

City of El Cajon Standard Plans

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1 Bedroom ADU	
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2 VICINITY MAP (PERMITTEE TO COMPLETE) SCALE: SCALE:

(INDICATE NORTH)



BY USING THESE STANDARD PLANS, THE USER AGREES TO RELEASE THE CITY OF EL CAJON, THE ARCHITECT, AND CON PREPARED THESE CONSTRUCTION DOCUMENTS F **CLAIMS, LIABILITIES, SUITS, AND DEMANDS ON AC** INJURY, DAMAGE, OR LOSS TO PERSONS OR PROI **INJURY OR DEATH, OR ECONOMIC LOSSES, ARISIN** OF THESE CONSTRUCTION DOCUMENTS. THE USE DOES NOT ELIMINATE OR REDUCE THE USER'S RE VERIFY ANY AND ALL INFORMATION PRIOR TO, AN CONSTRUCTION.

FIRE DEPARTMENT ACCESS NOTE

ACCESSORY DWELLING UNITS MUST COMPLY WIT CODE AS ADOPTED BY THE CITY OF EL CAJON TO OF THE FIRE MARSHAL.

FIRE SAFETY STANDARDS FOR SITE ACCESS, AND HOSE-PULL MUST BE OBSERVED. A TURN REQUIRED.

FIRE DEPARTMENT SPRINKLER NOTES:

ACCESSORY DWELLING UNITS REQUIRE SPRINK WHEN THE PRIMARY UNIT IS SPRINKLER PROT UNITS EXCEEDING 1,200 SQUARE FEET IN SIZE REQUIRES AN AUTOMATIC FIRE SPRINKLER SYSTE

ENGINEERING DIVISION EASEMEN

PERMANENT STRUCTURES CANNOT BE BUILT ON T CAJON - OWNED EASEMENTS. FOR MORE INFOI CHECK WITH THE CITY OF EL CAJON, DEPART WORKS.

ENCROACHMENT PERMITS:

ENCROACHMENT PERMITS ARE REQUIRED PRIOR PUBLIC RIGHT-OF-WAY. TO APPLY, GO TO WWW.ELC

ENCROACHMENT PERMIT REQUIREMENTS: WWW.ELCAJON.GOV/ENCROACHMENT

INSURANCE GUIDELINES: WWW.ELCAJON.GOV/INSURANCEGUIDELINES

SITE PLAN REQUIREMENTS:

1. ADD PLOT PLAN TO TEMPLATE AREA, OR SUBMIT SHEET OF PAPER LARGE ENOUGH TO SHOW ALL OF INFORMATION. MINIMUM SIZE IS 8 1/2" x 11"

2. SHOW A NORTH DIRECTION ARROW ON YOUR PLO

3. INDICATE THE SCALE OF YOUR DRAWING

4. INDICATE THE AREA AND DIMENSIONS OF THE PA 5. PROVIDE THE ASSESSOR PARCEL NUMBER ON

6. SHOW LOCATION, NAMES, AND WIDTHS OF BORD

SITE STREETS, ROAD EASEMENTS AND ALLEYS 7. SHOW ALL UTILITY AND/OR OPEN SPACE EASEME

THE USE OF THE EASEMENT AND DIMENSIONS

8. SHOW LOCATION AND WIDTH OF INTERIOR DRIVE 9. SHOW LOCATIONS AND DIMENSIONS OF ALL EXIS PROPOSED BUILDINGS, STRUCTURES, PARKING AN AREAS

10. STATE THE USE OF ALL BUILDINGS AND STRUCT 11. SHOW ALL DISTANCES FROM BUILDINGS AND O PROPERTY LINES OR ROAD/STREET EASEMENTS /

12. SHOW DISTANCES BETWEEN BUILDINGS

13. INDICATE LOCATION OF ALL SLOPES AND BANKS





SREES TO RELEASE NSULTANTS WHO	APPLICABLE CODES:	
ROM ANY AND ALL COUNT OF ANY PERTY, INCLUDING	ALL WORK SHALL CONFORM TO ALL APPLICABLE BUILDING CODES AND ORDINANCES WITHIN THE PROJECT JURISDICTION. CODES	
NG OUT OF THE USE OF THESE PLANS	USED IN THIS PROJECT INCLUDE BUT ARE NOT LIMITED TO: 2022 CALIFORNIA ADMINISTRATIVE CODE	
ID DURING,	2022 CALIFORNIA RESIDENTIAL CODE WITH CITY OF EL CAJON AMENDMENTS 2022 CALIFORNIA BUILDING CODE WITH CITY OF EL CAJON AMENDMENTS	
<u>ES:</u>	2022 CALIFORNIA MECHANICAL CODE WITH CITY OF EL CAJON AMENDMENTS	
TH CALIFORNIA FIRE THE SATISFACTION	2022 CALIFORNIA ELECTRICAL CODE WITH CITY OF EL CAJON AMENDMENTS 2022 CALIFORNIA PLUMBING CODE WITH CITY OF EL CAJON AMENDMENTS	
BUILDING SPACING, I AROUND MAY BE	2022 CALIFORNIA ENERGY CODE WITH CITY OF EL CAJON AMENDMENTS 2022 CALIFORNIA FIRE CODE	
	WITH CITY OF EL CAJON AMENDMENTS 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE WITH APPENDICES A4 & A5	
KLER PROTECTION TECTED. DWELLING OF LIVING SPACE EM.	IN CASE OF ANY CONFLICT WHEREIN THE METHOD OR STANDARDS OF INSTALLATION, OR THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE LAWS OR ORDINANCES, THE LAWS OR ORDINANCES SHALL GOVERN.	NAME: SIGNAT ADDRES DATE:
NTS: TOP OF CITY OF EL	STORMWATER, GRADING AND DRAINAGE CONTROL CODES AS WELL AS EROSION CONTROL MEASURES MUST BE FOLLOWED IF APPLICABLE, AS WELL AS ALL ENVIRONMENTALLY CRITICAL AREA (ECA) REGULATIONS FOR THE JURISDICTION.	
ORMATION, PLEASE ITMENT OF PUBLIC	OWNER INFORMATION:	
	NAME:	
	ADDRESS:	
R TO WORK IN THE CAJON.GOV/PACO	PHONE:	
	EMAIL:	
	CONTACT INFORMATION:	
	NAME:	
	ADDRESS:	
T ON A SEPARATE	PHONE:	
	EMAIL:	
LOT PLAN		
	PROJECT INFORMATION:	
	(PERMITTEE TO COMPLETE)	bry Fety
DERING OR ON-	SITE ADDRESS:	Sa Sa
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IENTS. INDICATE	LEGAL DESCRIPTION:	
/EWAYS	ZONE:	
STING AND ND LANDSCAPE	EXISTING STRUCTURE SPRINKLERED: YES / NO (SELECT ONE)	20 2
	NEW ADU - TYPE & USE: *SPRINKLERS REQUIRED: YES / NO (SELECT ONE)	
	SQUARE FOOTAGE:	
AND CENTERLINES	(E) RESIDENCE: (N) ADU: OTHER STRUCTURES:	
KS		
	PROJECT DESCRIPTION: PROPOSED 560 SF DETACHED ACCESSORY DWELLING UNIT	
	DEFERRED SUBMITTAL:	
	PHOTOVOLTAIC SOLAR PANEL SYSTEM PER TITLE 24 REPORT	
	SHEET INDEX 14 total	
	A0.1 TITLE	
	A0.3 CRC MIN. CONSTRUCTION SPECIFICATIONS	CAJO
	A0.4 EROSION CONTROL/BMP A1.1 FLOOR PLAN / ROOF PLAN	The Valley of Opportunity
	A1.2 FOUNDATION PLAN / ROOF FRAMING PLAN A1.3 UTILITY PLAN	is 🐲 🔊
	A2.1 ELEVATIONS A3.1 SECTIONS	Corporated 19
	A4.1 CRC SCHEDULES	
	A4.2 DETAILS A4.3 DETAILS	AU.1
	T24.1ENERGY CALCULATIONST24.2ENERGY CALCULATIONS	
		TITLE

BUILDING DESIGN CRITERIA

THE DESIGN CRITERIA LISTED BELOW FOR BUILDING PROJECTS WITHIN THE CITY OF EL CAJON ARE PROVIDED AS GENERAL GUIDELINES. THEY ARE NOT INTENDED TO BE USED IN PLACE OF PROJECT SPECIFIC INFORMATION AS MAY BE SUPPLIED BY A LICENSED DESIGN PROFESSIONAL OR GEOTECHNICAL ENGINEER.

SEISMIC DESIGN: 1613.2.5 OCCUPANCY CATEGORY I, II, OR III STRUCTURES LOCATED WHERE THE MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER AT 1-SECOND PERIOD. S1 IS GREATER THAN OR EQUAL TO 0.75 WILL BE SEISMIC CATEGORY E. OCCUPANCY CATEGORY IV STRUCTURES LOCATED WHERE THE MAPPED SPECTRAL ACCELERATION PARAMETER AT 1-SECOND PERIOD S1 IS GREATER THAN OR EQUAL TO 0.75 WILL BE SEISMIC CATEGORY F.ALL OTHER STRUCTURES SHALL BE ASSIGNED TO A SEISMIC DESIGN CATEGORY BASED ON THEIR OCCUPANCY

CATEGORY AND THE DESIGN SPECTRAL RESPONSE ACCELERATION COEFFICIENTS, SDS AND SD1 DETERMINED IN ACCORDANCE WITH CBC SECTION 1613.2.4 FOR STRUCTURES DESIGNED UNDER THE 2022 CRC SEISMIC DESIGN CATEGORY D2 IS ASSUMED UNLESS SUSTANTIATED BY ANALYSIS (2022 CRC 301.2.2.1) USE SITE SOIL CLASS D UNLESS OTHERWISE INDICTED IN A GEOTECHNICAL REPORT SPECIFIC TO THE SITE (2022 CBC SECTION 1616.2.2) 2. WIND DESIGN

THE MINIMUM BASIC WIND SPEED AT ANY LOCATION IS 100(CLASS I), 110(CLASS II), 115(CLASS III, IV) MILES PER HOUR. 2019 CBC FIGURES 1609, BASIC WIND SPEED SPEED, 3 SECOND GUST, 2022 CRC FIGURE R301.2 (5)A. SURFACE ROUGHNESS CATEGORY WILL GENERALLY BE CATEGORY B, BUT COULD BE CATEGORY C DEPENDING ON SITE SPECIFIC CONDITIONS. THE WIND DESIGN SHALL COMPLY WITH EXPOSURE B OR C REQUIREMENTS, DEPENDING ON SITE SPECIFIC CONDITIONS

3. CLIMATE ZONE FOR TITLE 24 ENERGY EFFICIENCY DESIGN - CLIMATE ZONE 10

ZONE MAP

4. HIGH FIRE SEVERITY ZON PLEASE CONTACT CITY STAFF FOR INFORMATION OR A COPY OF THE HIGH FIRE SEVERITY

GREEN BUILDING REQUIREMENTS FOR RESIDENTIAL CONSTRUCTION

- . INDOOR WATER USE CGBSC 4.303 INDOOR WATER FIXTURES SHALL NOT EXCEED THE FIXTURE FLOW RATES BELOW - LAVATORFAUCETS : 1.2 GPM @ 60 PSI MAX. - .8 GPM @ 20 PSI MIN. - KITCHEN FAUCETS : 1.8 GPM @ 60 PSI - WATER CLOSETS (TOILETS) : 1.28 GAL. PER FLUSH
 - SHOWERHEADS : 1.8 GPM @ 80 PSI

2. CONSTRUCTION WASTE MANAGEMENT - CGBSC 4.408 A CONSTRUCTION WASTE MANAGEMENT PLAN SHALL BE SUBMITTED. THE WASTE MANAGEMENT PLAN SHALL ADDRESS THE FOLLOWING AREAS. I. IDENTIFIES THE MATERIALS TO BE DIVERTED FROM DISPOSAL BY RECYCLING, REUSE ON THE PROJECT, OR SALVAGE FOR FUTURE USE OR SALE. SPECIFY IS MATERIALS WILL BE SORTED ON-SITE OR MIXED FOR TRANSPORTATION TO A IVERSION FACILITY 3. IDENTIFIES THE DIVERSION FACILITY WHERE THE MATERIAL COLLECTED WILL BE TAKEN. 4. IDENTIFIES CONSTRUCTION METHODS EMPLOYED TO REDUCE THE AMOUNT OF WASTE GENERATE

5. SPEFICIES THAT THE AMOUNT OF MATERIALS DIVERTED SHALL BE CALCULATED BY WEIGHT OR VOLUME, BUT NOT BY BOTH 3. BUILDING MAINTENANCE AND OPERATION (MANUAL) - CGMSC 4.410

AT FINAL INSPECTION DOCUMENTATION ACCEPTABLE TO THE ENFORCING AGENCY ON BUILDING MAINTENANCE AND OPERATION MUST BE PROVIDED FOR THE OWNER OR OCCUPANT AND SHALL INCLUDE: 1. OPERATION AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT, SYSTEMS, AND APPI IANCES 2. ROOF AND YARD DRAINAGE INCLUDING GUTTERS AND DOWNSPOUTS . SPACE CONDITIONING SYSTEMS INCLUDING CONDENSERS AND AIR FILTERS 4. LANDSCAPE AND IRRIGATION SYSTEMS

5. WATER REUSE SYSTEMS . UTILITY, WATER, RECYCLING PROGRAMS AND LOCATIONS

PUBLIC TRANSPORTATION AND CARPOOL OPTIONS 3. EDUCATIONAL MATERIAL ON POSSITIVE IMPACTS OF MAINTAINING INDOOR RELATIVE HIMUDITY BETWEEN 30 AND 60 PERCENT 9. INFORMATION ABOUT WATER CONSERVING LANDSCAPE AND IRRIGATION DESIGN 0. IMPORTANCE OF GUTTERS AND DOWNSPOUTS AND DIVERTING WATER AT LEAST 5' FROM

BUILDINGS 1. INFORMATION ON ROUTINE MAINTENANCE SUCH AS CAULKING, PAINTING, GRADING, ETC 12. INFORMATION ABOUT STATE SOLAR ENERGY AND INCENTIVE PROGRAMS 13. A COPY OF ALL SPECIAL INSPECTION VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY

4. POLLUTION CONTROL - CGBSC 4.504 POLLUTION CONTROL MUST BE PROVIDED AS FOLLOWS ALL DUCTS AND RELATED DISTRIBUTION COMPONENT OPENINGS MUST BE COVERED WITH

TAPE OR OTHER APPROVED MEANS TO PREVENT DUST ACCUMULATION 2. ADHESIVES, SEALANTS, AND CAULKS MUST MEET THE MINIMUM VOC LIMITS (TABLE 4.504.1) PAINTS AND COATINGS MUST MEET MIMIMUM VOC LIMITS 4. AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC

IN SECTION 944522(a)(2) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNTS AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(e)(1) AND (f)(1) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520 5. ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE TESTING AND PRODUCT REQUIREMENTS OF ONE OF THE FOLLOWING

a. CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS PROGRAM
b. CALIFORNIA DEPARTMENT OF PUBLIC HEALTH STANDARD PRACTIVE FOR TESTING OF VOCs (SPECIFICATION 01350) NSF/ANSI 140 AT THE GOLD LEVE

d. SCIENTIFIC CERTIFICATIONS SYSTEM INDOOR ADVANTAGE GOLD ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CARPET AND RUG INSTITUTEGREEL LABEL PROGRAM 7. ALL CARPET ADHESIVE SHALL MEET THE MINIMUM VOC LIMITS (TABLE 4.504.1)

WHERE RESILIENT FLOORING IS INSTALLED, AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL COMPLY WITH THE VOC EMISSION LIMITS DEFINED IN COLLABORATIVE FOR HIGH PERFORMANCE SCHOOLS (CHPS) LOW-EMITTING MATERIALS LIST OR CERTIFIED UNDER THE RESILIENT FLOOR COVERING INSTITURE (RCFI) FLOOR SCORE PROGRAM). HARDWOOD PLYWOOD, PARTICLEBOARD, AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXICS CONTROL MEASURES FOR COMPOSITE WOOD (17 CCR 93120 ET SEQ.), BY OR BEFORE THE DATES SPECIFIED IN THOSE SECTIONS, AS SHOWN IN TABLE 4,504.5

DOCUMENTATION FOR THE ITEMS LISTED ABOVE MUST BE MADE AVAILABLE TO YOUR INSPECTOR UPON REQUEST.

5. INTERIOR MOISTURE CONTROL - CGBSC 4.505 A LARGE CAPILLARY BREAK SHALL BE INSTALLED AND SHALL CONSIST OF THE FOLLOWING: A 4-INCH THICK BASE OF 1/2 INCH OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR BARRIER IN DIRECT CONTRACT 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. AN EQUIVALENT SLAB DESIGN BY A DESIGN PROFESSIONAL IS ACCEPTABLE.

6. MOISTURE CONTENT OF BUILDING MATERIALS - CGBSC 4.505.3 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 . MOISTURE READINGS SHALL BE TAKEN AT A POINT 2 FEET TO 4 FEET FROM THE GRADE STAMPED END OF EACH PIECE TO BE VERIFIED

3. AT LEAST THREE RANDOM MOISTURE READINGS SHALL BE PERFORMED ON WALL AND FLOOR FRAMING WITH DOCUMENTATION PROVIDED IMMEDIATELY PRIOR TO ENCLOSURE OF THE WALL AND FLOOR FRAMING

INSULATION PRODUCTS WHICH ARE VISIBLY WET OR HAVE A HIGH MOISTURE CONTACT 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 CLOSURE.

7. INDOOR AIR QUALITY AND AXHAUST - CGBSC 4.506 FOR BATHROOMS CONTAINING A BATHRUB, SHOWER, OR TUB/SHOWER COMBINATION, A MECHANICAL EXHAUST FAN WHICH EXHAUSTS DIRECTLY FROM THE BATHROOM MUST BE INSTALLED. FANS MUST BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE READILY ACCESSIBLE. HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 TO 80 PERCENT

8. HEATING AND AIR-CONDITIONING - CGBSC 4.507 HEATING AND AIR-CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELETED USING THE FOLLOWING METHODS: THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J-2016, ASHRAE HANDBOOK OR OTHER EQUIVALENT DESIGN SOFTWARE METHODS . DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D-2016, ASHRAE HANDBOOKS R OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S-2014 OR OTHER EQUIVALENT DESIGN SOFTWARE METHODS

EXCEPTION: USE OF ALTERNATE DESIGN TEMPERATURES NECESSARY TO ENSURE THE SYSTEMS FUNCTION ARE ACCEPTABLE.

<u>GENERAL NOTES</u>

R327.1 - AGING-IN-PLACE DESIGN AND FALL PREVENTION NEWLY CONSTRUCTED DWELLINGS SUBJECT TO THE REQUIREMENTS OF THIS CODE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTIONS R327.1.1 THROUGH R327.1.4

327.1.1 - REINFORCEMENT FOR GRAB BARS AT LEAST ONE BATHROOM ON THE ENTRY LEVEL SHALL BE PROVIDED WITH REINFORCEMENT INSTALLED IN ACCORDANCE WITH THIS SECTION. WHERE THERE IS NO BATHROOM ON THE ENTRY LEVEL. AT LEAST ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE SWELLING HALL COMPLY WITH THIS SECTION. REINFORCEMENT SHALL BE SOLID LUMBER OR OTHER CONSTRUCTION MATERIALS APPROVED BY THE ENFORCING AGENCY. REINFORCEMENT SHALL NOT BE LESS THAN 2 BY 8 INCH (51 MM BY 203 MM) NOMINAL LUMBER. [11/2 INCH BY 7 1/4 INCH (38 MM BY 184 MM) ACTUAL DIMÈNSION] OR OTHEŔ CONSTRUCTION MÅTERIAL PROVIDING QUAL HEIGHT AND LOAD CAPACITY. REINFORCEMENT SHALL BE LOCATED BETWEEN 32 INCHES (812.8 MM) AND 39 1/4 INCHES (997 MM) ABOVE THE FINISHED FLOOR FLUSH WITH THE WALL FRAMING. WATER CLOSET REINFORCEMENT SHALL BE INSTALLED ON BOTH SIDE WALLS OF THE FIXTURE, OR ONE SIDE WALL AND THE BACK WALL. SHOWER REINFORCEMENT SHALL E CONTINUOUS WHERE WALL FRAMING IS PROVIDED. BATHTUB AND COMBINATION BATHTUB

HOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE ROVIDED WITH THE BOTTOM EDGE LOCATED NO MORE THAN 6 INCHES (152.4 MM) ABOVE THE BATHTUB RIM.

EXCEPTIONS: WHERE THE WATER CLOSET IS NOT PLACED ADJACENT TO A SIDE WALL CAPABLE OF ACCOMMODATING A GRAB BAR, THE BATHROOM SHALL HAVE PROVISIONS FOR NSTALLATION OF FLOOR MOUNTED, FOLDAWAY OR SIMILIAR ALTERNATE GRAB BAR REINFORCEMENTS APPROVED BY THE ENFORCING AGENCY. REINFORCEMENT SHALL NOT BE REQUIRED IN WALL FRAMING FOR PRE-FABRICATED SHOWER ENCLOSURES AND BATHTUB WALL PANELS WITH INTEGRAL FACTORY - INSTALLED GRAB BARS OR WHEN FACTORY -INSTALLED REINFORCEMENT FOR GRAB BARS IS PROVIDED. SHOWER ENCLOSURES THAT DO NOT PERMIT INSTALLATION OF REINFORCEMENT AND/OR GRAB BARS SHALL BE PERMITTED PROVIDED REINFORCEMENT FOR INSTALLATION OF FLOOR-MOUNTED GRAB BARS OR AN ALTERNATE METHOD IS APPROVED BY THE ENFORCING AGENCY. BATHTUBS WITH NO SURROUNDING WALLS, OR WHERE THE WALL PANELS DO NOT PERMIT THE INSTALLATION OF EINFORCEMENT SHALL BE PERMITTED, PROVIDED REINFORCEMENT FOR INSTALLATION OF FLOOR - MOUNTED GRAB BARS ADJACENT TO THE BATHTUB OR AN ALTERNATE METHOD IS APPROVED BY THE ENFORCING AGENCY. REINFORCEMENT OF FLOORS SHALL NOT BE

R327.1.1.1 - DOCUMENTATION FOR GRAB BARS REINFORCEMENT INFORMATION AND/OR DRAWINGS IDENTIFYING THE LOCATION OF GRAB BAR REINFORCEMENT SHALL BE PLACED IN THE OPERATION AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS CODE, CHAPTER 4, DIVISION 4.4

REQUIRED FOR BATHTUBS AND WATER CLOSETS INSTALLED IN CONCRETE SLAB FLOORS.

R327.1.2 - ELECTRICAL RECEPTACLE OUTLET, SWITCH AND CONTROL HEIGHTS ELECTRICAL RECEPTACLE OUTLETS, SWITCHES, AND CONTROLS (INCLUDING CONTROLS FOR HEATING, VENTILATION, AND AIR CONDITIONING) INTENDED TO BE USED BY OCCUPANTS SHALL BE LOCATED NO MORE THAN 48 INCHES (1219.2 MM) MEASURED FROM THE TOP OF THE DUTLET BOX AND NOT LESS THAN 15 INCHES (381 MM) MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE FINISH FLOOR EXCEPTIONS: DEDICATED RECEPTACLE OUTLETS REQUIRED BY THE CALIFORNIA ELECTRICAL CODE ON A WALL SPACE WHERE THE DISTANCE BETWEEN THE FINISHED FLOOR AND A BUILT-IN FEATURE ABOVE THE FINISH FLOOR, SUCH AS A WINDOW, IS LESS THAN 15 INCHES (381 MM).

R327.1.3 - INTERIOR DOORS EFFECTIVE JULY 1, 2024, AT LEAST ONE BATHROOM AND ONE BEDROOM ON THE ENTRY LEVEL SHALL PROVIDE A DOORWAY WITH A NET CLEAR OPENING OF NOT LESS THAN 32 INCHES (812.8 MM), MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM THE LÓSED POSITION; OR, IN THE CASE OF A TWO OR THREE - STORY SINGLE FAMILY DWELLING, IN THE SECOND OR THIRD FLOOR OF THE DWELLING IF A BATHROOM OR BEDROOM IS NOT

LOCATED ON THE ENTRY LEVEL. R327.1.4 - DOORBELL BUTTONS DOORBELL BUTTONS OR CONTROLS. WHEN INSTALLED. SHALL NOT EXCEED 48 INCHES (1219.2 MM) ABOVE THE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL UTTON ASSEMBLY. WHERE DOORBELL BUTTONS INTEGRATED WITH OTHER FEATURES ARE

REQUIRED TO BE INSTALLED ABOVE 48 INCHES (1219.2 MM) MEASURED FROM THE EXTERIOR FLOOR OR LANDING, A STANDARD DOORBELL BUTTON OR CONTROL SHALL ALSO BE PROVIDED AT A HEIGHT NOT EXCEEDING 48 INCHES (1219.2 MM) ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON OR CONTROL.

ARCHITECTURAL GENERAL NOTES:

DIMENSIONS, DRAWINGS, AND PERMITS CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE INCLUDING. BUT NOT LIMITED TO, SOILS AND EXISTING UTILITIES, PRIOR TO START OF SITE IMPROVEMENTS. ALL DISCREPANCIES SHALL BE REPORTED TO THE OWNER IMMEDIATELY.

DO NOT SCALE DRAWINGS OR DETAILS. USE GIVEN DIMENSIONS. CHECK DETAILS FOR LOCATION OF ALL ITEMS NOT DIMENSIONED ON PLANS. ALL DIMENSIONS ARE FACE OF STUD WALL, CENTER LINE OF COLUMN, OR FACE OF CONCRETE UNLESS NOTED OTHERWISE. THE DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE

SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE OWNER.

CONTRACTOR AND SUBCONTRACTORS SHALL SECURE ANY PERMITS NOT COVERED BY THE PRIMARY BUILDING PERMIT, SUCH AS ELECTRICAL, PLUMBING, MECHANICAL, AND SEPTIC WORK

APPROVED PERMIT PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY ANY WORKMEN

BUILDING COMPONENT BUILDING SYSTEMS AND COMPONENTS NOT SPECIFICALY DETAILED SHALL BE INSTALLED PER MANUFACTURERS' RECOMMENDATIONS. VERIFY CHEMICAL COMPATIBILITY OF COMPONENTS (SUCH AS CAULKING, SEALANTS, AND PAINT) PER MANUFACTURER'S REQUIREMENTS. NOTIFY HE OWNER OF ANY RESULTING CONFLICTS.

WHERE INSTALLATION INCLUDES MANUFACTURED PRODUCTS, COMPLY WITH THE MANUFACTURER'S APPLICABLE INSTRUCTIONS FOR INSTALLATION. VERIFY ROUGH-IN DIMENSIONS FOR EQUIPMENT AND PROVIDE BUCK-OUTS, BACKING AND JACKS AS REQUIRED.

ALL GLAZING IN HAZARDOUS LOCATIONS AS DEFINED BY THE BUILDING CODE SHALL BE SAFETY GLAZING, INCLUDING BUT NOT LIMITED TO THE SAFETY GLAZING IDENTIFIED IN THE CONSTRUCTION DOCUMENTS. CONSTRUCTION METHODS

ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR EXPOSED TO WEATHER (SUCH AS SILL PLATES, EXTERIOR DECKING, JOISTS & BEAMS) SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE OR BE A WOOD SPECIES WITH NATURAL RESISTANCE TO DECAY. FASTENERS FOR PRESSURE TREATED WOOD SHALL BE GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER.

PROVIDE GALVANIC INSULATION BETWEEN DISSIMILAR METALS.

APPROVED CORROSION RESISTIVE FLASHING SHALL BE PROVIDED IN THE EXTERIOR WALL ENVELOPE IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OF PENETRATION OF WATER TO THE BUILDINGS' STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL EXTEND TO THE OUTSIDE FACE OF THE EXTERIOR WALL SURFACE OR COMPONENT AND SHALL BE INSTALLED TO PREVENT WATER FROM REENTERING THE EXTERIOR WALL ENVELOPE.

FLASHING SHALL BE INSTALLED AT, BUT NOT LIMITED TO THE FOLLOWING LOCATIONS: - THE TOP OF ALL EXTERIOR WINDOW & DOOR OPENINGS INTERSECTIONS OF FRAME WALLS AND MASONRY OR STUCCO UNDER MASONRY, WOOD OR METAL COPINGS AND SILLS

CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM WHERE EXTERIOR PORCHES, DECKS, TRELLIS OR STAIRS ATTACH TO A WALL AT WALL AND ROOF OR SOFFIT INTERSECTIONS - AT BUILT-IN GUTTERS

VERIFY ALL RECEPTACLES, SWITCH AND FIXTURE LOCATIONS WITH OWNER PRIOR TO INSTALLATION. ALL SWITCHES TO BE DIMMABLE UNLESS NOTED OTEHRWISE.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS AND WORKERS AT ALL TIMES DURING THE COURSE OF THE PROJECT

	2022 RESIDENTIAL	- CALIFORNIA	GREEN BUILDING	STANDARDS	COD
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General Notes:

- 1. The flow rates for all plumbing fixtures shall comply with the maximum flow rates in CALGreen Section 4.303.1. 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. [CALGreen 4.406.1]. Before final inspection, a complete operation and maintenance manual shall be placed in the building. A sample of
- the manual is available on the Housing and community Development (HCD) web site. The manual should include the items listed in 2023 CALGreen 4.410.1. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove
- shall comply with U.S. EPA Phase II emission limits where applicable. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.
- All duct and other related air distribution component openings shall be covered during with tape, plastic, or sheet
- metal until the final startup of the heating cooling, and ventilation equipment. [CALGreen 4.504.1]. Paints, stains, coatings, adhesives, sealants and caulks shall comply with the Volatile Organic Compound (VOC) limits listed in 2023 CALGreen Section 4.504.2.
- The VOC Content Verification shall be made available to the City staff upon request.
- . All carpet and 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). [CALGreen 4.504.3] Where Esilient flooring installed, at least 80 percent of floor area receiving Esilient flooring all 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). [CALGreen 4.504.4] 0. New hardwood plywood, particle board, and medium density fiberboard (MDF) composite wood product used in the
- building shall meet the formaldehyde limits listed in 2023 CALGreen Table 4.504.5. . Building materials with visible signs of water damage shall not be installed. Walls and floors framing shall not be
- enclosed when framing members exceed 19% moisture content. [CALGreen 4.505.3]. 2. Newly installed bathroom exhaust fans shall be Energy Star compliant and be ducted to terminate outside of the
- building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidistat which can adjust between 50 to 80 percent. [CALGreen 4.506.1].
- 3. Heating and Air conditioners shall be sized, designed and have their equipment selected using the following
- 1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J 2016 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods. 2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2016 (Residential Duct Systems), ASHRAE
- handbooks or other equivalent design software or methods. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Equipment
- Selection) or other equivalent design software or method.

2023 RESIDENTIAL - CALIFORNIA ENERGY CODE

- Manufacture, Construction and Installation of Systems, Equipment and Building Components
- All HVAC systems shall meet the control requirements per Section 110.2 and 120.2 E.E.S. All HVAC equipment and appliances shall meet the requirements per section 110.1-110.3, 110.5, 120.1-120.4 Title 24 Energy Standards.
- Doors and windows shall meet the minimum infiltration requirements per Sections 110.6 and 110.7 E.E.S.
- . Insulation material shall meet the California quality standard per Section 110.8 Energy Efficiency Standards (E.E.S.).

Space-conditioning Equipment

- Installed air conditioner and heat pump outdoor condensing units shall have a clearance of at least five (5) feet (1.5 meters) from the outlet of any dryer vent.
- All heating or cooling systems, including heat pumps, not controlled by a central energy management control system (EMCS) shall have a setback thermostat, as specified in Section 110.2 (c).
- All water piping, solar water-heating systems piping, and space-conditioning system line insulation thickness and conductivity shall comply with CEC Section150.0(j).

Residential Lighting

permitted.

- All lighting shall be high efficacy and have readily accessible wall-mounted controls that allow the lighting to be manually turned On and Off
- Lighting in bathrooms, garages, laundry rooms, utility rooms and walk-in closets shall have all high efficacy luminaire and at least one luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality
- . For lighting internal to drawers and cabinetry with opaque fronts or doors, controls that turn the light off when the drawer or door is closed shall be provided
- All the installed wattage of luminaires in habitable space such as living rooms, dining rooms, kitchens and bedrooms shall be high efficacy and shall have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down unless exempted by CEC Section 150.0(k)2F
- Integrated lighting of exhaust fans shall be controlled independently from the fans. Under cabinet lighting,
- undershelf lighting, interior lighting of display cabinets or switched outlets lighting shall be switched separately. All luminaires mounted to the building or to other buildings on the same lot shall be high efficacy luminaires and must be controlled by a manual on and off switch, AND controlled by one of these automatic control types: Photocontrol and a motion sensor, or automatic time switch control, or Astronomical time clock or Energy
- management control system (EMCS). Internally illuminated address signed shall consume no more than 5 watts of power or comply with CEC Section 140.8
- . Provide an exterior light at new exterior exits. For dwelling units, attached garages, and detached garages with electric power, at least one wall switch-controlled lighting outlet shall be installed to provide illumination on the exterior side of outdoor entrances or exits with grade level access. A vehicle door in a garage shall not be considered as an outdoor entrance or exit. Exception: Remote, central, or automatic control of lighting shall be

- Air-Distribution and Ventilation System Ducts, Plenums and Fans
- 1. Ducts not located in entirely conditioned space shall have a minimum installed level of R-6.0 unless exempted by CEC Section 150.0(m)1Bi
- 2. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts
- B. All fan systems, regardless of volumetric capacity, that exchange air between the building conditioned space and the outside of the building shall be provided with backdraft or automatic dampers to prevent unintended air
- leakage through the fan system when the fan system is not operating.
- 4. Duct system sealing and leakage testing must comply with CEC Section 150.0(m)11.

Water Heating System:

- Systems using gas or propane water heaters to serve individual dwelling units shall designate a space at least 2.5 feet by 2.5 feet wide and 7 feet tall suitable for the future installation of a heat pump water heater (HPWH) by meeting either CALGreen Section 150.0(n)1 A or B below. All electrical components shall be installed in accordance with the California Electrical Code
- Instantaneous water heaters with an input rating greater than 6.8 kBTU/hr (2kW) shall meet the requirements ofSection 110.3(c)6.

Solar Readiness

- . Solar Readiness shall be provided meeting the requirements of CEC Section 110.10.
- 2. The residency shall have a minimum solar ready zone in compliance with CEC Section 110.10(b)1A.

Heat Pump Space Heater Ready:

Systems using gas or propane furnace to serve individual dwelling units shall include a dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the furnace and accessible to the furnace with no obstructions. The branch circuit conductors shall be rated at 30 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the Dalifornia Electrical Code. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future heat pump space heater installation. The reserved space shall be permanently marked as "For Future 240V use."

Electric Cooktop Ready:

Systems using gas or propane cooktop to serve individual dwelling units shall include a dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the cooktop and accessible to the cooktop with no obstructions. The branch circuit conductors shall be rated at 50 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the Dalifornia Electrical Code. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric cooktop installation. The reserved space shall be permanently marked as "For Future 240V use."

Electric Clothes Dryer Ready:

Clothes dryer locations with gas or propane plumbing to serve individual dwelling units shall include a dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the clothes dryer location and accessible to the clothes dryer location with no obstructions. The branch circuit conductors shall be rated at 30 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the California Electrical Code. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric clothes dryer installation. The reserved space shall be permanently marked as "For Future 240V use.

2022 RESIDENTIAL -MECHANICAL/PLUMBING

Mechanical Notes

- Attic/Underfloor installation must comply with Sections 904, 908, and 909 of the California Mechanical Code (CMC). When a water heater compartment is openable to and is accessible from a bedroom or bathroom, fuel burning water heaters shall be separated in a closet protected with a listed, gasketed self-closing door assembly installed with a threshold/bottom seal complying with Section 504.1.1 and 504.1.2 of the California Plumbing Code. Combustion air shall be supplied to the closet from the exterior in accordance with Section 506.4 of the CPC & the
- water heater shall be direct venting. The closet shall be used exclusively for the water heater. CPC 504.1 When a central heating furnace compartment is openable to and is accessible from a sleeping room such as a bedroom or a bathroom they shall be separated from bedroom in a closet protected with a listed, gasketed self-closing door assembly complying with Section 904.1.1 and 904.1.2 of the California Mechanical Code. ion air shall be supplied to the closet from the exterior in accordance with Section 506.4 of the CPC. The closet shall be used exclusively for the furnace. The furnace shall be of the direct vent type. CMC 904.1

2022 CALIFORNIA RESIDENTIAL CODI

- Shower compartments and bathtubs with installed shower heads shall be finished with a nonabsorbent surface that
- extends to a height of not less than 6 feet above the floor. [CRC R307.2]. 2. Smoke alarms and smoke detectors shall be installed a minimum of 20 feet horizontal distance from a permanently
- installed cooking appliance.
- Smoke alarms shall be installed not less than a 3-foot horizontal distance from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by other sections of the CRC.
- Smoke alarms and smoke detectors shall not be installed within a 36-inch horizontal path from the supply registers of a forced air heating or cooling system and shall be installed outside of the direct airflow of those registers.
- Smoke alarms shall be interconnected so that actuation of one alarm will activate all the alarms within the individual dwelling unit. In new construction smoke alarms shall receive their primary power source from the building wiring and shall be equipped with battery backup
- and low battery signal.
- 6. Smoke alarms shall comply with NFPA 72 and shall be listed in accordance with UL 217. 2. Combination smoke and carbon monoxide alarms shall be listed in accordance with UL 217 and UL 2034.
- 8. Smoke alarm systems and components shall be California State Fire Marshal listed and approved in accordance with California Code of Regulations, Title 19, Division 1 for the purpose for which they are installed. 0. Window opening control devices serving emergency escape and rescue openings shall comply with ASTM F2090.
- [CRC R310.1.1]. 0. Window fall control device shall comply with ASTM F2090. At the emergency escape windows,
- the device after operation should release the control device allowing the windows to fully open providing the clear net opening area required for emergency escape window in accordance with CRC R310.2.1.

2022 RESIDENTIAL - VERY HIGH FIRE HAZARD ZONE SEVERITY ZONE

- . Roof gutters shall be provided with the means to prevent the accumulation of leaves and debris in the gutter. All roof gutters and downspouts shall be constructed of non-combustible materials. [CRC R337.5.4].
- 2. Drip edge flashing used at the free edges of roofing materials shall be non-combustible. 8. Valley flashings shall be not less than 0.019-inch (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide underlayment consisting of one layer of No. 72 ASTM cap sheet running the full
- length of the valley. [CRC R337.5.3]. Chimneys, flues or stovepipes attached to any fireplace, stove, barbeque or other solid or liquid fuel burning equipment or device shall be equipped with an approves spark arrestor.
- Turbine attic vents shall be equipped to allow one-way direction rotation only and shall not free spin in both directions
- 6. Glazing frames made of vinyl materials shall have welded corners, metal reinforcement in the interlock area. and be certified to the most current edition of ANSI/AAMA/NWWDA 101/I.S.2 structural requirements.

1. 2. 3.	Plans for the deferred submittal items shall be submitted in a timely manner but not less than 30 business days prior to installation for City review and approval.
2. 3.	The deferred submitted items shall not be installed until their design and submitted desurgests have been assured
3.	by the Building Official. [SDMC §129.0205]
	The registered and responsible design professional shall review the deferred submittal documents and submit them to the Building Official, with annotation indicating that the deferred submittal documents have been reviewed and found to be in general conformance to the design of the building. [SDMC §129.0205].
De	ferred Submittal (NFPA 13D Fire Sprinkler)
1.	The submittal of residential fire sprinkler plans required by California Residential Code Section R313 has been deferred.
2.	To avoid delays in construction, plans for fire sprinkler plans shall be submitted not less than 30 calendar days prior to installation or prior to requesting a foundation inspection. A framing/rough inspection shall not be requested prior to approval of the fire sprinkler plans.
Spe	ecial Inspections (if applicable to project)
1.	NOTICE TO THE APPLICANT/OWNER/ OWNER'S AGENT/ARCHITECT or ENGINEER OF RECORD: By using this permitt construction drawings for construction/installation of the work specified herein, you agree to comply with the requirements of City El Cajon for special inspections, structural observations, construction material testing and off-site fabrication of building components, contained in the statement of special inspections and, as required by the California construction codes
2.	NOTICE TO THE CONTRACTOR/BUILDER/INSTALLER/SUB-CONTRACTOR/OWNER-BUILDER: By using this permitted construction drawings for construction/installation of the work specified herein, you acknowledge and are aware of, the requirements contained in the statement of special inspections. You agree to comply with the requirements of City of El Cajon for special inspections, structural observations, construction material testing and off-site fabrication of building components, contained in the statement of special inspections and, as required by the California construction codes.
3.	The special inspector must be registered by the City of El Cajon, Development Services, in the category of work required to have special inspection.
4.	The special inspections identified on plans are, in addition to, and not a substitute for, those inspections required to be performed by a City's building inspector.
5.	The construction materials testing laboratory must be approved by the City of El Cajon, Development Services, for testing of materials, systems, components and, equipment.
6.	Offsite fabricator must be approved by the City of El Cajon, Development Services for the fabrication of members and assemblies on the premises of the fabricator's shop.
7.	Offsite fabricator shall submit an 'Application to perform Off-Site Fabrication' to the Inspection Services Division for approval prior to commencement of fabrication.
8.	Offsite fabricator shall submit a 'Certificate of Compliance for Off-Site Fabrication' to the Inspection Services Division prior to erection of fabricated items and assemblies.
Soi	Is and Foundation
1.	When no geotechnical investigation report is provided:
	I ne structure(s) will be located entirely on undisturbed native soil.
2	When no geotechnical investigation report is provided:
۲.	As a California licensed Architect/Engineer, I have classified the undisturbed native soils to be and per Table 1806.2 of the 2019 CBC I have assigned a foundation pressure of psf. for the design of foundations related to this project.
	Signatureof Licensed Architect/Engineer
3.	If the Building Inspector suspects fill, expansive soils or any geologic instability based upon observation of the foundation excavation, a soils or geological report, and resubmittal of plans to plan check to verify that report recommendations have been incorporated, may be required.
Fire	e Notes
	During construction, at least one extinguisher shall be provided on each floor level at each stairway, in all storage

2. Buildings undergoing construction, alteration, or demolition shall conform to CFC Chapter 33. Welding, cutting, and other hot work shall be in conformance with CFC Chapter 35

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D: D S Building



GENERAL NOTES

A. General Applicable codes. See A0.1

B. Electrical, Plumbing, and Mechanical

- 1. Exterior lighting. All projects shall comply with the El Cajon lighting ordinance. 2. GFCI outlets. Ground Fault Circuit Interrupter (GFCI) outlets are required in bathrooms, a kitchen countertops, at laundry and wet bar sinks, in garages, in crawlspaces, in unfinished basements, and outdoors. (CEC 210.8)
- 3. AFCI outlets. Electrical circuits in bedrooms, living rooms, dining rooms, dens, closets, hallways, or similar rooms must be protected by Arc Fault Circuit Interrupters (AFCI). (CEC
- 210.12) 4. Luminaire requirements. Installed luminaires shall meet the efficacy and fixture requirements of CBEES 150.0(k).
- 5. Smoke detectors in building remodels. Smoke detectors are required in each existing sleeping room, outside each separate sleeping area in the immediate vicinity of sleeping rooms. and on each story of a dwelling including basements. Battery operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R314.3)
- 6. Carbon monoxide detectors in building remodels. Carbon monoxide detectors are required outside each separate sleeping area in the immediate vicinity of sleeping rooms and on each story of a dwelling including basements. Battery-operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R315.3)
- Water heater seismic strapping. Minimum two 3/4-inch-by-24-gauge straps required around water heaters, with 1/4-inch-by-3-inch lag bolts attached directly to framing. Straps shall be at points within upper third and lower third of water heater vertical dimension. Lower connection shall occur minimum 4 inches above controls. (CPC 507.2)
- 8. Gas appliances in garages. Water heaters and heating/cooling equipment capable of igniting flammable vapors shall be placed on minimum 18-inch-high platform unless listing report number provided showing ignition-resistant appliance. (CPC 507.13 and CMC 305.1)
- **Impact protection of appliances.** Water heaters and heating/cooling equipment subject to vehicular impact shall be protected by bollards or an equivalent measure. (CPC 507.13.1 and CMC 305.11)
- 10. Water closet clearance. Minimum 30-inch-wide by 24-inch-deep clearance required at front of water closets. (CPC 402.5)
- **11.** Shower size. Shower compartments shall have minimum area of 1024 square inches and be able to encompass a 30-inch-diameter circle. Shower doors shall have a minimum 22-inch unobstructed width. (CPC 408.5 and CPC 408.6)
- 12. Fireplace appliances. Fireplaces with gas appliances are required to have the flue damper permanently fixed in the open position and fireplaces with LPG appliances are to have no 'pit' or 'sump' configurations. (CMC 303.7.1)
- 13. Chimney clearance. Minimum 2-foot chimney clearance required above building within 10-foot horizontally of chimney. The chimney shall extend minimum 3 feet above highest point where chimney passes through roof. (CRC R1003.9)

C. Mechanical Ventilation and Indoor Air Quality (ASHRAE 62.2-2010)

- 1. **Transfer air.** Ventilation air shall be provided directly from the outdoors and not as transfer air from adjacent dwelling units or other spaces, such as garages, unconditioned crawlspaces, or unconditioned attics. (CBEES 150.0(o))
- **Instructions and labeling.** Ventilation system controls shall be labeled, and the homeowner shall be provided with instructions on how to operate the system. (CBEES 150.0(o)) 3. Combustion and solid-fuel burning appliances. Combustion appliances shall be properly
- vented and air systems shall be designed to prevent back drafting. (CBEES 150.0(o)) 4. Garages. The wall and openings between occupiable spaces and the garage shall be sealed. HVAC systems that include air handlers or return ducts located in garages shall have total air
- leakage of no more than 6% of total fan flow when measured at 0.1 in. w.c. using California Title 24 or equivalents. (CBEES 150.0(o)) Minimum filtration. Mechanical systems supplying air to occupiable space through ductwork 5.
- shall be provided with a filter having a minimum efficiency of MERV 6 or better. (CBEES 150.0(0)6. Air inlets. Air inlets (not exhaust) shall be located away from known contaminants. (CBEES
- 7. Air moving equipment. Air moving equipment used to meet either the wholebuilding ventilation requirement or the local ventilation exhaust requirement shall be rated in terms of airflow and sound. (CBEES 150.0(o))
- a. All continuously operating fans shall be rated at a maximum of 1.0 sone.
- **b.** Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- c. Intermittently operated local exhaust fans shall be rated at maximum of 3.0 sone. **d.** Remotely located air-moving equipment (mounted outside of habitable spaces) need not meet

requirements if at least 4 feet of ductwork between fan and intake grill

D. Foundation and Underfloor

(CRC 506.2.3)

- 1. Foundation reinforcement. Continuous footings and stem walls shall be provided with a minimum two longitudinal No. 4 bars, one at the top and one at the bottom of the footing. (CRC R403.1.3.3)
- **2. Shear wall foundation support.** Shear walls shall be supported by continuous foundations. (CRC 403.1.2)
- 3. Concrete slabs-on-grade. Slabs-on-grade shall be minimum 3-1/2-inches thick. (CRC R506.1) 4. Vapor retarder. A 10-mil polyethylene or approved vapor retarder with joints lapped minimum 6 inches shall be placed between a concrete slab -on-grade and the base course or subgrade.
- Anchor bolts and sills. Foundation plates or sills shall be bolted or anchored to the foundation or foundation wall per the following (CRC R403.1.6 and CRC R602.11.1):
- **a.** Minimum 1/2-inch-diameter steel bolts b. Bolts embedded at least 7 inches into concrete or masonry
- c. Bolts spaced maximum 6 feet on center
- d. Minimum two bolts per plate/sill piece with one bolt located maximum 12 inches and minimum 7 bolt diameters from each end of each sill plate/piece
- e. Minimum 3-inch by 3-inch by 0.299-inch steel plate washer between sill and nut on each bolt 6. Hold-downs. All hold-downs must be tied in place prior to foundation inspection.
- 7. Protection of wood against decay. Naturally durable or preservative-treated wood shall be
- provided in the following locations (CRC R317.1): a. All wood in contact with ground, embedded in concrete in direct contact with ground, or embedded in concrete exposed to weather
- **b.** Wood joists within 18 inches and wood girders within 12 inches of the exposed ground in crawl spaces shall be of naturally durable or preservative-treated wood
- c. Wood framing members that rest on concrete or mæonry exterior foundation walls and are less than 8 inches from exposed earth shall be of naturally durable or preservative treated wood
- d. Wood framing, sheathing, and siding on the exterior of the building and having clearance less than 6 inches from the exposed ground or less than 2 inches vertically from concrete steps, porch slabs, patio slabs, and similar horizontal surface exposed to weather
- e. Sills and sleepers on concrete or masonry slab in direct contact with ground unless separated from such slab by impervious moisture barrier
- f. Ends of wood girders entering masonry or concrete walls with clearances less than 1/2 inch on tops, sides, and ends
- g. Wood structural members supporting moisture-permeable floors or roofs exposed to weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier
- **h.** Wood furring strips or other wood framing members attached directly to interior of exterior concrete or masonry walls below grade except where vapor retarder applied between wall and furring strips or framing members
- 8. Underfloor ventilation. Underfloor areas shall have ventilation openings through foundation walls or exterior walls, with minimum net area of ventilation openings of 1 square foot for each 150 square feet of underfloor area. On such ventilating opening shall be within 3 feet of each corner of the building. (CRC R408.1)
- 9. Underfloor access. Underfloor areas shall be provided with a minimum 18-inch by 24-inch access opening. (CRC R408.4)

E. Wood Framing

- 1. Fastener requirements. The number, size, and spacing of fasteners connecting wood members/elements shall not be less than that set forth in CRC Table R602.3(1). (CRC R502.9, CRC R602.3. and CRC R802.2)
- 2. Stud size, height, and spacing. The size, height, and spacing of studs shall be in accordance with CRC Table R602.3(5). (CRC R602.3.1)

E. Wood Framing (Continued)

- 3. Sill plate. Studs shall have full bearing on nominal 2-inch thick or larger sill plate with width at least equal to stud width. (CRC R602.3.4)
- 4. Bearing studs. Where joists, trusses, or rafters are spaced more than 16 inches on center and the bearing studs below are spaced 24 inches on center, such members shall bear within 5 nches of the studs beneath. (CRC R602.3.3)
- Drilling and notching of studs. Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25% of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40% of a single stud width. Any stud may be bored or drilled, provided the diameter of the resulting hole is no more than 60% of the stud width, the edge of the hole is no more than 5/8 inch to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior wall or bearing partitions drilled over 40% and up to 60% shall also be doubled with no more than two successive studs bored. (CRC R602.6)
- **Top plate.** Wood stud walls shall be capped with a double top plate installed to provide overlapping at corners and at intersections with other partitions. End joints in double top plates shall be offset at least 24 inches. Joints in plates need not occur over studs. Plates shall be minimum nominal 2 inches thick and have width at least equal to width of studs. (CRC R602.3.2)
- side of splice. (CRC R602.10.8.1)
- Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling, or notching of the top plate by more than 50% of its width, a galvanized metal tie not less than 0.054-inch thick and 1-1/2inches wide shall be fastened across and to the plate at each side of the opening with not less than 8 10d nails having a minimum length of 1-1/2 inches at each side or equivalent. The metal tie must extend minimum 6 inches past the opening. (CRC R602.6.1)
- 9. Cripple walls. Foundation cripple walls shall be framed of studs not less in size than the studding above. Cripple walls more than 4 feet in height shall have studs sized as required for an additional story. Cripple walls with stud height less than 14 inches shall be sheathed on at least one side with a wood structural panel fastened to both the top and bottom plates in accordance with Table R602.3(1), or the cripple walls shall be constructed of solid blocking. Cripple walls shall be supported on continuous foundations. (CRC R602.9)
- 10. Wall bracing. Buildings shall be braced in accordance with the methods allowed per CRC R602.10.2, CRC R602.10.4, and/or CRC R602.10.5.
- 11. Braced wall line spacing. Spacing between braced wall lines shall not exceed 20 feet or alternate provisions of CRC R602.10.1.3.
- 12. Shear wall cumulative length. The cumulative length of shear walls within each braced wall line shall meet the provisions of CRC Table R602.10.3(1) for wind loads and CRC Table R602.10.3(2) for seismic loads. (CRC R602.10.1.1) 13. Shear wall spacing. Shear walls shall be located not more than 25 feet on center. (CRC R602.10.2.2)
- 14. Shear wall offset. Shear walls may be offset out-of-plan not more than 4 feet from the designated braced wall line and not more than 8 feet from any other offset wall considered part of the same braced wall line. (CRC R602.10.1.2)
- 15. Shear wall location. Shear walls shall be located at the ends of each braced wall line or meet the alternate provisions of CRC R602.10.2.2.
- 16. Individual shear wall length. Shear walls shall meet minimum length requirements of CRC R602.10.6.5.1
- 17. Cripple wall bracing. Cripple walls shall be braced per CRC R602.10.11. **18.** Shear wall and diaphragm nailing. All shear walls, roof diaphragms, and floor diaphragms shall be nailed to supporting construction per CRC Table R602.3(1). (CRC R604.3)
- 19. Shear wall joints. All vertical joints in shear wall sheathing shall occur over, and be fastened to, common studs. Horizontal joints in shear walls shall occur over, and be fastened to, minimum 1-1/2-inch-thick blocking. (CRC R602.10.10)
- **20.** Framing over openings. Headers, double joists, or trusses of adequate size to transfer loads to vertical members shall be provided over window and door openings in loadbearing walls and partitions. (CBC 2304.3.2)
- 21. Joists under bearing partitions. Joists under parallel bearing partitions shall be of adequate size to support the load. Double joists, sized to adequately support the load, that are separated to permit the installation of piping or vents shall be full depth solid-blocked with minimum 2-inch nominal lumber spaced at maximum 4 feet on center. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R502.4)
- 22. Joists above or below shear walls. Where joists are perpendicular to a shear wall above or below, a rim joist, band joist, or blocking shall be provided along the entire length of the shear wall. Where joists are parallel to a shear wall above or below, a rim joist, end joist, or other parallel framing shall be provided directly above and/or below the shear wall. Where a parallel framing member cannot be located directly above and/or below the shear wall, full-depth blocking at 16-inch spacing shall be provided between the parallel framing members to each side of the shear wall. (CRC R602.10.8)
- 23. Floor member bearing. The ends of each floor joist, beam, or girder shall have minimum 1-1/2 inches of bearing on wood or metal and minimum 3 inches of bearing on masonry or concrete except where supported on a 1-inch-by-4-inch ribbon strip and nailed to the adjoining stud or by the use of approved joist hangers. (CRC R502.6)
- 24. Floor joist lap. Floor joists framing opposite sides over a bearing support shall lap minimum 3 inches and shall be nailed together within minimum 3 10d face nails. A wood or metal splice with strength equal to or greater than that provided by the lap is permitted. (CRCR502.6.1)
- 25. Floor joist-to-girder support. Floor joists framing into the side of a wood girder shall be supported by approved framing anchors or on ledger strips minimum nominal 2 inches by 2 inches. (CRC R502.6.2)
- 26. Floor joist lateral restraint. Floor joists shall be supported laterally at ends and each intermediate support by minimum 2-inch full-depth blocking, by attachment to full-depth header band joist, or rim joist, to an adjoining stud, or shall be otherwise provided with lateral support to prevent rotation. (CRC R502.7)
- **27.** Floor joist bridging. Floor joists exceeding nominal 2 inches by 12 inches shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch strip nailed across the bottom of joists perpendicular to joists at maximum 8-foot intervals. (CRC
- 28. Framing of floor openings. Openings in floor framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the floor joist. Single trimmer joists may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section F. General Material Specifications to support the floor joists framing into the header. Approved hangers shall be used for the header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail joists over 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R502.10)
- **29. Girders**. Girders for single-story construction or girders supporting loads from a single floor shall not be less than 4 inches by 6 inches for spans 6 feet or less, provided that girders are spaced not more than 8 feet on center. Other girders shall be designed to support the loads specified in the CBC. Girder end joints shall occur over supports. When a girder is spliced over a support, an adequate tie shall be provided. The ends of beams or girders supported on masonry or concrete shall not have less than 3 inches of bearing. (CBC 2308.7)
- **30.** Ridges, hips, and valleys. Rafters shall be framed to a ridge board or to each other with a gusset plate as a tie. Ridge boards shall be minimum 1-inch nominal thickness and not less in depth than the cut end of the rafter. At all valley and hips, there shall be a valley or hip rafter not less than 2-inch nominal thickness and not less in depth than the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the specific load at that point. Where the roof pitch is less than 3:12 slope 5. Masonry. Masonry units shall comply with ASTM C 90 for load bearing concrete masonry units. (25% gradient), structural members that support rafters and ceilings joists, such as ridges, hips, and valleys, shall be designed as beams. (CRC R802.3)
- 31. Ceiling joist and rafter connections. Ceiling joists and rafters shall be nailed to each other per CRC Table R802.5.1(9), and the rafter shall be nailed to the wall top plate per CRC Table R602.3(1). Ceiling joists shall be continuous or securely joined per CRC Table R802.5.1(9) where they meet over interior partitions and are nailed to adjacent rafters to provide a continuous tie across the building when such joists are parallel to rafters. Where ceiling joists are not connected to the rafters at the wall top plate, joists connected higher in the attic shall be installed as rafter ties, or rafter ties shall be installed to provide a continuous tie. Where ceiling joists are not parallel to rafters, rafter ties shall be installed. Rafter ties shall be minimum 2 inches by 4 inches nominal, installed per CRC Table R802.5.1(9), or connections of equivalent capacities shall be provided. Where ceilings joists or rafter ties are not provided, the ridge formed by these rafters shall be supported by a wall or engineer-designed girder. (CRC R802.3.1)
- 32. Ceiling joists lapped. Ends of ceiling joists shall be lapped minimum 3 inches or butted overbearing partitions or beams and toenailed to the bearing element. Where ceiling joists provide resistance to rafter thrust, lapped joists shall be nailed together per CRC Table R602.3(1) and butted joists shall be tied together in a manner to resist such thrust. (CRC R802.3.2)
- **33.** Collar ties. Collar ties or ridge straps to resist wind uplift shall be connected in the upper third of the attic space. Collar ties shall be a minimum 1 inch by 4 inches nominal and spaced at maximum 4 feet on center. (CRC R802.3.1)
- 34. Purlins. Purlins installed to reduce the span of rafters shall be sized not less than the required size of the rafters they support. Purlins shall be continuous and shall be supported by 2-inchby-4-inch nominal braces installed to bearing walls at a minimum 45-degree slope from norizontal. The braces shall be spaced maximum 4 feet on center with a maximum 8-foot unbraced length. (CRC R802.5.1
- 35. Roof/ceiling member bearing. The ends of each rafter or ceiling joist shall have not less than 1-1/2 inches of bearing on wood or metal and not less than 3 inches of bearing on masonry or concrete. (CRC R802.6)
- **36.** Roof/ceiling member lateral support. Roof framing members and ceiling joists with anominal depth-to-thickness ratio exceeding 5:1 shall be provided with lateral support at points of bearing to prevent rotation. (CRC R802.8)
- 37. Roof/ceiling bridging. Rafters and ceiling joists with a nominal depth-to-thickness ratio exceeding 6:1 shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch wood strip nailed across the rafters or ceiling joists at maximum 8-foot intervals. (CRC R802.8.1)

E. Wood Framing (Continued)

Top plate splices. Top plate lap splices shall be face-nailed with minimum 8 16d nails on each

- **38.** Framing of roof/ceiling openings. Openings in roof and ceiling framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the ceiling joist or rafter. Single trimmer joist s may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section to support the ceiling joists or rafters framing into the header. Approved hangers shall be used for the header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail joists over 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R502.10)
- 39. Roof framing above shear walls. Rafters or roof trusses shall be connected to top plates of shear walls with blocking between the rafters or trusses. (CRC R602.10.8) 40. Roof diaphragm under fill framing. Roof plywood shall be continuous under California fill
- 41. Roof diaphragm at ridges. Minimum 2-inch nominal blocking required for roof diaphragm
- nailing at ridges 42. Blocking of roof trusses. Minimum 2-inch nominal blocking required between trusses at ridge
- lines and at points of bearing at exterior walls. 43. Truss clearance. Minimum 1/2-inch clearance required between top plates of interior nonbearing partitions and bottom chords of trusses.
- 44. Drilling, cutting, and notching of roof/floor framing. Notches in solid lumber joists, rafters, blocking, and beams shall not exceed onesixth the member depth, shall be not longer than one third the member depth, and shall not be located in the middle one-third of the span. Notches at member ends shall not exceed one-fourth the member depth. The tension side of members 4 inches or greater in nominal thickness shall not be notched except at member ends. The diameter of holes bored or cut into members shall not exceed one-third the member depth. Holes shall not be closer than 2 inches to the top or bottom of the member or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches to the notch. (CRC R502.8.1
- 45. Exterior landings, decks, balconies, and stairs. Such elements shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be selfsupporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal. (CRC R311.3) 46. Fireblocking. Fireblocking shall be provided in the following locations (CRC R302.11 and CRC
- R1003.19): a. In concealed spaces of stud walls and partitions, including furred spaces, and parallel rows of studs or staggered studs, as follows:
- I. Vertically at the ceiling and floor levels
- II. Horizontally at intervals not exceeding 10 feet
- **b.** At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings, and cove ceilings c. In concealed spaces between stair stringers at the top and bottom of the run
- d. At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion
- e. At chimneys and fireplaces per item E.49
- f. Cornices of a two-family dwelling at the line of dwelling-unit separation
- **47.** Fireblocking materials. Except as otherwise specified in items E.48 and E.49, fireblocking shall consist of the following materials with the integrity maintained (CRC R302.11.1): a. Two-inch nominal lumber
- b. Two thicknesses of one-inch nominal lumber with broken lap joints
- c. One thickness of 23/32-inch wood structural panel with joints backed by 23/32-inch wood structural panel
- d. One thickness of 3/4-inch particleboard with joints backed by 3/4-inch particleboard
- e. 1/2-inch gypsum board
- **f.** 1/4-inch cement-based millboard
- g. Batts or blankets of mineral or glass fiber of other approved materials installed in such a manner as to be securely retained in place. Batts or blankets of mineral or glass fiber or other approved non-rigid materials shall be permitted for compliance with the 10 -foot horizontal fireblocking in walls constructed using parallel rows of studs or staggered studs. Unfaced fiberglass batt insulation used as fireblocking shall fill the entire cross-section of the wall cavity to a minimum height of 16 inches measured vertically. When piping, conduit, or similar obstructions are encountered, the insulation shall be packed tightly around the obstruction. Loose-fill insulation material shall not be used as a fireblock unless specifically tested in the form and manner intended for use to demonstrate its ability to remain in place and to retard the spread of fire and hot gases.
- 48. Fireblocking at openings around vents, pipes, ducts, cables, and wires at ceiling and floor level. Such openings shall be fireblocked with an approved material to resist the free passage of flame and products of combustion. (CRC R302.11
- 49. Fireblocking of chimneys and fireplaces. All spaces between chimneys and floors and ceilings through which chimneys pass shall be fireblocked with noncombustible material securely fastened in place. The fireblocking of spaces between chimneys and wood joists, beams, or headers shall be self-supporting or be placed on strips of metal or metal lath laid across the spaces between combustible material and the chimney. (CRC R1003.19)
- **50. Draftstopping**. In combustible construction where there is usable space both above and below the concealed space of a floor/ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1000 square feet. Draftstopping shall divide the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draftstopping shall be provided in floor/ceiling assemblies under the following circumstances (CRC R302.12):
- **a.** Ceiling is suspended under the floor framing
- **b.** Floor framing is constructed of truss-type open-web or perforated members 51. Draftstopping materials. Draftstopping shall not be less than 1/2-inch gypsum board, 3/8-inch
- wood structural panels, or other approved materials adequately supported. Draftstopping shall be installed parallel to the floor framing members unless otherwise approved by the building official. The integrity of draftstops shall be maintained. (CRC R302.12.1)
- 52. Combustible insulation clearance. Combustible insulation shall be separated minimum 3 inches from recessed luminaires, fan motors, and other heat producing devices. (CRC R302.14)

- Lumber. All joists, rafters, beams, and posts 2-inches to 4-inches thick shall be No. 2 grade Douglas Fir-Larch or better. All posts and beams 5 inches and thicker shall be No. 1 grade Douglas Fir-Larch or better. Studs not more than 8 feet long shall be stud -grade Douglas Fir-Larch or better when supporting not more than one floor, roof, and ceiling. Studs longer than 8 feet shall be No. 2 grade Douglas Fir-Larch or better.
- **Concrete**. Concrete shall have a minimum compressive strength of 2,500 psi at 28 days and shall consist of 1 part cement, 3 parts sand, 4 parts 1-inch maximum size rock, and not more than 7-1/2 gallons of water per sack of cement. (CRC R402.2)
- Mortar. Mortar used in construction of masonry walls, foundation walls, and retaining walls shall conform to ASTM C 270 and shall consist of 1 part portland cement, 2-1/4 to 3 parts sand, and 1/4 to 1/2 part hydrated lime. (CBC 2103.2)
- Grout. Grout shall conform to ASTM C 476 and shall consist of 1 part portland cement, 1/10 part hydrated lime, 2-1/4 to 3 parts sand, and 1 to 2 parts gravel. Grout shall attain a minimum compressive strength of 2,000 psi at 28 days. (CBC 2103.3)
- (CBC 2103.1) Reinforcing steel. Reinforcing steel used in construction of reinforced masonry or concrete
- structures shall be deformed and comply with ASTM A 615. (CBC 2103.4)
- Structural steel. Steel used as structural shapes such as wide-flange sections, channels, plates, and angles shall comply with ASTM A36. Pipe columns shall comply with ASTM A53. Structural tubes shall comply with ASTM A500, Grade B.
- Fasteners for preservative-treated wood. Fasteners for preservative-treated and fireretardant-treated wood - including nuts and washers -- shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.3.1) **Exception:** 1/2-inch diameter or greater steel bolts
- Exception: Fasteners other than nails and timber rivets may be of mechanically deposited zinc coated steel with coating weights in accordance with ASTM B 695, Class 55 minimum Exception: Plain carbon steel fasteners acceptable in SBX/DOT and zinc borate preservativetreated wood in an interior, dry environment
- Fasteners for fire-retardant-treated wood. Fasteners for fire-retardant-treated wood used in exterior applications or wet or damp locations shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.3.3)

G. Roofing and Weatherproofing

- Roof covering. All roof covering shall be installed per applicable requirements of CBC 1507. Roof coverings shall be at least Class A rated in accordance with ASTM E 108 or UL 790. (County Building Code 92.1.1505.1)
- 2. Roof flashing. Flashing shall be installed at wall and roof intersections, at gutters, wherever there is a change in roof slope or direction, and around roof openings. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019 inch (No. 26 galvanized sheet). (CRC R903.2.1)
- 3. Crickets and saddles. A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches wide as measured perpendicular to the slope. Cricket or saddle covering shall be sheet metal or the same material as the roof covering. (CRC R903.2.2)

G. Roofing and Weatherproofing (Continued)

- 4. Water-resistive barrier. A minimum of one layer of No. 15 asphalt felt shall be attached to studs or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer minimum 2 inches. Where joints occur, felt shall be lapped minimum 6 inches. The felt shall be continuous to the top of walls and terminated at penetrations and building appendages in a mannerto maintain a weather-resistant exterior wall envelope. (CRC R703.2)
- Wall flashing. Approved corrosion-resistant flashing shall be applied shingle fashion at the following locations to prevent entry of water into the wall cavity or penetration of water to the building structural framing components (CRC R703.8):
- **a.** Exterior door and window openings, extending to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage b. At the intersection of chimneys or other masonry cons truction with frame or stucco walls, with
- projecting lips on both sides under stucco copings **c.** Under and at the ends of masonry, wood, or metal copings and sills
- **d.** Continuously above all projecting wood trim
- e. Where exterior porches, decks, or stairs attach to a wall or floor assembly of wood-frame construction
- f. At wall and roof intersections
- g. At built-in gutters Damp proofing. Damp proofing materials for foundation walls enclosing usable space below grade shall be installed on the exterior surface of the wall and shall extend from the top of the
- footing to finished grade. (CRC R406.1) Weep screed. A minimum 0.019-inch (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed with a minimum vertical attachment flange of 3 -1/2 inches shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C 92. The weep screed shall be placed a minimum 4 inches above the earth or 2 inches above paved areas and shall be of a type allowing trapped water to drain to the exterior of the building. (CRC R703.7.2.1)

H. Grading and soils

- Grading permit. Grading permit required if volume of earth moved exceeds 200 cubic yards or if any cuts or fills exceed 8 feet in height/depth. (County Grading Ordinance 202)
- Compaction report. Compaction report required for fill material 12 inches or more in depth. (CBC 1803.5.8)

I. Green Building Standards Code (CALGreen) Requirements

- Applicability. CalGreen residential mandatory measures shall apply to every newly constructed building or structure and within any addition or alteration increasing a building's conditioned area, volume, or size. (CalGreen 101.3, CalGreen 301.1.1) Exception: All residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures per CalGreen 301.1.1 and CalGreen 4.303.1
- 2. Water conserving plumbing fixtures and fittings. Plumbing fixtures and fittings shall comply with the following per CalGreen 4.303.1: a. Water closets: Maximum 1.28 gallons per flush
- **b.** Urinals: Maximum 0.5 gallons per flush

(CalGreen 4.304.1)

- c. Single showerheads: Maximum flow rate of 1.8 gallons per minute at 80 psi d. Multiple showerheads serving one shower: Maximum combined flow rate of 1.8 gallons per
- minute at 80 psi e. Lavatory faucets: Maximum flow rate of 1.2 gallons per minute at 60 psi, minimum flow rate of 0.8 gallons per minute at 20 psi
- f. Kitchen faucets: Maximum flow rate of 1.5 gallons per minute at 60 psi (County Green Building Code 97.1.4.303.1.4.4)
- Exception: Temporary increase allowed to maximum 2.2 gallons per minute at 60 psi if f aucet defaults back to maximum 1.5 gallons per minute at 60 psi g. Appliances: At least one qualified ENERGY STAR dishwasher or clothes washer shall be
- nstalled in each dwelling unit. (County Green Building Code 97.1.4.303.3) Outdoor potable water uses in landscape areas. Residential developments shall comply with local water efficient landscape ordinance or the current California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

compliance with the California Energy Code. (CALGreen 4.406.1)

demolition waste management ordinance. (CalGreen 4.408.1)

Construction & Demolition (C&D) Facilities Guide is online at:

reasonably close to the jobsite The City of El Cajon Building Division,

construction for examination by the enforcing agency. (CalGreen 4.408.2)

recycling, reuse on the project or salvage for future use or sale.

or bulk mixed (single stream).

4.408.1. (CalGreen 4.408.3)

calculated by weight or volume, but not by both.

waste materials will be diverted by a waste company

requirement in Section 4.408.1. (CalGreen 4.408.4)

reduction requirement in Section 4.408.1.

b. Operation and maintenance instructions for the following:

II. Roof and yard drainage, including gutters and downspouts.

resource consumption, including recycle programs and locations.

d. Public transportation and/or carpool options available in the area.

in the building (CALGreen 4.410.1):

IV. Landscape irrigation systems.

least 5 feet away from the foundation

cycle of the structure.

V. Water reuse systems

range

conserve water.

waste generated.

Exception: Excavated soil and land-clearing debris.

4. Joints and openings. Openings in the building envelope separating conditioned space from

cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

unconditioned space needed to accommodate utility and other penetrations must be sealed in

Exception: Annular spaces around pipes, electric cables, conduits or other openings in plates

Construction waste reduction, disposal, and recycling. Recycle and/or salvage for reuse a

minimum of 65 percent of the nonhazardous construction and demolition waste in accordance

with either Section 4.408.2, 4.408.3, or 4.408.4, or meet a more stingent local construction and

Exception: Alternate waste reduction methods developed by working with local agencies if

https://www.sandiegocounty.gov/content/dam/sdc/dpw/SOLID_WASTE_PLANNING_

and_RECYCLING/UpdatedCDResources/CDFacility_QuickGuide.pdf

Exception: The enforcing agency may make exceptions to the requirements of this section when

Construction waste management plan. A construction waste management plan in

conformance with Items 1-5 shall be completed and available on the job site. The construction

waste management plan shall be updated as necessary and shall be available during

a. Identify the construction and demolition waste materials to be diverted from disposal by

b. Specify if construction and demolition waste materials will be sorted on-site (source-separated)

c. Identify diversion facilities where the construction and demolition waste materials will be taken.

d. Identify construction methods employed to reduce the amount of construction and demolition

e. Specify that the amount of construction and demolition waste materials diverted shall be

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

Note: The owner or contractor may make the determination if the construction and demolition

8. Waste stream reduction alternative [LR]. Projects that generate a total combined weight of

isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

diversion or recycle facilities capable of compliance with this item do not exist or are not located

at exterior walls shall be protected against the passage of rodents by closing such opening with

I. (CALGreen) Requirements (Continued)

h. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.

- Information about state solar energy and incentive programs available.
- A copy of all special inspection verifications required by the enforcing agency or code.
- k. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.
- I. Information and/or drawings identifying the location of grab bar reinforcements.
- 11. Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation or during storage on the construction site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, Sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system. (CALGreen 4.504.1
- 12. Adhesives, sealants, caulks, paints, and coatings pollutant control. Adhesives (including carpet adhesives), sealants, caulks, paints, and coatings shall comply with VOC limits per CALGreen 4.504.2. Verification of compliance shall be provided at the request of the enforcing agency. (CALGreen 4.504.2.1)
- **13.** Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the following (CALGreen 4.504.3):
- a. Carpet and Rug Institute's Green Label Plus Program (all carpet cushions must meet the requirements of this program) **b.** California Department of Public Health Standard Practice for the testing of VOCs (Specification
- 01350). c. NSF/ANSI 140 at the Gold level.
- d. Scientific Certifications Systems Indoor Advantage[™] Gold.
- 14. Resilient flooring systems. At least 80 percent of the floor area receiving resilient flooring shall comply with one of or more of the following (CALGreen 4.504.4):
- a. VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) High Performance Products Database b. Products compliant with CHPS criteria certified under the Greenguard Children & Schools
- program c. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program
- d. Meet the currently adopted version of California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," (also known as Specification 01350)
- **15.** Composite wood products. Hardwood plywood, particleboard and medium density fibeboard composite wood products used on the interior or exterior of the building 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 CalGreen Table 4.504.5. The following limits are in parts per million (CALGreen 4.504.5): a. Hardwood plywood veneer core 0.05
- **b.** Hardwood plywood composite core 0.05
- 0.09 c. Particle board
- 0.11 0.13
- 16. 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
- **a.** Moisture content shall be determined with either a probe-type or contact-type moisture meter. **b.** Moisture readings shall be taken at a point 2 feet to 4 feet from the grade stamped end of each
- **c.** 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 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. 17. Bathrooms with a bathtub and/or shower shall be mechanically ventilated per the following
- (CalGreen 4.506.1): **a.** Fans shall be ENERGY STAR compliant and ducted to terminate outside building
- **b.** Unless functioning as a component of a whole-house ventilation system, fans shall have humidity controls capable of adjustment - manually or automatically -- between a relative humidity range of 50% to 80%.
- Heating and air-conditioning system design. Heating and air-conditioning systems shall be sized, designed, and have their equipment selected using the following methods (CALGreen 4.507.2):
- a. The heat loss and heat gain are established according to the currently adopted version of ANSI/ACCA 2 Manual J, ASHRAE handbooks, or other equivalent design software or methods. b. Duct systems are sized according to the currently adopted version of ANSI/ACCA 1 Manual D,
- ASHRAE handbooks, or other equivalent design software or methods. c. Select heating and cooling equipment according to the currently adopted version of ACCA 36-S Manual S or other equivalent design software or methods.

PDS081

THERE ARE MINIMUM REQUIREMENTS AND SHALL NOT SUPERSEDE MORE RESTRICTIVE SPECIFICATIONS ON THE PLANS OR AS REQUIRED BY APPLICABLE CODE

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CRC MIN. CONSTRUCTION SPECIFICATIONS

construction and demolition waste disposed of in landfills, which do not exceed 3.4 pounds per square foot of the building area shall meet the 65 percent construction waste reduction **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 65 percent construction waste **Documentation.** Documentation shall be provided to the enforcing agency which demonstrates

compliance with Section 4.408.2, Items 1-5, Section 4.408.3, or Section 4.408.4. 10. Operation and maintenance manual. Prior to final inspection, a manual, compact disc, web based reference, or other acceptable media which includes all of the following shall be placed

a. Directions to owner or occupant that manual shall remain with the building throughout the life

I. Equipment and appliances, including water-saving devices and systems, HVAC system, photovoltaic systems, water-heating systems and other major appliances and equipment.

III. Space conditioning systems, including condensers and air filters.

c. Information from local utility, water, and waste recovery providers on methods to further reduce

e. 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

f. Information about water-conserving landscape and irrigation design and controllers which

g. Instructions for maintaining gutters and downspouts and the importance of diverting water at

d. Medium-density fiberboard (MDF) e. Thin MDF (5/16 inch or less) following (CALGreen 4.505.3)

piece to be verified.

General Storm Water Notes:

A. ALL OPERATION WILL COMPLY WITH THE CITY'S JURIDICTIONAL RUNOFF MANAGEMENT PLAN (JRMP).

B. THE OWNER AND THE OWNER'S CONTRACTOR ARE RESPONSIBLE FOR POLLUTION PREVENTION PRACTICES TO PREVENT THE DISCHARGE OF SEDIMENT AND POLLUTANTS TO THE PUBLIC STORM DRAIN SYSTEM. C. OWNER AND THE OWNER'S CONTRACTOR ARE RESPONSIBLE FOR THE PREVENTION OF EROSION CAUSED BY CLEARING OF VEGETATION, GRADING, DEMOLITION OR CONSTRUCTION.

D. SEDIMENT, POLLUTION AND EROSION CONTROL MEASURES WILL BE IMPLEMENTED STARTING THE FIRST DAY OF CLEARING, GRADING OR SOIL DISTURBANCE, OR CONSTRUCTION. THESE CONTROLS WILL REMAIN IN EFFECT UNTIL ALL RELEVANT OPERATIONS HAVE BEEN COMPLETED AND DISTURBED SOILS HAVE EITHER:

1) ESTABLISHED VEGETATION, OR 2) OTHER PERMANENT EROSION CONTROL AT 70% COMPLETION

Erosion and Sediment Control Notes:

1. IN CASE OF EMERGENCY, CONTACT: NAME: PHONE:

2. THE CONTRACTOR WILL MAINTAIN ALL SEDIMENT AND EROSION CONTROL DEVICES IN GOOD WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER THROUGHOUT EVERY PHASE OF THE PROJECT. 3. THE CONTRACTOR WILL INSTALL ALL EROSION CONTROL MEASURES ADDITIONAL TO THOSE SPECIFIED BY THE

APPROVED EROSION CONTROL PLAN IF REQUIRED TO DO SO BY THE CITY ENGINEER.

4. THE CONTRACTOR AND PROPERTY OWNER WILL PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION..

5. GRADED AREAS AROUND THE PROJECT PERIMETER WILL DRAIN AWAY FROM THE FACE OF SLOPES AT THE END OF EACH WORKING DAY.

6. ALL GRAVEL BAGS SHALL HAVE 3/4 INCH MINIMUM AGGREGATE (NO SANDBAGS AND NO BURLAP TYPE BAGS ALLOWED) 7. THE EROSION CONTROL BMP'S MUST BE INSTALLED PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION ACTIVITIES. PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL NOTIFY THE CITY STORM WATER INSPECTOR AT (619) 441-1653.

PROJECT ADDRESS:
PROJECT APN:
PERMIT NUMBER:
APPLICANT NAME:
APPLICANT ADDRESS:

EROSION CONTROL / BMP PLAN (PERMITTEE TO COMPLETE) SCALE:_____

EARTHWOR	OMPLETE)	EXISTING PERVIOUS SURFACE AREA TABLE (PERMITTEE TO COMPLETE)									
(NOTES	AREA (SF)	DIMENSIONS	PERVIOUS ITEM	SITE ID						
TOTAL DISTURE											
EXISTING IMPE											
PROPOSED AM											
IMPERVIOUS AF											
TOTAL IMPERVI											
	COMPLETE)	ERMITTEE TO	ACE AREA TABLE (F	SED PERVIOUS SURF	PROPOS						
CUT QUANTITIE	NOTES	AREA (SF)	DIMENSIONS	PERVIOUS ITEM	SITE ID						
FILL QUANTITIE											
IMPORT/EXPOR											
MAX CUT DEPT											
MAX FILL DEPT											





(INDICATE NORTH)

K QUANTITIES AND LAND DISTURBANCE (PERMITTEE TO COMPLETE)							
SF							
SF							
SF							
SF							
CYD							
CYD							
CYD							
FT							
FT							

LEGEND

(Pl	ER CALTRANS' STANDARDS)
\rightarrow	DIRECTION OF FLOW
	FIBER ROLLS (SC-5)
∞	GRAVEL BAGS (SC-6)
_x_x_	SILT FENCE (SC-1)
WM-1	MATERIAL STORAGE
WM-5	SOLID WASTE MANAGEMENT
WM-8	CONCRETE WASTE MANAGEM
WM-9	SANITARY WASTE MANAGEME

WINDOW NOTES: 1. VERIFY OPERATION AND OPENING DIRECTION WITH PLAN AND ELEVATION DRAWINGS. CONFIRM FINAL OPERABILITY WITH OWNER

2. WINDOW SIZES ARE ROUGH OPENING DIMENSIONS, GC TO VERIFY FINAL R.O. SIZES PER WINDOW SCHEDULE AND SELECTED WINDOW MANUFACTURER. 3. UNLESS OTHERWISE NOTED, ALIGN TOP OF WINDOWS AND DOORS SUCH THAT HEAD TRIM LINES UP, SEE ELEVATION DRAWINGS FOR REFERENCE. 4. CRC R337.8.2.1 EXTERIOR WINDOWS, SKYLIGHTS AND EXTERIOR GLAZED DOOR ASSEMBLY REQUIREMENTS

EXTERIOR WINDOWS, SKYLIGHTS AND EXTERIOR GLAZED DOOR ASSEMBLIES SHALL COMPLY WITH ONE OF THE FOLLOWING REQUIREMENTS: BE CONSTRUCTED OF MULTIPANE GLAZING WITH A MINIMUM OF ONE TEMPERED PANE MEETING THE REQUIREMENTS OF SECTION 2406 SAFETY GLAZING, (1) OR

(2) BE CONSTRUCTED OF GLASS BLOCK UNITS, OR

HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED ACCORDING TO NFPA 257, OR (3)

BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-2. (4) 5. GLAZING FRAMES MADE OF VINYL MATERIALS SHALL HAVE WELDED CORNERS, METAL REINFORCEMENT IN THE INTERLOCK AREA, AND BE CERTIFIED TO THE MOST CURRECT EDITION OF ANSI/AAMA/NWWDA 101/I.S.2 STRUCTURAL REQUIREMENTS.

6. TRANSPARENT WINDOWS SHALL NOT USE TINTED, MIRRORED, OR HIGHLY REFLECTIVE GLASS. THE USE OF NON-REFLECTIVE GLASS IS REQUIRED PER CITY OF EL CAJON MUNICIPAL DESIGN STANDARDS 17.140.170(E)(2)

7. EGRESS COMPLIANT WINDOWS TO MEET ALL REQUIREMENTS OF CRC R310 AND CFC 1031.3.1 8. CFC 1031.3.1 - MINIMUM SIZE:

a. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET (0.53 m²).



DOOR NOTES:

1. VERIFY DOOR TYPE, OPERATION, AND OPENING DIRECTION WITH PLAN AND ELEVATION DRAWINGS. CONFIRM FINAL OPERABILITY WITH OWNE 2. UNLESS OTHERWISE NOTED, ALIGN TOP OF WINDOWS AND DOORS SUCH THAT HEAD TRIM LINES UP, SEE ELEVATION DRAWINGS FOR REFERE 3. INTERIOR DOOR SIZES ARE NORMINAL PANEL DIMENSIONS. FINAL PANEL SYLE PER OWNER.

- CRC 337.8.3 EXTERIOR DOORS EXTERIOR DOORS SHALL COMPLY WITH ONE OF THE FOLLOWING:
 - THE EXTERIOR SURFACE OR CLADDING SHALL BE OF NON-COMBUSTIBLE MATERIAL (1)
 - THE EXTERIOR SURFACE OR CLADDING SHALL BE OF IGNITION RESISTANT MATERIAL (2) (3)

THE EXTERIOR DOOR SHALL BE CONSTRUCTED OF SOLID CORE WOOD THAT COMPLIES WITH ONE OF THE FOLLOWING REQUIREME STILES AND RAILS SHALL NOT BE LESS THAN 1 ³/₈ INCHES THICK. 2 PANELS SHALL NOT BE LESS THAN 1¹/₄ INCHES THICK, EXCEPT FOR THE EXTERIOR PERIMETER OF THE PANEL THAT SHALL BI

PERMITTED TO TAPER TO A TONGUE NOT LESS THAN 3/8 INCH THICK. (4) THE EXTERIOR DOOR ASSEMBLY SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED IN ACCOF

TO NFPA 252. (5) THE EXTERIOR SURFACE OR CLADDING SHALL BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SECTION 707A.3.1 WH TESTED IN ACCORDANCE TO ASTM E2707.

(6) THE EXTERIOR SURFACE OR CLADDING SHALL BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A 4. AT EXTERIOR MAN DOORS, PROVIDE A MINIMUM 36" DEEP FLOOR OR LANDING ON EACH SIDE OF EACH EXTERIOR DOOR, WITH A SLOPE NOT EXCEEDING ¼ UNIT VERTICAL IN 12 UNITS HORIZONTAL (2%). THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SERVED. 5. TRANSPARENT DOORS SHALL NOT USE TINTED, MIRRORED, OR HIGHLY REFLECTIVE GLASS. THE USE OF NON-REFLECTIVE GLASS IS REQUIR CITY OF EL CAJON MUNICIPAL DESIGN STANDARDS 17.140.170(E)(2)

ATTIC VENTILATION REQUIRED

NET FREE CROSS VENTILATION AREA = 1/300 VENT AREA REQ'D = 550 ft² / 150 = 3.73 ft² x 144 = 538 in²

GABLE END VENT: (CONFIRM WITH SITE FIRE CLASSIFICATION) EAVE VENT: ROOF VENT:

R806.1.1 VENTS IN THE WILDLAND URBAN INTERFACE (WUI) WHERE PROVIDED, VENTILATION OPENINGS FOR ENCLOSED ATTICS, GABLE ENDS, RIDGE ENDS, UNDER EAVES AND CORNICES, ENCLOSED EAVE SOFFIT SPACES, ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, UNDERFLOOR VENTILATION, FOUNDATIONS AND CRAWL SPACES, OR ANY OTHER OPENING INTENDED TO PERMIT VENTILATION, EITHER IN A HORIZONTAL OR VERTICAL PLANE, SHALL BE IN ACCORDANCE WITH SECTIONS R337.6.1 THROUGH R337.6.2 TO RESIST BUILDING IGNITION FROM THE INTRUSION OF BURNING EMBERS AND FLAME THROUGH THE VENTILATION OPENINGS.

SOLAR READY NOTES

1. MIN. 250 S.F. SOLAR ZONE AREA

2. DEDICATED SOLAR ZONE AREA LOCATED BETWEEN 110 AND 270 DEGRESS OF TRUE NORTH - USE AREA A OR B AS NEEDED

3. NO OBSTRUCTIONS - INCLUDING VENTS, CHIMNEYS, SKYLIGHTS, ARCHITECTURAL FEATURES, ROOF-MOUNTED EQUIPMENT - LOCATED WITHIN SOLAR ZONE

4. 3' MIN. FIRE FIGHTER ACCESS

5. 1'-6" SMOKE VENTILATION SETBACK AT RIDGES



P	WINDOW SCHEDULE						DOOR SCHEDULE - Exterior								
NCE	ID	QTY	Width	Height	Туре	Notes	Egress	Tempered	ID	QTY	′ Width	Height	Туре	Notes	Tempered
	01	1	2'-6"	5'-0"	CASEMENT		Y	Y	А	1	3'-0"	7'-0"	SWING		Y
	02	1	2'-6"	5'-0"	CASEMENT		Y	Y	В	1	3'-0"	7'-0"	SWING		Y
ENTS:	03	1	2'-6"	5'-0"	CASEMENT		Y	Y						LOUVERED DOOR W/ MIN. OPENING NOT LESS	
Ξ	04	1	3'-0"	1'-6"	AWNING			Y	С	1	2'-4"	7'-0"	SWING	THAN 100 SQ.IN. PER CMC 504.4 MAKE UP AIR REQ'S - CONFIRM WIDTH WITH SELECTED	
RDANCE	05	1	1'-8"	3'-0"	CASEMENT									WATER HEATER	
EN	06	1	1'-6"	3'-0"	CASEMENT				[
-1.	07	1	2'-6"	5'-0"	CASEMENT		Y	Y	DOC	DR SC	HEDUL	E - Interio	or		
	08	1	2'-6"	5'-0"	CASEMENT		Y	Y	ID	QTY	' Width	Height	Ту	pe Notes	
ED PER	09	1	2'-6"	5'-0"	CASEMENT		Y	Y	iA	1	2'-2"	7'-0"	SWING		
	10	1	2'-0"	4'-0"	CASEMENT			Y	iB	1	2'-6"	7'-0"	SWING		
	11	1	3'-10"	4'-0"	FIXED			Y	iC	1	2'-2"	7'-0"	SWING		
	12	1	2'-0"	4'-0"	CASEMENT								1		



REQ'D FLOOR / LANDING AT

EXTERIOR DOOR, TYP.

slope < 2%

Int. Ext.

slope < 2%



Unit

gr

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FLOOR PLAN / ROOF PLAN

TABLE R602.3(3) REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES^{a, b, c}

Mark	MINIMU	IM NAIL		MINIMUM NOMINAL		PANEL NAI	ULTIMATE DESIGN WIND SPEED V _{ult} (mph)			
	Size	Penetration (inches)	SPAN RATING	(inches)	SPACING (inches)	Edges Field (inches o.c.) (inches o.c.)		Wind exposure) category		
								В	С	D
	8d Common			7	16	6	12	170	140	135
X'-X" (1)	(2.5″ × 0.131″)	1.75	24/16	//16	24	6	12	140	115	110

1. WOOD STRUCTURAL PANELS SHALL CONFORM TO DOC PS 1, DOC PS 2 OR ANSI/APA PRP 210, CSA 0437 OR CSA 0325. PANELS SHALL BE IDENTIFIED BY A GRADE MARK OR CERTIFICATE OF INSPECTION ISSUED BY AN APPROVED AGENCY. 2. VERTICAL JOINTS OF PANEL SHEATHING SHALL OCCUR OVER AND BE FASTENED TO COMMON STUDS. HORIZONTAL JOINTS IN BRACED WALL PANELS SHALL OCCUR OVER AND BE FASTENED TO COMMON BLOCKING OF A MINIMUM 1 1/2 INCH THICKNESS. 3.BRACED WALL PANELS SHALL BE FASTENED TO REQUIRED FOUNDATIONS IN ACCORDANCE WITH SECTION R602.11.1, AND TOP PLATE LAP SPLICES SHALL BE FACE-NAILED WITH NOT LESS THAN EIGHT (8) 16d NAILS ON EACH SIDE OF THE SPLICE.



RAFTER SPAN CHART

For additional species and span criteria see CBC Table 2308.7.2(2), CRC Table R802.5.1(2)

RAFTER SPANS FOR COMMON LUMBER SPECIES (Roof Live Load = 20 pounds per square foot, Ceiling Attached to Rafters, L/Δ = 240)

		DEAI	DEAD LOAD = 10 pounds per square foot					DEAD LOAD = 20 pounds per square foot				
RAFTER		2 × 4	2 × 6	2 × 8	2 × 10	2 × 12	2 × 4	2 × 6	2 × 8	2 × 10	2 × 12	
SPACING	1				Μ	laximum ra	fter spans					
(inches)	SPECIES AND GRADE	(ft in.)	(ft in.)	(ft in.)	(ft in.)	(ft in.)	(ft in.)	(ft in.)	(ft in.)	(ft in.)	(ft in.)	
16	Douglas Fir-Larch SS	9-6	14-11	19-7	25-0	Note b	9-6	14-11	19-7	24-9	Note b	
	Douglas Fir-Larch #1	9-1	14-4	18-11	23-9	Note b	9-1	13-3	16-10	20-7	23-10	
	Douglas Fir-Larch #2	8-11	14-1	18-2	22-3	25-9	8-6	12-5	15-9	19-3	22-4	
	Douglas Fir-Larch #3	7-5	10-10	13-9	16-9	19-6	6-5	9-5	11-11	14-6	16-10	

CEILING JOIST SPAN CHART For additional species and span criteria see CBC Table 2308.7.1(1) and CRC Table R802.4

CEILING JOIST SPANS FOR COMMON LUMBER SPECIES (Uninhabitable Attics Without Storage, Live Load = 10 pounds psf, L/Δ = 240)

			DEAD LOAD = 5 pounds per square foot								
			2 × 4	2 × 6	2 × 8	2 × 10					
SPACING				Maximum ceiling joist spans							
(inches)	SPECIES AND GRA	DE	(ft in.)	(ft in.)	(ft in.)	(ft in.)					
	Douglas Fir-Larch	SS	11-11	18-9	24-8	Note a					
16	Douglas Fir-Larch	#1	11-6	18-1	23-10	Note a					
10	Douglas Fir-Larch	#2	11-3	17-8	23-0	Note a					
	Douglas Fir-Larch	#3	9-5	13-9	17-5	21-3					

TABLE R803.1 MINIMUM THICKNESS OF LUMBER ROOF SHEATHING

TABLE R602.7(3)





(INDICATE NORTH) TABLE R602.7(1) GIRDER SPANS^a AND HEADER SPANS^a FOR EXTERIOR BEARING WALLS (Maximum spans for Douglas fir-larch, hem-fir, Southern pine and sprucepine-fir^b and required number of jack studs)

	GROUND SNOW LOAD (psf) ^e																		
				30						50						70	70		
GIRDERS AND HEADERS SUPPORTING	SIZE			_				В	uild	ing wi	dth ^c	(feet)						_	
		12		24		36	;	12		24		36		12		24		36	
		Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJd	Span ^f	NJd	Span ^f	NJd								
	1-2 × 6	4-0	1	3-1	2	2-7	2	3-5	1	2-8	2	2-3	2	3-0	2	2-4	2	2-0	2
	1-2 × 8	5-1	2	3-11	2	3-3	2	4-4	2	3-4	2	2-10	2	3-10	2	3-0	2	2-6	3
	$1-2 \times 10$	6-0	2	4-8	2	3-11	2	5-2	2	4-0	2	3-4	3	4-7	2	3-6	3	3-0	3
	1-2 × 12	7-1	2	5-5	2	4-7	3	6-1	2	4-8	3	3-11	3	5-5	2	4-2	3	3-6	3
	2-2 × 4	4-0	1	3-1	1	2-7	1	3-5	1	2-7	1	2-2	1	3-0	1	2-4	1	2-0	1
Roof and ceiling	2-2 × 6	6-0	1	4-7	1	3-10	1	5-1	1	3-11	1	3-3	2	4-6	1	3-6	2	2-11	2
	2-2 × 8	7-7	1	5-9	1	4-10	2	6-5	1	5-0	2	4-2	2	5-9	1	4-5	2	3-9	2
	2-2 × 10	9-0	1	6-10	2	5-9	2	7-8	2	5-11	2	4-11	2	6-9	2	5-3	2	4-5	2
	2-2 × 12	10-7	2	8-1	2	6-10	2	9-0	2	6-11	2	5-10	2	8-0	2	6-2	2	5-2	3
HOCH VERY LEGING	3-2 × 8	9-5	1	7-3	1	6-1	1	8-1	1	6-3	1	5-3	2	7-2	1	5-6	2	4-8	2
	3-2 × 10	11-3	1	8-7	1	7-3	2	9-7	1	7-4	2	6-2	2	8-6	1	6-7	2	5-6	2
	3-2 × 12	13-2	1	10-1	2	8-6	2	11-3	2	8-8	2	7-4	2	10-0	2	7-9	2	6-6	2
	4-2 × 8	10-11	1	8-4	1	7-0	1	9-4	1	7-2	1	6-0	1	8-3	1	6-4	1	5-4	2
	4-2 × 10	12-11	1	9-11	1	8-4	1	11-1	1	8-6	1	7-2	2	9-10	1	7-7	2	6-4	2
	4-2 × 12	15-3	1	11-8	1	9-10	2	13-0	1	10-0	2	8-5	2	11-7	1	8-11	2	7-6	2

TABLE R602.3.2 SINGLE TOP-PLATE SPLICE CONNECTION DETAILS

	TOP-PLATE SPLICE LOCATION										
CONDITION	Corners and interse	ecting walls	Butt joints in straight walls								
CONDITION	Splice plate size	Minimum nails each side of joint	Splice plate size	Minimum nails each side of joint							
Structures in SDC A-C; and in SDC D_0 , D_1 and D_2 with braced wall line spacing less than 25 feet	$3'' \times 6'' \times 0.036''$ galvanized steel plate or equivalent	(6) 8d box (2 ¹ / ₂ " × 0.113") nails	$3'' \times 12'' \times 0.036''$ galvanized steel plate or equivalent	(12) 8d box (2 ¹ / ₂ " × 0.113") nails							
Structures in SDC D_0 , D_1 and D_2 , with braced wall line spacing greater than or equal to 25 feet	$3^{"} \times 8^{"} \times 0.036^{"}$ galvanized steel plate or equivalent	(9) 8d box (2 ¹ /2" × 0.113") nails	$3'' \times 16'' \times 0.036''$ galvanized steel plate or equivalent	(18) 8dbox (2 ¹ /2" × 0.113") nails							



	PLAN KEY NOTES	
	1. WALL BRACING PER SECTION R602 AND TABLE R602.10.3(1) & R602.10.3(3)	
	2. FOOTING PER SECTION R403, SEE DETAILS 6 & 7/A4.3	
e-pine-fir ^b)	3. SLAB ON GRADE PER CRC R506. 4" CONCRETE SLAB WITH NO. 3 BARS AT MIDPOINT 18" O.C. EACH WAY OVER 4" COMPACTED CONSTRUCTION GRAVEL W/ 10 MIL. VAPOR BARRIER UNDER SLAB TYP.	
	4. NOT USED	W
	5. DOUBLE STUD AT EXTERIOR OPENINGS OVER 8'-0", TYP.	
14	6. LINE OF ROOF OVERHANG	
4-9 6-4 7-9	7. NOTCH RAFTERS PER R802.7.1.1 AND TAPER CUT JOISTS PER R802.7.1.2 AS REQUIRED	
9-0	8. INTERIOR HEADER PER GENERAL NOTE 2, TYP.	
	9. PROVIDE EIGHT (8) 16d COMMON NAILS PER RAFTER TO CEILING JOIST HEEL JOINT CONNECTION PER CRC TABLE R802.5.2(1)	
	10. PROVIDE 2-2x6 STUDS WITH SIMPSON HDU2 HOLD-DOWN WITH SSTB16 ANCHOR BOLT INSTALLED PER MANUFACTURER REQUIREMENTS. INCREASE FOOTING DEPTH AND WIDTH AS NECESSARY AT HOLD-DOWN ANCHOR LOCATIONS TO PROVIDE MINIMUM 3" CONCRETE COVER AT ALL SIDES OF BOLT	NAME SIGNA ADDR DATE:
	11. INTERIOR BRACED WALL CONNECTED TO ROOF RAFTERS PER 10/A4.3	
	<u>GENERAL NOTES</u>	
	 ALL ANCHOR BOLTS SHALL BE 5/8" DIAMETER AND HAVE A MINIMUM EMBEDMENT OF 7" INTO CONCRETE AND NOT SPACED MORE THAN 6' APART FOR INTERIOR NON-BEARING HEADERS, USE AS FOLLOW: 4x4 DF # 2 UP TO 5'-0" SPAN 4x6 DF # 2 UP TO 7'-0" SPAN WOOD POSTS SHALL BE PROTECTED AGAINST DECAY PER CRC R317 FOR STANDARD CUT WASHERS PLACED BETWEEN PLATE WASHERS AND NUT, HOLE IN PLATE WASHER MAY BE DIAGONALLY SLOTTED WITH MAXIMUM 3/16" LARGER WIDTH THAN BOLT DIAMETER AND MAXIMUM 1 3/4" SLOT LENTH PROVIDE A MINIMUM OF TWO ANCHOR BOLTS PER SILL PLATE WITH ONE BOLT LOCATED MAXIMUM 12" AND MINIMUM 7 BOLT DIAMETERS FROM EACH END OF SECTION BOLTS LOCATED IN THE MIDDLE THIRD OF THE SILL PLATE WIDTH FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE RETARDANT TREATED WOOD SHALL BE HOT-DIPPED ZINC COATED GALVANIZED OR STAINLESS STEEL NO LPG PIPING ASSEMBLIES ALLOWED IN OR BENEATH SLABS WITHIN THE STRUCTURE ALL WOOD FRAMING NUMBER 2 GRADE DOUGLAS FIR-LARCH 	
	LEGEND	
	2x6 WALL	
	2x4 WALL	
	OVERSTACK FRAMING	ory [
	X'-X" X SHEAR MARK / LENGTH	Sa Sa
		O coe
	WALL BRACING	
	← – → CEILING JOIST	
	ROOF RAFTER	

TABLE R602.7.5 MINIMUM NUMBER OF FULL-HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS^a

NI(feet)	ULTIMATE DESIGN WIND SPEED AND EXPOSURE CATEGORY											
an (reet)	< 140 mph, Exposure B or < 130 mph, Exposure C	≤ 115 mph, Exposure B ^b										
	1	1										
	2	1										
	2	1										
	3	2										
	3	2										
	3	2										
	4	2										
	4	2										

DRAG STRAP

KEYNOTE #

#→

		NONBEARING WALLS				
oorted stud eet)	Maximum spacing where supporting a roof-ceiling assemblyor a habitable attic assembly, only(inches)	Maximum spacing where supporting one floor,plus a roof-ceiling assembly or a habitable attic assembly (inches)	Maximum spacing where supporting two floors, plus a roof-ceiling assembly or a habitable attic assembly (inches)	Maximum spacing where supporting one floor height₄(inches)	Laterally unsupported stud height₄(feet)	Maximum spacing(inches)
	_	_	_	_	10	16
	24c	16c	—	24	14	24
	24	24	16	24	14	24
	24	24	—	24	16	24
	24	24	16	24	20	24



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7. AN INTERMITTENTLY OR CONTINUOUSLY OPERATING LOCAL MECHANICAL EXHAUST VENTILATION SYSTEM SHALL BE INSTALLED IN EACH BATHROOM WITH A BATHTUB, SHOWER, OR SIMILAR MOISTURE SOURCE AND IN EACH KITCHEN IN COMPLIANCE WITH ASHRAE STANDARD 62.2 AS ADOPTED BY THE CALIFORNIA ENERGY COMMISSION. INTERMITTENT LOCAL EXHAUST VENTILATION AIRFLOW RATES SHALL BE 50 CFM IN BATHROOMS AND 100 CFM IN KITCHENS. CONTINUOUS LOCAL EXHAUST CENTILATION AIRFLOW RATES SHALL BE 20 CFM IN BATHROOMS AND 5 AIR CHANGES PER HOUR IN KITCHENS BASED ON KITCHEN VOLUME

8. WATER HEATER OR FURNACE SHALL BE A DIRECT-VENT APPLIANCE

CALIFORNIA ENERGY COMMISSION

9. LISTED GASKETED SELF CLOSING DOOR REQUIRED FOR GAS FAU

	LEGEND
# ►	KEYNOTE
Ф	DUPLEX OUTLET
\$	WALL SWITCH
\$ _{G.D.}	GARBAGE DISPOSAL SWITCH
- 0-	GARBAGE DISPOSAL
\mathbb{Q}	4" DIA. DRYER VENT
ю́-	HIGH EFFICACY EXTERIOR LIGHT FIXTURE (STANDARD HEIGHT 7'-0" A.F.F. UNLESS NOTED)
-\$-	HIGH EFFICACY WALL SCONCE
-ф-	HIGH EFFICACY RECESSED LIGHT
P	HIGH EFFICACY PENDANT OR SURFACE MOUNTED LIGHT
\bigcirc	FAN (MIN. 120 CFM FOR BATH AND KITCHEN)
SD	SMOKE / CO DETECTOR
×	CEILING FAN WITH LIGHT
x'-x" a.f.f. ↓ b.o. ceiling	CEILING HEIGHT ABV.



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UTILITY PLAN

<u>17.140.170(E) - EL CAJON DESIGN STANDARDS (Ord. 5131):</u>

- E. STRUCTURES SHALL MEET THE FOLLOWING DESIGN STANDARDS:
- FOLLOWS:
- INCLUDE A MINIMUM OF THREE (3) OF THE FOLLOWING DESIGN FEATURES:
- LIMITED TO MATERIALS SUCH AS WOOD, SIDING, STONE, BRICK, AND STUCCO;
- c. ENTRYWAY LIGHTING FEATURES SUCH AS PENDANT LIGHTS OR SIDELIGHTS; d. SHUTTERS OR AWNINGS;
- e. DOORS, WHICH INCLUDE WINDOWS;
- g. GARAGE DOOR PANELS WHICH INCLUDES WINDOWS; OR h. CONSTRASTING TRIM OR MOLDING
- 5. ROOF AND WALL PLANES SHALL BE DIFFERENT COLORS.



8



4. ACCESSORY STRUCTURES SHALL HAVE COMPARABLE ROOF STYLE TO THE PRIMARY STRUCTURE.

GENERAL NOTES

1. REGARDLESS OF BUILDING MATERIAL, ALL ELEVATIONS SHALL PAINTED SURFACES, WEATHER-RESISTANT ENAMEL FINISHES, OF MATERIALS THAT ARE NON-REFLECTIVE. 2. ROOF AND WALL PLANES SHALL BE DIFFERENT COLORS

3. OWNER TO CONSIDER MATCHING THE COLOR AND MATERIALS HOME.

4. GLASS SHALL NOT BE TINTED, MIRRORED, OR OTHERWISE HIG REFLECTIVE.

5. DESIGN FEATURES MUST BE INSTALLED AS IDENTIFIED ON EAC DRAWING AND ITS CORRESPONDING DESIGN FEATURE TABLE. 6. ROOFING MATERIAL WEIGHT SHALL NOT EXCEED THE RAFTER LOAD ON SHEET A1.2







	ELEVATION KEY NOTES	
. INCLUDE R FINISHED	1. ROOF: CLASS "A" FIRE RATING - (SEE GENERAL NOTE 6) ROOF MATERIAL: UNDERLAYMENT:	
S OF THE MAIN GHLY	2. EXTERIOR WALL FINISH: SELECT ONE (SEE VHFSZ NOTE 7) (VERTICAL SIDING SHOWN FOR REFERENCE) a. CEMENT PLASTER SIDING b. FIBER CEMENT - BOARD AND BATT SIDING	
CH ELEVATION SPAN DEAD	3. ROOF PITCH AS INDICATED	
	4. NOT USED 5. GABLE VENT OR ROOF VENT (SEE NOTE 5 & 6 BELOW) SEE A1.2 FOR MIN. REQUIRED VENT AREA MANUFACTURER: MODEL: NEVA	
	6. EAVE SOFFIT VENT (SEE NOTE 5 & 6 BELOW) SEE A1.2 FOR MIN. REQUIRED VENT AREA MANUFACTURER: MODEL: NFVA:	PERM AE: NATURE: DRESS:
	7. FENESTRATION PER SCHEDULE, TYP.	NAN SIG ADE DAT
	8. OPTIONAL DECORATIVE RAILING	
	9. OPTIONAL GUTTER / DOWNSPOUT	
	<u>VHFSZ PLAN NOTES</u>	
-	 IN ROOF COVERINGS WHERE THE PROFILE CREATES SPACE BETWEEN THE ROOF COVERING AND COMBUSTIBLE ROOF DECKING, SPECIFY ONE OF THE FOLLOWING MEANS OF PROTECTING SPACES AT EAVES ENDS. a. FIRE-STOPPING WITH APPROVED MATERIALS b. ONE LAYER OF 72 POUNT (32.4 KG) MINERAL-SURFACED NON-PERFORATED CAP SHEET COMPLYING WITH ASTM D 3909 c. OTHERWISE CONSTRUCTED TO PREVENT INTRUSTION OF FLAMES AND EMBERS 	
	2. EXPOSED VALLEY FLASHINGS SHALL BE CONSTRUCTED WITH NOT LESS THAN 0.019-INCH (NO. 26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT METAL INSTALLED OVER A MINIMUM 36-INCH WIDE UNDERLAYMENT CONSISTING OF ONE LAYER OF NO. 72 ASTM CAP SHEET RUNNING THE FULL LENGTH OF THE VALLEY.	
	3. ANY ROOF GUTTERS SHALL BE PROVIDED WITH MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS.	
	4. SKYLIGHTS SHALL BE TEMPERED GLASS.	
	5. ALL VENTS (ROOFS, FOUNDATION, COMBUSTION-AIR, ETC.) SHALL RESIST THE INTRUSION OF FLAMES AND EMBERS.	
-	 6. VENTILATION OPENINGS FOR ENCLOSED ATTICS, EAVE SOFFIT SPACES, ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, UNDERFLOOR VENTILATION OPENINGS, AND VENT OPENINGS IN EXTERIOR WALLS AND EXTERIOR DOORS SHALL BE LISTED TO ASTM E 2886 AND COMPLY WITH ALL OF THE FOLLOWING: a. THERE SHALL BE NO FLAMING IGNITION OF THE COTTON MATERIAL DURING THE EMBER INTRUSION TEST b. THERE SHALL BE NO FLAMING IGNITION DURING THE INTEGRITY TEST PORTION OF THE FRAME INTRUSION TEST. c. THE MAXIMUM TEMPERATURE OF THE UNEXPOSED SIDE OF THE VENT SHALL NOT EXCEED 662 DEGREES FAHRENHEIT (350 DEGREES CELSIUS) 	of El Ca Accessory Dwellin ding Safety Divisid
	 7. EXTERIOR WALL FINISH SHALL COMPLY WITH ONE OF THE FOLLOWING: a. NON-COMBUSTIBLE MATERIAL (STUCCO, CEMENT FIBER BOARD, ETC.) STUCCO AND CEMENT PLASTER USED AS AN EXTERIOR WALL COVERING SHALL BE 7/8-INCH THICK. NON-COMBUSTIBLE OR FIRE-RETARDANT TREATED WOOD SHAKE USED AS AN EXTERIOR WALL COVER SHALL HAVE AN UNDERLAYMENT OF MINIMUM 1/2-INCH FIRE RATED GYPSUM SHEATHING THAT IS TIGHTLY BUTTED, OR TAPED AND MUDDED, OR AN UNDERLAYMENT OF OTHER IGNITION-RESISTANT MATERIAL APPROVED BY THE BUILDING OFFICIAL. IGNITION-RESISTANT MATERIAL 	City 560 SF
	 8. PATIO COVER, CARPORT AND TRELLIS CONSTRUCTION WITH ALL EXPOSED ELEMENTS SHALL COMPLY WITH ANY OF THE FOLLOWING: NON-COMBUSTIBLE MATERIAL 1-HOUR FIRE-RESISTANT RATED MATERIAL APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD -MODIFIED HEAVY TIMBER (MIN. 2x TONGUE AND GROOVE SHEATHING, 4x6 RATERS/BEAMS, 6x6 POSTS) 	
	 9. DECK, BALCONY, AND EXTERIOR STAIR CONSTRUCTION, WITH ALL EXPOSED ELEMENTS SHALL COMPLY WITH THE FOLLOWING: a. FRAMING NON-COMBUSTIBLE MATERIAL 1-HOUR FIRE-RESISTANT RATED MATERIAL APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD MODIFIED HEAVY TIMBER (MIN. 4x8 JOISTS, 4x10 OR 6x8 BEAMS, 6x6 POSTS) b. DECKING AND TREATED MATERIAL (ANY OF THEFOLLOWING): NON-COMBUSTIBLE MATERIAL 1-HOUR FIRE-RESISTANT RATED MATERIAL APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD APPROVED ALTERNATIVE DECKING MATERIAL MEETINGTESTS REQUIREMENTS OF COUNTY BUILDING CODE 92.1.709A.1.4) 	
	 10. EXTERIOR GARAGE DOORS SHALL RESIST THE INTRUSION OF EMBERS INTO THE GARAGE BY LIMITING THE SIZE OF ANY GAPS AT THE BOTTOM, SIDES, AND TOP OF THE DOOR TO 1/8-INCH OR LESS USING ONE OF THE FOLLOWING METHODS: a. WEATHER-STRIPPING PRODUCTS WITH TENSILE STRENGTH AND FLAMMABILITY RATING PER CBC 708A.4 b. DOOR OVERLAPS ONTO JAMBS AND HEADERS c. GARAGE DOOR JAMBS AND HEADERS COVERED WITH METAL FLASHING 	The Valley of Opportunity
	11. PAPER-FACED INSULATION PROHIBITED IN ATTICS OR OTHER VENTILATED SPACES	
	 12. FENCES OR ANY STRUCTURES WITHIN 5 FEET OF BUILDING SHALL BE CONSTRUCTED PER ONE OF THE FOLLOWING: a. NON-COMBUSTIBLE MATERIAL b. APPROVED EXTERIOR FIRE RETARDANT TREATED WOOD c. MATERIAL MEETING SAME FIRE-RESISTIVE STANDARDS AS EXTERIOR WALLS OF BUILDING 	A2.1 ELEVATIONS



TYP. ROOF ASSEMBLY: (TOP TO BOTTOM) - UNDERLAYMENT PER ROOFING MFR. - 5/8" ROOF SHEATHING PER CRC R803.1 - WOOD RAFTER PER FRAMING PLAN

TYP. CEILING ASSEMBLY: (TOP TO BOTTOM) - R-____ INSULATION PER T24 REPORT _ - WOOD JOIST PER FRAMING PLAN

TAPER CUT CEILNG JOIST PER R802.7.1.2 RAFTER / CEILING CONNECTION,

PAINTED EXTERIOR GRADE SOFFIT BOARD NOTE: ADD NON-COMBUSTIBLE OR IGNITION RESISTANT MATERIAL WHEN REQUIRED AT RATED ASSEMBLY PER FIRE CODE

- EXTERIOR FINISH MATERIAL PER ELEVATION - WOOD STUD PER FRAMING PLAN - R-____ INSULATION PER T24 REPORT - LEVEL 4 - PAINTED 5/8" GWB, TYP.

TYP. S.O.G. FLOOR: (TOP TO BOTTOM)

-4" COMPACTED CONSTRUCTION GRAVEL

SLOPE GRADE AWAY FROM STRUCTURE -

4" RIGID PERF. PIPE, HOLES DOWN, SLOPED 1/4" PER FT. TO DRAIN. EMBEDDED IN 3/4" MINUS WASHED ROCK, LINE TRENCH AND COVER

TABLE R802.5.2(1) RAFTER/CEILING JOIST HEEL JOINT CONNECTIONS⁹

		GROUND SNOW LOAD (psf)														
			20 ^e		30			50			70					
RAFTER	RAFTER SPACING	AFIER SPACING (inches) Roof span (feet)														
SLOPE	(inches)	12	24	36	12	24	36	12	24	36	12	24	36			
		Req	uired	num	ber o	f 16d	canai	æ, e, n, _f r	nails _I	per he	eel jo	int sp	lices			
	12	3	4	6	3	5	7	4	7	10	5	9	13			
4.10	16	3	5	8	3	6	9	5	9	13	6	12	17			
4.12	19.2	3	6	9	4	7	11	6	11	16	7	14	21			
	24	4	8	11	5	9	13	7	13	19	9	17	26			
	12	3	3	5	3	4	6	3	6	8	4	7	11			
5.10	16	3	4	6	3	5	7	4	7	11	5	9	14			
5.12	19.2	3	5	7	3	6	9	5	9	13	6	11	17			
	24	3	6	9	4	7	11	6	11	16	7	14	21			
	12	3	3	4	3	3	4	3	4	6	3	5	8			
7.10	16	3	3	5	3	4	5	3	5	8	4	7	10			
/.12	19.2	3	4	5	3	4	6	3	6	9	4	8	12			
	24	3	5	7	3	5	8	4	8	11	5	10	15			







SECTION KEY NOTES
1. WALL INSULATION (PER T24 REPORT):
2. CEILING INSULATION (PER T24 REPORT):
3. INTERIOR FINISH: 5/8" GYPSUM BOARD
4. EXTERIOR WALL/ PLUMBING WALL: 2x6 STUD WALL
5. INTERIOR WALL: 2x4 STUD WALL @ 16" O.C.
6. RADIANT BARRIER: Y or N (PER T24 REPORT)
7. NOT USED
8. ROOF FRAMING: 2x10 RAFTER
9. CEILING FRAMING: 2x10 JOIST
10. RIDGE BOARD PER CRC R802.2 RAFTER FULL BEARING ON RIDGE BOARD FRAMED OPPOSITE EACH OTHER
11. EXPOSED CONCRETE SLAB PER FOUNDATION PLAN. FINISH PER OWNER
12. SILL PLATE AND ANCHOR PER 6/A4.3
13. PROVIDE BLOCKING AT BRACED WALL CONNECTION TO ROOF RAFTERS PER CRC FIGURE R602.10.8.2(3). SEE 5/A3.1
14. SHEAR TRANSFER PER 3/A4.3

15. CONCRETE SLAB ON GRADE PER FOUNDATION PLAN



Unit ajon lling Dwe \mathbf{O} ____ >sor of CCC City SБ

ty Division Safe Building

560



Image: Problem in the state of the sta	TABLE R703.3(1) SIDING MINIMUM ATTACHMEN	IT AND MINIMUM	M THICKNESS	1						1	Floor 4-8d box (21/2" x 0 113"): or	1	1	TABLE R60 FASTENIN	02.3(1) IG SCHEDULE DESCRIPTION OF BUILDING				
Image: state st				TYPE O Wood or	F SUPPORTS FOI	R THE SIDING MAT	ERIAL AND FA	D FASTENERS			3-8d common (21/2" × 0.131"); or			ITEM	ELEMENTS	b, c Roof	a, SPACING AND LOCATION		
Image: state	SIDING MATERIAL	NOMINAL THICKNESS	JOINT TREATMENT	wood structural	perboard Gyp	sum plastic	Direct to	t to Number or	22	Joist to sill, top plate or girder	3-10d box (3" × 0.128"); or		Toe nail			4-8d box (21/2" × 0.113"); or			
		(inches)		panel sh sheathing in	neathing sheat nto stud into	stud stud	g studs	ds spacing of fasteners			3-3″ × 0.131″ nails				Blocking between ceiling joists, rafters or trusses to top plate	3-8d common (21/2" × 0.131"); or	Toe nail		
HereIRefAutorLandLandRefMargingAutorAutorRefAutorAutorAutorAutorAutorAutorAutorAutorAutorRefAutorAutorAutorAutorAutorAutorAutorAutorAutorAutorRefAutorAutorAutorAutorAutorAutorAutorAutorAutorAutorAutorRefAutorAutorAutorAutorAutorAutorAutorAutorAutorAutorAutorAutorRefAutorAutorAutorAutorAutorAutorAutorAutorAutorAutorAutorAutorAutorAutorRefAutor <td></td> <td></td> <td></td> <td>into stud</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Dire is in the set is in the blacking to sit</td> <td>8d box (21/2" × 0.113") 8d common (21/2" × 0.131"); or</td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td>4" o.c. toe nail</td> <td></td> <td>or other framing below</td> <td>3-10d box (3" × 0.128"); or</td> <td></td> <td></td>				into stud						Dire is in the set is in the blacking to sit	8d box (21/2" × 0.113") 8d common (21/2" × 0.131"); or	· · · · · · · · · · · · · · · · · · ·	4" o.c. toe nail		or other framing below	3-10d box (3" × 0.128"); or			
VIC	Anchored veneer: brick, concrete, masonry or stone	2	Section R703.8			Section R703.8			23	Rim joist, band joist or blocking to sil or top plate (roof applications also)	10d box (3" × 0.128"); or		6″ o.c. toe nail	1		3-3" × 0.131" nails 2-8d common (21/2" × 0.131"); or			
Network <t< td=""><td>(see Section R703.8)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3" × 0.131" nails</td><td></td><td></td><td></td><td>Blocking between rafters or truss no</td><td>2-3" × 0.131" nails</td><td>Each end toe nail</td><td></td></t<>	(see Section R703.8)										3" × 0.131" nails				Blocking between rafters or truss no	2-3" × 0.131" nails	Each end toe nail		
<th co<="" td=""><td>Adhered veneer: concrete,</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.8d common $(24/2" \times 0.131")$; or</td><td></td><td></td><td></td><td>at the wall top plates, to raiter or thus</td><td>2 - 16d common (31/2" × 0. 162); or</td><td>End nail</td><td></td></th>	<td>Adhered veneer: concrete,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2.8d common $(24/2" \times 0.131")$; or</td> <td></td> <td></td> <td></td> <td>at the wall top plates, to raiter or thus</td> <td>2 - 16d common (31/2" × 0. 162); or</td> <td>End nail</td> <td></td>	Adhered veneer: concrete,										2.8d common $(24/2" \times 0.131")$; or				at the wall top plates, to raiter or thus	2 - 16d common (31/2" × 0. 162); or	End nail	
Image: state	stone or masonry (see Section R703.12)	—	Section R703.12			Section R703.12			24	1" × 6" subfloor or less to each joist	$2-60$ common (21/2 \times 0.131), or 3.10d box (3" x 0.128"); or		Face nail		Elet blocking to truck and web filler	3-3" × 0.131" nalls 16d common (31/2" × 0.162"); or			
Image: state Image: state <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3" × 0.131" nails</td><td></td><td></td></t<>																3" × 0.131" nails			
Norm	Panel siding			6d common 6d	common 6d co	ommon 6d commo	4d common	imon 6″ panel edges 12″			2 staples, 1" crown, 16 ga., 13/4" long 3-16d box (31/2" × 0.135"); or					3-8d common (21/2" × 0.131"): or			
abaaaababbb	(see Section <u>R703.10.1)</u>	16-May	Section R703.10.	(2" × 0.113") (2"	× 0.113") (2" × (0.113") (2" × 0.113	(11/2" × 0.099")	9″) inter. sup.	25	2" subfloor to joist or girder	2-16d common (31/2" × 0.162")	Bli	llind and face nail	2	Ceiling joists to top plate	3-10d box (3" × 0.128"); or	Per joist, toe nail		
Image: stateImage: state </td <td>cement</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>26</td> <td>2″ planks (plank & beam—floor & roof)</td> <td>3-16d box (31/2" × 0.135"); or</td> <td>3-16d box (31/2" × 0.135"); or</td> <td>At each bearing, face nail</td> <td></td> <td></td> <td>3-3″ × 0.131″ nails</td> <td></td> <td></td>	cement								26	2″ planks (plank & beam—floor & roof)	3-16d box (31/2" × 0.135"); or	3-16d box (31/2" × 0.135"); or	At each bearing, face nail			3-3″ × 0.131″ nails			
Normal and the set of the	Lap siding			6d common 6d	common 6d co	ommon 6d commo	6d common n (2" × 0.113")	113")			2-16d common (31/2" × 0.162") 3-16d common (31/2" × 0.162"); or	2-16d common (31/2" × 0.162")	")		Ceiling joist not attached to parallel	4-10d box (3" × 0.128"); or			
Image: state in the	(see Section <u>R703.10.2)</u>	16-May	Section R703.10.	2 (2" × 0.113") (2"	× 0.113") (2" × 0	0.113") (2" × 0.113	") or 11 gage roofing nail	gage nail	07	Dand an size is is the is is t	4-10 box (3" × 0.128"); or		Ford and 1	3	[see <u>Section R802.5.2</u> and <u>Table</u> R802.5.2(1)]	3-16d common (31/2" × 0.162"); or	Face nail	AE: NAT NRES	
Weise in the second se				0.120″ poil	120″ poil 0.120	0" noil 0 120" no	il 0.120″ poil	/ noil	27	Band of him joist to joist	4-3″ × 0.131″ nails; or		End nall		Ceiling joist attached to parallel rafte	4-3" × 0.131" nails r		NAN SIGI ADD DAT	
Image: state in the state in	Hardboard panel siding (see Section R703.5)	16-Jul	-	(shank) with (sh	nank) with (shan	k) with (shank) with	th (shank) with) with boad			4-3" × 14 ga. staples,7/16" crown			4	(neel joint) [see <u>Section</u> <u>R802.5.2</u> and <u>Table R802.5.2(1)</u>]	1able R802.5.2(1)			
New by the part of				0.099" nail 0.2	099" nail 0.090	9" nail 0.099" na	il 0.099" nail	' nail Same as stud			20d common (4" × 0.192"); or	Nail each layer as follows:	: 32" o.c. at top and bottom and staggered.	5	Collar tie to rafter, face pail	3-10d common (3" × 0.148"): or	Face nail each rafter		
NormNor	Hardboard lap siding (see Section R703.5)	16-Jul	Note e	(shank) with (sh 0.240" head 0.2	nank) with (shan	hk) with (shank) with (shank) with (shank) with	th (shank) with) with spacing 2 per head bearing			nails	24″ o.c. face nail at top a	and bottom staggered on opposite sides	Ŭ		4-3" × 0.131" nails			
Image: state s				Siding nail Sidir	ng nail 2″ × Siding	nail 2" × Siding			28	Built-up girders and beams, 2-inch lumber layers	2-20d common (4" × 0 192") [.] or					3-16d box (31/2" × 0.135"); or			
a b <td< td=""><td>Without</td><td>0.019ь</td><td>Lap</td><td>11/2" × 0.120"</td><td>0.120" 0.1</td><td>120" nailh 11/2" 0.120"</td><td>× Not allowed</td><td>bwed</td><td></td><td></td><td>3-10d box (3" × 0.128"); or</td><td>Face nail a</td><td>at ends and at each splice</td><td>6</td><td>Rafter or roof truss to plate</td><td>3-10d common (3" × 0.148"); or</td><td>2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss</td><td></td></td<>	Without	0.019ь	Lap	11/2" × 0.120"	0.120" 0.1	120" nailh 11/2" 0.120"	× Not allowed	bwed			3-10d box (3" × 0.128"); or	Face nail a	at ends and at each splice	6	Rafter or roof truss to plate	3-10d common (3" × 0.148"); or	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss		
Image Image <t< td=""><td>Horizontal aluminuma</td><td>0.024</td><td>Lap</td><td>Siding nail Sidir 11/2" × 0.120"</td><td>ng nail 2″ × Siding 0.120″ 0.1</td><td>nail 2" × Siding 120" nailh 11/2"</td><td>× Not allowed</td><td>owed Same as stud spacing</td><td></td><td></td><td>3-3″ × 0.131″ nails</td><td></td><td></td><td></td><td></td><td>4-10d box (3" × 0.128"); or</td><td></td><td></td></t<>	Horizontal aluminuma	0.024	Lap	Siding nail Sidir 11/2" × 0.120"	ng nail 2″ × Siding 0.120″ 0.1	nail 2" × Siding 120" nailh 11/2"	× Not allowed	owed Same as stud spacing			3-3″ × 0.131″ nails					4-10d box (3" × 0.128"); or			
III	With insulation	0 010	lan	Siding nail Si	iding nail Sidin	ng nail nails 14/6"	× Siding nail	nail			4-16d box (31/2" × 0.135"); or				+	4-3" × 0.131" nails 4-16d box (31/2" × 0.135"); or			
		0.013	Lαγ	11/2" × 0.120" 21/2	2" × 0.120" 21/2" ×	« 0.120" 0.120"	11/2" × 0.120'	0.120"	29	Ledger strip supporting joists or rafters	3-16d common (31/2" × 0.162"); or	At each j	joist or rafter, face nail			3-10d common (3" × 0.148"); or	÷. «		
Image: state in the		0.005		0.120 nail 0.	.120 nail 0.12	20 nail <u>0.120 nail</u>	_	16 inches on center or specified			4-10d box (3" × 0.128"); or					4-10d box (3" × 0.128"); or	l oe nail		
Image: state in the	Insulated vinyl siding	0.035 (vinyl siding layer	Lap	(snank) with (sha a 0.313 head 0.31	апк) with a (shank 13 head or 0.313 16 сосс	head or <u>0.313</u>	Not allowed	by manufacturer instructions, test		1	4-3" × 0.131" nails 2-10d box (3" × 0.128"); or			7	Roof rafters to ridge, valley or hip rafters or roof rafter to minimum 2"	4-3" × 0.131" nails			
		oniy)		crownh, i	crownh cro	yaye <u>nead Sectio</u> WNh <u>R703.11.2</u>	<u>.</u>	sections of this	30	Bridging or blocking to joist, rafter or truss	2-8d common (21/2" × 0.131"); or	Ea	ach end, toe nail		ridge beam	2-16d common (31/2" × 0.162"); or			
Image: state				6d box nail 6d b	oox nail (2″ 6d box	(nail (2″ 6d box na	il	code			2-3" × 0.131" nails					3-10d box (3" × 0.128"); or	End nail		
Image: state		8-Mar	-	(2" × 0.099") ×	0.099") × 0.0	099") (2" × 0.099	") Not allowed	owed	ITEM	DESCRIPTION OF BUILDING	NUMBER AND TYPE OF FASTENER a,	SPACI	ING OF FASTENERS			3-3" × 0.131" nails			
Image: state s	Particleboard panels	2-Jan	_	6d box nail 6d b	oox nail (2″6d box 0 099″) × 0 0	(nail (2″6d box na (099″) (2″ × 0 099	il 6d box nail (2 × 0 099″)	nail (2″ 6″ panel edges 12″ 99″) inter, sup.				Edgesh (inches)	Intermediatesupports c, e (inches)			Wall 16d common (31/2" × 0.162")	24″ o.c. face nail		
Image: state s				6d box nail	box nail 8d bo	ox nail 6d box na	il 6d box nail (2	nail (2"	Wood	l structural panels, subfloor, roof and interio	or wall sheathing to framing andparticleboard w	rall sheathing to framing [see Table R	R602.3(3) for wood structural panel exterior wall	8	Stud to stud (not at braced wall panels)	10d box (3" × 0.128"); or	16″ o.c. face nail		
Image: state		8-May	-	(2" × 0.099")	(21/2" × (21/ 0.113") 0.1	/2" × (2" × 0.099 13")	") × 0.099")	99″)			sheathing to wall fra	aming]				3″ × 0.131″ nails 16d box (31/2″ × 0.135″); or			
Property is an interpretation in the second sec								As specified by the manufacturer			6d common or deformed (2" × 0.113"×	C.	<i>c.</i>	9	Stud to stud and abutting studs at intersecting wall corners (at braced	3″ × 0.131″ nails	12″ o.c. face nail		
Image: state s	Polypropylene siding	Not applicable	e Lap	<u>Section</u> 703.14.1 7	<u>Section Sec</u> 703.14.1 703	<u>S.14.1</u> <u>Section</u> <u>703.14.1</u>	Not allowed	bwed instructions, test report or other			0.266" head); or 23/8 × 0.113" × 0.266" head nail (subfloor, walli)	0	Of	10	Built-up header (2' to 2" header	16d common (31/2" × 0.162") 16d common (31/2" × 0.162")	16" o.c. face nail 16" o.c. each edge face nail		
Image: Constraint of the second s				Siding poil Si	iding poil Cidin			sections of this code	31	3/8" - 1/2"	8d common (21/2″ × 0.131″) nail (roof); or	r		10	with 1/2" spacer)	16d box (31/2" × 0.135") 5-8d box (21/2" × 0.113"); or	12" o.c. each edge face nail		
Image: state	Steelc	29 ga.	Lap	(13/4" ×	(23/4" × (21/	/2" × (13/4" ×	Not allowed	Same as stud			RSRS-01 (2₃/ଃ″ × 0.113″) nail (roof)₀	6	6f	11	Continuous header to stud	4-8d common (21/2" × 0.131"); or	Toe nail		
				Staple–13/4 Sta	aple–21/2 Stapl	le–21/4 Staple–13/	/4	spacing			8d common (2-21/2" × 0.131") nail	6	12			4-10d box (3" × 0.128")			
				0.120" nail (shank) with (sha	120″ nail 0.120 ank) with a (shank	0″ nail () with a	<u>L</u>	16 inches on center or as			8d common (21/2" × 0.131") nail (roof); of	r				4-16d box (31/2"× 0.135"); or			
	Vinyl siding (see Section R703.11)	0.035	Lap	a 0.313" head or 16- 16-c	3" head or 0.313"	head or the staple	Not allowed	bwed specified by the manufacturer	32	19/32" — 3/4"		6	6f	12	Adjacent full-height stud to end of header	3-16d common (31/2" × 0.162"); or	End nail		
V V				gage staple with 3/8- to 1/2 inc	3/8- to $1/2$ - with $3/8$	⁸⁻ to 1/2- crownh	on	instructions or test report			Deformed 23/8" × 0.113") hall (root)b	6	12			4-10d box (3" × 0.128"); or			
				INCN CROWNh, i							(wall or subfloor) 10d common (3" × 0.148") nail; or	0	12			4-3" × 0.131" nalls 16d common (31/2" × 0.162") 10d box (2" × 0.120"); or	16″ o.c. face nail		
And P = P =	Wood rustic						8d box or	x or Eace pailing up to	33	7/8" — 11/4"	$(21/2'' \times 0.131 \times 0.281'' \text{ head})$ deformed	6	12	13	Top plate to top plate	10d Dox (3 × 0.128); or	12″ o.c. face nail		
image: image	Wood siding drop	3/8 min.	Lap	6d box or 6 siding nail (2" sidi	d box or 6d b	oox or 6d box or	siding nail	nail 6" widths, 1 nail			nail Other wall sheath	ling g				8-16d common (31/2" × 0.162"); or			
Image: Market Marke	R703.5)			× 0.099") ×	(0.099″) × 0.0	099") × 0.099")	0.113") Staple-2"	3'' width sand over, 2 $2^{-2''}$ nails per bearing	34	1/2" structural cellulosic fiberboard	head diameter; or	3	6	14	Double top plate splice	12-16d box (31/2" × 0.135"); or	Face nail on each side of end joint (minimum 24 lap splice length each side of		
L Bulg UN UN <th< td=""><td>Shipiap Bevel</td><td>19/32 average 16-Jul</td><td>Lap</td><td></td><td></td><td></td><td></td><td></td><td>54</td><td>sheathing</td><td>11/4" long 16 ga. staple with 7/16" or 1" crown</td><td>5</td><td>0</td><td>14</td><td>Double top plate splice</td><td>12-10d box (3" × 0.128"); or</td><td>end joint)</td><td>Bu Bu</td></th<>	Shipiap Bevel	19/32 average 16-Jul	Lap						54	sheathing	11/4" long 16 ga. staple with 7/16" or 1" crown	5	0	14	Double top plate splice	12-10d box (3" × 0.128"); or	end joint)	Bu Bu	
mining mining<	Butt tip	16-Mar	Lap				_				13/4" × 0.120" galvanized roofing nail, 7/16" head diameter; or					12-3" × 0.131" nails 16d common (31/2" × 0.162")	16″ o.c. face nail		
0 0	wood structural panel <u>ANSI/APA PRP-</u>	3/8 — 1/2	Note e	2" × 0.099" 21/2	2" × 0.113" 21/2" ×	 0.113" 21/2" × 0.113" sidir 	2" × 0.099"	099″ 6″ panel edges 12″	35	25/32" structural cellulosic fiberboard sheathing	11/4" long 16 ga. staple with 7/16" or 1"	3	6	15	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall	16d box (31/2" × 0.135"); or	12" o.c. face nail		
Image: marked	(see <u>Section R703.5</u>)			siding hali si	iding nali sidin	ng nali nail	siding hall	nali inter. sup.			crown 11/2" × 0.120" galvanized roofing				panels)	3" × 0.131" nails Roof			
min min <thmin< th=""> <thmin< th=""> <thmin< th=""></thmin<></thmin<></thmin<>	Wood structural papel lap			2" x 0 000" 24/2	" x 0 112" 21/2" x	21/2" ×	2" × 0.000"	000" 8" along bottom			nail, 7/16" head diameter, or				Detterre wiede de iniet eine iniet how d	3-16d box (31/2" × 0.135"); or			
	siding (see Section R703.5)	3/8 — 1/2	Note eNote g	siding nail si	iding nail sidin	ng nail 0.113" sidir nail	ng siding nail	nail edge	36	1/2″ gypsum sheathing	11/4"long 16 ga.;	7	7	16	joist or blocking (at braced wall pane	1) 2-16d common (31/2" × 0.162"); or	16″ o.c. face nail		
$ \frac{1}{2} \left[\frac{1}{2} + $	For SI: 1 inch = 25.4 mm. a.Aluminum nails shall be used to attach	aluminum siding.									staple galvanized, 11/2" long;7/16" or 1" crown or 11/4" screws, Type W or S					4-3" × 0.131" nails 4-8d box (21/2" × 0.113"); or			
dots 1	b.Aluminum (0.019 inch) shall be unback inch of the nominal dimension.	ed only where the max	iximum panel width is 10 i	nches and the maximum flat	area is 8 inches. The toler	rance for aluminum siding s	hall be +0.002			1	13/4" × 0.120" galvanized roofing nail, 7/16" head diameter, or 11/4" long 16					3-16d box (31/2" × 0.135"); or			
A construction A con	c.Shall be of approved type. d.Where used to resist shear forces the s	spacing must be 4 incl	thes at panel edges and 8	inches on interior supports					37	5/8″ gypsum sheathing	ga.;	7	7			4-8d common (21/2" × 0.131"); or	Toe nail		
	e.Vertical end joints shall occur at studs a f.Face nailing: one 6d common nail throw	and shall be covered v gh the overlapping bla	with a joint cover or shall l anks at each stud. Concer	e caulked. led nailing: one 11-cage 1 1/2	2-inch-long galv. roofing pa	ail through the top edge of e	each plank at				staple galvanized, 11/2" long;7/16" or 1" crown or 11/4" screws Type W or S					4-10d box (3" × 0.128"); or			
	each stud in accordance with the manufa g.Vertical joints, if staggered, shall be per	acturer's installation in rmitted to be away from	nstructions. om studs if applied over w	ood structural panel sheathin	g.					w	/ood structural panels, combination subf	I loor underlayment to framing		17	Top or bottom plate to stud	4-3" × 0.131" nails 3-16d box (31/2" × 0.135"): or			
$ \frac{1}{1} 1$	h.Minimum fastener length must be suffic manufacturer's installation instructions.	cient to penetrate she	eathing other nailable sub	strate and framing a total of a	a minimum of 1 1/4 inches	s or in accordance with the					Deformed (2" × 0.113") or					2-16d common (31/2" × 0.162"); or			
j = j = j = j = j = j = j = j = j = j =	i.Where specified by the manufacturer's in substrate of minimum thickness specified	nstructions and suppo d by the instructions of	orted by a test report, fast or test report, without pen	eners are permitted to penetr etrating into framing.	ate into or fully through na	ailable sheathing or other na	ailable		38	3/4″ and less	Deformed (2″ × 0.120″) nail; or	6	12			3-10d box (3" × 0.128"): or	End nail		
$ \frac{3}{1} + \frac{1}{1} + 1$	j.Insulated vinyl siding shall comply with A k.Polypropylene siding shall comply with	ASTM D7793. ASTM D7254.		J							8d common (21/2" × 0.131") nail 8d common (21/2" × 0.131") nail: or					3-3" × 0.131" nails			
$ \frac{1}{1} + 1$	I.Cladding attachment over foam sheathin	ng shall comply with t	the additional requiremen	s and limitations of <u>Sections</u>	<u>s R703.15, R703.16</u> and <u>R</u>	<u>1703.17</u> .			39	7/8" — 1"	Deformed (2" × 0.113"): or	6	12		Top plates long at assess	3-10d box (3" × 0.128"); or			
$ \frac{100}{10^{10} 1^{10} 1^{-1} 1^{10}} $ $ \frac{100}{10^{10} 1^{10} 1^{-1} 1^{10} 1^{-1} 1^{10}} $ $ \frac{100}{10^{10} 1^{10} 1^{10} 1^{-1} 1^{10}$											Deformed (21/2" × 0.120") nail	, , , , , , , , , , , , , , , , , , ,		18	ι ορ μιατes, ιaps at corners and intersections	2-16d common (31/2" × 0.162"); or	Face nail		
$ \frac{1}{10} $											10d common (3" × 0.148") nail; or				+	3-3" × 0.131" nails 3-8d box (21/2" × 0.113"); or			
b Deformed (2x' 0.120') nall 11 11 stoce to each stud and plate 2.100 box (3' 0.0128'); or 24 and plate 2.100 box (3' 0.0128'); or 24 and plate 24 and plate <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>40</td> <td>11/8" - 11/4"</td> <td>Deformed (2" × 0.113"); or</td> <td>6</td> <td>12</td> <td></td> <td></td> <td>2-8d common (21/2" × 0.131"); or</td> <td></td> <td></td>									40	11/8" - 11/4"	Deformed (2" × 0.113"); or	6	12			2-8d common (21/2" × 0.131"); or			
A bit is a random common, bas card defined in basics access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceedings are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon access the vise of a bit abased proceeding are cardon									For SI: 1 inch	h = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.44	Deformed (21/2" × 0.120") nail 47 m/s; 1 ksi = 6.895 MPa.	<u>I</u>		19	1" brace to each stud and plate	2-10d box (3" × 0.128"); or	Face nail		
Conservations using raise and rate protecting realized sequences and reader between sequences and readers between sequences and readers between sequences and readers between sequences and readers and readers between sequences and readers b									a.Nails are sm	mooth-common, box or deformed shanks except where oth as shown: 80 ksi for shank diameter of 0.192 inch (20d c	nerwise stated. Nails used for framing and sheathing connections common nail), 90 ksi for shank diameters larger than 0.142 inch b	s are carbon steel and shall have minimum averag but not larger than 0.177 inch, and 100 ksi for sha	age bending yield strengths nank diameters of 0.142 inch or less.			2 staples 13/4"			
c. Naise shall be spaced aft notwe than in towe than in shaped supports where spans are 48 inches or greater. d. Four foot by 8 forces not includes and be spaced at 4 inches or greater. d. Spaced of 5 thores based in table shall be absed on Table 6602.3(2). 1 For wood structural panel code shaped ing and to intermediate supports with 48 inches of roof edges and ridges, nails shall be spaced at 4 inches on center where the ultimate designating and to intermediate supports with 48 inches of roof edges and ridges, nails shall be spaced at 4 inches on center where the ultimate designating and to intermediate supports with 48 inches of roof edges and ridges, nails shall be spaced at 4 inches on center where the ultimate designating and to intermediate supports with 48 inches of roof edges and ridges, nails shall be spaced at 4 inches on center where the ultimate designating shall conform to ASTM C1280 of QA235. Floerboard sheathing shall conform to ASTM C1280 of QA235. Floerboard at all foor perimeters only. Spacing of fasteners on roof sheathing panel edges supported by framing members and required blocking. deges applies to panel edges supported by framing members and required blocking. Go form from forms enders on edges dup of the rofter and to an edgicer to panel edges supported by framing members and required blocking. UWhere a rafter is fastened to an adjacent parallel celling joist in accordance with this schedule, provide two te nails on one side of the rafter and te nails from the celling joist to top plate in accordance with this schedule, provide two te nails on one side of the rafter and te nails from the celling joist to top plate in accordance with this schedule, provide two te nails on one side of the rafter and te nails from the celling joist to top plate in accordance with this schedule, provide two te nails on one side of the rafter and te nails from the celling joist to top plate in accordance with this schedule, provide two te nails on one side of the rafter and te nails from the celling									b.RSRS-01 is	Connections using nails and staples of other materials, s is a Roof Sheathing Ring Shank nail meeting the specific	such as stainless steel, shall be designed by accepted engineering ications in ASTM F1667.	g practice or approved under Section R104.11.				3-δα DOX (21/2" × 0.113"); or		CAI	
e-space of Table R602.3(2). (-For wood structured and this table shade to gable end of sheet R602.3(2). (-For wood structured and to intermediate supports within 48 inches of roof edges and ridges, nails shall be spaced at 4 inches on center where the ultimate design wind speed is greater than 130 mph in Exposure 0. g. Gypsum sheathing stated to gable end myhin Exposure 0. g. Gypsum sheathing shall conform to ASTM C1396 and shall be installed in accordance with ASTM C1280 or <u>GA.253.</u> Fiberboard sheathing and to perimeters only. Spacing of fasteners on roof sheathing and to perimeters only. Spacing of fasteners on roof sheathing and to the framing members and required blocking and at floor perimeters only. Spacing of fasteners on roof sheathing panel edges supported by framing members and required blocking. except as required by other provisions of this code. Floor perimeter shall be spaced at this schedule, provide two to enails on one side of the rafter and to enails from the ceiling joist in accordance with this schedule, provide two to enails on one side of the rafter and to enails from the ceiling joist to top plate in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this i.Where a rafter is fastened to an adjacent parallel ceiling joist to top plate in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this i.Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this i.Where a rafter is fastened to an adjacent parallel ceiling joist to top plate in accordance with this i.Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceilin									c.Nails shall d.Four-foot b	upe spaced at not more than 6 inches on center at all s by 8-foot or 4-foot by 9-foot panels shall be applied ver	supports where spans are 48 inches or greater. rtically.			20	1" × 6" sheathing to each bearing	2-ou common (2/2" × 0.131"); or 2-10d box (3" × 0.128"); or	Face nail	when h	
design wind spects is greater than 150 mpt in Exposure or. 2 staples, 1" crown, 16 ga., 13/4" long g.Gypsum sheatingshears on floor of that XIM C1396 and shall be installed in accordance with XIM C1280 or GA 253. Fiberboard sheating panel degas supported by framing members and required blocking and at floor perimeters only. Spacing of fasteners on roof sheating panel 3-8d box (21/2" × 0.113"); or except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking. 3-8d common (21/2" × 0.131"); or i.Where a rafter is fastened to an adjacent panellel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this 3.10d hox (21/2" × 0.132"); or									e.Spacing of f f.For wood s	rasteners not included in this table shall be based on Table structural panel roof sheathing attached to gable end r design wind shead is greater than 120 million 5	къ02.3(2). roof framing and to intermediate supports within 48 inches	of roof edges and ridges, nails shall be space	eed at 4 inches on center where the ultimate			2 100 DOA (0 A 0.120); 01		The Valley of Opportunity	
edges applies to panel edges supported by framing members and required blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking. i.Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails from the ceiling joist to top plate in accordance with this									g.Gypsum sł	sheathing shall conform to ASTM C1396 and shall be in fasteners on floor sheathing papel edges applies to the	nstalled in accordance with ASTM C1280 or <u>GA 253</u> . Fiberb panel edges supported by framing members and convict d	poard sheathing shall conform to ASTM C208.	8. g of fasteners on roof sheathing namel			2 staples, 1" crown, 16 ga., 13/4" long 3-8d box (21/2" × 0.113"): or		i 🐨 N	
i. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails from the ceiling joist to top plate in accordance with this									n.spacing of	edges applies to panel edges supported by framing except as required by other provisions of this code	g members and required blocking. Blocking of roof or floor s . Floor perimeter shall be supported by framing members or	sheathing panel edges perpendicular to the fr r solid blocking.	framing members need not be provided			3-8d common (21/2" × 0.131"); or		"orporated 19	
Schedule. The top nail on the renter shall not be rentered									i.Where a raf	schedule. The toe nail on the opposite side of the set	accordance with this schedule, provide two toe nails on one shall not be required	side of the rafter and toe nails from the ceilin	ing joist to top plate in accordance with this			3-10d box (3" × 0.128"): or			
										selection on the opposite side of the rafter	and the self required.					3 stanles 1" arour 10 1/"		Δ/ 1	
21 1" × 8" and wider sheathing to each Wider than 1" × 8" Eace pail														21	1" × 8" and wider sheathing to each	Wider than 1" × 8"	Face nail		
² bearing 4-8d box (21/2" × 0.113"); or														~ 1	bearing	4-8d box (21/2" × 0.113"); or			
3-8d common (21/2" × 0.131"); or																3-8d common (21/2" × 0.131"); or			
3-10d box (3" × 0.128"); or																3-10d box (3" × 0.128"); or			
4 staples. 1" crown. 16 aa 13/4" lona																4 staples, 1" crown, 16 ga 13/4" long			
														L	1				





FIGURE R602.10.8.2(3) **BRACED WALL PANEL CONNECTION OPTION TO PERPENDICULAR RAFTERS OR ROOF TRUSSES**

4 CRC Figure R602.10.8.2(3)

FRAMING DETAILS

CUT PLATE TIED WITH 16 GAGE STEEL STRAP. SEE SECTION R602.6.1

SINGLE OR DOUBLE TOP PLATE

FIREBLOCK AROUND

WALL STUDS SEE SECTION R602.3

PLATE

IN, BY 4 IN.

APPLY APPROVED SHEATHING OR BRACE EXTERIOR WALLS WITH 1 IN. BY 4 IN. BRACES LET INTO STUDG AND PLATES AND EXTENDING FROM BOTTOM PLATE TO TOP PLATE, OR OTHER APPROVED METAL STRAP DEVICES INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. SEE SECTION R602.10.

3

= 25.4 mm, 1 foot = 304.8 mm.

XAGONAL BRACE

LET INTO STUDS

SUBFLOOR"

SILL PLATE



CORNER AND PARTITION POSTS

NOTE: A THIRD STUD AND/OR PARTITION INTERSECTION BACKING STUDS SHALL BE PERMITTED TO BE OMITTED THROUGH THE USE OF WOOD BACKUP CLEATS. METAL DRY/MALL CLIPS OR OTHER APPROVED DEVICES THAT WILL SERVE AS ADEQUATE BACKING FOR THE FACING MATERIALS. MATERIALS

FIGURE R602.3(2)

CRC Figure R602.3(2)



Concrete footings located in Seismic Design Categories D₀, D₁ and D₂, as established in Table R301.2, shall have minimum reinforcement in accordance with this section and Figure R403.1.3. Reinforcement shall be installed with support and cover in accordance with Section R403.1.3.5.



W = Width of footing, T = Thickness of footing and P = Projection perSection R403.1.1.

NOTES:

- a. See Section R404.3 for sill requirements.
- b. See Section R403.1.6 for sill attachment. c. See Section R506.2.3 for vapor barrier requirements.
- d. See Section R403.1 for base.
- e. See Section R408 for under-floor ventilation and access requirements.
- f. See Section R403.1.3.5 for reinforcement requirements.

FIGURE R403.1.3

REINFORCED CONCRETE FOOTINGS AND MASONRY AND CONCRETE STEM WALLS IN SDC D₀, D₁ AND D_{2^a}



2 CRC Figure R403.1.3



1 El Cajon - Cutting & Notching of Joists, Rafters, and Studs

CRC DETAILS

SEAMED METAL HEAD FLASHING WITH DRIP EDGE INTEGRATED INTO WEATER

5/4 THICK PAINT GRADE WOOD HEAD TRIM, EXTENDS 1/2" BEYOND OUTER EDGE OF

5/4 THICK PAINT GRADE



WASHERS SPACED MAX. 6' O.C.

TYP. 12"x12" CONCRETE FOOTING W/ (2) #4 BAR TOP AND BOTTOM

 $\geq \leq 1$

 \bigtriangledown

12"

FOUNDATION DETAIL

- B.N.

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(7

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ີ (ຕັ) _

YA N'

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

0



0 20

SLR CLR

(6)

୍ଚ ଜ/→

0 0

~~~

FOUNDATION DETAIL

-**O** 

12"



4

**ROOF FRAMING DETAIL** SCALE: 1 1/2"= 1'-0"

![](_page_12_Figure_11.jpeg)

![](_page_13_Figure_2.jpeg)

T24 Energy Calculations (Provided by Permittee)

![](_page_14_Figure_2.jpeg)

T24 Energy Calculations (Provided by Permittee)

![](_page_16_Picture_0.jpeg)

### 2 VICINITY MAP (PERMITTEE TO COMPLETE) SCALE: SCALE:

![](_page_16_Picture_3.jpeg)

BY USING THESE STANDARD PLANS, THE USER AGREES TO RELEASE THE CITY OF EL CAJON, THE ARCHITECT, AND CON PREPARED THESE CONSTRUCTION DOCUMENTS F CLAIMS, LIABILITIES, SUITS, AND DEMANDS ON AC INJURY, DAMAGE, OR LOSS TO PERSONS OR PRO **INJURY OR DEATH, OR ECONOMIC LOSSES, ARISIN** OF THESE CONSTRUCTION DOCUMENTS. THE USE DOES NOT ELIMINATE OR REDUCE THE USER'S RE VERIFY ANY AND ALL INFORMATION PRIOR TO, AN CONSTRUCTION.

# FIRE DEPARTMENT ACCESS NOTI

ACCESSORY DWELLING UNITS MUST COMPLY WIT CODE AS ADOPTED BY THE CITY OF EL CAJON TO OF THE FIRE MARSHAL.

FIRE SAFETY STANDARDS FOR SITE ACCESS, AND HOSE-PULL MUST BE OBSERVED. A TURN REQUIRED.

FIRE DEPARTMENT SPRINKLER NOTES:

ACCESSORY DWELLING UNITS REQUIRE SPRIN WHEN THE PRIMARY UNIT IS SPRINKLER PROT UNITS EXCEEDING 1,200 SQUARE FEET IN SIZE REQUIRES AN AUTOMATIC FIRE SPRINKLER SYSTE

# **ENGINEERING DIVISION EASEMEN**

PERMANENT STRUCTURES CANNOT BE BUILT ON CAJON - OWNED EASEMENTS. FOR MORE INFO CHECK WITH THE CITY OF EL CAJON, DEPAR WORKS.

# **ENCROACHMENT PERMITS:**

ENCROACHMENT PERMITS ARE REQUIRED PRIOR PUBLIC RIGHT-OF-WAY. TO APPLY, GO TO WWW.ELC

ENCROACHMENT PERMIT REQUIREMENTS: WWW.ELCAJON.GOV/ENCROACHMENT

INSURANCE GUIDELINES: WWW.ELCAJON.GOV/INSURANCEGUIDELINES

# **SITE PLAN REQUIREMENTS:**

1. ADD PLOT PLAN TO TEMPLATE AREA, OR SUBMIT SHEET OF PAPER LARGE ENOUGH TO SHOW ALL OF INFORMATION. MINIMUM SIZE IS 8 1/2" x 11"

2. SHOW A NORTH DIRECTION ARROW ON YOUR PL

3. INDICATE THE SCALE OF YOUR DRAWING

4. INDICATE THE AREA AND DIMENSIONS OF THE P 5. PROVIDE THE ASSESSOR PARCEL NUMBER ON

6. SHOW LOCATION, NAMES, AND WIDTHS OF BORD SITE STREETS, ROAD EASEMENTS AND ALLEYS

7. SHOW ALL UTILITY AND/OR OPEN SPACE EASEME THE USE OF THE EASEMENT AND DIMENSIONS

8. SHOW LOCATION AND WIDTH OF INTERIOR DRIV

9. SHOW LOCATIONS AND DIMENSIONS OF ALL EXI PROPOSED BUILDINGS, STRUCTURES, PARKING AN AREAS

10. STATE THE USE OF ALL BUILDINGS AND STRUCT 11. SHOW ALL DISTANCES FROM BUILDINGS AND O PROPERTY LINES OR ROAD/STREET EASEMENTS /

12. SHOW DISTANCES BETWEEN BUILDINGS

13. INDICATE LOCATION OF ALL SLOPES AND BANKS

![](_page_16_Picture_29.jpeg)

![](_page_16_Picture_30.jpeg)

| GREES TO RELEASE<br>NSULTANTS WHO                                          | APPLICABLE CODES:                                                                                                                                                                                                    |                                     |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| FROM ANY AND ALL<br>CCOUNT OF ANY<br>PERTY, INCLUDING<br>NG OUT OF THE USE | ALL WORK SHALL CONFORM TO ALL APPLICABLE BUILDING CODES<br>AND ORDINANCES WITHIN THE PROJECT JURISDICTION. CODES<br>USED IN THIS PROJECT INCLUDE BUT ARE NOT LIMITED TO:                                             |                                     |
| OF THESE PLANS<br>ESPONSIBILITY TO<br>ND DURING,                           | 2022 CALIFORNIA ADMINISTRATIVE CODE<br>2022 CALIFORNIA RESIDENTIAL CODE<br>WITH CITY OF EL CAJON AMENDMENTS                                                                                                          |                                     |
| E6.                                                                        | 2022 CALIFORNIA BUILDING CODE<br>WITH CITY OF EL CAJON AMENDMENTS<br>2022 CALIFORNIA MECHANICAL CODE                                                                                                                 | <b>RMA</b>                          |
| <b>LO.</b><br>TH CALIFORNIA FIRE<br>THE SATISFACTION                       | 2022 CALIFORNIA ELECTRICAL CODE<br>WITH CITY OF EL CAJON AMENDMENTS<br>2022 CALIFORNIA PLUMBING CODE                                                                                                                 |                                     |
| BUILDING SPACING,                                                          | 2022 CALIFORNIA ENERGY CODE<br>WITH CITY OF EL CAJON AMENDMENTS                                                                                                                                                      |                                     |
| N AROUND MAY BE                                                            | 2022 CALIFORNIA FIRE CODE<br>WITH CITY OF EL CAJON AMENDMENTS<br>2022 CALIFORNIA GREEN BUILDING STANDARDS CODE<br>WITH APPENDICES A4 & A5                                                                            | <b>PERMI</b>                        |
| IKLER PROTECTION<br>TECTED. DWELLING<br>E OF LIVING SPACE<br>EM.           | IN CASE OF ANY CONFLICT WHEREIN THE METHOD OR STANDARDS<br>OF INSTALLATION, OR THE MATERIALS SPECIFIED DO NOT EQUAL OR<br>EXCEED THE REQUIREMENTS OF THE LAWS OR ORDINANCES, THE<br>LAWS OR ORDINANCES SHALL GOVERN. | NAME:<br>SIGNATU<br>ADDRES<br>DATE: |
| NTS:                                                                       | STORMWATER, GRADING AND DRAINAGE CONTROL CODES AS WELL<br>AS EROSION CONTROL MEASURES MUST BE FOLLOWED IF<br>APPLICABLE, AS WELL AS ALL ENVIRONMENTALLY CRITICAL AREA<br>(ECA) REGULATIONS FOR THE JURISDICTION.     |                                     |
| TOP OF CITY OF EL<br>ORMATION, PLEASE                                      |                                                                                                                                                                                                                      |                                     |
| IMENT OF PUBLIC                                                            | OWNER INFORMATION:<br>(PERMITTEE TO COMPLETE)                                                                                                                                                                        |                                     |
|                                                                            | NAME:                                                                                                                                                                                                                |                                     |
|                                                                            | ADDRESS:                                                                                                                                                                                                             |                                     |
| CAJON.GOV/PACO                                                             | PHONE:                                                                                                                                                                                                               |                                     |
|                                                                            | EMAIL:                                                                                                                                                                                                               |                                     |
|                                                                            | CONTACT INFORMATION:<br>(PERMITTEE TO COMPLETE)                                                                                                                                                                      |                                     |
|                                                                            | NAME:                                                                                                                                                                                                                |                                     |
|                                                                            | ADDRESS:                                                                                                                                                                                                             |                                     |
| T ON A SEPARATE<br>DF THE                                                  | PHONE:                                                                                                                                                                                                               |                                     |
|                                                                            | EMAIL:                                                                                                                                                                                                               |                                     |
|                                                                            |                                                                                                                                                                                                                      | visi visi                           |
| PARCEL                                                                     | PROJECT INFORMATION:                                                                                                                                                                                                 |                                     |
| THE PLAN                                                                   | (PERMITTEE TO COMPLETE)                                                                                                                                                                                              | ory II                              |
| DERING OR ON-                                                              | SITE ADDRESS:                                                                                                                                                                                                        | Sa Sa                               |
|                                                                            | APN:                                                                                                                                                                                                                 | Acce O                              |
|                                                                            | LEGAL DESCRIPTION:                                                                                                                                                                                                   |                                     |
| /EWAYS                                                                     |                                                                                                                                                                                                                      |                                     |
| ISTING AND<br>ND LANDSCAPE                                                 | CONSTRUCTION TYPE & USE                                                                                                                                                                                              |                                     |
|                                                                            | NEW ADU - TYPE V-B*   GROUP R-3<br>*SPRINKLERS REQUIRED: YES / NO (SELECT ONE)                                                                                                                                       |                                     |
| OVERHANGS TO                                                               | SQUARE FOOTAGE:                                                                                                                                                                                                      |                                     |
| AND CENTERLINES                                                            | (E) RESIDENCE:<br>(N) ADU:<br>OTHER STRUCTURES:                                                                                                                                                                      |                                     |
| Ś                                                                          |                                                                                                                                                                                                                      |                                     |
|                                                                            | PROPOSED 649 SF DETACHED ACCESSORY DWELLING UNIT                                                                                                                                                                     |                                     |
|                                                                            | DEFERRED SUBMITTAL:                                                                                                                                                                                                  |                                     |
|                                                                            | PHOTOVOLTAIC SOLAR PANEL SYSTEM PER TITLE 24 REPORT                                                                                                                                                                  |                                     |
|                                                                            | SHEET INDEX 14 total                                                                                                                                                                                                 |                                     |
|                                                                            | A0.1 TITLE                                                                                                                                                                                                           |                                     |
|                                                                            | A0.2 GENERAL NOTES<br>A0.3 CRC MIN. CONSTRUCTION SPECIFICATIONS                                                                                                                                                      | CAJO                                |
|                                                                            | A0.4 EROSION CONTROL/BMP<br>A1.1 FLOOR PLAN / ROOF PLAN                                                                                                                                                              | The Valley of Opportunity           |
|                                                                            | A1.2   FOUNDATION PLAN / ROOF FRAMING PLAN<br>A1.3   UTILITY PLAN                                                                                                                                                    | in the si                           |
|                                                                            | A2.1     ELEVATIONS       A3.1     SECTIONS                                                                                                                                                                          | orporated 19                        |
|                                                                            | A4.1 CRC SCHEDULES<br>A4.2 CRC DETAILS                                                                                                                                                                               |                                     |
|                                                                            | A4.3 DETAILS                                                                                                                                                                                                         |                                     |
|                                                                            | T24.1     ENERGY CALCULATIONS       T24.2     ENERGY CALCULATIONS                                                                                                                                                    |                                     |
|                                                                            |                                                                                                                                                                                                                      | TITLE                               |

### **BUILDING DESIGN CRITERIA**

THE DESIGN CRITERIA LISTED BELOW FOR BUILDING PROJECTS WITHIN THE CITY OF EL CAJON ARE PROVIDED AS GENERAL GUIDELINES. THEY ARE NOT INTENDED TO BE USED IN PLACE OF PROJECT SPECIFIC INFORMATION AS MAY BE SUPPLIED BY A LICENSED DESIGN PROFESSIONAL OR GEOTECHNICAL ENGINEER.

#### SEISMIC DESIGN: 1613.2.5 OCCUPANCY CATEGORY I, II, OR III STRUCTURES LOCATED WHERE THE MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER AT 1-SECOND PERIOD. S1 IS GREATER THAN OR EQUAL TO 0.75 WILL BE SEISMIC CATEGORY E. OCCUPANCY CATEGORY IV STRUCTURES LOCATED WHERE THE MAPPED SPECTRAL ACCELERATION PARAMETER AT 1-SECOND PERIOD S1 IS GREATER THAN OR EQUAL TO 0.75 WILL BE SEISMIC CATEGORY F.ALL OTHER STRUCTURES SHALL BE ASSIGNED TO A SEISMIC DESIGN CATEGORY BASED ON THEIR OCCUPANCY

CATEGORY AND THE DESIGN SPECTRAL RESPONSE ACCELERATION COEFFICIENTS, SDS AND SD1 DETERMINED IN ACCORDANCE WITH CBC SECTION 1613.2.4 FOR STRUCTURES DESIGNED UNDER THE 2022 CRC SEISMIC DESIGN CATEGORY D2 IS ASSUMED UNLESS SUSTANTIATED BY ANALYSIS (2022 CRC 301.2.2.1) USE SITE SOIL CLASS D UNLESS OTHERWISE INDICTED IN A GEOTECHNICAL REPORT SPECIFIC TO THE SITE (2022 CBC SECTION 1616.2.2) 2. WIND DESIGN

#### THE MINIMUM BASIC WIND SPEED AT ANY LOCATION IS 100(CLASS I), 110(CLASS II), 115(CLASS III, IV) MILES PER HOUR. 2019 CBC FIGURES 1609, BASIC WIND SPEED SPEED, 3 SECOND GUST, 2022 CRC FIGURE R301.2 (5)A. SURFACE ROUGHNESS CATEGORY WILL GENERALLY BE CATEGORY B, BUT COULD BE CATEGORY C DEPENDING ON SITE SPECIFIC CONDITIONS. THE WIND DESIGN SHALL COMPLY WITH EXPOSURE B OR C REQUIREMENTS, DEPENDING ON SITE SPECIFIC CONDITIONS

#### 3. CLIMATE ZONE FOR TITLE 24 ENERGY EFFICIENCY DESIGN - CLIMATE ZONE 10

ZONE MAP

4. HIGH FIRE SEVERITY ZON PLEASE CONTACT CITY STAFF FOR INFORMATION OR A COPY OF THE HIGH FIRE SEVERITY

### **GREEN BUILDING REQUIREMENTS FOR RESIDENTIAL CONSTRUCTION**

- . INDOOR WATER USE CGBSC 4.303 INDOOR WATER FIXTURES SHALL NOT EXCEED THE FIXTURE FLOW RATES BELOW - LAVATORFAUCETS : 1.2 GPM @ 60 PSI MAX. - .8 GPM @ 20 PSI MIN. - KITCHEN FAUCETS : 1.8 GPM @ 60 PSI - WATER CLOSETS (TOILETS) : 1.28 GAL. PER FLUSH
  - SHOWERHEADS : 1.8 GPM @ 80 PSI

2. CONSTRUCTION WASTE MANAGEMENT - CGBSC 4.408 A CONSTRUCTION WASTE MANAGEMENT PLAN SHALL BE SUBMITTED. THE WASTE MANAGEMENT PLAN SHALL ADDRESS THE FOLLOWING AREAS. I. IDENTIFIES THE MATERIALS TO BE DIVERTED FROM DISPOSAL BY RECYCLING, REUSE ON THE PROJECT, OR SALVAGE FOR FUTURE USE OR SALE. SPECIFY IS MATERIALS WILL BE SORTED ON-SITE OR MIXED FOR TRANSPORTATION TO A IVERSION FACILITY 3. IDENTIFIES THE DIVERSION FACILITY WHERE THE MATERIAL COLLECTED WILL BE TAKEN. 4. IDENTIFIES CONSTRUCTION METHODS EMPLOYED TO REDUCE THE AMOUNT OF WASTE GENERATE

5. SPEFICIES THAT THE AMOUNT OF MATERIALS DIVERTED SHALL BE CALCULATED BY WEIGHT OR VOLUME, BUT NOT BY BOTH 3. BUILDING MAINTENANCE AND OPERATION (MANUAL) - CGMSC 4.410

AT FINAL INSPECTION DOCUMENTATION ACCEPTABLE TO THE ENFORCING AGENCY ON BUILDING MAINTENANCE AND OPERATION MUST BE PROVIDED FOR THE OWNER OR OCCUPANT AND SHALL INCLUDE: 1. OPERATION AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT, SYSTEMS, AND APPI IANCES 2. ROOF AND YARD DRAINAGE INCLUDING GUTTERS AND DOWNSPOUTS . SPACE CONDITIONING SYSTEMS INCLUDING CONDENSERS AND AIR FILTERS 4. LANDSCAPE AND IRRIGATION SYSTEMS

#### 5. WATER REUSE SYSTEMS . UTILITY, WATER, RECYCLING PROGRAMS AND LOCATIONS

PUBLIC TRANSPORTATION AND CARPOOL OPTIONS 3. EDUCATIONAL MATERIAL ON POSSITIVE IMPACTS OF MAINTAINING INDOOR RELATIVE HIMUDITY BETWEEN 30 AND 60 PERCENT 9. INFORMATION ABOUT WATER CONSERVING LANDSCAPE AND IRRIGATION DESIGN 0. IMPORTANCE OF GUTTERS AND DOWNSPOUTS AND DIVERTING WATER AT LEAST 5' FROM

BUILDINGS 1. INFORMATION ON ROUTINE MAINTENANCE SUCH AS CAULKING, PAINTING, GRADING, ETC 12. INFORMATION ABOUT STATE SOLAR ENERGY AND INCENTIVE PROGRAMS 13. A COPY OF ALL SPECIAL INSPECTION VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY

4. POLLUTION CONTROL - CGBSC 4.504 POLLUTION CONTROL MUST BE PROVIDED AS FOLLOWS ALL DUCTS AND RELATED DISTRIBUTION COMPONENT OPENINGS MUST BE COVERED WITH

TAPE OR OTHER APPROVED MEANS TO PREVENT DUST ACCUMULATION 2. ADHESIVES, SEALANTS, AND CAULKS MUST MEET THE MINIMUM VOC LIMITS (TABLE 4.504.1) PAINTS AND COATINGS MUST MEET MIMIMUM VOC LIMITS 4. AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC

IN SECTION 944522(a)(2) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNTS AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(e)(1) AND (f)(1) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520 5. ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE TESTING AND PRODUCT REQUIREMENTS OF ONE OF THE FOLLOWING a. CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS PROGRAM
b. CALIFORNIA DEPARTMENT OF PUBLIC HEALTH STANDARD PRACTIVE FOR TESTING OF VOCs

(SPECIFICATION 01350) NSF/ANSI 140 AT THE GOLD LEVE d. SCIENTIFIC CERTIFICATIONS SYSTEM INDOOR ADVANTAGE GOLD

ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CARPET AND RUG INSTITUTEGREEL LABEL PROGRAM 7. ALL CARPET ADHESIVE SHALL MEET THE MINIMUM VOC LIMITS (TABLE 4.504.1)

. WHERE RESILIENT FLOORING IS INSTALLED, AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL COMPLY WITH THE VOC EMISSION LIMITS DEFINED IN COLLABORATIVE FOR HIGH PERFORMANCE SCHOOLS (CHPS) LOW-EMITTING MATERIALS LIST OR CERTIFIED UNDER THE RESILIENT FLOOR COVERING INSTITURE (RCFI) FLOOR SCORE PROGRAM ). HARDWOOD PLYWOOD, PARTICLEBOARD, AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXICS CONTROL MEASURES FOR COMPOSITE WOOD (17 CCR 93120 ET SEQ.), BY OR BEFORE THE DATES SPECIFIED IN THOSE SECTIONS, AS SHOWN IN TABLE 4,504.5

DOCUMENTATION FOR THE ITEMS LISTED ABOVE MUST BE MADE AVAILABLE TO YOUR INSPECTOR UPON REQUEST.

5. INTERIOR MOISTURE CONTROL - CGBSC 4.505 A LARGE CAPILLARY BREAK SHALL BE INSTALLED AND SHALL CONSIST OF THE FOLLOWING: A 4-INCH THICK BASE OF 1/2 INCH OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR BARRIER IN DIRECT CONTRACT 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. AN EQUIVALENT SLAB DESIGN BY A DESIGN PROFESSIONAL IS ACCEPTABLE.

6. MOISTURE CONTENT OF BUILDING MATERIALS - CGBSC 4.505.3 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 1 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 . MOISTURE READINGS SHALL BE TAKEN AT A POINT 2 FEET TO 4 FEET FROM THE GRADE STAMPED END OF EACH PIECE TO BE VERIFIED

3. AT LEAST THREE RANDOM MOISTURE READINGS SHALL BE PERFORMED ON WALL AND FLOOR FRAMING WITH DOCUMENTATION PROVIDED IMMEDIATELY PRIOR TO ENCLOSURE OF THE WALL AND FLOOR FRAMING

INSULATION PRODUCTS WHICH ARE VISIBLY WET OR HAVE A HIGH MOISTURE CONTACT 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 CLOSURE.

7. INDOOR AIR QUALITY AND AXHAUST - CGBSC 4.506 FOR BATHROOMS CONTAINING A BATHRUB, SHOWER, OR TUB/SHOWER COMBINATION, A MECHANICAL EXHAUST FAN WHICH EXHAUSTS DIRECTLY FROM THE BATHROOM MUST BE INSTALLED. FANS MUST BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE READILY ACCESSIBLE. HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 TO 80 PERCENT

8. HEATING AND AIR-CONDITIONING - CGBSC 4.507 HEATING AND AIR-CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELETED USING THE FOLLOWING METHODS: THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J-2016, ASHRAE HANDBOOK OR OTHER EQUIVALENT DESIGN SOFTWARE METHODS . DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D-2016, ASHRAE HANDBOOKS R OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S-2014 OR OTHER EQUIVALENT DESIGN SOFTWARE METHODS

EXCEPTION: USE OF ALTERNATE DESIGN TEMPERATURES NECESSARY TO ENSURE THE SYSTEMS FUNCTION ARE ACCEPTABLE.

### <u>GENERAL NOTES</u>

R327.1 - AGING-IN-PLACE DESIGN AND FALL PREVENTION NEWLY CONSTRUCTED DWELLINGS SUBJECT TO THE REQUIREMENTS OF THIS CODE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTIONS R327.1.1 THROUGH R327.1.4

327.1.1 - REINFORCEMENT FOR GRAB BARS AT LEAST ONE BATHROOM ON THE ENTRY LEVEL SHALL BE PROVIDED WITH REINFORCEMENT INSTALLED IN ACCORDANCE WITH THIS SECTION. WHERE THERE IS NO BATHROOM ON THE ENTRY LEVEL. AT LEAST ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE SWELLING HALL COMPLY WITH THIS SECTION. REINFORCEMENT SHALL BE SOLID LUMBER OR OTHER CONSTRUCTION MATERIALS APPROVED BY THE ENFORCING AGENCY. REINFORCEMENT SHALL NOT BE LESS THAN 2 BY 8 INCH (51 MM BY 203 MM) NOMINAL LUMBER. [11/2 INCH BY 7 1/4 INCH (38 MM BY 184 MM) ACTUAL DIMÈNSION] OR OTHEŔ CONSTRUCTION MÅTERIAL PROVIDING QUAL HEIGHT AND LOAD CAPACITY. REINFORCEMENT SHALL BE LOCATED BETWEEN 32 INCHES (812.8 MM) AND 39 1/4 INCHES (997 MM) ABOVE THE FINISHED FLOOR FLUSH WITH THE WALL FRAMING. WATER CLOSET REINFORCEMENT SHALL BE INSTALLED ON BOTH SIDE WALLS OF THE FIXTURE, OR ONE SIDE WALL AND THE BACK WALL. SHOWER REINFORCEMENT SHALL E CONTINUOUS WHERE WALL FRAMING IS PROVIDED. BATHTUB AND COMBINATION BATHTUB

HOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE ROVIDED WITH THE BOTTOM EDGE LOCATED NO MORE THAN 6 INCHES (152.4 MM) ABOVE THE BATHTUB RIM.

EXCEPTIONS: WHERE THE WATER CLOSET IS NOT PLACED ADJACENT TO A SIDE WALL CAPABLE OF ACCOMMODATING A GRAB BAR, THE BATHROOM SHALL HAVE PROVISIONS FOR NSTALLATION OF FLOOR MOUNTED, FOLDAWAY OR SIMILIAR ALTERNATE GRAB BAR REINFORCEMENTS APPROVED BY THE ENFORCING AGENCY. REINFORCEMENT SHALL NOT BE REQUIRED IN WALL FRAMING FOR PRE-FABRICATED SHOWER ENCLOSURES AND BATHTUB WALL PANELS WITH INTEGRAL FACTORY - INSTALLED GRAB BARS OR WHEN FACTORY -INSTALLED REINFORCEMENT FOR GRAB BARS IS PROVIDED. SHOWER ENCLOSURES THAT DO NOT PERMIT INSTALLATION OF REINFORCEMENT AND/OR GRAB BARS SHALL BE PERMITTED PROVIDED REINFORCEMENT FOR INSTALLATION OF FLOOR-MOUNTED GRAB BARS OR AN ALTERNATE METHOD IS APPROVED BY THE ENFORCING AGENCY. BATHTUBS WITH NO SURROUNDING WALLS, OR WHERE THE WALL PANELS DO NOT PERMIT THE INSTALLATION OF EINFORCEMENT SHALL BE PERMITTED, PROVIDED REINFORCEMENT FOR INSTALLATION OF FLOOR - MOUNTED GRAB BARS ADJACENT TO THE BATHTUB OR AN ALTERNATE METHOD IS APPROVED BY THE ENFORCING AGENCY. REINFORCEMENT OF FLOORS SHALL NOT BE

R327.1.1.1 - DOCUMENTATION FOR GRAB BARS REINFORCEMENT INFORMATION AND/OR DRAWINGS IDENTIFYING THE LOCATION OF GRAB BAR REINFORCEMENT SHALL BE PLACED IN THE OPERATION AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS CODE, CHAPTER 4, DIVISION 4.4

REQUIRED FOR BATHTUBS AND WATER CLOSETS INSTALLED IN CONCRETE SLAB FLOORS.

R327.1.2 - ELECTRICAL RECEPTACLE OUTLET, SWITCH AND CONTROL HEIGHTS ELECTRICAL RECEPTACLE OUTLETS, SWITCHES, AND CONTROLS (INCLUDING CONTROLS FOR HEATING, VENTILATION, AND AIR CONDITIONING) INTENDED TO BE USED BY OCCUPANTS SHALL BE LOCATED NO MORE THAN 48 INCHES (1219.2 MM) MEASURED FROM THE TOP OF THE DUTLET BOX AND NOT LESS THAN 15 INCHES (381 MM) MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE FINISH FLOOR EXCEPTIONS: DEDICATED RECEPTACLE OUTLETS REQUIRED BY THE CALIFORNIA ELECTRICAL CODE ON A WALL SPACE WHERE THE DISTANCE BETWEEN THE FINISHED FLOOR AND A BUILT-IN FEATURE ABOVE THE FINISH FLOOR, SUCH AS A WINDOW, IS LESS THAN 15 INCHES (381 MM).

R327.1.3 - INTERIOR DOORS EFFECTIVE JULY 1, 2024, AT LEAST ONE BATHROOM AND ONE BEDROOM ON THE ENTRY LEVEL SHALL PROVIDE A DOORWAY WITH A NET CLEAR OPENING OF NOT LESS THAN 32 INCHES (812.8 MM), MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM THE LÓSED POSITION; OR, IN THE CASE OF A TWO OR THREE - STORY SINGLE FAMILY DWELLING, IN THE SECOND OR THIRD FLOOR OF THE DWELLING IF A BATHROOM OR BEDROOM IS NOT

LOCATED ON THE ENTRY LEVEL. R327.1.4 - DOORBELL BUTTONS DOORBELL BUTTONS OR CONTROLS. WHEN INSTALLED. SHALL NOT EXCEED 48 INCHES (1219.2 MM) ABOVE THE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL UTTON ASSEMBLY. WHERE DOORBELL BUTTONS INTEGRATED WITH OTHER FEATURES ARE

REQUIRED TO BE INSTALLED ABOVE 48 INCHES (1219.2 MM) MEASURED FROM THE EXTERIOR FLOOR OR LANDING, A STANDARD DOORBELL BUTTON OR CONTROL SHALL ALSO BE PROVIDED AT A HEIGHT NOT EXCEEDING 48 INCHES (1219.2 MM) ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON OR CONTROL.

### **ARCHITECTURAL GENERAL NOTES:**

DIMENSIONS, DRAWINGS, AND PERMITS CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE INCLUDING. BUT NOT LIMITED TO, SOILS AND EXISTING UTILITIES, PRIOR TO START OF SITE IMPROVEMENTS. ALL DISCREPANCIES SHALL BE REPORTED TO THE OWNER IMMEDIATELY.

DO NOT SCALE DRAWINGS OR DETAILS. USE GIVEN DIMENSIONS. CHECK DETAILS FOR LOCATION OF ALL ITEMS NOT DIMENSIONED ON PLANS. ALL DIMENSIONS ARE FACE OF STUD WALL, CENTER LINE OF COLUMN, OR FACE OF CONCRETE UNLESS NOTED OTHERWISE. THE DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE

SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE OWNER.

CONTRACTOR AND SUBCONTRACTORS SHALL SECURE ANY PERMITS NOT COVERED BY THE PRIMARY BUILDING PERMIT, SUCH AS ELECTRICAL, PLUMBING, MECHANICAL, AND SEPTIC WORK

APPROVED PERMIT PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY ANY WORKMEN

BUILDING COMPONENTS BUILDING SYSTEMS AND COMPONENTS NOT SPECIFICALY DETAILED SHALL BE INSTALLED PER MANUFACTURERS' RECOMMENDATIONS. VERIFY CHEMICAL COMPATIBILITY OF COMPONENTS (SUCH AS CAULKING, SEALANTS, AND PAINT) PER MANUFACTURER'S REQUIREMENTS. NOTIFY HE OWNER OF ANY RESULTING CONFLICTS.

WHERE INSTALLATION INCLUDES MANUFACTURED PRODUCTS, COMPLY WITH THE MANUFACTURER'S APPLICABLE INSTRUCTIONS FOR INSTALLATION. VERIFY ROUGH-IN DIMENSIONS FOR EQUIPMENT AND PROVIDE BUCK-OUTS, BACKING AND JACKS AS REQUIRED.

ALL GLAZING IN HAZARDOUS LOCATIONS AS DEFINED BY THE BUILDING CODE SHALL BE SAFETY GLAZING, INCLUDING BUT NOT LIMITED TO THE SAFETY GLAZING IDENTIFIED IN THE CONSTRUCTION DOCUMENTS. CONSTRUCTION METHODS

ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR EXPOSED TO WEATHER (SUCH AS SILL PLATES, EXTERIOR DECKING, JOISTS & BEAMS) SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE OR BE A WOOD SPECIES WITH NATURAL RESISTANCE TO DECAY. FASTENERS FOR PRESSURE TREATED WOOD SHALL BE GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER.

PROVIDE GALVANIC INSULATION BETWEEN DISSIMILAR METALS.

APPROVED CORROSION RESISTIVE FLASHING SHALL BE PROVIDED IN THE EXTERIOR WALL ENVELOPE IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OF PENETRATION OF WATER TO THE BUILDINGS' STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL EXTEND TO THE OUTSIDE FACE OF THE EXTERIOR WALL SURFACE OR COMPONENT AND SHALL BE INSTALLED TO PREVENT WATER FROM REENTERING THE EXTERIOR WALL ENVELOPE.

FLASHING SHALL BE INSTALLED AT, BUT NOT LIMITED TO THE FOLLOWING LOCATIONS: - THE TOP OF ALL EXTERIOR WINDOW & DOOR OPENINGS INTERSECTIONS OF FRAME WALLS AND MASONRY OR STUCCO UNDER MASONRY, WOOD OR METAL COPINGS AND SILLS

CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM WHERE EXTERIOR PORCHES, DECKS, TRELLIS OR STAIRS ATTACH TO A WALL AT WALL AND ROOF OR SOFFIT INTERSECTIONS - AT BUILT-IN GUTTERS

VERIFY ALL RECEPTACLES, SWITCH AND FIXTURE LOCATIONS WITH OWNER PRIOR TO INSTALLATION. ALL SWITCHES TO BE DIMMABLE UNLESS NOTED OTEHRWISE.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS AND WORKERS AT ALL TIMES DURING THE COURSE OF THE PROJECT

|  | 2022 RESIDENTIAL | - CALIFORNIA | <b>GREEN BUILDING</b> | STANDARDS | COD |
|--|------------------|--------------|-----------------------|-----------|-----|
|--|------------------|--------------|-----------------------|-----------|-----|

# General Notes:

- 1. The flow rates for all plumbing fixtures shall comply with the maximum flow rates in CALGreen Section 4.303.1. 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. [CALGreen 4.406.1]. Before final inspection, a complete operation and maintenance manual shall be placed in the building. A sample of
- the manual is available on the Housing and community Development (HCD) web site. The manual should include the items listed in 2023 CALGreen 4.410.1. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove
- shall comply with U.S. EPA Phase II emission limits where applicable. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.
- All duct and other related air distribution component openings shall be covered during with tape, plastic, or sheet
- metal until the final startup of the heating cooling, and ventilation equipment. [CALGreen 4.504.1]. Paints, stains, coatings, adhesives, sealants and caulks shall comply with the Volatile Organic Compound (VOC) limits listed in 2023 CALGreen Section 4.504.2.
- The VOC Content Verification shall be made available to the City staff upon request.
- . All carpet and 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). [CALGreen 4.504.3] Where Esilient flooring installed, at least 80 percent of floor area receiving Esilient flooring all 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). [CALGreen 4.504.4] 0. New hardwood plywood, particle board, and medium density fiberboard (MDF) composite wood product used in the
- building shall meet the formaldehyde limits listed in 2023 CALGreen Table 4.504.5. . Building materials with visible signs of water damage shall not be installed. Walls and floors framing shall not be
- enclosed when framing members exceed 19% moisture content. [CALGreen 4.505.3]. 2. Newly installed bathroom exhaust fans shall be Energy Star compliant and be ducted to terminate outside of the
- building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidistat which can adjust between 50 to 80 percent. [CALGreen 4.506.1].
- 3. Heating and Air conditioners shall be sized, designed and have their equipment selected using the following
- 1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J 2016 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods. 2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2016 (Residential Duct Systems), ASHRAE
- handbooks or other equivalent design software or methods. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Equipment
- Selection) or other equivalent design software or method.

### 2023 RESIDENTIAL - CALIFORNIA ENERGY CODE

- Manufacture, Construction and Installation of Systems, Equipment and Building Components
- All HVAC systems shall meet the control requirements per Section 110.2 and 120.2 E.E.S. All HVAC equipment and appliances shall meet the requirements per section 110.1-110.3, 110.5, 120.1-120.4 Title 24 Energy Standards.
- Doors and windows shall meet the minimum infiltration requirements per Sections 110.6 and 110.7 E.E.S.
- . Insulation material shall meet the California quality standard per Section 110.8 Energy Efficiency Standards (E.E.S.).

### Space-conditioning Equipment

- Installed air conditioner and heat pump outdoor condensing units shall have a clearance of at least five (5) feet (1.5 meters) from the outlet of any dryer vent.
- All heating or cooling systems, including heat pumps, not controlled by a central energy management control system (EMCS) shall have a setback thermostat, as specified in Section 110.2 (c).
- All water piping, solar water-heating systems piping, and space-conditioning system line insulation thickness and conductivity shall comply with CEC Section150.0(j).

#### Residential Lighting

- All lighting shall be high efficacy and have readily accessible wall-mounted controls that allow the lighting to be manually turned On and Off
- Lighting in bathrooms, garages, laundry rooms, utility rooms and walk-in closets shall have all high efficacy luminaire and at least one luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality
- . For lighting internal to drawers and cabinetry with opaque fronts or doors, controls that turn the light off when the drawer or door is closed shall be provided
- All the installed wattage of luminaires in habitable space such as living rooms, dining rooms, kitchens and bedrooms shall be high efficacy and shall have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down unless exempted by CEC Section 150.0(k)2F
- Integrated lighting of exhaust fans shall be controlled independently from the fans. Under cabinet lighting, undershelf lighting, interior lighting of display cabinets or switched outlets lighting shall be switched separately.
- All luminaires mounted to the building or to other buildings on the same lot shall be high efficacy luminaires and must be controlled by a manual on and off switch, AND controlled by one of these automatic control types: Photocontrol and a motion sensor, or automatic time switch control, or Astronomical time clock or Energy management control system (EMCS).
- Internally illuminated address signed shall consume no more than 5 watts of power or comply with CEC Section 140.8
- . Provide an exterior light at new exterior exits. For dwelling units, attached garages, and detached garages with electric power, at least one wall switch-controlled lighting outlet shall be installed to provide illumination on the exterior side of outdoor entrances or exits with grade level access. A vehicle door in a garage shall not be considered as an outdoor entrance or exit. Exception: Remote, central, or automatic control of lighting shall be permitted.

- Air-Distribution and Ventilation System Ducts, Plenums and Fans
- 1. Ducts not located in entirely conditioned space shall have a minimum installed level of R-6.0 unless exempted by CEC Section 150.0(m)1Bi
- 2. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts
- B. All fan systems, regardless of volumetric capacity, that exchange air between the building conditioned space and the outside of the building shall be provided with backdraft or automatic dampers to prevent unintended air
- leakage through the fan system when the fan system is not operating.
- 4. Duct system sealing and leakage testing must comply with CEC Section 150.0(m)11.

#### Water Heating System:

- Systems using gas or propane water heaters to serve individual dwelling units shall designate a space at least 2.5 feet by 2.5 feet wide and 7 feet tall suitable for the future installation of a heat pump water heater (HPWH) by meeting either CALGreen Section 150.0(n)1 A or B below. All electrical components shall be installed in accordance with the California Electrical Code
- Instantaneous water heaters with an input rating greater than 6.8 kBTU/hr (2kW) shall meet the requirements ofSection 110.3(c)6.

### Solar Readiness

- . Solar Readiness shall be provided meeting the requirements of CEC Section 110.10.
- 2. The residency shall have a minimum solar ready zone in compliance with CEC Section 110.10(b)1A.

#### Heat Pump Space Heater Ready:

Systems using gas or propane furnace to serve individual dwelling units shall include a dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the furnace and accessible to the furnace with no obstructions. The branch circuit conductors shall be rated at 30 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the Dalifornia Electrical Code. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future heat pump space heater installation. The reserved space shall be permanently marked as "For Future 240V use."

#### Electric Cooktop Ready:

Systems using gas or propane cooktop to serve individual dwelling units shall include a dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the cooktop and accessible to the cooktop with no obstructions. The branch circuit conductors shall be rated at 50 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the Dalifornia Electrical Code. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric cooktop installation. The reserved space shall be permanently marked as "For Future 240V use."

#### Electric Clothes Dryer Ready:

Clothes dryer locations with gas or propane plumbing to serve individual dwelling units shall include a dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the clothes dryer location and accessible to the clothes dryer location with no obstructions. The branch circuit conductors shall be rated at 30 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the California Electrical Code. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric clothes dryer installation. The reserved space shall be permanently marked as "For Future 240V use.

2022 RESIDENTIAL -MECHANICAL/PLUMBING

#### Mechanical Notes

- Attic/Underfloor installation must comply with Sections 904, 908, and 909 of the California Mechanical Code (CMC). When a water heater compartment is openable to and is accessible from a bedroom or bathroom, fuel burning water heaters shall be separated in a closet protected with a listed, gasketed self-closing door assembly installed with a threshold/bottom seal complying with Section 504.1.1 and 504.1.2 of the California Plumbing Code. Combustion air shall be supplied to the closet from the exterior in accordance with Section 506.4 of the CPC & the
- water heater shall be direct venting. The closet shall be used exclusively for the water heater. CPC 504.1 When a central heating furnace compartment is openable to and is accessible from a sleeping room such as a bedroom or a bathroom they shall be separated from bedroom in a closet protected with a listed, gasketed self-closing door assembly complying with Section 904.1.1 and 904.1.2 of the California Mechanical Code. ion air shall be supplied to the closet from the exterior in accordance with Section 506.4 of the CPC. The closet shall be used exclusively for the furnace. The furnace shall be of the direct vent type. CMC 904.1

#### 2022 CALIFORNIA RESIDENTIAL CODI

- Shower compartments and bathtubs with installed shower heads shall be finished with a nonabsorbent surface that
- extends to a height of not less than 6 feet above the floor. [CRC R307.2]. 2. Smoke alarms and smoke detectors shall be installed a minimum of 20 feet horizontal distance from a permanently
- installed cooking appliance.
- Smoke alarms shall be installed not less than a 3-foot horizontal distance from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by other sections of the CRC.
- Smoke alarms and smoke detectors shall not be installed within a 36-inch horizontal path from the supply registers of a forced air heating or cooling system and shall be installed outside of the direct airflow of those registers.
- Smoke alarms shall be interconnected so that actuation of one alarm will activate all the alarms within the individual dwelling unit. In new construction smoke alarms shall receive their primary power source from the building wiring and shall be equipped with battery backup
- and low battery signal. 6. Smoke alarms shall comply with NFPA 72 and shall be listed in accordance with UL 217.
- 2. Combination smoke and carbon monoxide alarms shall be listed in accordance with UL 217 and UL 2034.
- 8. Smoke alarm systems and components shall be California State Fire Marshal listed and approved in accordance with California Code of Regulations, Title 19, Division 1 for the purpose for which they are installed. 0. Window opening control devices serving emergency escape and rescue openings shall comply with ASTM F2090.
- [CRC R310.1.1]. 0. Window fall control device shall comply with ASTM F2090. At the emergency escape windows,
- the device after operation should release the control device allowing the windows to fully open providing the clear net opening area required for emergency escape window in accordance with CRC R310.2.1.

2022 RESIDENTIAL - VERY HIGH FIRE HAZARD ZONE SEVERITY ZONE

- . Roof gutters shall be provided with the means to prevent the accumulation of leaves and debris in the gutter. All roof gutters and downspouts shall be constructed of non-combustible materials. [CRC R337.5.4].
- 2. Drip edge flashing used at the free edges of roofing materials shall be non-combustible. 8. Valley flashings shall be not less than 0.019-inch (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide underlayment consisting of one layer of No. 72 ASTM cap sheet running the full
- length of the valley. [CRC R337.5.3]. Chimneys, flues or stovepipes attached to any fireplace, stove, barbeque or other solid or liquid fuel burning equipment or device shall be equipped with an approves spark arrestor.
- . Turbine attic vents shall be equipped to allow one-way direction rotation only and shall not free spin in both directions
- 6. Glazing frames made of vinyl materials shall have welded corners, metal reinforcement in the interlock area. and be certified to the most current edition of ANSI/AAMA/NWWDA 101/I.S.2 structural requirements.

| <ol> <li>2. The deferred submittal items shall not be<br/>by the Building Official. [SDMC §129.020</li> <li>3. The registered and responsible design pr<br/>to the Building Official, with annotation ind<br/>found to be in general conformance to the</li> <li>Deferred Submittal (NFPA 13D Fire Sprinkle</li> <li>1. The submittal of residential fire sprinkler p<br/>deferred.</li> <li>2. To avoid delays in construction, plans for<br/>prior to installation or prior to requesting a<br/>requested prior to approval of the fire spri</li> <li>Special Inspections (if applicable to project)</li> <li>1. NOTICE TO THE APPLICANT/OWNER/<br/>construction drawings for construction/ins<br/>requirements of City El Cajon for special<br/>off-site fabrication of building components<br/>the California construction codes.</li> <li>2. NOTICE TO THE CONTRACTOR/BUILDI<br/>construction drawings for construction/ins<br/>the requirements contained in the stateme<br/>City of El Cajon for special inspections, st<br/>fabrication of building components, contai<br/>California construction codes.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | installed until their design and submittal documents have been approved<br>[5]<br>ofessional shall review the deferred submittal documents and submit them<br>dicating that the deferred submittal documents have been reviewed and<br>a design of the building. [SDMC §129.0205].<br>[7]<br>plans required by California Residential Code Section R313 has been<br>fire sprinkler plans shall be submitted not less than 30 calendar days<br>foundation inspection. A framing/rough inspection shall not be<br>nkler plans. |
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| <ol> <li>The registered and responsible design prito the Building Official, with annotation incomposed for the Building Official, with annotation incomposed for the Building Official, with annotation incomposed for the submittal of residential fire sprinkler processes of the sprinkler processes of the submittal o</li></ol> | ofessional shall review the deferred submittal documents and submit them<br>dicating that the deferred submittal documents have been reviewed and<br>e design of the building. [SDMC §129.0205].<br>r)<br>blans required by California Residential Code Section R313 has been<br>fire sprinkler plans shall be submitted not less than 30 calendar days<br>i foundation inspection. A framing/rough inspection shall not be<br>nkler plans.                                                                                  |
| <ol> <li>Deferred Submittal (NFPA 13D Fire Sprinkle</li> <li>The submittal of residential fire sprinkler p<br/>deferred.</li> <li>To avoid delays in construction, plans for<br/>prior to installation or prior to requesting a<br/>requested prior to approval of the fire spri</li> <li>Special Inspections (if applicable to project)</li> <li>NOTICE TO THE APPLICANT/OWNER/<br/>construction drawings for construction/ins<br/>requirements of City El Cajon for special<br/>off-site fabrication of building components<br/>the California construction codes.</li> <li>NOTICE TO THE CONTRACTOR/BUILDI<br/>construction drawings for construction/ins<br/>the requirements contained in the stateme<br/>City of El Cajon for special inspections, st<br/>fabrication of building components, contai<br/>California construction codes.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | r)<br>plans required by California Residential Code Section R313 has been<br>fire sprinkler plans shall be submitted not less than 30 calendar days<br>i foundation inspection. A framing/rough inspection shall not be<br>nkler plans.                                                                                                                                                                                                                                                                                      |
| <ol> <li>The submittal of residential fire sprinkler p<br/>deferred.</li> <li>To avoid delays in construction, plans for<br/>prior to installation or prior to requesting a<br/>requested prior to approval of the fire spri</li> <li>Special Inspections (if applicable to project)</li> <li>NOTICE TO THE APPLICANT/OWNER/<br/>construction drawings for construction/ins<br/>requirements of City El Cajon for special<br/>off-site fabrication of building components<br/>the California construction codes.</li> <li>NOTICE TO THE CONTRACTOR/BUILDI<br/>construction drawings for construction/ins<br/>the requirements contained in the statement<br/>City of El Cajon for special inspections, st<br/>fabrication of building components, contain<br/>California construction codes.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | fire sprinkler plans shall be submitted not less than 30 calendar days<br>i foundation inspection. A framing/rough inspection shall not be<br>nkler plans.                                                                                                                                                                                                                                                                                                                                                                   |
| <ol> <li>To avoid delays in construction, plans for<br/>prior to installation or prior to requesting a<br/>requested prior to approval of the fire spri</li> <li>Special Inspections (if applicable to project)</li> <li>NOTICE TO THE APPLICANT/OWNER/<br/>construction drawings for construction/ins<br/>requirements of City El Cajon for special<br/>off-site fabrication of building components<br/>the California construction codes.</li> <li>NOTICE TO THE CONTRACTOR/BUILDI<br/>construction drawings for construction/ins<br/>the requirements contained in the statement<br/>City of El Cajon for special inspections, st<br/>fabrication of building components, contai<br/>California construction codes.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | fire sprinkler plans shall be submitted not less than 30 calendar days<br>I foundation inspection. A framing/rough inspection shall not be<br>nkler plans.                                                                                                                                                                                                                                                                                                                                                                   |
| <ol> <li>Special Inspections (if applicable to project)</li> <li>NOTICE TO THE APPLICANT/OWNER/<br/>construction drawings for construction/ins<br/>requirements of City El Cajon for special<br/>off-site fabrication of building components<br/>the California construction codes.</li> <li>NOTICE TO THE CONTRACTOR/BUILDI<br/>construction drawings for construction/ins<br/>the requirements contained in the statemed<br/>City of El Cajon for special inspections, st<br/>fabrication of building components, contain<br/>California construction codes.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <ol> <li>NOTICE TO THE APPLICANT/OWNER/<br/>construction drawings for construction/ins<br/>requirements of City El Cajon for special<br/>off-site fabrication of building components<br/>the California construction codes.</li> <li>NOTICE TO THE CONTRACTOR/BUILDI<br/>construction drawings for construction/ins<br/>the requirements contained in the stateme<br/>City of El Cajon for special inspections, st<br/>fabrication of building components, contai<br/>California construction codes.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <ol> <li>NOTICE TO THE CONTRACTOR/BUILD,<br/>construction drawings for construction/ins<br/>the requirements contained in the stateme<br/>City of El Cajon for special inspections, st<br/>fabrication of building components, contai<br/>California construction codes.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | DWNER'S AGENT/ARCHITECT or ENGINEER OF RECORD: By using this permitt<br>tallation of the work specified herein, you agree to comply with the<br>inspections, structural observations, construction material testing and<br>s, contained in the statement of special inspections and, as required by                                                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ER/INSTALLER/SUB-CONTRACTOR/OWNER-BUILDER: By using this permitted tallation of the work specified herein, you acknowledge and are aware of, ent of special inspections. You agree to comply with the requirements of ructural observations, construction material testing and off-site ined in the statement of special inspections and, as required by the                                                                                                                                                                 |
| 3. The special inspector must be registered required to have special inspection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | by the City of El Cajon, Development Services, in the category of work                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 4. The special inspections identified on plan-<br>be performed by a City's building inspector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | s are, in addition to, and not a substitute for, those inspections required to<br>pr.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 5. The construction materials testing laborat testing of materials, systems, components                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ory must be approved by the City of El Cajon, Development Services, for<br>s and, equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <ol> <li>Offsite fabricator must be approved by the<br/>and assemblies on the premises of the fail</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | City of El Cajon, Development Services for the fabrication of members<br>bricator's shop.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <ol> <li>Offsite fabricator shall submit an 'Applicat<br/>approval prior to commencement of fabric</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ion to perform Off-Site Fabrication' to the Inspection Services Division for<br>ation.                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <ol> <li>Offsite fabricator shall submit a 'Certificate<br/>prior to erection of fabricated items and as</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | e of Compliance for Off-Site Fabrication' to the Inspection Services Division ssemblies.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Soils and Foundation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 1. When no geotechnical investigation report                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | t is provided:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| The structure(s) will be located entirely or                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | undisturbed native soil.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| SignatureOwner/Licensed El                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ngineer or Architect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| vinen no geotechnical investigation report<br>As a California licensed Architect/Engineer<br>Table 1806.2 of the 2019 CBC I have ass<br>foundations related to this project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | t is provided:<br>er, I have classified the undisturbed native soils to be and per<br>igned a foundation pressure of psf. for the design of                                                                                                                                                                                                                                                                                                                                                                                  |
| Signatureof Licensed Archi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | tect/Engineer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <ol> <li>If the Building Inspector suspects fill, expa<br/>foundation excavation, a soils or geologic<br/>recommendations have been incorporate</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Insive soils or any geologic instability based upon observation of the al report, and resubmittal of plans to plan check to verify that report d, may be required.                                                                                                                                                                                                                                                                                                                                                           |
| Fire Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <ol> <li>During construction, at least one extinguis<br/>and construction sheds, in locations wher</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | sher shall be provided on each floor level at each stairway. in all storage                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

2. Buildings undergoing construction, alteration, or demolition shall conform to CFC Chapter 33. Welding, cutting, and other hot work shall be in conformance with CFC Chapter 35

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The Valley of Opportunity 

**GENERAL NOTES** 

#### A. General Applicable codes. See A0.1

# B. Electrical, Plumbing, and Mechanical

- 1. Exterior lighting. All projects shall comply with the El Cajon lighting ordinance. 2. GFCI outlets. Ground Fault Circuit Interrupter (GFCI) outlets are required in bathrooms, a kitchen countertops, at laundry and wet bar sinks, in garages, in crawlspaces, in unfinished basements, and outdoors. (CEC 210.8)
- 3. AFCI outlets. Electrical circuits in bedrooms, living rooms, dining rooms, dens, closets, hallways, or similar rooms must be protected by Arc Fault Circuit Interrupters (AFCI). (CEC 210.12)
- 4. Luminaire requirements. Installed luminaires shall meet the efficacy and fixture requirements of CBEES 150.0(k).
- 5. Smoke detectors in building remodels. Smoke detectors are required in each existing sleeping room, outside each separate sleeping area in the immediate vicinity of sleeping rooms. and on each story of a dwelling including basements. Battery operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R314.3)
- 6. Carbon monoxide detectors in building remodels. Carbon monoxide detectors are required outside each separate sleeping area in the immediate vicinity of sleeping rooms and on each story of a dwelling including basements. Battery-operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R315.3)
- Water heater seismic strapping. Minimum two 3/4-inch-by-24-gauge straps required around water heaters, with 1/4-inch-by-3-inch lag bolts attached directly to framing. Straps shall be at points within upper third and lower third of water heater vertical dimension. Lower connection shall occur minimum 4 inches above controls. (CPC 507.2)
- 8. Gas appliances in garages. Water heaters and heating/cooling equipment capable of igniting flammable vapors shall be placed on minimum 18-inch-high platform unless listing report number provided showing ignition-resistant appliance. (CPC 507.13 and CMC 305.1)
- **Impact protection of appliances.** Water heaters and heating/cooling equipment subject to vehicular impact shall be protected by bollards or an equivalent measure. (CPC 507.13.1 and CMC 305.11)
- 10. Water closet clearance. Minimum 30-inch-wide by 24-inch-deep clearance required at front of water closets. (CPC 402.5)
- **11.** Shower size. Shower compartments shall have minimum area of 1024 square inches and be able to encompass a 30-inch-diameter circle. Shower doors shall have a minimum 22-inch unobstructed width. (CPC 408.5 and CPC 408.6)
- 12. Fireplace appliances. Fireplaces with gas appliances are required to have the flue damper permanently fixed in the open position and fireplaces with LPG appliances are to have no 'pit' or 'sump' configurations. (CMC 303.7.1)
- 13. Chimney clearance. Minimum 2-foot chimney clearance required above building within 10-foot horizontally of chimney. The chimney shall extend minimum 3 feet above highest point where chimney passes through roof. (CRC R1003.9)

#### C. Mechanical Ventilation and Indoor Air Quality (ASHRAE 62.2-2010)

- 1. **Transfer air.** Ventilation air shall be provided directly from the outdoors and not as transfer air from adjacent dwelling units or other spaces, such as garages, unconditioned crawlspaces, or unconditioned attics. (CBEES 150.0(o))
- **Instructions and labeling.** Ventilation system controls shall be labeled, and the homeowner shall be provided with instructions on how to operate the system. (CBEES 150.0(o)) 3. Combustion and solid-fuel burning appliances. Combustion appliances shall be properly
- vented and air systems shall be designed to prevent back drafting. (CBEES 150.0(o)) 4. Garages. The wall and openings between occupiable spaces and the garage shall be sealed. HVAC systems that include air handlers or return ducts located in garages shall have total air
- leakage of no more than 6% of total fan flow when measured at 0.1 in. w.c. using California Title 24 or equivalents. (CBEES 150.0(o)) Minimum filtration. Mechanical systems supplying air to occupiable space through ductwork 5.
- shall be provided with a filter having a minimum efficiency of MERV 6 or better. (CBEES 150.0(0)6. Air inlets. Air inlets (not exhaust) shall be located away from known contaminants. (CBEES
- 7. Air moving equipment. Air moving equipment used to meet either the wholebuilding ventilation requirement or the local ventilation exhaust requirement shall be rated in terms of airflow and
- sound. (CBEES 150.0(o)) a. All continuously operating fans shall be rated at a maximum of 1.0 sone.
- **b.** Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- c. Intermittently operated local exhaust fans shall be rated at maximum of 3.0 sone. **d.** Remotely located air-moving equipment (mounted outside of habitable spaces) need not meet
- requirements if at least 4 feet of ductwork between fan and intake grill

### D. Foundation and Underfloor

- 1. Foundation reinforcement. Continuous footings and stem walls shall be provided with a minimum two longitudinal No. 4 bars, one at the top and one at the bottom of the footing. (CRC R403.1.3.3)
- **2. Shear wall foundation support.** Shear walls shall be supported by continuous foundations. (CRC 403.1.2)
- 3. Concrete slabs-on-grade. Slabs-on-grade shall be minimum 3-1/2-inches thick. (CRC R506.1) 4. Vapor retarder. A 10-mil polyethylene or approved vapor retarder with joints lapped minimum 6 inches shall be placed between a concrete slab -on-grade and the base course or subgrade. (CRC 506.2.3)
- Anchor bolts and sills. Foundation plates or sills shall be bolted or anchored to the foundation or foundation wall per the following (CRC R403.1.6 and CRC R602.11.1):
- **a.** Minimum 1/2-inch-diameter steel bolts b. Bolts embedded at least 7 inches into concrete or masonry
- c. Bolts spaced maximum 6 feet on center
- d. Minimum two bolts per plate/sill piece with one bolt located maximum 12 inches and minimum 7 bolt diameters from each end of each sill plate/piece
- e. Minimum 3-inch by 3-inch by 0.299-inch steel plate washer between sill and nut on each bolt 6. Hold-downs. All hold-downs must be tied in place prior to foundation inspection.
- 7. Protection of wood against decay. Naturally durable or preservative-treated wood shall be
- provided in the following locations (CRC R317.1): a. All wood in contact with ground, embedded in concrete in direct contact with ground, or embedded in concrete exposed to weather
- **b.** Wood joists within 18 inches and wood girders within 12 inches of the exposed ground in crawl spaces shall be of naturally durable or preservative-treated wood
- c. Wood framing members that rest on concrete or mæonry exterior foundation walls and are less than 8 inches from exposed earth shall be of naturally durable or preservative treated wood
- d. Wood framing, sheathing, and siding on the exterior of the building and having clearance less than 6 inches from the exposed ground or less than 2 inches vertically from concrete steps, porch slabs, patio slabs, and similar horizontal surface exposed to weather
- e. Sills and sleepers on concrete or masonry slab in direct contact with ground unless separated from such slab by impervious moisture barrier
- f. Ends of wood girders entering masonry or concrete walls with clearances less than 1/2 inch on tops, sides, and ends g. Wood structural members supporting moisture-permeable floors or roofs exposed to weather,
- such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier
- **h.** Wood furring strips or other wood framing members attached directly to interior of exterior concrete or masonry walls below grade except where vapor retarder applied between wall and furring strips or framing members
- 8. Underfloor ventilation. Underfloor areas shall have ventilation openings through foundation walls or exterior walls, with minimum net area of ventilation openings of 1 square foot for each 150 square feet of underfloor area. On such ventilating opening shall be within 3 feet of each corner of the building. (CRC R408.1)
- 9. Underfloor access. Underfloor areas shall be provided with a minimum 18-inch by 24-inch access opening. (CRC R408.4)

### E. Wood Framing

- 1. Fastener requirements. The number, size, and spacing of fasteners connecting wood members/elements shall not be less than that set forth in CRC Table R602.3(1). (CRC R502.9, CRC R602.3. and CRC R802.2)
- 2. Stud size, height, and spacing. The size, height, and spacing of studs shall be in accordance with CRC Table R602.3(5). (CRC R602.3.1)

### E. Wood Framing (Continued)

- 3. Sill plate. Studs shall have full bearing on nominal 2-inch thick or larger sill plate with width at least equal to stud width. (CRC R602.3.4)
- 4. Bearing studs. Where joists, trusses, or rafters are spaced more than 16 inches on center and the bearing studs below are spaced 24 inches on center, such members shall bear within 5 nches of the studs beneath. (CRC R602.3.3)
- Drilling and notching of studs. Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25% of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40% of a single stud width. Any stud may be bored or drilled, provided the diameter of the resulting hole is no more than 60% of the stud width, the edge of the hole is no more than 5/8 inch to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior wall or bearing partitions drilled over 40% and up to 60% shall also be doubled with no more than two successive studs bored. (CRC R602.6)
- **Top plate.** Wood stud walls shall be capped with a double top plate installed to provide overlapping at corners and at intersections with other partitions. End joints in double top plates shall be offset at least 24 inches. Joints in plates need not occur over studs. Plates shall be minimum nominal 2 inches thick and have width at least equal to width of studs. (CRC R602.3.2)
- side of splice. (CRC R602.10.8.1)
- Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling, or notching of the top plate by more than 50% of its width, a galvanized metal tie not less than 0.054-inch thick and 1-1/2inches wide shall be fastened across and to the plate at each side of the opening with not less than 8 10d nails having a minimum length of 1-1/2 inches at each side or equivalent. The metal tie must extend minimum 6 inches past the opening. (CRC R602.6.1)
- 9. Cripple walls. Foundation cripple walls shall be framed of studs not less in size than the studding above. Cripple walls more than 4 feet in height shall have studs sized as required for an additional story. Cripple walls with stud height less than 14 inches shall be sheathed on at least one side with a wood structural panel fastened to both the top and bottom plates in accordance with Table R602.3(1), or the cripple walls shall be constructed of solid blocking. Cripple walls shall be supported on continuous foundations. (CRC R602.9)
- 10. Wall bracing. Buildings shall be braced in accordance with the methods allowed per CRC R602.10.2, CRC R602.10.4, and/or CRC R602.10.5.
- 11. Braced wall line spacing. Spacing between braced wall lines shall not exceed 20 feet or alternate provisions of CRC R602.10.1.3.
- 12. Shear wall cumulative length. The cumulative length of shear walls within each braced wall line shall meet the provisions of CRC Table R602.10.3(1) for wind loads and CRC Table R602.10.3(2) for seismic loads. (CRC R602.10.1.1) 13. Shear wall spacing. Shear walls shall be located not more than 25 feet on center. (CRC R602.10.2.2)
- 14. Shear wall offset. Shear walls may be offset out-of-plan not more than 4 feet from the designated braced wall line and not more than 8 feet from any other offset wall considered part of the same braced wall line. (CRC R602.10.1.2)
- 15. Shear wall location. Shear walls shall be located at the ends of each braced wall line or meet the alternate provisions of CRC R602.10.2.2.
- 16. Individual shear wall length. Shear walls shall meet minimum length requirements of CRC R602.10.6.5.1 17. Cripple wall bracing. Cripple walls shall be braced per CRC R602.10.11.
- **18.** Shear wall and diaphragm nailing. All shear walls, roof diaphragms, and floor diaphragms shall be nailed to supporting construction per CRC Table R602.3(1). (CRC R604.3)
- 19. Shear wall joints. All vertical joints in shear wall sheathing shall occur over, and be fastened to, common studs. Horizontal joints in shear walls shall occur over, and be fastened to, minimum 1-1/2-inch-thick blocking. (CRC R602.10.10)
- **20.** Framing over openings. Headers, double joists, or trusses of adequate size to transfer loads to vertical members shall be provided over window and door openings in loadbearing walls and partitions. (CBC 2304.3.2)
- 21. Joists under bearing partitions. Joists under parallel bearing partitions shall be of adequate size to support the load. Double joists, sized to adequately support the load, that are separated to permit the installation of piping or vents shall be full depth solid-blocked with minimum 2-inch nominal lumber spaced at maximum 4 feet on center. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R502.4)
- 22. Joists above or below shear walls. Where joists are perpendicular to a shear wall above or below, a rim joist, band joist, or blocking shall be provided along the entire length of the shear wall. Where joists are parallel to a shear wall above or below, a rim joist, end joist, or other parallel framing shall be provided directly above and/or below the shear wall. Where a parallel framing member cannot be located directly above and/or below the shear wall, full-depth blocking at 16-inch spacing shall be provided between the parallel framing members to each side of the shear wall. (CRC R602.10.8)
- 23. Floor member bearing. The ends of each floor joist, beam, or girder shall have minimum 1-1/2 inches of bearing on wood or metal and minimum 3 inches of bearing on masonry or concrete except where supported on a 1-inch-by-4-inch ribbon strip and nailed to the adjoining stud or by the use of approved joist hangers. (CRC R502.6)
- inches and shall be nailed together within minimum 3 10d face nails. A wood or metal splice with strength equal to or greater than that provided by the lap is permitted. (CRCR502.6.1)
- 25. Floor joist-to-girder support. Floor joists framing into the side of a wood girder shall be supported by approved framing anchors or on ledger strips minimum nominal 2 inches by 2 inches. (CRC R502.6.2)
- 26. Floor joist lateral restraint. Floor joists shall be supported laterally at ends and each intermediate support by minimum 2-inch full-depth blocking, by attachment to full-depth header band joist, or rim joist, to an adjoining stud, or shall be otherwise provided with lateral support to prevent rotation. (CRC R502.7)
- **27.** Floor joist bridging. Floor joists exceeding nominal 2 inches by 12 inches shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch strip nailed across the bottom of joists perpendicular to joists at maximum 8-foot intervals. (CRC
- 28. Framing of floor openings. Openings in floor framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the floor joist. Single trimmer joists may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section F. General Material Specifications to support the floor joists framing into the header. Approved hangers shall be used for the header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail joists over 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R502.10)
- **29. Girders**. Girders for single-story construction or girders supporting loads from a single floor shall not be less than 4 inches by 6 inches for spans 6 feet or less, provided that girders are spaced not more than 8 feet on center. Other girders shall be designed to support the loads specified in the CBC. Girder end joints shall occur over supports. When a girder is spliced over a support, an adequate tie shall be provided. The ends of beams or girders supported on masonry or concrete shall not have less than 3 inches of bearing. (CBC 2308.7)
- **30.** Ridges, hips, and valleys. Rafters shall be framed to a ridge board or to each other with a gusset plate as a tie. Ridge boards shall be minimum 1-inch nominal thickness and not less in depth than the cut end of the rafter. At all valley and hips, there shall be a valley or hip rafter not less than 2-inch nominal thickness and not less in depth than the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the specific load at that point. Where the roof pitch is less than 3:12 slope 5. Masonry. Masonry units shall comply with ASTM C 90 for load bearing concrete masonry units. (25% gradient), structural members that support rafters and ceilings joists, such as ridges, hips, and valleys, shall be designed as beams. (CRC R802.3)
- 31. Ceiling joist and rafter connections. Ceiling joists and rafters shall be nailed to each other per CRC Table R802.5.1(9), and the rafter shall be nailed to the wall top plate per CRC Table R602.3(1). Ceiling joists shall be continuous or securely joined per CRC Table R802.5.1(9) where they meet over interior partitions and are nailed to adjacent rafters to provide a continuous tie across the building when such joists are parallel to rafters. Where ceiling joists are not connected to the rafters at the wall top plate, joists connected higher in the attic shall be installed as rafter ties, or rafter ties shall be installed to provide a continuous tie. Where ceiling joists are not parallel to rafters, rafter ties shall be installed. Rafter ties shall be minimum 2 inches by 4 inches nominal, installed per CRC Table R802.5.1(9), or connections of equivalent capacities shall be provided. Where ceilings joists or rafter ties are not provided, the ridge formed by these rafters shall be supported by a wall or engineer-designed girder. (CRC R802.3.1)
- 32. Ceiling joists lapped. Ends of ceiling joists shall be lapped minimum 3 inches or butted overbearing partitions or beams and toenailed to the bearing element. Where ceiling joists provide resistance to rafter thrust, lapped joists shall be nailed together per CRC Table R602.3(1) and butted joists shall be tied together in a manner to resist such thrust. (CRC R802.3.2)
- **33.** Collar ties. Collar ties or ridge straps to resist wind uplift shall be connected in the upper third of the attic space. Collar ties shall be a minimum 1 inch by 4 inches nominal and spaced at maximum 4 feet on center. (CRC R802.3.1)
- 34. Purlins. Purlins installed to reduce the span of rafters shall be sized not less than the required size of the rafters they support. Purlins shall be continuous and shall be supported by 2-inchby-4-inch nominal braces installed to bearing walls at a minimum 45-degree slope from norizontal. The braces shall be spaced maximum 4 feet on center with a maximum 8-foot unbraced length. (CRC R802.5.1
- 35. Roof/ceiling member bearing. The ends of each rafter or ceiling joist shall have not less than 1-1/2 inches of bearing on wood or metal and not less than 3 inches of bearing on masonry or concrete. (CRC R802.6)
- **36.** Roof/ceiling member lateral support. Roof framing members and ceiling joists with anominal depth-to-thickness ratio exceeding 5:1 shall be provided with lateral support at points of bearing to prevent rotation. (CRC R802.8)
- 37. Roof/ceiling bridging. Rafters and ceiling joists with a nominal depth-to-thickness ratio exceeding 6:1 shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch wood strip nailed across the rafters or ceiling joists at maximum 8-foot intervals. (CRC R802.8.1)

#### E. Wood Framing (Continued)

**Top plate splices.** Top plate lap splices shall be face-nailed with minimum 8 16d nails on each

24. Floor joist lap. Floor joists framing opposite sides over a bearing support shall lap minimum 3

- **38.** Framing of roof/ceiling openings. Openings in roof and ceiling framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the ceiling joist or rafter. Single trimmer joist s may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section to support the ceiling joists or rafters framing into the header. Approved hangers shall be used for the header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail joists over 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R502.10)
- 39. Roof framing above shear walls. Rafters or roof trusses shall be connected to top plates of shear walls with blocking between the rafters or trusses. (CRC R602.10.8)
- 40. Roof diaphragm under fill framing. Roof plywood shall be continuous under California fill 41. Roof diaphragm at ridges. Minimum 2-inch nominal blocking required for roof diaphragm
- nailing at ridges 42. Blocking of roof trusses. Minimum 2-inch nominal blocking required between trusses at ridge
- lines and at points of bearing at exterior walls. 43. Truss clearance. Minimum 1/2-inch clearance required between top plates of interior non-
- bearing partitions and bottom chords of trusses. 44. Drilling, cutting, and notching of roof/floor framing. Notches in solid lumber joists, rafters, blocking, and beams shall not exceed onesixth the member depth, shall be not longer than one third the member depth, and shall not be located in the middle one-third of the span. Notches at member ends shall not exceed one-fourth the member depth. The tension side of members 4 inches or greater in nominal thickness shall not be notched except at member ends. The diameter of holes bored or cut into members shall not exceed one-third the member depth. Holes shall not be closer than 2 inches to the top or bottom of the member or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches to the notch. (CRC R502.8.1
- 45. Exterior landings, decks, balconies, and stairs. Such elements shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be selfsupporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal. (CRC R311.3)
- R1003.19): a. In concealed spaces of stud walls and partitions, including furred spaces, and parallel rows of studs or staggered studs, as follows:

46. Fireblocking. Fireblocking shall be provided in the following locations (CRC R302.11 and CRC

- I. Vertically at the ceiling and floor levels
- II. Horizontally at intervals not exceeding 10 feet
- **b.** At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings, and cove ceilings
- c. In concealed spaces between stair stringers at the top and bottom of the run d. At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion
- e. At chimneys and fireplaces per item E.49
- f. Cornices of a two-family dwelling at the line of dwelling-unit separation
- 47. Fireblocking materials. Except as otherwise specified in items E.48 and E.49, fireblocking shall consist of the following materials with the integrity maintained (CRC R302.11.1): a. Two-inch nominal lumber
- b. Two thicknesses of one-inch nominal lumber with broken lap joints c. One thickness of 23/32-inch wood structural panel with joints backed by 23/32-inch wood structural panel
- d. One thickness of 3/4-inch particleboard with joints backed by 3/4-inch particleboard
- e. 1/2-inch gypsum board
- **f.** 1/4-inch cement-based millboard
- g. Batts or blankets of mineral or glass fiber of other approved materials installed in such a manner as to be securely retained in place. Batts or blankets of mineral or glass fiber or other approved non-rigid materials shall be permitted for compliance with the 10 -foot horizontal fireblocking in walls constructed using parallel rows of studs or staggered studs. Unfaced fiberglass batt insulation used as fireblocking shall fill the entire cross-section of the wall cavity to a minimum height of 16 inches measured vertically. When piping, conduit, or similar obstructions are encountered, the insulation shall be packed tightly around the obstruction. Loose-fill insulation material shall not be used as a fireblock unless specifically tested in the form and manner intended for use to demonstrate its ability to remain in place and to retard the spread of fire and hot gases.
- 48. Fireblocking at openings around vents, pipes, ducts, cables, and wires at ceiling and floor level. Such openings shall be fireblocked with an approved material to resist the free passage of flame and products of combustion. (CRC R302.11
- 49. Fireblocking of chimneys and fireplaces. All spaces between chimneys and floors and ceilings through which chimneys pass shall be fireblocked with noncombustible material securely fastened in place. The fireblocking of spaces between chimneys and wood joists, beams, or headers shall be self-supporting or be placed on strips of metal or metal lath laid across the spaces between combustible material and the chimney. (CRC R1003.19)
- **50. Draftstopping**. In combustible construction where there is usable space both above and below the concealed space of a floor/ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1000 square feet. Draftstopping shall divide the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draftstopping shall be provided in floor/ceiling assemblies under the following circumstances (CRC R302.12):
- **a.** Ceiling is suspended under the floor framing
- **b.** Floor framing is constructed of truss-type open-web or perforated members 51. Draftstopping materials. Draftstopping shall not be less than 1/2-inch gypsum board, 3/8-inch
- wood structural panels, or other approved materials adequately supported. Draftstopping shall be installed parallel to the floor framing members unless otherwise approved by the building official. The integrity of draftstops shall be maintained. (CRC R302.12.1)
- 52. Combustible insulation clearance. Combustible insulation shall be separated minimum 3 inches from recessed luminaires, fan motors, and other heat producing devices. (CRC R302.14)

- Lumber. All joists, rafters, beams, and posts 2-inches to 4-inches thick shall be No. 2 grade Douglas Fir-Larch or better. All posts and beams 5 inches and thicker shall be No. 1 grade Douglas Fir-Larch or better. Studs not more than 8 feet long shall be stud -grade Douglas Fir-Larch or better when supporting not more than one floor, roof, and ceiling. Studs longer than 8 feet shall be No. 2 grade Douglas Fir-Larch or better.
- **Concrete**. Concrete shall have a minimum compressive strength of 2,500 psi at 28 days and shall consist of 1 part cement, 3 parts sand, 4 parts 1-inch maximum size rock, and not more than 7-1/2 gallons of water per sack of cement. (CRC R402.2)
- Mortar. Mortar used in construction of masonry walls, foundation walls, and retaining walls shall conform to ASTM C 270 and shall consist of 1 part portland cement, 2-1/4 to 3 parts sand, and 1/4 to 1/2 part hydrated lime. (CBC 2103.2)
- Grout. Grout shall conform to ASTM C 476 and shall consist of 1 part portland cement, 1/10 part hydrated lime, 2-1/4 to 3 parts sand, and 1 to 2 parts gravel. Grout shall attain a minimum compressive strength of 2,000 psi at 28 days. (CBC 2103.3)
- (CBC 2103.1) Reinforcing steel. Reinforcing steel used in construction of reinforced masonry or concrete
- structures shall be deformed and comply with ASTM A 615. (CBC 2103.4)
- Structural steel. Steel used as structural shapes such as wide-flange sections, channels, plates, and angles shall comply with ASTM A36. Pipe columns shall comply with ASTM A53. Structural tubes shall comply with ASTM A500, Grade B.
- Fasteners for preservative-treated wood. Fasteners for preservative-treated and fireretardant-treated wood - including nuts and washers -- shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.3.1) **Exception:** 1/2-inch diameter or greater steel bolts
- Exception: Fasteners other than nails and timber rivets may be of mechanically deposited zinc coated steel with coating weights in accordance with ASTM B 695, Class 55 minimum Exception: Plain carbon steel fasteners acceptable in SBX/DOT and zinc borate preservativetreated wood in an interior, dry environment
- Fasteners for fire-retardant-treated wood. Fasteners for fire-retardant-treated wood used in exterior applications or wet or damp locations shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.3.3)

#### G. Roofing and Weatherproofing

- Roof covering. All roof covering shall be installed per applicable requirements of CBC 1507. Roof coverings shall be at least Class A rated in accordance with ASTM E 108 or UL 790. (County Building Code 92.1.1505.1)
- 2. Roof flashing. Flashing shall be installed at wall and roof intersections, at gutters, wherever there is a change in roof slope or direction, and around roof openings. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019 inch (No. 26 galvanized sheet). (CRC R903.2.1)
- 3. Crickets and saddles. A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches wide as measured perpendicular to the slope. Cricket or saddle covering shall be sheet metal or the same material as the roof covering. (CRC R903.2.2)

#### G. Roofing and Weatherproofing (Continued)

- 4. Water-resistive barrier. A minimum of one layer of No. 15 asphalt felt shall be attached to studs or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer minimum 2 inches. Where joints occur, felt shall be lapped minimum 6 inches. The felt shall be continuous to the top of walls and terminated at penetrations and building appendages in a mannerto maintain a weather-resistant exterior wall envelope. (CRC R703.2)
- Wall flashing. Approved corrosion-resistant flashing shall be applied shingle fashion at the following locations to prevent entry of water into the wall cavity or penetration of water to the building structural framing components (CRC R703.8):
- **a.** Exterior door and window openings, extending to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage b. At the intersection of chimneys or other masonry cons truction with frame or stucco walls, with
- projecting lips on both sides under stucco copings **c.** Under and at the ends of masonry, wood, or metal copings and sills
- **d.** Continuously above all projecting wood trim e. Where exterior porches, decks, or stairs attach to a wall or floor assembly of wood-frame
- construction
- f. At wall and roof intersections g. At built-in gutters
- Damp proofing. Damp proofing materials for foundation walls enclosing usable space below grade shall be installed on the exterior surface of the wall and shall extend from the top of the footing to finished grade. (CRC R406.1)
- Weep screed. A minimum 0.019-inch (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed with a minimum vertical attachment flange of 3 -1/2 inches shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C 92. The weep screed shall be placed a minimum 4 inches above the earth or 2 inches above paved areas and shall be of a type allowing trapped water to drain to the exterior of the building. (CRC R703.7.2.1)

#### H. Grading and soils

- Grading permit. Grading permit required if volume of earth moved exceeds 200 cubic yards or if any cuts or fills exceed 8 feet in height/depth. (County Grading Ordinance 202)
- Compaction report. Compaction report required for fill material 12 inches or more in depth. (CBC 1803.5.8)

### I. Green Building Standards Code (CALGreen) Requirements

- Applicability. CalGreen residential mandatory measures shall apply to every newly constructed building or structure and within any addition or alteration increasing a building's conditioned area, volume, or size. (CalGreen 101.3, CalGreen 301.1.1) Exception: All residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures per CalGreen 301.1.1 and CalGreen 4.303.1
- 2. Water conserving plumbing fixtures and fittings. Plumbing fixtures and fittings shall comply with the following per CalGreen 4.303.1: a. Water closets: Maximum 1.28 gallons per flush
- **b.** Urinals: Maximum 0.5 gallons per flush

(CalGreen 4.304.1)

- c. Single showerheads: Maximum flow rate of 1.8 gallons per minute at 80 psi d. Multiple showerheads serving one shower: Maximum combined flow rate of 1.8 gallons per
- minute at 80 psi e. Lavatory faucets: Maximum flow rate of 1.2 gallons per minute at 60 psi, minimum flow rate of
- 0.8 gallons per minute at 20 psi f. Kitchen faucets: Maximum flow rate of 1.5 gallons per minute at 60 psi (County Green Building Code 97.1.4.303.1.4.4)
- Exception: Temporary increase allowed to maximum 2.2 gallons per minute at 60 psi if f aucet defaults back to maximum 1.5 gallons per minute at 60 psi g. Appliances: At least one qualified ENERGY STAR dishwasher or clothes washer shall be
- nstalled in each dwelling unit. (County Green Building Code 97.1.4.303.3) Outdoor potable water uses in landscape areas. Residential developments shall comply with local water efficient landscape ordinance or the current California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

compliance with the California Energy Code. (CALGreen 4.406.1)

demolition waste management ordinance. (CalGreen 4.408.1)

Construction & Demolition (C&D) Facilities Guide is online at:

reasonably close to the jobsite The City of El Cajon Building Division,

construction for examination by the enforcing agency. (CalGreen 4.408.2)

recycling, reuse on the project or salvage for future use or sale.

or bulk mixed (single stream).

4.408.1. (CalGreen 4.408.3)

calculated by weight or volume, but not by both.

waste materials will be diverted by a waste company

requirement in Section 4.408.1. (CalGreen 4.408.4)

reduction requirement in Section 4.408.1.

b. Operation and maintenance instructions for the following:

II. Roof and yard drainage, including gutters and downspouts.

resource consumption, including recycle programs and locations.

**d.** Public transportation and/or carpool options available in the area.

in the building (CALGreen 4.410.1):

**IV.** Landscape irrigation systems.

least 5 feet away from the foundation

cycle of the structure.

V. Water reuse systems

range

conserve water.

waste generated.

**Exception**: Excavated soil and land-clearing debris.

4. Joints and openings. Openings in the building envelope separating conditioned space from

cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

unconditioned space needed to accommodate utility and other penetrations must be sealed in

Exception: Annular spaces around pipes, electric cables, conduits or other openings in plates

Construction waste reduction, disposal, and recycling. Recycle and/or salvage for reuse a

minimum of 65 percent of the nonhazardous construction and demolition waste in accordance

with either Section 4.408.2, 4.408.3, or 4.408.4, or meet a more stingent local construction and

Exception: Alternate waste reduction methods developed by working with local agencies if

https://www.sandiegocounty.gov/content/dam/sdc/dpw/SOLID\_WASTE\_PLANNING

and RECYCLING/UpdatedCDResources/CDFacility QuickGuide.pdf

**Exception**: The enforcing agency may make exceptions to the requirements of this section when

Construction waste management plan. A construction waste management plan in

conformance with Items 1-5 shall be completed and available on the job site. The construction

waste management plan shall be updated as necessary and shall be available during

a. Identify the construction and demolition waste materials to be diverted from disposal by

**b.** Specify if construction and demolition waste materials will be sorted on-site (source-separated)

c. Identify diversion facilities where the construction and demolition waste materials will be taken.

d. Identify construction methods employed to reduce the amount of construction and demolition

e. Specify that the amount of construction and demolition waste materials diverted shall be

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

Note: The owner or contractor may make the determination if the construction and demolition

construction and demolition waste disposed of in landfills, which do not exceed 3.4 pounds per

square foot of the building area shall meet the 65 percent construction waste reduction

8. Waste stream reduction alternative [LR]. Projects that generate a total combined weight of

isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

diversion or recycle facilities capable of compliance with this item do not exist or are not located

at exterior walls shall be protected against the passage of rodents by closing such opening with

### I. (CALGreen) Requirements (Continued)

**h.** Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.

- Information about state solar energy and incentive programs available.
- A copy of all special inspection verifications required by the enforcing agency or code.
- k. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.
- I. Information and/or drawings identifying the location of grab bar reinforcements.
- 11. Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation or during storage on the construction site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, Sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system. (CALGreen 4.504.1
- 12. Adhesives, sealants, caulks, paints, and coatings pollutant control. Adhesives (including carpet adhesives), sealants, caulks, paints, and coatings shall comply with VOC limits per CALGreen 4.504.2. Verification of compliance shall be provided at the request of the enforcing agency. (CALGreen 4.504.2.1)
- **13.** Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the following (CALGreen 4.504.3):
- a. Carpet and Rug Institute's Green Label Plus Program (all carpet cushions must meet the requirements of this program) **b.** California Department of Public Health Standard Practice for the testing of VOCs (Specification
- 01350). c. NSF/ANSI 140 at the Gold level.
- d. Scientific Certifications Systems Indoor Advantage<sup>™</sup> Gold.
- 14. Resilient flooring systems. At least 80 percent of the floor area receiving resilient flooring shall comply with one of or more of the following (CALGreen 4.504.4):
- a. VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) High Performance Products Database b. Products compliant with CHPS criteria certified under the Greenguard Children & Schools
- program c. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program
- d. Meet the currently adopted version of California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," (also known as Specification 01350)
- **15.** Composite wood products. Hardwood plywood, particleboard and medium density fibeboard composite wood products used on the interior or exterior of the building 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 CalGreen Table 4.504.5. The following limits are in parts per million (CALGreen 4.504.5): a. Hardwood plywood veneer core 0.05
- **b.** Hardwood plywood composite core 0.05
- 0.09 c. Particle board
- d. Medium-density fiberboard (MDF) 0.11 e. Thin MDF (5/16 inch or less) 0.13
- 16. 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 (CALGreen 4.505.3)
- **a.** Moisture content shall be determined with either a probe-type or contact-type moisture meter. **b.** Moisture readings shall be taken at a point 2 feet to 4 feet from the grade stamped end of each
- piece to be verified. **c.** 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 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. 17. Bathrooms with a bathtub and/or shower shall be mechanically ventilated per the following
- (CalGreen 4.506.1): **a.** Fans shall be ENERGY STAR compliant and ducted to terminate outside building
- **b.** Unless functioning as a component of a whole-house ventilation system, fans shall have humidity controls capable of adjustment - manually or automatically -- between a relative humidity range of 50% to 80%.
- Heating and air-conditioning system design. Heating and air-conditioning systems shall be sized, designed, and have their equipment selected using the following methods (CALGreen 4.507.2):
- a. The heat loss and heat gain are established according to the currently adopted version of ANSI/ACCA 2 Manual J, ASHRAE handbooks, or other equivalent design software or methods. b. Duct systems are sized according to the currently adopted version of ANSI/ACCA 1 Manual D,
- ASHRAE handbooks, or other equivalent design software or methods. c. Select heating and cooling equipment according to the currently adopted version of ACCA 36-S Manual S or other equivalent design software or methods.

PDS081

THERE ARE MINIMUM REQUIREMENTS AND SHALL NOT SUPERSEDE MORE RESTRICTIVE SPECIFICATIONS ON THE PLANS OR AS REQUIRED BY APPLICABLE CODE

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isio  $\bar{\Box}$ afe S Building

![](_page_18_Picture_218.jpeg)

CRC MIN. CONSTRUCTION SPECIFICATIONS

#### **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 65 percent construction waste **Documentation.** Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1-5, Section 4.408.3, or Section 4.408.4. 10. Operation and maintenance manual. Prior to final inspection, a manual, compact disc, web based reference, or other acceptable media which includes all of the following shall be placed

a. Directions to owner or occupant that manual shall remain with the building throughout the life

I. Equipment and appliances, including water-saving devices and systems, HVAC system, photovoltaic systems, water-heating systems and other major appliances and equipment.

III. Space conditioning systems, including condensers and air filters.

c. Information from local utility, water, and waste recovery providers on methods to further reduce

e. 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

f. Information about water-conserving landscape and irrigation design and controllers which

**g.** Instructions for maintaining gutters and downspouts and the importance of diverting water at

# **General Storm Water Notes:**

A. ALL OPERATION WILL COMPLY WITH THE CITY'S JURIDICTIONAL RUNOFF MANAGEMENT PLAN (JRMP). B. THE OWNER AND THE OWNER'S CONTRACTOR ARE RESPONSIBLE FOR POLLUTION PREVENTION PRACTICES TO PREVENT THE DISCHARGE OF SEDIMENT AND POLLUTANTS TO THE PUBLIC STORM DRAIN SYSTEM.

C. OWNER AND THE OWNER'S CONTRACTOR ARE RESPONSIBLE FOR THE PREVENTION OF EROSION CAUSED BY CLEARING OF VEGETATION, GRADING, DEMOLITION OR CONSTRUCTION.

D. SEDIMENT, POLLUTION AND EROSION CONTROL MEASURES WILL BE IMPLEMENTED STARTING THE FIRST DAY OF CLEARING, GRADING OR SOIL DISTURBANCE, OR CONSTRUCTION. THESE CONTROLS WILL REMAIN IN EFFECT UNTIL ALL RELEVANT OPERATIONS HAVE BEEN COMPLETED AND DISTURBED SOILS HAVE EITHER: 1) ESTABLISHED VEGETATION, OR

2) OTHER PERMANENT EROSION CONTROL AT 70% COMPLETION

# **Erosion and Sediment Control Notes:**

1. IN CASE OF EMERGENCY, CONTACT: NAME:

PHONE: 2. THE CONTRACTOR WILL MAINTAIN ALL SEDIMENT AND EROSION CONTROL DEVICES IN GOOD WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER THROUGHOUT EVERY PHASE OF THE PROJECT.

3. THE CONTRACTOR WILL INSTALL ALL EROSION CONTROL MEASURES ADDITIONAL TO THOSE SPECIFIED BY THE APPROVED EROSION CONTROL PLAN IF REQUIRED TO DO SO BY THE CITY ENGINEER.

4. THE CONTRACTOR AND PROPERTY OWNER WILL PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION..

5. GRADED AREAS AROUND THE PROJECT PERIMETER WILL DRAIN AWAY FROM THE FACE OF SLOPES AT THE END OF EACH WORKING DAY.

6. ALL GRAVEL BAGS SHALL HAVE 3/4 INCH MINIMUM AGGREGATE (NO SANDBAGS AND NO BURLAP TYPE BAGS ALLOWED) 7. THE EROSION CONTROL BMP'S MUST BE INSTALLED PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION ACTIVITIES. PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL NOTIFY THE CITY STORM WATER INSPECTOR AT (619) 441-1653.

| PROJECT ADDRESS:   |
|--------------------|
| PROJECT APN:       |
| PERMIT NUMBER:     |
| APPLICANT NAME:    |
| APPLICANT ADDRESS: |
|                    |

![](_page_19_Picture_14.jpeg)

| EARTHWC     | COMPLETE) | RMITTEE TO C | ACE AREA TABLE (PE | NG PERVIOUS SURFA | EXISTIN |
|-------------|-----------|--------------|--------------------|-------------------|---------|
|             | NOTES     | AREA (SF)    | DIMENSIONS         | PERVIOUS ITEM     | SITE ID |
|             |           |              |                    |                   |         |
|             |           |              |                    |                   |         |
| IMPERVIOUS  |           |              |                    |                   |         |
| TOTAL IMPER |           |              |                    | ·                 |         |
|             | COMPLETE) | ERMITTEE TO  | ACE AREA TABLE (P  | SED PERVIOUS SURF | PROPOS  |
| CUT QUANTI  | NOTES     | AREA (SF)    | DIMENSIONS         | PERVIOUS ITEM     | SITE ID |
| FILL QUANTI |           |              |                    |                   |         |
| IMPORT/EXP  |           |              |                    |                   |         |
| MAX CUT DE  |           |              |                    |                   |         |
| MAX FILL DE |           |              |                    |                   |         |

![](_page_19_Picture_16.jpeg)

![](_page_19_Picture_18.jpeg)

(INDICATE NORTH)

| DISTURBANCE<br>E) |
|-------------------|
| SF                |
| SF                |
| SF                |
| SF                |
|                   |
| CYD               |
| CYD               |
| CYD               |
| FT                |
| FT                |
|                   |

# **LEGEND**

| (Pl           | ER CALTRANS' STANDARDS) |
|---------------|-------------------------|
| $\rightarrow$ | DIRECTION OF FLOW       |
|               | FIBER ROLLS (SC-5)      |
| $\infty$      | GRAVEL BAGS (SC-6)      |
| _xx_          | SILT FENCE (SC-1)       |
| WM-1          | MATERIAL STORAGE        |
| WM-5          | SOLID WASTE MANAGEMENT  |
| WM-8          | CONCRETE WASTE MANAGEM  |
| WM-9          | SANITARY WASTE MANAGEME |
|               |                         |

#### WINDOW NOTES: 1. VERIFY OPERATION AND OPENING DIRECTION WITH PLAN AND ELEVATION DRAWINGS. CONFIRM FINAL OPERABILITY WITH OWNER

- 2. WINDOW SIZES ARE ROUGH OPENING DIMENSIONS, GC TO VERIFY FINAL R.O. SIZES PER WINDOW SCHEDULE AND SELECTED WINDOW MANUFACTURER. 3. UNLESS OTHERWISE NOTED, ALIGN TOP OF WINDOWS AND DOORS SUCH THAT HEAD TRIM LINES UP, SEE ELEVATION DRAWINGS FOR REFERENCE. 4. CRC R337.8.2.1 EXTERIOR WINDOWS, SKYLIGHTS AND EXTERIOR GLAZED DOOR ASSEMBLY REQUIREMENTS
- EXTERIOR WINDOWS, SKYLIGHTS AND EXTERIOR GLAZED DOOR ASSEMBLIES SHALL COMPLY WITH ONE OF THE FOLLOWING REQUIREMENTS: BE CONSTRUCTED OF MULTIPANE GLAZING WITH A MINIMUM OF ONE TEMPERED PANE MEETING THE REQUIREMENTS OF SECTION 2406 SAFETY GLAZING, (1) OR
- (2) BE CONSTRUCTED OF GLASS BLOCK UNITS, OR
- HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED ACCORDING TO NFPA 257, OR (3) BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-2. (4)

5. GLAZING FRAMES MADE OF VINYL MATERIALS SHALL HAVE WELDED CORNERS, METAL REINFORCEMENT IN THE INTERLOCK AREA, AND BE CERTIFIED TO THE MOST CURRECT EDITION OF ANSI/AAMA/NWWDA 101/I.S.2 STRUCTURAL REQUIREMENTS.

6. TRANSPARENT WINDOWS SHALL NOT USE TINTED, MIRRORED, OR HIGHLY REFLECTIVE GLASS. THE USE OF NON-REFLECTIVE GLASS IS REQUIRED PER CITY OF EL CAJON MUNICIPAL DESIGN STANDARDS 17.140.170(E)(2)

7. EGRESS COMPLIANT WINDOWS TO MEET ALL REQUIREMENTS OF CRC R310 AND CFC 1031.3.1

8. CFC 1031.3.1 - MINIMUM SIZE: a. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET (0.53 m<sup>2</sup>).

b. EXCEPTION: THE MINIMUM NET CLEAR OPENING FOR GRADE FLOOR EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE 5 SQUARE FEET (0.46 m<sup>2</sup>).

![](_page_20_Figure_10.jpeg)

### DOOR NOTES:

1. VERIFY DOOR TYPE, OPERATION, AND OPENING DIRECTION WITH PLAN AND ELEVATION DRAWINGS. CONFIRM FINAL OPERABILITY WITH OWNER 2. UNLESS OTHERWISE NOTED, ALIGN TOP OF WINDOWS AND DOORS SUCH THAT HEAD TRIM LINES UP, SEE ELEVATION DRAWINGS FOR REFERENCE 3. INTERIOR DOOR SIZES ARE NORMINAL PANEL DIMENSIONS. FINAL PANEL SYLE PER OWNER.

- CRC 337.8.3 EXTERIOR DOORS EXTERIOR DOORS SHALL COMPLY WITH ONE OF THE FOLLOWING:
  - THE EXTERIOR SURFACE OR CLADDING SHALL BE OF NON-COMBUSTIBLE MATERIAL (1)
  - THE EXTERIOR SURFACE OR CLADDING SHALL BE OF IGNITION RESISTANT MATERIAL (2) THE EXTERIOR DOOR SHALL BE CONSTRUCTED OF SOLID CORE WOOD THAT COMPLIES WITH ONE OF THE FOLLOWING REQUIREMENTS (3) STILES AND RAILS SHALL NOT BE LESS THAN 1 3/8 INCHES THICK. 1

PANELS SHALL NOT BE LESS THAN 1<sup>1</sup>/<sub>4</sub> INCHES THICK, EXCEPT FOR THE EXTERIOR PERIMETER OF THE PANEL THAT SHALL BE 2 PERMITTED TO TAPER TO A TONGUE NOT LESS THAN <sup>3</sup>/<sub>8</sub> INCH THICK.

(4) THE EXTERIOR DOOR ASSEMBLY SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED IN ACCORDAN TO NFPA 252. (5) THE EXTERIOR SURFACE OR CLADDING SHALL BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SECTION 707A.3.1 WHEN

TESTED IN ACCORDANCE TO ASTM E2707.

(6) THE EXTERIOR SURFACE OR CLADDING SHALL BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-1. 4. AT EXTERIOR MAN DOORS, PROVIDE A MINIMUM 36" DEEP FLOOR OR LANDING ON EACH SIDE OF EACH EXTERIOR DOOR, WITH A SLOPE NOT EXCEEDING <sup>1</sup>/<sub>4</sub> UNIT VERTICAL IN 12 UNITS HORIZONTAL (2%). THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SERVED. 5. TRANSPARENT DOORS SHALL NOT USE TINTED, MIRRORED, OR HIGHLY REFLECTIVE GLASS. THE USE OF NON-REFLECTIVE GLASS IS REQUIRED I CITY OF EL CAJON MUNICIPAL DESIGN STANDARDS 17.140.170(E)(2)

![](_page_20_Figure_34.jpeg)

| WIN | <b>IDOW</b> | SCHED | ULE    |          |       |        |          | DOC | OR SC | HEDULI | E - Exter   | ior      |                                        |          |
|-----|-------------|-------|--------|----------|-------|--------|----------|-----|-------|--------|-------------|----------|----------------------------------------|----------|
| ID  | QTY         | Width | Height | Туре     | Notes | Egress | Tempered | ID  | QTY   | Width  | Height      | Туре     | Notes                                  | Tempered |
| 01  | 1           | 2'-8" | 4'-0"  | CASEMENT |       |        | Y        | Α   | 1     | 3'-0"  | 7'-0"       | SWING    |                                        | Y        |
| 02  | 1           | 2'-8" | 4'-0"  | CASEMENT |       |        | Y        | В   | 1     | 3'-0"  | 7'-0"       | SWING    |                                        | Y        |
| 03  | 1           | 2'-8" | 5'-0"  | CASEMENT |       | Y      | Y        |     |       |        |             |          | LOUVERED DOOR W/ MIN. OPENING NOT LESS |          |
| 04  | 1           | 2'-8" | 5'-0"  | CASEMENT |       | Y      | Y        | С   | 1     | 2'-4"  | 7'-0"       | SWING    | REQ'S - CONFIRM WIDTH WITH SELECTED    |          |
| 05  | 1           | 3'-0" | 5'-0"  | CASEMENT |       | Y      | Y        |     |       |        |             |          | WATER HEATER                           |          |
| 06  | 1           | 3'-0" | 5'-0"  | CASEMENT |       | Y      | Y        |     |       |        |             |          |                                        |          |
| 07  | 1           | 1'-6" | 1'-6"  | AWNING   |       |        | Y        | DOC | OR SC | HEDULI | E - Interio | or       |                                        |          |
| 08  | 1           | 3'-0" | 5'-0"  | CASEMENT |       |        | Y        | ID  | QTY   | Width  | Height      | Ту       | pe Notes                               |          |
| 09  | 1           | 3'-0" | 5'-0"  | CASEMENT |       |        |          | iA  | 1     | 2'-6"  | 7'-0"       | SWING    |                                        |          |
| 10  | 1           | 3'-0" | 5'-0"  | CASEMENT |       |        |          | iB  | 1     | 2'-6"  | 7'-0"       | SWING    |                                        |          |
| 11  | 1           | 3'-0" | 5'-0"  | CASEMENT |       |        |          | iC  | 1     | 2'-6"  | 7'-0"       | SWING    |                                        |          |
| 12  | 1           | 3'-0" | 5'-0"  | CASEMENT |       |        |          | iD  | 1     | 5'-0"  | 7'-0"       | DOUBLE S | WING                                   |          |
| 13  | 1           | 3'-0" | 5'-0"  | CASEMENT |       |        |          | L   |       |        |             |          |                                        |          |

'Porat' A1 FLOOR PLAN /

ROOF PLAN

The Valley of Opportun

22

TABLE R602.3(3) REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES<sup>a, b, c</sup>

| Mark      | MINIMU            | M NAIL                  |             | MINIMUM NOMINAL |                  | PANEL NAI              | L SPACING              | UL<br>DESI<br>SPI | TIMA<br>GN W<br>EED V<br>(mph) | TE<br>/IND<br><sup>/</sup> ult |
|-----------|-------------------|-------------------------|-------------|-----------------|------------------|------------------------|------------------------|-------------------|--------------------------------|--------------------------------|
| Mark      | Size              | Penetration<br>(inches) | SPAN RATING | (inches)        | SPACING (inches) | Edges<br>(inches o.c.) | Field<br>(inches o.c.) | ex<br>ca          | Wind<br>posu<br>tego           | re<br>ry                       |
|           | 0.1.0             |                         |             |                 | 1.0              |                        | 10                     | D                 | C                              | D                              |
|           | 8d Common         | 1 75                    | 24/26       | 7,              | 16               | 6                      | 12                     | 170               | 140                            | 135                            |
| X'-X" (1) | (2.5 ×<br>0.131″) | 1.75                    | 24/16       | ʻ <b>/</b> 16   | 24               | 6                      | 12                     | 140               | 115                            | 110                            |

1. WOOD STRUCTURAL PANELS SHALL CONFORM TO DOC PS 1, DOC PS 2 OR ANSI/APA PRP 210, CSA O437 OR CSA O325. PANELS SHALL BE IDENTIFIED BY A GRADE MARK OR CERTIFICATE OF INSPECTION ISSUED BY AN APPROVED AGENCY. 2. VERTICAL JOINTS OF PANEL SHEATHING SHALL OCCUR OVER AND BE FASTENED TO COMMON STUDS. HORIZONTAL JOINTS IN BRACED WALL PANELS SHALL OCCUR OVER AND BE FASTENED TO COMMON BLOCKING OF A MINIMUM 1 1/2 INCH THICKNESS. 3.BRACED WALL PANELS SHALL BE FASTENED TO REQUIRED FOUNDATIONS IN ACCORDANCE WITH SECTION R602.11.1, AND TOP PLATE LAP SPLICES SHALL BE FACE-NAILED WITH NOT LESS THAN EIGHT (8) 16d NAILS ON EACH SIDE OF THE SPLICE.

![](_page_21_Figure_3.jpeg)

# **RAFTER SPAN CHART** For additional species and span criteria see CBC Table 2308.7.2(2), CRC Table R802.5.1(2)

RAFTER SPANS FOR COMMON LUMBER SPECIES (Roof Live Load = 20 pounds per square foot, Ceiling Attached to Rafters,  $L/\Delta$  = 240)

|          |                      | DEAI     | D LOAD = 1 | I0 pounds | per square | e foot     | DEAD       | LOAD =   | 20 pounds | per squar | e foot   |
|----------|----------------------|----------|------------|-----------|------------|------------|------------|----------|-----------|-----------|----------|
| RAFTER   |                      | 2 × 4    | 2 × 6      | 2 × 8     | 2 × 10     | 2 × 12     | 2 × 4      | 2 × 6    | 2 × 8     | 2 × 10    | 2 × 12   |
| SPACING  |                      |          |            |           | Μ          | laximum ra | fter spans |          |           |           |          |
| (inches) | SPECIES AND GRADE    | (ft in.) | (ft in.)   | (ft in.)  | (ft in.)   | (ft in.)   | (ft in.)   | (ft in.) | (ft in.)  | (ft in.)  | (ft in.) |
|          | Douglas Fir-Larch SS | 9-6      | 14-11      | 19-7      | 25-0       | Note b     | 9-6        | 14-11    | 19-7      | 24-9      | Note b   |
| 16       | Douglas Fir-Larch #1 | 9-1      | 14-4       | 18-11     | 23-9       | Note b     | 9-1        | 13-3     | 16-10     | 20-7      | 23-10    |
| 10       | Douglas Fir-Larch #2 | 8-11     | 14-1       | 18-2      | 22-3       | 25-9       | 8-6        | 12-5     | 15-9      | 19-3      | 22-4     |
|          | Douglas Fir-Larch #3 | 7-5      | 10-10      | 13-9      | 16-9       | 19-6       | 6-5        | 9-5      | 11-11     | 14-6      | 16-10    |

#### **CEILING JOIST SPAN CHART** For additional species and span criteria see CBC Table 2308.7.1(1) and CRC Table R802.4

CEILING JOIST SPANS FOR COMMON LUMBER SPECIES (Uninhabitable Attics Without Storage, Live Load = 10 pounds psf, L/Δ = 240)

|          |                   |    |          | DEAD LOAD | D = 5 pounds per square foot |          |
|----------|-------------------|----|----------|-----------|------------------------------|----------|
|          |                   | ĺ  | 2 × 4    | 2 × 6     | 2 × 8                        | 2 × 10   |
| SPACING  |                   |    |          | Maxim     | num ceiling joist spans      |          |
| (inches) | SPECIES AND GRAI  | DE | (ft in.) | (ft in.)  | (ft in.)                     | (ft in.) |
|          | Douglas Fir-Larch | SS | 11-11    | 18-9      | 24-8                         | Note a   |
| 16       | Douglas Fir-Larch | #1 | 11-6     | 18-1      | 23-10                        | Note a   |
| 10       | Douglas Fir-Larch | #2 | 11-3     | 17-8      | 23-0                         | Note a   |
|          | Douglas Fir-Larch | #3 | 9-5      | 13-9      | 17-5                         | 21-3     |

|                             |                                                                                                             | MINIMUM T                | TAB<br>HICKNESS (            | LE R803.1<br>DF LUMBER                                                                                                                                                                | ROOF SHEA                              | THING                                        |                                | PLAN KEY NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                             |
|-----------------------------|-------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| R                           | AFTER OR BEAM SPACI                                                                                         | IG (inches)              |                              |                                                                                                                                                                                       | MI                                     | IIMUM NET THICKNESS (inches                  | s)                             | 1. WALL BRACING PER SECTION R602 AND TABLE R602.10.3(1) & R602.10.3(3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                             |
|                             | 48 <sup>a</sup>                                                                                             |                          |                              | _                                                                                                                                                                                     |                                        | /8                                           |                                | 2. FOOTING PER SECTION R403. SEE DETAILS 6 & 7/A4.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                             |
|                             | 72 <sup>c</sup>                                                                                             |                          | TABL                         | E R602.7(3)                                                                                                                                                                           |                                        | 1-/2 1 & G                                   |                                | 3. SLAB ON GRADE PER CRC R506. 4" CONCRETE SLAB WITH NO. 3 BARS AT<br>MIDPOINT 18" O.C. EACH WAY OVER 4" COMPACTED CONSTRUCTION GRAVEL W/<br>10 MIL, VAPOR BARRIER UNDER SLAB TYP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                             |
| DER AND HI                  | EADER SPANS <sup>a</sup> FOR OPE                                                                            | N PORCHES (              | Maximum sp                   | oan for Dou                                                                                                                                                                           | glas fir-larc                          | h, hem-fir, Southern pine and                | spruce-pine-fir <sup>b</sup> ) | 4. CALIFORNIA FILL OVERSTACK FRAMING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                             |
|                             |                                                                                                             | SUPPORTIN<br>Ground Snow | G ROOF<br>Load (psf)         |                                                                                                                                                                                       |                                        |                                              |                                | 5 DOUBLE STUD AT EXTERIOR OPENINGS OVER 8'-0" TYP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | OR                                                                          |
| SIZE                        | 30                                                                                                          | Depth of Por             | i0<br>:h <sup>c</sup> (feet) | 70                                                                                                                                                                                    | )                                      | SUPPORTING FLO                               | JOK                            | 6. LINE OF BOOF OVERHAND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                             |
| 2 ~ 6                       | 8 14                                                                                                        | 8                        | 14                           | 8                                                                                                                                                                                     | 14                                     | 8                                            | 14                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                             |
| -2 × 6<br>-2 × 8            | 7-6         5-8           10-1         7-7                                                                  | 8-3                      | 4-8<br>6-2                   | 5-4<br>7-1                                                                                                                                                                            | 4-0<br>5-4                             | 8-5                                          | 6-4                            | 7. NOTCH RAFTERS PER R802.7.1.1 AND TAPER CUT JOISTS PER R802.7.1.2 AS<br>REQUIRED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                             |
| 2 × 10<br>2 × 12            | 12-4         9-4           14-4         10-10                                                               | 10-1<br>11-8             | 7-7<br>8-10                  | 8-9<br>10-1                                                                                                                                                                           | 6-7<br>7-8                             | 10-4<br>11-11                                | 7-9<br>9-0                     | 8. INTERIOR HEADER PER GENERAL NOTE 2, TYP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                             |
|                             |                                                                                                             |                          |                              |                                                                                                                                                                                       | · · ·                                  |                                              |                                | 9. PROVIDE EIGHT (8) 16d COMMON NAILS PER RAFTER TO CEILING JOIST HEEL JOINT CONNECTION PER CRC TABLE R802.5.2(1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | PER                                                                         |
|                             |                                                                                                             | B                        |                              |                                                                                                                                                                                       |                                        | C                                            |                                | 10. PROVIDE 2-2x6 STUDS WITH SIMPSON HDU2 HOLD-DOWN WITH SSTB16<br>ANCHOR BOLT INSTALLED PER MANUFACTURER REQUIREMENTS. INCREASE<br>FOOTING DEPTH AND WIDTH AS NECESSARY AT HOLD-DOWN ANCHOR<br>LOCATIONS TO PROVIDE MINIMUM 3" CONCRETE COVER AT ALL SIDES OF BOLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | NAME:<br>SIGNAT<br>ADDRE<br>DATE:_                                          |
| <u>TO CORN</u><br>02.10.2.2 | IER<br>5'-4" (1)                                                                                            | <br>MIN.                 |                              |                                                                                                                                                                                       |                                        |                                              |                                | 11. INTERIOR BRACED WALL CONNECTED TO ROOF RAFTERS PER 10/A4.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                             |
| 10                          |                                                                                                             | -0' <br>NEL              | POST                         | POS                                                                                                                                                                                   | T3                                     | 4x4 POST W/ CB           (TYP.) @ PORCH      | <u>SQ</u><br>I                 | GENERAL NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                             |
|                             | (1) MIN. 7'-4"<br>4'-0"<br>PANEL                                                                            |                          | SIDE POF                     | 10'-0" ()<br>RCH P<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(WC.)<br>(MIN.)<br>4'-0"<br>PANEL | 2) MIN.<br>4'-0"<br>ANELS<br>ANELS<br> | 1 4'-0"<br>1 4'-0"<br>1 4'-0"<br>PANEL       | 3                              | <ul> <li>EMBEDMENT OF 7" INTO CONCRETE AND NOT SPACED MORE THAN 6 APART</li> <li>2. FOR INTERIOR NON-BEARING HEADERS, USE AS FOLLOW: <ul> <li>4x4 DF # 2 UP TO 5'-0" SPAN</li> <li>4x6 DF # 2 UP TO 7'-0" SPAN</li> </ul> </li> <li>3. WOOD POSTS SHALL BE PROTECTED AGAINST DECAY PER CRC R317</li> <li>4. FOR STANDARD CUT WASHERS PLACED BETWEEN PLATE WASHERS AND NUT, HOLE IN PLATE WASHER MAY BE DIAGONALLY SLOTTED WITH MAXIMUM 3/16" <ul> <li>LARGER WIDTH THAN BOLT DIAMETER AND MAXIMUM 1 3/4" SLOT LENTH</li> <li>5. PROVIDE A MINIMUM OF TWO ANCHOR BOLTS PER SILL PLATE WITH ONE BOLT</li> <li>LOCATED MAXIMUM 12" AND MINIMUM 7 BOLT DIAMETERS FROM EACH END OF SECTION</li> <li>6. BOLTS LOCATED IN THE MIDDLE THIRD OF THE SILL PLATE WIDTH</li> <li>7. FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE RETARDANT TREATED WOOD SHALL BE HOT-DIPPED ZINC COATED GALVANIZED OR STAINLESS STEEL</li> <li>8. NO LPG PIPING ASSEMBLIES ALLOWED IN OR BENEATH SLABS WITHIN THE STRUCTURE</li> <li>9. ALL WOOD FRAMING NUMBER 2 GRADE DOUGLAS FIR-LARCH</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                             |
|                             |                                                                                                             |                          |                              |                                                                                                                                                                                       |                                        |                                              |                                | LEGEND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                             |
| FRON<br>PORC                | A4.3<br>(1) MIN. 4'-0"<br>4'-0"<br>PANEL<br>(1) MIN. 4'-0"<br>(1) MIN. 4'-0"<br>H<br>(1) MIN. 4'-0"<br>A4.3 |                          |                              | <u>M</u>                                                                                                                                                                              |                                        | (1) MIN.<br>4'-0"<br>PANEL<br>10<br>10<br>10 | 2)                             | $\blacksquare$ $2x6$ WALL $\blacksquare$ $2x4$ WALL $\checkmark$ $\bigcirc$ $\checkmark$ $\bigcirc$ $\checkmark$ | <b>City of El Caj</b><br>49 SF Accessory Dwellin<br>Building Safety Divisio |

|                                   |                                           | TAI                                     | BLE R803.1<br>OF LUMBER ROOF SHEATH                                           | ING                                   |                                                                       | PLAN KEY NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|-----------------------------------|-------------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| RA                                | AFTER OR BEAM SPACING                     | (inches)                                | MININ                                                                         | UM NET THICKNESS (inc<br>5/8          | :hes)                                                                 | 1. WALL BRACING PER SECTION R602 AND TABLE R602.10.3(1) & R602.10.3(3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                   | 48 <sup>a</sup>                           |                                         |                                                                               | 1 <sup>1</sup> /2 T & G               |                                                                       | 2. FOOTING PER SECTION R403, SEE DETAILS 6 & 7/A4.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                   |                                           |                                         | LE R602.7(3)                                                                  | hom fir. Southorn ning a              | and enruce nine fir b)                                                | 3. SLAB ON GRADE PER CRC R506. 4" CONCRETE SLAB WITH NO. 3 BARS AT<br>MIDPOINT 18" O.C. EACH WAY OVER 4" COMPACTED CONSTRUCTION GRAVEL W/<br>10 MIL. VAPOR BARRIER UNDER SLAB TYP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                   | ADER SPANS FOR OPEN                       |                                         |                                                                               |                                       | ind sprace-pine-in ()                                                 | 4. CALIFORNIA FILL OVERSTACK FRAMING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                   | SUPPORTING ROOF<br>Ground Snow Load (psf) |                                         |                                                                               | SUPPORTING F                          | SUPPORTING FLOOR 5. DOUBLE STUD AT EXTERIOR OPENINGS OVER 8'-0", TYP. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| SIZE                              | 30                                        | 50<br>epth of Porch <sup>c</sup> (feet) | 70                                                                            |                                       |                                                                       | 6. LINE OF ROOF OVERHANG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| 2-2 × 6                           | <b>8 14</b><br>7-6 5-8                    | <b>8 14</b><br>6-2 4-8                  | 8         14           5-4         4-0                                        | <b>8</b><br>6-4                       | <b>14</b><br>4-9                                                      | 7. NOTCH RAFTERS PER R802.7.1.1 AND TAPER CUT JOISTS PER R802.7.1.2 AS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| 2-2 × 8<br>2-2 × 10               | 10-1 7-7<br>12-4 9-4                      | 8-3 6-2<br>10-1 7-7                     | 7-1         5-4           8-9         6-7                                     | 8-5                                   | 6-4                                                                   | REQUIRED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| 2-2 × 12                          | 14-4 10-10                                | 11-8 8-10                               | 10-1 7-8                                                                      | 11-11                                 | 9-0                                                                   | 8. INTERIOR HEADER PER GENERAL NOTE 2, TYP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                   |                                           |                                         |                                                                               |                                       |                                                                       | 9. PROVIDE EIGHT (8) 16d COMMON NAILS PER RAFTER TO CEILING JOIST HEEL JOINT CONNECTION PER CRC TABLE R802.5.2(1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                   |                                           | <b>B</b> )                              |                                                                               |                                       |                                                                       | 10. PROVIDE 2-2x6 STUDS WITH SIMPSON HDU2 HOLD-DOWN WITH SSTB16<br>ANCHOR BOLT INSTALLED PER MANUFACTURER REQUIREMENTS. INCREASE<br>FOOTING DEPTH AND WIDTH AS NECESSARY AT HOLD-DOWN ANCHOR<br>LOCATIONS TO PROVIDE MINIMUM 3" CONCRETE COVER AT ALL SIDES OF BOLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | NAME:<br>SIGNA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |
| <u>NG TO CORNI</u><br>R602.10.2.2 | <u>ER</u> ▶<br>5'-4" (1) MI               | <br>N.                                  |                                                                               | 1                                     |                                                                       | 11. INTERIOR BRACED WALL CONNECTED TO ROOF RAFTERS PER 10/A4.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| 10                                |                                           | POST                                    | POST 3                                                                        | 4x4 POST W/<br>(TYP.) @ POR           | CBSQ<br>RCH                                                           | <u>GENERAL NOTES</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| '→<br><br>N.<br>L                 | (1) MIN. 7'-4"<br>4'-0"<br>PANEL          |                                         | 10'-0" (2) MIN.<br>4'-0"<br>PANELS<br>WC.<br>(1) MIN.<br>4'-0"<br>PANEL 5'-7" | 1 4'-0"<br>(1) MIN.<br>4'-0"<br>PANEL | -3                                                                    | <ul> <li>EMBEDMENT OF 7" INTO CONCRETE AND NOT SPACED MORE THAN 6' APART</li> <li>2. FOR INTERIOR NON-BEARING HEADERS, USE AS FOLLOW: <ul> <li>4x4 DF # 2 UP TO 5'-0" SPAN</li> <li>4x6 DF # 2 UP TO 7'-0" SPAN</li> </ul> </li> <li>3. WOOD POSTS SHALL BE PROTECTED AGAINST DECAY PER CRC R317</li> <li>4. FOR STANDARD CUT WASHERS PLACED BETWEEN PLATE WASHERS AND NUT, HOLE IN PLATE WASHER MAY BE DIAGONALLY SLOTTED WITH MAXIMUM 3/16"</li> <li>LARGER WIDTH THAN BOLT DIAMETER AND MAXIMUM 1 3/4" SLOT LENTH</li> <li>5. PROVIDE A MINIMUM OF TWO ANCHOR BOLTS PER SILL PLATE WITH ONE BOLT LOCATED MAXIMUM 12" AND MINIMUM 7 BOLT DIAMETERS FROM EACH END OF SECTION</li> <li>6. BOLTS LOCATED IN THE MIDDLE THIRD OF THE SILL PLATE WIDTH</li> <li>7. FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE RETARDANT TREATED WOOD SHALL BE HOT-DIPPED ZINC COATED GALVANIZED OR STAINLESS STEEL</li> <li>8. NO LPG PIPING ASSEMBLIES ALLOWED IN OR BENEATH SLABS WITHIN THE STRUCTURE</li> <li>9. ALL WOOD FRAMING NUMBER 2 GRADE DOUGLAS FIR-LARCH</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                   | 7                                         |                                         |                                                                               |                                       |                                                                       | LEGEND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                   | (1) MIN 4'-0"                             |                                         |                                                                               |                                       |                                                                       | 2x6 WALL<br>2x4 WALL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Welling Divisio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                   | 4'-0" 1<br><u>PANEL</u>                   |                                         |                                                                               | 4'-0"<br>PANEL                        |                                                                       | OVERSTACK FRAMING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ety D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |
| L                                 |                                           |                                         |                                                                               |                                       | -(2)                                                                  | X'-X" X SHEAR MARK / LENGTH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Saf                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |
| I. FRON <sup>-</sup><br>⊲ PORCI   | Г<br>Н (1) MIN. 4'-0"                     |                                         |                                                                               |                                       | $\smile$                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | of of the second |  |  |  |
|                                   | PANEL A                                   |                                         |                                                                               |                                       |                                                                       | WALL BRACING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                   |                                           |                                         | <u>₩////////////////////////////////////</u>                                  | <u>!</u> <del></del>                  | -1                                                                    | CEILING JOIST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Bu Bu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |
|                                   |                                           |                                         |                                                                               | ·                                     |                                                                       | ROOF RAFTER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                   |                                           | (1) MIN.                                | (1) MIN.                                                                      |                                       |                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0 - 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |

![](_page_21_Figure_16.jpeg)

(INDICATE NORTH) TABLE R602.7(1) GIRDER SPANS<sup>a</sup> AND HEADER SPANS<sup>a</sup> FOR EXTERIOR BEARING WALLS (Maximum spans for Douglas fir-larch, hem-fir, Southern pine and sprucepine-fir<sup>b</sup> and required number of jack studs)

|                                |                 | GROUND SNOW LOAD (psf) <sup>e</sup> |                                    |                   |                 |                   |                 |                   |                 |                   |                 |                   |                 |                   |     |                   |     |                   |     |
|--------------------------------|-----------------|-------------------------------------|------------------------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----|-------------------|-----|-------------------|-----|
|                                |                 |                                     | 30                                 |                   |                 |                   |                 |                   |                 | 50                |                 |                   |                 |                   |     | 70                | )   |                   |     |
| GIRDERS AND HEADERS SUPPORTING | SIZE            |                                     | Building width <sup>c</sup> (feet) |                   |                 |                   |                 |                   |                 |                   |                 |                   |                 |                   |     |                   |     |                   |     |
|                                |                 | 12                                  | 2                                  | 24                |                 | 36                | 5               | 12                |                 | 24                | l.              | 36                | )               | 12                | 2   | 24                |     | 36                | i   |
|                                |                 | Span <sup>f</sup>                   | NJd                                | Span <sup>f</sup> | NJ <sup>d</sup> | Span <sup>f</sup> | NJd | Span <sup>f</sup> | NJd | Span <sup>f</sup> | NJd |
|                                | 1-2 × 6         | 4-0                                 | 1                                  | 3-1               | 2               | 2-7               | 2               | 3-5               | 1               | 2-8               | 2               | 2-3               | 2               | 3-0               | 2   | 2-4               | 2   | 2-0               | 2   |
|                                | 1-2 × 8         | 5-1                                 | 2                                  | 3-11              | 2               | 3-3               | 2               | 4-4               | 2               | 3-4               | 2               | 2-10              | 2               | 3-10              | 2   | 3-0               | 2   | 2-6               | 3   |
|                                | $1-2 \times 10$ | 6-0                                 | 2                                  | 4-8               | 2               | 3-11              | 2               | 5-2               | 2               | 4-0               | 2               | 3-4               | 3               | 4-7               | 2   | 3-6               | 3   | 3-0               | 3   |
| Boof and ceiling               | 1-2 × 12        | 7-1                                 | 2                                  | 5-5               | 2               | 4-7               | 3               | 6-1               | 2               | 4-8               | 3               | 3-11              | 3               | 5-5               | 2   | 4-2               | 3   | 3-6               | 3   |
|                                | 2-2 × 4         | 4-0                                 | 1                                  | 3-1               | 1               | 2-7               | 1               | 3-5               | 1               | 2-7               | 1               | 2-2               | 1               | 3-0               | 1   | 2-4               | 1   | 2-0               | 1   |
|                                | 2-2 × 6         | 6-0                                 | 1                                  | 4-7               | 1               | 3-10              | 1               | 5-1               | 1               | 3-11              | 1               | 3-3               | 2               | 4-6               | 1   | 3-6               | 2   | 2-11              | 2   |
|                                | 2-2 × 8         | 7-7                                 | 1                                  | 5-9               | 1               | 4-10              | 2               | 6-5               | 1               | 5-0               | 2               | 4-2               | 2               | 5-9               | 1   | 4-5               | 2   | 3-9               | 2   |
|                                | 2-2 × 10        | 9-0                                 | 1                                  | 6-10              | 2               | 5-9               | 2               | 7-8               | 2               | 5-11              | 2               | 4-11              | 2               | 6-9               | 2   | 5-3               | 2   | 4-5               | 2   |
| ROOM AND LEAD US               | 2-2 × 12        | 10-7                                | 2                                  | 8-1               | 2               | 6-10              | 2               | 9-0               | 2               | 6-11              | 2               | 5-10              | 2               | 8-0               | 2   | 6-2               | 2   | 5-2               | 3   |
|                                | 3-2 × 8         | 9-5                                 | 1                                  | 7-3               | 1               | 6-1               | 1               | 8-1               | 1               | 6-3               | 1               | 5-3               | 2               | 7-2               | 1   | 5-6               | 2   | 4-8               | 2   |
| 3                              | 3-2 × 10        | 11-3                                | 1                                  | 8-7               | 1               | 7-3               | 2               | 9-7               | 1               | 7-4               | 2               | 6-2               | 2               | 8-6               | 1   | 6-7               | 2   | 5-6               | 2   |
|                                | 3-2 × 12        | 13-2                                | 1                                  | 10-1              | 2               | 8-6               | 2               | 11-3              | 2               | 8-8               | 2               | 7-4               | 2               | 10-0              | 2   | 7-9               | 2   | 6-6               | 2   |
|                                | 4-2 × 8         | 10-11                               | 1                                  | 8-4               | 1               | 7-0               | 1               | 9-4               | 1               | 7-2               | 1               | 6-0               | 1               | 8-3               | 1   | 6-4               | 1   | 5-4               | 2   |
|                                | 4-2 × 10        | 12-11                               | 1                                  | 9-11              | 1               | 8-4               | 1               | 11-1              | 1               | 8-6               | 1               | 7-2               | 2               | 9-10              | 1   | 7-7               | 2   | 6-4               | 2   |
|                                | 4-2 × 12        | 15-3                                | 1                                  | 11-8              | 1               | 9-10              | 2               | 13-0              | 1               | 10-0              | 2               | 8-5               | 2               | 11-7              | 1   | 8-11              | 2   | 7-6               | 2   |

![](_page_21_Figure_20.jpeg)

**TABLE R602.3.2** SINGLE TOP-PLATE SPLICE CONNECTION DETAILS

|                                                                                                            | TOP-PLATE SPLICE LOCATION                                            |                                                             |                                                                       |                                                              |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------|--|--|--|--|--|
| CONDITION                                                                                                  | Corners and inters                                                   | ecting walls                                                | Butt joints in straight walls                                         |                                                              |  |  |  |  |  |
|                                                                                                            | Splice plate size                                                    | Minimum nails<br>each side of joint                         | Splice plate size                                                     | Minimum nails<br>each side of joi                            |  |  |  |  |  |
| Structures in SDC A-C; and in SDC $D_0$ , $D_1$ and $D_2$ with braced wall line spacing less than 25 feet  | $3'' \times 6'' \times 0.036''$ galvanized steel plate or equivalent | (6) 8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113") nails | $3'' \times 12'' \times 0.036''$ galvanized steel plate or equivalent | (12) 8d box (2 <sup>1</sup> /2"<br>0.113") nails             |  |  |  |  |  |
| Structures in SDC $D_0$ , $D_1$ and $D_2$ , with braced wall line spacing greater than or equal to 25 feet | $3'' \times 8'' \times 0.036''$ galvanized steel plate or equivalent | (9) 8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113") nails | $3'' \times 16'' \times 0.036''$ galvanized steel plate or equivalent | (18) 8dbox (2 <sup>1</sup> / <sub>2</sub> "<br>0.113") nails |  |  |  |  |  |

#---KEYNOTE #

TABLE R602.7.5 MINIMUM NUMBER OF FULL-HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS<sup>a</sup>

| N(foot)  | ULTIMATE DESIGN WIND SPEED AND EXPOSURE CATEGORY |                                    |  |  |  |  |  |  |  |  |
|----------|--------------------------------------------------|------------------------------------|--|--|--|--|--|--|--|--|
| in(leet) | < 140 mph, Exposure B or < 130 mph, Exposure C   | ≤ 115 mph, Exposure B <sup>b</sup> |  |  |  |  |  |  |  |  |
|          | 1                                                | 1                                  |  |  |  |  |  |  |  |  |
|          | 2                                                | 1                                  |  |  |  |  |  |  |  |  |
|          | 2                                                | 1                                  |  |  |  |  |  |  |  |  |
|          | 3                                                | 2                                  |  |  |  |  |  |  |  |  |
|          | 3                                                | 2                                  |  |  |  |  |  |  |  |  |
|          | 3                                                | 2                                  |  |  |  |  |  |  |  |  |
|          | 4                                                | 2                                  |  |  |  |  |  |  |  |  |
|          | 4                                                | 2                                  |  |  |  |  |  |  |  |  |

|                     |                                                                                                              | BEARING WALLS                                                                                                              |                                                                                                                              |                                                                  | NONBEARING                               | WALLS                      |
|---------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------|----------------------------|
| ported stud<br>eet) | Maximum spacing where<br>supporting a roof-ceiling<br>assemblyor a habitable attic<br>assembly, only(inches) | Maximum spacing where<br>supporting one floor,plus a<br>roof-ceiling assembly or a<br>habitable attic assembly<br>(inches) | Maximum spacing where<br>supporting two floors, plus<br>a roof-ceiling assembly or a<br>habitable attic assembly<br>(inches) | Maximum spacing where<br>supporting one floor<br>heighta(inches) | Laterally unsupported stud heighta(feet) | Maximum<br>spacing(inches) |
|                     |                                                                                                              |                                                                                                                            |                                                                                                                              |                                                                  |                                          |                            |
|                     | —                                                                                                            |                                                                                                                            | -                                                                                                                            | —                                                                | 10                                       | 16                         |
|                     | 24c                                                                                                          | 16c                                                                                                                        | _                                                                                                                            | 24                                                               | 14                                       | 24                         |
|                     | 24                                                                                                           | 24                                                                                                                         | 16                                                                                                                           | 24                                                               | 14                                       | 24                         |
|                     | 24                                                                                                           | 24                                                                                                                         | _                                                                                                                            | 24                                                               | 16                                       | 24                         |
|                     | 24                                                                                                           | 24                                                                                                                         | 16                                                                                                                           | 24                                                               | 20                                       | 24                         |

![](_page_21_Picture_27.jpeg)

PLAN / ROOF FRAMING PLAN

HEET PRINT DATE: 9/14/2023 C:\Users\Chris\Dropbox\Projects\El Cajon ADUs\01-ArchiCAD Mode\\2023-09-12\_1-BR ADU - CD.pl

![](_page_22_Figure_1.jpeg)

# PLAN KEY NOTES

1. WATER HEATER AS INDICATED IN CF1R FORMS (TITLE-24)

2. -AMP ELECTRICAL PANEL (PERMITTEE TO COMPLETE)

3. OUTLET BELOW COUNTERTOP

4. RANGE HOOD

5. NOT USED

6. DRYER VENT TERMINATION AT EXTERIOR TO BE A MINIMUM OF 3 FEET FROM ANY OPENING

# **GENERAL NOTES**

1. SEE A0.2 FOR ADDITIONAL CALIFORNIA RESIDENTIAL, MECHANICAL/PLUMBING, ENERGY CODE, AND GREEN BUILDING STANDARDS CODE REQUIREMENTS

2. LOCAL EXHAUST FANS TO EXTERIOR TO PROVIDE MINIMUM 50 CFM INTERMITTENT OR 20 CFM CONTINUOUS VENTILLATION

3. SMOKE DETECTORS TO BE INTERCONNECTED PER CRC R314.4 AND HARD-WIRED WITH BATTERY BACK-UP PER CRC R314.6

4. CARBON MONOXIDE ALARMS TO BE INTERCONNECTED PER CRC R315.7 AND HARD-WIRED WITH BATTERY BACK-UP PER CRC R315.5

5. 4" DIA. DRYER VENT WITH MAXIMUM 14 FOOT COMBINED HORIZONTAL AND VERTICAL LENGTH WITH TWO 90 DEGREE ELBOWS

6. A MECHANICAL EXHAUST VENTILATION SYSTEM, SUPPLY VENTILATION SYSTEM, OR COMBINATION THEREOF SHALL BE INSTALLED FOR EACH DWELLING UNIT TO PROVIDE WHOLE-BUILDING VENTILATION WITH OUTDOOR AIR IN COMPLIANCE WITH ASHRAE STANDARD 62.2 AS ADOPTED BY THE CALIFORNIA ENERGY COMMISSION

7. AN INTERMITTENTLY OR CONTINUOUSLY OPERATING LOCAL MECHANICAL EXHAUST VENTILATION SYSTEM SHALL BE INSTALLED IN EACH BATHROOM WITH A BATHTUB, SHOWER, OR SIMILAR MOISTURE SOURCE AND IN EACH KITCHEN IN COMPLIANCE WITH ASHRAE STANDARD 62.2 AS ADOPTED BY THE CALIFORNIA ENERGY COMMISSION. INTERMITTENT LOCAL EXHAUST VENTILATION AIRFLOW RATES SHALL BE 50 CFM IN BATHROOMS AND 100 CFM IN KITCHENS. CONTINUOUS LOCAL EXHAUST CENTILATION AIRFLOW RATES SHALL BE 20 CFM IN BATHROOMS AND 5 AIR CHANGES PER HOUR IN KITCHENS BASED ON KITCHEN VOLUME

8. WATER HEATER OR FURNACE SHALL BE A DIRECT-VENT APPLIANCE

9. LISTED GASKETED SELF CLOSING DOOR REQUIRED FOR GAS FAU

# <u>LEGEND</u>

| #►                 | KEYNOTE                                                                             |
|--------------------|-------------------------------------------------------------------------------------|
| Φ                  | DUPLEX OUTLET                                                                       |
| \$                 | WALL SWITCH                                                                         |
| \$ <sub>G.D.</sub> | GARBAGE DISPOSAL SWITCH                                                             |
| <del>.</del> ~-    | GARBAGE DISPOSAL                                                                    |
| <b>₽</b>           | 4" DIA. DRYER VENT                                                                  |
| ŀ¢-                | HIGH EFFICACY EXTERIOR LIGHT FIXTURE<br>(STANDARD HEIGHT 7'-0" A.F.F. UNLESS NOTED) |
| - <b>\</b> -       | HIGH EFFICACY WALL SCONCE                                                           |
| -ф-                | HIGH EFFICACY RECESSED LIGHT                                                        |
| P                  | HIGH EFFICACY PENDANT OR SURFACE MOUNTED LIGHT                                      |
| $\bigcirc$         | FAN (MIN. 120 CFM FOR BATH AND KITCHEN)                                             |
| SD                 | SMOKE / CO DETECTOR                                                                 |
| >                  | CEILING FAN WITH LIGHT                                                              |
| x'-x" a.f.f.       | CEILING HEIGHT ABV.                                                                 |

| PERMITTEE INFORMATION: |
|------------------------|
| NAME:                  |
| SIGNATURE:             |
| ADDRESS:               |
| DATE:                  |
|                        |

City of El Cajon 649 SF Accessory Dwelling Unit

Building Safety Division

![](_page_22_Picture_24.jpeg)

UTILITY PLAN

<u>17.140.170(E) - EL CAJON DESIGN STANDARDS (Ord. 5131):</u>

- E. STRUCTURES SHALL MEET THE FOLLOWING DESIGN STANDARDS:
- FOLLOWS:

INCLUDE A MINIMUM OF THREE (3) OF THE FOLLOWING DESIGN FEATURES:

- LIMITED TO MATERIALS SUCH AS WOOD, SIDING, STONE, BRICK, AND STUCCO;
- d. SHUTTERS OR AWNINGS; e. DOORS, WHICH INCLUDE WINDOWS;
- g. GARAGE DOOR PANELS WHICH INCLUDES WINDOWS; OR h. CONSTRASTING TRIM OR MOLDING
- 5. ROOF AND WALL PLANES SHALL BE DIFFERENT COLORS.

![](_page_23_Figure_11.jpeg)

![](_page_23_Figure_13.jpeg)

4. ACCESSORY STRUCTURES SHALL HAVE COMPARABLE ROOF STYLE TO THE PRIMARY STRUCTURE.

# **GENERAL NOTES**

1. REGARDLESS OF BUILDING MATERIAL, ALL ELEVATIONS SHAL PAINTED SURFACES, WEATHER-RESISTANT ENAMEL FINISHES, ( MATERIALS THAT ARE NON-REFLECTIVE. 2. ROOF AND WALL PLANES SHALL BE DIFFERENT COLORS

3. OWNER TO CONSIDER MATCHING THE COLOR AND MATERIAL HOME.

4. GLASS SHALL NOT BE TINTED, MIRRORED, OR OTHERWISE HI REFLECTIVE.

5. DESIGN FEATURES MUST BE INSTALLED AS IDENTIFIED ON EA DRAWING AND ITS CORRESPONDING DESIGN FEATURE TABLE. 6. ROOFING MATERIAL WEIGHT SHALL NOT EXCEED THE RAFTER LOAD ON SHEET A1.2

|                           | ELEVATION KEY NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| LL INCLUDE<br>OR FINISHED | 1. ROOF: CLASS "A" FIRE RATING - (SEE GENERAL NOTE 6)<br>ROOF MATERIAL:<br>UNDERLAYMENT:<br>LISTING REPORT #:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                       |
| LS OF THE MAIN            | 2. EXTERIOR WALL FINISH: SELECT ONE (SEE VHFSZ NOTE 7)<br>(VERTICAL SIDING SHOWN FOR REFERENCE)<br>a. CEMENT PLASTER SIDING<br>b. FIBER CEMENT - BOARD AND BATT SIDING<br>c. FIBER CEMENT - LAP SIDING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                       |
| R SPAN DEAD               | 3. ROOF PITCH AS INDICATED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                       |
|                           | <ul> <li>4. NOT USED</li> <li>5. GABLE VENT OR ROOF VENT (SEE NOTE 5 &amp; 6 BELOW)</li> <li>SEE A1.2 FOR MIN. REQUIRED VENT AREA<br/>MANUFACTURER:<br/>MODEL:<br/>NEVA:</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                       |
|                           | 6. EAVE SOFFIT VENT (SEE NOTE 5 & 6 BELOW)<br>SEE A1.2 FOR MIN. REQUIRED VENT AREA<br>MANUFACTURER:<br>MODEL:<br>NEVA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | PERM                                                  |
|                           | 7. FENESTRATION PER SCHEDULE, TYP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | NAMI<br>SIGN<br>ADDF<br>DATE                          |
|                           | 8. OPTIONAL DECORATIVE RAILING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                       |
|                           | 9. OPTIONAL GUTTER / DOWNSPOUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                       |
|                           | 10. CONTRACTOR TO CONFIRM ELECTRICAL PANEL LOCATION IN FIELD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                       |
|                           | VHFSZ PLAN NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                       |
|                           | <ol> <li>IN ROOF COVERINGS WHERE THE PROFILE CREATES SPACE BETWEEN THE<br/>ROOF COVERING AND COMBUSTIBLE ROOF DECKING, SPECIFY ONE OF THE<br/>FOLLOWING MEANS OF PROTECTING SPACES AT EAVES ENDS.</li> <li>a. FIRE-STOPPING WITH APPROVED MATERIALS</li> <li>b. ONE LAYER OF 72 POUNT (32.4 KG) MINERAL-SURFACED NON-PERFORATED<br/>CAP SHEET COMPLYING WITH ASTM D 3909</li> <li>c. OTHERWISE CONSTRUCTED TO PREVENT INTRUSTION OF FLAMES AND<br/>EMBERS</li> </ol>                                                                                                                                                                                                                                                                                              |                                                       |
|                           | 2. EXPOSED VALLEY FLASHINGS SHALL BE CONSTRUCTED WITH NOT LESS<br>THAN 0.019-INCH (NO. 26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT<br>METAL INSTALLED OVER A MINIMUM 36-INCH WIDE UNDERLAYMENT CONSISTING<br>OF ONE LAYER OF NO. 72 ASTM CAP SHEET RUNNING THE FULL LENGTH OF THE<br>VALLEY.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                       |
|                           | 3. ANY ROOF GUTTERS SHALL BE PROVIDED WITH MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                       |
|                           | 4. SKYLIGHTS SHALL BE TEMPERED GLASS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                       |
|                           | 5. ALL VENTS (ROOFS, FOUNDATION, COMBUSTION-AIR, ETC.) SHALL RESIST THE INTRUSION OF FLAMES AND EMBERS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                       |
|                           | <ul> <li>6. VENTILATION OPENINGS FOR ENCLOSED ATTICS, EAVE SOFFIT SPACES,<br/>ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY<br/>TO THE UNDERSIDE OF ROOF RAFTERS, UNDERFLOOR VENTILATION OPENINGS,<br/>AND VENT OPENINGS IN EXTERIOR WALLS AND EXTERIOR DOORS SHALL BE<br/>LISTED TO ASTM E 2886 AND COMPLY WITH ALL OF THE FOLLOWING:</li> <li>a. THERE SHALL BE NO FLAMING IGNITION OF THE COTTON MATERIAL DURING<br/>THE EMBER INTRUSION TEST</li> <li>b. THERE SHALL BE NO FLAMING IGNITION DURING THE INTEGRITY TEST<br/>PORTION OF THE FRAME INTRUSION TEST.</li> <li>c. THE MAXIMUM TEMPERATURE OF THE UNEXPOSED SIDE OF THE VENT SHALL<br/>NOT EXCEED 662 DEGREES FAHRENHEIT (350 DEGREES CELSIUS)</li> </ul>                         | of El Caj<br>Accessory Dwellin<br>ding Safety Divisio |
|                           | <ul> <li>7. EXTERIOR WALL FINISH SHALL COMPLY WITH ONE OF THE FOLLOWING:</li> <li>a. NON-COMBUSTIBLE MATERIAL (STUCCO, CEMENT FIBER BOARD, ETC.)</li> <li>STUCCO AND CEMENT PLASTER USED AS AN EXTERIOR WALL COVERING<br/>SHALL BE 7/8-INCH THICK.</li> <li>NON-COMBUSTIBLE OR FIRE-RETARDANT TREATED WOOD SHAKE USED AS AN<br/>EXTERIOR WALL COVER SHALL HAVE AN UNDERLAYMENT OF MINIMUM 1/2-INCH<br/>FIRE RATED GYPSUM SHEATHING THAT IS TIGHTLY BUTTED, OR TAPED AND<br/>MUDDED, OR AN UNDERLAYMENT OF OTHER IGNITION-RESISTANT MATERIAL<br/>APPROVED BY THE BUILDING OFFICIAL.</li> <li>IGNITION-RESISTANT MATERIAL</li> </ul>                                                                                                                                | City<br>649 SF /<br>Build                             |
|                           | <ul> <li>8. PATIO COVER, CARPORT AND TRELLIS CONSTRUCTION WITH ALL EXPOSED<br/>ELEMENTS SHALL COMPLY WITH ANY OF THE FOLLOWING:</li> <li>NON-COMBUSTIBLE MATERIAL</li> <li>1-HOUR FIRE-RESISTANT RATED MATERIAL</li> <li>APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD</li> <li>-MODIFIED HEAVY TIMBER (MIN. 2x TONGUE AND GROOVE SHEATHING, 4x6<br/>RATERS/BEAMS, 6x6 POSTS)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                          |                                                       |
|                           | <ul> <li>9. DECK, BALCONY, AND EXTERIOR STAIR CONSTRUCTION, WITH ALL EXPOSED<br/>ELEMENTS SHALL COMPLY WITH THE FOLLOWING:</li> <li>a. FRAMING</li> <li>NON-COMBUSTIBLE MATERIAL</li> <li>1-HOUR FIRE-RESISTANT RATED MATERIAL</li> <li>APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD</li> <li>MODIFIED HEAVY TIMBER (MIN. 4x8 JOISTS, 4x10 OR 6x8 BEAMS, 6x6 POSTS)</li> <li>b. DECKING AND TREATED MATERIAL (ANY OF THEFOLLOWING):</li> <li>NON-COMBUSTIBLE MATERIAL</li> <li>1-HOUR FIRE-RESISTANT RATED MATERIAL</li> <li>APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD</li> <li>APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD</li> <li>APPROVED ALTERNATIVE DECKING MATERIAL MEETINGTESTS<br/>REQUIREMENTS OF COUNTY BUILDING CODE 92.1.709A.1.4)</li> </ul> |                                                       |
|                           | 10. EXTERIOR GARAGE DOORS SHALL RESIST THE INTRUSION OF EMBERS INTO<br>THE GARAGE BY LIMITING THE SIZE OF ANY GAPS AT THE BOTTOM, SIDES, AND<br>TOP OF THE DOOR TO 1/8-INCH OR LESS USING ONE OF THE FOLLOWING<br>METHODS:<br>a. WEATHER-STRIPPING PRODUCTS WITH TENSILE STRENGTH AND<br>FLAMMABILITY RATING PER CBC 708A.4<br>b. DOOR OVERLAPS ONTO JAMBS AND HEADERS                                                                                                                                                                                                                                                                                                                                                                                            | The Valley of Opportunity                             |
|                           | c. GARAGE DOOR JAMBS AND HEADERS COVERED WITH METAL FLASHING<br>11. PAPER-FACED INSULATION PROHIBITED IN ATTICS OR OTHER VENTILATED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Reorporated 1917                                      |
|                           | SPACES<br>12. FENCES OR ANY STRUCTURES WITHIN 5 FEET OF BUILDING SHALL BE<br>CONSTRUCTED PER ONE OF THE FOLLOWING:<br>a. NON-COMBUSTIBLE MATERIAL<br>b. APPROVED EXTERIOR FIRE RETARDANT TREATED WOOD<br>c. MATERIAL MEETING SAME FIRE-RESISTIVE STANDARDS AS EXTERIOR WALLS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | A2.1                                                  |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ELEVATIONS                                            |

![](_page_24_Figure_0.jpeg)

SCALE: 1" = 1'-0"

TYP. ROOF ASSEMBLY: (TOP TO BOTTOM) - CLASS "A" SHINGLE ROOFING - UNDERLAYMENT PER ROOFING MFR - 5/8" ROOF SHEATHING PER CRC R803.1 - WOOD RAFTER PER FRAMING PLAN

CONNECTION TO ROOF RAFTERS

TYP. CEILING ASSEMBLY: (TOP TO BOTTOM) - R-\_\_\_\_ INSULATION PER T24 REPORT - WOOD JOIST PER FRAMING PLAN

TAPER CUT CEILNG JOIST PER R802.7.1.2 RAFTER / CEILING CONNECTION,

PAINTED EXTERIOR GRADE SOFFIT BOARD NOTE: ADD NON-COMBUSTIBLE OR IGNITION RESISTANT MATERIAL WHEN REQUIRED AT RATED ASSEMBLY PER FIRE CODE

TYP. EXT. WALL ASSEMBLY: (EXT. TO INT.) - EXTERIOR FINISH MATERIAL PER ELEVATION - WEATHER RESISTIVE BARRIER - WALL SHEATHING PER R602.3(3) - WOOD STUD PER FRAMING PLAN - R-\_\_\_\_ INSULATION PER T24 REPORT - LEVEL 4 - PAINTED 5/8" GWB, TYP.

# TYP. S.O.G. FLOOR: (TOP TO BOTTOM)

-4" COMPACTED CONSTRUCTION GRAVEL

CONCRETE SLAB ON GRADE PATIO -

SLOPE GRADE AWAY FROM STRUCTURE -

TYP. FOOTING DRAIN 4" RIGID PERF. PIPE, HOLES DOWN, SLOPED 1/4" PER FT. TO DRAIN. EMBEDDED IN 3/4" MINUS WASHED ROCK, LINE TRENCH AND COVER

### TABLE R802.5.2(1) RAFTER/CEILING JOIST HEEL JOINT CONNECTIONS<sup>9</sup>

|       |                |                  |                 |     | GR    | OUN   | D SNO    | DW LO    | DAD (              | psf)   |        |        |       |
|-------|----------------|------------------|-----------------|-----|-------|-------|----------|----------|--------------------|--------|--------|--------|-------|
|       |                |                  | 20 <sup>e</sup> |     |       | 30    |          |          | 50                 |        | 70     |        |       |
|       | RAFTER SPACING | Roof span (feet) |                 |     |       |       |          |          |                    |        |        |        |       |
| SLOPE | (inches)       | 12               | 24              | 36  | 12    | 24    | 36       | 12       | 24                 | 36     | 12     | 24     | 36    |
|       |                | Req              | uired           | num | ber o | f 16d | ငဓ္ခက္မွ | n, do tu | nails <sub>I</sub> | per he | eel jo | int sp | lices |
|       | 12             | 3                | 4               | 6   | 3     | 5     | 7        | 4        | 7                  | 10     | 5      | 9      | 13    |
| 4.10  | 16             | 3                | 5               | 8   | 3     | 6     | 9        | 5        | 9                  | 13     | 6      | 12     | 17    |
| 4.12  | 19.2           | 3                | 6               | 9   | 4     | 7     | 11       | 6        | 11                 | 16     | 7      | 14     | 21    |
|       | 24             | 4                | 8               | 11  | 5     | 9     | 13       | 7        | 13                 | 19     | 9      | 17     | 26    |
|       | 12             | 3                | 3               | 5   | 3     | 4     | 6        | 3        | 6                  | 8      | 4      | 7      | 11    |
| 5.10  | 16             | 3                | 4               | 6   | 3     | 5     | 7        | 4        | 7                  | 11     | 5      | 9      | 14    |
| 5.12  | 19.2           | 3                | 5               | 7   | 3     | 6     | 9        | 5        | 9                  | 13     | 6      | 11     | 17    |
|       | 24             | 3                | 6               | 9   | 4     | 7     | 11       | 6        | 11                 | 16     | 7      | 14     | 21    |
|       | 12             | 3                | 3               | 4   | 3     | 3     | 4        | 3        | 4                  | 6      | 3      | 5      | 5 8   |
| 7.10  | 16             | 3                | 3               | 5   | 3     | 4     | 5        | 3        | 5                  | 8      | 8 4 7  | 10     |       |
| /.12  | 19.2           | 3                | 4               | 5   | 3     | 4     | 6        | 3        | 6                  | 9      | 4      | 8      | 12    |
|       | 24             | 3                | 5               | 7   | 3     | 5     | 8        | 4        | 8                  | 11     | 5      | 10     | 15    |

![](_page_24_Figure_16.jpeg)

![](_page_24_Figure_17.jpeg)

![](_page_24_Figure_18.jpeg)

![](_page_24_Figure_19.jpeg)

![](_page_24_Figure_20.jpeg)

![](_page_24_Figure_21.jpeg)

Unit ajon ling Dwe  $\bigcirc$ > SOL Ч— B Ó Ũ City SБ 649

Division ţ Safe Building

The Valley of Opportunity porated A3.1 SECTIONS

| TABLE R703.3(1)<br>SIDING MINIMUM ATTACHMEN                                            | IT AND MINIMUM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      | <b></b>                                                                                                                                                         | 1                                                                                                                                                                                         | Floor                                                                                                                                                   | T                                                                                                               |                                                            | TABLE R602.3(1)<br>FASTENING SCHEDULE                                                                     |                                                                                           | 1                                                                               |                           |  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------|--|
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           | TYI<br>Wood or                       | PE OF SUPPOR                                                                                                      | TS FOR THE                                                                                                                                   | SIDING MATE                                                                 | RIAL AND FAS                             | STENERS                                              |                                                                                                                                                                 |                                                                                                                                                                                           | 4-8d box (21/2 × 0.113); of<br>3-8d common (21/2" × 0.131"); or                                                                                         |                                                                                                                 |                                                            | ITEM DESCRIPTION OF BOILDING<br>ELEMENTS                                                                  | NUMBER AND TYPE OF FASTENER<br>b, c<br>Roof                                               | <sup>a,</sup> SPACING AND LOCATION                                              |                           |  |
| SIDING MATERIAL                                                                        | NOMINAL<br>THICKNESS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | JOINT<br>TREATMENT                                        | wood<br>structural                   | Fiberboard                                                                                                        | Gypsum                                                                                                                                       | Foam<br>plastic                                                             | Direct to                                | Number or                                            | 22                                                                                                                                                              | Joist to sill, top plate or girder                                                                                                                                                        | 3-10d box (3" × 0.128"); or                                                                                                                             |                                                                                                                 | Toe nail                                                   |                                                                                                           | 4-8d box (21/2" × 0.113"); or                                                             |                                                                                 |                           |  |
|                                                                                        | (inches)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                           | panel<br>sheathing                   | sheathing<br>into stud                                                                                            | sheathing<br>into stud                                                                                                                       | sheathing<br>into studi                                                     | studs                                    | spacing of<br>fasteners                              |                                                                                                                                                                 |                                                                                                                                                                                           | 3-3" × 0.131" nails                                                                                                                                     |                                                                                                                 |                                                            | Blocking between ceiling joists, rafters or trusses to top plate                                          | 3-8d common (21/2" × 0.131"); or                                                          | Toe nail                                                                        |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           | into stud                            |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 | Diminist hand isist as blacking to si                                                                                                                                                     | 8d box (21/2" × 0.113")<br>8d common (21/2" × 0.131"); or                                                                                               | 4" (                                                                                                            | o.c. toe nail                                              | or other framing below                                                                                    | 3-10d box (3" × 0.128"); or                                                               |                                                                                 |                           |  |
| Anchored veneer: brick,<br>concrete, masonry or stone                                  | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Section R703.8                                            |                                      |                                                                                                                   | Sec                                                                                                                                          | ction R703.8                                                                |                                          |                                                      | 23                                                                                                                                                              | or top plate (roof applications also)                                                                                                                                                     | 10d box (3" × 0.128"); or                                                                                                                               | 6" 0                                                                                                            | o.c. toe nail                                              | 1                                                                                                         | 2-8d common (21/2" × 0.131"); or                                                          | Each end toe nail                                                               |                           |  |
| (see Section R703.8)                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | 3" × 0.131" nails<br>3-8d box (21/2" × 0.113"); or                                                                                                      |                                                                                                                 |                                                            | Blocking between rafters or truss no at the wall top plates, to rafter or trus                            | 2-3" × 0.131" nails<br>2-16d common (31/2" × 0.162"); or                                  |                                                                                 | SWI I                     |  |
| Adhered veneer: concrete,                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 6                                                         |                                      |                                                                                                                   | <b>C</b>                                                                                                                                     |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | 2-8d common (21/2" × 0.131"); or                                                                                                                        |                                                                                                                 |                                                            |                                                                                                           | 3-3″ × 0.131″ nails                                                                       | End nail                                                                        |                           |  |
| <u>R703.12)</u>                                                                        | _                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Section R703.12                                           |                                      |                                                                                                                   | <u>sect</u>                                                                                                                                  | tion R703.12                                                                |                                          |                                                      | 24                                                                                                                                                              | 1" × 6" subfloor or less to each joist                                                                                                                                                    | 3-10d box (3" × 0.128"); or                                                                                                                             | F                                                                                                               | Face nail                                                  | Flat blocking to truss and web filler                                                                     | 16d common (31/2" × 0.162"); or                                                           | 6″ o.c. face nail                                                               |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | 2 staples, 1" crown, 16 ga., 13/4" long                                                                                                                 | ,                                                                                                               |                                                            |                                                                                                           | 3" × 0.131" nails<br>4-8d box (21/2" × 0.113"); or                                        |                                                                                 |                           |  |
| Panel siding<br>(see Section                                                           | 16-May                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Section R703.10.1                                         | 6d common<br>(2" × 0.113")           | 6d common<br>(2″ × 0.113″)                                                                                        | 6d common<br>(2″ × 0.113″)                                                                                                                   | 6d common<br>) (2" × 0.113")                                                | 4d common<br>(11/2" ×                    | 6″ panel edges 12″<br>inter. sup.                    | 25                                                                                                                                                              | 2" subfloor to joist or girder                                                                                                                                                            | 3-16d box (31/2" × 0.135"); or                                                                                                                          | Blind                                                                                                           | and face nail                                              | 2 Ceiling joists to top plate                                                                             | 3-8d common (21/2" × 0.131"); or                                                          | Per joist, toe nail                                                             |                           |  |
| Fiber                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             | 0.099 )                                  |                                                      |                                                                                                                                                                 | 2″ planks (plank & beam—floor &                                                                                                                                                           | 2-16d common (31/2" × 0.162")<br>3-16d box (31/2" × 0.135"); or                                                                                         | 3-16d box (31/2" × 0.135"); or                                                                                  |                                                            |                                                                                                           | 3-10d box (3" × 0.128"); or                                                               |                                                                                 | SWI I                     |  |
| siding                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             | 6d common                                |                                                      | 20                                                                                                                                                              | roof)                                                                                                                                                                                     | 2-16d common (31/2" × 0.162")                                                                                                                           | 2-16d common (31/2" × 0.162")                                                                                   | At each bearing, face nail                                 | Ceiling joist not attached to parallel                                                                    | 3-3" × 0.131" nails<br>4-10d box (3" × 0.128"); or                                        |                                                                                 |                           |  |
| (see Section<br>R703.10.2)                                                             | 16-May                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Section R703.10.2                                         | 6d common<br>(2" × 0.113")           | 6d common<br>(2″ × 0.113″)                                                                                        | 6d common<br>(2" × 0.113")                                                                                                                   | 6d common<br>) (2" × 0.113")                                                | (2" × 0.113")<br>or 11 gage              | Note f                                               |                                                                                                                                                                 |                                                                                                                                                                                           | 4-10 box (3" × 0.128"); or                                                                                                                              |                                                                                                                 |                                                            | 3 rafter, laps over partitions<br>[see <u>Section R802.5.2</u> and <u>Table</u>                           | 3-16d common (31/2" × 0.162"); or                                                         | Face nail                                                                       |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              | _                                                                           |                                          |                                                      | 27                                                                                                                                                              | Band or rim joist to joist                                                                                                                                                                | 4-3" × 0.131" nails; or                                                                                                                                 |                                                                                                                 | End nail                                                   | Ceiling joist attached to parallel rafte                                                                  | 4-3" × 0.131" nails<br>r                                                                  |                                                                                 | NAM<br>SIGN<br>ADDI       |  |
| Hardboard panel siding<br>(see Section R703.5)                                         | 16-Jul                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | _                                                         | 0.120" nail<br>(shank) with          | 0.120″ nail<br>(shank) with                                                                                       | 0.120" nail<br>(shank) with                                                                                                                  | 0.120" nail<br>(shank) with                                                 | 0.120" nail<br>(shank) with              | 6″ panel edges 12″<br>inter. sup.d                   |                                                                                                                                                                 |                                                                                                                                                                                           | 4-3" × 14 ga. staples,7/16" crown                                                                                                                       |                                                                                                                 |                                                            | 4 (heel joint) [see <u>Section</u><br><u>R802.5.2</u> and <u>Table R802.5.2(1)</u> ]                      | Table R802.5.2(1)                                                                         | Face nail                                                                       |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           | 0.225 nead                           | 0.225 head                                                                                                        | 0.225 nead                                                                                                                                   | 0.099" nail                                                                 | 0.225 nead                               | Same as stud                                         |                                                                                                                                                                 |                                                                                                                                                                                           | 20d common (4" × 0.192"); or                                                                                                                            | Nail each layer as follows: 32                                                                                  | ' o.c. at top and bottom and staggered.                    | 5 Collar tie to rafter, face nail                                                                         | 3-10d common (3" × 0.128 ); or                                                            | Face nail each rafter                                                           |                           |  |
| Hardboard lap siding<br>(see Section R703.5)                                           | 16-Jul                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Note e                                                    | (shank) with 0.240" head             | (shank) with 0.240" head                                                                                          | (shank) with<br>0.240" head                                                                                                                  | (shank) with 0.240" head                                                    | (shank) with 0.240" head                 | spacing 2 per<br>bearing                             |                                                                                                                                                                 | Built-up girders and beams. 2-inch And:                                                                                                                                                   | nails<br>And:                                                                                                                                           | 24″ o.c. face nail at top and                                                                                   | bottom staggered on opposite sides                         |                                                                                                           | 4-3" × 0.131" nails                                                                       |                                                                                 |                           |  |
|                                                                                        | 0.019b                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Lap                                                       | Siding nail                          | Siding nail 2″ ×                                                                                                  | Siding nail 2″                                                                                                                               | × Siding                                                                    | Not allowed                              |                                                      | 28                                                                                                                                                              | lumber layers                                                                                                                                                                             | 2-20d common (4" × 0.192"); or                                                                                                                          |                                                                                                                 |                                                            |                                                                                                           | 3-16d box (31/2" × 0.135"); or                                                            |                                                                                 |                           |  |
| Without<br>insulation                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -~P                                                       | 11/2" × 0.120"                       | 0.120"                                                                                                            | 0.120"                                                                                                                                       | 0.120"<br>Siding                                                            |                                          | Somo os stud                                         |                                                                                                                                                                 |                                                                                                                                                                                           | 3-10d box (3" × 0.128"); or                                                                                                                             | Face nail at e                                                                                                  | nds and at each splice                                     | 6 Rafter or roof truss to plate                                                                           | 3-10d common (3" × 0.148"); or                                                            | 2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss |                           |  |
| aluminuma                                                                              | 0.024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Lap                                                       | 11/2" × 0.120"                       | 0.120"                                                                                                            | 0.120                                                                                                                                        | * nailh 11/2" × 0.120"                                                      | Not allowed                              | spacing                                              |                                                                                                                                                                 |                                                                                                                                                                                           | 3-3" × 0.131" nails                                                                                                                                     |                                                                                                                 |                                                            |                                                                                                           | 4-100 bbx (3 × 0.128 ), 01                                                                |                                                                                 |                           |  |
| With insulation                                                                        | 0.019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Lap                                                       | Siding nail<br>11/2″ × 0.120″        | Siding nail<br>21/2" × 0.120"                                                                                     | Siding nail<br>21/2" × 0.120                                                                                                                 | Siding<br>nailh 11/2" ×                                                     | Siding nail<br>11/2" × 0.120"            |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | 3-16d common (31/2" × 0.162"); or                                                                                                                       |                                                                                                                 |                                                            |                                                                                                           | 4-16d box (31/2" × 0.135"); or                                                            |                                                                                 |                           |  |
| I                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              | 0.120                                                                       |                                          | 16 inches on                                         | 29                                                                                                                                                              | 29 Ledger strip supporting joists or<br>rafters 4-10d box (i                                                                                                                              | 4-10d box (3" × 0.128"); or                                                                                                                             | At each jois                                                                                                    | st or rafter, face nail                                    |                                                                                                           | 3-10d common (3" × 0.148"); or                                                            | Toe nail                                                                        |                           |  |
| Insulated view siding                                                                  | 0.035 (vinyl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Lan                                                       | 0.120 nail<br>(shank) with           | 0.120 nail<br>(shank) with a                                                                                      | 0.120 nail<br>(shank) with a                                                                                                                 | <u>0.120 nail</u><br>a <u>(shank) with a</u>                                | Not allowed                              | center or specified<br>by manufacturer               |                                                                                                                                                                 |                                                                                                                                                                                           | 4-3" × 0.131" nails                                                                                                                                     |                                                                                                                 |                                                            | Roof rafters to ridge, valley or hip                                                                      | 4-10d box (3" × 0.128"); or                                                               |                                                                                 |                           |  |
| insulated virtyr sidirig                                                               | only)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Lap                                                       | or 16-gage<br>crownh.i               | 16-gage<br>crownh                                                                                                 | 16-gage<br>crownh                                                                                                                            | head Section<br>R703.11.2                                                   | Not allowed                              | report or other<br>sections of this                  | 30                                                                                                                                                              | 30 Bridging or blocking to joist, rafter or                                                                                                                                               | 2-100 DOX (3 × 0.128 ), 01<br>2-8d common (21/2" × 0.131"); or                                                                                          | Each                                                                                                            | n end. toe nail                                            | 7 rafters or roof rafter to minimum 2"<br>ridge beam                                                      | 3-16d box (31/2" × 0.135"); or                                                            |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           | ,                                    |                                                                                                                   |                                                                                                                                              |                                                                             |                                          | code                                                 |                                                                                                                                                                 | truss                                                                                                                                                                                     | 2-3″ × 0.131″ nails                                                                                                                                     |                                                                                                                 | ,                                                          |                                                                                                           | 2-16d common (31/2" × 0.162"); or                                                         | End nail                                                                        |                           |  |
|                                                                                        | $\begin{array}{c c} & & & \\ & & \\ 8^{-Mar} & & \\ & & \\ \end{array} \begin{array}{c} - & & \\ 6d \text{ box nail} \\ (2'' \times 0.099'') & \\ \end{array} \begin{array}{c} 6d \text{ box nail} (2'' \\ \times 0.099'') & \\ \end{array} \begin{array}{c} 6d \text{ box nail} (2'' \\ \times 0.099'') & \\ \end{array} \begin{array}{c} 6d \text{ box nail} \\ (2'' \times 0.099'') & \\ \end{array} \begin{array}{c} 0d \text{ box nail} \\ (2'' \times 0.099'') & \\ \end{array} \begin{array}{c} 0d \text{ box nail} \\ (2'' \times 0.099'') & \\ \end{array} \end{array}$ |                                                           | ITEM                                 | DESCRIPTION OF BUILDING                                                                                           | NUMBER AND TYPE OF FASTENERa,                                                                                                                | SPACING                                                                     | OF FASTENERS                             |                                                      | 3-10d box (3" × 0.128"); or                                                                                                                                     |                                                                                                                                                                                           |                                                                                                                                                         |                                                                                                                 |                                                            |                                                                                                           |                                                                                           |                                                                                 |                           |  |
| Particleboard panels                                                                   | 2-Jan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | _                                                         | 6d box nail<br>(2" × 0.099")         | 6d box nail (2"                                                                                                   | 3d box nail (2                                                                                                                               | 3d box nail (2″<br>× 0.099″)                                                | 2" 6d box nail                           | 6d box nail (2"                                      | ' 6″ panel edges 12″                                                                                                                                            |                                                                                                                                                                                           | ELEMENIS                                                                                                                                                | b, c                                                                                                            | Edgesh (inches)                                            | Intermediatesupportsc, e (inches)                                                                         |                                                                                           | <b>Wall</b><br>16d common (31/2" × 0.162")                                      | 24" o.c. face nail        |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           | 6d box nail                          | 8d box nail                                                                                                       | 8d box nail                                                                                                                                  | 6d box nail                                                                 | 6d box nail (2"                          | ,                                                    | <u>Wood</u>                                                                                                                                                     | structural panels, subfloor, roof and interio                                                                                                                                             | or wall sheathing to framing andparticleboard w                                                                                                         | vall sheathing to framing [see Table R602                                                                       | 2.3(3) for wood structural panel exterior wall             | 8 Stud to stud (not at braced wall panels)                                                                | 10d box (3" × 0.128"); or                                                                 | 16" o.c. face nail                                                              |                           |  |
| (2" × 0.099") (21/2 × 0.113")                                                          | (21/2" ×<br>0.113")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (21/2** ×<br>0.113")                                      | (2" × 0.099")                        | × 0.099″)                                                                                                         | As specified by the                                                                                                                          |                                                                             |                                          | sneatning to wall fra                                |                                                                                                                                                                 |                                                                                                                                                                                           | Stud to stud and abutting studs at                                                                                                                      | 3" × 0.131" nails<br>16d box (31/2" × 0.135"); or                                                               |                                                            |                                                                                                           |                                                                                           |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Section                                                   | Section_                             | <u>Section</u>                                                                                                    | Section                                                                                                                                      | Net allowed                                                                 | manufacturer<br>instructions, test       |                                                      |                                                                                                                                                                 | 6d common or deformed (2" × 0.113"×<br>0.266" head); or 23/8" × 0.113" × 0.266"                                                                                                           | 6                                                                                                                                                       | 6f                                                                                                              | 9 intersecting wall corners (at braced wall panels)        | 3" × 0.131" nails                                                                                         | 12" o.c. face nail                                                                        |                                                                                 |                           |  |
|                                                                                        | Lap                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <u>703.14.1</u>                                           | 703.14.1                             | 703.14.1                                                                                                          | 703.14.1                                                                                                                                     | Not allowed                                                                 | report or other sections of this         | 31                                                   | 3/8" - 1/2"                                                                                                                                                     | head nail (subfloor, walli)                                                                                                                                                               | -                                                                                                                                                       |                                                                                                                 | 10 Built-up header (2" to 2" header<br>with 1/2" spacer)   | 16d common $(31/2 \times 0.162)$<br>16d common $(31/2" \times 0.162")$<br>16d box $(31/2" \times 0.135")$ | 16" o.c. lace hall<br>16" o.c. each edge face nail<br>12" o.c. each edge face nail        |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           | Siding nail                          | Siding nail                                                                                                       | nail Siding nail Siding nai                                                                                                                  | g nail Siding nail Siding nail                                              | Siding nail Siding nail                  |                                                      | code                                                                                                                                                            |                                                                                                                                                                                           |                                                                                                                                                         | 80 common $(21/2^{\circ} \times 0.131^{\circ})$ hall (root); o                                                  | 6                                                          | 6f                                                                                                        |                                                                                           | 5-8d box (21/2" × 0.113"); or                                                   |                           |  |
| Steelc                                                                                 | 29 ga.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Lap                                                       | (13/4 ×<br>0.113″)<br>Staple–13/4    | (23/4 ×<br>0.113")<br>Staple-21/2                                                                                 | (21/2 ×<br>0.113″)<br>Staple–21/4                                                                                                            | (13/4 ×<br>0.113")<br>Staple–13/4                                           | Not allowed                              | spacing                                              |                                                                                                                                                                 |                                                                                                                                                                                           | RSRS-01 (23/8" × 0.113") nail (roof) <sub>b</sub>                                                                                                       |                                                                                                                 |                                                            | 11 Continuous header to stud                                                                              | 4-8d common (21/2" × 0.131"); or                                                          | Toe nail                                                                        |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           | 0.120" nail                          | 0.120″ nail                                                                                                       | 0.120″ nail                                                                                                                                  | 0.120" nail                                                                 |                                          | 16 inches on                                         |                                                                                                                                                                 |                                                                                                                                                                                           | (subfloor, wall)                                                                                                                                        | 6                                                                                                               | 12                                                         |                                                                                                           | 4-10d box (3" × 0.128")<br>4-16d box (31/2"× 0.135"); or                                  |                                                                                 |                           |  |
| Vinyl siding (see Section                                                              | 0.035                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Lap                                                       | a 0.313"<br>head or 16-              | (shank) with a 0.313″ head or                                                                                     | (shank) with a 0.313" head o                                                                                                                 | a (shank) with a 0.313                                                      | Not allowed                              | center or as specified by the                        | 32                                                                                                                                                              | 19/32" — 3/4"                                                                                                                                                                             |                                                                                                                                                         | 6                                                                                                               | 6f                                                         | Adjacent full-height stud to end of                                                                       | 3-16d common (31/2" × 0.162"); or                                                         | End nail                                                                        |                           |  |
| <u></u> 0<br><u></u> 0                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           | gage staple<br>with 3/8- to 1/2-     | 16-gage staple<br>with 3/8- to 1/2-                                                                               | 16-gage stapl<br>with 3/8- to 1/2                                                                                                            | 2- <u>head Section</u><br><u>R703.11.2</u>                                  |                                          | instructions or test                                 |                                                                                                                                                                 |                                                                                                                                                                                           | RSRS-01; (23/8" × 0.113") nail (roof)b                                                                                                                  |                                                                                                                 |                                                            | header                                                                                                    | 4-10d box (3" × 0.128"); or                                                               |                                                                                 |                           |  |
|                                                                                        | inch crownh inch crownh inch crownh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                           |                                      |                                                                                                                   | (wall or subfloor)<br>10d common (3" × 0.148") nail; or                                                                                      | 6                                                                           | 12                                       |                                                      | 4-3" × 0.131" nails<br>16d common (31/2" × 0.162")                                                                                                              | 16" o.c. face nail                                                                                                                                                                        | afe E                                                                                                                                                   |                                                                                                                 |                                                            |                                                                                                           |                                                                                           |                                                                                 |                           |  |
| Wood rustic.                                                                           | , .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             | 8d box or                                | Face nailing up to                                   | 33 7/8" – 11/4"                                                                                                                                                 | (21/2" × 0.131 × 0.281" head) deformed                                                                                                                                                    | 6                                                                                                                                                       | 12                                                                                                              | 13 Top plate to top plate                                  | 10d box (3" × 0.128"); or                                                                                 | 12″ o.c. face nail                                                                        |                                                                                 |                           |  |
| <u>Wood siding</u> drop                                                                | 3/8 min.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Lap                                                       | 6d box or siding nail (2″            | 6d box or siding nail (2"                                                                                         | 6d box or<br>siding nail (2'                                                                                                                 | 6d box or<br>siding nail (2"                                                | siding nail<br>(21/2" ×                  | 6" widths, 1 nail<br>per bearing; 8"                 | Other wall sheath                                                                                                                                               | ning g<br>″                                                                                                                                                                               |                                                                                                                                                         |                                                                                                                 | 8-16d common (31/2" × 0.162"); or                          |                                                                                                           |                                                                                           |                                                                                 |                           |  |
| R703.5)<br>Shiplap                                                                     | 19/32 average                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Lan                                                       | × 0.099″)                            | ×0.099")                                                                                                          | × 0.099")                                                                                                                                    | × 0.099″)                                                                   | 0.113″)<br>Staple–2″                     | width sand over, 2<br>nails per bearing 34 sheathing | 1/2" structural cellulosic fiberboard                                                                                                                           | head diameter; or                                                                                                                                                                         | 3                                                                                                                                                       | 6                                                                                                               | 14 Double top plate splice                                 | 12-16d box (31/2" × 0.135"); or                                                                           | Face nail on each side of end joint (minimum 24 lap splice length each side of end ioint) |                                                                                 |                           |  |
| Bevel<br>Butt tip                                                                      | 16-Jul<br>16-Mar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Lap                                                       | _                                    |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 | 11/4" long 16 ga. staple with/16" or 1"<br>crown                                                                                                                                          |                                                                                                                                                         |                                                                                                                 |                                                            | 12-10d box (3" × 0.128"); or                                                                              |                                                                                           |                                                                                 |                           |  |
| Wood structural                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           | 0.11 0. 0000.11                      | 0.5.4.0.440                                                                                                       | 0.4.1.1.0.440                                                                                                                                | 21/2" ×                                                                     | 0.11 0. 00001                            | 0                                                    | 35                                                                                                                                                              | 25/32" structural cellulosic fiberboard                                                                                                                                                   | nail, 7/16" head diameter; or                                                                                                                           | 3                                                                                                               | 6                                                          | Bottom plate to joist, rim joist, band                                                                    | 16d common (31/2" × 0.162")<br>16d box (31/2" × 0.135"); or                               | 16" o.c. face nail                                                              | 34c                       |  |
| <u>210</u> siding (exterior grade)<br>(see Section R703 5)                             | 3/8 — 1/2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Note e                                                    | siding nail                          | siding nail                                                                                                       | siding nail                                                                                                                                  | 0.113″ siding<br>nail                                                       | siding nail                              | inter. sup.                                          |                                                                                                                                                                 | Sneathing                                                                                                                                                                                 | 11/4" long 16 ga. staple with 7/16" or 1"<br>crown                                                                                                      |                                                                                                                 |                                                            | 15 joist or blocking (not at braced wall panels)                                                          | 3″ × 0.131″ nails                                                                         | 12" o.c. face nail                                                              |                           |  |
| ( <u></u> )                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              | 0.4.4                                                                       |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | nail, 7/16" head diameter, or                                                                                                                           |                                                                                                                 |                                                            |                                                                                                           | <b>Roof</b><br>3-16d box (31/2" × 0.135"); or                                             |                                                                                 |                           |  |
| Wood structural panel lap<br>siding (see Section R703.5)                               | 3/8 — 1/2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Note eNote g                                              | 2″ × 0.099″<br>siding nail           | 21/2" × 0.113"<br>siding nail                                                                                     | 21/2" × 0.113<br>siding nail                                                                                                                 | 0.113" siding                                                               | 2″ × 0.099″<br>siding nail               | 8″ along bottom<br>edge                              | 36                                                                                                                                                              | 1/2″ gypsum sheathinǥ                                                                                                                                                                     | 11/4″long 16 ga.;                                                                                                                                       | 7                                                                                                               | 7                                                          | 16 Bottom plate to joist, rim joist, band joist or blocking (at braced wall pane                          | 2-16d common (31/2" × 0.162"); or                                                         | 16″ o.c. face nail                                                              |                           |  |
| For SI: 1 inch = 25.4 mm.                                                              | oluminum oiding                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | staple galvanized, 11/2" long; 7/16" or 1"<br>crown or 11/4" screws, Type W or S                                                                        |                                                                                                                 |                                                            |                                                                                                           | 4-3" × 0.131" nails<br>4-8d box (21/2" × 0.113"); or                                      |                                                                                 |                           |  |
| b.Aluminum (0.019 inch) shall be unback<br>inch of the nominal dimension.              | ked only where the max                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | kimum panel width is 10 ir                                | ches and the maximu                  | um flat area is 8 inches                                                                                          | s. The tolerance for                                                                                                                         | aluminum siding sha                                                         | ll be +0.002                             |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | 13/4" × 0.120" galvanized roofing<br>nail, 7/16" head diameter, or 11/4" long 16                                                                        |                                                                                                                 |                                                            |                                                                                                           | 3-16d box (31/2" × 0.135"); or                                                            |                                                                                 |                           |  |
| c.Shall be of approved type.<br>d.Where used to resist shear forces, the               | spacing must be 4 incl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | nes at panel edges and 8 i                                | nches on interior supp               | ports.                                                                                                            |                                                                                                                                              |                                                                             |                                          |                                                      | 37                                                                                                                                                              | 5/8″ gypsum sheathing                                                                                                                                                                     | ga.;                                                                                                                                                    | 7                                                                                                               | 7                                                          |                                                                                                           | 4-8d common (21/2" × 0.131"); or                                                          | Toe nail                                                                        |                           |  |
| e.Vertical end joints shall occur at studs<br>f.Face nailing: one 6d common nail throu | and shall be covered w<br>ugh the overlapping pla                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | vith a joint cover or shall b<br>nks at each stud. Concea | e caulked.<br>ed nailing: one 11-gag | ge 1 1/2-inch-long galv                                                                                           | . roofing nail throug                                                                                                                        | gh the top edge of eac                                                      | h plank at                               |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | staple galvanized, 11/2" long; 7/16" or 1"<br>crown or 11/4" screws, Type W or S                                                                        |                                                                                                                 |                                                            |                                                                                                           | 4-10d box (3" × 0.128"); or                                                               |                                                                                 |                           |  |
| each stud in accordance with the manuf<br>g.Vertical joints, if staggered, shall be pe | acturer's installation in<br>rmitted to be away from                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | structions.<br>n studs if applied over wo                 | od structural panel sh               | neathing.                                                                                                         | <i></i>                                                                                                                                      |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | /ood structural panels, combination subf                                                                                                                | loor underlayment to framing                                                                                    |                                                            | 17 Top of bottom plate to stud                                                                            | 4-3" × 0.131" nails<br>3-16d box (31/2" × 0.135"); or                                     |                                                                                 |                           |  |
| n.Minimum fastener length must be suff<br>manufacturer's installation instructions.    | instructions and suppo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | atning other naliable subs                                | trate and framing a to               | penetrate into or fully                                                                                           | 1/4 inches of in acc                                                                                                                         | cordance with the                                                           | ble                                      |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | Deformed (2" × 0.113") or                                                                                                                               |                                                                                                                 |                                                            |                                                                                                           | 2-16d common (31/2" × 0.162"); or                                                         | End poil                                                                        |                           |  |
| substrate of minimum thickness specific<br>j.Insulated vinyl siding shall comply with  | ed by the instructions of ASTM D7793.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | r test report, without pene                               | trating into framing.                |                                                                                                                   |                                                                                                                                              | or oard Halla                                                               |                                          |                                                      | 38                                                                                                                                                              | S/4 ATTU IESS                                                                                                                                                                             | elormed (2 × 0.120°) nall; or<br>8d common (21/2" × 0.131") pail                                                                                        | ъ                                                                                                               | 12                                                         |                                                                                                           | 3-10d box (3" × 0.128"); or                                                               | Ling Hall                                                                       |                           |  |
| k.Polypropylene siding shall comply with<br>I.Cladding attachment over foam sheath     | ASTM D7254.<br>ing shall comply with tl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | he additional requirement                                 | s and limitations of <u>S</u>        | Sections R703.15, R703                                                                                            | 3.16 and <u>R703.17</u> .                                                                                                                    |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | 8d common (21/2" × 0.131") nail; or                                                                                                                     |                                                                                                                 |                                                            |                                                                                                           | 3-3" × 0.131" nails<br>3-10d box (3" × 0.128"); or                                        |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      | 39                                                                                                                                                              | 7/8" — 1"                                                                                                                                                                                 | Deformed (2" × 0.113"); or                                                                                                                              | 6                                                                                                               | 12                                                         | 18 Top plates, laps at corners and intersections                                                          | 2-16d common (31/2" × 0.162"); or                                                         | Face nail                                                                       |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           | Deformed (21/2" × 0.120") nail<br>10d common (3" × 0.148") nail; or                                                                                     |                                                                                                                 |                                                            |                                                                                                           | 3-3" × 0.131" nails<br>3-8d box (21/2" × 0.113"): or                                      |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      | 40                                                                                                                                                              | 1 1/8" - 1 1/4"                                                                                                                                                                           | Deformed (2" × 0.113"); or                                                                                                                              | 6                                                                                                               | 12                                                         |                                                                                                           | 2-8d common (21/2" × 0.131"); or                                                          |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      | For SI: 1 inch                                                                                                                                                  | n = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.4                                                                                                                                     | Deformed (21/2" × 0.120") nail<br>47 m/s; 1 ksi = 6.895 MPa.                                                                                            |                                                                                                                 |                                                            | 19 1" brace to each stud and plate                                                                        | 2-10d box (3" × 0.128"); or                                                               | Face nail                                                                       |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      | a.Nails are sm                                                                                                                                                  | ooth-common, box or deformed shanks except where oth<br>as shown: 80 ksi for shank diameter of 0.192 inch (20d                                                                            | nerwise stated. Nails used for framing and sheathing connections<br>common nail), 90 ksi for shank diameters larger than 0.142 inch                     | s are carbon steel and shall have minimum average be<br>but not larger than 0.177 inch, and 100 ksi for shank d | ending yield strengths<br>liameters of 0.142 inch or less. |                                                                                                           | 2 staples 13/4"                                                                           |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      | b.RSRS-01 is<br>c.Nails shall                                                                                                                                   | Connections using nails and staples of other materials,<br>a Roof Sheathing Ring Shank nail meeting the specif<br>be spaced at not more than 6 inches on center at all                    | such as stainless steel, shall be designed by accepted engineering<br>ications in ASTM F1667.<br>supports where spans are 48 inches or greater.         | g practice or approved under Section R104.11.                                                                   |                                                            |                                                                                                           | 2-8d common (21/2" × 0.131"); or                                                          |                                                                                 | CAJO                      |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      | d.Four-foot b<br>e.Spacing of fa                                                                                                                                | by 8-foot or 4-foot by 9-foot panels shall be applied ve<br>asteners not included in this table shall be based on Table                                                                   | rtically.<br>R602.3(2).                                                                                                                                 |                                                                                                                 |                                                            | 20 $1'' \times 6''$ sheathing to each bearing                                                             | 2-10d box (3" × 0.128"); or                                                               | Face nail                                                                       | av Th                     |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      | f.For wood st                                                                                                                                                   | tructural panel roof sheathing attached to gable end<br>design wind speed is greater than 130 mph in Expo                                                                                 | roof framing and to intermediate supports within 48 inches<br>sure B or greater than 110 mph in Exposure C.                                             | of roof edges and ridges, nails shall be spaced at                                                              | 4 inches on center where the ultimate                      |                                                                                                           | 2 staples, 1" crown, 16 ga., 13/4" long                                                   |                                                                                 | The Valley of Opportunity |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          | g.Gypsum sh<br>h.Spacing of                          | reatining shall conform to ASTM C1396 and shall be i<br>fasteners on floor sheathing panel edges applies to<br>edges applies to panel edges supported by from a | nstalled in accordance with ASTM C1280 or <u>GA 253</u> . Fiberb<br>panel edges supported by framing members and required b<br>g members and required blocking. Blocking of roof or floor | poard sneathing shall conform to ASTM C208.<br>plocking and at floor perimeters only. Spacing of fa<br>sheathing panel edges perpendicular to the frame | asteners on roof sheathing panel<br>ing members need not be provided                                            |                                                            | 3-8d box (21/2" × 0.113"); or                                                                             |                                                                                           | Theory ton't                                                                    |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           | i.Where a raft                       | except as required by other provisions of this code<br>ter is fastened to an adjacent parallel ceiling ioist in a | <ul> <li>Floor perimeter shall be supported by framing members of<br/>accordance with this schedule, provide two toe nails on one</li> </ul> | r solid blocking.<br>e side of the rafter and toe nails from the ceiling io | ist to top plate in accordance with this |                                                      | 3-8d common (21/2" × 0.131"); or                                                                                                                                |                                                                                                                                                                                           | porated                                                                                                                                                 |                                                                                                                 |                                                            |                                                                                                           |                                                                                           |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 | schedule. The toe nail on the opposite side of the rafter                                                                                                                                 | r shall not be required.                                                                                                                                |                                                                                                                 |                                                            |                                                                                                           | 3-10d box (3" × 0.128"); or                                                               | a., 13/4" long                                                                  |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           |                                                                                                                                                         |                                                                                                                 |                                                            | $1'' \times 8''$ and wider sheathing to each                                                              | 3 staples, 1" crown, 16 ga., 13/4" long<br>Wider than 1" × 8"                             |                                                                                 | <del>/\</del> 4.1         |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 | 21 bearing                                                                                                                                                                                | 4-8d box (21/2" × 0.113"); or                                                                                                                           | ⊢ace nail                                                                                                       |                                                            |                                                                                                           |                                                                                           |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           |                                                                                                                                                         |                                                                                                                 |                                                            |                                                                                                           |                                                                                           |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           |                                                                                                                                                         |                                                                                                                 |                                                            |                                                                                                           | 3-10d box (3" × 0.128"); or                                                               |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           |                                                                                                                                                         |                                                                                                                 |                                                            |                                                                                                           | 4 staples, 1" crown, 16 ga., 13/4" long                                                   |                                                                                 |                           |  |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                                      |                                                                                                                   |                                                                                                                                              |                                                                             |                                          |                                                      |                                                                                                                                                                 |                                                                                                                                                                                           |                                                                                                                                                         |                                                                                                                 |                                                            |                                                                                                           |                                                                                           |                                                                                 |                           |  |

![](_page_26_Figure_0.jpeg)

![](_page_26_Figure_1.jpeg)

**BRACED WALL PANEL CONNECTION OPTION TO PERPENDICULAR RAFTERS OR ROOF TRUSSES** 

![](_page_26_Figure_5.jpeg)

![](_page_26_Figure_9.jpeg)

![](_page_26_Figure_14.jpeg)

![](_page_26_Figure_16.jpeg)

![](_page_26_Picture_27.jpeg)

2 CRC Figure R403.1.3

1 El Cajon - Cutting & Notching of Joists, Rafters, and Studs

CRC DETAILS

![](_page_27_Figure_4.jpeg)

![](_page_27_Figure_5.jpeg)

![](_page_27_Figure_6.jpeg)

![](_page_27_Figure_10.jpeg)

![](_page_28_Figure_2.jpeg)

T24 Energy Calculations (Provided by Permittee)

![](_page_29_Figure_2.jpeg)

T24 Energy Calculations (Provided by Permittee)

![](_page_31_Picture_0.jpeg)

### 2 VICINITY MAP (PERMITTEE TO COMPLETE) SCALE: SCALE:

![](_page_31_Picture_2.jpeg)

BY USING THESE STANDARD PLANS, THE USER AGREES TO RELEASE THE CITY OF EL CAJON, THE ARCHITECT, AND CON PREPARED THESE CONSTRUCTION DOCUMENTS F **CLAIMS, LIABILITIES, SUITS, AND DEMANDS ON AC INJURY, DAMAGE, OR LOSS TO PERSONS OR PROP** INJURY OR DEATH, OR ECONOMIC LOSSES, ARISIN OF THESE CONSTRUCTION DOCUMENTS. THE USE DOES NOT ELIMINATE OR REDUCE THE USER'S RE VERIFY ANY AND ALL INFORMATION PRIOR TO, AN CONSTRUCTION.

# FIRE DEPARTMENT ACCESS NOTI

ACCESSORY DWELLING UNITS MUST COMPLY WIT CODE AS ADOPTED BY THE CITY OF EL CAJON TO OF THE FIRE MARSHAL.

FIRE SAFETY STANDARDS FOR SITE ACCESS, AND HOSE-PULL MUST BE OBSERVED. A TURN REQUIRED.

FIRE DEPARTMENT SPRINKLER NOTES:

ACCESSORY DWELLING UNITS REQUIRE SPRIN WHEN THE PRIMARY UNIT IS SPRINKLER PROT UNITS EXCEEDING 1,200 SQUARE FEET IN SIZE REQUIRES AN AUTOMATIC FIRE SPRINKLER SYSTE

# **ENGINEERING DIVISION EASEMEN**

PERMANENT STRUCTURES CANNOT BE BUILT ON CAJON - OWNED EASEMENTS. FOR MORE INFO CHECK WITH THE CITY OF EL CAJON, DEPAR WORKS.

# **ENCROACHMENT PERMITS:**

ENCROACHMENT PERMITS ARE REQUIRED PRIOR PUBLIC RIGHT-OF-WAY. TO APPLY, GO TO WWW.ELC

ENCROACHMENT PERMIT REQUIREMENTS: WWW.ELCAJON.GOV/ENCROACHMENT

INSURANCE GUIDELINES: WWW.ELCAJON.GOV/INSURANCEGUIDELINES

# **SITE PLAN REQUIREMENTS:**

1. ADD PLOT PLAN TO TEMPLATE AREA, OR SUBMIT SHEET OF PAPER LARGE ENOUGH TO SHOW ALL OF INFORMATION. MINIMUM SIZE IS 8 1/2" x 11"

2. SHOW A NORTH DIRECTION ARROW ON YOUR PLO

3. INDICATE THE SCALE OF YOUR DRAWING

4. INDICATE THE AREA AND DIMENSIONS OF THE P 5. PROVIDE THE ASSESSOR PARCEL NUMBER ON

6. SHOW LOCATION, NAMES, AND WIDTHS OF BORD SITE STREETS, ROAD EASEMENTS AND ALLEYS

7. SHOW ALL UTILITY AND/OR OPEN SPACE EASEME THE USE OF THE EASEMENT AND DIMENSIONS

8. SHOW LOCATION AND WIDTH OF INTERIOR DRIV

9. SHOW LOCATIONS AND DIMENSIONS OF ALL EXI PROPOSED BUILDINGS, STRUCTURES, PARKING AN AREAS

10. STATE THE USE OF ALL BUILDINGS AND STRUCT 11. SHOW ALL DISTANCES FROM BUILDINGS AND O PROPERTY LINES OR ROAD/STREET EASEMENTS /

12. SHOW DISTANCES BETWEEN BUILDINGS

13. INDICATE LOCATION OF ALL SLOPES AND BANKS

![](_page_31_Picture_28.jpeg)

![](_page_31_Picture_29.jpeg)

| SREES TO RELEASE                                                 | APPLICABLE CODES:                                                                                                                                                                                                    |                                         |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| COUNT OF ANY<br>PERTY, INCLUDING                                 | ALL WORK SHALL CONFORM TO ALL APPLICABLE BUILDING CODES<br>AND ORDINANCES WITHIN THE PROJECT JURISDICTION. CODES<br>USED IN THIS PROJECT INCLUDE BUILARE NOT LIMITED TO                                              |                                         |
| OF THE USE<br>OF THESE PLANS<br>SPONSIBILITY TO<br>ID DURING,    | 2022 CALIFORNIA ADMINISTRATIVE CODE<br>2022 CALIFORNIA RESIDENTIAL CODE<br>WITH CITY OF EL CAJON AMENDMENTS<br>2022 CALIFORNIA BUILDING CODE                                                                         |                                         |
| Ee.                                                              | WITH CITY OF EL CAJON AMENDMENTS<br>2022 CALIFORNIA MECHANICAL CODE                                                                                                                                                  |                                         |
| <b>ES:</b><br>TH CALIFORNIA FIRE<br>THE SATISFACTION             | WITH CITY OF EL CAJON AMENDMENTS<br>2022 CALIFORNIA ELECTRICAL CODE<br>WITH CITY OF EL CAJON AMENDMENTS<br>2022 CALIFORNIA PLUMBING CODE                                                                             |                                         |
|                                                                  | WITH CITY OF EL CAJON AMENDMENTS<br>2022 CALIFORNIA ENERGY CODE                                                                                                                                                      |                                         |
| BUILDING SPACING,<br>N AROUND MAY BE                             | WITH CITY OF EL CAJON AMENDMENTS<br>2022 CALIFORNIA FIRE CODE<br>WITH CITY OF EL CAJON AMENDMENTS<br>2022 CALIFORNIA GREEN BUILDING STANDARDS CODE<br>WITH APPENDICES A4 & A5                                        |                                         |
| IKLER PROTECTION<br>TECTED. DWELLING<br>E OF LIVING SPACE<br>EM. | IN CASE OF ANY CONFLICT WHEREIN THE METHOD OR STANDARDS<br>OF INSTALLATION, OR THE MATERIALS SPECIFIED DO NOT EQUAL OR<br>EXCEED THE REQUIREMENTS OF THE LAWS OR ORDINANCES, THE<br>LAWS OR ORDINANCES SHALL GOVERN. | ADDRES:                                 |
| NTS:                                                             | STORMWATER, GRADING AND DRAINAGE CONTROL CODES AS WELL<br>AS EROSION CONTROL MEASURES MUST BE FOLLOWED IF<br>APPLICABLE, AS WELL AS ALL ENVIRONMENTALLY CRITICAL AREA<br>(ECA) REGULATIONS FOR THE JURISDICTION.     |                                         |
| ORMATION, PLEASE<br>TMENT OF PUBLIC                              | OWNER INFORMATION:<br>(PERMITTEE TO COMPLETE)                                                                                                                                                                        |                                         |
|                                                                  | NAME:                                                                                                                                                                                                                |                                         |
|                                                                  | ADDRESS:                                                                                                                                                                                                             |                                         |
| CAJON.GOV/PACO                                                   | PHONE:                                                                                                                                                                                                               |                                         |
|                                                                  | CONTACT INFORMATION:<br>(PERMITTEE TO COMPLETE)                                                                                                                                                                      |                                         |
|                                                                  | NAME:                                                                                                                                                                                                                |                                         |
| T ON A SEPARATE                                                  | ADDRESS:                                                                                                                                                                                                             | <u>+</u> =                              |
| DF THE                                                           | PHONE:                                                                                                                                                                                                               |                                         |
| LOT PLAN                                                         |                                                                                                                                                                                                                      | aj(                                     |
| PARCEL                                                           | PROJECT INFORMATION:<br>(PERMITTEE TO COMPLETE)                                                                                                                                                                      | v Dwe                                   |
| THE PLAN                                                         |                                                                                                                                                                                                                      | sor afe                                 |
| DERING OR ON-                                                    | SITE ADDRESS:                                                                                                                                                                                                        | of S |
| IENTS. INDICATE                                                  | LEGAL DESCRIPTION:                                                                                                                                                                                                   | Ac Ac Idir                              |
| /EWAYS                                                           | ZONE:                                                                                                                                                                                                                | sF<br>Bui                               |
| ISTING AND                                                       | EXISTING STRUCTURE SPRINKLERED: YES / NO (SELECT ONE)                                                                                                                                                                |                                         |
| ND LANDSCAPE                                                     | CONSTRUCTION TYPE & USE:                                                                                                                                                                                             |                                         |
| TURES                                                            | *SPRINKLERS REQUIRED: YES / NO (SELECT ONE)                                                                                                                                                                          |                                         |
| OVERHANGS TO<br>AND CENTERLINES                                  | SQUARE FOOTAGE:<br>(E) RESIDENCE:<br>(N) ADU:<br>OTHER STRUCTURES:                                                                                                                                                   |                                         |
| <s td=""  <=""><td></td><td></td></s>                            |                                                                                                                                                                                                                      |                                         |
|                                                                  | PROJECT DESCRIPTION:<br>PROPOSED 802 SF DETACHED ACCESSORY DWELLING UNIT                                                                                                                                             |                                         |
|                                                                  | DEFERRED SUBMITTAL:<br>PHOTOVOLTAIC SOLAR PANEL SYSTEM PER TITLE 24 REPORT                                                                                                                                           |                                         |
|                                                                  | SHEET INDEX 14 TOTAL                                                                                                                                                                                                 |                                         |
|                                                                  | A0.1 TITLE<br>A0.2 GENERAL NOTES                                                                                                                                                                                     | CAI                                     |
|                                                                  | A0.3CRC MIN. CONSTRUCTION SPECIFICATIONSA0.4EROSION CONTROL/BMP                                                                                                                                                      | and the                                 |
|                                                                  | A1.1FLOOR PLAN / ROOF PLANA1.2FOUNDATION PLAN / ROOF FRAMING PLAN                                                                                                                                                    | The Valley of Opportunity               |
|                                                                  | A1.3 UTILITY PLAN<br>A2.1 ELEVATIONS                                                                                                                                                                                 | Theor Donated 1917                      |
|                                                                  | A3.1 SECTIONS                                                                                                                                                                                                        | - Of all -                              |
|                                                                  | A4.2 CRC DETAILS                                                                                                                                                                                                     | A0.1                                    |
|                                                                  | A4.3     DETAILS       T24.1     ENERGY CALCULATIONS                                                                                                                                                                 |                                         |
|                                                                  | T24.2 ENERGY CALCULATIONS                                                                                                                                                                                            |                                         |
|                                                                  |                                                                                                                                                                                                                      | IIIEE                                   |

### **BUILDING DESIGN CRITERIA**

THE DESIGN CRITERIA LISTED BELOW FOR BUILDING PROJECTS WITHIN THE CITY OF EL CAJON ARE PROVIDED AS GENERAL GUIDELINES. THEY ARE NOT INTENDED TO BE USED IN PLACE OF PROJECT SPECIFIC INFORMATION AS MAY BE SUPPLIED BY A LICENSED DESIGN PROFESSIONAL OR GEOTECHNICAL ENGINEER.

#### SEISMIC DESIGN: 1613.2.5 OCCUPANCY CATEGORY I, II, OR III STRUCTURES LOCATED WHERE THE MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER AT 1-SECOND PERIOD. S1 IS GREATER THAN OR EQUAL TO 0.75 WILL BE SEISMIC CATEGORY E. OCCUPANCY CATEGORY IV STRUCTURES LOCATED WHERE THE MAPPED SPECTRAL ACCELERATION PARAMETER AT 1-SECOND PERIOD S1 IS

GREATER THAN OR EQUAL TO 0.75 WILL BE SEISMIC CATEGORY F.ALL OTHER STRUCTURES SHALL BE ASSIGNED TO A SEISMIC DESIGN CATEGORY BASED ON THEIR OCCUPANCY CATEGORY AND THE DESIGN SPECTRAL RESPONSE ACCELERATION COEFFICIENTS, SDS AND SD1 DETERMINED IN ACCORDANCE WITH CBC SECTION 1613.2.4 FOR STRUCTURES DESIGNED UNDER THE 2022 CRC SEISMIC DESIGN CATEGORY D2 IS ASSUMED UNLESS SUSTANTIATED BY ANALYSIS (2022 CRC 301.2.2.1) USE SITE SOIL CLASS D UNLESS OTHERWISE INDICTED IN A GEOTECHNICAL REPORT SPECIFIC TO THE SITE (2022 CBC SECTION 1616.2.2)

2. WIND DESIGN THE MINIMUM BASIC WIND SPEED AT ANY LOCATION IS 100(CLASS I), 110(CLASS II), 115(CLASS III, IV) MILES PER HOUR. 2019 CBC FIGURES 1609, BASIC WIND SPEED SPEED, 3 SECOND GUST, 2022 CRC FIGURE R301.2 (5)A. SURFACE ROUGHNESS CATEGORY WILL GENERALLY BE CATEGORY B, BUT COULD BE CATEGORY C DEPENDING ON SITE SPECIFIC CONDITIONS. THE WIND DESIGN SHALL COMPLY WITH EXPOSURE B OR C REQUIREMENTS, DEPENDING ON SITE SPECIFIC CONDITIONS

#### 3. CLIMATE ZONE

FOR TITLE 24 ENERGY EFFICIENCY DESIGN - CLIMATE ZONE 10

4. HIGH FIRE SEVERITY ZON PLEASE CONTACT CITY STAFF FOR INFORMATION OR A COPY OF THE HIGH FIRE SEVERITY ZONE MAP

### **GREEN BUILDING REQUIREMENTS FOR RESIDENTIAL CONSTRUCTION**

- . INDOOR WATER USE CGBSC 4.303 INDOOR WATER FIXTURES SHALL NOT EXCEED THE FIXTURE FLOW RATES BELOW - LAVATORFAUCETS : 1.2 GPM @ 60 PSI MAX. - .8 GPM @ 20 PSI MIN. - KITCHEN FAUCETS : 1.8 GPM @ 60 PSI - WATER CLOSETS (TOILETS) : 1.28 GAL. PER FLUSH
  - SHOWERHEADS : 1.8 GPM @ 80 PSI

2. CONSTRUCTION WASTE MANAGEMENT - CGBSC 4.408 A CONSTRUCTION WASTE MANAGEMENT PLAN SHALL BE SUBMITTED. THE WASTE MANAGEMENT PLAN SHALL ADDRESS THE FOLLOWING AREAS. I. IDENTIFIES THE MATERIALS TO BE DIVERTED FROM DISPOSAL BY RECYCLING, REUSE ON THE PROJECT, OR SALVAGE FOR FUTURE USE OR SALE. SPECIFY IS MATERIALS WILL BE SORTED ON-SITE OR MIXED FOR TRANSPORTATION TO A IVERSION FACILITY 3. IDENTIFIES THE DIVERSION FACILITY WHERE THE MATERIAL COLLECTED WILL BE TAKEN. 4. IDENTIFIES CONSTRUCTION METHODS EMPLOYED TO REDUCE THE AMOUNT OF WASTE GENERATE

5. SPEFICIES THAT THE AMOUNT OF MATERIALS DIVERTED SHALL BE CALCULATED BY WEIGHT OR VOLUME, BUT NOT BY BOTH 3. BUILDING MAINTENANCE AND OPERATION (MANUAL) - CGMSC 4.410 AT FINAL INSPECTION DOCUMENTATION ACCEPTABLE TO THE ENFORCING AGENCY ON BUILDING MAINTENANCE AND OPERATION MUST BE PROVIDED FOR THE OWNER OR OCCUPANT AND SHALL

INCLUDE: 1. OPERATION AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT, SYSTEMS, AND APPI IANCES 2. ROOF AND YARD DRAINAGE INCLUDING GUTTERS AND DOWNSPOUTS . SPACE CONDITIONING SYSTEMS INCLUDING CONDENSERS AND AIR FILTERS 4. LANDSCAPE AND IRRIGATION SYSTEMS

#### 5. WATER REUSE SYSTEMS . UTILITY, WATER, RECYCLING PROGRAMS AND LOCATIONS

PUBLIC TRANSPORTATION AND CARPOOL OPTIONS 3. EDUCATIONAL MATERIAL ON POSSITIVE IMPACTS OF MAINTAINING INDOOR RELATIVE HIMUDITY BETWEEN 30 AND 60 PERCENT 9. INFORMATION ABOUT WATER CONSERVING LANDSCAPE AND IRRIGATION DESIGN 0. IMPORTANCE OF GUTTERS AND DOWNSPOUTS AND DIVERTING WATER AT LEAST 5' FROM

BUILDINGS 11. INFORMATION ON ROUTINE MAINTENANCE SUCH AS CAULKING, PAINTING, GRADING, ETC 12. INFORMATION ABOUT STATE SOLAR ENERGY AND INCENTIVE PROGRAMS 13. A COPY OF ALL SPECIAL INSPECTION VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY

4. POLLUTION CONTROL - CGBSC 4.504 POLLUTION CONTROL MUST BE PROVIDED AS FOLLOWS ALL DUCTS AND RELATED DISTRIBUTION COMPONENT OPENINGS MUST BE COVERED WITH TAPE OR OTHER APPROVED MEANS TO PREVENT DUST ACCUMULATION

2. ADHESIVES, SEALANTS, AND CAULKS MUST MEET THE MINIMUM VOC LIMITS (TABLE 4.504.1) PAINTS AND COATINGS MUST MEET MIMIMUM VOC LIMITS 4. AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC IN SECTION 944522(a)(2) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF

CERTAIN TOXIC COMPOUNTS AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(e)(1) AND (f)(1) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520 5. ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE TESTING AND PRODUCT REQUIREMENTS OF ONE OF THE FOLLOWING. a. CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS PROGRAM b. CALIFORNIA DEPARTMENT OF PUBLIC HEALTH STANDARD PRACTIVE FOR TESTING OF VOCs

(SPECIFICATION 01350) NSF/ANSI 140 AT THE GOLD LEVE d. SCIENTIFIC CERTIFICATIONS SYSTEM INDOOR ADVANTAGE GOLD

ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CARPET AND RUG INSTITUTEGREEL LABEL PROGRAM 7. ALL CARPET ADHESIVE SHALL MEET THE MINIMUM VOC LIMITS (TABLE 4.504.1)

3. WHERE RESILIENT FLOORING IS INSTALLED, AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL COMPLY WITH THE VOC EMISSION LIMITS DEFINED IN COLLABORATIVE FOR HIGH PERFORMANCE SCHOOLS (CHPS) LOW-EMITTING MATERIALS LIST OR CERTIFIED UNDER THE RESILIENT FLOOR COVERING INSTITURE (RCFI) FLOOR SCORE PROGRAM 9. HARDWOOD PLYWOOD, PARTICLEBOARD, AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXICS CONTROL MEASURES FOR COMPOSITE WOOD (17 CCR 93120 ET SEQ.), BY OR BEFORE THE DATES SPECIFIED IN THOSE SECTIONS, AS SHOWN IN TABLE 4.504.5

DOCUMENTATION FOR THE ITEMS LISTED ABOVE MUST BE MADE AVAILABLE TO YOUR INSPECTOR UPON REQUEST.

5. INTERIOR MOISTURE CONTROL - CGBSC 4.505 A LARGE CAPILLARY BREAK SHALL BE INSTALLED AND SHALL CONSIST OF THE FOLLOWING: A 4-INCH THICK BASE OF 1/2 INCH OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR BARRIER IN DIRECT CONTRACT 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. AN EQUIVALENT SLAB DESIGN BY A DESIGN PROFESSIONAL IS ACCEPTABLE.

6. MOISTURE CONTENT OF BUILDING MATERIALS - CGBSC 4.505.3 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 . MOISTURE READINGS SHALL BE TAKEN AT A POINT 2 FEET TO 4 FEET FROM THE GRADE STAMPED END OF EACH PIECE TO BE VERIFIED 3. AT LEAST THREE RANDOM MOISTURE READINGS SHALL BE PERFORMED ON WALL AND FLOOR FRAMING WITH DOCUMENTATION PROVIDED IMMEDIATELY PRIOR TO ENCLOSURE OF THE WALL

INSULATION PRODUCTS WHICH ARE VISIBLY WET OR HAVE A HIGH MOISTURE CONTACT 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 CLOSURE.

AND FLOOR FRAMING

7. INDOOR AIR QUALITY AND AXHAUST - CGBSC 4.506 FOR BATHROOMS CONTAINING A BATHRUB, SHOWER, OR TUB/SHOWER COMBINATION, A MECHANICAL EXHAUST FAN WHICH EXHAUSTS DIRECTLY FROM THE BATHROOM MUST BE INSTALLED. FANS MUST BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE READILY ACCESSIBLE. HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 TO 80 PERCENT

8. HEATING AND AIR-CONDITIONING - CGBSC 4.507 HEATING AND AIR-CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELETED USING THE FOLLOWING METHODS: THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J-2016, ASHRAE HANDBOOK OR OTHER EQUIVALENT DESIGN SOFTWARE METHODS 2. DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D-2016, ASHRAE HANDBOOKS R OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS . SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S-2014 OR OTHER EQUIVALENT DESIGN SOFTWARE METHODS

EXCEPTION: USE OF ALTERNATE DESIGN TEMPERATURES NECESSARY TO ENSURE THE SYSTEMS FUNCTION ARE ACCEPTABLE.

### <u>GENERAL NOTES</u>

R327.1 - AGING-IN-PLACE DESIGN AND FALL PREVENTION NEWLY CONSTRUCTED DWELLINGS SUBJECT TO THE REQUIREMENTS OF THIS CODE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTIONS R327.1.1 THROUGH R327.1.4

327.1.1 - REINFORCEMENT FOR GRAB BARS AT LEAST ONE BATHROOM ON THE ENTRY LEVEL SHALL BE PROVIDED WITH REINFORCEMENT INSTALLED IN ACCORDANCE WITH THIS SECTION. WHERE THERE IS NO BATHROOM ON THE ENTRY LEVEL. AT LEAST ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE SWELLING HALL COMPLY WITH THIS SECTION. REINFORCEMENT SHALL BE SOLID LUMBER OR OTHER CONSTRUCTION MATERIALS APPROVED BY THE ENFORCING AGENCY. REINFORCEMENT SHALL NOT BE LESS THAN 2 BY 8 INCH (51 MM BY 203 MM) NOMINAL LUMBER. [11/2 INCH BY 7 1/4 INCH (38 MM BY 184 MM) ACTUAL DIMÈNSION] OR OTHEŔ CONSTRUCTION MÅTERIAL PROVIDING QUAL HEIGHT AND LOAD CAPACITY. REINFORCEMENT SHALL BE LOCATED BETWEEN 32 INCHES (812.8 MM) AND 39 1/4 INCHES (997 MM) ABOVE THE FINISHED FLOOR FLUSH WITH THE WALL FRAMING. WATER CLOSET REINFORCEMENT SHALL BE INSTALLED ON BOTH SIDE WALLS OF THE FIXTURE, OR ONE SIDE WALL AND THE BACK WALL. SHOWER REINFORCEMENT SHALL E CONTINUOUS WHERE WALL FRAMING IS PROVIDED. BATHTUB AND COMBINATION BATHTUB

HOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE ROVIDED WITH THE BOTTOM EDGE LOCATED NO MORE THAN 6 INCHES (152.4 MM) ABOVE THE BATHTUB RIM.

EXCEPTIONS: WHERE THE WATER CLOSET IS NOT PLACED ADJACENT TO A SIDE WALL CAPABLE OF ACCOMMODATING A GRAB BAR, THE BATHROOM SHALL HAVE PROVISIONS FOR NSTALLATION OF FLOOR MOUNTED, FOLDAWAY OR SIMILIAR ALTERNATE GRAB BAR REINFORCEMENTS APPROVED BY THE ENFORCING AGENCY. REINFORCEMENT SHALL NOT BE REQUIRED IN WALL FRAMING FOR PRE-FABRICATED SHOWER ENCLOSURES AND BATHTUB WALL PANELS WITH INTEGRAL FACTORY - INSTALLED GRAB BARS OR WHEN FACTORY -INSTALLED REINFORCEMENT FOR GRAB BARS IS PROVIDED. SHOWER ENCLOSURES THAT DO NOT PERMIT INSTALLATION OF REINFORCEMENT AND/OR GRAB BARS SHALL BE PERMITTED PROVIDED REINFORCEMENT FOR INSTALLATION OF FLOOR-MOUNTED GRAB BARS OR AN ALTERNATE METHOD IS APPROVED BY THE ENFORCING AGENCY. BATHTUBS WITH NO SURROUNDING WALLS, OR WHERE THE WALL PANELS DO NOT PERMIT THE INSTALLATION OF EINFORCEMENT SHALL BE PERMITTED, PROVIDED REINFORCEMENT FOR INSTALLATION OF FLOOR - MOUNTED GRAB BARS ADJACENT TO THE BATHTUB OR AN ALTERNATE METHOD IS APPROVED BY THE ENFORCING AGENCY. REINFORCEMENT OF FLOORS SHALL NOT BE

R327.1.1.1 - DOCUMENTATION FOR GRAB BARS REINFORCEMENT INFORMATION AND/OR DRAWINGS IDENTIFYING THE LOCATION OF GRAB BAR REINFORCEMENT SHALL BE PLACED IN THE OPERATION AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS CODE, CHAPTER 4, DIVISION 4.4

REQUIRED FOR BATHTUBS AND WATER CLOSETS INSTALLED IN CONCRETE SLAB FLOORS.

R327.1.2 - ELECTRICAL RECEPTACLE OUTLET, SWITCH AND CONTROL HEIGHTS ELECTRICAL RECEPTACLE OUTLETS, SWITCHES, AND CONTROLS (INCLUDING CONTROLS FOR HEATING, VENTILATION, AND AIR CONDITIONING) INTENDED TO BE USED BY OCCUPANTS SHALL BE LOCATED NO MORE THAN 48 INCHES (1219.2 MM) MEASURED FROM THE TOP OF THE DUTLET BOX AND NOT LESS THAN 15 INCHES (381 MM) MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE FINISH FLOOR EXCEPTIONS: DEDICATED RECEPTACLE OUTLETS REQUIRED BY THE CALIFORNIA ELECTRICAL CODE ON A WALL SPACE WHERE THE DISTANCE BETWEEN THE FINISHED FLOOR AND A BUILT-IN FEATURE ABOVE THE FINISH FLOOR, SUCH AS A WINDOW, IS LESS THAN 15 INCHES (381 MM).

R327.1.3 - INTERIOR DOORS EFFECTIVE JULY 1, 2024, AT LEAST ONE BATHROOM AND ONE BEDROOM ON THE ENTRY LEVEL SHALL PROVIDE A DOORWAY WITH A NET CLEAR OPENING OF NOT LESS THAN 32 INCHES (812.8 MM), MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM THE LÓSED POSITION; OR, IN THE CASE OF A TWO OR THREE - STORY SINGLE FAMILY DWELLING, IN THE SECOND OR THIRD FLOOR OF THE DWELLING IF A BATHROOM OR BEDROOM IS NOT

LOCATED ON THE ENTRY LEVEL. R327.1.4 - DOORBELL BUTTONS DOORBELL BUTTONS OR CONTROLS. WHEN INSTALLED. SHALL NOT EXCEED 48 INCHES (1219.2 MM) ABOVE THE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL UTTON ASSEMBLY. WHERE DOORBELL BUTTONS INTEGRATED WITH OTHER FEATURES ARE

REQUIRED TO BE INSTALLED ABOVE 48 INCHES (1219.2 MM) MEASURED FROM THE EXTERIOR FLOOR OR LANDING, A STANDARD DOORBELL BUTTON OR CONTROL SHALL ALSO BE PROVIDED AT A HEIGHT NOT EXCEEDING 48 INCHES (1219.2 MM) ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON OR CONTROL.

### **ARCHITECTURAL GENERAL NOTES:**

DIMENSIONS, DRAWINGS, AND PERMITS CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE INCLUDING. BUT NOT LIMITED TO, SOILS AND EXISTING UTILITIES, PRIOR TO START OF SITE IMPROVEMENTS. ALL DISCREPANCIES SHALL BE REPORTED TO THE OWNER IMMEDIATELY.

DO NOT SCALE DRAWINGS OR DETAILS. USE GIVEN DIMENSIONS. CHECK DETAILS FOR LOCATION OF ALL ITEMS NOT DIMENSIONED ON PLANS. ALL DIMENSIONS ARE FACE OF STUD WALL, CENTER LINE OF COLUMN, OR FACE OF CONCRETE UNLESS NOTED OTHERWISE. THE DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE

SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE OWNER.

CONTRACTOR AND SUBCONTRACTORS SHALL SECURE ANY PERMITS NOT COVERED BY THE PRIMARY BUILDING PERMIT, SUCH AS ELECTRICAL, PLUMBING, MECHANICAL, AND SEPTIC WORK

APPROVED PERMIT PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY ANY WORKMEN

BUILDING SYSTEMS AND COMPONENTS NOT SPECIFICALY DETAILED SHALL BE INSTALLED PER MANUFACTURERS' RECOMMENDATIONS. VERIFY CHEMICAL COMPATIBILITY OF COMPONENTS (SUCH AS CAULKING, SEALANTS, AND PAINT) PER MANUFACTURER'S REQUIREMENTS. NOTIFY HE OWNER OF ANY RESULTING CONFLICTS.

WHERE INSTALLATION INCLUDES MANUFACTURED PRODUCTS, COMPLY WITH THE MANUFACTURER'S APPLICABLE INSTRUCTIONS FOR INSTALLATION. VERIFY ROUGH-IN DIMENSIONS FOR EQUIPMENT AND PROVIDE BUCK-OUTS, BACKING AND JACKS AS REQUIRED.

ALL GLAZING IN HAZARDOUS LOCATIONS AS DEFINED BY THE BUILDING CODE SHALL BE SAFETY GLAZING, INCLUDING BUT NOT LIMITED TO THE SAFETY GLAZING IDENTIFIED IN THE CONSTRUCTION DOCUMENTS. CONSTRUCTION METHODS

ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR EXPOSED TO WEATHER (SUCH AS SILL PLATES, EXTERIOR DECKING, JOISTS & BEAMS) SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE OR BE A WOOD SPECIES WITH NATURAL RESISTANCE TO DECAY. FASTENERS FOR PRESSURE TREATED WOOD SHALL BE GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER.

PROVIDE GALVANIC INSULATION BETWEEN DISSIMILAR METALS.

BUILDING COMPONENT

APPROVED CORROSION RESISTIVE FLASHING SHALL BE PROVIDED IN THE EXTERIOR WALL ENVELOPE IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OF PENETRATION OF WATER TO THE BUILDINGS' STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL EXTEND TO THE OUTSIDE FACE OF THE EXTERIOR WALL SURFACE OR COMPONENT AND SHALL BE INSTALLED TO PREVENT WATER FROM REENTERING THE EXTERIOR WALL ENVELOPE.

FLASHING SHALL BE INSTALLED AT, BUT NOT LIMITED TO THE FOLLOWING LOCATIONS: - THE TOP OF ALL EXTERIOR WINDOW & DOOR OPENINGS INTERSECTIONS OF FRAME WALLS AND MASONRY OR STUCCO UNDER MASONRY, WOOD OR METAL COPINGS AND SILLS

CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM WHERE EXTERIOR PORCHES, DECKS, TRELLIS OR STAIRS ATTACH TO A WALL AT WALL AND ROOF OR SOFFIT INTERSECTIONS - AT BUILT-IN GUTTERS

VERIFY ALL RECEPTACLES, SWITCH AND FIXTURE LOCATIONS WITH OWNER PRIOR TO INSTALLATION. ALL SWITCHES TO BE DIMMABLE UNLESS NOTED OTEHRWISE.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS AND WORKERS AT ALL TIMES DURING THE COURSE OF THE PROJECT

|  | 2022 RESIDENTIAL | - CALIFORNIA | <b>GREEN BUILDING</b> | STANDARDS | COD |
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# General Notes:

- 1. The flow rates for all plumbing fixtures shall comply with the maximum flow rates in CALGreen Section 4.303.1. 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. [CALGreen 4.406.1]. Before final inspection, a complete operation and maintenance manual shall be placed in the building. A sample of
- the manual is available on the Housing and community Development (HCD) web site. The manual should include the items listed in 2023 CALGreen 4.410.1. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove
- shall comply with U.S. EPA Phase II emission limits where applicable. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.
- All duct and other related air distribution component openings shall be covered during with tape, plastic, or sheet metal until the final startup of the heating cooling, and ventilation equipment. [CALGreen 4.504.1].
- Paints, stains, coatings, adhesives, sealants and caulks shall comply with the Volatile Organic Compound (VOC) limits listed in 2023 CALGreen Section 4.504.2.
- The VOC Content Verification shall be made available to the City staff upon request.
- . All carpet and 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). [CALGreen 4.504.3] Where Esilient flooring installed, at least 80 percent of floor area receiving Esilient flooring all 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). [CALGreen 4.504.4] 0. New hardwood plywood, particle board, and medium density fiberboard (MDF) composite wood product used in the building shall meet the formaldehyde limits listed in 2023 CALGreen Table 4.504.5.
- . Building materials with visible signs of water damage shall not be installed. Walls and floors framing shall not be
- enclosed when framing members exceed 19% moisture content. [CALGreen 4.505.3]. 2. Newly installed bathroom exhaust fans shall be Energy Star compliant and be ducted to terminate outside of the building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a
- humidistat which can adjust between 50 to 80 percent. [CALGreen 4.506.1]. 3. Heating and Air conditioners shall be sized, designed and have their equipment selected using the following
- 1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J 2016 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.
- 2. Duct systems are sized according to ANSI/ACCA 1 Manual D 2016 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
- Select heating and cooling equipment according to ANSI/ACCA 3 Manual S 2014 (Residential Equipment Selection) or other equivalent design software or method.

### 2023 RESIDENTIAL - CALIFORNIA ENERGY CODE

- Manufacture, Construction and Installation of Systems, Equipment and Building Components
- All HVAC systems shall meet the control requirements per Section 110.2 and 120.2 E.E.S. All HVAC equipment and appliances shall meet the requirements per section 110.1-110.3, 110.5, 120.1-120.4 Title 24 Energy Standards.
- Doors and windows shall meet the minimum infiltration requirements per Sections 110.6 and 110.7 E.E.S.
- . Insulation material shall meet the California quality standard per Section 110.8 Energy Efficiency Standards (E.E.S.).

### Space-conditioning Equipment

- Installed air conditioner and heat pump outdoor condensing units shall have a clearance of at least five (5) feet (1.5 meters) from the outlet of any dryer vent.
- All heating or cooling systems, including heat pumps, not controlled by a central energy management control system (EMCS) shall have a setback thermostat, as specified in Section 110.2 (c).
- All water piping, solar water-heating systems piping, and space-conditioning system line insulation thickness and conductivity shall comply with CEC Section150.0(j).

#### Residential Lighting

- All lighting shall be high efficacy and have readily accessible wall-mounted controls that allow the lighting to be manually turned On and Off
- Lighting in bathrooms, garages, laundry rooms, utility rooms and walk-in closets shall have all high efficacy luminaire and at least one luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality
- . For lighting internal to drawers and cabinetry with opaque fronts or doors, controls that turn the light off when the drawer or door is closed shall be provided
- All the installed wattage of luminaires in habitable space such as living rooms, dining rooms, kitchens and bedrooms shall be high efficacy and shall have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down unless exempted by CEC Section 150.0(k)2F
- Integrated lighting of exhaust fans shall be controlled independently from the fans. Under cabinet lighting, undershelf lighting, interior lighting of display cabinets or switched outlets lighting shall be switched separately.
- All luminaires mounted to the building or to other buildings on the same lot shall be high efficacy luminaires and must be controlled by a manual on and off switch, AND controlled by one of these automatic control types: Photocontrol and a motion sensor, or automatic time switch control, or Astronomical time clock or Energy management control system (EMCS).
- Internally illuminated address signed shall consume no more than 5 watts of power or comply with CEC Section 140.8
- . Provide an exterior light at new exterior exits. For dwelling units, attached garages, and detached garages with electric power, at least one wall switch-controlled lighting outlet shall be installed to provide illumination on the exterior side of outdoor entrances or exits with grade level access. A vehicle door in a garage shall not be considered as an outdoor entrance or exit. Exception: Remote, central, or automatic control of lighting shall be permitted.

- Air-Distribution and Ventilation System Ducts, Plenums and Fans
- Ducts not located in entirely conditioned space shall have a minimum installed level of R-6.0 unless exempted by CEC Section 150.0(m)1Bi
- 2. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts
- B. All fan systems, regardless of volumetric capacity, that exchange air between the building conditioned space and the outside of the building shall be provided with backdraft or automatic dampers to prevent unintended air
- leakage through the fan system when the fan system is not operating.
- 4. Duct system sealing and leakage testing must comply with CEC Section 150.0(m)11.

#### Water Heating System:

- Systems using gas or propane water heaters to serve individual dwelling units shall designate a space at least 2.5 feet by 2.5 feet wide and 7 feet tall suitable for the future installation of a heat pump water heater (HPWH) by meeting either CALGreen Section 150.0(n)1 A or B below. All electrical components shall be installed in accordance with the California Electrical Code
- Instantaneous water heaters with an input rating greater than 6.8 kBTU/hr (2kW) shall meet the requirements ofSection 110.3(c)6.

### Solar Readiness

. Solar Readiness shall be provided meeting the requirements of CEC Section 110.10. 2. The residency shall have a minimum solar ready zone in compliance with CEC Section 110.10(b)1A.

#### Heat Pump Space Heater Ready:

Systems using gas or propane furnace to serve individual dwelling units shall include a dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the furnace and accessible to the furnace with no obstructions. The branch circuit conductors shall be rated at 30 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the Dalifornia Electrical Code. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future heat pump space heater installation. The reserved space shall be permanently marked as "For Future 240V use."

#### Electric Cooktop Ready:

Systems using gas or propane cooktop to serve individual dwelling units shall include a dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the cooktop and accessible to the cooktop with no obstructions. The branch circuit conductors shall be rated at 50 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the Dalifornia Electrical Code. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric cooktop installation. The reserved space shall be permanently marked as "For Future 240V use."

#### Electric Clothes Dryer Ready:

Clothes dryer locations with gas or propane plumbing to serve individual dwelling units shall include a dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the clothes dryer location and accessible to the clothes dryer location with no obstructions. The branch circuit conductors shall be rated at 30 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the California Electrical Code. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric clothes dryer installation. The reserved space shall be permanently marked as "For Future 240V use.

2022 RESIDENTIAL -MECHANICAL/PLUMBING

#### Mechanical Notes

- Attic/Underfloor installation must comply with Sections 904, 908, and 909 of the California Mechanical Code (CMC). When a water heater compartment is openable to and is accessible from a bedroom or bathroom, fuel burning water heaters shall be separated in a closet protected with a listed, gasketed self-closing door assembly installed with a threshold/bottom seal complying with Section 504.1.1 and 504.1.2 of the California Plumbing Code. Combustion air shall be supplied to the closet from the exterior in accordance with Section 506.4 of the CPC & the
- water heater shall be direct venting. The closet shall be used exclusively for the water heater. CPC 504.1 When a central heating furnace compartment is openable to and is accessible from a sleeping room such as a bedroom or a bathroom they shall be separated from bedroom in a closet protected with a listed, gasketed self-closing door assembly complying with Section 904.1.1 and 904.1.2 of the California Mechanical Code. ion air shall be supplied to the closet from the exterior in accordance with Section 506.4 of the CPC. The closet shall be used exclusively for the furnace. The furnace shall be of the direct vent type. CMC 904.1

#### 2022 CALIFORNIA RESIDENTIAL CODI

- Shower compartments and bathtubs with installed shower heads shall be finished with a nonabsorbent surface that
- extends to a height of not less than 6 feet above the floor. [CRC R307.2]. 2. Smoke alarms and smoke detectors shall be installed a minimum of 20 feet horizontal distance from a permanently
- installed cooking appliance.
- Smoke alarms shall be installed not less than a 3-foot horizontal distance from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by other sections of the CRC.
- Smoke alarms and smoke detectors shall not be installed within a 36-inch horizontal path from the supply registers of a forced air heating or cooling system and shall be installed outside of the direct airflow of those registers.
- Smoke alarms shall be interconnected so that actuation of one alarm will activate all the alarms within the individual dwelling unit. In new construction smoke alarms shall receive their primary power source from the building wiring and shall be equipped with battery backup
- and low battery signal. 6. Smoke alarms shall comply with NFPA 72 and shall be listed in accordance with UL 217.
- 2. Combination smoke and carbon monoxide alarms shall be listed in accordance with UL 217 and UL 2034.
- 8. Smoke alarm systems and components shall be California State Fire Marshal listed and approved in accordance with California Code of Regulations, Title 19, Division 1 for the purpose for which they are installed. 0. Window opening control devices serving emergency escape and rescue openings shall comply with ASTM F2090.
- [CRC R310.1.1]. 0. Window fall control device shall comply with ASTM F2090. At the emergency escape windows,
- the device after operation should release the control device allowing the windows to fully open providing the clear net opening area required for emergency escape window in accordance with CRC R310.2.1.

2022 RESIDENTIAL - VERY HIGH FIRE HAZARD ZONE SEVERITY ZONE

- . Roof gutters shall be provided with the means to prevent the accumulation of leaves and debris in the gutter. All roof gutters and downspouts shall be constructed of non-combustible materials. [CRC R337.5.4].
- 2. Drip edge flashing used at the free edges of roofing materials shall be non-combustible. 8. Valley flashings shall be not less than 0.019-inch (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide underlayment consisting of one layer of No. 72 ASTM cap sheet running the full
- length of the valley. [CRC R337.5.3]. Chimneys, flues or stovepipes attached to any fireplace, stove, barbeque or other solid or liquid fuel burning equipment or device shall be equipped with an approves spark arrestor.
- . Turbine attic vents shall be equipped to allow one-way direction rotation only and shall not free spin in both directions
- 6. Glazing frames made of vinyl materials shall have welded corners, metal reinforcement in the interlock area. and be certified to the most current edition of ANSI/AAMA/NWWDA 101/I.S.2 structural requirements.

| De<br>1. | ferred Submittal (general)<br>Plans for the deferred submittal items shall be submitted in a timely manner but not less than 30 business days<br>prior to installation for City review and approval.                                                                                                                                                                                                                                                                                                                                                                                             |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.       | The deferred submittal items shall not be installed until their design and submittal documents have been approved<br>by the Building Official. [SDMC §129.0205]                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3.       | The registered and responsible design professional shall review the deferred submittal documents and submit them to the Building Official, with annotation indicating that the deferred submittal documents have been reviewed and found to be in general conformance to the design of the building. [SDMC §129.0205].                                                                                                                                                                                                                                                                           |
| D        | eferred Submittal (NFPA 13D Fire Sprinkler)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 1.       | The submittal of residential fire sprinkler plans required by California Residential Code Section R313 has been deferred.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2.       | To avoid delays in construction, plans for fire sprinkler plans shall be submitted not less than 30 calendar days prior to installation or prior to requesting a foundation inspection. A framing/rough inspection shall not be requested prior to approval of the fire sprinkler plans.                                                                                                                                                                                                                                                                                                         |
| Sp       | ecial Inspections (if applicable to project)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1.       | NOTICE TO THE APPLICANT/OWNER/ OWNER'S AGENT/ARCHITECT or ENGINEER OF RECORD: By using this permitte<br>construction drawings for construction/installation of the work specified herein, you agree to comply with the<br>requirements of City El Cajon for special inspections, structural observations, construction material testing and<br>off-site fabrication of building components, contained in the statement of special inspections and, as required by<br>the California construction codes                                                                                           |
| 2.       | NOTICE TO THE CONTRACTOR/BUILDER/INSTALLER/SUB-CONTRACTOR/OWNER-BUILDER: By using this permitted construction drawings for construction/installation of the work specified herein, you acknowledge and are aware of, the requirements contained in the statement of special inspections. You agree to comply with the requirements of City of El Cajon for special inspections, structural observations, construction material testing and off-site fabrication of building components, contained in the statement of special inspections and, as required by the California construction codes. |
| 3.       | The special inspector must be registered by the City of El Cajon, Building Division, in the category of work required to have special inspection.                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4.       | The special inspections identified on plans are, in addition to, and not a substitute for, those inspections required to be performed by a City's building inspector.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 5.       | The construction materials testing laboratory must be approved by the City of El Cajon, Building Division, for testing of materials, systems, components and, equipment.                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 6.       | Offsite fabricator must be approved by the City of El Cajon, Building Division for the fabrication of members<br>and assemblies on the premises of the fabricator's shop.                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 7.       | Offsite fabricator shall submit an 'Application to perform Off-Site Fabrication' to the Building Division for<br>approval prior to commencement of fabrication.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 8.       | Offsite fabricator shall submit a 'Certificate of Compliance for Off-Site Fabrication' to the Building Division prior to erection of fabricated items and assemblies.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| So       | vils and Foundation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 1.       | When no geotechnical investigation report is provided:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|          | The structure(s) will be located entirely on undisturbed native soil.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| n n      | SignatureOwner/Licensed Engineer or Architect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Ζ.       | As a California licensed Architect/Engineer. I have classified the undisturbed native soils to be and per                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|          | Table 1806.2 of the 2019 CBC I have assigned a foundation pressure of psf. for the design of foundations related to this project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|          | Signatureof Licensed Architect/Engineer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3.       | If the Building Inspector suspects fill, expansive soils or any geologic instability based upon observation of the foundation excavation, a soils or geological report, and resubmittal of plans to plan check to verify that report recommendations have been incorporated, may be required.                                                                                                                                                                                                                                                                                                    |
| Fi       | re Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1.       | During construction, at least one extinguisher shall be provided on each floor level at each stairway, in all storage and construction sheds, in locations where flammable or combustible liquids are stored or used, and where other special basards are precept per CEC 22156.1                                                                                                                                                                                                                                                                                                                |
|          | special nazarus are present per CFC 53130.1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

2. Buildings undergoing construction, alteration, or demolition shall conform to CFC Chapter 33. Welding, cutting, and other hot work shall be in conformance with CFC Chapter 35

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**GENERAL NOTES** 

#### A. General

# Applicable codes. See A0.1

### B. Electrical, Plumbing, and Mechanical

- 1. Exterior lighting. All projects shall comply with the El Cajon lighting ordinance. 2. GFCI outlets. Ground Fault Circuit Interrupter (GFCI) outlets are required in bathrooms, a kitchen countertops, at laundry and wet bar sinks, in garages, in crawlspaces, in unfinished
- basements, and outdoors. (CEC 210.8) 3. AFCI outlets. Electrical circuits in bedrooms, living rooms, dining rooms, dens, closets, hallways, or similar rooms must be protected by Arc Fault Circuit Interrupters (AFCI). (CEC
- 210.12) 4. Luminaire requirements. Installed luminaires shall meet the efficacy and fixture requirements of CBEES 150.0(k).
- 5. Smoke detectors in building remodels. Smoke detectors are required in each existing sleeping room, outside each separate sleeping area in the immediate vicinity of sleeping rooms. and on each story of a dwelling including basements. Battery operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R314.3)
- 6. Carbon monoxide detectors in building remodels. Carbon monoxide detectors are required outside each separate sleeping area in the immediate vicinity of sleeping rooms and on each story of a dwelling including basements. Battery-operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R315.3)
- Water heater seismic strapping. Minimum two 3/4-inch-by-24-gauge straps required around water heaters, with 1/4-inch-by-3-inch lag bolts attached directly to framing. Straps shall be at points within upper third and lower third of water heater vertical dimension. Lower connection shall occur minimum 4 inches above controls. (CPC 507.2)
- 8. Gas appliances in garages. Water heaters and heating/cooling equipment capable of igniting flammable vapors shall be placed on minimum 18-inch-high platform unless listing report number provided showing ignition-resistant appliance. (CPC 507.13 and CMC 305.1)
- **Impact protection of appliances.** Water heaters and heating/cooling equipment subject to vehicular impact shall be protected by bollards or an equivalent measure. (CPC 507.13.1 and CMC 305.11)
- 10. Water closet clearance. Minimum 30-inch-wide by 24-inch-deep clearance required at front of water closets. (CPC 402.5)
- **11.** Shower size. Shower compartments shall have minimum area of 1024 square inches and be able to encompass a 30-inch-diameter circle. Shower doors shall have a minimum 22-inch unobstructed width. (CPC 408.5 and CPC 408.6)
- 12. Fireplace appliances. Fireplaces with gas appliances are required to have the flue damper permanently fixed in the open position and fireplaces with LPG appliances are to have no 'pit' or 'sump' configurations. (CMC 303.7.1)
- 13. Chimney clearance. Minimum 2-foot chimney clearance required above building within 10-foot horizontally of chimney. The chimney shall extend minimum 3 feet above highest point where chimney passes through roof. (CRC R1003.9)

#### C. Mechanical Ventilation and Indoor Air Quality (ASHRAE 62.2-2010)

- 1. **Transfer air.** Ventilation air shall be provided directly from the outdoors and not as transfer air from adjacent dwelling units or other spaces, such as garages, unconditioned crawlspaces, or unconditioned attics. (CBEES 150.0(o))
- **Instructions and labeling.** Ventilation system controls shall be labeled, and the homeowner shall be provided with instructions on how to operate the system. (CBEES 150.0(o)) 3. Combustion and solid-fuel burning appliances. Combustion appliances shall be properly
- vented and air systems shall be designed to prevent back drafting. (CBEES 150.0(o)) 4. Garages. The wall and openings between occupiable spaces and the garage shall be sealed.
- HVAC systems that include air handlers or return ducts located in garages shall have total air leakage of no more than 6% of total fan flow when measured at 0.1 in. w.c. using California Title 24 or equivalents. (CBEES 150.0(o))
- Minimum filtration. Mechanical systems supplying air to occupiable space through ductwork 5. shall be provided with a filter having a minimum efficiency of MERV 6 or better. (CBEES 150.0(0)
- 6. Air inlets. Air inlets (not exhaust) shall be located away from known contaminants. (CBEES
- 7. Air moving equipment. Air moving equipment used to meet either the wholebuilding ventilation requirement or the local ventilation exhaust requirement shall be rated in terms of airflow and sound. (CBEES 150.0(o))
- a. All continuously operating fans shall be rated at a maximum of 1.0 sone.
- **b.** Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone. c. Intermittently operated local exhaust fans shall be rated at maximum of 3.0 sone.
- **d.** Remotely located air-moving equipment (mounted outside of habitable spaces) need not meet requirements if at least 4 feet of ductwork between fan and intake grill

#### D. Foundation and Underfloor

- 1. Foundation reinforcement. Continuous footings and stem walls shall be provided with a minimum two longitudinal No. 4 bars, one at the top and one at the bottom of the footing. (CRC R403.1.3.3)
- **2. Shear wall foundation support.** Shear walls shall be supported by continuous foundations. (CRC 403.1.2)
- 3. Concrete slabs-on-grade. Slabs-on-grade shall be minimum 3-1/2-inches thick. (CRC R506.1) 4. Vapor retarder. A 10-mil polyethylene or approved vapor retarder with joints lapped minimum 6 inches shall be placed between a concrete slab -on-grade and the base course or subgrade.
- (CRC 506.2.3) 5. Anchor bolts and sills. Foundation plates or sills shall be bolted or anchored to the foundation or foundation wall per the following (CRC R403.1.6 and CRC R602.11.1):
- **a.** Minimum 1/2-inch-diameter steel bolts b. Bolts embedded at least 7 inches into concrete or masonry
- c. Bolts spaced maximum 6 feet on center
- d. Minimum two bolts per plate/sill piece with one bolt located maximum 12 inches and minimum 7 bolt diameters from each end of each sill plate/piece
- e. Minimum 3-inch by 3-inch by 0.299-inch steel plate washer between sill and nut on each bolt 6. Hold-downs. All hold-downs must be tied in place prior to foundation inspection.
- 7. Protection of wood against decay. Naturally durable or preservative-treated wood shall be
- provided in the following locations (CRC R317.1): a. All wood in contact with ground, embedded in concrete in direct contact with ground, or embedded in concrete exposed to weather
- **b.** Wood joists within 18 inches and wood girders within 12 inches of the exposed ground in crawl spaces shall be of naturally durable or preservative-treated wood
- c. Wood framing members that rest on concrete or mæonry exterior foundation walls and are less than 8 inches from exposed earth shall be of naturally durable or preservative treated wood
- d. Wood framing, sheathing, and siding on the exterior of the building and having clearance less than 6 inches from the exposed ground or less than 2 inches vertically from concrete steps, porch slabs, patio slabs, and similar horizontal surface exposed to weather
- e. Sills and sleepers on concrete or masonry slab in direct contact with ground unless separated from such slab by impervious moisture barrier
- f. Ends of wood girders entering masonry or concrete walls with clearances less than 1/2 inch on tops, sides, and ends
- g. Wood structural members supporting moisture-permeable floors or roofs exposed to weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier
- **h.** Wood furring strips or other wood framing members attached directly to interior of exterior concrete or masonry walls below grade except where vapor retarder applied between wall and furring strips or framing members
- 8. Underfloor ventilation. Underfloor areas shall have ventilation openings through foundation walls or exterior walls, with minimum net area of ventilation openings of 1 square foot for each 150 square feet of underfloor area. On such ventilating opening shall be within 3 feet of each corner of the building. (CRC R408.1)
- 9. Underfloor access. Underfloor areas shall be provided with a minimum 18-inch by 24-inch access opening. (CRC R408.4)

### E. Wood Framing

- 1. Fastener requirements. The number, size, and spacing of fasteners connecting wood members/elements shall not be less than that set forth in CRC Table R602.3(1). (CRC R502.9, CRC R602.3. and CRC R802.2)
- 2. Stud size, height, and spacing. The size, height, and spacing of studs shall be in accordance with CRC Table R602.3(5). (CRC R602.3.1)

### E. Wood Framing (Continued)

- 3. Sill plate. Studs shall have full bearing on nominal 2-inch thick or larger sill plate with width at least equal to stud width. (CRC R602.3.4)
- 4. Bearing studs. Where joists, trusses, or rafters are spaced more than 16 inches on center and the bearing studs below are spaced 24 inches on center, such members shall bear within 5 nches of the studs beneath. (CRC R602.3.3)
- Drilling and notching of studs. Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25% of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40% of a single stud width. Any stud may be bored or drilled, provided the diameter of the resulting hole is no more than 60% of the stud width, the edge of the hole is no more than 5/8 inch to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior wall or bearing partitions drilled over 40% and up to 60% shall also be doubled with no more than two successive studs bored. (CRC R602.6)
- **Top plate.** Wood stud walls shall be capped with a double top plate installed to provide overlapping at corners and at intersections with other partitions. End joints in double top plates shall be offset at least 24 inches. Joints in plates need not occur over studs. Plates shall be minimum nominal 2 inches thick and have width at least equal to width of studs. (CRC R602.3.2)
- side of splice. (CRC R602.10.8.1)
- Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling, or notching of the top plate by more than 50% of its width, a galvanized metal tie not less than 0.054-inch thick and 1-1/2inches wide shall be fastened across and to the plate at each side of the opening with not less than 8 10d nails having a minimum length of 1-1/2 inches at each side or equivalent. The metal tie must extend minimum 6 inches past the opening. (CRC R602.6.1)
- 9. Cripple walls. Foundation cripple walls shall be framed of studs not less in size than the studding above. Cripple walls more than 4 feet in height shall have studs sized as required for an additional story. Cripple walls with stud height less than 14 inches shall be sheathed on at least one side with a wood structural panel fastened to both the top and bottom plates in accordance with Table R602.3(1), or the cripple walls shall be constructed of solid blocking. Cripple walls shall be supported on continuous foundations. (CRC R602.9)
- 10. Wall bracing. Buildings shall be braced in accordance with the methods allowed per CRC R602.10.2, CRC R602.10.4, and/or CRC R602.10.5.
- 11. Braced wall line spacing. Spacing between braced wall lines shall not exceed 20 feet or alternate provisions of CRC R602.10.1.3.
- 12. Shear wall cumulative length. The cumulative length of shear walls within each braced wall line shall meet the provisions of CRC Table R602.10.3(1) for wind loads and CRC Table R602.10.3(2) for seismic loads. (CRC R602.10.1.1) 13. Shear wall spacing. Shear walls shall be located not more than 25 feet on center. (CRC R602.10.2.2)
- 14. Shear wall offset. Shear walls may be offset out-of-plan not more than 4 feet from the designated braced wall line and not more than 8 feet from any other offset wall considered part of the same braced wall line. (CRC R602.10.1.2)
- 15. Shear wall location. Shear walls shall be located at the ends of each braced wall line or meet the alternate provisions of CRC R602.10.2.2.
- 16. Individual shear wall length. Shear walls shall meet minimum length requirements of CRC R602.10.6.5.1
- 17. Cripple wall bracing. Cripple walls shall be braced per CRC R602.10.11. 18. Shear wall and diaphragm nailing. All shear walls, roof diaphragms, and floor diaphragms
- 19. Shear wall joints. All vertical joints in shear wall sheathing shall occur over, and be fastened to, common studs. Horizontal joints in shear walls shall occur over, and be fastened to, minimum 1-1/2-inch-thick blocking. (CRC R602.10.10)
- **20.** Framing over openings. Headers, double joists, or trusses of adequate size to transfer loads to vertical members shall be provided over window and door openings in loadbearing walls and partitions. (CBC 2304.3.2)
- 21. Joists under bearing partitions. Joists under parallel bearing partitions shall be of adequate size to support the load. Double joists, sized to adequately support the load, that are separated to permit the installation of piping or vents shall be full depth solid-blocked with minimum 2-inch nominal lumber spaced at maximum 4 feet on center. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R502.4)
- 22. Joists above or below shear walls. Where joists are perpendicular to a shear wall above or below, a rim joist, band joist, or blocking shall be provided along the entire length of the shear wall. Where joists are parallel to a shear wall above or below, a rim joist, end joist, or other parallel framing shall be provided directly above and/or below the shear wall. Where a parallel framing member cannot be located directly above and/or below the shear wall, full-depth blocking at 16-inch spacing shall be provided between the parallel framing members to each side of the shear wall. (CRC R602.10.8)
- 23. Floor member bearing. The ends of each floor joist, beam, or girder shall have minimum 1-1/2 inches of bearing on wood or metal and minimum 3 inches of bearing on masonry or concrete except where supported on a 1-inch-by-4-inch ribbon strip and nailed to the adjoining stud or by the use of approved joist hangers. (CRC R502.6)
- 24. Floor joist lap. Floor joists framing opposite sides over a bearing support shall lap minimum 3 inches and shall be nailed together within minimum 3 10d face nails. A wood or metal splice with strength equal to or greater than that provided by the lap is permitted. (CRCR502.6.1)
- 25. Floor joist-to-girder support. Floor joists framing into the side of a wood girder shall be supported by approved framing anchors or on ledger strips minimum nominal 2 inches by 2 inches. (CRC R502.6.2)
- 26. Floor joist lateral restraint. Floor joists shall be supported laterally at ends and each intermediate support by minimum 2-inch full-depth blocking, by attachment to full-depth header. band joist, or rim joist, to an adjoining stud, or shall be otherwise provided with lateral support to prevent rotation. (CRC R502.7)
- **27.** Floor joist bridging. Floor joists exceeding nominal 2 inches by 12 inches shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch strip nailed across the bottom of joists perpendicular to joists at maximum 8-foot intervals. (CRC
- 28. Framing of floor openings. Openings in floor framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the floor joist. Single trimmer joists may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section F. General Material Specifications to support the floor joists framing into the header. Approved hangers shall be used for the header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail joists over 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R502.10)
- **29. Girders**. Girders for single-story construction or girders supporting loads from a single floor shall not be less than 4 inches by 6 inches for spans 6 feet or less, provided that girders are spaced not more than 8 feet on center. Other girders shall be designed to support the loads specified in the CBC. Girder end joints shall occur over supports. When a girder is spliced over a support, an adequate tie shall be provided. The ends of beams or girders supported on masonry or concrete shall not have less than 3 inches of bearing. (CBC 2308.7)
- **30.** Ridges, hips, and valleys. Rafters shall be framed to a ridge board or to each other with a gusset plate as a tie. Ridge boards shall be minimum 1-inch nominal thickness and not less in depth than the cut end of the rafter. At all valley and hips, there shall be a valley or hip rafter not less than 2-inch nominal thickness and not less in depth than the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the specific load at that point. Where the roof pitch is less than 3:12 slope 5. Masonry. Masonry units shall comply with ASTM C 90 for load bearing concrete masonry units. (25% gradient), structural members that support rafters and ceilings joists, such as ridges, hips, and valleys, shall be designed as beams. (CRC R802.3)
- 31. Ceiling joist and rafter connections. Ceiling joists and rafters shall be nailed to each other per CRC Table R802.5.1(9), and the rafter shall be nailed to the wall top plate per CRC Table R602.3(1). Ceiling joists shall be continuous or securely joined per CRC Table R802.5.1(9) where they meet over interior partitions and are nailed to adjacent rafters to provide a continuous tie across the building when such joists are parallel to rafters. Where ceiling joists are not connected to the rafters at the wall top plate, joists connected higher in the attic shall be installed as rafter ties, or rafter ties shall be installed to provide a continuous tie. Where ceiling joists are not parallel to rafters, rafter ties shall be installed. Rafter ties shall be minimum 2 inches by 4 inches nominal, installed per CRC Table R802.5.1(9), or connections of equivalent capacities shall be provided. Where ceilings joists or rafter ties are not provided, the ridge formed by these
- 32. Ceiling joists lapped. Ends of ceiling joists shall be lapped minimum 3 inches or butted overbearing partitions or beams and toenailed to the bearing element. Where ceiling joists provide resistance to rafter thrust, lapped joists shall be nailed together per CRC Table R602.3(1) and butted joists shall be tied together in a manner to resist such thrust. (CRC R802.3.2)
- **33.** Collar ties. Collar ties or ridge straps to resist wind uplift shall be connected in the upper third of the attic space. Collar ties shall be a minimum 1 inch by 4 inches nominal and spaced at maximum 4 feet on center. (CRC R802.3.1)
- 34. Purlins. Purlins installed to reduce the span of rafters shall be sized not less than the required size of the rafters they support. Purlins shall be continuous and shall be supported by 2-inchby-4-inch nominal braces installed to bearing walls at a minimum 45-degree slope from norizontal. The braces shall be spaced maximum 4 feet on center with a maximum 8-foot unbraced length. (CRC R802.5.1
- 35. Roof/ceiling member bearing. The ends of each rafter or ceiling joist shall have not less than 1-1/2 inches of bearing on wood or metal and not less than 3 inches of bearing on masonry or concrete. (CRC R802.6)
- **36.** Roof/ceiling member lateral support. Roof framing members and ceiling joists with anominal depth-to-thickness ratio exceeding 5:1 shall be provided with lateral support at points of bearing to prevent rotation. (CRC R802.8)
- 37. Roof/ceiling bridging. Rafters and ceiling joists with a nominal depth-to-thickness ratio exceeding 6:1 shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch wood strip nailed across the rafters or ceiling joists at maximum 8-foot intervals. (CRC R802.8.1)

#### E. Wood Framing (Continued)

**Top plate splices.** Top plate lap splices shall be face-nailed with minimum 8 16d nails on each

shall be nailed to supporting construction per CRC Table R602.3(1). (CRC R604.3)

rafters shall be supported by a wall or engineer-designed girder. (CRC R802.3.1)

- **38.** Framing of roof/ceiling openings. Openings in roof and ceiling framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the ceiling joist or rafter. Single trimmer joist s may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section to support the ceiling joists or rafters framing into the header. Approved hangers shall be used for the header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail joists over 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R502.10)
- 39. Roof framing above shear walls. Rafters or roof trusses shall be connected to top plates of shear walls with blocking between the rafters or trusses. (CRC R602.10.8)
- 40. Roof diaphragm under fill framing. Roof plywood shall be continuous under California fill 41. Roof diaphragm at ridges. Minimum 2-inch nominal blocking required for roof diaphragm
- nailing at ridges 42. Blocking of roof trusses. Minimum 2-inch nominal blocking required between trusses at ridge
- lines and at points of bearing at exterior walls. 43. Truss clearance. Minimum 1/2-inch clearance required between top plates of interior non-
- bearing partitions and bottom chords of trusses. 44. Drilling, cutting, and notching of roof/floor framing. Notches in solid lumber joists, rafters, blocking, and beams shall not exceed onesixth the member depth, shall be not longer than one third the member depth, and shall not be located in the middle one-third of the span. Notches at member ends shall not exceed one-fourth the member depth. The tension side of members 4 inches or greater in nominal thickness shall not be notched except at member ends. The diameter of holes bored or cut into members shall not exceed one-third the member depth. Holes shall not be closer than 2 inches to the top or bottom of the member or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches to the notch. (CRC R502.8.1
- 45. Exterior landings, decks, balconies, and stairs. Such elements shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be selfsupporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal. (CRC R311.3)
- R1003.19): a. In concealed spaces of stud walls and partitions, including furred spaces, and parallel rows of studs or staggered studs, as follows:

46. Fireblocking. Fireblocking shall be provided in the following locations (CRC R302.11 and CRC

- I. Vertically at the ceiling and floor levels
- II. Horizontally at intervals not exceeding 10 feet
- **b.** At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings, and cove ceilings
- c. In concealed spaces between stair stringers at the top and bottom of the run d. At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion
- e. At chimneys and fireplaces per item E.49
- f. Cornices of a two-family dwelling at the line of dwelling-unit separation
- 47. Fireblocking materials. Except as otherwise specified in items E.48 and E.49, fireblocking shall consist of the following materials with the integrity maintained (CRC R302.11.1): a. Two-inch nominal lumber
- b. Two thicknesses of one-inch nominal lumber with broken lap joints c. One thickness of 23/32-inch wood structural panel with joints backed by 23/32-inch wood structural panel
- d. One thickness of 3/4-inch particleboard with joints backed by 3/4-inch particleboard
- e. 1/2-inch gypsum board
- **f.** 1/4-inch cement-based millboard
- g. Batts or blankets of mineral or glass fiber of other approved materials installed in such a manner as to be securely retained in place. Batts or blankets of mineral or glass fiber or other approved non-rigid materials shall be permitted for compliance with the 10 -foot horizontal fireblocking in walls constructed using parallel rows of studs or staggered studs. Unfaced fiberglass batt insulation used as fireblocking shall fill the entire cross-section of the wall cavity to a minimum height of 16 inches measured vertically. When piping, conduit, or similar obstructions are encountered, the insulation shall be packed tightly around the obstruction. Loose-fill insulation material shall not be used as a fireblock unless specifically tested in the form and manner intended for use to demonstrate its ability to remain in place and to retard the spread of fire and hot gases.
- 48. Fireblocking at openings around vents, pipes, ducts, cables, and wires at ceiling and floor level. Such openings shall be fireblocked with an approved material to resist the free passage of flame and products of combustion. (CRC R302.11
- 49. Fireblocking of chimneys and fireplaces. All spaces between chimneys and floors and ceilings through which chimneys pass shall be fireblocked with noncombustible material securely fastened in place. The fireblocking of spaces between chimneys and wood joists, beams, or headers shall be self-supporting or be placed on strips of metal or metal lath laid across the spaces between combustible material and the chimney. (CRC R1003.19)
- **50. Draftstopping**. In combustible construction where there is usable space both above and below the concealed space of a floor/ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1000 square feet. Draftstopping shall divide the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draftstopping shall be provided in floor/ceiling assemblies under the following circumstances (CRC R302.12):
- **a.** Ceiling is suspended under the floor framing
- **b.** Floor framing is constructed of truss-type open-web or perforated members 51. Draftstopping materials. Draftstopping shall not be less than 1/2-inch gypsum board, 3/8-inch
- wood structural panels, or other approved materials adequately supported. Draftstopping shall be installed parallel to the floor framing members unless otherwise approved by the building official. The integrity of draftstops shall be maintained. (CRC R302.12.1)
- 52. Combustible insulation clearance. Combustible insulation shall be separated minimum 3 inches from recessed luminaires, fan motors, and other heat producing devices. (CRC R302.14)

- Lumber. All joists, rafters, beams, and posts 2-inches to 4-inches thick shall be No. 2 grade Douglas Fir-Larch or better. All posts and beams 5 inches and thicker shall be No. 1 grade Douglas Fir-Larch or better. Studs not more than 8 feet long shall be stud -grade Douglas Fir-Larch or better when supporting not more than one floor, roof, and ceiling. Studs longer than 8 feet shall be No. 2 grade Douglas Fir-Larch or better.
- **Concrete**. Concrete shall have a minimum compressive strength of 2,500 psi at 28 days and shall consist of 1 part cement, 3 parts sand, 4 parts 1-inch maximum size rock, and not more than 7-1/2 gallons of water per sack of cement. (CRC R402.2)
- Mortar. Mortar used in construction of masonry walls, foundation walls, and retaining walls shall conform to ASTM C 270 and shall consist of 1 part portland cement, 2-1/4 to 3 parts sand, and 1/4 to 1/2 part hydrated lime. (CBC 2103.2)
- Grout. Grout shall conform to ASTM C 476 and shall consist of 1 part portland cement, 1/10 part hydrated lime, 2-1/4 to 3 parts sand, and 1 to 2 parts gravel. Grout shall attain a minimum compressive strength of 2,000 psi at 28 days. (CBC 2103.3)
- (CBC 2103.1) Reinforcing steel. Reinforcing steel used in construction of reinforced masonry or concrete
- structures shall be deformed and comply with ASTM A 615. (CBC 2103.4)
- Structural steel. Steel used as structural shapes such as wide-flange sections, channels, plates, and angles shall comply with ASTM A36. Pipe columns shall comply with ASTM A53. Structural tubes shall comply with ASTM A500, Grade B.
- Fasteners for preservative-treated wood. Fasteners for preservative-treated and fireretardant-treated wood - including nuts and washers -- shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.3.1) **Exception:** 1/2-inch diameter or greater steel bolts
- Exception: Fasteners other than nails and timber rivets may be of mechanically deposited zinc coated steel with coating weights in accordance with ASTM B 695, Class 55 minimum Exception: Plain carbon steel fasteners acceptable in SBX/DOT and zinc borate preservativetreated wood in an interior, dry environment
- Fasteners for fire-retardant-treated wood. Fasteners for fire-retardant-treated wood used in exterior applications or wet or damp locations shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.3.3)

#### G. Roofing and Weatherproofing

- Roof covering. All roof covering shall be installed per applicable requirements of CBC 1507. Roof coverings shall be at least Class A rated in accordance with ASTM E 108 or UL 790. (County Building Code 92.1.1505.1)
- 2. Roof flashing. Flashing shall be installed at wall and roof intersections, at gutters, wherever there is a change in roof slope or direction, and around roof openings. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019 inch (No. 26 galvanized sheet). (CRC R903.2.1)
- 3. Crickets and saddles. A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches wide as measured perpendicular to the slope. Cricket or saddle covering shall be sheet metal or the same material as the roof covering. (CRC R903.2.2)

#### G. Roofing and Weatherproofing (Continued)

- 4. Water-resistive barrier. A minimum of one layer of No. 15 asphalt felt shall be attached to studs or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer minimum 2 inches. Where joints occur, felt shall be lapped minimum 6 inches. The felt shall be continuous to the top of walls and terminated at penetrations and building appendages in a mannerto maintain a weather-resistant exterior wall envelope. (CRC R703.2)
- Wall flashing. Approved corrosion-resistant flashing shall be applied shingle fashion at the following locations to prevent entry of water into the wall cavity or penetration of water to the building structural framing components (CRC R703.8):
- **a.** Exterior door and window openings, extending to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage b. At the intersection of chimneys or other masonry cons truction with frame or stucco walls, with
- projecting lips on both sides under stucco copings **c.** Under and at the ends of masonry, wood, or metal copings and sills
- **d.** Continuously above all projecting wood trim e. Where exterior porches, decks, or stairs attach to a wall or floor assembly of wood-frame
- construction
- f. At wall and roof intersections g. At built-in gutters
- Damp proofing. Damp proofing materials for foundation walls enclosing usable space below grade shall be installed on the exterior surface of the wall and shall extend from the top of the footing to finished grade. (CRC R406.1)
- Weep screed. A minimum 0.019-inch (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed with a minimum vertical attachment flange of 3 -1/2 inches shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C 92. The weep screed shall be placed a minimum 4 inches above the earth or 2 inches above paved areas and shall be of a type allowing trapped water to drain to the exterior of the building. (CRC R703.7.2.1)

#### H. Grading and soils

- Grading permit. Grading permit required if volume of earth moved exceeds 200 cubic yards or if any cuts or fills exceed 8 feet in height/depth. (County Grading Ordinance 202)
- Compaction report. Compaction report required for fill material 12 inches or more in depth. (CBC 1803.5.8)

### I. Green Building Standards Code (CALGreen) Requirements

- Applicability. CalGreen residential mandatory measures shall apply to every newly constructed building or structure and within any addition or alteration increasing a building's conditioned area, volume, or size. (CalGreen 101.3, CalGreen 301.1.1) Exception: All residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures per CalGreen 301.1.1 and CalGreen 4.303.1
- 2. Water conserving plumbing fixtures and fittings. Plumbing fixtures and fittings shall comply with the following per CalGreen 4.303.1: a. Water closets: Maximum 1.28 gallons per flush
- **b.** Urinals: Maximum 0.5 gallons per flush

(CalGreen 4.304.1)

- c. Single showerheads: Maximum flow rate of 1.8 gallons per minute at 80 psi d. Multiple showerheads serving one shower: Maximum combined flow rate of 1.8 gallons per
- minute at 80 psi e. Lavatory faucets: Maximum flow rate of 1.2 gallons per minute at 60 psi, minimum flow rate of
- 0.8 gallons per minute at 20 psi f. Kitchen faucets: Maximum flow rate of 1.5 gallons per minute at 60 psi (County Green Building Code 97.1.4.303.1.4.4)
- Exception: Temporary increase allowed to maximum 2.2 gallons per minute at 60 psi if f aucet defaults back to maximum 1.5 gallons per minute at 60 psi g. Appliances: At least one qualified ENERGY STAR dishwasher or clothes washer shall be
- nstalled in each dwelling unit. (County Green Building Code 97.1.4.303.3) Outdoor potable water uses in landscape areas. Residential developments shall comply with local water efficient landscape ordinance or the current California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

compliance with the California Energy Code. (CALGreen 4.406.1)

demolition waste management ordinance. (CalGreen 4.408.1)

Construction & Demolition (C&D) Facilities Guide is online at:

reasonably close to the jobsite The City of El Cajon Building Division,

construction for examination by the enforcing agency. (CalGreen 4.408.2)

recycling, reuse on the project or salvage for future use or sale.

or bulk mixed (single stream).

4.408.1. (CalGreen 4.408.3)

calculated by weight or volume, but not by both.

waste materials will be diverted by a waste company

requirement in Section 4.408.1. (CalGreen 4.408.4)

reduction requirement in Section 4.408.1.

b. Operation and maintenance instructions for the following:

II. Roof and yard drainage, including gutters and downspouts.

resource consumption, including recycle programs and locations.

**d.** Public transportation and/or carpool options available in the area.

in the building (CALGreen 4.410.1):

**IV.** Landscape irrigation systems.

least 5 feet away from the foundation

cycle of the structure.

V. Water reuse systems

range

conserve water.

waste generated.

**Exception**: Excavated soil and land-clearing debris.

4. Joints and openings. Openings in the building envelope separating conditioned space from

cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

unconditioned space needed to accommodate utility and other penetrations must be sealed in

Exception: Annular spaces around pipes, electric cables, conduits or other openings in plates

Construction waste reduction, disposal, and recycling. Recycle and/or salvage for reuse a

minimum of 65 percent of the nonhazardous construction and demolition waste in accordance

with either Section 4.408.2, 4.408.3, or 4.408.4, or meet a more stingent local construction and

Exception: Alternate waste reduction methods developed by working with local agencies if

https://www.sandiegocounty.gov/content/dam/sdc/dpw/SOLID\_WASTE\_PLANNING

and RECYCLING/UpdatedCDResources/CDFacility QuickGuide.pdf

**Exception**: The enforcing agency may make exceptions to the requirements of this section when

Construction waste management plan. A construction waste management plan in

conformance with Items 1-5 shall be completed and available on the job site. The construction

waste management plan shall be updated as necessary and shall be available during

Note: The owner or contractor may make the determination if the construction and demolition

isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

diversion or recycle facilities capable of compliance with this item do not exist or are not located

at exterior walls shall be protected against the passage of rodents by closing such opening with

### I. (CALGreen) Requirements (Continued)

**h.** Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.

- Information about state solar energy and incentive programs available.
- A copy of all special inspection verifications required by the enforcing agency or code.
- k. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.
- I. Information and/or drawings identifying the location of grab bar reinforcements.
- 11. Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation or during storage on the construction site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, Sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system. (CALGreen 4.504.1
- 12. Adhesives, sealants, caulks, paints, and coatings pollutant control. Adhesives (including carpet adhesives), sealants, caulks, paints, and coatings shall comply with VOC limits per CALGreen 4.504.2. Verification of compliance shall be provided at the request of the enforcing agency. (CALGreen 4.504.2.1)
- **13.** Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the following (CALGreen 4.504.3):
- a. Carpet and Rug Institute's Green Label Plus Program (all carpet cushions must meet the requirements of this program)
- **b.** California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350). c. NSF/ANSI 140 at the Gold level.
- d. Scientific Certifications Systems Indoor Advantage<sup>™</sup> Gold.
- 14. Resilient flooring systems. At least 80 percent of the floor area receiving resilient flooring shall comply with one of or more of the following (CALGreen 4.504.4):
- a. VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) High Performance Products Database b. Products compliant with CHPS criteria certified under the Greenguard Children & Schools
- program c. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program
- d. Meet the currently adopted version of California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," (also known as Specification 01350)
- **15.** Composite wood products. Hardwood plywood, particleboard and medium density fibeboard composite wood products used on the interior or exterior of the building 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 CalGreen Table 4.504.5. The following limits are in parts per million (CALGreen 4.504.5): a. Hardwood plywood veneer core 0.05
- **b.** Hardwood plywood composite core 0.05
- 0.09 c. Particle board
- d. Medium-density fiberboard (MDF) 0.11 e. Thin MDF (5/16 inch or less) 0.13
- 16. 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 (CALGreen 4.505.3)
- **a.** Moisture content shall be determined with either a probe-type or contact-type moisture meter. **b.** Moisture readings shall be taken at a point 2 feet to 4 feet from the grade stamped end of each
- piece to be verified. **c.** 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 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. 17. Bathrooms with a bathtub and/or shower shall be mechanically ventilated per the following
- (CalGreen 4.506.1): **a.** Fans shall be ENERGY STAR compliant and ducted to terminate outside building
- **b.** Unless functioning as a component of a whole-house ventilation system, fans shall have humidity controls capable of adjustment - manually or automatically -- between a relative humidity range of 50% to 80%.
- Heating and air-conditioning system design. Heating and air-conditioning systems shall be sized, designed, and have their equipment selected using the following methods (CALGreen 4.507.2):
- a. The heat loss and heat gain are established according to the currently adopted version of ANSI/ACCA 2 Manual J, ASHRAE handbooks, or other equivalent design software or methods. b. Duct systems are sized according to the currently adopted version of ANSI/ACCA 1 Manual D,
- ASHRAE handbooks, or other equivalent design software or methods. c. Select heating and cooling equipment according to the currently adopted version of ACCA 36-S Manual S or other equivalent design software or methods.

PDS081

THERE ARE MINIMUM REQUIREMENTS AND SHALL NOT SUPERSEDE MORE RESTRICTIVE SPECIFICATIONS ON THE PLANS OR AS REQUIRED BY APPLICABLE CODE

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> Unit 0 ng σ Ő 0 ഗ

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isio Ū afe S Building

![](_page_33_Picture_217.jpeg)

CRC MIN. CONSTRUCTION SPECIFICATIONS

# 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 65 percent construction waste **Documentation.** Documentation shall be provided to the enforcing agency which demonstrates

photovoltaic systems, water-heating systems and other major appliances and equipment.

c. Information from local utility, water, and waste recovery providers on methods to further reduce

e. Educational material on the positive impacts of an interior relative humidity between 30-60

f. Information about water-conserving landscape and irrigation design and controllers which

**g.** Instructions for maintaining gutters and downspouts and the importance of diverting water at

a. Identify the construction and demolition waste materials to be diverted from disposal by **b.** Specify if construction and demolition waste materials will be sorted on-site (source-separated) c. Identify diversion facilities where the construction and demolition waste materials will be taken. d. Identify construction methods employed to reduce the amount of construction and demolition e. Specify that the amount of construction and demolition waste materials diverted shall be

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

8. 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 pounds per

square foot of the building area shall meet the 65 percent construction waste reduction **4.408.4.1 Waste stream reduction alternative.** Projects that generate a total combined

compliance with Section 4.408.2, Items 1-5, Section 4.408.3, or Section 4.408.4.

10. Operation and maintenance manual. Prior to final inspection, a manual, compact disc, web based reference, or other acceptable media which includes all of the following shall be placed

a. Directions to owner or occupant that manual shall remain with the building throughout the life

I. Equipment and appliances, including water-saving devices and systems, HVAC system,

III. Space conditioning systems, including condensers and air filters.

percent and what methods an occupant may use to maintain the relative humidity level in that

# **General Storm Water Notes:**

A. ALL OPERATION WILL COMPLY WITH THE CITY'S JURIDICTIONAL RUNOFF MANAGEMENT PLAN (JRMP). B. THE OWNER AND THE OWNER'S CONTRACTOR ARE RESPONSIBLE FOR POLLUTION PREVENTION PRACTICES TO

PREVENT THE DISCHARGE OF SEDIMENT AND POLLUTANTS TO THE PUBLIC STORM DRAIN SYSTEM. C. OWNER AND THE OWNER'S CONTRACTOR ARE RESPONSIBLE FOR THE PREVENTION OF EROSION CAUSED BY CLEARING OF VEGETATION, GRADING, DEMOLITION OR CONSTRUCTION.

D. SEDIMENT, POLLUTION AND EROSION CONTROL MEASURES WILL BE IMPLEMENTED STARTING THE FIRST DAY OF

CLEARING, GRADING OR SOIL DISTURBANCE, OR CONSTRUCTION. THESE CONTROLS WILL REMAIN IN EFFECT UNTIL ALL RELEVANT OPERATIONS HAVE BEEN COMPLETED AND DISTURBED SOILS HAVE EITHER:

1) ESTABLISHED VEGETATION, OR

2) OTHER PERMANENT EROSION CONTROL AT 70% COMPLETION

# **Erosion and Sediment Control Notes:**

1. IN CASE OF EMERGENCY, CONTACT: NAME:

PHONE: 2. THE CONTRACTOR WILL MAINTAIN ALL SEDIMENT AND EROSION CONTROL DEVICES IN GOOD WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER THROUGHOUT EVERY PHASE OF THE PROJECT.

3. THE CONTRACTOR WILL INSTALL ALL EROSION CONTROL MEASURES ADDITIONAL TO THOSE SPECIFIED BY THE

APPROVED EROSION CONTROL PLAN IF REQUIRED TO DO SO BY THE CITY ENGINEER.

4. THE CONTRACTOR AND PROPERTY OWNER WILL PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION..

5. GRADED AREAS AROUND THE PROJECT PERIMETER WILL DRAIN AWAY FROM THE FACE OF SLOPES AT THE END OF EACH WORKING DAY.

6. ALL GRAVEL BAGS SHALL HAVE 3/4 INCH MINIMUM AGGREGATE (NO SANDBAGS AND NO BURLAP TYPE BAGS ALLOWED) 7. THE EROSION CONTROL BMP'S MUST BE INSTALLED PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION ACTIVITIES. PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL NOTIFY THE CITY STORM WATER INSPECTOR AT (619) 441-1653.

| PROJECT ADDRESS:   |
|--------------------|
| PROJECT APN:       |
| PERMIT NUMBER:     |
| APPLICANT NAME:    |
| APPLICANT ADDRESS: |
|                    |

![](_page_34_Picture_16.jpeg)

| 1 | EROSION CONTROL / BMP PLAN (PERMITTEE TO |
|---|------------------------------------------|
|   | SCALE:                                   |

| EARTHWO     | COMPLETE) | RMITTEE TO C | ACE AREA TABLE (PE | NG PERVIOUS SURFA | EXISTIN |
|-------------|-----------|--------------|--------------------|-------------------|---------|
| TOTAL DISTU | NOTES     | AREA (SF)    | DIMENSIONS         | PERVIOUS ITEM     | SITE ID |
| EXISTING IM |           |              |                    |                   |         |
| PROPOSED A  |           |              |                    |                   |         |
| TOTAL IMPER |           |              |                    |                   |         |
|             | COMPLETE) | ERMITTEE TO  | ACE AREA TABLE (P  | SED PERVIOUS SURF | PROPOS  |
| CUT QUANTI  | NOTES     | AREA (SF)    | DIMENSIONS         | PERVIOUS ITEM     | SITE ID |
| FILL QUANTI |           |              |                    |                   |         |
| IMPORT/EXP  |           |              |                    |                   |         |
| MAX CUT DE  |           |              |                    |                   |         |
| MAX FILL DE |           |              |                    |                   |         |
| 1           |           |              |                    |                   |         |

![](_page_34_Picture_19.jpeg)

COMPLETE)

![](_page_34_Picture_21.jpeg)

(INDICATE NORTH)

| K QUANTITIES AND LAND I<br>(PERMITTEE TO COMPLET | DISTURBANCE<br>E) |
|--------------------------------------------------|-------------------|
| RBANCE AREA                                      | SF                |
| ERVIOUS AREA                                     | SF                |
| MOUNT OF<br>AREA                                 | SF                |
| /IOUS AREA                                       | SF                |
|                                                  |                   |
| ES                                               | CYD               |
| ES                                               | CYD               |
| RT                                               | CYD               |
| ТН                                               | FT                |
| ТН                                               | FT                |

# **LEGEND**

| (P            | ER CALTRANS' STANDARDS)  |
|---------------|--------------------------|
| $\rightarrow$ | DIRECTION OF FLOW        |
|               | FIBER ROLLS (SC-5)       |
| $\infty$      | GRAVEL BAGS (SC-6)       |
| _x_x_         | SILT FENCE (SC-1)        |
| WM-1          | MATERIAL STORAGE         |
| WM-5          | SOLID WASTE MANAGEMENT   |
| WM-8          | CONCRETE WASTE MANAGEM   |
| WM-9          | SANITARY WASTE MANAGEMEI |
|               |                          |

EXTERIOR WINDOWS, SKYLIGHTS AND EXTERIOR GLAZED DOOR ASSEMBLIES SHALL COMPLY WITH ONE OF THE FOLLOWING REQUIREMENTS: BE CONSTRUCTED OF MULTIPANE GLAZING WITH A MINIMUM OF ONE TEMPERED PANE MEETING THE REQUIREMENTS OF SECTION 2406 SAFETY GLAZING, (1)

(3)

(4)

CAJON MUNICIPAL DESIGN STANDARDS 17.140.170(E)(2)

b. EXCEPTION: THE MINIMUM NET CLEAR OPENING FOR GRADE FLOOR EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE 5 SQUARE FEET (0.46 m<sup>2</sup>).

![](_page_35_Figure_11.jpeg)

STILES AND RAILS SHALL NOT BE LESS THAN 1 <sup>3</sup>/<sub>8</sub> INCHES THICK.

PANELS SHALL NOT BE LESS THAN 1<sup>1</sup>/<sub>4</sub> INCHES THICK, EXCEPT FOR THE EXTERIOR PERIMETER OF THE PANEL THAT SHALL BE 2 PERMITTED TO TAPER TO A TONGUE NOT LESS THAN <sup>3</sup>/<sub>8</sub> INCH THICK.

(4) THE EXTERIOR DOOR ASSEMBLY SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED IN ACCORI TO NFPA 252.

(5) THE EXTERIOR SURFACE OR CLADDING SHALL BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SECTION 707A.3.1 WHEI TESTED IN ACCORDANCE TO ASTM E2707.

(6) THE EXTERIOR SURFACE OR CLADDING SHALL BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-4. AT EXTERIOR MAN DOORS, PROVIDE A MINIMUM 36" DEEP FLOOR OR LANDING ON EACH SIDE OF EACH EXTERIOR DOOR, WITH A SLOPE NOT EXCEEDING ¼ UNIT VERTICAL IN 12 UNITS HORIZONTAL (2%). THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SERVED. 5. TRANSPARENT DOORS SHALL NOT USE TINTED, MIRRORED, OR HIGHLY REFLECTIVE GLASS. THE USE OF NON-REFLECTIVE GLASS IS REQUIRE CITY OF EL CAJON MUNICIPAL DESIGN STANDARDS 17.140.170(E)(2)

| )     | WI | NDOW | SCHED  | ULE    |          |       | DOOR SCHEDULE - Exterior |          |     |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                                                                                  |                    |     |  |  |  |  |
|-------|----|------|--------|--------|----------|-------|--------------------------|----------|-----|-------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------|--------------------|-----|--|--|--|--|
| ÎCE   | ID | QTY  | Width  | Height | Туре     | Notes | Egress                   | Tempered | ID  | QTY   | Width  | Height                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Туре     | Notes                                                                            | Temper             | red |  |  |  |  |
|       | 01 | 1    | 2'-0"  | 5'-0"  | CASEMENT |       |                          |          | А   | 1     | 3'-0"  | 7'-0"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SWING    |                                                                                  | Y                  |     |  |  |  |  |
|       | 02 | 1    | 3'-10" | 5'-0"  | FIXED    |       |                          | Y        | В   | 1     | 3'-0"  | 7'-0"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SWING    |                                                                                  | Y                  |     |  |  |  |  |
| NTS:  | 03 | 1    | 2'-0"  | 5'-0"  | CASEMENT |       |                          | Y        |     |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          | LOUVERED DOOR W/ MIN. OPENING                                                    | IOT LESS           |     |  |  |  |  |
|       | 04 | 1    | 3'-0"  | 5'-0"  | CASEMENT |       | Y                        | Y        | С   | 1     | 2'-4"  | 7'-0"       7'-0"       7'-0"       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0 | SWING    | THAN 100 SQ.IN. PER CMC 504.4 MAKE UP AIR<br>REQ'S - CONFIRM WIDTH WITH SELECTED |                    |     |  |  |  |  |
| DANCE | 05 | 1    | 3'-0"  | 5'-0"  | CASEMENT |       | Y                        | Y        |     |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          | WATER HEATER                                                                     |                    |     |  |  |  |  |
| N     | 06 | 1    | 3'-0"  | 5'-0"  | CASEMENT |       | Y                        | Y        |     |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                                                                                  |                    |     |  |  |  |  |
| 1.    | 07 | 1    | 2'-6"  | 5'-0"  | CASEMENT |       | Y                        |          | DOC | OR SC | HEDULI | E - Interio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | or       |                                                                                  |                    |     |  |  |  |  |
|       | 08 | 1    | 2'-6"  | 5'-0"  | CASEMENT |       | Y                        | Y        | ID  | QTY   | Width  | Height                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Ty       | e No                                                                             | es                 |     |  |  |  |  |
| D PER | 09 | 1    | 2'-6"  | 5'-0"  | CASEMENT |       | Y                        |          | iA  | 1     | 2'-6"  | 7'-0"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SWING    |                                                                                  |                    |     |  |  |  |  |
|       | 10 | 1    | 2'-6"  | 5'-0"  | CASEMENT |       | Y                        |          | iB  | 1     | 2'-6"  | 7'-0"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SWING    |                                                                                  |                    |     |  |  |  |  |
|       | 11 | 1    | 2'-6"  | 5'-0"  | CASEMENT |       | Y                        |          | iC  | 1     | 2'-6"  | 7'-0"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SWING    |                                                                                  |                    |     |  |  |  |  |
|       | 12 | 1    | 1'-6"  | 1'-6"  | AWNING   |       |                          | Y        |     |       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                                                                                  | PENING NOT LESS TH | AN  |  |  |  |  |
|       | 13 | 1    | 2'-6"  | 3'-6"  | CASEMENT |       |                          |          | iD  | 1     | 2'-8"  | 7'-0"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SWING    | 100 SQ.IN. PER CMC 504.4 M                                                       | AKE UP AIR REQ'S   | ,   |  |  |  |  |
|       | 14 | 1    | 2'-6"  | 5'-0"  | CASEMENT |       |                          |          | iE  | 1     | 2'-6"  | 7'-0"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SWING    |                                                                                  |                    |     |  |  |  |  |
|       | 15 | 1    | 2'-6"  | 5'-0"  | CASEMENT |       |                          |          | iF  | 1     | 2'-6"  | 7'-0"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SWING    |                                                                                  |                    |     |  |  |  |  |
|       | 16 | 1    | 2'-6"  | 5'-0"  | CASEMENT |       |                          |          | iG  | 1     | 4'-0"  | 7'-0"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DOUBLE S | VING                                                                             |                    |     |  |  |  |  |

![](_page_35_Picture_37.jpeg)

FLOOR PLAN / ROOF PLAN

| Mark      | MINIMU                       | IM NAIL |             | MINIMUM NOMINAL |                  | PANEL NAI              | ULTIMATE<br>DESIGN WIND<br>SPEED V <sub>ult</sub><br>(mph) |               |                             |               |
|-----------|------------------------------|---------|-------------|-----------------|------------------|------------------------|------------------------------------------------------------|---------------|-----------------------------|---------------|
| Mark      | Size Penetration<br>(inches) |         | SPAN RATING | (inches)        | SPACING (inches) | Edges<br>(inches o.c.) | Field<br>(inches o.c.)                                     | ex<br>ca<br>B | Wind<br>posu<br>itegoi<br>C | re<br>ry<br>D |
|           | 8d Common                    |         |             | _               | 16               | 6                      | 12                                                         | 170           | 140                         | 135           |
| X'-X" (1) | (2.5″ ×<br>0.131″)           | 1.75    | 24/16       | 7/16            | 24               | 6                      | 12                                                         | 140           | 115                         | 110           |

(INDICATE NORTH)

![](_page_36_Figure_3.jpeg)

**RAFTER SPAN CHART** For additional species and span criteria see CBC Table 2308.7.2(2), CRC Table R802.5.1(2)

RAFTER SPANS FOR COMMON LUMBER SPECIES (Roof Live Load = 20 pounds per square foot, Ceiling Attached to Rafters,

|          |                   |          | DEA      | D LOAD = <sup>2</sup> | I0 pounds | per square | foot        | DEAD LOAD = 20 pounds per square foot |          |          |          |        |  |  |  |  |
|----------|-------------------|----------|----------|-----------------------|-----------|------------|-------------|---------------------------------------|----------|----------|----------|--------|--|--|--|--|
| RAFTER   |                   |          | 2 × 4    | 2 × 6                 | 2 × 8     | 2 × 10     | 2 × 12      | 2 × 4                                 | 2 × 6    | 2 × 8    | 2 × 10   | 2 × 12 |  |  |  |  |
| SPACING  |                   |          |          |                       |           | М          | after spans |                                       |          |          |          |        |  |  |  |  |
| (inches) | SPECIES AND C     | (ft in.) | (ft in.) | (ft in.)              | (ft in.)  | (ft in.)   | (ft in.)    | (ft in.)                              | (ft in.) | (ft in.) | (ft in.) |        |  |  |  |  |
|          | Douglas Fir-Larch | SS       | 9-6      | 14-11                 | 19-7      | 25-0       | Note b      | 9-6                                   | 14-11    | 19-7     | 24-9     | Note b |  |  |  |  |
| 16       | Douglas Fir-Larch | #1       | 9-1      | 14-4                  | 18-11     | 23-9       | Note b      | 9-1                                   | 13-3     | 16-10    | 20-7     | 23-10  |  |  |  |  |
| 10       | Douglas Fir-Larch | #2       | 8-11     | 14-1                  | 18-2      | 22-3       | 25-9        | 8-6                                   | 12-5     | 15-9     | 19-3     | 22-4   |  |  |  |  |
|          | Douglas Fir-Larch | #3       | 7-5      | 10-10                 | 13-9      | 16-9       | 19-6        | 6-5                                   | 9-5      | 11-11    | 14-6     | 16-10  |  |  |  |  |

*L*/∆ = 240)

#### **CEILING JOIST SPAN CHART** For additional species and span criteria see CBC Table 2308.7.1(1) and CRC Table R802.4

CEILING JOIST SPANS FOR COMMON LUMBER SPECIES (Uninhabitable Attics Without Storage, Live Load = 10 pounds psf, L/∆ = 240)

|          |                   |    | DEAD LOAD = 5 pounds per square foot |          |          |          |  |  |  |  |  |  |  |  |  |
|----------|-------------------|----|--------------------------------------|----------|----------|----------|--|--|--|--|--|--|--|--|--|
|          |                   | ĺ  | 2 × 4                                | 2 × 8    | 2 × 10   |          |  |  |  |  |  |  |  |  |  |
| SPACING  |                   |    | Maximum ceiling joist spans          |          |          |          |  |  |  |  |  |  |  |  |  |
| (inches) | SPECIES AND GRAD  | DE | (ft in.)                             | (ft in.) | (ft in.) | (ft in.) |  |  |  |  |  |  |  |  |  |
|          | Douglas Fir-Larch | SS | 11-11                                | 18-9     | 24-8     | Note a   |  |  |  |  |  |  |  |  |  |
| 16       | Douglas Fir-Larch | #1 | 11-6                                 | 18-1     | 23-10    | Note a   |  |  |  |  |  |  |  |  |  |
| 10       | Douglas Fir-Larch | #2 | 11-3                                 | 17-8     | 23-0     | Note a   |  |  |  |  |  |  |  |  |  |
|          | Douglas Fir-Larch | #3 | 9-5                                  | 13-9     | 17-5     | 21-3     |  |  |  |  |  |  |  |  |  |

| RAFTER OR BEAM SPACING (inches) | MINIMUM NET THICKNESS (inche        |
|---------------------------------|-------------------------------------|
| 24                              | <sup>5</sup> /8                     |
| 48 <sup>a</sup>                 |                                     |
| 60 <sup>b</sup>                 | 1 <sup>1</sup> / <sub>2</sub> T & G |
| 72 <sup>c</sup>                 |                                     |
|                                 | •                                   |

|          |      | S     | UPPORTING  | g ROOF     |      |     |                |  |  |  |  |  |
|----------|------|-------|------------|------------|------|-----|----------------|--|--|--|--|--|
|          |      | Gro   | und Snow I | _oad (psf) |      |     |                |  |  |  |  |  |
| SIZE     |      | 30    | 5          | 0          | 70   |     | SUPPORTING FLO |  |  |  |  |  |
|          |      | De    | 7          |            |      |     |                |  |  |  |  |  |
|          | 8    | 14    | 8          | 14         | 8    | 14  | 8              |  |  |  |  |  |
| 2-2 × 6  | 7-6  | 5-8   | 6-2        | 4-8        | 5-4  | 4-0 | 6-4            |  |  |  |  |  |
| 2-2 × 8  | 10-1 | 7-7   | 8-3        | 6-2        | 7-1  | 5-4 | 8-5            |  |  |  |  |  |
| 2-2 × 10 | 12-4 | 9-4   | 10-1       | 7-7        | 8-9  | 6-7 | 10-4           |  |  |  |  |  |
| 2-2 × 12 | 14-4 | 10-10 | 11-8       | 8-10       | 10-1 | 7-8 | 11-11          |  |  |  |  |  |
|          |      |       |            |            |      |     |                |  |  |  |  |  |

(INDICATE NORTH)

TABLE R602.7(1) GIRDER SPANS<sup>a</sup> AND HEADER SPANS<sup>a</sup> FOR EXTERIOR BEARING WALLS (Maximum spans for Douglas fir-larch, hem-fir, Southern pine and sprucepine-fir<sup>b</sup> and required number of jack studs)

|                                |                 |                   |                 |                   |                 |                   |                 | GRO               | UNC             | SNOV              | V LC            | AD (ps            | sf) <sup>e</sup> | _                 |                 |                   |     |                   |                 |
|--------------------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|------------------|-------------------|-----------------|-------------------|-----|-------------------|-----------------|
|                                |                 |                   |                 | 30                |                 |                   |                 |                   |                 | 50                |                 |                   |                  |                   |                 | 70                | )   |                   |                 |
| GIRDERS AND HEADERS SUPPORTING | SIZE            |                   |                 |                   |                 |                   |                 | В                 | uild            | ing wi            | dtho            | (feet)            |                  | _                 |                 | _                 |     |                   |                 |
|                                |                 | 12                |                 | 24                | 1               | 36                |                 | 12                |                 | 24                |                 | 36                |                  | 12                |                 | 24                |     | 36                | •               |
|                                |                 | Span <sup>f</sup> | NJ <sup>d</sup>  | Span <sup>f</sup> | NJ <sup>d</sup> | Span <sup>f</sup> | NJd | Span <sup>f</sup> | NJ <sup>d</sup> |
|                                | 1-2 × 6         | 4-0               | 1               | 3-1               | 2               | 2-7               | 2               | 3-5               | 1               | 2-8               | 2               | 2-3               | 2                | 3-0               | 2               | 2-4               | 2   | 2-0               | 2               |
|                                | 1-2 × 8         | 5-1               | 2               | 3-11              | 2               | 3-3               | 2               | 4-4               | 2               | 3-4               | 2               | 2-10              | 2                | 3-10              | 2               | 3-0               | 2   | 2-6               | 3               |
|                                | $1-2 \times 10$ | 6-0               | 2               | 4-8               | 2               | 3-11              | 2               | 5-2               | 2               | 4-0               | 2               | 3-4               | 3                | 4-7               | 2               | 3-6               | 3   | 3-0               | 3               |
|                                | 1-2 × 12        | 7-1               | 2               | 5-5               | 2               | 4-7               | 3               | 6-1               | 2               | 4-8               | 3               | 3-11              | 3                | 5-5               | 2               | 4-2               | 3   | 3-6               | 3               |
|                                | 2-2 × 4         | 4-0               | 1               | 3-1               | 1               | 2-7               | 1               | 3-5               | 1               | 2-7               | 1               | 2-2               | 1                | 3-0               | 1               | 2-4               | 1   | 2-0               | 1               |
| Roof and ceiling               | 2-2 × 6         | 6-0               | 1               | 4-7               | 1               | 3-10              | 1               | 5-1               | 1               | 3-11              | 1               | 3-3               | 2                | 4-6               | 1               | 3-6               | 2   | 2-11              | 2               |
|                                | 2-2 × 8         | 7-7               | 1               | 5-9               | 1               | 4-10              | 2               | 6-5               | 1               | 5-0               | 2               | 4-2               | 2                | 5-9               | 1               | 4-5               | 2   | 3-9               | 2               |
|                                | 2-2 × 10        | 9-0               | 1               | 6-10              | 2               | 5-9               | 2               | 7-8               | 2               | 5-11              | 2               | 4-11              | 2                | 6-9               | 2               | 5-3               | 2   | 4-5               | 2               |
|                                | 2-2 × 12        | 10-7              | 2               | 8-1               | 2               | 6-10              | 2               | 9-0               | 2               | 6-11              | 2               | 5-10              | 2                | 8-0               | 2               | 6-2               | 2   | 5-2               | 3               |
| ROCH WEB GER HAL               | 3-2 × 8         | 9-5               | 1               | 7-3               | 1               | 6-1               | 1               | 8-1               | 1               | 6-3               | 1               | 5-3               | 2                | 7-2               | 1               | 5-6               | 2   | 4-8               | 2               |
|                                | 3-2 × 10        | 11-3              | 1               | 8-7               | 1               | 7-3               | 2               | 9-7               | 1               | 7-4               | 2               | 6-2               | 2                | 8-6               | 1               | 6-7               | 2   | 5-6               | 2               |
|                                | 3-2 × 12        | 13-2              | 1               | 10-1              | 2               | 8-6               | 2               | 11-3              | 2               | 8-8               | 2               | 7-4               | 2                | 10-0              | 2               | 7-9               | 2   | 6-6               | 2               |
|                                | 4-2 × 8         | 10-11             | 1               | 8-4               | 1               | 7-0               | 1               | 9-4               | 1               | 7-2               | 1               | 6-0               | 1                | 8-3               | 1               | 6-4               | 1   | 5-4               | 2               |
|                                | 4-2 × 10        | 12-11             | 1               | 9-11              | 1               | 8-4               | 1               | 11-1              | 1               | 8-6               | 1               | 7-2               | 2                | 9-10              | 1               | 7-7               | 2   | 6-4               | 2               |
|                                |                 | 15-3              | 1               | 11-8              | 1               | 9-10              | 2               | 13-0              | 1               | 10-0              | 2               | 8-5               | 2                | 11-7              | 1               | 8-11              | 2   | 7-6               | 2               |

**TABLE R602.3.2** SINGLE TOP-PLATE SPLICE CONNECTION DETAILS

|                                                                                                            | TOP-PLATE SPLICE LOCATION                             |                                                             |                                                                       |                                                              |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------|--|--|--|--|--|--|
| CONDITION                                                                                                  | Corners and interse                                   | ecting walls                                                | Butt joints in straight walls                                         |                                                              |  |  |  |  |  |  |
| CONDITION                                                                                                  | Splice plate size                                     | Minimum nails<br>each side of joint                         | Splice plate size                                                     | Minimum nails<br>each side of joint                          |  |  |  |  |  |  |
| Structures in SDC A-C; and in SDC $D_0$ , $D_1$ and $D_2$ with braced wall line spacing less than 25 feet  | 3" × 6" × 0.036" galvanized steel plate or equivalent | (6) 8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113") nails | $3'' \times 12'' \times 0.036''$ galvanized steel plate or equivalent | (12) 8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113") nails |  |  |  |  |  |  |
| Structures in SDC $D_0$ , $D_1$ and $D_2$ , with braced wall line spacing greater than or equal to 25 feet | 3" × 8" × 0.036" galvanized steel plate or equivalent | (9) 8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113") nails | $3'' \times 16'' \times 0.036''$ galvanized steel plate or equivalent | (18) 8dbox (2 <sup>1</sup> / <sub>2</sub> " × 0.113") nails  |  |  |  |  |  |  |

![](_page_36_Figure_22.jpeg)

#### **TABLE R602.7.5** MINIMUM NUMBER OF FULL-HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS<sup>a</sup>

| N(foot) | ULTIMATE DESIGN WIND SPEED AND EXPOSURE CATEGORY |                                    |  |  |  |  |  |  |  |  |  |  |  |
|---------|--------------------------------------------------|------------------------------------|--|--|--|--|--|--|--|--|--|--|--|
| N(feet) | < 140 mph, Exposure B or < 130 mph, Exposure C   | ≤ 115 mph, Exposure B <sup>b</sup> |  |  |  |  |  |  |  |  |  |  |  |
|         | 1                                                | 1                                  |  |  |  |  |  |  |  |  |  |  |  |
|         | 2                                                | 1                                  |  |  |  |  |  |  |  |  |  |  |  |
|         | 2                                                | 1                                  |  |  |  |  |  |  |  |  |  |  |  |
|         | 3                                                | 2                                  |  |  |  |  |  |  |  |  |  |  |  |
|         | 3                                                | 2                                  |  |  |  |  |  |  |  |  |  |  |  |
|         | 3                                                | 2                                  |  |  |  |  |  |  |  |  |  |  |  |
|         | 4                                                | 2                                  |  |  |  |  |  |  |  |  |  |  |  |
|         | 4                                                | 2                                  |  |  |  |  |  |  |  |  |  |  |  |

|                     |                                                                                                              | NONBEARING WALLS                                                                                                           |                                                                                                                              |                                                                  |                                             |                 |  |
|---------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------|-----------------|--|
| ported stud<br>eet) | Maximum spacing where<br>supporting a roof-ceiling<br>assemblyor a habitable attic<br>assembly, only(inches) | Maximum spacing where<br>supporting one floor,plus a<br>roof-ceiling assembly or a<br>habitable attic assembly<br>(inches) | Maximum spacing where<br>supporting two floors, plus<br>a roof-ceiling assembly or a<br>habitable attic assembly<br>(inches) | Maximum spacing where<br>supporting one floor<br>heighta(inches) | Laterally unsupported<br>stud height₄(feet) | spacing(inches) |  |
|                     |                                                                                                              |                                                                                                                            |                                                                                                                              |                                                                  |                                             |                 |  |
|                     | _                                                                                                            | _                                                                                                                          | _                                                                                                                            | _                                                                | 10                                          | 16              |  |
|                     | 24c                                                                                                          | 16c                                                                                                                        | —                                                                                                                            | 24                                                               | 14                                          | 24              |  |
|                     | 24                                                                                                           | 24                                                                                                                         | 16                                                                                                                           | 24                                                               | 14                                          | 24              |  |
|                     | 24                                                                                                           | 24                                                                                                                         | _                                                                                                                            | 24                                                               | 16                                          | 24              |  |
|                     | 24                                                                                                           | 24                                                                                                                         | 16                                                                                                                           | 24                                                               | 20                                          | 24              |  |

![](_page_36_Picture_26.jpeg)

 $\geq$ 

PLAN / ROOF FRAMING PLAN

![](_page_37_Figure_1.jpeg)

(INDICATE NORTH)

![](_page_37_Figure_3.jpeg)

![](_page_37_Picture_4.jpeg)

- h. CONSTRASTING TRIM OR MOLDING

![](_page_38_Figure_12.jpeg)

![](_page_38_Figure_13.jpeg)

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

![](_page_39_Figure_0.jpeg)

SCALE: 1" = 1'-0"

0 6" 1'

TYP. ROOF ASSEMBLY: (TOP TO BOTTOM) - UNDERLAYMENT PER ROOFING MFR. - 5/8" ROOF SHEATHING PER CRC R803.1

TYP. CEILING ASSEMBLY: (TOP TO BOTTOM) - R-\_\_\_\_ INSULATION PER T24 REPORT - WOOD JOIST PER FRAMING PLAN

TAPER CUT CEILNG JOIST PER R802.7.1.2

PAINTED EXTERIOR GRADE SOFFIT BOARD NOTE: ADD NON-COMBUSTIBLE OR IGNITION RESISTANT MATERIAL WHEN REQUIRED AT

- EXTERIOR FINISH MATERIAL PER ELEVATION - R-\_\_\_\_ INSULATION PER T24 REPORT

# TYP. S.O.G. FLOOR: (TOP TO BOTTOM)

-4" COMPACTED CONSTRUCTION GRAVEL

SLOPE GRADE AWAY FROM STRUCTURE -

WASHED ROCK, LINE TRENCH AND COVER

### TABLE R802.5.2(1) RAFTER/CEILING JOIST HEEL JOINT CONNECTIONS<sup>9</sup>

| _ |       |                |                        |       |     |       |       |        |                     |                    |        |        |        |       |  |  |
|---|-------|----------------|------------------------|-------|-----|-------|-------|--------|---------------------|--------------------|--------|--------|--------|-------|--|--|
|   |       |                | GROUND SNOW LOAD (psf) |       |     |       |       |        |                     |                    |        |        |        |       |  |  |
|   |       |                | 20 <sup>e</sup>        |       |     | 30    |       |        | 50                  |                    |        | 70     |        |       |  |  |
|   |       | RAFTER SPACING | Roof span (feet)       |       |     |       |       |        |                     |                    |        |        |        |       |  |  |
|   | SLOPE | (inches)       | 12                     | 24    | 36  | 12    | 24    | 36     | 12                  | 24                 | 36     | 12     | 24     | 36    |  |  |
|   |       |                | Req                    | uired | num | ber o | f 16d | ငဓ္ဂရွ | n, <b>Q</b> , P, FI | nails <sub>l</sub> | per ho | eel jo | int sp | lices |  |  |
|   |       | 12             | 3                      | 4     | 6   | 3     | 5     | 7      | 4                   | 7                  | 10     | 5      | 9      | 13    |  |  |
|   | 1.10  | 16             | 3                      | 5     | 8   | 3     | 6     | 9      | 5                   | 9                  | 13     | 6      | 12     | 17    |  |  |
|   | 4.12  | 19.2           | 3                      | 6     | 9   | 4     | 7     | 11     | 6                   | 11                 | 16     | 7      | 14     | 21    |  |  |
|   |       | 24             | 4                      | 8     | 11  | 5     | 9     | 13     | 7                   | 13                 | 19     | 9      | 17     | 26    |  |  |
|   |       | 12             | 3                      | 3     | 5   | 3     | 4     | 6      | 3                   | 6                  | 8      | 4      | 7      | 11    |  |  |
|   | 5.10  | 16             | 3                      | 4     | 6   | 3     | 5     | 7      | 4                   | 7                  | 11     | 5      | 9      | 14    |  |  |
|   | 5.12  | 19.2           | 3                      | 5     | 7   | 3     | 6     | 9      | 5                   | 9                  | 13     | 6      | 11     | 17    |  |  |
|   |       | 24             | 3                      | 6     | 9   | 4     | 7     | 11     | 6                   | 11                 | 16     | 7      | 14     | 21    |  |  |
|   |       | 12             | 3                      | 3     | 4   | 3     | 3     | 4      | 3                   | 4                  | 6      | 3      | 5      | 8     |  |  |
|   | 7.10  | 16             | 3                      | 3     | 5   | 3     | 4     | 5      | 3                   | 5                  | 8      | 4      | 7      | 10    |  |  |
|   | 1.12  | 19.2           | 3                      | 4     | 5   | 3     | 4     | 6      | 3                   | 6                  | 9      | 4      | 8      | 12    |  |  |
|   |       | 24             | 3                      | 5     | 7   | 3     | 5     | 8      | 4                   | 8                  | 11     | 5      | 10     | 15    |  |  |

2

•

![](_page_39_Figure_12.jpeg)

5 | 10 | 15

![](_page_39_Figure_13.jpeg)

![](_page_39_Figure_14.jpeg)

![](_page_39_Figure_15.jpeg)

| SECTION KEY NOTES                                                                                           |
|-------------------------------------------------------------------------------------------------------------|
| 1. WALL INSULATION (PER T24 REPORT):                                                                        |
| 2. CEILING INSULATION (PER T24 REPORT):                                                                     |
| 3. INTERIOR FINISH: 5/8" GYPSUM BOARD                                                                       |
| 4. EXTERIOR WALL/ PLUMBING WALL: 2x6 STUD WALL                                                              |
| 5. INTERIOR WALL: 2x4 STUD WALL @ 16" O.C.                                                                  |
| 6. RADIANT BARRIER: Y or N (PER T24 REPORT)                                                                 |
| 7. NOT USED                                                                                                 |
| 8. ROOF FRAMING: 2x10 RAFTER                                                                                |
| 9. CEILING FRAMING: 2x10 JOIST                                                                              |
| 10. RIDGE BOARD PER CRC R802.2 RAFTER FULL BEARING ON RIDGE BOARD FRAMED OPPOSITE EACH OTHER                |
| 11. EXPOSED CONCRETE SLAB PER FOUNDATION PLAN. FINISH PER OWNER                                             |
| 12. SILL PLATE AND ANCHOR PER 6/A4.3                                                                        |
| 13. PROVIDE BLOCKING AT BRACED WALL CONNECTION TO ROOF RAFTERS PER<br>CRC FIGURE R602.10.8.2(3). SEE 5/A3.1 |
| 14. SHEAR TRANSFER PER 3/A4.3                                                                               |
|                                                                                                             |

15. CONCRETE SLAB ON GRADE PER FOUNDATION PLAN

![](_page_39_Figure_17.jpeg)

Unit ajon lling Dwe  $\mathbf{O}$ \_ >sor of CCC City SБ 802

Division

ŝťy

Safe

Building

![](_page_39_Picture_19.jpeg)

| TABLE R703.3(1)<br>SIDING MINIMUM ATTACHMEN                                                | T AND MINIMUM                                       | I THICKNESS                                                                                                     |                                               |                                   |                                                       |                                      |                                                                 |                                  |                                                                                                                                                                              | Floor                                                                                                                                                     |                                                                                                                 |                                                            | TABLE R60<br>FASTENIN | 02.3(1)<br>G SCHEDULE                                                                      |                                                                                 |                                                                                 |                           |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------|-------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------|
|                                                                                            |                                                     |                                                                                                                 | TYI<br>Wood or                                | PE OF SUPPOF                      | RTS FOR THE SIDING                                    | MATERIAL AND                         | FASTENERS                                                       |                                  |                                                                                                                                                                              | 4-8d box (21/2" × 0.113"); or<br>3-8d common (21/2" × 0.131"); or                                                                                         |                                                                                                                 |                                                            | ITEM                  | DESCRIPTION OF BUILDING<br>ELEMENTS                                                        | NUMBER AND TYPE OF FASTENERa<br>b, c<br>Roof                                    | SPACING AND LOCATION                                                            |                           |
| SIDING MATERIAL                                                                            | NOMINAL<br>THICKNESS                                | JOINT<br>TREATMENT                                                                                              | wood<br>structural                            | Fiberboard                        | Gypsum F                                              | oam<br>astic Direct                  | Number or                                                       | 22                               | Joist to sill, top plate or girder                                                                                                                                           | 3-10d box (3" × 0.128"); or                                                                                                                               |                                                                                                                 | Toe nail                                                   |                       |                                                                                            | 4-8d box (21/2" × 0.113"); or                                                   |                                                                                 |                           |
|                                                                                            | (inches)                                            |                                                                                                                 | panel<br>sheathing                            | sheathing<br>into stud            | into stud into                                        | athing stude<br>stude                | fasteners                                                       |                                  |                                                                                                                                                                              | 3-3" × 0.131" nails                                                                                                                                       |                                                                                                                 |                                                            |                       | Blocking between ceiling joists, rafters or trusses to top plate                           | 3-8d common (21/2" × 0.131"); or                                                | Toe nail                                                                        |                           |
|                                                                                            |                                                     |                                                                                                                 | into stud                                     |                                   |                                                       |                                      |                                                                 | -                                | Rim joist band joist or blocking to sill                                                                                                                                     | 8d box (21/2" × 0.113")<br>8d common (21/2" × 0.131"); or                                                                                                 | 4* (                                                                                                            | o.c. toe hall                                              |                       | or other framing below                                                                     | 3-10d box (3" × 0.128"); or                                                     |                                                                                 |                           |
| Anchored veneer: brick,<br>concrete, masonry or stone                                      | 2                                                   | Section R703.8                                                                                                  |                                               |                                   | Section R70                                           | <u>3.8</u>                           |                                                                 | 23                               | or top plate (roof applications also)                                                                                                                                        | 10d box (3" × 0.128"); or                                                                                                                                 | 6" (                                                                                                            | o.c. toe nail                                              | 1                     |                                                                                            | 2-8d common (21/2" × 0.131"); or                                                | Each end toe nail                                                               |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | ┥ ┝──                            |                                                                                                                                                                              | 3" × 0.131" nails<br>3-8d box (21/2" × 0.113"); or                                                                                                        |                                                                                                                 |                                                            |                       | Blocking between rafters or truss not at the wall top plates, to rafter or truss           | 2-3" × 0.131" nails<br>2-16d common (31/2" × 0.162"); or                        |                                                                                 |                           |
| Adhered veneer: concrete,<br>stone or masonry (see Section                                 | _                                                   | Section R703.12                                                                                                 |                                               |                                   | Section R70                                           | 8. <u>12</u>                         |                                                                 |                                  |                                                                                                                                                                              | 2-8d common (21/2" × 0.131"); or                                                                                                                          |                                                                                                                 |                                                            |                       |                                                                                            | 3-3" × 0.131" nails                                                             | End nail                                                                        |                           |
| <u>R703.12)</u>                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | 24                               | 1" × 6" subfloor or less to each joist                                                                                                                                       | 3-10d box (3" × 0.128"); or                                                                                                                               |                                                                                                                 | Face nail                                                  |                       | Flat blocking to truss and web filler                                                      | 3" × 0.131" nails                                                               | 6″ o.c. face nail                                                               |                           |
| Panel siding                                                                               |                                                     |                                                                                                                 |                                               |                                   |                                                       | 4d comr                              | non                                                             |                                  |                                                                                                                                                                              | 2 staples, 1" crown, 16 ga., 13/4" long                                                                                                                   |                                                                                                                 |                                                            |                       |                                                                                            | 4-8d box (21/2" × 0.113"); or                                                   |                                                                                 |                           |
| (see Section<br>R703.10.1)                                                                 | 16-May                                              | Section R703.10.                                                                                                | 6d common<br>(2" × 0.113")                    | 6d common<br>(2″ × 0.113″)        | 6d common 6d c<br>(2" × 0.113") (2" ×                 | 0.113") (11/2"<br>0.099              | 6" panel edges 12'<br>inter. sup.                               | 25                               | 2" subfloor to joist or girder                                                                                                                                               | 3-16d box (31/2" × 0.135"); or                                                                                                                            | Blind                                                                                                           | d and face nail                                            | 2                     | Ceiling joists to top plate                                                                | 3-8d common (21/2" × 0.131"); or                                                | Per joist, toe nail                                                             |                           |
| Fiber<br>cement                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | 26                               | 2″ planks (plank & beam—floor &                                                                                                                                              | 3-16d box (31/2" × 0.135"); or                                                                                                                            | 3-16d box (31/2" × 0.135"); or                                                                                  | At each bearing, face nail                                 |                       |                                                                                            | 3-3" × 0.131" nails                                                             |                                                                                 |                           |
| siding<br>Lap siding                                                                       |                                                     |                                                                                                                 | 6d common                                     | 6d common                         | 6d common 6d c                                        | 6d comr<br>ommon (2" × 0.1           | non<br>13")                                                     |                                  |                                                                                                                                                                              | 2-16d common (31/2" × 0.162")<br>3-16d common (31/2" × 0.162"); or                                                                                        | 2-16d common (31/2" × 0.162")                                                                                   |                                                            |                       | Ceiling joist not attached to parallel                                                     | 4-10d box (3" × 0.128"); or                                                     |                                                                                 |                           |
| <u>(see Section</u><br><u>R703.10.2)</u>                                                   | 16-May                                              | Section R703.10.                                                                                                | 2 (2" × 0.113")                               | (2" × 0.113")                     | (2" × 0.113") (2" ×                                   | 0.113") or 11 ga<br>roofing          | nail                                                            | 27                               | Band or rim joint to joint                                                                                                                                                   | 4-10 box (3" × 0.128"); or                                                                                                                                |                                                                                                                 | End noil                                                   | 3                     | [see <u>Section R802.5.2</u> and <u>Table</u><br>R802.5.2(1)]                              | 3-16d common (31/2" × 0.162"); or                                               | Face nail                                                                       | AE:<br>NATU               |
|                                                                                            |                                                     |                                                                                                                 | 0.120″ nail                                   | 0.120″ nail                       | 0.120″ nail 0.12                                      | 0″ nail 0.120″ i                     | nail                                                            |                                  | Band of him joist to joist                                                                                                                                                   | 4-3″ × 0.131″ nails; or                                                                                                                                   |                                                                                                                 |                                                            | 4                     | Ceiling joist attached to parallel rafter<br>(heel joint) [see Section                     | 4-3" × 0.131" nails                                                             | Face nail                                                                       | NAN<br>SIG<br>ADE<br>DAT  |
| Hardboard panel siding<br>(see Section R703.5)                                             | 16-Jul                                              | -                                                                                                               | (shank) with 0.225″ head                      | (shank) with<br>0.225″ head       | (shank) with (sha<br>0.225" head 0.22                 | hk) with (shank)<br>5″ head 0.225″ h | with<br>ead                                                     |                                  |                                                                                                                                                                              | 4-3" × 14 ga. staples, 7/16" crown                                                                                                                        | Nail aach lavar as fallows: 27                                                                                  | " o o at top and bottom and staggared                      |                       | <u>R802.5.2</u> and <u>Table R802.5.2(1)</u> ]                                             | 4-10d box (3" × 0.128"); or                                                     |                                                                                 |                           |
| Hardboard lap siding                                                                       |                                                     |                                                                                                                 | 0.099″ nail                                   | 0.099″ nail                       | 0.099" nail 0.09                                      | 9″ nail 0.099″ i                     | nail Same as stud                                               |                                  |                                                                                                                                                                              | 10d box (3" × 0.128"); or 3" × 0.131"                                                                                                                     | 24" o c face nail at top and                                                                                    | bottom staggered on opposite sides                         | 5                     | Collar tie to rafter, face nail                                                            | 3-10d common (3" × 0.148"); or                                                  | Face nail each rafter                                                           |                           |
| (see Section R703.5)                                                                       | 16-Jul                                              | Note e                                                                                                          | (shank) with 0.240" head                      | (shank) with 0.240″ head          | (shank) with (sha<br>0.240" head 0.24                 | nk) with (shank)<br>)" head 0.240" h | ead bearing                                                     | 28                               | Built-up girders and beams, 2-inch                                                                                                                                           | nails<br>And:                                                                                                                                             |                                                                                                                 |                                                            |                       |                                                                                            | 4-3" × 0.131" nails<br>3-16d box (31/2" × 0.135"); or                           |                                                                                 |                           |
| Without                                                                                    | 0.019b                                              | Lap                                                                                                             | Siding nail<br>11/2″ × 0.120″                 | Siding nail 2″ ×<br>0.120″        | Siding nail 2″ × S<br>0.120″ nailh                    | ding<br>11/2″ × Not allow            | ved                                                             | 20                               | lumber layers                                                                                                                                                                | 2-20d common (4" × 0.192"); or                                                                                                                            | Face nail at e                                                                                                  | ends and at each splice                                    |                       |                                                                                            | 3-10d common (3" × 0.148"); or                                                  |                                                                                 |                           |
| Horizontal                                                                                 | 0.024                                               | Lap                                                                                                             | Siding nail                                   | Siding nail 2" ×                  | Siding nail 2" × S                                    | ding<br>11/2″ × Not allov            | Same as stud                                                    |                                  |                                                                                                                                                                              | 3-10d box (3" × 0.128"); or                                                                                                                               |                                                                                                                 |                                                            | 6                     | Rafter or roof truss to plate                                                              | 4-10d box (3" × 0.128"); or                                                     | 2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss |                           |
| aluminuma                                                                                  |                                                     |                                                                                                                 | 11/2" × 0.120"                                | 0.120"<br>Siding pail             | 0.120″<br>0.<br>Siding pail                           | 120"<br>ding Siding                  | spacing                                                         |                                  |                                                                                                                                                                              | 3-3" × 0.131" nails<br>4-16d box (31/2" × 0.135"); or                                                                                                     |                                                                                                                 |                                                            |                       |                                                                                            | 4-3" × 0.131" nails<br>4-16d box (31/2" × 0.135"): or                           |                                                                                 |                           |
| With insulation                                                                            | 0.019                                               | Lap                                                                                                             | 11/2" × 0.120"                                | 21/2" × 0.120"                    | 21/2" × 0.120" naih<br>0.                             | 11/2" ×<br>120" 11/2" × 0.           | 120″                                                            | 29                               | Ledger strip supporting joists or                                                                                                                                            | 3-16d common (31/2" × 0.162"); or                                                                                                                         | At each jois                                                                                                    | st or rafter, face nail                                    |                       |                                                                                            | 3-10d common (3" × 0.148"); or                                                  |                                                                                 |                           |
|                                                                                            |                                                     |                                                                                                                 | 0.120 nail                                    | 0.120 nail                        | 0.120 nail <u>0.1</u>                                 | 20 nail_                             | 16 inches on<br>center or specified                             | 1                                | ratters                                                                                                                                                                      | 4-10d box (3" × 0.128"); or                                                                                                                               | ,                                                                                                               | ,                                                          |                       |                                                                                            | 4-10d box (3" × 0.128"); or                                                     | Toe nail                                                                        |                           |
| Insulated vinyl siding                                                                     | 0.035 (vinyl siding layer                           | Lap                                                                                                             | (shank) with<br>a 0.313 head                  | (shank) with a 0.313 head or      | (shank) with a <u>(shan</u><br>0.313 head or <u>0</u> | k) with a<br><u>313</u> Not allow    | by manufacturer<br>ved instructions, test                       |                                  |                                                                                                                                                                              | 4-3" × 0.131" nails<br>2-10d box (3" × 0.128"); or                                                                                                        |                                                                                                                 |                                                            | 7                     | Roof rafters to ridge, valley or hip rafters or roof rafter to minimum 2"                  | 4-3" × 0.131" nails                                                             |                                                                                 |                           |
|                                                                                            | oniy)                                               |                                                                                                                 | or 16-gage<br>crownh, i                       | crownh                            | crownh <u>R70</u>                                     | <u>Section</u><br>3.11.2             | sections of this                                                | 30                               | Bridging or blocking to joist, rafter or truss                                                                                                                               | 2-8d common (21/2" × 0.131"); or                                                                                                                          | Each                                                                                                            | h end, toe nail                                            |                       | ridge beam                                                                                 | 2-16d common (31/2" × 0.162"); or                                               |                                                                                 |                           |
|                                                                                            | 8 Mor                                               |                                                                                                                 | 6d box nail                                   | 6d box nail (2″                   | 6d box nail (2″6d b                                   | ox nail                              | vod                                                             | -                                |                                                                                                                                                                              | 2-3″ × 0.131″ nails                                                                                                                                       | SDACING                                                                                                         |                                                            |                       |                                                                                            | 3-10d box (3" × 0.128"); or                                                     | End nail                                                                        |                           |
|                                                                                            | o-iviai                                             | _                                                                                                               | (2" × 0.099")                                 | × 0.099")                         | × 0.099") (2" ×                                       | 0.099")                              |                                                                 | ITEM                             | DESCRIPTION OF BUILDING<br>ELEMENTS                                                                                                                                          | NUMBER AND TYPE OF FASTENERa,<br>b, c                                                                                                                     | Edgesh (inches)                                                                                                 | Intermediatesupportsc. e (inches)                          |                       |                                                                                            | 3-3″ × 0.131″ nails                                                             |                                                                                 |                           |
| Particleboard panels                                                                       | 2-Jan                                               | —                                                                                                               | 6d box nail<br>(2" × 0.099")                  | 6d box nail (2"<br>× 0.099")      | 6d box nail (2" 6d b<br>× 0.099") (2" ×               | ox nail 6d box na<br>0.099") × 0.099 | il (2" 6" panel edges 12"<br>)") inter. sup.                    | <i>"</i>                         |                                                                                                                                                                              |                                                                                                                                                           | ,                                                                                                               |                                                            |                       | Stud to stud (not at braced wall                                                           | Wall<br>16d common (31/2" × 0.162")<br>10d box (3" × 0.128"): or                | 24" o.c. face nail                                                              |                           |
|                                                                                            | 8-May                                               | _                                                                                                               | 6d box nail<br>(2" × 0.099")                  | 8d box nail<br>(21/2" ×           | 8d box nail<br>(21/2" × (2" ×                         | ox nail 6d box na<br>0.099″) × 0.099 | il (2"<br>)")                                                   | <u>Wood s</u>                    | structural panels, subfloor, roof and interio                                                                                                                                | r wall sheathing to framing andparticleboard w<br>sheathing to wall fra                                                                                   | vall sheathing to framing [see Table R602<br>aming]                                                             | 2.3(3) for wood structural panel exterior wall             | 8                     | panels)                                                                                    | 3" × 0.131" nails                                                               | 16″ o.c. face nail                                                              |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               | 0.113")                           | 0.113")                                               |                                      | As specified by the                                             | •                                |                                                                                                                                                                              | 6d common or deformed (2" × 0.113"×                                                                                                                       |                                                                                                                 |                                                            | 9                     | Stud to stud and abutting studs at intersecting wall corners (at braced                    | 16d box (31/2" × 0.135"); or                                                    | 12″ o.c. face nail                                                              |                           |
| Polypropylene siding                                                                       | Not applicable                                      | Lap                                                                                                             | <u>Section</u><br>703.14.1                    | <u>Section</u><br><u>703.14.1</u> | <u>Section</u> <u>Sec</u><br>703.14.1 70              | Ction<br>8.14.1 Not allow            | ved instructions, test<br>report or other                       |                                  |                                                                                                                                                                              | 0.266" head); or 23/8" × 0.113" × 0.266"<br>head nail (subfloor, walli)                                                                                   | 6                                                                                                               | 6f                                                         |                       | wall panels)                                                                               | 3" × 0.131" nails<br>16d common (31/2" × 0.162")<br>16d common (21/2" × 0.162") | 16" o.c. face nail                                                              |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      | sections of this code                                           | 31                               | 3/8" - 1/2"                                                                                                                                                                  | 8d common (21/2″ × 0.131″) nail (roof); o                                                                                                                 | r                                                                                                               |                                                            | 10                    | with 1/2" spacer)                                                                          | 16d box (31/2" × 0.135")<br>5-8d box (21/2" × 0.113"); or                       | 12" o.c. each edge face nail                                                    |                           |
| Steelc                                                                                     | 29 ga.                                              | Lap                                                                                                             | Siding nail<br>(13/4" ×                       | Siding nail<br>(23/4" ×           | Siding nail Sidi<br>(21/2" × (1                       | ng nail<br>3/4″ ×<br>12″) Not allov  | ved Same as stud                                                |                                  |                                                                                                                                                                              | RSRS-01 (2₃/ଃ″ × 0.113″) nail (roof)₀                                                                                                                     | 6                                                                                                               | 6f                                                         | 11                    | Continuous header to stud                                                                  | 4-8d common (21/2" × 0.131"); or                                                | Toe nail                                                                        |                           |
|                                                                                            |                                                     |                                                                                                                 | Staple-13/4                                   | Staple-21/2                       | Staple–21/4 Stap                                      | le–13/4                              | spacing                                                         | -                                |                                                                                                                                                                              | 8d common (2-21/2" × 0.131") nail<br>(subfloor, wall)                                                                                                     | 6                                                                                                               | 12                                                         |                       |                                                                                            | 4-10d box (3" × 0.128")                                                         |                                                                                 |                           |
|                                                                                            |                                                     |                                                                                                                 | 0.120" nail<br>(shank) with<br>a 0.313"       | 0.120″ nail<br>(shank) with a     | 0.120″ nail<br>(shank) with a (shan                   | <u>0″ nail</u><br>k) with a          | 16 inches on<br>center or as                                    | nches on<br>iter or as           |                                                                                                                                                                              | 8d common (21/2" × 0.131") nail (roof); o                                                                                                                 | r                                                                                                               |                                                            |                       |                                                                                            | 4-16d box (31/2"× 0.135"); or<br>3-16d common (31/2" × 0.162"); or              |                                                                                 |                           |
| Vinyl siding (see Section<br>R703.11)                                                      | 0.035                                               | Lap                                                                                                             | head or 16-<br>gage staple                    | 0.313" head or<br>16-gage staple  | 0.313" head or<br>16-gage staple<br>with a/a to a/a   | 313 Not allow                        | ved specified by the<br>manufacturer                            | 32                               | 19/32" — 3/4"                                                                                                                                                                | RSRS-01; (2₃/8″ × 0.113″) nail (roof)ь                                                                                                                    | 6                                                                                                               | бf                                                         | 12                    | Adjacent full-height stud to end of<br>header                                              | 4-10d box (3" × 0.128"); or                                                     | End nail                                                                        |                           |
|                                                                                            |                                                     |                                                                                                                 | with 3/8- to 1/2-<br>inch crownh, i           | inch crownh                       | inch crownh                                           | <u>3.11.2</u>                        | report                                                          |                                  |                                                                                                                                                                              | Deformed 23/8" × 0.113" × 0.266" head<br>(wall or subfloor)                                                                                               | 6                                                                                                               | 12                                                         |                       |                                                                                            | 4-3" × 0.131" nails                                                             |                                                                                 | ory <b>H</b>              |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | 33                               | 7/8" — 11/4"                                                                                                                                                                 | 10d common (3" × 0.148") nail; or                                                                                                                         | 6                                                                                                               | 12                                                         | 13                    | Top plate to top plate                                                                     | 16d common (31/2" × 0.162")<br>10d box (3" × 0.128"); or                        | 16" o.c. face nail                                                              | Ssc Ca                    |
| Wood rustic,<br>Wood siding drop                                                           | 3/8 min.                                            | Lap                                                                                                             | 6d box or                                     | 6d box or                         | 6d box or 6d                                          | 8d box<br>box or siding r            | or Face nailing up to<br>nail 6″ widths, 1 nail                 |                                  |                                                                                                                                                                              | nail Other wall sheath                                                                                                                                    | ning g                                                                                                          |                                                            |                       |                                                                                            | 3" × 0.131" nails<br>8-16d common (31/2" × 0.162"); or                          |                                                                                 |                           |
| (see Section<br>R703.5)                                                                    |                                                     |                                                                                                                 | siding nail (2"<br>× 0.099")                  | siding nail (2″<br>×0.099″)       | siding nail (2" siding<br>× 0.099") × 0               | nail (2" (21/2"<br>.099") 0.113      | <ul> <li>per bearing; 8"</li> <li>width sand over, 2</li> </ul> |                                  | 1/2" structural cellulosic fiberboard                                                                                                                                        | 11/2" × 0.120" galvanized roofing nail;/16<br>head diameter; or                                                                                           | "                                                                                                               |                                                            |                       |                                                                                            | 12-16d box (31/2" × 0.135"); or                                                 | Face nail on each side of end joint (minimum 24 lap splice length each side of  | Ac                        |
| Shiplap<br>Bevel                                                                           | 19/32 average<br>16-Jul                             | Lap                                                                                                             |                                               |                                   |                                                       | Staple-                              | -2" nails per bearing                                           | 34                               | sheathing                                                                                                                                                                    | 11/4" long 16 ga. staple with /16" or 1"                                                                                                                  | 3                                                                                                               | 6                                                          | 14                    | Double top plate splice                                                                    | 12-10d box (3" × 0.128"); or                                                    | end joint)                                                                      | Bui Bui                   |
| Butt tip                                                                                   | 16-Mar                                              | Lap                                                                                                             |                                               |                                   |                                                       |                                      |                                                                 | -                                | ac/as" structural collulacia fiberboard                                                                                                                                      | 13/4" × 0.120" galvanized roofing<br>nail, 7/16" head diameter; or                                                                                        |                                                                                                                 |                                                            | i                     | <b>5</b> //                                                                                | 12-3" × 0.131" nails<br>16d common (31/2" × 0.162")                             | 16" o.c. face nail                                                              |                           |
| panel <u>ANSI/APA PRP-</u><br>210 siding (exterior grade)                                  | 3/8 — 1/2                                           | Note e                                                                                                          | 2" × 0.099"<br>siding nail                    | 21/2" × 0.113"<br>siding nail     | 21/2" × 0.113" 2.113<br>siding nail                   | /2" × 2" × 0.0<br>" siding siding r  | 99″ 6″ panel edges 12'<br>ail inter. sup.                       | " 35                             | sheathing                                                                                                                                                                    | 11/4″ long 16 ga. staple with//16″ or 1″                                                                                                                  | 3                                                                                                               | 6                                                          | 15                    | Bottom plate to joist, rim joist, band<br>joist or blocking (not at braced wall<br>panels) | 16d box (31/2" × 0.135"); or                                                    | 12″ o.c. face nail                                                              |                           |
| (see <u>Section R703.5</u> )                                                               |                                                     |                                                                                                                 |                                               |                                   |                                                       | nali                                 |                                                                 |                                  | +                                                                                                                                                                            | 11/2" × 0.120" galvanized roofing<br>nail, 7/16" head diameter, or                                                                                        |                                                                                                                 |                                                            |                       | · ,                                                                                        | 3" × 0.131" nails<br>Roof                                                       |                                                                                 |                           |
| Wood structural panel lap                                                                  | 3/8 — 1/2                                           | Note eNote g                                                                                                    | 2" × 0.099"                                   | 21/2" × 0.113"                    | 21/2" × 0.113" 2.                                     | /2" × 2" × 0.0                       | 99″ 8″ along bottom                                             | 36                               | 1/2" gypsum sheathing                                                                                                                                                        | 11/4″long 16 ga.;                                                                                                                                         | 7                                                                                                               | 7                                                          | 16                    | Bottom plate to joist, rim joist, band                                                     | 2-16d common (31/2" × 0.162"); or                                               | 16″ o.c. face nail                                                              |                           |
| For SI: 1 inch = 25.4 mm.                                                                  |                                                     |                                                                                                                 | siding hall                                   | siding hall                       | siding hali                                           | nail                                 | iaii edge                                                       |                                  |                                                                                                                                                                              | staple galvanized, 11/2″ long;7/16″ or 1″                                                                                                                 |                                                                                                                 |                                                            |                       | joist or blocking (at braced wall panel)                                                   | 4-3" × 0.131" nails                                                             |                                                                                 |                           |
| a.Aluminum nails shall be used to attach<br>b.Aluminum (0.019 inch) shall be unback        | aluminum siding.<br>ed only where the max           | timum panel width is 10 i                                                                                       | nches and the maximu                          | um flat area is 8 inches          | s. The tolerance for aluminum                         | siding shall be +0.002               |                                                                 |                                  |                                                                                                                                                                              | crown or 11/4" screws, Type W or S<br>13/4" × 0.120" galvanized roofing                                                                                   |                                                                                                                 |                                                            |                       |                                                                                            | 4-8d box (21/2" × 0.113"); or                                                   |                                                                                 |                           |
| inch of the nominal dimension.<br>c.Shall be of approved type.                             |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | 27                               | s/a" gupoum choothing                                                                                                                                                        | nail, 7/16" head diameter, or 11/4" long 16 ga.;                                                                                                          | 7                                                                                                               | 7                                                          |                       |                                                                                            | 4-8d common (21/2" × 0.131"); or                                                | Toe nail                                                                        |                           |
| d.Where used to resist shear forces, the s<br>e.Vertical end joints shall occur at studs a | pacing must be 4 inch<br>and shall be covered w     | nes at panel edges and 8<br>vith a joint cover or shall                                                         | inches on interior supp<br>be caulked.        | ports.                            | 6                                                     |                                      |                                                                 | 51                               | 5/8 gypsun sneathing                                                                                                                                                         | staple galvanized, 11/2" long; 7/16" or 1"                                                                                                                | 7                                                                                                               | 1                                                          |                       |                                                                                            | 4-10d box (3" × 0.128"); or                                                     |                                                                                 |                           |
| each stud in accordance with the manufa<br>a.Vertical joints, if staggered, shall be per   | icturer's installation in<br>mitted to be away fror | nks at each stud. Conces<br>structions.<br>n studs if applied over w                                            | ood structural panel st                       | ge i 172-inch-iong gaiv           | . rooning hair through the top e                      | uge of each plank at                 |                                                                 |                                  |                                                                                                                                                                              | ood structural panels, combination subf                                                                                                                   | loor underlayment to framing                                                                                    |                                                            | 17                    | Top or bottom plate to stud                                                                | 4-3" × 0.131" nails                                                             |                                                                                 |                           |
| h.Minimum fastener length must be suffi<br>manufacturer's installation instructions.       | cient to penetrate shea                             | athing other nailable sub                                                                                       | strate and framing a to                       | otal of a minimum of 1            | 1/4 inches or in accordance v                         | ith the                              |                                                                 |                                  |                                                                                                                                                                              | Deformed (2" × 0.113") or                                                                                                                                 |                                                                                                                 |                                                            |                       |                                                                                            | 2-16d common (31/2" × 0.162"); or                                               |                                                                                 |                           |
| i.Where specified by the manufacturer's i<br>substrate of minimum thickness specifie       | nstructions and suppo<br>d by the instructions o    | rted by a test report, fast<br>r test report, without pen                                                       | eners are permitted to etrating into framing. | penetrate into or fully           | through nailable sheathing o                          | other nailable                       |                                                                 | 38                               | 3/4″ and less                                                                                                                                                                | Deformed (2" × 0.120") nail; or                                                                                                                           | 6                                                                                                               | 12                                                         |                       |                                                                                            | 3-10d box (3" × 0.128"); or                                                     | End nail                                                                        |                           |
| j.Insulated vinyl siding shall comply with a k.Polypropylene siding shall comply with      | ASTM D7793.<br>ASTM D7254.                          | an addition of the second s | to and Berlin it                              | Notice - Para -                   | 0 16 P700                                             |                                      |                                                                 |                                  |                                                                                                                                                                              | 8d common (21/2" × 0.131") nail<br>8d common (21/2" × 0.131") nail; or                                                                                    |                                                                                                                 |                                                            |                       |                                                                                            | 3-3" × 0.131" nails                                                             |                                                                                 |                           |
| I.Cladding attachment over foam sheathi                                                    | ng shall comply with th                             | ne additional requiremen                                                                                        | ts and limitations of <u>S</u>                | Sections R703.15, R703            | <u>3.16</u> and <u>R703.17</u> .                      |                                      |                                                                 | 39                               | 7/8" — 1"                                                                                                                                                                    | Deformed (2" × 0.113"); or                                                                                                                                | 6                                                                                                               | 12                                                         | 18                    | Top plates, laps at corners and                                                            | 2-16d common (31/2" × 0.162"); or                                               | Face nail                                                                       |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 |                                  |                                                                                                                                                                              | Deformed (21/2″ × 0.120″) nail<br>10d common (3″ × 0.148″) nail; or                                                                                       |                                                                                                                 |                                                            |                       | intersections                                                                              | 3-3" × 0.131" nails                                                             |                                                                                 |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | 40                               | 11/8" - 11/4"                                                                                                                                                                | Deformed (2" × 0.113"); or                                                                                                                                | 6                                                                                                               | 12                                                         |                       |                                                                                            | 3-8d box (21/2" × 0.113"); or                                                   |                                                                                 |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 |                                  | - 05 4                                                                                                                                                                       | Deformed (21/2" × 0.120") nail                                                                                                                            |                                                                                                                 |                                                            | 19                    | 1" brace to each stud and plate                                                            | 2-8d common (21/2" × 0.131"); or                                                | Face nail                                                                       |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | a.Nails are smo                  | = 25.4 mm, 1 1001 = 304.8 mm, 1 mile per nour = 0.44<br>both-common, box or deformed shanks except where othe<br>as shown: 80 ksi for shank diameter of 0.192 inch (20d cc   | erwise stated. Nails used for framing and sheathing connections ommon nail), 90 ksi for shank diameters larger than 0.142 inch                            | s are carbon steel and shall have minimum average be<br>but not larger than 0.177 inch, and 100 ksi for shank d | ending yield strengths<br>diameters of 0.142 inch or less. |                       |                                                                                            | 2 staples 13/4"                                                                 |                                                                                 |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | b.RSRS-01 is                     | Connections using nails and staples of other materials, so<br>a Roof Sheathing Ring Shank nail meeting the specific                                                          | uch as stainless steel, shall be designed by accepted engineering<br>cations in ASTM F1667.                                                               | g practice or approved under Section R104.11.                                                                   |                                                            |                       |                                                                                            | 3-8d box (21/2" × 0.113"); or                                                   |                                                                                 | CAIO                      |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | c.Nails shall b<br>d.Four-foot b | be spaced at not more than 6 inches on center at all s<br>y 8-foot or 4-foot by 9-foot panels shall be applied ver                                                           | supports where spans are 48 inches or greater.<br>tically.                                                                                                |                                                                                                                 |                                                            | 20                    | 1″ × 6″ sheathing to each bearing                                                          | 2-8d common (21/2" × 0.131"); or                                                | Face nail                                                                       | and the                   |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | e.Spacing of fa<br>f.For wood st | summers not included in this table shall be based on Table f<br>ructural panel roof sheathing attached to gable end ro<br>design wind speed is greater than 130 mnh in Fxnos | κου2.3(2).<br>oof framing and to intermediate supports within 48 inches<br>sure B or greater than 110 mph in Exposure C.                                  | of roof edges and ridges, nails shall be spaced at                                                              | at 4 inches on center where the ultimate                   |                       |                                                                                            | 2 staples 4" ereier 40                                                          |                                                                                 | The Valley of Opportunity |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | g.Gypsum sh<br>h.Spacing of      | eathing shall conform to ASTM C1396 and shall be in<br>fasteners on floor sheathing panel edges applies to p                                                                 | stalled in accordance with ASTM C1280 or <u>GA 253</u> . Fiber<br>anel edges supported by framing members and required b                                  | poard sheathing shall conform to ASTM C208.<br>Nocking and at floor perimeters only. Spacing of fa              | fasteners on roof sheathing panel                          |                       |                                                                                            | 3-8d box (21/2" × 0.113"); or                                                   |                                                                                 | The star of               |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 |                                  | edges applies to panel edges supported by framing<br>except as required by other provisions of this code.                                                                    | nembers and required blocking. Blocking of roof or floor<br>Floor perimeter shall be supported by framing members of<br>coordagoe with this action to the | sheathing panel edges perpendicular to the frami<br>r solid blocking.                                           | ning members need not be provided                          |                       |                                                                                            | 3-8d common (21/2" × 0.131"); or                                                |                                                                                 | "porated                  |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 | i.Where a raft                   | cr is rasteried to an adjacent parallel ceiling joist in ad<br>schedule. The toe nail on the opposite side of the rafter :                                                   | shall not be required.                                                                                                                                    | : אופי טו נוופ ומדניר and toe nails from the ceiling jo                                                         | סיס וט וטף plate in accordance with this                   |                       |                                                                                            | 3-10d box (3" × 0.128"); or                                                     |                                                                                 |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 |                                  |                                                                                                                                                                              |                                                                                                                                                           |                                                                                                                 |                                                            |                       |                                                                                            | 3 staples, 1" crown, 16 ga., 13/4" long                                         |                                                                                 | A4.1                      |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 |                                  |                                                                                                                                                                              |                                                                                                                                                           |                                                                                                                 |                                                            | 21                    | 1″ × 8″ and wider sheathing to each bearing                                                | 4-8d box (24/2" × 0.112"); c-                                                   | Face nail                                                                       |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 |                                  |                                                                                                                                                                              |                                                                                                                                                           |                                                                                                                 |                                                            |                       |                                                                                            | 3-8d common (21/2" × 0.131"); or                                                |                                                                                 |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 |                                  |                                                                                                                                                                              |                                                                                                                                                           |                                                                                                                 |                                                            |                       |                                                                                            | 3-10d box (3" × 0.128"); or                                                     |                                                                                 | CRC SCHEDULES             |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 |                                  |                                                                                                                                                                              |                                                                                                                                                           |                                                                                                                 |                                                            |                       |                                                                                            | 4 staples, 1" crown, 16 ga., 1₃/4" long                                         |                                                                                 |                           |
|                                                                                            |                                                     |                                                                                                                 |                                               |                                   |                                                       |                                      |                                                                 |                                  |                                                                                                                                                                              |                                                                                                                                                           |                                                                                                                 |                                                            | <u>.</u>              |                                                                                            |                                                                                 |                                                                                 |                           |

![](_page_41_Figure_0.jpeg)

![](_page_41_Figure_1.jpeg)

**BRACED WALL PANEL CONNECTION OPTION TO PERPENDICULAR RAFTERS OR ROOF TRUSSES** 

![](_page_41_Figure_4.jpeg)

![](_page_41_Picture_6.jpeg)

![](_page_41_Picture_23.jpeg)

2 CRC Figure R403.1.3

1 El Cajon - Cutting & Notching of Joists, Rafters, and Studs

CRC DETAILS

![](_page_42_Figure_4.jpeg)

![](_page_42_Figure_5.jpeg)

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

![](_page_42_Figure_6.jpeg)

![](_page_43_Figure_2.jpeg)

T24 Energy Calculations (Provided by Permittee)

![](_page_44_Figure_2.jpeg)

T24 Energy Calculations (Provided by Permittee)