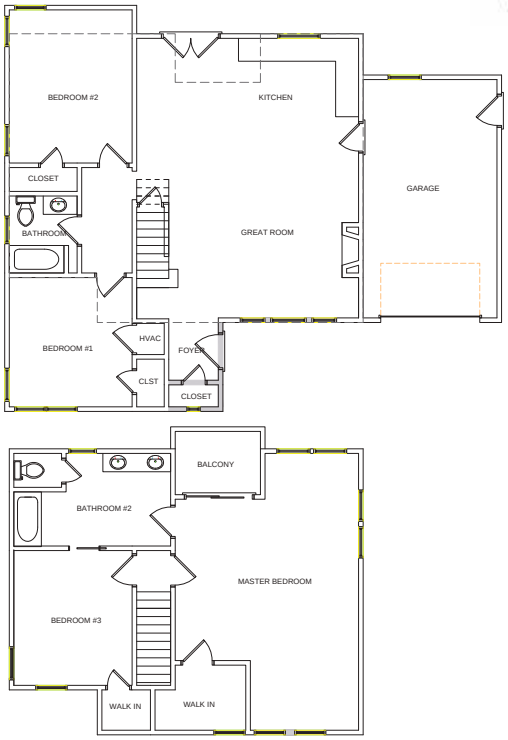
A-1.0	COVER SHEET / SITE PLAN / DEMO PLAN
A-2.0	PROPOSED FLOOR PLAN / ELECTRICAL PLAN
A-2.1	MEP NOTATION
A-3.0	PROPOSED ELEVATIONS / ROOF PLAN
S-0.0	STRUCTURAL NOTES
S-0.1	REBAR TIE DETAILS / STRUCTURAL NOTES
S-1.0	FOUNDATION PLAN CEILING / ROOF PLAN FRAMING PLAN
S-2.0	CROSS SECTION AND DETAILS
T-24 1	ENERGY CALCULATION
T-24 2	ENERGY CALCULATION
CG	CALGREEN SHEET
CBP	CLEAN BAY PLAN

PROJECT DATA

GENERAL NOTES

1. WORKING HOURS: NO WORK SHALL COMMENCE ON THE JOB SITE PRIOR TO 7:00 A.M. NOR CONTINUE LATER THAN 6:00 P.M., MONDAY THROUGH FRIDAY, NOR SHALL ANY WORK BE PERMITTED ON SATURDY OR SUNDAY UNLESS PRIOR APPROVAL IS GRANTED BY THE BUILDING OFFICAL.
2. GENERAL CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO EXCAVATION, TRENCHING, OR GRADING OF ANY KIND. GENERAL CONTRACTOR SHALL COORDINATE WITH APPLICABLE UTILITY COMPANIES WHEN REROUTING ELECTRICAL, TELEPHONE, CABLE TV, GAS, WATER, SANITARY SEWER SERVICES, OR ANY OTHER UTILITY. G. C. SHALL MAINTAIN ALL ELECTRICAL AND COMMUNICATION SYSTEMS IN HOUSE AT ALL TIMES.
3. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH ALL GOVERNING CODES, ORDINANCES, AND REGULATIONS. G. C. SHALL BECOME FAMILIAR WITH ALL ASPECTS OF WORKING. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND EXECUTION OF THE WORK SHOWN OR IMPLIED IN THE CONSTRUCTION DOCUMENTS AND IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, AND PROCEDURES.
4. GENERAL CONTRACTOR SHALL COORDINATE ALL FACETS OF HIS WORK AND ALL TRADES INVOLVED TO AVOID CONFLICT IN THE LOCATION, INSTALLATION, AND CONSTRUCTION OF ALL ITEMS OF WORK AS INDICATED ON THE CONSTRUCTION DOCUMENTS. IF ANY WORK IS TO BE INSTALLED BY THE OWNER DIRECTLY, ALLOWANCES FOR THE OWNER'S WORK MUST BE MADE. COORDINATE WITH ARCHITECT / OWNER.
5. GENERAL CONTRACTOR SHALL LEAVE THE JOB SITE "BROOM CLEAN" AT THE END OF EACH WORKING DAY. ALL MATERIALS SHALL BE STORED IN A NEAT AND SAFE PLACE TO AVOID ACCIDENTS, FOR CONSTRUCTION AND FOR THE OWNER.
6. IN CASE OF ANY DISCREPANCY IN THE CONTRACT DOCUMENTS, CONSULT THE ARCHITECT BEFORE PROCEEDING.
7. NO DIMENSIONS SHALL BE TAKEN BY SCALING FROM THE DRAWINGS. DETAILS TAKE PRECEDENCE OVER GENERAL SECTIONS OR FLOOR PLANS. IF DIMENSIONS MUST BE CLARIFIED, CONSULT THE ARCHITECT. REFER TO THE COVER SHEET FOR DIMENSIONING STANDARDS.
8. VERIFY ALL DIMENSIONS ON THE JOB SITE PRIOR TO ORDERING OR MANUFACTURING.
9. GENERAL CONTRACTOR SHALL REVIEW ALL ARCHITECTURAL DRAWINGS BEFORE FRAMING. COORDINATE RECESSED LIGHT FIXTURE LOCATIONS, SHAFTS, AND HVAC DUCTWORK PRIOR TO FRAMING. IT IS IMPERATIVE THAT FRAMING MEMBER LOCATIONS DO NOT CONFLICT WITH LOCATIONS OF RECESSED LIGHT FIXTURES. IF CONFLICT EXISTS, NOTIFY ARCHITECT.
10. GENERAL CONTRACTOR SHALL INSTALL ALL APPLIANCES SPECIFIED AND ALL NEW EQUIPMENT ACCORDING TO MANUFACTURER'S INSTRUCTIONS. ALL GUARANTEES, INSTRUCTION BOOKLETS, AND INFORMATION REGARDING NEW EQUIPMENT SHALL BE HANDED DIRECTLY TO THE OWNER IN ONE MANILA ENVELOPE AT THE TIME OF SUBSTANTIAL COMPLETION. CONTRACTOR SHALL VERIFY THAT EVERY PIECE OF EQUIPMENT AND EVERY APPLIANCE IS IN PERFECT WORKING ORDER AND THAT INFORMATION ABOUT ALL WARRANTIES AND GUARANTEES IS MADE KNOWN TO THE OWNER.
11. THE INSTALLER OF EACH MAJOR UNIT OF WORK IS REQUIRED TO INSPECT THE SUBSTRATE AND CONDITIONS TO RECEIVE WORK AND SHALL REPORT ALL UNSATISFACTORY CONDITIONS TO THE GENERAL CONTRACTOR AND NOT PROCEED UNTIL SATISFACTORY CONDITIONS ARE ATTAINED.
12. FOR MOUNTING HEIGHTS NOT CLEARLY OUTLINED IN THE PLANS OR SCHEDULES, COORDINATE WITH THE ARCHITECT. ARCHITECT SHALL CONFIRM ALL ELECTRICAL DEVICE AND LIGHT FIXTURE LOCATIONS BEFORE CONTRACTOR PULLS WIRE.
13. PROVIDE SOLID BLOCKING AS NECESSARY FOR WALL MOUNTED SHELVES, FIXTURES, AND FITTINGS, EVEN WHEN WORK IS TO BE DONE BY OWNER DIRECTLY. REVIEW SCOPE OF WORK AND LOCATIONS FROM INTERIOR ELEVATIONS AND COORDINATE WITH OWNER/ARCHITECT.
14. ALL FASTENING DEVICES TO BE CONCEALED, UNLESS OTHERWISE SHOWN.
15. WEATHER-STRIP ALL EXTERIOR DOORS AND WINDOWS.
16. CAULK OR OTHERWISE SEAL AROUND ALL OPENINGS TO LIMIT INFILTRATION, INCLUDING BUT NOT LIMITED TO: EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES, BETWEEN SOLE PLATES AND FLOORS AND BETWEEN EXTERIOR WALL PANELS.
17. GENERAL CONTRACTOR SHALL VERIFY THAT ALL WORK ON THE EXTERIOR OF THE PROJECT IS WATERTIGHT. ALL JOINTS EXPOSED TO THE ELEMENTS SHALL BE TESTED FOR WATER TIGHTNESS PRIOR TO SUBSTANTIAL COMPLETION.

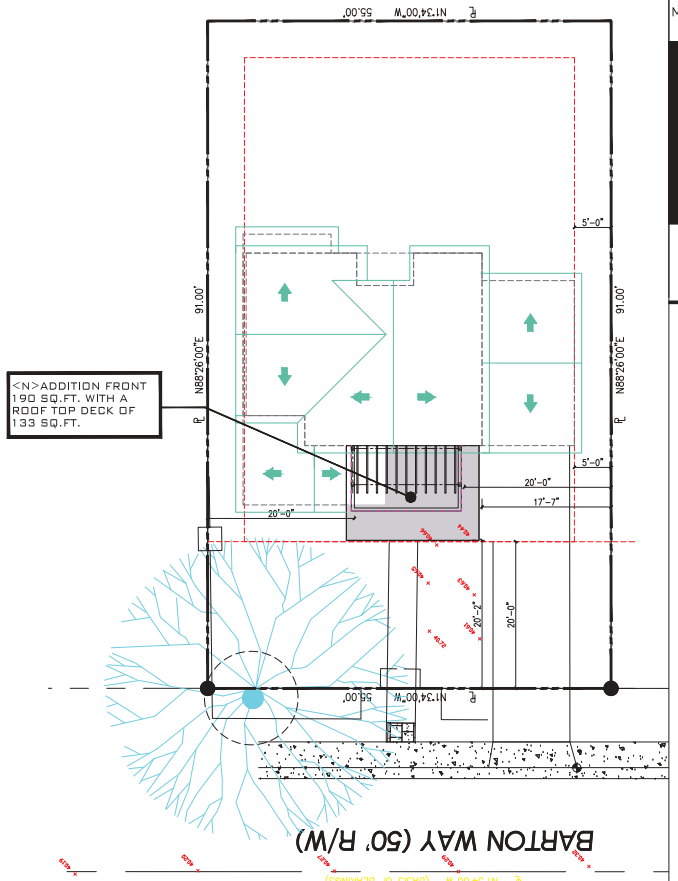




DEMO PLAN

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

EXST. WALL
REBUILT WALL
DEMO WALL



PROPOSED SITE PLAN

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

DEMO AREA
NEW ADDITION
REBUILT REPAIR

SITE NOTES:
ALL DIMENSIONS AND SETBACK POINTS NEED TO BE CHECKED BEFORE THE ADDITION TAKES PLACE. PLEASE VERIFY ALL SETBACKS FROM THE BOUNDARY OF THE PROPERTY TO THE <E> HOUSE AND <N> ADDITIONS PRIER TO DIGGING NEW FOUNDATION AND POURING OF THE CONCRETE OR FORM WORK SETUP.
IF THE SETBACK AT THE SITE DOES NOT MATCH UP TO THE DRAWING OR IS OVER THE ALLOWABLE SETBACK PLEASE CONTACT THE PROJECT ARCHITECT FOR FURTHER GUIDANCE ON THE PROJECT.

ADDITION

332 BARTON WAY
MENLO PARK CA

GED DESIGN
367 SANTANA HEIGHTS UNIT #3089
SAN JOSE CA 95128

Georgy Novitsky

SUBMITTALS AND REVISION
04.30.24 BUILDING SUBMITTAL

PROJECT NO. 24035 DATE 04.30.24

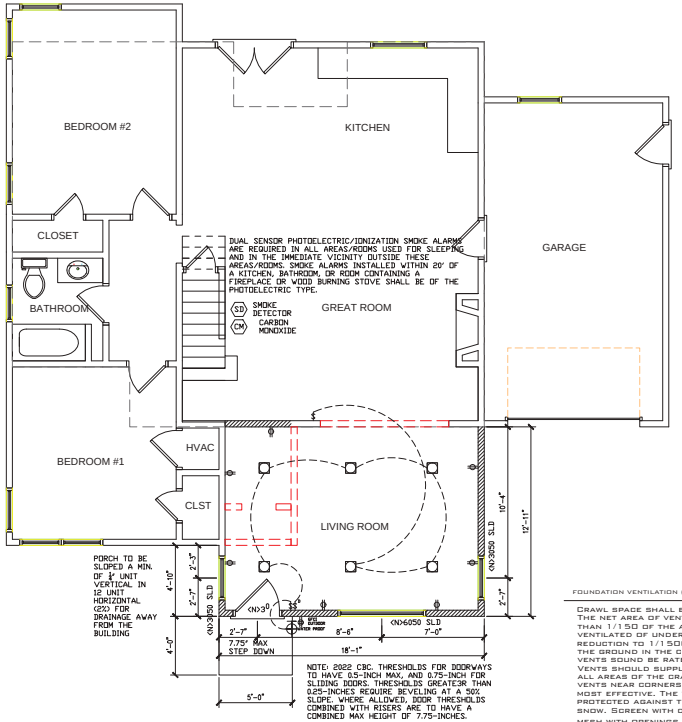
SITE PLAN
DEMO PLAN

A-1.0

1-0 PROPOSED PLAN FIRST FLOOR

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

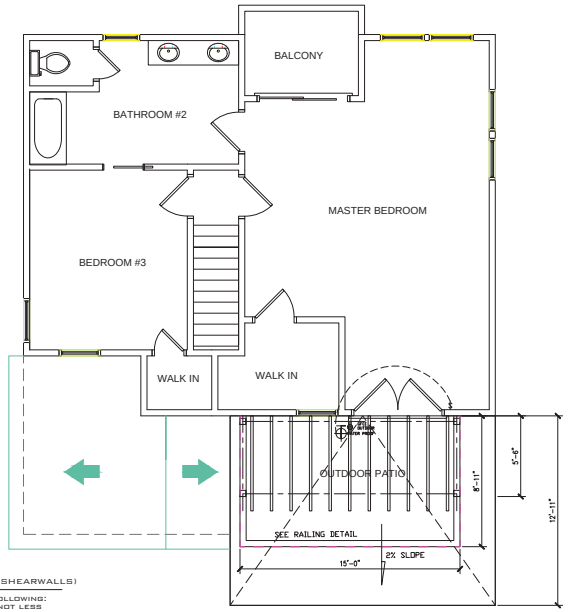
EXST. WALL
NEW WALL
REBUILT WALL
REMOVED WALL



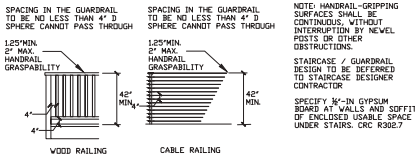
2-0 PROPOSED PLAN SECOND FLOOR

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

EXST. WALL
NEW WALL
REBUILT WALL
REMOVED WALL



DECK TOP PATIO TO BE WATERPROOFED WITH GLV FLASHING BETWEEN THE SECOND FLOOR EXTERIOR FRAMING AND FINISH TO THE DECK SURFACE. THE TOP ROOF COVERING TO BE A WATERPROOF POLYURETHANE COATING UL RATED PER STATE CONDITIONS



HANDRAILS HAVE 1-1/4 -2 INCH GRASPABLE CROSS SECTION, NO SHARP CORNERS, AND AT A HEIGHT OF 34 INCHES TO 38 INCHES ABOVE NOSING. EXTEND CONTINUOUSLY FROM TOP TO BOTTOM RISER, AND TERMINATE AT NEWEL POSTS OR RETURN TO WALLS. CRC R311.7.7

GUARD IS REQUIRED ON THE OPEN SIDE OF THE STAIRWAY AT A HEIGHT OF 34" TO 38" AND SHALL HAVE INTERMEDIATE RAILS SPACED SUCH THAT A SPHERE 4-3/8" IN DIAMETER CANNOT PASS THROUGH. CRC 312

NOTE: HANDRAIL-GRIPPING SURFACES SHALL BE CONTINUOUS, WITHOUT INTERRUPTION BY NEWEL POSTS OR OTHER OBSTRUCTIONS.

STAIRCASE / GUARDRAIL DESIGN TO BE DEFERRED TO STAIRCASE DESIGNER CONTRACTOR

SPECIFY ⅝"-IN GYPSUM BOARD AT WALLS AND SOFFIT OF ENCLOSED USABLE SPACE UNDER STAIRS. CRC R302.7

NOTE: HANDRAIL-GRIPPING SURFACES SHALL BE CONTINUOUS, WITHOUT INTERRUPTION BY NEWEL POSTS OR OTHER OBSTRUCTIONS.

FOUNDATION VENTILATION (NO VENTS IN SHEARWALLS)

CRAWL SPACE SHALL BE VENTED AS FOLLOWING: THE NET AREA OF VENTING SHALL BE NOT LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED OF UNDER-FLOOR AREA WITH A REDUCTION TO 1/1500 IF VAPOR BARRIER COVERS THE GROUND IN THE CRAWL SPACE. SCREENED VENTS SOUND BE RATED FOR NET VENTING AREA. VENTS SHOULD SUPPLY CROSS-VENTILATION TO ALL AREAS OF THE CRAWL SPACE. LOCATING VENTS NEAR CORNERS AND ON OPPOSITE SIDES IS MOST EFFECTIVE. THE VENT OPENING SHALL BE PROTECTED AGAINST THE ENTRANCE OF RAIN & SNOW. SCREEN WITH CORROSION RESISTANT WIRE MESH WITH OPENINGS NO GREATER THAN ⅛". 5"X14" VENT PROVIDES 0.39 SF OF CLEAR VENT AREA

FONDATION VENTILATION CALCULATIONS FRONT ADDITION

VENTING CALCULATIONS:

LIVING SPACE CALC.
<N>ADDITION FRONT OF THE HOUSE: 190 SQ.FT.

A. VENT NEW ADDITION<N>: 225 SQ.FT. / 150 = 1.27 SQ.FT.

PROVIDED ADDITION AREA <N>: 3 - 6"x16" VENTS = 4.5 SQ.FT. ADDITIONAL COVERED VENTS ADDED BACK (3) TOTAL PROVIDED NEW VENTS 6 TOTAL: 2.7 SQ.FT. FOUNDATION VENT (1 @ 0.45 CFM)

SHEET NOTES:

E: EGRESS WINDOW - WINDOW OPENINGS IN BEDROOMS ARE TO BE A MAX. OF 44" ABOVE FINISHED FLOOR FOR EMERGENCY EGRESS.
T: TEMPERED GLASS
F: FIXED WINDOW

1) ALL DIMENSIONS ARE TAKEN FROM STUDS TO STUDS.
2) EXTERIOR WINDOW AND DOOR TO BE CENTERED TO THE WALL, UNLESS OTHERWISE NOTED, TYP.
3) SHOWER AND TUB/SHOWER COMBINATION IN ALL BUILDINGS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THE THERMOSTATIC MIXING VALVE TYPE.
4) THE MAXIMUM HOT WATER TEMP. DISCHARGING FROM THE BATHTUB AND WHIRLPOOL BATHTUB FILLER SHALL BE LIMITED TO 120 DEG F.
5) RAISED PLATFORM SHOULD BE 18" ABOVE FLOOR, THAT THE WATER HEATER WILL HAVE TWO SEISMIC STRAPS AND PRESSURE RELIEF VALVE WILL BE TERMINATE AT THE EXTERIOR OF THE HOUSE.
6) 30"X24" MIN. FLOOR ACCESS DOOR.
7) PROVIDE 1-HOUR FIRE RATED DOOR OR SELF-CLOSING, SELF-LATCHING, TIGHT FITTING, SOLID WOOD 1-3/8" THICK DOOR.
8) TEMP. GLASS DOOR AND ENCLOSURE, TYP. MATERIALS OTHER THAN STRUCTURAL ELEMENTS TO BE MOISTURE RESISTANT, TYP. SHOWER DOOR MIN. 22", SHOWER AND TUB/SHOWER WALLS TO SPECIFY A SMOOTH, HARD, NONABSORBENT SURFACE (E.G., CERAMIC TILE OR FIBERGLASS) OVER A MOISTURE RESISTANT UNDERLAYMENT (E.G., CEMENT, FIBER CEMENT, OR GLASS MAT GYPSUM BACKER) TO A HEIGHT OF 72" ABOVE THE DRAIN INLET. WATER- RESISTANT GYPSUM BACKING BOARD SHALL NOT BE USED OVER A VAPOR RETARDER IN SHOWER OR BATHTUB COMPARTMENTS. (R307.2)
9) WALLS AND CEILING IN GARAGE SEPARATING AND SUPPORTING LIVING AREA SHALL BE COVERED WITH 5/8"TYPE 'X' GYPSUM.
10) KITCHEN HOOD: PROVIDE A BACK-DRAFT DAMPER, HOOD SHALL BE INSTALLED DIRECTLY OVER THE COOK TOP, BE AS WIDE AS THE STOVE AND CENTERED OVER STOVE, 30" MIN. CLEARANCE FROM THE COOKING SURFACE, AND MUST BE SEPARATED BY 1/4" MIN. GAP FROM THE COMBUSTIBLES OR METAL CABINET. FURNACE AT ABOVE CEILING. KITCHEN EXHAUST FAN REQUIRED CFM AND DUCT SIZE SHOULD COMPLY WITH CA ENERGY CODE SECTION 150(D) AND ASHRAE 62.2.
11) PROPOSED ELECTRICAL FUSE BOX LOCATION, CONTRACTOR TO VERIFY SPECIFIC MODEL WITH OWNER.
12) PROPOSED HOME NETWORK PANEL LOCATION, CONTRACTOR TO VERIFY SPECIFIC MODEL WITH OWNER.
13) MARBLE HEARTH, MAJESTIC GAS FIREPLACE & FLUE SYSTEM W/ REMOTE CONTROL. THERMAL VENT DAMPER, U.L. LISTING # MH6018.

LIGHTING/MECHANICAL LEGEND

- CEILING MOUNTED FIXTURE
- PENDANT LIGHT FIXTURE
- CEILING MOUNTED FAN
- CEILING MOUNTED FAN/LIGHT
- CEILING HIGH EFFICACY EXTERIOR
- RECESSED FIXTURE (IC RATED)
- RECESSED- HIGH EFFICACY
- RECESSED- HIGH EFFICACY EXTERIOR
- WET AREA RECESSED FIXTURE
- FLUORESCENT T5
- FLUORESCENT T5 - DIMMABLE
- WALL-MOUNTED FIXTURE
- WALL-MOUNTED FIXTURE W/ OCCUPANCY SENSOR*
- EXTERIOR WALL-MOUNTED HIGH EFFICACY FIXTURE
- STRIP LIGHTING
- SWITCH
- 3-WAY SWITCH
- SWITCH W/ DIMMER
- OUTLET (12" ABOVE F.F.)AFCI
- OUTLET W/ GROUND FAULT CIRCUIT INTERRUPTER
- EXTERIOR OUTLET W/ GFCI
- APPLIANCE OUTLET
- FLOOR OUTLET
- 220V OUTLET
- GAS CONNECTION
- EXTERIOR HOSE BIB
- INTERIOR WATER SUPPLY
- TV CABLE JACK
- PHONE JACK
- ETHERNET PORT
- DOORBELL
- AIR SUPPLY REGISTER (BT FLOOR/2 FLOOR) (2ND FLOOR @ CEILING)
- AIR SUPPLY REGISTER (@ BASEBOARD)
- AIR RETURN REGISTER (@ WALL)
- PROGRAMMABLE THERMOSTAT (+5'-0")
- PHOTOELECTRIC SMOKE ALARM W/IN 20'0" OF KITCHEN OF FIRE-PLACE
- DUAL SENSOR SMOKE ALARM (PHOTOELECTRIC & IONIZATION)
- CARBON MONOXIDE (CO) ALARM
- EXHAUST FAN - CEILING
- WET AREA FLUORESCENT LIGHT EXHAUST DISCHARGE TO OUTSIDE LIGHT & FAN SWITCH SEPARATE

* LIGHTING FIXTURES WITH OCCUPANCY SENSORS SHALL TURN OFF AUTOMATICALLY WHEN NO OCCUPANTS ARE PRESENT AND BE ONLY TURNED ON MANUALLY WITH A SWITCH.

** ALL RECEPTACLES LOCATED WITHIN THE KITCHEN AREA SHALL BE "TAMPER-RESISTANT RECEPTACLES" PER ARTICLE 406.11 OF THE C.E.C. 2022 CODE.

*** ALL HOUSE LIGHTING NEED TO BE HIGH EFFICACY LIGHTING PER CEC 2022

STUCCO DETAIL:

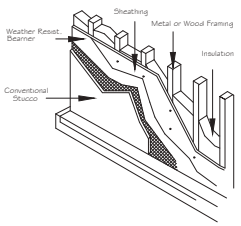
THREE COAT STUCCO 7/8" MIN. THICK
BUILDING CODE WOOD SHEATHING (PLYWOOD, OSB) 26 GALVANIZED WEEP SCREEN AT FOUNDATION PLATE LINE
AT LEAST 4" ABOVE GRADE (OR 2" ABOVE CONCRETE OR PAVING). CRC R703.6
(1) LAYER OF GRADE D PAPER (R703.6.3).

PLASTERING WITH PORTLAND CEMENT PLASTER SHALL NOT BE LESS THAN THREE COATS WHEN APPLIED OVER METAL LATH OR WIRE LATH AND SHALL BE NOT LESS THAN TWO COATS WHEN APPLIED OVER MASONRY, CONCRETE, PRESSURE-PRESERV ABOVE TREATED WOOD OR DECAY-RESISTANT WOOD AS SPECIFIED IN SECTION R317.1 OR GYPSUM BACKING (R703.6.2).

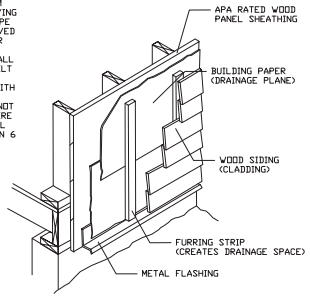
A MINIMUM 26 GA. GALVANIZED CORROSION-RESISTANT WEEP SCREED WITH: (R703.6.2.1)

1. A MINIMUM VERTICAL ATTACHMENT FLANGE OF 3-1/2 INCHES PROVIDED AT OR BELOW THE FOUNDATION PLATE LINE AT ALL EXTERIOR WALLS.

2. THE SCREED SHALL BE PLACED A MINIMUM OF 4 INCHES ABOVE EARTH OR 2 INCHES ABOVE PAVED AREA.



MIN. OF ONE LAYER OF NO. 15 ASPHALT FELT, FREE FROM HOLES OR BREAKS, COMPLYING WITH ASTM D 226 FOR TYPE 2 FELT, OR OTHER APPROVED WATER-RESISTIVE BARRIER SHALL BE APPLIED OVER STUDS OR SHEATHING OF ALL EXTERIOR WALLS. SUCH FELT OR MATERIAL SHALL BE APPLIED HORIZONTALLY, WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2 INCHES. WHERE JOINTS OCCUR, FELT SHALL BE LAPPED NOT LESS THAN 6 INCHES (R703.2)



ADDITION

332 BARTON WAY
MENLO PARK CA

GEO DESIGN
367 SANTANA HEIGHTS
UNIT #5089
SAN JOSE CA 95128

SUBMITTALS AND REVISION
04.30.24 BUILDING SUBMITTAL

PROJECT NO. 24035 DATE 04.30.24

PROPOSED FLOORPLAN ELECTRICAL

A2.0

PLUMBING / GENERAL NOTES

101: BATHTUBS AND WHIRLPOOL BATHTUBS. THE MAX. HOT WATER TEMPERATURE DISCHARGING SHALL BE LIMITED TO 120 DEGREES. CPC/2022

102: BATHTUBS WASTE OPENING IN FLOOR OVER CRAWL SPACES SHALL BE PROTECTED BY A METAL SCREEN NOT EXCEEDING ¼" OR SOLID COVER. CPC/2022

103: 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. CPC/2022

104: VERIFY AND WHERE WATER PRESSURE EXCEEDS 80 PSI AN APPROVED PRESSURE REGULATOR PRECEDED BY AN ADEQUATE STRAINER SHALL BE INSTALLED CPC/2022

105: INSTALL TEMPERATURE AND PRESSURE RELIEF VALVE WITH MINIMUM ¾" 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/2022

106: PROVIDE (ON THE PLANS) A GAS PIPING DIAGRAM OF THE GAS PIPING SYSTEM THAT INCLUDES ALL PIPE SIZES, PIPE LENGTHS AND BTU RATINGS.

107: 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.

108: MAX 1.8 SHOWER HEAD, MAX.1.2 GPM BATHROOM FAUCET, MAX. 1.8 GPM KITCHEN FAUCET, AND MAX 1.28 WATER CLOSET TO CONFORM TO REQUIREMENTS.

MAXIMUM FIXTURE FLOW RATE REQUIREMENTS IN ACCORDANCE WITH CGBSC SECTION 4.303.

i. SINGLE SHOWERHEAD - IL GPM AT 80 PSI (REQUIRED *FOR* PERMIT *SUBMITTALS ON* OR *AFTER JULY 1, 2018 PER "2016 CGBSC JULY* I, *2018 SUPPLEMENT - BLUE* PA G ES). CGBSC SECTION 4.303.1.3.1

ii. MULTIPLE SHOWERHEADS SERVING ONE SHOWER - COMBINED FLOW RATE OF ALL SHOWERHEADS AND/OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE - IL GPM AT 80 PSI (*REQUIRED FOR PERMIT SUBMITTALS ON OR AFTER JULY 1, 2018 PER "2016 CGBSC JULY 1, 2018 SUPPLEMENT-BLUE* PAGES). CGBSC SECTION 4.303.1 .3.2

PLUMBING FIXTURES AND FITTINGS SHALL MEET THE STANDARDS REFERENCED PER 2019 CALIFORNIA PLUMBING CODE.

109: BATHROOMS: PROVIDE AN EXHAUST FAN DUCTED TO THE OUTSIDE (MINIMUM 4" DIAMETER FLEX DUCT WITH A MAXIMUM LENGTH OF 70') WITH A MINIMUM VENTILATION RATE OF 100 CFM.

110: 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. CPC/2022

111: IF WATER PRESSURE EXCEEDS 80 PSI, AND EXPANSION TANK AND AN APPROVED PRESSURE REGULATOR SHALL BE INSTALLED. CPC/2022

112: NON-REMOVABLE BACK FLOW PRE-VENTER OR BIBB-TYPE VACUUM BREAKER WILL BE INSTALLED ON ALL EXTERIOR HOSE BIBS. CPC/2022

113: HOT WATER RE-CIRCULATING SYSTEM IS INSTALLED, THE ENTIRE LENGTH OF HOT WATER PIPES SHALL BE INSULATED. CPC/2022

114: HOT WATER PIPE FROM THE WATER HEATER TO THE KITCHEN WILL BE INSULATED. (2022 CALIFORNIA ENERGY REGULATIONS)

115: A DURABLE PLACARD (MINIMUM SIZE OF 4X5 INCHES) MUST BE PERMANENTLY AFFIXED ON A WALL NEAR AND VISIBLE FROM THE DRYER LOCATION. THE PLACARD SHALL STATE THE ACTUAL LENGTH OF THE INSTALLED DRYER EXHAUST VENT AND INCLUDE THE FOLLOWING LANGUAGE.

116: ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN SOLE/BOTTOM PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY, OR SIMILAR ACCEPTABLE METHODS. CGBSC

117: PROVIDE PRESSURE AND TEMPERATURE RELIEF VALVE AT WATER HEATER. RELIEF VALVE LOCATED INSIDE THE BUILDING, SHALL BE PROVIDED WITH A DRAIN TO OUTSIDE OF THE BUILDING. CPC/2022

MECHANICAL / GENERAL NOTES

201: ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE FOR THE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT (CAK GREEN)

202: THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J-2004(RESIDENTIAL LOAD CALCULATION), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

203: DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D-2009 (RESIDENTIAL DUCT SYSTEMS), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

204: SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI.ACCA 3 MANUAL S-2004 (RESIDENTIAL EQUIPMENT SELECTION) OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

205: USED OF ALTERNATE DESIGN TEMPERATURES NECESSARY TO ENSURE THE SYSTEMS FUNCTIONS ARE ACCEPTABLE.

206: SMOKE ALARMS ARE REQUIRED IN ALL AREAS/RDOMS USED FOR SLEEPING AND IN THE IMMEDIATE VICINITY OUTSIDE THESE AREAS/ROOMS.

- Smoke alarms installed within 20 ft. of a kitchen, bathroom, or room containing a fireplace or wood burning stove shall be of the photoelectric type.
- Carbon monoxide and smoke alarms shall receive their primary power from the building wiring, be equipped with battery back-up and be interconnected in such a manner that the activation of one alarm will activate all smoke and carbon monoxide alarms.
- For placement of smoke alarms and carbon monoxide alarms in rooms with variations in ceiling height (sloped, pitched etc.), refer to the manufacturers guidelines for proper placement.

207: 2022 CA ENERGY CODE SECTION L 50(K) FOR LIGHTING, WHICH INCLUDE THE FOLLOWING:

A. AMEND PLANS TO SHOW ALL LIGHTING AS HIGH EFFICACY (I.E. PIN-BASED CFL; PULSE-START MH, HPS, GU-24 SOCKETS OTHER THAN LEDS, LED LUMINAIRES WITH INTEGRAL SOURCE, ETC.). CEC TABLE 150.0-A
B. AMEND THE PLANS TO SHOW ALL JAB COMPLIANT LIGHT SOURCES IN THE FOLLOWING LOCATIONS ARE CONTROLLED BY VACANCY SENSORS OR DIMMERS (EXCEPTION CLOSETS LESS THAN 70 SF AND HALLWAYS). CEC 150.0(K) (2K):
   i. CEILING RECESSED DOWNLIGHT LUMINAIRES.
   ii. LED LUMINAIRES WITH INTEGRAL SOURCES.
   iii. PIN-BASED LED LAMPS (I.E. MRL 6, AR-111, ETC.)
   iv. GU-24 BASED LED LIGHT SOURCES.
C. AMEND THE PLANS TO SHOW AT LEAST ONE FIXTURE IN EACH BATHROOM CONTROLLED BY A VACANCY SENSOR. CEC 150.0(K)2J
D. AMEND THE PLANS TO SHOW AT LEAST ONE FIXTURE IN THE GARAGE CONTROLLED BY A VACANCY SENSOR. CEC 150.0(K)2J
E. AMEND THE PLANS TO SHOW AT LEAST ONE FIXTURE IN EACH LAUNDRY ROOM CONTROLLED BY A VACANCY SENSOR. CEC 150.0(K)2J
F. AMEND THE PLANS TO SHOW AT LEAST ONE FIXTURE IN EACH UTILITY ROOM CONTROLLED BY A VACANCY SENSOR. CEC 150.0(K)2J
   AMEND THE PLANS TO SHOW ALL OUTDOOR LIGHTING AS HIGH EFFICACY WITH MANUAL ON/OFF SWITCH AND ONE OF THE FOLLOWING IN ACCORDANCE WITH CEC 150.0(K)3:
   i. PHOTOCONTROL AND MOTION SENSOR
   ii. PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL
   iii. ASTRONOMICAL TIME SWITCH CONTROL
   iv. ENERGY MANAGEMENT CONTROL SYSTEMS.
B. NOTE ON THE PLANS THAT COMPLETED CF2R-LTG-01-E FORM MUST BE PROVIDED TO THE TOWN BUILDING INSPECTOR, PRIOR TO FINAL INSPECTION.

ELECTRICAL / GENERAL NOTES

301: PROVIDE A 125 VOLT 15 OR 20 AMP RECEPTACLE WITHIN 25' OF HEATING OR AIR CONDITIONING EQUIPMENT. CEC/2022

302: ALL BRANCH CIRCUITS THAT SUPPLY OUTLETS INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATIONS ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER. CEC/2022

303: A DEDICATED MINIMUM 20-AMP CIRCUIT IS REQUIRED TO SERVE THE REQUIRED BATHROOM OUTLETS. THIS CIRCUIT CANNOT SUPPLY ANY OTHER RECEPTACLES, LIGHTS, FANS, ETC. (EXCEPTION-WHERE THE CIRCUIT SUPPLIES A SINGLE BATHROOM, OUTLETS FOR OTHER EQUIPMENT WITHIN THE SAME BATHROOM SHALL BE PERMITTED TO BE SUPPLIED.) CEC/2022

304: A MINIMUM 20 AMP SMALL APPLIANCE BRANCH CIRCUITS SHALL BE PROVIDED FOR ALL RECEPTACLE OUTLETS IN THE KITCHEN, DINING AREA, PANTRY, OR OTHER SIMILAR AREAS (CEC/2022)

305: AT LEAST ONE 20 AMP BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY LAUNDRY RECEPTACLE OUTLETS. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. (CEC/2022)

306: IN EVERY DWELLING UNITE, FIXED APPLIANCES SUCH AS FOOD WASTE GRINDERS, DISHWASHERS, WASHING MACHINES, DRYERS, LAUNDRY TRAY LOCATIONS BUILT-IN REFRIGERATORS OR FREEZERS, FURNACES, AC UNITS, BUILT-IN HEATERS OR ANY OTHER FIXED APPLIANCE WITH A MOTOR OF M- < H.P. OR LARGER SHALL BE ON A SEPARATE 20 AMP. BRANCH CIRCUIT.

307:125- AND 250-VOLT RECEPTACLES INSTALLED OUTDOORS IN A WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED. (CEC/2022).

308: TAMPER RESISTANT RECEPTACLES AT ALL 124 VOLT, 15 AND 20 AMP RECEPTACLES. CEC/2022

309: ALL BRANCH CIRCUITS THAT SUPPLY OUTLETS INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATIONS ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER. CEC/2022

310: SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING, INTERCONNECTED, AND WIRED ON A LIGHTING CIRCUIT WITH BATTERY BACKUP. EXISTING AREAS MAY BE SOLELY BATTERY OPERATED. SMOKE ALARMS SHALL NOT BE INSTALLED WITHIN A 36" HORIZONTAL PATH FROM THE SUPPLY OR RETURN REGISTERS OF A HEATING OR COOLING SYSTEM. R314 CRC/2022 CARBON MONOXIDE ALARMS: SAME REQUIREMENTS AS SMOKE ALARMS EXCEPT NOT REQUIRED IN BEDROOMS. R315 CRC/202

311: APPLIANCES DESIGNER TO BE FIXED IN POSITION SHALL BE SECURELY FASTEN IN PLACE. SUPPORTS FOR APPLIANCES SHALL BE DESIGNED AND CONSTRUCTED TO SUSTAIN VERTICAL AND HORIZONTAL LOADS WITHIN THE STRESS LIMITATIONS SPECIFIED IN THE BUILDING .4 CMC/2022 (SEISMIC BRACING FOR GAS APPLIANCES.)

312: APPLIANCES INSTALLED IN GARAGES OR OTHER AREAS SUBJECT TO MECHANICAL DAMAGE SHALL BE GUARDED AGAINST BY BEING INSTALLED BEHIND PROTECTIVE BARRIERS OR ELEVATED OR OUT OF THE NORMAL PATH OF VEHICLES. INSTALL A 4" DIAMETER BOLLARD (FILLED W/ CONCRETE) EMBEDDED 36" INTO 12" DIAMETER FOOTING IN FRONT OF APPLIANCE OR PROVIDE A DETAIL AND OR CALCULATION FROM AN ENGINEER FOR REVIEW CMC/2022

313: APPLIANCES DESIGNER TO BE FIXED IN POSITION SHALL BE SECURELY FASTEN IN PLACE. SUPPORTS FOR APPLIANCES SHALL BE DESIGNED AND CONSTRUCTED TO SUSTAIN VERTICAL AND HORIZONTAL LOADS WITHIN THE STRESS LIMITATIONS SPECIFIED IN THE BUILDING CODE. CMC / 2022 (SEISMIC BRACING FOR GAS APPLIANCES.)

314: PROVIDE GENERAL USE ELECTRICAL RECEPTACLES SPACED SO THAT NO POINT ALONG THE FLOOR LINE IS MORE THAN 6 FEET FROM A RECEPTACLE AND ANY WALL SPACE TWO FEET OR GREATER HAS A RECEPTACLE (EXCEPT IN BATHROOMS AND KITCHENS COUNTERTOPS). (2022 CEC)

315: ARC-FAULT CIRCUIT INTERRUPTER IS REQUIRED TO SERVE ALL ROOMS EXCEPT GARAGES, KITCHENS, AND BATHROOMS. PARLORS AND CLOSETS REQUIRE AFCI. (2022 CEC) ALL RECEPTACLES MUST BE TAMPER-RESISTANT.

316: SMOKE DETECTORS IN NEW CONSTRUCTION AND ADDITIONS ARE TO BE 110V WITH A BATTERY BACK-UP AND INTERCONNECTED. (2022 CBC).

317: PROVIDE A DEDICATED CIRCUIT FOR THE BATHROOM OUTLETS. ALL BATHROOM OUTLETS TO BE GFCI. 2022 CEC.

318: ALL HOSE BIBS TO INSTALL ANTI-SIPHON DEVICE

319: ALL LIGHTING AS HIGH EFFICACY (I.E. PIN-BASED CFL; PULSE-START MH, HPS, GU-24 SOCKETS OTHER THAN LEDS, LED LUMINAIRES WITH INTEGRAL SOURCE, ETC.). CEC 2022

320: SPECIFY CLEARANCES OF CLOSET LIGHTS TO SHELVES. SURFACE MOUNTED EFFICACY LIGHTING REQUIRES 12-INCHES CLEARANCE FROM SHELVES AND STORAGE SPACE. SURFACE MOUNTED FLUORESCENT REQUIRES 6-INCHES FROM SHELVES AND STORAGE SPACE. RECESSED EFFICACY LIGHTING REQUIRES 6-INCHES FROM SHELVES AND STORAGE SPACE. (2022 CEC)

321: PROVIDE A DEDICATED 30 AMP CIRCUIT FOR THE LAUNDRY. (2022 CEC)

322 PROVIDE A DEDICATED 20 AMP CIRCUIT FOR THE FURNACE AND PROVIDE A RECEPTACLE WITHIN 25'. (2022 CEC)

323 ALL OUTDOOR RECEPTACLES OUTLETS ARE TO BE NA WEATHER PROOFED INCLOSURE CAPABLE OF REMAINING SHOT WHEN IN USE. AND ALSO GFCI PER 2019 CEC.

324: MISCELLANEOUS LIGHTING NOTES (CALIFORNIA TITLE 24 SECTION 150)

11 SCREW-BASED PERMANENTLY INSTALLED LIGHT FIXTURES MUST CONTAIN SCREW-BASED JA8 (JOINT APPENDIX 8) COMPLIANT LAMPS. JA8 COMPLIANT LIGHT SOURCES MUST BE MARKED AS "JAS-2016" OR "JAS-2016-E" ("JAS-2016-E" LUMINAIRES ARE DEEMED APPROPRIATE FOR USE IN ENCLOSED LUMINAIRES). CEC 150.0(K)G

12 ALL JA8 COMPLIANT LIGHT SOURCES IN THE FOLLOWING LOCATIONS -AR E CONTROLLED BY VACANCY SENSORS OR DIMMERS (EXCEPTION CLOSETS LESS THAN 70 SF AND HALLWAYS). CEC 150.0(K) (2K):

i. CEILING RECESSED DOWNLIGHT LUMINAIRES.
ii. LED LUMINAIRES WITH INTEGRAL SOURCES.
iii. PIN-BASED LED LAMPS (I.E. MRL 6, AR-111, ETC.)
iv. GU-24 BASED LED LIGHT SOURCES.

13 AT LEAST ONE FIXTURE IN EACH BATHROOM CONTROLLED BY A VACANCY SENSOR. CEC L 50.0(K)2J

325: THAT TWO OR MORE 20-AMPERE SMALL APPLIANCE BRANCH CIRCUITS ARE REQUIRED FOR THE KITCHEN AND ARE LIMITED TO SUPPLYING WALL AND COUNTER SPACE RECEPTACLES OUTLETS FOR THE KITCHEN, PANTRY, BREAKFAST ROOM, DINING ROOM, OR SIMILAR AREAS. NOTE: THESE CIRCUITS CANNOT SERVE OUTSIDE PLUGS, RANGE HOOD, DISPOSALS, DISHWASHERS OR MICROWAVES - ONLY THE REQUIRED COUNTERTOP/WALL OUTLETS INCLUDING THE REFRIGERATOR. CEC 2022

DEDICATED 120-VOLT, 20-AMP CIRCUIT ARE REQUIRED TO SERVE BATHROOM RECEPTACLE OUTLET(S). IT SHALL BE INSTALLED ON A WALL/PARTITION WITHIN 3 FEET OF THE OUTSIDE EDGE OF EACH BASIN OR INSTALLED ON THE SIDE/FACE 12 IN MAX BELOW THE COUNTERTOP. THIS CIRCUIT CANNOT SUPPLY ANY OTHER RECEPTACLES, LIGHTS, FANS, ETC. (EXCEPTION-WHERE THE CIRCUIT SUPPLIES A SINGLE BATHROOM, OUTLETS FOR OTHER EQUIPMENT WITHIN THE SAME BATHROOM SHALL BE PERMITTED TO BE SUPPLIED.) CEC 2022

ALL 120-VOLT, SINGLE PHASE, 15 AND 20 AMPERE BRANCH CIRCUITS THAT SUPPLY OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS OR SIMILAR ROOM/AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER. SHEET E-1.0. CEC 2022
ALL 15- AND 20- AMPERE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. CEC 2022

326: RECESSED LIGHTING FIXTURES SHALL BE RATED AS AIR-TIGHT (AT) AND, WHEN INSTALLED IN AN INSULATED CEILING SHALL HAVE AN APPROVED ZERO CLEARANCE INSULATION COVER (IC).

327: CLOSET LIGHTS SHALL BE FLUORESCENT OR HAVE A SEALED LENS. (2022 CEC)

328: ALL OUTLETS MUST BE TAMPER RESISTANT PER ARTICLE (2022 CEC)

329: AT LEAST ONE FIXTURE IN THE GARAGE CONTROLLED BY A VACANCY SENSOR. CEC 2022

330: AT LEAST ONE FIXTURE IN EACH LAUNDRY ROOM CONTROLLED BY A VACANCY SENSOR.

331: AT LEAST ONE FIXTURE IN EACH UTILITY ROOM CONTROLLED BY A VACANCY SENSOR. CEC 2022

A. 332: ALL OUTDOOR LIGHTING AS HIGH EFFICACY WITH MANUAL ON/OFF SWITCH AND ONE OF THE FOLLOWING IN ACCORDANCE WITH CEC 2019
   PHOTOCONTROL AND MOTION SENSOR
ii. PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL
iii. ASTRONOMICAL TIME SWITCH CONTROL
iv. ENERGY MANAGEMENT CONTROL SYSTEMS.

ADDITION

332 BARTON WAY
MENLO PARK CA

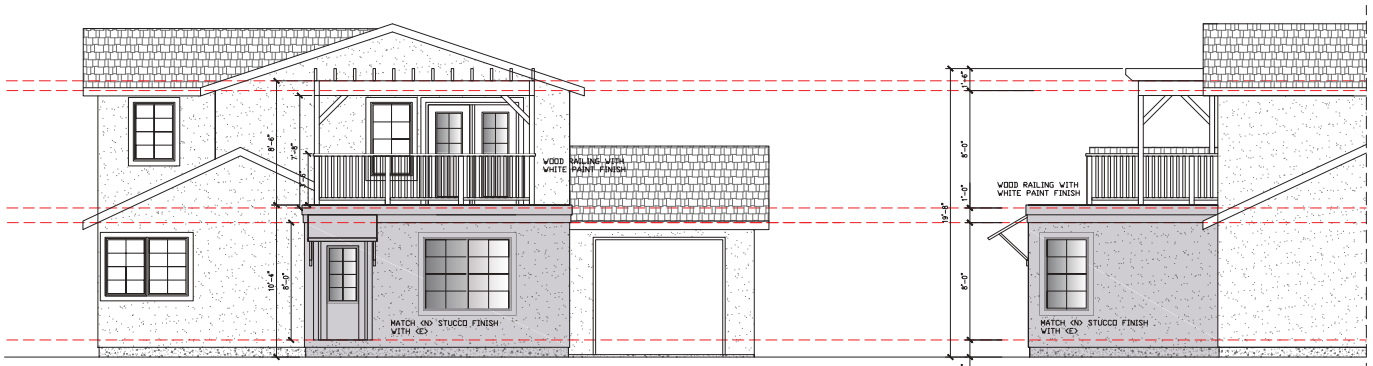
GED DESIGN
367 SANTANA HEIGHTS UNIT #3089
SAN JOSE CA 95128

SUBMITTALS AND REVISION
04.30.24 BUILDING SUBMITTAL

PROJECT NO. 24035 DATE 04.30.24

MEP NOTES

A2.1



1-0 FRONT PROPOSED ELEVATION WEST

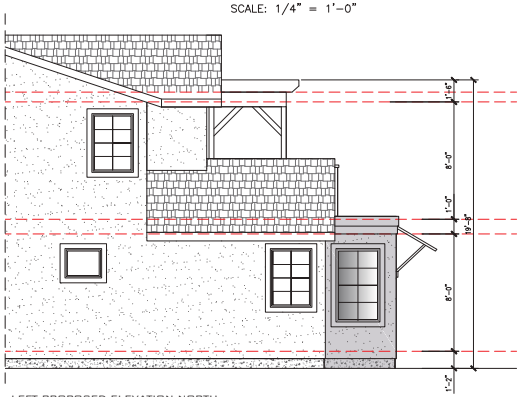
0 2' 4' 8'

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

2-0 RIGHT PROPOSED ELEVATION SOUTH

0 2' 4' 8'

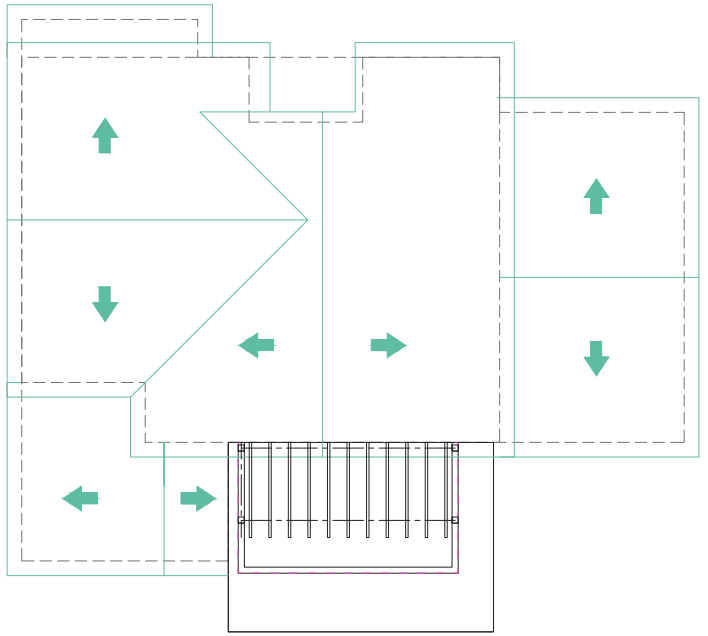
SCALE: 1/4" = 1'-0"



3-0 LEFT PROPOSED ELEVATION NORTH

0 2' 4' 8'

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



4-0 PROPOSED ROOF PLAN

0 2' 4' 8'

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

ADDITION

332 BARTON WAY
MENLO PARK CA

GED DESIGN
367 SANTANA HEIGHTS
UNIT #3089
SAN JOSE CA 95128

SUBMITTALS AND REVISION
04.30.24 BUILDING SUBMITTAL

PROJECT NO. 24035 DATE 04.30.24

PROPOSED ELEVATIONS

A3.0

GENERAL NOTES:

101. ALL WORK PERFORMED IN THIS PROJECT SHALL COMPLY WITH 2022 CBC. AND ALL PERTINENT LOCAL CODE REQUIREMENTS, LAW AND ORDINANCES.
102. ALL WORK PERFORMED SHALL COMPLY WITH THESE GENERAL REQUIREMENTS UNLESS OTHERWISE NOTED ON PLANS OR SPECIFICATIONS.
103. CONTRACTOR SHALL COORDINATE ALL DRAWINGS, VERIFY ALL DIMENSIONS, ELEVATIONS AND CONNECTIONS BEFORE CONSTRUCTION.
104. CONTRACTOR SHALL BE RESPONSIBLE FOR ON SIDE VERIFICATION OF CONDITIONS.
105. DRAWINGS ARE NOT TO BE SCALE. DIMENSIONS NOT SPECIFIED, WHEN REQUIRED BY FIELD CONDITION, SHALL BE DETERMINED BY ENGINEER.
106. ENGINEER SHALL BE NOTIFIED FOR ANY FIELD CONDITIONS DIFFERENT FROM THOSE INDICATED ON DRAWINGS.
107. ENGINEER SHALL BE NOTIFIED FOR ANY QUESTIONS WHICH MAY ARISE PERTAINING TO THE DRAWINGS AND SPECIFICATIONS
108. GENERAL CONTRACTOR AND HIS/HER SUB-CONTRACTORS ARE RESPONSIBLE FOR ALL THE EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING AND THE PROTECTION OF THE ADJACENT PROPERTY, STRUCTURES, STREET AND UTILITIES.
109. TYPICAL DETAILS ON THESE SHEETS SHALL APPLY WHERE NO SPECIFIC DETAILS OR SECTIONS ARE GIVEN.
110. MATERIAL NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER STRUCTURAL NOTES CONTAINED HEREIN.
111. ALL DRAWINGS AND SUBSEQUENT REVISIONS IF ANY SHALL BE APPROVED BY BUILDING OFFICIAL PRIOR TO STARTING CONSTRUCTION.
112. ALL DRAWINGS AND SUBSEQUENT REVISIONS IF ANY SHALL BE MADE WITH WRITTEN APPROVAL OF ENGINEERING.
113. CONTRACTOR SHALL VERIFY ALL HEATING, VENTILATING, PLUMBING AND ELECTRICAL OPENINGS AND NOTIFY THE ENGINEER FOR ANY DEVIATIONS FROM THE DRAWINGS
114. THE STRUCTURAL DRAWING SHOW STRUCTURAL FEATURE ONLY. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND OTHER DRAWINGS FOR NON- STRUCTURAL ITEMS.
115. EXCEPT AS NOTED HEREIN. NO STRUCTURAL MEMBERS SHALL BE OMITTED, NOTCHED, CUT, BLOCKED OUT, OR RELOCATED WITHOUT PRIOR APPROVAL BY THE ENGINEER OF RECORD.
116. THE STRUCTURAL DRAWINGS FOR THE PROJECT DESCRIBE THE BUILDING STRUCTURE ONLY, AND ARE NOT INTENDED TO SHOW NON-STRUCTURAL ITEMS COORDINATION FOR AND INSTALLATION OF MECHANICAL, ELECTRICAL, ARCHITECTURAL AND MISCELLANEOUS NON-STRUCTURAL ITEMS SHOWN ELSEWHERE IN THE PROJECT PLANS SHALL BE THE RESPONSIBILITY OF GENERAL CONTRACTOR
117. SUBCONTRACTORS FOR STRUCTURAL PORTIONS OF THE BUILDING, INCLUDING BUT NOT LIMITED TO FOUNDATIONS AND STRUCTURAL FRAME, AREA ADVISED TO REVIEW ALL DIVISIONS OF THE PLANS AND SPECIFICATIONS FOR NON-STRUCTURAL ITEMS WHICH MAYBE EMBEDDED IN, ATTACHED TO OR OTHERWISE CONNECTED TO THE STRUCTURAL ELEMENTS OF THE BUILDING BEFORE SUBMITTING THEIR BIDS.
118. IN CASED OF CONFLICT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

FRAMING NOTES:

201. CONTRACTOR SHALL REVIEW ALL TYPICAL FRAMING DETAILS (E.Q. TOP PLATE SPLICE. WALL CORNER CONNECTIONS, SHEAR PANEL NAILING, etc.). SILL NAILING AND BLOCK REQUIREMENTS PER FOOTNOTES IN SHEAR WALL SCHEDULE PRIOR TO STARTING ANY FRAME WORK.
202. BEAM-TO-POST (ISOLATED) CONNECTIONS SHALL BE PROPERLY ALIGNED AND CONNECTED WITH BRACKETS U.N.O.
203. WHERE PARTITION WALLS PARALLEL TO THE FRAMING BELOW, DOUBLE JOISTS SHALL BE PROVIDED BELOW THE WALL. WHERE PERPENDICULAR, 2X BLOCKING SHALL BE PROVIDED BETWEEN EACH JOISTS.
204. 2X BLOCKING SHALL BE PROVIDED BETWEEN THE FLOOR JOISTS AT THE ENDS AND AT EACH SUPPORT OF THE FLOOR, SUCH AS BEARING WALL, STRUCTURAL BEAM, etc. BLOCKING MAY BE OMITTED ONLY AS SPECIFIED ON PLAN, OR AT THE ENDS OF FLOOR JOISTS WHERE THEY ARE NAILED TO A HEADER, BEAM, OR RIM JOIST.
205. BOTTOM OF POSTS SHALL HAVE FULL BEARING IN A TIGHT-FIT CONDITION WITH THE SUPPORTING STRUCTURAL MEMBER BELLOW.
206. WHERE POST TERMINATED ON FLOOR WITH STUD WALLS OR BEAM BELOW, THE SPACE BETWEEN THE BOTTOM OF THE POST AND THE TOP OF THE PLATE OR THE BEAM SHALL BE SOLIDLY FILLED WITH 2X BLOCKING AND THE STUD WALL BELOW SHALL HAVE MATCHING POST AT SAME LOCATION.
207. U.O.N. BOTTOM OF ISOLATED POSTED WHEN TERMINATED ON FLOOR SHALL BE FIXED TO THE FLOOR DIAPHRAGM BY 2-A35 CLIPS.
208. PROVIDE A35 CLIP ON EACH SIDE OF GIRDER TRUSS AT BEARING WALLS.
209. PROVIDE ⅜" CDX(OSB) AT FIREPLACE FRAMING,
210. CUTTING BEAMS, JOISTS, AND RAFTERS: NOTCHED FROM TOP EDGE AND BORED HOLES SHALL BE: 1) LIMITED TO 1/6 MEMBER DEPTH: 2) LOCATED AWAY FROM BEARING NOT MORE THAN 3 TIMES MEMBER DEPTH. ALL OTHER CUTS, NOTCHES, AND BORED HOLES EXCEEDING 2" DIAMETER ARE PERMITTED ONLY WHEN APPROVED IN ADVANCE.
211. ALL FRAMING, BRACING, NAILING, NOTCHING, DRILLING, OR BORING SHALL BE IN ACCORDANCE WITH IBC UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED.
212. U.O.N. ALL WINDOW AND DOOR OPENINGS 8 FT AND WIDER SHALL HAVE DOUBLE KING STUDS & TRIMMERS.
213. U.O.N. ALL FLUSH MOUNTED SAWN LUMBERS BEAMS OR MULTIPLE JOISTS SHALL HAVE "HHUS" HANGERS WHERE FLUSH MOUNTED, FLUSH MOUNTED GLU-LAM BEAMS SHALL BE AS INDICATED ON PLAN.
214. U.O.N. ALL FLUSH MOUNTED SINGLE ROOF RAFTER (>8'-0" LONG) SHALL HAVE "LSU26: HANGER.
215. ALL EXTERIOR WALL CORNERS SHALL BE TIED WITH ST2215'S AT SLOPING PLATES CONDITION.
216. POSTS OR MULTI-STUDS SHALL BE PROVIDED AT LOWER FLOOR UNDER POSTS OR MULTI-STUDS ABOVE.
217. U.O.N. ALL BEARING AND/OR SHEAR WALLS WHICH ARE PLUMBING WALLS SHALL BE 2X6 WALL.
218 ALL CALIFORNIA FRAMING SHALL BE 2X6 RAFTERS AT 24" O.C. WITH CRIPPLE WALLS SUPPORT AT HIGH ROOF.

SHEATHING NOTES:

301. ANY PLYWOOD SHEATHING PANELS USED ON ROOF, FLOOR AND SHEAR WALLS SHALL NOT BE LESS THAN 24" WIDE UNLESS ALL EDGES OF THE UNDERSIZE SHEETS ARE SUPPORTED BY FRAMING MEMBER OR BLOCKING.
302. ROOF PLYWOOD SHALL BE ½" CDX (OSB) APA 24/0. FACE GRAIN PERPENDICULAR TO FRAMING REMEMBERS BELLOW. STAGGER ADJACENT PANELS BY 4 FEET. NAILED WITH 8d COMMON NAILS AT 6" O.C. ALL PLYWOOD PANEL EDGES AND 12" O.C. ALL INTERMEDIATE SUPPORTS.
303. FLOOR PLYWOOD SHALL BE 1⅛" CDX APA 48/24 TONGUE AND GROOVE. FACE GRAIN PERPENDICULAR TO FRAMING MEMBER BELOW. STAGGER AT ALL PLYWOOD EDGES AND AT 10" O.C. AT ALL INTERMEDIATE SUPPORTS. FOLLOW THE PLAN SET FOR DESIGN REQUIREMENTS
304. ALL FLOOR PLYWOOD SHALL BE GLUED TO THE JOISTS. THE FIELD -GLUED FLOOR SYSTEM SHALL BE INSTALLED ACCORDING TO THE RECOMMENDATION OF THE APA. GLUE SHALL BE APPLIED TO JOISTS AND THE GROOVE IN THE EDGE OF THE T&G PANEL. GLUE SHALL MEET THE REQUIREMENTS OF THE APA ADHESIVE SPEC. AFG-DI AND SHALL BE APPLIED AS DIRECTED BY THE GLUE MANUFACTURER. GLUE MAY BE APPLIED MANUALLY OR WITH ELECTRIC EQUIPMENT.
305. SHEAR WALL PLYWOOD SHALL BE ⅜"(½") CDX(OSD) APA 24/0. ALL PLYWOOD PANEL EDGES BLOCKED AND NAILED PER SHEAR WALL SCHEDULE. ALL PLYWOOD PANEL INTERMEDIATE SUPPORTS SHALL BE NAILED WITH 8d(10d) COMMON OR GALVANIZED BOX NAILS AT 12" O.C.
306. SHEAR WALL CDX(OSB) SHALL BE PLACED ON THE DESIGNED SIDE OF STUDS AS SHOW ON PLANS. THE CDX MAY BE PLACED ON THE OPPOSITE SIDE PROVIDED: 1) THERE ARE NO PERPENDICULAR WALLS INTERSECTING FULL LENGTH OF SHEAR WALL. 2) SHEAR WALL CDX(OSB) IS CONTINUOUSLY PLACED ACROSS PERPENDICULAR WALL FRAMING. OR 3) SHEAR WALL CORNER DETAIL IS PROPERLY FOLLOWED.
307. ALL CALIFORNIA ROOF FRAMING SHALL HAVE ROOF CDX(OSB) AT BOTH UPPER AND LOWER ROOF.
308. ALL ROOF AND FLOOR BEAMS AND COLLECTORS(COLL.) SHALL RECEIVE CDX(OSB) EDGE NAILING ALONG ITS FULL LENGTH.

MISCELLANEOUS NOTES:

401. U.N.O. PROVIDE ST6236 AT TOP PLATES AT PLUMBING PENETRATIONS.
402. AL SIMPSON CS STRAPS SHALL BE ATTACHED TO FRAMING WITH 8d MAILS IN EVERY OTHER HOLE IN EACH ROW.
403. ALL FRAMING ANCHORS, STRAPS, HANGERS, POST CAPS, COLUMN BASES, HOLDOWNS, HINGE CONNECTORS, ANGLES AND CLIPS SHALL BE MANUFACTURE BY SIMPSON OR EQUAL. NAILING SCHEDULE SHALL BE IN ACCORDANCE WITH PRODUCT REQUIREMENTS.
404. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING THE APPROPRIATE SIZE AND CONFIGURATION OF CONNECTORS FROM THE SERIES DESIGNED ON DRAWINGS. UNLESS NOTED OTHERWISE.
405. UNLESS NOTED OTHERWISE ALL NAILS SHALL BE COMMON NAILS.
406. ALL TOE NAILING SHALL BE 8d NAILS.
407. ALL NAILS EXPOSED TO THE WEATHER SHALL BE HOT-DIPPED GALVANIZED NAILS.
408. CONVENTIONAL LET-IN BRACING'S ARE NOT REQUIRED IN THE PROJECT.
409. NELSON STUDS SHALL BE MANUFACTURED AND FABRICATED PER TRW NELSON REQUIREMENTS.
410. ALL ITEMS (SPRINKLER PIPE, MECHANICAL EQUIPMENTS.. etc.) INTENDED TO BE SUPPORTED ON, OR FROM THE STRUCTURE, UNLESS WITHIN THE STRUCTURAL DRAWINGS, SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO INSTALLING.
411. UNLESS NOTES OTHERWISE, SEE ARCHITECTURAL DRAWING FOR DIMENSIONS, WALKS, RAMPS, PATIOS, ELEVATIONS, ROOF PITCHED etc.

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411. UNLESS NOTES OTHERWISE, SEE ARCHITECTURAL DRAWING FOR DIMENSIONS, WALKS, RAMPS, PATIOS, ELEVATIONS, ROOF PITCHED etc.

LUMBER NOTES:

501. ALL LUMBER SHALL HAVE MOISTURE CONTENT NOT EXCEEDING 19% PRIOR TO INSTALLATION.
502. WOOD MEMBER AGAINST CONCRETE AND OTHER MEMBERS LOCATED WITHIN 8" OF FINISHED GRADE SHALL BE PRESSURE TREATED DOUGLAS FIR LARCH.
503. 2X4 STUD SHALL BE DOUGLAS FIR LARCH STANDARD GRADE OR BETTER.
504. 2X6 STUD SHALL BE DOUGLAS FIR LARCH #2 OR BETTER.
505. TOP & SOLE PLATES SHALL BE DOUGLAS FIR LARCH #2 OR BETTER.
506. 3X & 4X POST SHALL BE DOUGLAS FIR LARCH #2 OR BETTER.
507. 2X & 4X JOIST AND BEAMS SHALL BE DOUGLAS FIR LARCH #2 OR BETTER.
508. 6X & 8X FRAMING MEMBERS SHALL BE DOUGLAS FIR LARCH #1 OR BETTER.
509. SIMPLY SUPPORTED GLUED-LAM BEAMS SHALL BE 24F-V4 DFL/DFL
510. GLUED-LAM BEAMS CANTILEVERED AT ENDS OR CONTINUOUSLY ACROSS SUPPORTS SHALL BE 24F-V8 DFL/DFL
511. GLUED-LAM BEAMS SHALL BEAR AITC CERTIFICATES AND SUBMITTED TO THE BUILDING OFFICIAL.
512. GLU-LAMINATED FABRICATION SHALL BE PERFORMED IN AN APPROVED FABRICATOR'S SHOP IN ACCORDANCE WITH CBC 1701.7
513. PSL SHALL BE 2.0E LVL SHALL BE 1.9E AND LSL (BEAM) SHALL BE 1.5E.

FOUNDATION NOTES:

601. SOILS REPORT PREPARED BY: N/A
602. FOUNDATION PLANS AND PERTINENT DETAILS SHALL BE REVIEWED AND APPROVED BY THE ABOVE SOILS ENGINEER PRIOR TO ANY FOUNDATION WORK.
603. SOIL REPORT SHALL TAKE PRECEDENCE OVER STRUCTURAL NOTE AND DETAILS.
604. SITE GRADING SUB-GRADE PREPARATION. CUTTING SLOPES, EXCAVATION AND PLACEMENT OF ENGINEERED FILL MATERIAL SHALL BE PERFORMED IN ACCORDANCE WITH THE SOIL REPORT AND/OR GRADING PLAN.
605. FOR SLAB-ON-GRADE CONSTRUCTION, THE SOIL REPORT SHALL BE REFERENCED REGARDING COMPACTION, SOAKING, MOISTURE BARRIER, SUB BASE, GRAVEL, SAND, ETC.
606. FINISH GRADE SHALL BE SLOPED AWAY FROM THE FOUNDATION AND MINIMUM 8 INCHES BELOW THE SILL PLATE.
607. SITE DRAINAGE REQUIREMENTS INCLUDING FINAL PAD GRADES, ROOF DRAINAGE DOWN SPOUTS SHALL BE REFERENCED TO GRADING & PLOT PLANS.
608. REFER TO ARCHITECTURAL PLANS FOR LOCATION AND DIMENSION OF UNDER-FLOOR VENTILATION, CONCRETE DRIVEWAY, DOOR PADS AND OTHER SIMILAR ITEMS.

CONCRETE NOTES:

701. FOUNDATION CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS.
702. REBARS, DOWELS AND OTHER EMBEDDED ELEMENTS SHALL BE SECURED IN PLACE AND APPROVED BY THE BUILDING OFFICIAL BEFORE POURING CONCRETE.
703. COLD JOINS MAY BE USED WHERE SHOWN. JOINTING SURFACE SHALL BE CLEAN FREE OF FOREIGN MATERIAL AND INTENTIONALLY ROUGHENED.
704. SPECIAL INSPECTION REQUIRED WHERE CONCRETE STRENGTH GREATER THAN 2,500 PSI IS SPECIFIED.

REINFORCEMENT NOTES:

801. REINFORCING STEEL SHALL BE DEFORMED BARS OF BILLET OR AXLE STEEL BAR ASTM A615 GRADE 40.
802. REINFORCE SHALL BE CLEAN AND FREE OF EXTRANEOUS MATERIAL.
803. ALL REINFORCEMENT SHALL BE PLACED AND SUPPORTED IN A TRUE LINE AS SOWN.
804. 3 INCHES CLEARANCE SHALL BE PROVIDED WHERE CONCRETE IS CASTED AGAINST EARTH OR WEATHER BUT DEPOSITED AGAINST FORMS, AND ¾" CLEARANCE FOR SLAB AND WALLS WHERE CONCRETE IS NOT EXPOSED TO EARTH OR WEATHER.
805. LAP ALL REINFORCING SPLICES A MINIMUM 48 BAR DIAMETERS BUT IN NO CASE LESS THAN 24 INCHES.
806. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185
807. CONTRACTOR SHALL INFORM ENGINEER 48 HOUR PRIOR TO POURING STRUCTURAL CONCRETE FOR REVIEWING THE WORK.

ANCHORAGE NOTES:

901. U.O.N. ON FOUNDATION PLAN, SILL PLATE FOR ALL EXTERIOR, INTERIOR BEARING AND SHEAR WALL SHALL BE ANCHORED TO CONCRETE FOUNDATION WITH ⅝" Ø ANCHOR BOLTS AT MAXIMUM 4 FEET ON CENTER, ANCHOR BOLT SHALL BE INSTALLED WITH SIMPSON BP5/8-3 (3"X3"X 1/4") BEARING PLATES.
902. BEARING WALL, SHEAR WALL AND EXTERIOR WALL SILLS RECEIVING FASTENERS SHALL HAVE THE FIRST FASTENERS AT 6" FROM EACH CUT END OF THE SILL. TWO FASTENERS MINIMUM PER EACH PIECE.
903. INTERIOR NON-BEARING WALL SILLS TO RECEIVE THE FIRST FASTENER AT 6 INCHES FROM EACH CUT OF THE SILL.
904. ANCHOR BOLTS MATERIAL SHALL BE ASTM A307.
905. POWER DRIVEN ANCHOR PINS (HILTI X-CP 72 P8 S23, ICC REPORT ESR-2379) MAY BE USED ON INTERIOR NON-SHEAR WALL ONLY.
906. POWER DRIVEN ANCHOR PINS SHALL BE SPACED AT MAXIMUM 16" O.C.
907. UNLESS HELD IN PLACE WHEN POURING CONCRETE, FASTENERS TO BE INSTALLED AFTER THE CONCRETE HAS SET FOR 7 DAYS MINIMUM.
908. ANCHOR BOLTS SHALL BE EMBEDDED 7" MINIMUM INTO CONCRETE OR REINFORCED MASONRY AND 15" MINIMUM INTO UN-REINFORCED GROUTED MASONRY.
909. U.O.N. INDIVIDUAL ISOLATED POSTS SHALL BE ANCHORED BY PB CONNECTORS.
910. CONTRACTOR SHALL VERIFY LOCATION OF HOLDOWNS AND ANCHOR BOLTS WITH ROUGH FRAMING TO ASSURE PROPER AND ACCURATE INSTALLATION.
911. U.O.N. INDIVIDUAL ISOLATED POSTS SHALL BE ANCHORED BY PB CONNECTORS.
912. HOLDOWNS SHALL BE TIED ON PLACE PRIOR TO INSPECTION.

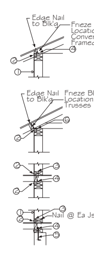
MATERIALS		Edges (inches)	Intermediate supports (inches)
[illegible]			

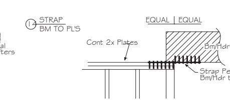
RESIDENTIAL NAILING SCHEDULE

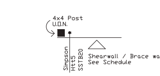
TABLE R602.3(1) FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING OF FASTENERS
1	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]

PROJECT FOLLOWS 2022 CRC CONSTRUCTION CONDITIONS







1. Shear Wall / Brace wall Mat'l
2. S.W. Edge Nail
3. Sole Plate Nail
4. Metal Connector
5. Anchor Bolt
6. Metal Connector

BRACED WALL PANEL SCHEDULE

	Mat'l	Shear (PLF)	② Edge Nail	Field Nail	③ 2x Sole Pl Nail	④ Mtl Conn	⑤ * Anchor Bolt To 3x PTDF Sill	Mtl Conn
Sheathing ⓪	1/2" Ply Blk'd	264	8d @ 6" o.c.	8d @ 12" o.c.	16d @ 16" o.c.	- -	- -	Simp. A35
Shearwalls ①	1/2" Ply Blk'd	264	8d @ 6" o.c.	8d @ 12" o.c.	16d @ 6" o.c.	A35 @ 12" o.c.	5/8" x 12" @ 48" o.c.	Simp. A35
②	1/2" Ply Blk'd	384	8d @ 4" o.c.	8d @ 12" o.c.	16d @ 4" o.c.	A35 @ 12" o.c.	5/8" x 12" @ 48" o.c.	Simp. A35
③	1/2" Ply Blk'd	492	8d @ 3" o.c.	8d @ 12" o.c.	16d @ 3" o.c.	A35 @ 12" o.c.	5/8" x 12" @ 48" o.c.	Simp. A35

NOTES:
A. USE 3X SOLE PLATE/STUDS AT PLYWOOD SPLICES AT TYPE 2 AND TYPE 3 SHEARWALLS / BRACE WALL
(IF PLYWOOD SPLICED AT SOLE PLATE OR STUDS)
B. USE 20D NAILS AT 3x SOLE PLATES
C. USE 3" x 3" x .229" WASHERS AT MUDSILLS
D. FRAMING SHALL BE 2X DOUGLAS FIR-LARCH OR SOUTHERN PINE
E. 3/8" PLYWOOD SHALL BE CDX
F. SHEATH ALL EXTERIOR WALLS W/ 3/8" CDX PLYWOOD W/ 8D @ 6" O.C. EDGES. 12" O.C. FIELD (UNO)
G. PROVIDE 4X4 POST (MIN) AT EACH END OF SHEARWALL (UNO ON PLAN)
H. ALL POSTS AND STUDS CONNECTED TO A HOLD DOWN EITHER AT TOP OR AT BOTTOM SHALL HAVE EDGE NAILING FULL HEIGHT
I. EXTERIOR WALL TOP TOP PLATE: USE DOUBLE 2X4: STAGGERED JOINTS 4'-0" O.C. (12-16D MIN AT OVERLAP)
J. FASTENERS FOR PRESERVATIVE-TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER (R317.3.1). EXCEPTION: ONE-HALF-INCH DIAMETER OR GREATER STEEL BOLTS.
* IF 2x PTDF SILL USED TO MATCH (E) REDUCE BOLT SPACING IN HALF AND USE 5/8 x10" A.BOLTS
* HOT DIPPED GALVANIZED AT PRESSURE TREATED WOOD

ADDITION

332 BARTON WAY
MENLO PARK CA

GEO DESIGN
367 SANTANA HEIGHTS
UNIT #3089
SAN JOSE CA 95128

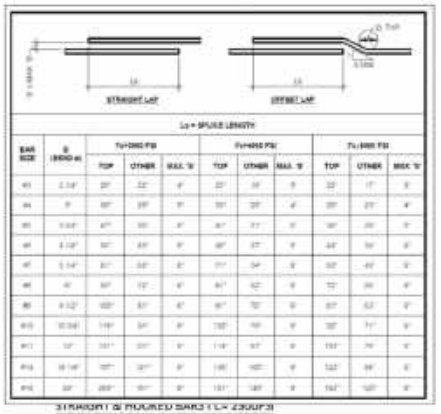
SUBMITTALS AND REVISION
04.30.24 BUILDING SUBMITTAL

PROJECT NO. 24035 DATE 04.30.24

STRUCTURAL NOTATION

S-0.0

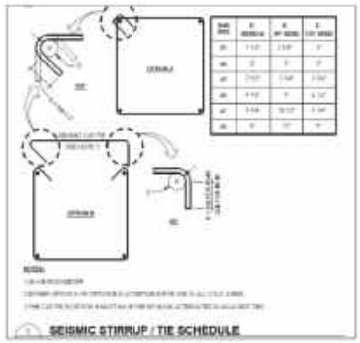
REBAR BENDING/SPLICING DETAILS:



STRAIGHT & HOOKED BARS (f'c= 2500PSI)

NOTES:

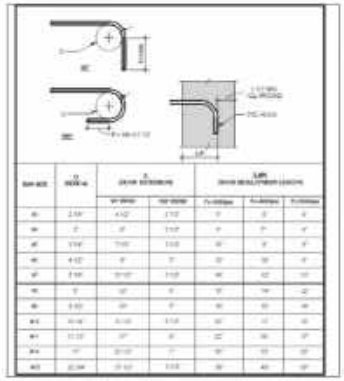
1. THIS TABLE CONTAINS MIN. LENGTH FOR LAP SPLICES & BAR DEVELOPMENT NOT OTHERWISE SPECIFIED ON THESE DRAWINGS. THESE LENGTHS MAY BE REDUCED IN CERTAIN SITUATIONS SUBJECT TO FIELD REVIEW & APPROVAL OF THE ENGINEER.
2. SPLICE LENGTHS ARE FOR NORMAL WEIGHT CONC. W/ GRADE 60 REBAR
3. MULTIPLY SPLICE LENGTH BY 1.3 FOR LIGHTWEIGHT CONC.
4. SPLICE LENGTHS ARE FOR UNCOATED BARS
5. DIVIDE LENGTHS IN TABLE BY 1.1 TO OBTAIN SINGLE STRAIGHT BAR DEVELOPMENT LENGTH IN CONCRETE
6. USE "TOP" FOR WALL BOUNDARIES & WHEN MORE THAN 12" OF FRESH CONC. IS PLACED BELOW SPLICE. "OTHER" FOR ALL OTHER SITUATIONS
7. "S" = SPACING
8. PROVIDE MIN. COVER PER GENERAL NOTES, BUT NOT LESS THAN 1x BAR DIAMETER

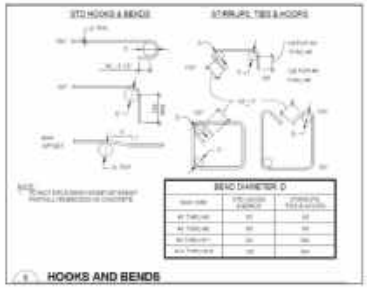


SEISMIC STIRRUP / TIE SCHEDULE

NOTES: ALL TIE CONDITIONS ARE APPLICABLE PER 2,500 PSI PLAN CONDITIONS AS STATED ON THE FOUNDATION PLAN.

BAR SIZE	STRAIGHT BARS	HOOKED BARS	
	DEVELOPMENT LENGTH	DEVELOPMENT LENGTH	DIA. (IN)
# 3	13"	7"	3/8"
# 4	17"	9"	5"
# 5	21"	11"	5/8"
# 7	37"	15"	7/8"





HOOKS AND BENDS

MINIMUM CONCRETE CLEAR COVER TO BARS

FOUNDATION AND TIE BEAMS (FORMED):
- 3"- BOTTOM
- 2"- TOP BARS &SIDE STIRRUPS

CONCRETE CAST AGAINST SOIL:
- 3"- NOT FORMED
- 2"- FORMED

SLAB-ON-GRADE:
- 3"- BOTTOM BARS
- 1"- TOP BARS

WALLS (WITH WATERPROOFING):
- 2"-FROM EXTERIOR FORMED SURFACE
- 1 ½"- FROM INTERIOR FORMED SURFASE

COVERED--BARS IN SINGLE CURTAIN:

COVERS SHOWN ARE CLEAR TO FACE OF REBAR CLOSEST TO SURFACE OF CONCRETE U.N.O.

NOTE ON THE TIE DOWNS:

IMPORTANT NOTES FOR TIE DOWNS IN THE NEW FOUNDATIONS:
1= USE SIMPSON TIE DOWN TREADED ROD AS PER SIMPSON INSTRUCTION FOR ALL TIE DOWNS.
2=USE 5/8" TREADED ROD FOR HDU4-SDS2.5. 3= USE 7/8" TREADED ROD FOR TIE DOWNS STDS.
3= USE 7/8" TREADED ROD FOR TIE DOWNS 1 TO 6.
4= USE SIMPSON STANDARD ANCHOR BOLT (7/8"X24") FOR ANCHORING TO THE FOUNDATIONS.

NOTE ON THE TIE DOWN CONNECTION TO THE EXISTING FOOTINGS:
NO EPOXY TIE DOWN IS USED FOR FOR THE EXISTING FOOTINGS.
USE A CONCRETE PAD OF 2'X2'X1'-0" (FOOTING F2) UNDER THE EXISTING PAD WHERE THE TIE DOWNS ARE USED.
MAKE THE HOLE IN THE EXISTING FOOTING TO PASS THE ANCHOR BOLTS TO THE FRESH CONCRETE.
FOR THE SIZE OF THE ANCHOR BOLTS SEE THE TIE DOWN SCHEDULE AND PLAN

WALL/JOIST/RAFTER HARDWARE

ADDITION

332 BARTON WAY
MENLO PARK CA

SEO DESIGN
367 SANTANA HEIGHTS
UNIT #3089
SAN JOSE CA 95128

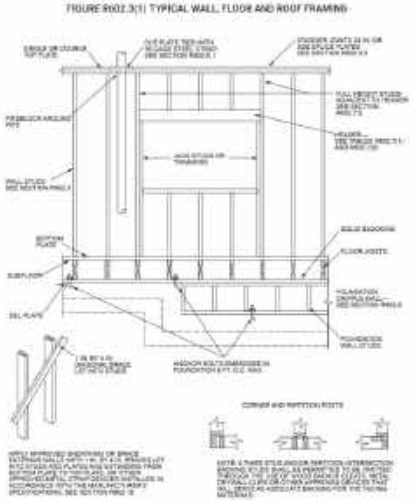
Jeorgy Venitsky

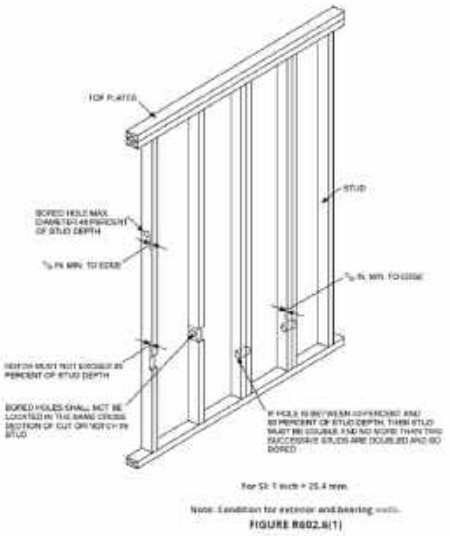
SUBMITTALS AND REVISION
04.30.24 BUILDING SUBMITTAL

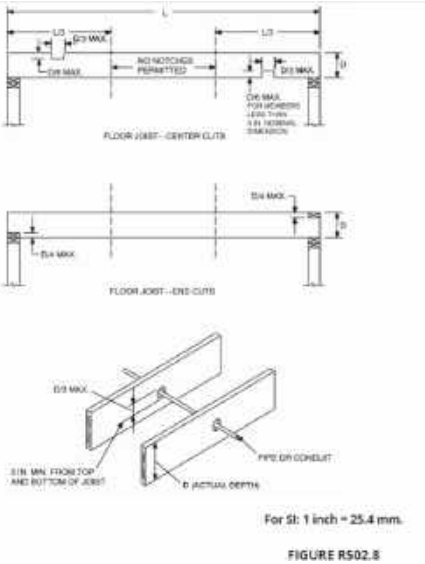
PROJECT NO. 24035 DATE 04.30.24

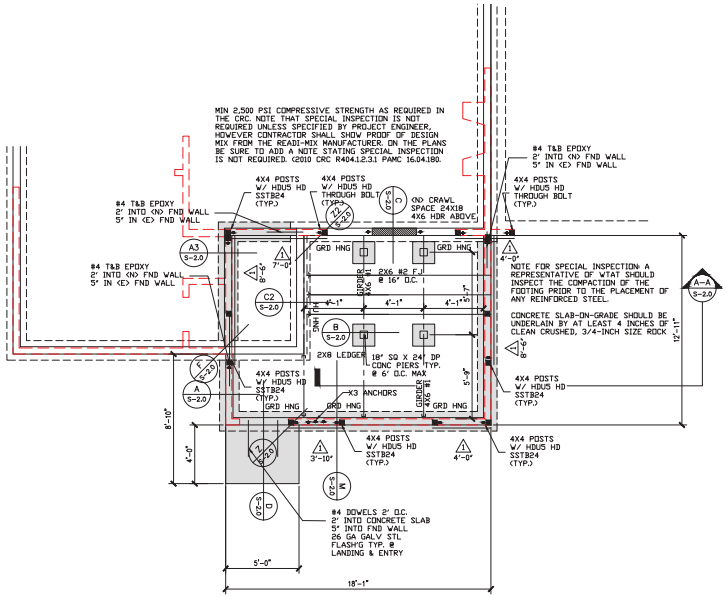
CROSS SECTION DETAILS

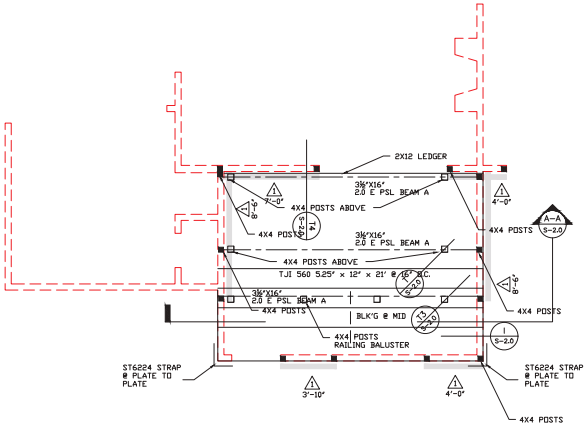
S-0.1

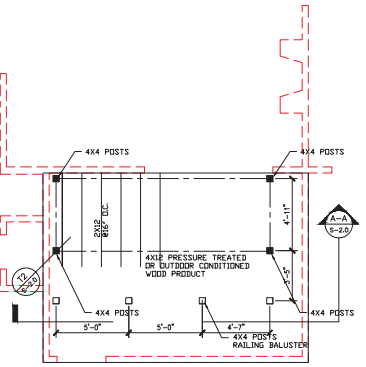












LOAD CONDITIONS TYPICAL CRC

LIVE LOAD - 60 PSF
DECK TOTAL DEAD - 24 PSF
CEILING - 10 PSF

— 1-0 PROPOSED FOUNDATION PLAN

0 2' 4' 8'

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

— 2-0 PROPOSED CEILING AND DECK PATIO FRAMING PLAN

0 2' 4' 8'

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

— 3-0 PROPOSED RAILING AND TRELLIS FRAMING

0 2' 4' 8'

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

ADDITION

332 BARTON WAY
MENLO PARK CA

GEO DESIGN
367 SANTANA HEIGHTS
UNIT #3089
SAN JOSE CA 95128

Georgy Nunitsky

SUBMITTALS AND REVISION
04.30.24 BUILDING SUBMITTAL

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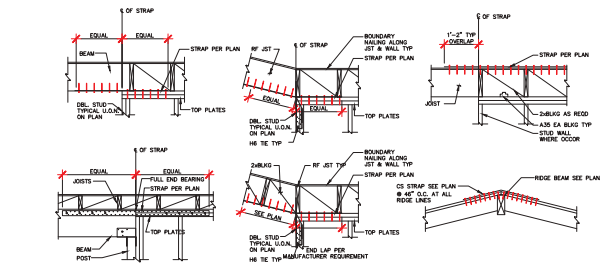
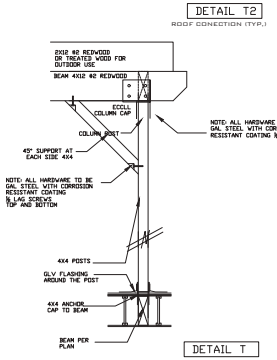
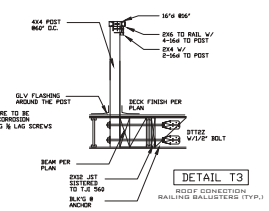
FOUNDATION PLAN
CEILING AND ROOF FRAMING PLAN

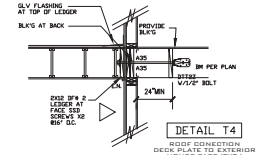
S-1.0

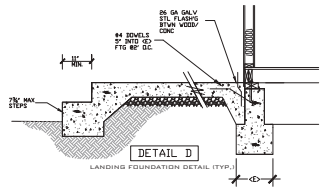


GENERAL DETAILS FOR STRAPPING



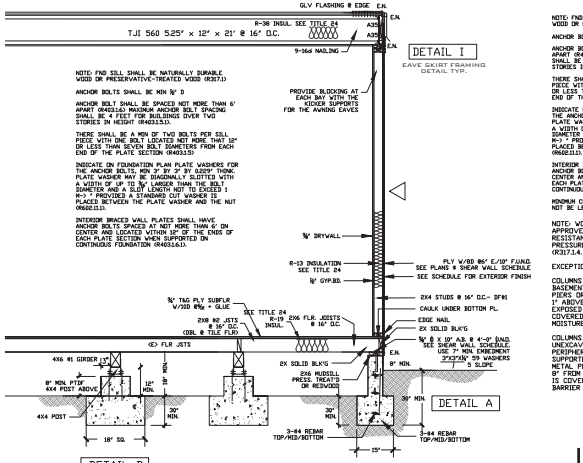






— A-A CROSS SECTION

SCALE: ½" = 1'-0"



NOTE: FND SILL SHALL BE NATURALLY DURABLE WOOD OR PRESERVATIVE-TREATED WOOD (R317.1)

ANCHOR BOLTS SHALL BE MIN ⅝" D

ANCHOR BOLT SHALL BE SPACED NOT MORE THAN 6' APART (R403.1.6) MAXIMUM ANCHOR BOLT SPACING SHALL BE 4 FEET FOR BUILDINGS OVER TWO STORIES IN HEIGHT (R403.1.5.1).

THERE SHALL BE A MIN OF TWO BOLTS PER SILL PIECE WITH ONE BOLT LOCATED NOT MORE THAT 12" OR LESS THAN SEVEN BOLT DIAMETERS FROM EACH END OF THE PLATE SECTION (R403.1.5)

INDICATE ON FOUNDATION PLAN PLATE WASHERS FOR THE ANCHOR BOLTS. MIN 3" BY 3" BY 0.229" THKNC. PLATE WASHER MAY BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO ⅜" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1 ¾ " PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT (R602.11.1).

INTERIOR BRACED WALL PLATES SHALL HAVE ANCHOR BOLTS SPACED AT NOT MORE THAN 6' ON CENTER AND LOCATED WITHIN 12" OF THE ENDS OF EACH PLATE SECTION WHEN SUPPORTED ON CONTINUOUS FOUNDATION (R403.1.6.1).

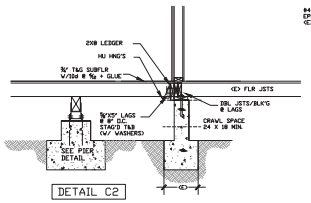
MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL NOT BE LESS THAN 3000 PSI IN SSC 3 (R404.1.2.3.1)

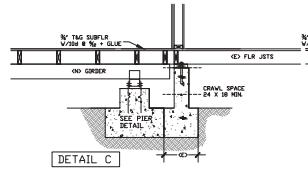
NOTE: WOOD COLUMNS/POST SHALL BE APPROVED WOOD OF NATURAL DECAY RESISTANCE OR APPROVED PRESSURE-PRESERVATIVE-TREATED WOOD (R317.1.4.

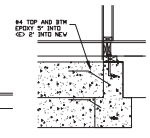
EXCEPTIONS:

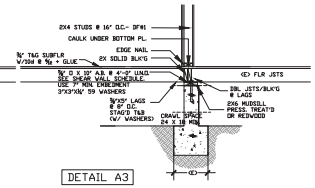
COLUMNS EXPOSED TO THE WEATHER OR IN BASEMENT WHEN SUPPORTED BY CONCRETE PIERS OR METAL PEDESTALS PROJECTING 1" ABOVE CONCRETE FLOORS OR 6" ABOVE EXPOSED EARTH AND THE EARTH IS COVERED BY AN APPROVED IMPERVIOUS MOISTURE BARRIER.

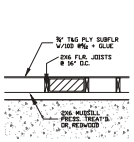
COLUMNS IN ENCLOSED CRAWL SPACED OR UNEXCAVATED AREAS LOCATED WITHIN THE PERIPHERY OF THE BUILDING WHEN SUPPORTED BY A CONCRETE PIER OR METAL PEDESTAL AT A HEIGHT MORE THAN 8" FROM EXPOSED EARTH AND THE EARTH IS COVERED BY AN IMPERVIOUS MOISTURE BARRIER

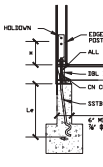








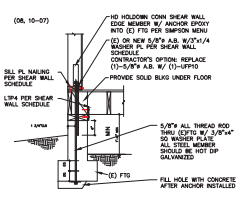




HOLDOWN SCHEDULE			
HOLDOWN	ANCHOR BOLT	EMBED. (Le)	LOAD
HTT22/HDU5	SSTB24	20"	5175#
HDU8	SSTB28	24"	8235#
HDU11	1" Ø ATR ##	36"	11675#
HHD914	1" Ø ATR ##	36"	14700#

EMBED. (Le) LOAD

ASTM A307 ANCHOR BOLT WITH NUT/ WASHER/ NUT



ADDITION

332 BARTON WAY
MENLO PLACE CA

GEO DESIGN
367 SANTANA HEIGHTS
UNIT #3089
SAN JOSE CA 95128

SUBMITTALS AND REVISION
04.30.24 BUILDING SUBMITTAL

PROJECT NO. 24035 DATE 04.30.24

CROSS SECTION DETAILS

S-2.0

GENERAL INFORMATION					
01	Project Name	Barton Way Addition			
02	Run Title	Title 24 Analysis			
03	Project Location	332 Barton Way			
04	City	Menlo Park	05	Standards Version	2022
06	Zip code		07	Software Version	EnergyPro 9.2
08	Climate Zone	3	09	Front Orientation (deg/ Cardinal)	270
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Addition and/or Alteration	13	Number of Bedrooms	4
14	Addition Cond. Floor Area (ft^2)	190	15	Number of Stories	2
16	Existing Cond. Floor Area (ft^2)	1817	17	Fenestration Average U-factor	0.3
18	Total Cond. Floor Area (ft^2)	2007	19	Glazing Percentage (%)	19.38%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Fuel Type	Natural gas	23	No Dwelling Unit:	No

COMPLIANCE RESULTS	
01	**Building Complies with Computer Performance**
02	**Building does not require field testing or HERS verification**
03	**This building incorporates one or more Special Features shown below**

ENERGY USE SUMMARY

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0	74.42	0	73.93	0	0.49
Space Cooling	0	15.89	0	16.16	0	-0.27
IAQ Ventilation	0	0	0	0	0	0
Water Heating	0	37.34	0	37.34	0	0
Self Utilization/Flexibility Credit						
Efficiency Compliance Total	**0**	**127.65**	**0**	**127.43**	**0**	**0.22**
Photovoltaics		0		0		
Battery				0		
Flexibility						
Indoor Lighting	0	7.79	0	7.79		
Appl. & Cooking	0	22.43	0	22.43		
Plug Loads	0	33.74	0	33.74		
Outdoor Lighting	0	1.78	0	1.78		
TOTAL COMPLIANCE	**0**	**193.39**	**0**	**193.17**		

ENERGY USE INTENSITY

	Standard Design (kBtu/ft^2 - yr)	Proposed Design (kBtu/ft^2 - yr)	Compliance Margin (kBtu/ft^2 - yr)	Margin Percentage
Gross EUI[1]	39.25	39.13	0.12	0.31
Net EUI[2]	39.25	39.13	0.12	0.31

Notes
1. Gross EUI is Energy Use Total (not including PV) / Total Building Area.
2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- Ceiling has high level of insulation
- New ductwork added is less than 25 ft. in length

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft^2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Barton Way Addition	2007	1	4	2	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft^2)	Avg. Ceiling Height	Water Heating System 1	Status
Existing Living Area	Conditioned	HVAC System1	1817	8	DHW Sys 1	Existing Unchanged
New Living Area	Conditioned	HVAC System1	190	8	DHW Sys 1	New

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Front Wall	Existing Living Area	R-0 Wall	270	Front	112	24	90	none	Existing	No
Left Wall	Existing Living Area	R-0 Wall	0	Left	296	41	90	none	Existing	No
Rear Wall	Existing Living Area	R-0 Wall	90	Back	256	65	90	none	Existing	No
Right Wall	Existing Living Area	R-0 Wall	180	Right	64	0	90	none	Existing	No
Front Wall 2	Existing Living Area	R-0 Wall	270	Front	256	69	90	none	Existing	No
Left Wall 2	Existing Living Area	R-0 Wall	0	Left	240	12	90	none	Existing	No
Rear Wall 2	Existing Living Area	R-0 Wall	90	Back	256	74	90	none	Existing	No
Right Wall 2	Existing Living Area	R-0 Wall	180	Right	240	24	90	none	Existing	No
Front Wall 3	New Living Area	R-15 Wall	270	Front	144	50	90	none	New	n/a
Left Wall 3	New Living Area	R-15 Wall	0	Left	40	15	90	Extension	New	n/a
Right Wall 3	New Living Area	R-15 Wall	180	Right	104	15	90	Extension	New	n/a
Interior Surface	New Living Area>>Existing Living Area	R-0 Wall1	n/a	n/a	208	0	n/a		New	n/a
Roof 2	Existing Living Area	R-11 Roof Attic	n/a	n/a	275	n/a	n/a		Existing	No
Roof 3	Existing Living Area	R-11 Roof Attic	n/a	n/a	771	n/a	n/a		Existing	No
Roof 4	New Living Area	R-38 Roof Attic	n/a	n/a	190	n/a	n/a		New	n/a
Raised Floor	Existing Living Area	R-0 Floor Crawlspace	n/a	n/a	1046	n/a	n/a		Existing	No

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Raised Floor 2	New Living Area	R-19 Floor Crawlspace	n/a	n/a	190	n/a	n/a		New	n/a
Interior Surface 2	Existing Living Area	R-0 Floor No Crawlspace	n/a	n/a	771	n/a	n/a		Existing	No
Front Wall 4	__Garage__	R-0 Wall	270	Front	136	0	90	none	Existing	No
Left Wall 4	__Garage__	R-0 Wall	0	Left	184	0	90	none	Existing	No
Rear Wall 3	__Garage__	R-0 Wall	90	Back	136	0	90	none	Existing	No
Right Wall 4	__Garage__	R-0 Wall	180	Right	184	0	90	none	Existing	No

OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Zone	Construction	Azimuth	Orientation	Area (ft^2)	Skylight Area (ft^2)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof	Status	Verified Existing Condition	Existing Construction
Roof	__Garage__	R-0 Roof No Attic	0	Left	283	0	4	0.1	0.85	No	Existing	No	

ATTIC

01	02	03	04	05	06	07	08	09	10
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof	Status	Verified Existing Condition
Attic Existing Living Area	Attic RoofExisting Living Area	Ventilated	4	0.1	0.85	No	No	Existing	No
Attic New Living Area	Attic RoofNew Living Area	Ventilated	4	0.1	0.85	Yes	No	New	n/a

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
Window	Window	Front Wall	Front	270			1	24	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 2	Window	Left Wall	Left	0			1	12	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 3	Window	Left Wall	Left	0			1	5	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 4	Window	Left Wall	Left	0			1	12	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 5	Window	Left Wall	Left	0			1	12	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 6	Window	Rear Wall	Back	90			1	12	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
French Door	Window	Rear Wall	Back	90			1	33	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 7	Window	Rear Wall	Back	90			1	20	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
French Door 2	Window	Front Wall 2	Front	270			1	46	0.3	NFRC	0.35	NFRC	Bug Screen	Altered	No
Window 8	Window	Front Wall 2	Front	270			1	11	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 9	Window	Front Wall 2	Front	270			1	12	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
Window 10	Window	Left Wall 2	Left	0			1	12	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 11	Window	Rear Wall 2	Back	90			1	10	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Sliding Glass Door	Window	Rear Wall 2	Back	90			1	40	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 12	Window	Rear Wall 2	Back	90			1	12	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 13	Window	Rear Wall 2	Back	90			1	12	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 14	Window	Right Wall 2	Right	180			1	12	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 15	Window	Right Wall 2	Right	180			1	12	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 16	Window	Front Wall 3	Front	270			1	30	0.3	NFRC	0.35	NFRC	Bug Screen	New	NA
French Door 3	Window	Front Wall 3	Front	270			1	20	0.3	NFRC	0.35	NFRC	Bug Screen	New	NA
Window 17	Window	Left Wall 3	Left	0			1	15	0.3	NFRC	0.35	NFRC	Bug Screen	New	NA
Window 18	Window	Right Wall 3	Right	180			1	15	0.3	NFRC	0.35	NFRC	Bug Screen	New	NA

SLAB FLOORS

01	02	03	04	05	06	07	08	09	10
Name	Zone	Area (ft^2)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated	Status	Verified Existing Condition
Slab	__Garage__	283	80	none	0	0%	No	Existing	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-0 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.361	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: 3 Coat Stucco
R-15 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Exterior Finish: 3 Coat Stucco
R-0 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-0	None / None	0.484	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4 Inside Finish: Gypsum Board
R-0 Wall1	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board
Attic RoofExisting Living Area	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
Attic RoofNew Living Area	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
R-0 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.216	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12
R-19 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x10 @ 16 in. O. C.	R-19	None / None	0.046	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x10
R-11 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-11	None / None	0.081	Over Ceiling Joists: R-1.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board
R-38 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-38	None / None	0.025	Over Ceiling Joists: R-28.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board
R-0 Floor No Crawlspace	Interior Floors	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.196	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04	05
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Not Required	Not Required	N/A	n/a	n/a

Carstairs Energy Inc.
2238 Bayview Heights Drive, Suite E
Los Osos, CA 93402
805-904-9048 lille24@yahoo.com
www.carstairsenergy.com

Barton Way Addition

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01-E

Project Name: Barton Way Addition — **Calculation Date/Time:** 2024-05-21T10:40:17-07:00 — (Page 10 of 12)

Calculation Description: Title 24 Analysis — **Input File Name:** Barton Way Addition (332).ribd22x

WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)	Status	Verified Existing Condition	Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)	Existing	No	

WATER HEATERS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Heating Efficiency Type	Efficiency	Rated Input Type	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	Tank Location	Status	Verified Existing Condition
DHW Heater 1	Gas	Small Storage	1	50	EF	0.53	Btu/Hr	75000	0	80	n/a		Existing	No

WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Existing HVAC System
HVAC System1	Heating and cooling system other	Heating Component 1	1	Cooling Component 1	1	HVAC Fan 1	Air Distribution System 1	n/a	Existing	No	

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01-E

Project Name: Barton Way Addition — **Calculation Date/Time:** 2024-05-21T10:40:17-07:00 — (Page 11 of 12)

Calculation Description: Title 24 Analysis — **Input File Name:** Barton Way Addition (332).ribd22x

HVAC - HEATING UNIT TYPES

01	02	03	04	05
Name	System Type	Number of Units	Heating Efficiency	Heating Unit Brand
Heating Component 1	Central gas furnace	1	AFUE - 80	n/a

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Design Type	Duct Ins. R-value		Duct Location		Surface Area		Bypass Duct	Duct Leakage	HERS Verification	Status	Verified Existing Condition	Existing Distribution system	New Ducts >= 25 ft
			Supply	Return	Supply	Return	Supply	Return							
Air Distribution System 1	Unconditioned attic	Non-Verified	R-6	R-6	Attic	Attic	n/a	n/a	No Bypass Duct	Existing (not specified)	Air Distribution System 1-hers-dist	Existing + New	No		No

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.58	n/a

HERS RATER VERIFICATION OF EXISTING CONDITIONS

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01-E

Project Name: Barton Way Addition — **Calculation Date/Time:** 2024-05-21T10:40:17-07:00 — (Page 12 of 12)

Calculation Description: Title 24 Analysis — **Input File Name:** Barton Way Addition (332).ribd22x

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Timothy Carstairs, CEA, HERS, GPR	Documentation Author Signature:
Company: Carstairs Energy Inc.	Signature Date: 5/21/2024
Address: 2238 Bayview Heights Drive, Suite E	CEA/ HERS Certification Identification (If applicable): R19-06-30151
City/State/Zip: Los Osos, CA 93402	Phone: 805-904-9048

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. 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.

Responsible Designer Name:	Responsible Designer Signature:
Company: Geo Design	Date Signed:
Address: 367 Santana Heights #3089	License:
City/State/Zip: San Jose, CA 95128	Phone:

RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name: Barton Way Addition — Building Type: ☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration — Date: 5/21/2024

Project Address: 332 Barton Way Menlo Park — California Energy Climate Zone: CA Climate Zone 03 — Total Cond. Floor Area: 2,007 — Addition: 190 — # of Units: 1

INSULATION

Construction	Type	Cavity	Area (ft²)	Special Features	Status
Floor	Wood Framed w/Crawl Space	- no insulation	1,046		Existing
Wall	Wood Framed	- no insulation	88		Existing
Wall	Wood Framed	- no insulation	255		Existing
Wall	Wood Framed	- no insulation	191		Existing
Wall	Wood Framed	- no insulation	64		Existing
Roof	Wood Framed Attic	R 11	275		Existing
Wall	Wood Framed	- no insulation	187		Existing
Wall	Wood Framed	- no insulation	228		Existing

FENESTRATION — Total Area: 389 — Glazing Percentage: 19.4 % — New/Altered Average U-Factor: 0.30

Orientation	Area(ft²)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status
Front (W)	47.0	1.190	0.83	none	none	N/A	Existing
Left (N)	53.0	1.190	0.83	none	none	N/A	Existing
Rear (E)	139.0	1.190	0.83	none	none	N/A	Existing
Front (W)	46.0	0.300	0.35	none	none	N/A	Altered
Right (S)	24.0	1.190	0.83	none	none	N/A	Existing
Front (W)	50.0	0.300	0.35	none	none	N/A	New
Left (N)	15.0	0.300	0.35	none	none	N/A	New
Right (S)	15.0	0.300	0.35	none	none	N/A	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Gas Central Furnace	80% AFUE	No Cooling	14.0 SEER	Setback	Existing

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
HVAC System	Ducted	Ducted	Attic	6.0	Altered

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status

RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name: Barton Way Addition — Building Type: ☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration — Date: 5/21/2024

Project Address: 332 Barton Way Menlo Park — California Energy Climate Zone: CA Climate Zone 03 — Total Cond. Floor Area: 2,007 — Addition: 190 — # of Units: 1

INSULATION

Construction	Type	Cavity	Area (ft²)	Special Features	Status
Wall	Wood Framed	- no insulation	182		Existing
Wall	Wood Framed	- no insulation	216		Existing
Roof	Wood Framed Attic	R 11	771		Existing
Demising	Wood Framed w/o Crawl Space	- no insulation	771		Existing
Floor	Wood Framed w/Crawl Space	R 19	190		New
Wall	Wood Framed	R 15	94		New
Wall	Wood Framed	R 15	25		New
Wall	Wood Framed	R 15	89		New

FENESTRATION — Total Area: 389 — Glazing Percentage: 19.4 % — New/Altered Average U-Factor: 0.30

Orientation	Area(ft²)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status

RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name: Barton Way Addition — Building Type: ☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration — Date: 5/21/2024

Project Address: 332 Barton Way Menlo Park — California Energy Climate Zone: CA Climate Zone 03 — Total Cond. Floor Area: 2,007 — Addition: 190 — # of Units: 1

INSULATION

Construction	Type	Cavity	Area (ft²)	Special Features	Status
Roof	Wood Framed Attic	R 38	190		New
Demising	Wood Framed	- no insulation	208		New

FENESTRATION — Total Area: 389 — Glazing Percentage: 19.4 % — New/Altered Average U-Factor: 0.30

Orientation	Area(ft²)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status

Carstairs Energy Inc.
2238 Bayview Heights Drive, Suite E
Los Osos, CA 93402
805-904-9048 title24@yahoo.com
www.carstairsenergy.com

Barton Way Addition

CABEC
Call Us for HERS Testing

2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.
(04/2022)

Building Envelope: [illegible]

2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters. *

[illegible]

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses.** Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii.
§ 150.0(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1Gii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.

[illegible]

Lighting: [illegible]

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

Y | N/A | RESPON. PARTY

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application.

Note: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section.

Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

Exceptions:

1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.
2. [HCD] For purposes of CALGreen, livework units, complying with Section 419 of the *California Building Code*, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable.

DIVISION 4.1 PLANNING AND DESIGN

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES

SECTION 4.102 DEFINITIONS

4.102.1 DEFINITIONS

The following terms are defined in Chapter 2 *(and are included here for reference)*

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

4.106 SITE DEVELOPMENT

4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.

(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the *California Electrical Code*, Article 625.

Exceptions:

1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
   1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power.
   1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the *California Electrical Code*.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities.
When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the requirements of Sections 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details.

4.106.4.2.1Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms.
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exceptions:

1.When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces.

2.When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed.

Notes:

a.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts.

4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms.
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required.

Notes:

a.Construction documents shall show locations of future EV spaces.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts.

3.EV Chargers. Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests.

When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the receptacle spaces.

4.106.4.2.2.1 Electric vehicle charging stations (EVCS).
Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1.

Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable requirements.

4.106.4.2.2.1.1 Location.
EVCS shall comply with at least one of the following options:

1.The charging space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.

2.The charging space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section 4.106.4.2.2.1.2, Item 3.

4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions.
The charging spaces shall be designed to comply with the following:

1.The minimum length of each EV space shall be 18 feet (5486 mm).

2.The minimum width of each EV space shall be 9 feet (2743 mm).

3.One in every 25 charging spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).

a.Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.2.1.3 Accessible EV spaces.
In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 1109A.

4.106.4.2.3 EV space requirements.
1.Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the location or the proposed location of the EV space. Construction documents shall identify the raceway termination point, receptacle or charger location, as applicable. The service panel and/ or subpanel shall have a 40-ampere minimum dedicated branch circuit, including branch circuit overcurrent protective device installed, or space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space, at the time of original construction in accordance with the California Electrical Code.

2.Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on amperage of installed or future receptacles or EVSE, raceway method(s), wiring schematics and electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space at the time of original construction in accordance with the California Electrical Code.

4.106.4.2.4 Identification.
The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

4.106.4.2.5 Electric Vehicle Ready Space Signage.
Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings.
When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE.

Notes:

1.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

2.There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL

4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE

4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.

4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.1.4.5 Pre-rinse spray valves.
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations),Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray valves manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)]

4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings.
Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the *California Plumbing Code*.

4.303.3 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code*.

NOTE:
THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE

FIXTURE TYPE	FLOW RATE
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

4.304 OUTDOOR WATER USE

4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

NOTES:

1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the *California Code Regulations*, Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are available at: https://www.water.ca.gov/

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material collected will be taken.
4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE (LR). Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4..

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

4.410 BUILDING MAINTENANCE AND OPERATION

4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
   a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
   b. Roof and yard drainage, including gutters and downspouts.
   c. Space conditioning systems, including condensers and air filters.
   d. Landscape irrigation systems.
   e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspections verifications required by the enforcing agency or this code.
11. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.
12. Information and/or drawings identifying the location of grab bar reinforcements.

4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of this section.

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL

4.501.1 Scope
The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS

5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

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Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O^3/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503 FIREPLACES

4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL

4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.

4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.

4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.

2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with section 94507.

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the *ARB Architectural Suggested Control Measure*, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification.
2. Field verification of on-site product containers.

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]

(Less Water and Less Exempt Compounds in Grams per Liter)

ARCHITECTURAL APPLICATIONS	VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVE	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT

(Less Water and Less Exempt Compounds in Grams per Liter)

SEALANTS	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS[1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.5 - FORMALDEHYDE LIMITS[1]

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed , at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

hhttps://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5

4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.
5. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL

4.505.1 General. Buildings shall meet or exceed the provisions of the *California Building Standards Code*.

4.505.2 CONCRETE SLAB FOUNDATIONS. Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section.

4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following:

1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter.Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.
   a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of adjustment.
   b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)

Notes:

1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.
2. Lighting integral to bathroom exhaust fans shall comply with the *California Energy Code*.

4.507 ENVIRONMENTAL COMFORT

4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Equipment Selection), or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

Notes:

1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.