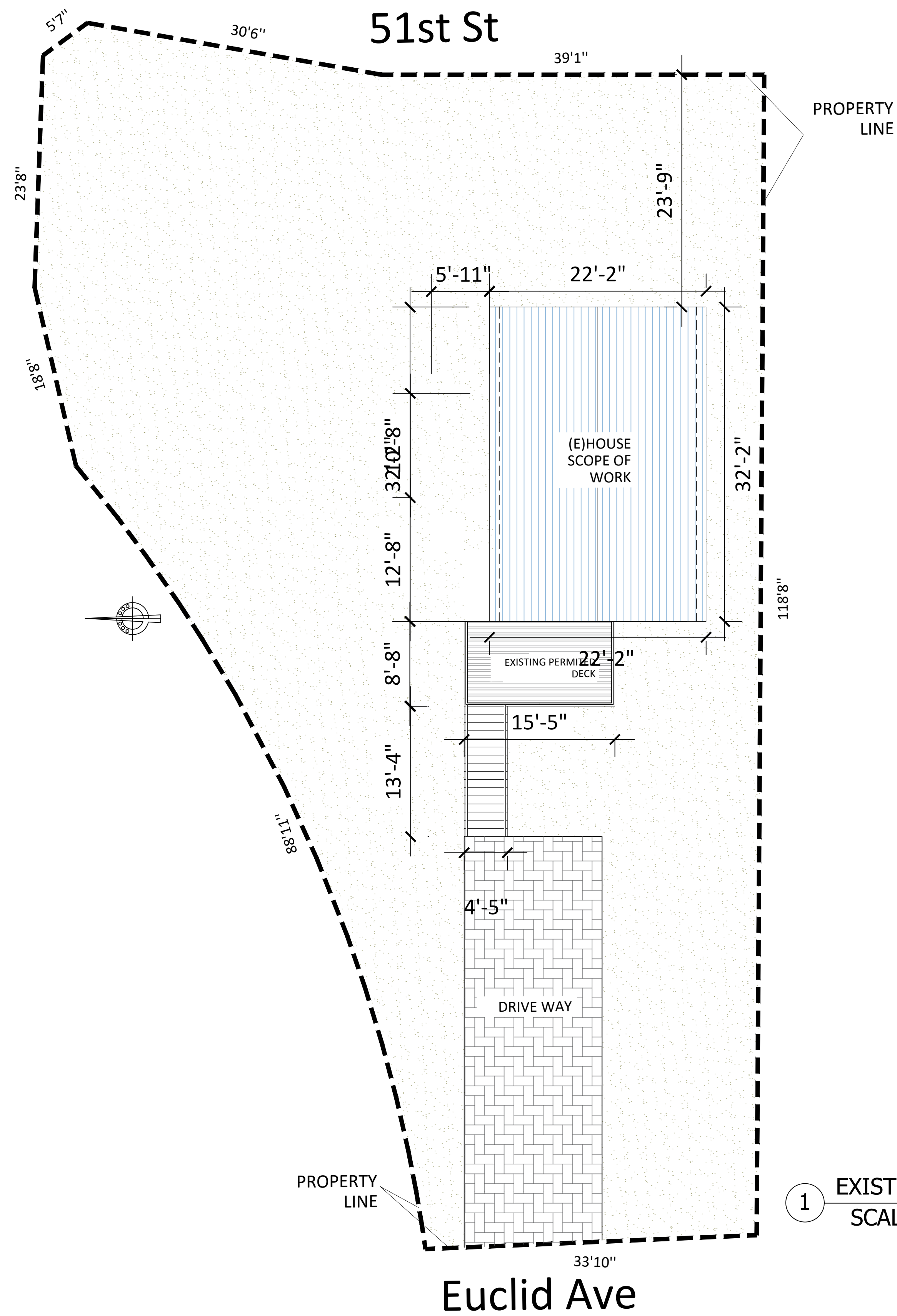






1 EXISTING SITE PLAN  
SCALE 1/8"=1'0"

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Kaitlin Endres  
Business Manager  
O 656-556-7900  
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CSB # 106458  
Send to: ECGCreativeDesignBuild.com



The contractor shall verify and be responsible for all dimensions and conditions on the job and this office must be notified in writing of any variation from the dimensions and conditions shown by these drawings.

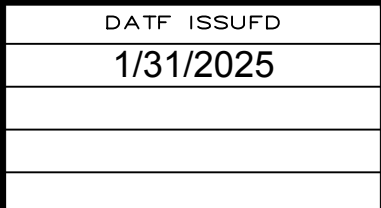
PREPARED FOR:  
  
648 51st St, San Diego, CA 92114

SHEET TITLE  
EXISTING  
SITE PLAN

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JOB NO.

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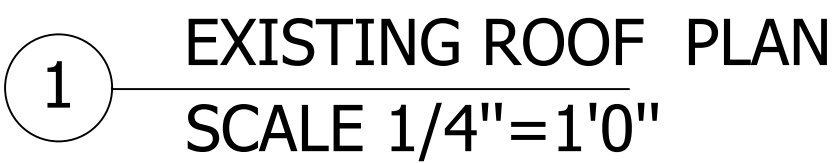


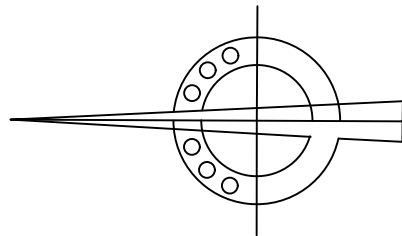
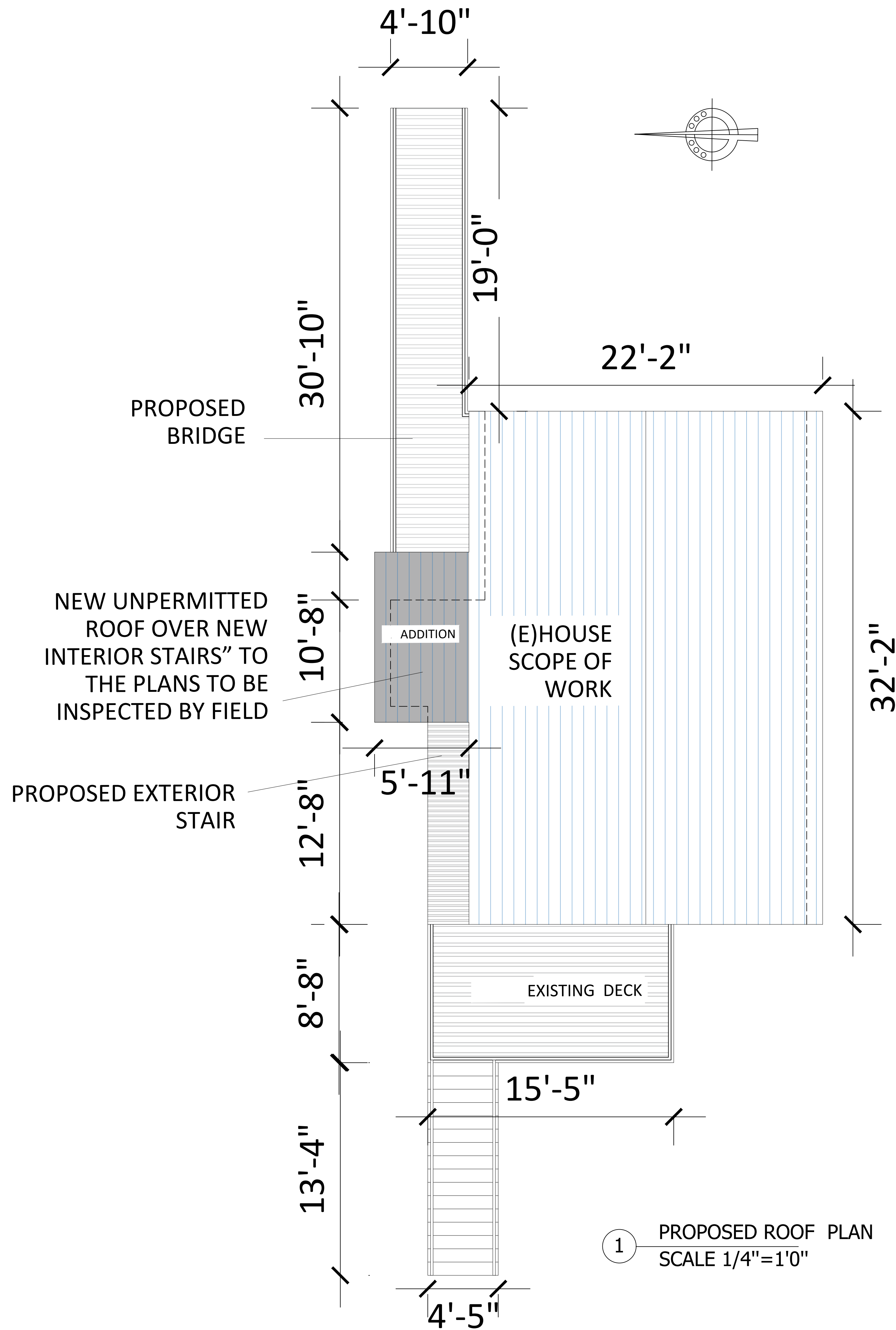
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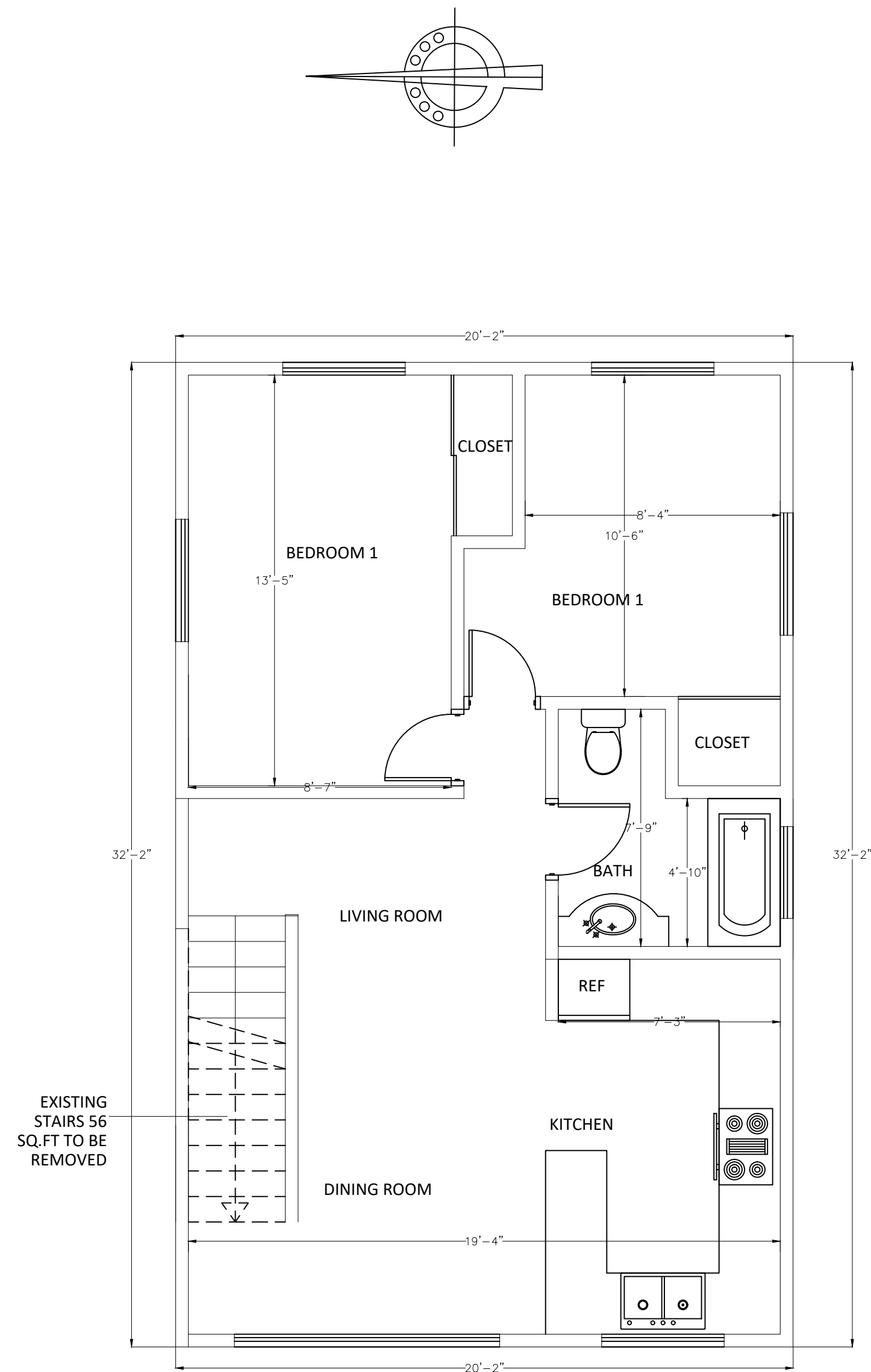
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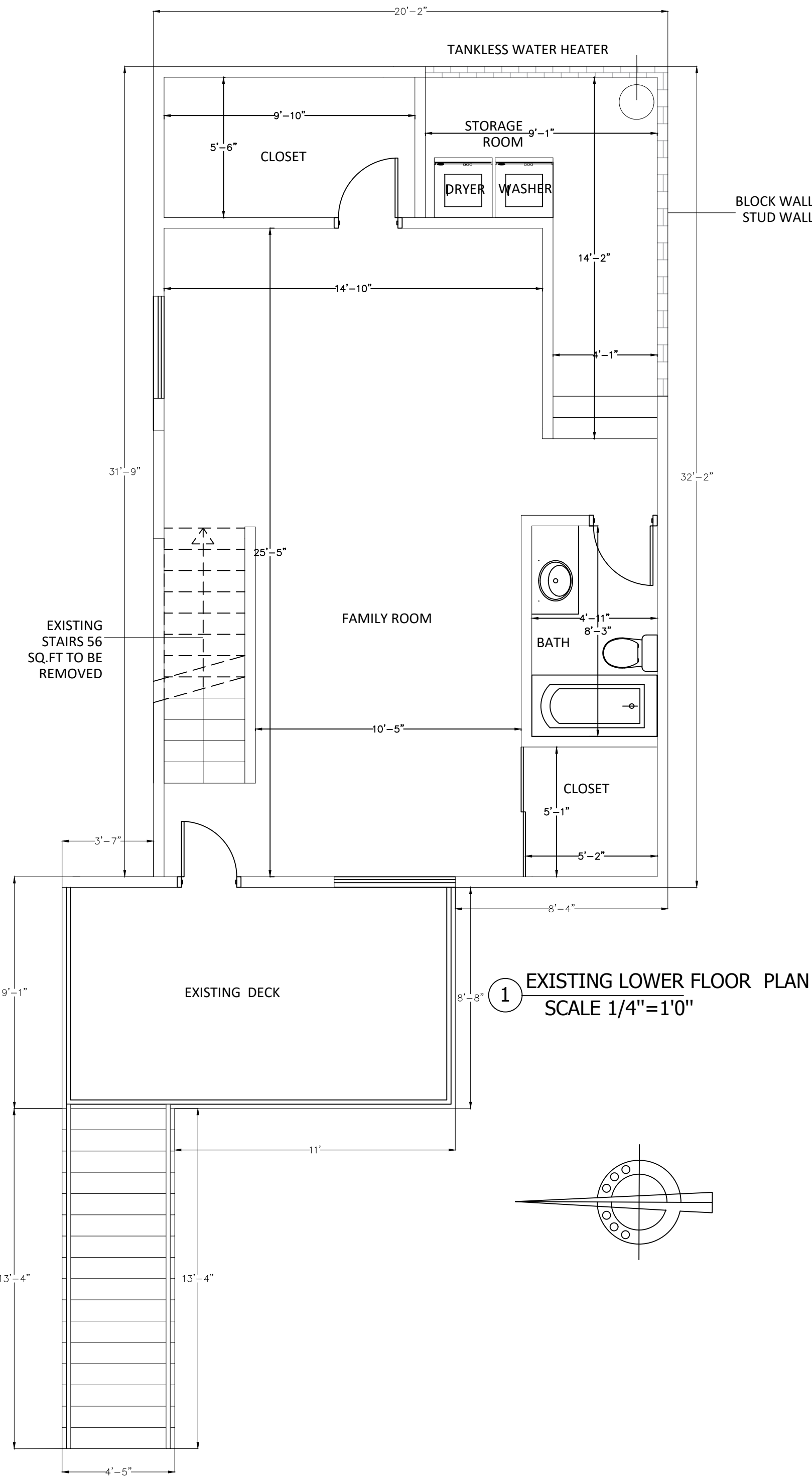
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PROPOSED  
ROOF PLAN

SCALE  
DRAWN BY HE-DM-GA  
CHECKED BY  
START DATE  
JOB NO.

SHEET NUMBER  
A-2.1



1 EXISTING UPPER FLOOR PLAN  
SCALE 1/4"=1'0"



1 EXISTING LOWER FLOOR PLAN  
SCALE 1/4"=1'0"

DATE ISSUED  
1/31/2025

#DATEREVISIONBY

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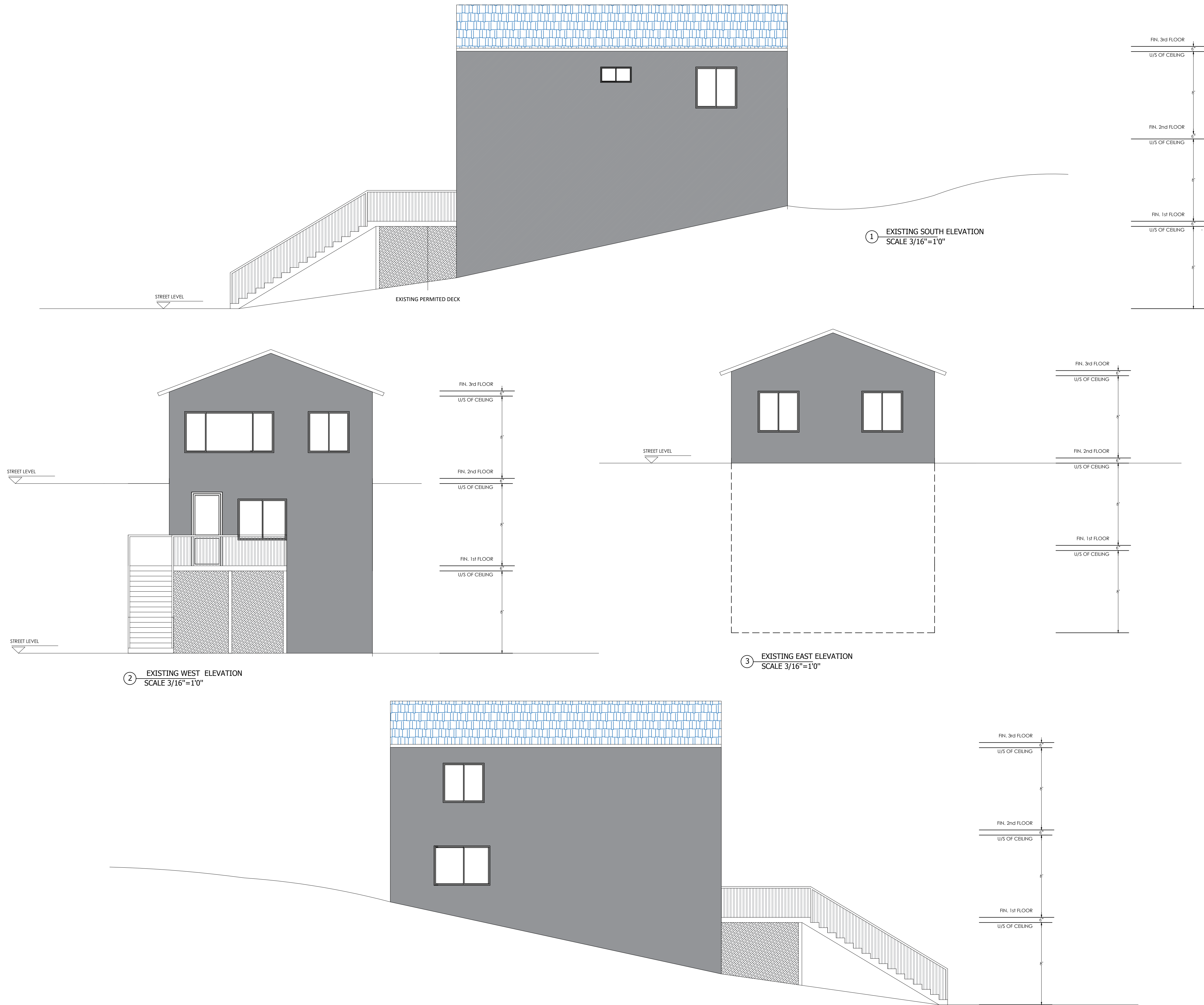
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DESIGN + BUILD



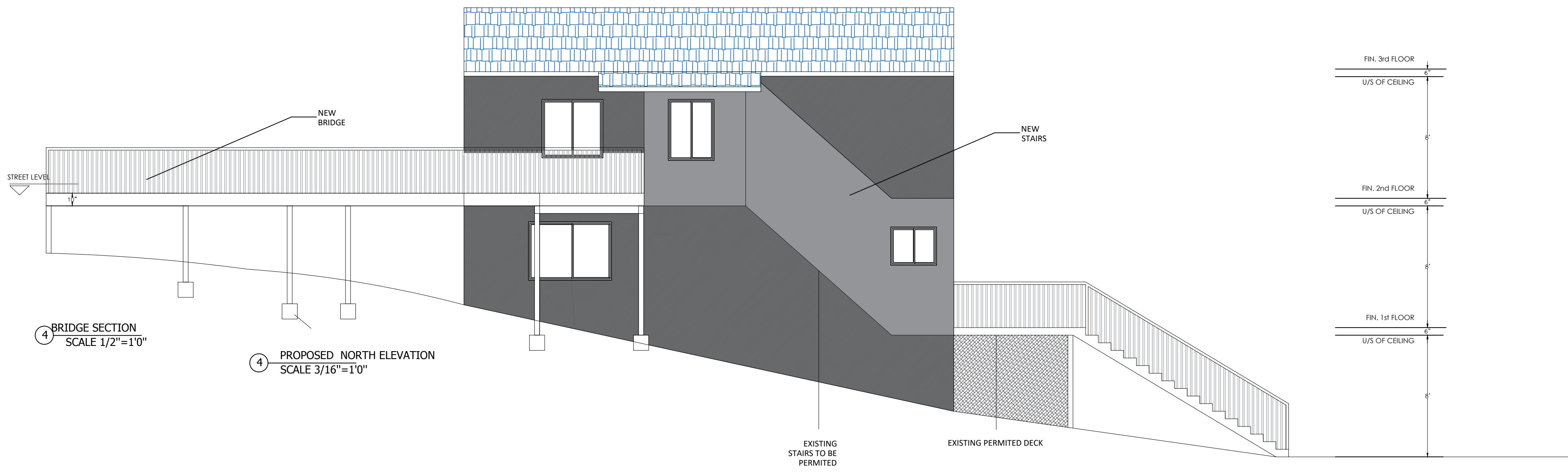
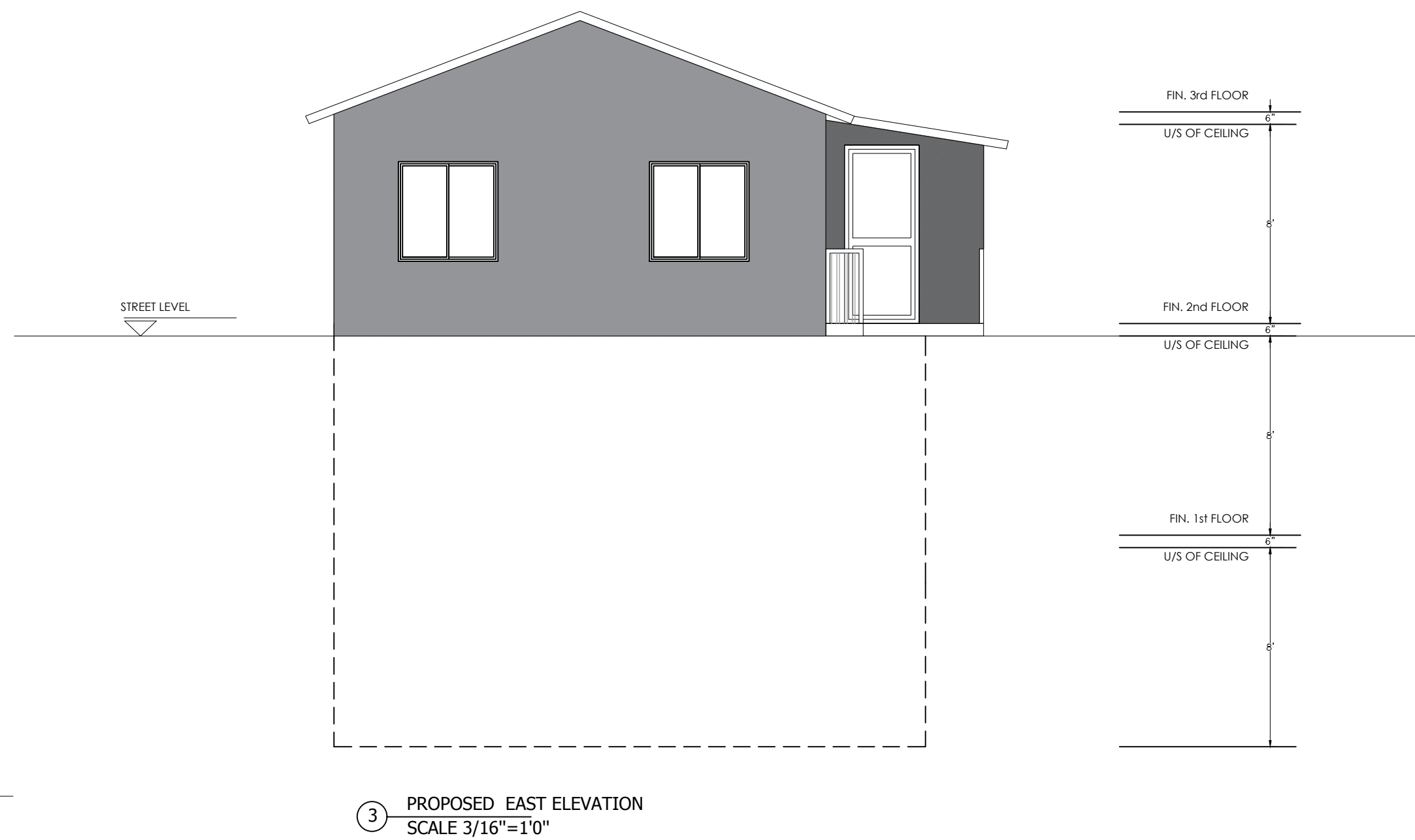
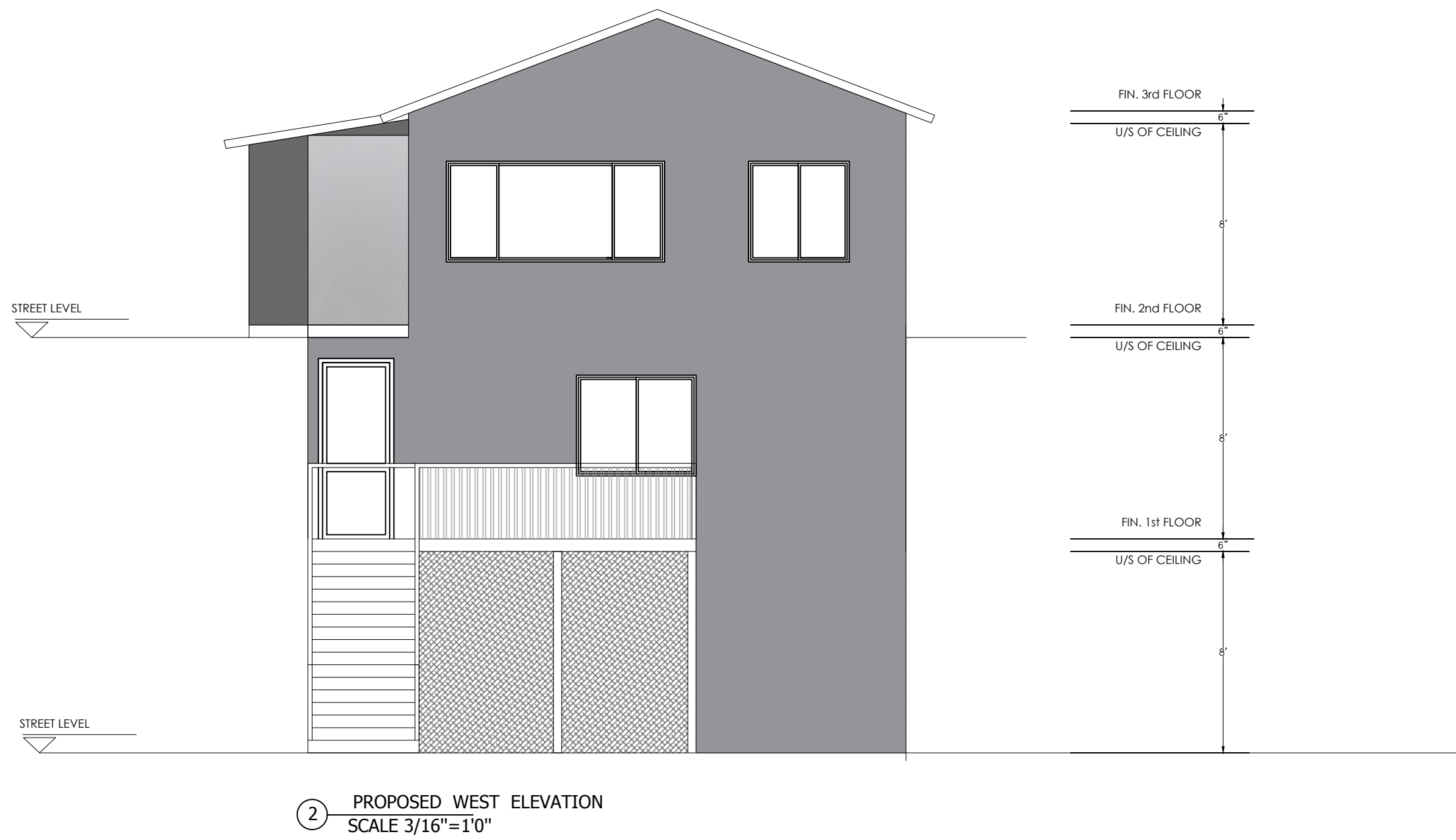
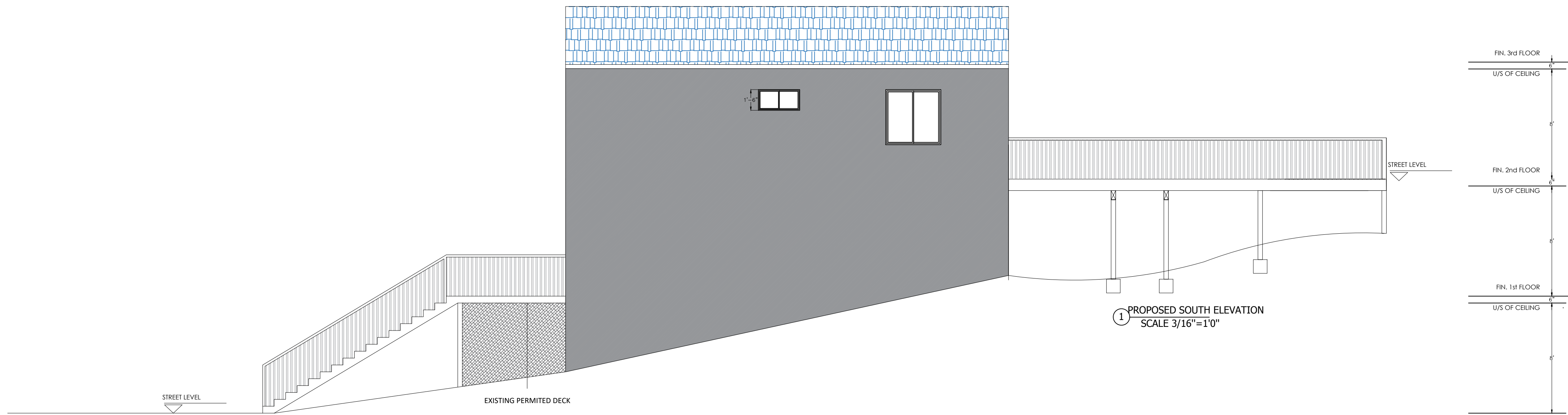
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PREPARED FOR:  
  
648 51st St, San Diego, CA 92114

SHEET TITLE  
EXISTING  
ELEVATIONS

SCALE  
DRAWN BY HE-DM-GA  
CHECKED BY  
START DATE  
JOB NO.

SHEET NUMBER  
A-6



DATE ISSUED  
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PREPARED FOR:  
648 51st St, San Diego, CA 92114

SHEET TITLE  
PROPOSED ELEVATIONS

SCALE  
DRAWN BY HE-DM-GA  
CHECKED BY  
START DATE  
JOB NO.

SHEET NUMBER  
A-6.1

# 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

## RESIDENTIAL MANDATORY MEASURES, SHEET 1 (INCLUDING JANUARY 1, 2020 ERRATA)

| INSPECTOR<br>SIGNOFF | CHAPTER 3<br>GREEN BUILDING<br>SECTION 301 GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | INSPECTOR<br>SIGNOFF | CHAPTER 3<br>GREEN BUILDING<br>SECTION 301 GENERAL | INSPECTOR<br>SIGNOFF | DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE<br>EFFICIENCY | INSPECTOR<br>SIGNOFF | DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE<br>EFFICIENCY |       |                                                     |    |          |    |           |    |                           |   |     |  |                                     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|                      | <p>301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.</p> <p>301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.</p> <p>Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.</p> <p>301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.</p> <p>SECTION 302 MIXED OCCUPANCY BUILDINGS</p> <p>302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.</p> <p>ABBREVIATION DEFINITIONS:</p> <table><tbody><tr><td>HCD</td><td>Department of Housing and Community Development</td></tr><tr><td>BSC</td><td>California Building Standards Commission</td></tr><tr><td>DSA-SS</td><td>Division of the State Architect, Structural Safety</td></tr><tr><td>OSHPD</td><td>Office of Statewide Health Planning and Development</td></tr><tr><td>LR</td><td>Low Rise</td></tr><tr><td>HR</td><td>High Rise</td></tr><tr><td>AA</td><td>Additions and Alterations</td></tr><tr><td>N</td><td>New</td></tr></tbody></table> <p>CHAPTER 4<br/>RESIDENTIAL MANDATORY MEASURES</p> <p>DIVISION 4.1 PLANNING AND DESIGN</p> <p>SECTION 4.102 DEFINITIONS</p> <p>4.102.1 DEFINITIONS</p> <p>The following terms are defined in Chapter 2 (and are included here for reference)</p> <p>FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.</p> <p>WATTLIES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.</p> <p>4.106 SITE DEVELOPMENT</p> <p>4.106.1 GENERAL. Use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.</p> <p>4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.</p> <ol style="list-style-type: none"><li>Retention basins of sufficient size shall be utilized to retain storm water on the site.</li><li>Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.</li><li>Compliance with a lawfully enacted storm water management ordinance.</li></ol> <p>4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:</p> <ol style="list-style-type: none"><li>Swales</li><li>Water collection and disposal systems</li><li>French drains</li><li>Water retention gardens</li><li>Other water measures which keep surface water away from buildings and aid in groundwater recharge.</li></ol> <p>Exception: Additions and alterations not altering the drainage path.</p> <p>4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1 and 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.</p> <p>Exceptions: On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:</p> <ol style="list-style-type: none"><li>Where there is no commercial power supply.</li><li>Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or developer by more than \$400.00 per unit.</li></ol> <p>4.106.4.1 New, one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous if enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.</p> <p>4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE." The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."</p> <p>4.106.4.2 New multifamily dwellings. Where 17 or more multifamily dwelling units are constructed on a building site, 3 percent of the total number of parking spaces provided for all types of parking facilities, but in no case less than one, shall be electric vehicle charging stations (EV spaces) capable of supporting future EVSE. Calculations for the number of EV spaces shall be rounded up to the nearest whole number.</p> <p>Note: Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.</p> <p>4.106.4.2.1 Electric vehicle charging space (EV space) locations. Construction documents shall indicate the location of proposed EV spaces. At least one EV space shall be located in common use areas and available for use by all residents.</p> <p>When EV chargers are installed, EV spaces required by Section 4.106.2.2, Item 3, shall comply with at least one of the following options:</p> <ol style="list-style-type: none"><li>The EV space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.</li><li>The EV space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.</li></ol> | HCD                  | Department of Housing and Community Development    | BSC                  | California Building Standards Commission                      | DSA-SS               | Division of the State Architect, Structural Safety            | OSHPD | Office of Statewide Health Planning and Development | LR | Low Rise | HR | High Rise | AA | Additions and Alterations | N | New |  | <p>4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV space shall be designed to comply with the following:</p> <ol style="list-style-type: none"><li>The minimum length of each EV space shall be 18 feet (5486 mm).</li><li>The minimum width of each EV space shall be 9 feet (2743 mm).</li><li>One in every 25 EV spaces, but not less than one EV space, shall have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).</li></ol> <p>a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.</p> <p>4.106.4.2.3 Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.</p> <p>4.106.4.2.4 Multiple EV spaces required. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway methods(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.</p> <p>4.106.4.2.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.</p> <p>Notes:</p> <ol style="list-style-type: none"><li>The California Department of Transportation adopts and publishes the "California Manual on Uniform Traffic Control Devices (California MUTCD)" to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies &amp; Directives Number 13-01. Website: <a href="http://www.dot.ca.gov/trfaffairs/policy/13-01.pdf">www.dot.ca.gov/trfaffairs/policy/13-01.pdf</a></li><li>See Vehicle Code Section 22511 for EV charging space signage in off-street parking facilities and for use of EV charging spaces.</li><li>The Governor's Office of Planning and Research (OPR) published a "Zero-Emission Vehicle Community Readiness Guidebook" which provides helpful information for local governments, residents and businesses. Website: <a href="http://opr.ca.gov/docs/ZEV_Guidebook.pdf">http://opr.ca.gov/docs/ZEV_Guidebook.pdf</a>.</li></ol> |  | <p>4.304 OUTDOOR WATER USE</p> <p>4.304.1 IRRIGATION CONTROLLERS. Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:</p> <ol style="list-style-type: none"><li>Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.</li><li>Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.</li></ol> <p>Note: More information regarding irrigation controller function and specifications is available from the Irrigation Association.</p> <p>DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY</p> <p>4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE</p> <p>4.406.1 ROOFING. 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.</p> <p>4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING</p> <p>4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.</p> <p>Exceptions:</p> <ol style="list-style-type: none"><li>Excavated soil and land-clearing debris.</li><li>Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.</li><li>The enforcing agency may make exceptions to the requirements of this section when isolated jobsite are located in areas beyond the haul boundaries of the diversion facility.</li></ol> <p>4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.</p> <ol style="list-style-type: none"><li>Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.</li><li>Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).</li><li>Identify diversion facilities where the construction and demolition waste material collected will be taken.</li><li>Identify construction methods employed to reduce the amount of construction and demolition waste generated.</li><li>Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.</li></ol> <p>4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.</p> <p>Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.</p> <p>4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 34 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1.</p> <p>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 lbs./sq.ft. of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1.</p> <p>4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5, Section 4.408.3 or Section 4.408.4.</p> <p>Notes:</p> <ol style="list-style-type: none"><li>Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at <a href="http://www.hcd.ca.gov/CALGreen.html">www.hcd.ca.gov/CALGreen.html</a> may be used to assist in documenting compliance with this section.</li><li>Mixed construction and demolition debris (C &amp; D) processors can be located at the California Department of Resources Recycling and Reuse (CalRecycle).</li></ol> |  | <p>MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g G/g ROG).</p> <p>Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.</p> <p>MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.</p> <p>PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).</p> <p>Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).</p> <p>REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.</p> <p>VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).</p> <p>4.503 FIREPLACES</p> <p>4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indication they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.</p> <p>4.504 POLLUTANT CONTROL</p> <p>4.504.1 COVERING OF DUCT OPENINGS &amp; PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.</p> <p>4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.</p> <p>4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:</p> <ol style="list-style-type: none"><li>Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.</li><li>Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with section 94507.</li></ol> <p>4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.</p> <p>4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of California Code of Regulations, Title 17 commencing with Section 94502; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.</p> <p>4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:</p> <ol style="list-style-type: none"><li>Manufacturer's product specification.</li><li>Field verification of on-site product containers.</li></ol> |
| HCD                  | Department of Housing and Community Development                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE 2019 CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

DATE ISSUED  
1/31/2025

# DATE REVISION BY

DATE ISSUED  
1/31/2025

# DATE REVISION BY

Katlin Endres  
Business Manager  
C 858.589.7900  
C 971.250.4246  
CSLA # 106425  
Service@ECCreativeDesignBuild.com

The contractor shall verify and be responsible for all dimensions and conditions on the job and this office must be notified in writing of any variation from the dimensions and conditions shown by these drawings.

PREPARED FOR:  
648 51st St, San Diego, CA 92114

SHEET TITLE  
CALGREEN BLDG.  
STANDARDS CODE

SCALE  
DRAWN BY HE-DM-GA  
CHECKED BY  
START DATE  
JOB NO.  
SHEET NUMBER  
G-1

# 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

## RESIDENTIAL MANDATORY MEASURES, SHEET 2 (INCLUDING JANUARY 1, 2020 ERRATA)

| INSPECTOR<br>SIGNOFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | INSPECTOR<br>SIGNOFF              | INSPECTOR<br>SIGNOFF | INSPECTOR<br>SIGNOFF                                      |  |          |                   |               |     |             |     |                  |     |         |     |                          |     |       |     |                 |  |               |  |            |     |        |     |                     |     |             |     |       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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-------------------|-----|---------------------------|-----|---------------------------------|-----|----------------------------------|-----|---------------------------|-----|-------------------------|-----|-----------------------------|-----|---------------------|-----|---------------------------|-----|----------------------------------|-----|------------------------------|-----|-------------------|-----|---------------|----|----------------------------|-----|----------|--|-------|-----|--------|-----|-------------------------------------------|-----|--------|-----|--------------------|-----|------------------------|-----|--------------------------|-----|------------------------------|-----|-------------------------|-----|---------------|-----|--------------------|-----|-------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--|-----------------------------------------------------|--|---------|---------------|------------------------------|------|---------------------------------|------|----------------|------|---------------------------|------|---------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------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| <table><thead><tr><th colspan="2">TABLE 4.504.2 - SEALANT VOC LIMIT</th></tr><tr><th colspan="2">(Less Water and Less Exempt Compounds in Grams per Liter)</th></tr><tr><th>SEALANTS</th><th>CURRENT VOC LIMIT</th></tr></thead><tbody><tr><td>ARCHITECTURAL</td><td>250</td></tr><tr><td>MARINE DECK</td><td>760</td></tr><tr><td>NONMEMBRANE ROOF</td><td>300</td></tr><tr><td>ROADWAY</td><td>250</td></tr><tr><td>SINGLE-PLY ROOF MEMBRANE</td><td>450</td></tr><tr><td>OTHER</td><td>420</td></tr><tr><td>SEALANT PRIMERS</td><td></td></tr><tr><td>ARCHITECTURAL</td><td></td></tr><tr><td>  NON-POROUS</td><td>250</td></tr><tr><td>  POROUS</td><td>775</td></tr><tr><td>MODIFIED BITUMINOUS</td><td>600</td></tr><tr><td>MARINE DECK</td><td>760</td></tr><tr><td>OTHER</td><td>750</td></tr></tbody></table> | TABLE 4.504.2 - SEALANT VOC LIMIT |                      | (Less Water and Less Exempt Compounds in Grams per Liter) |  | SEALANTS | CURRENT VOC LIMIT | ARCHITECTURAL | 250 | MARINE DECK | 760 | NONMEMBRANE ROOF | 300 | ROADWAY | 250 | SINGLE-PLY ROOF MEMBRANE | 450 | OTHER | 420 | SEALANT PRIMERS |  | ARCHITECTURAL |  | NON-POROUS | 250 | POROUS | 775 | MODIFIED BITUMINOUS | 600 | MARINE DECK | 760 | OTHER | 750 | <table><thead><tr><th colspan="2">TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS<sup>2,3</sup></th></tr><tr><th colspan="2">GRAMS OF VOC PER LITER OF COATING, LESS WATER &amp; LESS EXEMPT COMPOUNDS</th></tr><tr><th>COATING CATEGORY</th><th>CURRENT VOC LIMIT</th></tr></thead><tbody><tr><td>FLAT COATINGS</td><td>50</td></tr><tr><td>NON-FLAT COATINGS</td><td>100</td></tr><tr><td>NONFLAT-HIGH GLOSS COATINGS</td><td>150</td></tr><tr><td>SPECIALTY COATINGS</td><td></td></tr><tr><td>  ALUMINUM ROOF COATINGS</td><td>400</td></tr><tr><td>  BASEMENT SPECIALTY COATINGS</td><td>400</td></tr><tr><td>  BITUMINOUS ROOF COATINGS</td><td>50</td></tr><tr><td>  BITUMINOUS ROOF PRIMERS</td><td>350</td></tr><tr><td>  BOND BREAKERS</td><td>350</td></tr><tr><td>  CONCRETE CURING COMPOUNDS</td><td>350</td></tr><tr><td>  CONCRETE/MASONRY SEALERS</td><td>100</td></tr><tr><td>  DRIVEWAY SEALERS</td><td>50</td></tr><tr><td>  DRY FOG COATINGS</td><td>150</td></tr><tr><td>  FAUX FINISHING COATINGS</td><td>350</td></tr><tr><td>  FIRE RESISTIVE COATINGS</td><td>350</td></tr><tr><td>  FLOOR COATINGS</td><td>100</td></tr><tr><td>  FORM-RELEASE COMPOUNDS</td><td>250</td></tr><tr><td>  GRAPHIC ARTS COATINGS (SIGN PAINTS)</td><td>500</td></tr><tr><td>  HIGH TEMPERATURE COATINGS</td><td>420</td></tr><tr><td>  INDUSTRIAL MAINTENANCE COATINGS</td><td>250</td></tr><tr><td>  LOW SOLIDS COATINGS<sup>1</sup></td><td>120</td></tr><tr><td>  MAGNESITE CEMENT COATINGS</td><td>450</td></tr><tr><td>  MASTIC TEXTURE COATINGS</td><td>100</td></tr><tr><td>  METALLIC PIGMENTED COATINGS</td><td>500</td></tr><tr><td>  MULTICOLOR COATINGS</td><td>250</td></tr><tr><td>  PRETREATMENT WASH PRIMERS</td><td>420</td></tr><tr><td>  PRIMERS, SEALERS, &amp; UNDERCOATERS</td><td>100</td></tr><tr><td>  REACTIVE PENETRATING SEALERS</td><td>350</td></tr><tr><td>  RECYCLED COATINGS</td><td>250</td></tr><tr><td>  ROOF COATINGS</td><td>50</td></tr><tr><td>  RUST PREVENTATIVE COATINGS</td><td>250</td></tr><tr><td>  SHELLACS</td><td></td></tr><tr><td>  CLEAR</td><td>730</td></tr><tr><td>  OPAQUE</td><td>550</td></tr><tr><td>  SPECIALTY PRIMERS, SEALERS &amp; UNDERCOATERS</td><td>100</td></tr><tr><td>  STAINS</td><td>250</td></tr><tr><td>  STONE CONSOLIDANTS</td><td>450</td></tr><tr><td>  SWIMMING POOL COATINGS</td><td>340</td></tr><tr><td>  TRAFFIC MARKING COATINGS</td><td>100</td></tr><tr><td>  TUB &amp; TILE REFINISH COATINGS</td><td>420</td></tr><tr><td>  WATERPROOFING MEMBRANES</td><td>250</td></tr><tr><td>  WOOD COATINGS</td><td>275</td></tr><tr><td>  WOOD PRESERVATIVES</td><td>350</td></tr><tr><td>  ZINC-RICH PRIMERS</td><td>340</td></tr></tbody></table> <p>1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER &amp; EXEMPT COMPOUNDS</p> <p>2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.</p> <p>3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.</p> | TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS <sup>2,3</sup> |  | GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS |  | COATING CATEGORY | CURRENT VOC LIMIT | FLAT COATINGS | 50 | NON-FLAT COATINGS | 100 | NONFLAT-HIGH GLOSS COATINGS | 150 | SPECIALTY COATINGS |  | ALUMINUM ROOF COATINGS | 400 | BASEMENT SPECIALTY COATINGS | 400 | BITUMINOUS ROOF COATINGS | 50 | BITUMINOUS ROOF PRIMERS | 350 | BOND BREAKERS | 350 | CONCRETE CURING COMPOUNDS | 350 | CONCRETE/MASONRY SEALERS | 100 | DRIVEWAY SEALERS | 50 | DRY FOG COATINGS | 150 | FAUX FINISHING COATINGS | 350 | FIRE RESISTIVE COATINGS | 350 | FLOOR COATINGS | 100 | FORM-RELEASE COMPOUNDS | 250 | GRAPHIC ARTS COATINGS (SIGN PAINTS) | 500 | HIGH TEMPERATURE COATINGS | 420 | INDUSTRIAL MAINTENANCE COATINGS | 250 | LOW SOLIDS COATINGS <sup>1</sup> | 120 | MAGNESITE CEMENT COATINGS | 450 | MASTIC TEXTURE COATINGS | 100 | METALLIC PIGMENTED COATINGS | 500 | MULTICOLOR COATINGS | 250 | PRETREATMENT WASH PRIMERS | 420 | PRIMERS, SEALERS, & UNDERCOATERS | 100 | REACTIVE PENETRATING SEALERS | 350 | RECYCLED COATINGS | 250 | ROOF COATINGS | 50 | RUST PREVENTATIVE COATINGS | 250 | SHELLACS |  | CLEAR | 730 | OPAQUE | 550 | SPECIALTY PRIMERS, SEALERS & UNDERCOATERS | 100 | STAINS | 250 | STONE CONSOLIDANTS | 450 | SWIMMING POOL COATINGS | 340 | TRAFFIC MARKING COATINGS | 100 | TUB & TILE REFINISH COATINGS | 420 | WATERPROOFING MEMBRANES | 250 | WOOD COATINGS | 275 | WOOD PRESERVATIVES | 350 | ZINC-RICH PRIMERS | 340 | <table><thead><tr><th colspan="2">TABLE 4.504.5 - FORMALDEHYDE LIMITS<sup>1</sup></th></tr><tr><th colspan="2">MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION</th></tr><tr><th>PRODUCT</th><th>CURRENT LIMIT</th></tr></thead><tbody><tr><td>HARDWOOD PLYWOOD VENEER CORE</td><td>0.05</td></tr><tr><td>HARDWOOD PLYWOOD COMPOSITE CORE</td><td>0.05</td></tr><tr><td>PARTICLE BOARD</td><td>0.09</td></tr><tr><td>MEDIUM DENSITY FIBERBOARD</td><td>0.11</td></tr><tr><td>THIN MEDIUM DENSITY FIBERBOARD<sup>2</sup></td><td>0.13</td></tr></tbody></table> <p>1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.</p> <p>2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).</p> | TABLE 4.504.5 - FORMALDEHYDE LIMITS <sup>1</sup> |  | MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION |  | PRODUCT | CURRENT LIMIT | HARDWOOD PLYWOOD VENEER CORE | 0.05 | HARDWOOD PLYWOOD COMPOSITE CORE | 0.05 | PARTICLE BOARD | 0.09 | MEDIUM DENSITY FIBERBOARD | 0.11 | THIN MEDIUM DENSITY FIBERBOARD <sup>2</sup> | 0.13 | <h3>CHAPTER 7</h3> <h4>INSTALLER &amp; SPECIAL INSPECTOR QUALIFICATIONS</h4> <h5>702 QUALIFICATIONS</h5> <p>702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:</p> <ol style="list-style-type: none"><li>1. State certified apprenticeship programs.</li><li>2. Public utility training programs.</li><li>3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.</li><li>4. Programs sponsored by manufacturing organizations.</li><li>5. Other programs acceptable to the enforcing agency.</li></ol> <p>702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector.</p> <ol style="list-style-type: none"><li>1. Certification by a national or regional green building program or standard publisher.</li><li>2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.</li><li>3. Successful completion of a third party apprentice training program in the appropriate trade.</li><li>4. Other programs acceptable to the enforcing agency.</li></ol> <p>Notes:</p> <ol style="list-style-type: none"><li>1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.</li><li>2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).</li></ol> <p>[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.</p> <p>Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.</p> <h5>703 VERIFICATIONS</h5> <p>703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.</p> |
| TABLE 4.504.2 - SEALANT VOC LIMIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                   |                      |                                                           |  |          |                   |               |     |             |     |            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| HARDWOOD PLYWOOD COMPOSITE CORE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.05                              |                      |                                                           |  |          |                   |               |     |             |     |            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| PARTICLE BOARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.09                              |                      |                                                           |  |          |                   |               |     |             |     |            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| MEDIUM DENSITY FIBERBOARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.11                              |                      |                                                           |  |          |                   |               |     |             |     |            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| THIN MEDIUM DENSITY FIBERBOARD <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.13                              |                      |                                                           |  |          |                   |               |     |             |     |            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DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE 2019 CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

DATE ISSUED  
1/31/2025

| # | DATE | REVISION | BY |
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The contractor shall verify and be responsible for all dimensions and conditions on the job and this office must be notified in writing of any variation from the dimensions and conditions shown by these drawings.

PREPARED FOR:  
  
648 51st St, San Diego, CA 92114

SHEET TITLE  
CALGREEN BLDG. STANDARDS CODE

SCALE  
DRAWN BY HE-DM-GA  
CHECKED BY  
START DATE  
JOB NO.

SHEET NUMBER  
G-2

| GREEN CODE NOTES:<br><br>A MINIMUM OF 65% OF CONSTRUCTION WASTE IS TO BE RECYCLED. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION WASTE MANAGEMENT PLAN TO THE JURISDICTION AGENCY THAT REGULATES WASTE MANAGEMENT.<br><br>THE BUILDER IS TO PROVIDE AN OPERATION MANUAL FOR (CONTAINING INFORMATION FOR MAINTAINING APPLIANCES, ETC.) FOR THE OWNER AT THE TIME OF FINAL INSPECTION. DURING CONSTRUCTION, ENDS OF DUCT OPENINGS ARE TO BE SEALED, AND MECHANICAL EQUIPMENT IS TO BE COVERED.<br><br>VOC'S MUST COMPLY WITH THE LIMITATIONS LISTED IN SECTION 4.504.3 AND TABLES 4.504.1, 4.504.2, 4.504.3 AND 4.504.5 FOR: ADHESIVES, PAINTS AND COATINGS, CARPET AND COMPOSITION WOOD PRODUCTS. (4.504.2)<br><br>CONCRETE SLABS WILL BE PROVIDED WITH A CAPILLSARY BREAK.<br><br>THE MOISTURE CONTENT OF WOOD SHALL NOT EXCEED 19% BEFORE IT IS ENCLOSED IN CONSTRUCTION. THE MOISTURE CONTENT NEEDS TO BE CERTIFIED BY ONE OF 3 METHODS SPECIFIED IN SECTION 4.505.3. BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHOULD NOT BE USED IN CONSTRUCTION.<br><br>BATHROOM FANS SHALL BE ENERGY STAR RATED, VENTED DIRECTLY TO THE OUTSIDE AND CONTROLLED BY A HUMIDISTAT.<br><br>PRIOR TO FINAL INSPECTION THE LICENSED CONTRACTOR, ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE OF THE OVERALL CONSTRUCTION MUST PROVIDE TO THE BUILDING DEPARTMENT OFFICIAL WRITTEN VERIFICATION THAT ALL APPLICABLE PROVISIONS FROM THE GREEN BUILDING STANDARDS CODE HAVE BEEN IMPLEMENT AS PART OF THE CONSTRUCTION. | <table><tr><th colspan="2">FIXTURE FLOW RATES</th></tr><tr><th>FIXTURE TYPE</th><th>MAXIMUM FLOW RATE</th></tr><tr><td>water closets</td><td>1.28 gallons/flush</td></tr><tr><td>urinals (wall-mounted)</td><td>0.125 gallon/flush</td></tr><tr><td>urinals (others)</td><td>0.5 gallon/flush</td></tr><tr><td>showerheads</td><td>1.8 gpm @ 80psi</td></tr><tr><td>lavatory faucets</td><td>1.2 gpm @ 60 psi</td></tr><tr><td>kitchen faucets</td><td>1.8 gpm @ 60 psi</td></tr><tr><td>metering faucets</td><td>0.25 gallons per cycle</td></tr><tr><td colspan="2">lavatory faucets shall not have a flow rate less than 0.8 gpm at 20 psi</td></tr></table> | FIXTURE FLOW RATES     |  | FIXTURE TYPE | MAXIMUM FLOW RATE | water closets | 1.28 gallons/flush | urinals (wall-mounted) | 0.125 gallon/flush | urinals (others) | 0.5 gallon/flush | showerheads | 1.8 gpm @ 80psi | lavatory faucets | 1.2 gpm @ 60 psi | kitchen faucets | 1.8 gpm @ 60 psi | metering faucets | 0.25 gallons per cycle | lavatory faucets shall not have a flow rate less than 0.8 gpm at 20 psi |  | ADDITIONAL NOTES:<br><br>-"SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS: IN EACH SLEEPING ROOM, OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS. ON EACH ADDITION STORY OF THE DWELLING INCLUDING BASEMENTS AND HABITABLE ATTICS.<br><br>- "WEN MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL SWELLING UNIT THE ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAN THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. THE ALARM SHALL BE CLEARLY AUDIBLE IN ALL BEDROOMS OVER BACKGROUND NOISE LEVELS WITH ALL INTERVENING DOORS CLOSED.<br>EXCEPTION: INTERCONNECTION IS NOT REQUIRED IN EXISTING DWELLING UNITS WHERE ALTERATIONS OR REPAIRS DO NOT RESULT IN THE REMOVAL OF INTERIOR WALLS AND CEILING FINISHES EXPOSING THE STRUCTURE, UNLESS THERE IS AN ATTIC, CRAWL SPACE, OR BASEMENT AVAILABLE WHICH COULD PROVIDE ACCESS FOR INTERCONNECTION WITHOUT THE REMOVAL OF INTERIOR FINISHES.<br><br>- SMOKE ALARMS SHALL BE RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING PROVIDED THAT SUCH WIRING IS SERVED FROM A COMMERCIAL SOURCE AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. SMOKE SHALL EMIT A SIGNAL WHEN THE BATTERIES ARE LOW.<br>EXCEPTION: SMOKE ALARMS ARE PERMITTED TO BE SOLELY BATTERY OPERATED IN EXISTING AREAS OF BUILDING UNDERGOING ALTERATIONS OR REPAIRS, THAT DO NOT RESULT IN THE REMOVAL OF INTERIOR WALLS AND CEILING FINISHES EXPOSING THE STRUCTURE, UNLESS THERE IS AN ATTIC, CRAWL SPACE, OR BASEMENT AVAILABLE WHICH COULD PROVIDE ACCESS FOR INTERCONNECTION WITHOUT THE REMOVAL OF INTERIOR FINISHES.<br><br>- SMOKE ALARMS MUST BE LOCATED A MINIMUM OF THREE FEET FROM AIR REGISTER AND THREE FEET FROM THE TIPS OF CEILING FANS. | ADDITIONAL NOTES:<br><br>-"JOINTS AND OPENINGS, ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS, OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY".<br><br>-" DUCT OPENINGS AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED DURING CONSTRUCTION".<br><br>-"ADHESIVES, SEALANTS AND CAULKS SHALL BE COMPLIANT WITH VOC AND OTHER TOXIC COMPOUND LIMITS".<br><br>-"CARPET AND CARPET SYSTEM SHALL BE COMPLIANT WITH VOC LIMITS. A LETTER FROM THE CONTRACTOR SUBCONTRACTOR AND OR THE BUILDING OWNER CERTIFYING WHAT MATERIAL USED COMPLIES WITH THE ARIZONA GREEN BUILDING CODE".<br><br>-" HARDWOOD PLYWOOD, PARTICLE BOARD, AND MEDIUM DENSITY FIBERBOARD (MDF) COMPOSITE WOOD PRODUCT USED ON THE INTERIOR OR EXTERIOR OF BUILDING SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXIC CONTROL MEASURE FOR COMPOSITE WOOD.<br><br>-"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".<br><br>-"THE MOISTURE CONTENT OF BUILDING MATERIALS USED IN WALL AND FLOOR FRAMING IS CHECKED BEFORE ENCLOSURE. MOISTURE CONTENT SHALL BE VERIFIED BY EITHER A PROBE TYPE OR CONTACT TYPE MOISTURE METER".<br><br>-"EXHAUST FANS WHICH TERMINATE OUTSIDE THE BUILDING ARE PROVIDED IN EVERY BATHROOM THAT CONTAINS A SHOWER AND TUB. 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".<br><br>-"SMOKE ALARMS SHALL BE RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING PROVIDED THAT SUCH WIRING IS SERVED FROM A COMMERCIAL SOURCE AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. SMOKE SHALL EMIT A SIGNAL WHEN THE BATTERIES ARE LOW.<br>EXCEPTION: SMOKE ALARMS ARE PERMITTED TO BE SOLELY BATTERY OPERATED IN EXISTING AREAS OF BUILDING UNDERGOING ALTERATIONS OR REPAIRS, THAT DO NOT RESULT IN THE REMOVAL OF INTERIOR WALLS AND CEILING FINISHES EXPOSING THE STRUCTURE, UNLESS THERE IS AN ATTIC, CRAWL SPACE, OR BASEMENT AVAILABLE WHICH COULD PROVIDE ACCESS FOR INTERCONNECTION WITHOUT THE REMOVAL OF INTERIOR FINISHES.<br><br>- SMOKE ALARMS MUST BE LOCATED A MINIMUM OF THREE FEET FROM AIR REGISTER AND THREE FEET FROM THE TIPS OF CEILING FANS. | ADDITIONAL NOTES:<br><br>-"EXHAUST DUCTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS.<br>-" DRYER VENTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS .<br>-"SCREENS/LOUVERS SHALL NOT BE INSTALLED AT DRYER VENT TERMINATIONS.<br>-" FLEXIBLE CLOTHES DRYER TRANSITION DUCTS SHALL NOT BE CANCELED WITHIN CONSTRUCTION".<br>-" ALL CLOTHES DRYERS INSTALLED FOR MULTIPLE/FAMILY USE SHALL BE EQUIPPED WITH APPROVED SAFETY SHUT-OFF DEVICES AND SHALL BE INSTALLED AS SPECIFIED FOR A TYPE 2 CLOTHES DRYER<br><br>-"CLOTHES DRYER SHALL BE EQUIPPED OR INSTALLED WITH LINT CONTROLLING MEANS".<br><br>-" VENTILATION AIR SHALL COME FROM THE OUTDOOR AND SHALL NOT BE TRANSFERRED FROM ADJACENT DWELLING UNITS, GARAGES OR CRAWLSPACE".<br>-" VENTILATION SYSTEM CONTROLS SHALL BE LABELED AND THE HOME OWNER SHALL BE PROVIDED WITH INSTRUCTIONS ON HOW TO OPERATE THE SYSTEM".<br><br>-" COMBUSTION APPLIANCES SHALL BE PROPERLY VENTED AND AIR SYSTEMS SHALL BE DESIGNED TO PREVENT BACK DRAFTING".<br><br>-" HABITABLE ROOMS SHALL HAVE WINDOWS WITH A VENTILATION AREA OF LEAST 4 PERCENT OF THE FLOOR AREA".<br><br>-"MECHANICAL SYSTEMS INCLUDING HEATING AND AIR CONDITIONING SYSTEMS THAT SUPPLY AIR TO HABITABLE SPACES SHALL HAVE MERV 6 FILTERS OR BETTER".<br><br>-"DEDICATED AIR INLETS (NOT EXHAUST) THAT ARE PART OF THE VENTILATION SYSTEM DESIGN SHALL BE LOCATED AWAY FROM KNOW CONTAMINANTS".<br>-" A CARBON MONOXIDE ALARM SHALL BE INSTALLED IN EACH DWELLING UNIT IN ACCORDANCE WITH NFPA 720".<br>-" AIR MOVING EQUIPMENT USED TO MEET THE WHOLE-BUILDING VENTILATION REQUIREMENT AND LOCAL VENTILATION EXHAUST REQUIREMENT SHALL BE RATED IN TERMS OF AIRFLOW AND SOUND.<br>a)all continuously operating fans shall be rated at maximum of 1.0 sone.<br>b) intermittently operated whole-building ventilation fans shall be rated at a max. of 1.0 sone.<br>c) intermittently operated local exhaust fans shall be rated ata a max of 3.0 sone.<br><br>-"REMOTELY LOCATED AIR MOVING EQUIPMENT (MOUNTED OUTSIDE OF HABITABLE SPACES) USED TO MEET THE WHOLE-BUILDING VENTILATION REQUIREMENT AND THE LOCAL VENTILATION EXHAUST REQUIREMENT NEED NOT MEET SOUND REQUIREMENTS IF THERE IS AT LEAST 4 FT. OF DUCTWORK BETWEEN THE FAN AND THE INTAKE GRILL". | FLOOR PLAN NOTES:<br><br>-EXTERIOR AND INTERIOR DOORS, WOOD MOLDING AT EXTERIOR, JAMB EXTENSIONS FOR CASING AT INTERIOR<br><br>-ALL GLAZING 18" OR ABOVE FLOOR AND WITHIN 24"OF DOOR SWING, SHALL BE TEMPERED GLASS.<br><br>-ALL DOOR INSTALLATIONS SHALL BE IN STRICT COMPLIANCE WITH THE MANUFACTURER'S MOST RECENT INSTALLATION DETAILS AND SPECIFICATIONS.<br><br>-AL WOOD DOORS SHOWN WITH NOMINAL DIMENSIONS. ALL ROUGH OPENINGS SIZES FOR DOOR SHALL BE PROVIDED BY THE DOOR INSTALLER. THE FRAMING CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH INSTALLER'S DIMENSIONS.<br><br>-ALL EXTERIOR DOORS EXCEPT SLIDING GLASS DOORS, SHALL HAVE WOOD THRESHOLDS.<br><br>-SEE PLANS FOR ALL DOORS AND WINDOWS, VERIFY ALL DIMENSIONS IN THE FIELD, ALL WINDOWS TO BE WOOD, DOUBLE GLAZED; ALL SLIDING GLASS DOORS TO BE WOOD, CLEAR, TEMPERED GLAZED; ALL FRENCH DOORS TO BE WOOD, CLEAR, TEMPERED GLAZED, U.N.O.<br><br>-ALL DOORS AND WINDOWS TO BE FULLY FLASHED AND WEATHERSTRIPPED.<br><br>-ALL JOINT PENETRATIONS TO BE CAULKED AND SEALED, GLASS AND FRENCH DOOR TO BE GLASS DOORS TEMPERED, PROVIDE BITUMINOUS PAINT OR #30 FELT WITH SEALANT UNDER SLIDING DOOR SILLS AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS ALL WINDOW FRAMES SILLS TO BE MASTIC. (IFFY SEAL OR EQUAL)<br><br>-HEADS OF ALL DOORS AND WINDOWS TO ALIGN UNLESS NOTED OTHERWISE ON THE PLANS AND EXTERIOR ELEVATIONS.<br><br>-ALL OPERATING WINDOWS WITH HEAD HEIGHTS PLUS 8" ABOVE FINISHED FLOOR TO HAVE REMOVABLE POLE OPERATIONS WITH ALL REQUIRED RELATED HARDWARE, FIELD VERIFY LENGTH OF OPERATORS REQUIRED.<br><br>-ALL EXTERIOR DOORS TO HAVE INTEGRAL DOOR BUTTONS AND WEATHER-STRIPPING UNLESS NOTED OTHERWISE. PROVIDE LOCKING DEVICES AT ALL EXTERIORS DOORS, ALL SOLID CORE AND HOLLOW CORE DOORS TO BE STAIN GRADE (DOUGLAS FIR)<br><br>-BLACK PRIME ALL SURFACES AND EDGES OF UNPAINTED OR UNPRIMED DOORS AND WINDOWS WHEN THEY ARRIVE AT THE JOB SITE AND AGAIN AFTER INSTALLATION TO PREVENT DAMAGE. |
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | FIXTURE TYPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MAXIMUM FLOW RATE      |  |              |                   |               |                    |                        |                    |                  |                  |             |                 |                  |                  |                 |                  |                  |                        |                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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                                                                                                | 1.28 gallons/flush     |  |              |                   |               |                    |                        |                    |                  |                  |             |                 |                  |                  |                 |                  |                  |                        |                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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                                                                                                | 0.125 gallon/flush     |  |              |                   |               |                    |                        |                    |                  |                  |             |                 |                  |                  |                 |                  |                  |                        |                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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                                                                                                | 0.5 gallon/flush       |  |              |                   |               |                    |                        |                    |                  |                  |             |                 |                  |                  |                 |                  |                  |                        |                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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                                                                                                | 1.8 gpm @ 80psi        |  |              |                   |               |                    |                        |                    |                  |                  |             |                 |                  |                  |                 |                  |                  |                        |                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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                                                                                                | 1.2 gpm @ 60 psi       |  |              |                   |               |                    |                        |                    |                  |                  |             |                 |                  |                  |                 |                  |                  |                        |                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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                                                                                                | 1.8 gpm @ 60 psi       |  |              |                   |               |                    |                        |                    |                  |                  |             |                 |                  |                  |                 |                  |                  |                        |                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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                                                                                                | 0.25 gallons per cycle |  |              |                   |               |                    |                        |                    |                  |                  |             |                 |                  |                  |                 |                  |                  |                        |                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| lavatory faucets shall not have a flow rate less than 0.8 gpm at 20 psi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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| PLUMBING NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| -"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".<br><br>-EXISTING "NONCOMPLIANT" FIXTURES (TOILETS THAT USE MORE THAN 1.6 GALLONS OF WATER PER FLUSH, URINALS THAT USE MORE THAN ONE GALLON OF WATER PER FLUSH, SHOWERHEADS THAT HAVE A FLOW CAPACITY OF MORE THAN 2.5 GALLONS OF WATER PER MINUTE, AND INTERIOR FAUCETS THAT EMIT MORE THAN 2.2 GALLONS OF WATER PER MINUTE) SHALL BE REPLACED. CERTIFICATION OF COMPLIANCE SHALL BE GIVEN TO THE BUILDING INSPECTOR PRIOR TO FINAL PERMIT APPROVAL.<br><br>-ALL DOMESTIC HOT WATER PIPING TO HAVE THE FOLLOWING MINIMUM INSULATION INSTALLED:- $\frac{3}{8}$ " PIPE (1/2" INSULATION); $\frac{3}{4}$ " PIPE (1" INSULATION); 1" TO 1"-1/2" PIPE (1-1/2" INSULATION).<br>A) ADDITIONAL, THE $\frac{3}{8}$ " HOT WATER PIPE TO THE KITCHEN SINK, AND THE COLD WATER PIPE WITHING 5' OF THE WATER HEATER BOTH REQUIRE 1" MINIMUM INSULATION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                          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DATE ISSUED  
1/31/2025

# DATE REVISION BY

Kaitlin Endres  
Business Manager  
C 858.588.7900  
C 971.250.4246  
CSLA # 104625  
Service@ECCreativeDesignBuild.com





The contractor shall verify and be responsible for all dimensions and conditions on the job and this office must be notified in writing of any variation from the dimensions and conditions shown by these drawings.

PREPARED FOR:  
  
648 51st St, San Diego, CA 92114

SHEET TITLE  
ADDITIONAL NOTES

SCALE \_\_\_\_\_  
DRAWN BY HE-DM-GA  
CHECKED BY \_\_\_\_\_  
START DATE \_\_\_\_\_  
JOB NO. \_\_\_\_\_

SHEET NUMBER  
N-1



# CIVIL PENALTY NOTICE AND ORDER

**Zoning Designation:** RM-1-1

| <u>Code Section</u>     | <u>Violation Description</u>                                                                                                                                    |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SDMC §129.0202          | When a Building Permit is required: Obtain required permit(s) to remove or keep unpermitted work; complete all required inspections.                            |
| SDMC §129.0111          | General Rules for construction permit inspections: Successfully complete all required inspections in a timely manner.                                           |
| SDMC §129.0402          | When a Plumbing/Mechanical Permit is Required.                                                                                                                  |
| SDMC §129.0302          | When an Electrical Permit is required.                                                                                                                          |
| SDMC §121.0202-121.0203 | Provides the authority regarding enforcement of the Land Development Code.                                                                                      |
| SDMC §121.0302          | Requires compliance with the Land Development Code, specifies these violations are not permitted, and provides authority for the abatement of public nuisances. |

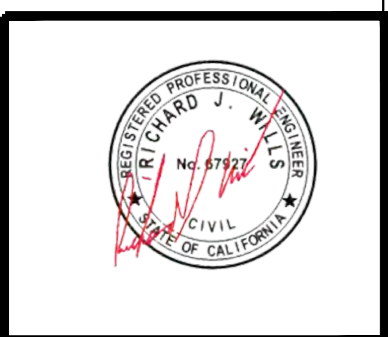
If you fail to comply with the Notice and Order, written notice of the time and place of an administrative enforcement hearing will be served on you at least 10 calendar days prior to the date of the hearing in accordance with SDMC §12.0403. At the hearing, you may present evidence concerning the existence of the violation(s) and whether the amount of administrative civil penalties assessed was reasonable in accordance with SDMC §12.0808.

CED# 0522095\_648 51<sup>st</sup> St.\_ced105\_DSM

**Kaitlin Endres**  
Business Manager

**O:** 858-588-7900  
**C:** 971-230-4246

**CSLB # 1084625**  
Service@ECCreativeDesignBuild.com



The contractor shall verify and be responsible for all dimensions and conditions on the job and this office must be notified in writing of any variation from the dimensions and conditions shown by these drawings.

648 51st St, San Diego, CA 92114

SHEET NUMBER

C-1

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD  
Project Name: 648 51ST STREET 2 STORY ADDITION  
Calculation Description: TITLE 24 COMPLIANCE

Calculation Date/Time: 2024-08-08T16:54:52-07:00

Input File Name: 648 51ST STREET 2 STORY ADDITION (AA2).ribd22

CF1R-PRF-01-E

(Page 7 of 9)

| 01          | 02                        | 03                 | 04                      | 05                 | 06                      | 07              | 08                | 09                       |
|-------------|---------------------------|--------------------|-------------------------|--------------------|-------------------------|-----------------|-------------------|--------------------------|
| Name        | System Type               | Heating Unit Name  | Heating Equipment Count | Cooling Unit Name  | Cooling Equipment Count | Fan Name        | Distribution Name | Required Thermostat Type |
| HVAC System | Heat pump heating cooling | Heat Pump System 1 | 2                       | Heat Pump System 1 | 2                       | HVAC Fan System | n/a               | Setback                  |

| 01                 | 02                    | 03              | 04                      | 05               | 06     | 07     | 08                      | 09          | 10              | 11                 | 12              | 13                             |
|--------------------|-----------------------|-----------------|-------------------------|------------------|--------|--------|-------------------------|-------------|-----------------|--------------------|-----------------|--------------------------------|
| Name               | System Type           | Number of Units | Heating Efficiency Type | HSPF/HIS FPI/COP | Cap 47 | Cap 17 | Cooling Efficiency Type | SEER/SE ER2 | EER/EEER 2/CEER | Zonally Controlled | Compressor Type | HERS Verification              |
| Heat Pump System 1 | Ductless MiniSplit HP | 2               | HSPF                    | 8.2              | 18000  | 18000  | ERSEER                  | 14          | 11              | Not Zonal          | Single Speed    | Heat Pump System 1-hera-hrpump |

| 01                             | 02               | 03             | 04                 | 05                  | 06                          | 07                   | 08                      | 09                      |
|--------------------------------|------------------|----------------|--------------------|---------------------|-----------------------------|----------------------|-------------------------|-------------------------|
| Name                           | Verified Airflow | Airflow Target | Verified EER/EEER2 | Verified SEER/SEER2 | Verified Refrigerant Charge | Verified HSPF/HISPF2 | Verified Heating Cap 47 | Verified Heating Cap 17 |
| Heat Pump System 1-hera-hrpump | Not Required     | 0              | Not Required       | Not Required        | No                          | No                   | Yes                     | Yes                     |

| 01              | 02       | 03                    | 04                        |
|-----------------|----------|-----------------------|---------------------------|
| Name            | Type     | Fan Power (Watts/CFM) | Name                      |
| HVAC Fan System | HVAC Fan | 0.35                  | HVAC Fan System -hera-fan |

Registration Number: 424-P010165891A-000-000-0000000-0000  
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CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 08/09/2024 10:23

Report Version: 2022.0.000

Schema Version: rev 20220901

HERS Provider: CHEERS

Report Generated: 2024-08-08 16:55:08

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD  
Project Name: 648 51ST STREET 2 STORY ADDITION  
Calculation Description: TITLE 24 COMPLIANCE

Calculation Date/Time: 2024-08-08T16:54:52-07:00

Input File Name: 648 51ST STREET 2 STORY ADDITION (AA2).ribd22

CF1R-PRF-01-E

(Page 8 of 9)

| 01                        | 02                     | 03                                |
|---------------------------|------------------------|-----------------------------------|
| Name                      | Verified Fan Watt Draw | Required Fan Efficacy (Watts/CFM) |
| HVAC Fan System -hera-fan | Not Required           | 0                                 |

Registration Number: 424-P010165891A-000-000-0000000-0000  
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CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 08/09/2024 10:23

Report Version: 2022.0.000

Schema Version: rev 20220901

HERS Provider: CHEERS

Report Generated: 2024-08-08 16:55:08

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD  
Project Name: 648 51ST STREET 2 STORY ADDITION  
Calculation Description: TITLE 24 COMPLIANCE

Calculation Date/Time: 2024-08-08T16:54:52-07:00

Input File Name: 648 51ST STREET 2 STORY ADDITION (AA2).ribd22

CF1R-PRF-01-E

(Page 9 of 9)

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Lawrence Gordon

Signature Date: 08/09/2024

Address: 1207 w. 112th street

City/State/Zip: los angeles, CA 90044

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
- I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Lawrence Gordon

Signature Date: 08/09/2024

Address: 1207 w. 112th street

City/State/Zip: los angeles, CA 90044

Digitally signed by California Home Energy Efficiency Rating Services (CHERS). This digital signature is provided in order to assure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

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CF1R-PRF-01-E

(Page 4 of 9)

| 01                      | 02       | 03                    | 04      | 05          | 06                            | 07                                      | 08         | 09              | 10     |
|-------------------------|----------|-----------------------|---------|-------------|-------------------------------|-----------------------------------------|------------|-----------------|--------|
| Name                    | Zone     | Construction          | Azimuth | Orientation | Gross Area (ft <sup>2</sup> ) | Window and Door Area (ft <sup>2</sup> ) | Tilt (deg) | Wall Exceptions | Status |
| RIGHT EXTERIOR WALL 1   | ADDITION | R-15 Wall Stucco      | 0       | Right       | 286.048                       | 12                                      | 90         | Extension       | New    |
| REAR EXTERIOR WALL 1    | ADDITION | R-15 Wall Stucco      | 270     | Back        | 578.68                        | 20                                      | 90         | Extension       | New    |
| LEFT Interior Wall 1    | ADDITION | Interior RD           | n/a     | n/a         | 286.048                       | 0                                       | n/a        |                 | New    |
| Floor Over Crawlspace 1 | ADDITION | (N) R-19 RAISED FLOOR | n/a     | n/a         | 89                            | n/a                                     | n/a        |                 | New    |

| 01                      | 02       | 03                | 04      | 05          | 06                      | 07                               | 08                  | 09               | 10             | 11        |
|-------------------------|----------|-------------------|---------|-------------|-------------------------|----------------------------------|---------------------|------------------|----------------|-----------|
| Name                    | Zone     | Construction      | Azimuth | Orientation | Area (ft <sup>2</sup> ) | Skylight Area (ft <sup>2</sup> ) | Roof Rise (x in 12) | Roof Reflectance | Roof Emittance | Cool Roof |
| RIGHT VAULTED Ceiling 1 | ADDITION | R-30 VAULTED ROOF | 0       | Right       | 39.46                   | 0                                | 4                   | 0.25             | 0.85           | Yes       |
| LEFT VAULTED Ceiling 1  | ADDITION | R-30 VAULTED ROOF | 270     | Back        | 48.97                   | 0                                | 8                   | 0.1              | 0.85           | No        |

| 01       | 02     | 03                    | 04          | 05      | 06         | 07          | 08    | 09                      | 10       | 11              | 12   | 13          | 14               |
|----------|--------|-----------------------|-------------|---------|------------|-------------|-------|-------------------------|----------|-----------------|------|-------------|------------------|
| Name     | Type   | Surface               | Orientation | Azimuth | Width (ft) | Height (ft) | Mult. | Area (ft <sup>2</sup> ) | U-factor | U-factor Source | SHGC | SHGC Source | Exterior Shading |
| Window B | Window | RIGHT EXTERIOR WALL 1 | Right       | 0       | 3          | 4           | 1     | 12                      | 0.3      | NFRC            | 0.23 | NFRC        | Bug Screen       |

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CF1R-PRF-01-E

(Page 5 of 9)

| 01         | 02                    | 03                      | 04       |
|------------|-----------------------|-------------------------|----------|
| Name       | Side of Building      | Area (ft <sup>2</sup> ) | U-factor |
| Door D2(1) | FRONT EXTERIOR WALL 1 | 20                      | 0.2      |
| Door D2(2) | REAR EXTERIOR WALL 1  | 20                      | 0.2      |

| 01                    | 02                     | 03                  | 04                  | 05                   | 06                                     | 07       | 08                                                                                                                                          |
|-----------------------|------------------------|---------------------|---------------------|----------------------|----------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Construction Name     | Surface Type           | Construction Type   | Framing             | Total Cavity R-value | Interior / Exterior Continuous R-value | U-factor | Assembly Layers                                                                                                                             |
| R-15 Wall Stucco      | Exterior Walls         | Wood Framed Wall    | 2x4 @ 16 in. O. C.  | R-15                 | None / None                            | 0.087    | Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Sheathing / Insulation: Wood Siding/sheathing/decking Exterior Finish: 3 Coat Stucco |
| R-30 VAULTED ROOF     | Cathedral Ceilings     | Wood Framed Ceiling | 2x10 @ 16 in. O. C. | R-30                 | None / None                            | 0.037    | Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x10 Inside Finish: Gypsum Board      |
| Interior RD           | Interior Walls         | Wood Framed Wall    | 2x4 @ 16 in. O. C.  | R-0                  | None / None                            | 0.277    | Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board                                                 |
| (N) R-19 RAISED FLOOR | Floors Over Crawlspace | Wood Framed Floor   | 2x6 @ 16 in. O. C.  | R-19                 | None / None                            | 0.049    | Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x6                                                |

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CF1R-PRF-01-E

(Page 6 of 9)

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

| 01            | 02                       | 03                | 04                       | 05              | 06                   | 07                   | 08                | 09                           |
|---------------|--------------------------|-------------------|--------------------------|-----------------|----------------------|----------------------|-------------------|------------------------------|
| Name          | System Type              | Distribution Type | Water Heater Name        | Number of Units | Solar Heating System | Compact Distribution | HERS Verification | Water Heater Name (ft)       |
| Ex DHW System | Domestic Hot Water (DHW) | Standard          | EX Tankless Water Heater | 1               | n/a                  | None                 | n/a               | EX Tankless Water Heater (1) |

| 01                       | 02              | 03             | 04         | 05              | 06                      | 07         | 08               | 09                    | 10                                | 11                           | 12                          | 13            |
|--------------------------|-----------------|----------------|------------|-----------------|-------------------------|------------|------------------|-----------------------|-----------------------------------|------------------------------|-----------------------------|---------------|
| Name                     | Heating Element | Tank Type      | # of Units | Tank Vol. (gal) | Heating Efficiency Type | Efficiency | Rated Input Type | Input Rating or Pilot | Tank Insulation R-value (Int/Ext) | Standby Loss or Recovery Eff | 1st Hr. Rating or Flow Rate | Tank Location |
| EX Tankless Water Heater | Gas             | Instantaneo us | 1          | 0               | EF                      | 0.82       | Btu/Hr           | 200000                | 0                                 | 70                           | n/a                         |               |

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

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CF1R-PRF-01-E

(Page 1 of 9)

| GENERAL INFORMATION |                                              |  |                                  |  |  |  |  |  |  |    |                                   |  |                    |  |  |  |  |  |  |  |  |
|---------------------|----------------------------------------------|--|----------------------------------|--|--|--|--|--|--|----|-----------------------------------|--|--------------------|--|--|--|--|--|--|--|--|
| 01                  | Project Name                                 |  | 648 51ST STREET 2 STORY ADDITION |  |  |  |  |  |  |    |                                   |  |                    |  |  |  |  |  |  |  |  |
| 02                  | Run Title                                    |  | TITLE 24 COMPLIANCE              |  |  |  |  |  |  |    |                                   |  |                    |  |  |  |  |  |  |  |  |
| 03                  | Project Location                             |  | 648 51ST STREET                  |  |  |  |  |  |  |    |                                   |  |                    |  |  |  |  |  |  |  |  |
| 04                  | City                                         |  | SAN DIEGO, CA                    |  |  |  |  |  |  | 05 | Standards Version                 |  | 2022               |  |  |  |  |  |  |  |  |
| 06                  | Zip code                                     |  | 92114                            |  |  |  |  |  |  | 07 | Software Version                  |  | CBECC-Res 2022.3.1 |  |  |  |  |  |  |  |  |
| 08                  | Climate Zone                                 |  | 7                                |  |  |  |  |  |  | 09 | Front Orientation (deg/ Cardinal) |  | 90                 |  |  |  |  |  |  |  |  |
| 10                  | Building Type                                |  | Single family                    |  |  |  |  |  |  | 11 | Number of Dwelling Units          |  | 1                  |  |  |  |  |  |  |  |  |
| 12                  | Project Scope                                |  | Newly Constructed Addition       |  |  |  |  |  |  | 13 | Number of Bedrooms                |  | 3                  |  |  |  |  |  |  |  |  |
| 14                  | Addition Cond. Floor Area (ft <sup>2</sup> ) |  | 140                              |  |  |  |  |  |  | 15 | Number of Stories                 |  | 2                  |  |  |  |  |  |  |  |  |
| 16                  | Existing Cond. Floor Area (ft <sup>2</sup> ) |  | 1296                             |  |  |  |  |  |  | 17 | Fenestration Average U-factor     |  | 0.3                |  |  |  |  |  |  |  |  |
| 18                  | Total Cond. Floor Area (ft <sup>2</sup> )    |  | 1436                             |  |  |  |  |  |  | 19 | Glazing Percentage (%)            |  | 8.57%              |  |  |  |  |  |  |  |  |
| 20                  | ADU Bedroom Count                            |  | n/a                              |  |  |  |  |  |  | 21 | ADU Conditioned Floor Area        |  | n/a                |  |  |  |  |  |  |  |  |
| 22                  | Fuel Type                                    |  | Natural gas                      |  |  |  |  |  |  | 23 | No Dwelling Unit:                 |  | No                 |  |  |  |  |  |  |  |  |

| ADDITION ALONE - Project Analysis Parameters |                                      |                  |                   |                   |                |
|----------------------------------------------|--------------------------------------|------------------|-------------------|-------------------|----------------|
| 01                                           | 02                                   | 03               | 04                | 05                | 06             |
| Existing Area (excl. new addition) (ft2)     | Addition Area (excl. existing) (ft2) | Total Area (ft2) | Existing Bedrooms | Addition Bedrooms | Total Bedrooms |
| 1296                                         | 140                                  | 1436             | 3                 | 0                 | 3              |

| 01                                          | 02  | 03                                                                                                                                                                  | 04  | 05                                                                  | 06  |
|---------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------|-----|
| Building Complies with Computer Performance | Yes | This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider. | Yes | This building incorporates one or more Special Features shown below | Yes |

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CF1R-PRF-01-E

(Page 2 of 9)

| Energy Use                          | Standard Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr) | Standard Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr) | Proposed Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr) | Proposed Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr) | Compliance Margin (EDR1) | Compliance Margin (EDR2) |
|-------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------|--------------------------|--------------------------|
| Space Heating                       | 0                                                               | 4.32                                                         | 0                                                               | 7.48                                                         | 0                        | -3.16                    |
| Space Cooling                       | 0                                                               | 42.05                                                        | 0                                                               | 38.1                                                         | 0                        | 3.95                     |
| IAQ Ventilation                     | 0                                                               | 0                                                            | 0                                                               | 0                                                            | 0                        | 0                        |
| Water Heating                       | 0                                                               | 171.82                                                       | 0                                                               | 171.82                                                       | 0                        | 0                        |
| Self Utilization/Flexibility Credit | 0                                                               | 0                                                            | 0                                                               | 0                                                            | 0                        | 0                        |
| Efficiency Compliance Total         | 0                                                               | 218.19                                                       | 0                                                               | 217.4                                                        | 0                        | 0.79                     |
| Photovoltaics                       | 0                                                               | 0                                                            | 0                                                               | 0                                                            | 0                        | 0                        |
| Battery                             | 0                                                               | 0                                                            | 0                                                               | 0                                                            | 0                        | 0                        |
| Flexibility                         | 0                                                               | 0                                                            | 0                                                               | 0                                                            | 0                        | 0                        |
| Indoor Lighting                     | 0                                                               | 7.88                                                         | 0                                                               | 7.88                                                         | 0                        | 0                        |
| Appl. & Cooking                     | 0                                                               | 133.88                                                       | 0                                                               | 132.86                                                       | 0                        | 1.02                     |
| Plug Loads                          | 0                                                               | 201.74                                                       | 0                                                               | 201.74                                                       | 0                        | 0                        |
| Outdoor Lighting                    | 0                                                               | 18.71                                                        | 0                                                               | 18.71                                                        | 0                        | 0                        |
| TOTAL COMPLIANCE                    | 0                                                               | 580.4                                                        | 0                                                               | 578.59                                                       | 0                        | 1.81                     |

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(Page 3 of 9)

| Energy Use Intensity | Standard Design (kBtu/ft <sup>2</sup> -yr) | Proposed Design (kBtu/ft <sup>2</sup> -yr) | Compliance Margin (kBtu/ft <sup>2</sup> -yr) | Margin Percentage |
|----------------------|--------------------------------------------|--------------------------------------------|----------------------------------------------|-------------------|
| Gross EU1            | 100.43                                     | 100.04                                     | 0.39                                         | 0.39              |
| Net EU2              | 100.43                                     | 100.04                                     | 0.39                                         | 0.39              |

Notes  
1.



2022 Single-Family Residential Mandatory Requirements Summary

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| § 150.0(i)(3): | <b>Space Conditioning System Airflow Rate and Fan Efficacy.</b> Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.50 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. * |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ventilation and Indoor Air Quality:

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| § 150.0(i):       | <b>Requirements for Ventilation and Indoor Air Quality.</b> All dwelling units must meet the requirements of ASHRAE Standard 62.2, <i>Ventilation and Acceptable Indoor Air Quality</i> in Residential Buildings subject to the amendments specified in § 150.0(i)1. *                                                                                                                                                                                                                                                                                                                     |
| § 150.0(i)(8):    | <b>Central Fan Integrated (CFI) Ventilation Systems.</b> Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(i)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed and/or controlled per §150.0(i)(8)(i)(v). CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(i)1C. |
| § 150.0(i)(1):    | <b>Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses.</b> Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(i)1C-iii.                                                                                                                                                                                                                                  |
| § 150.0(i)(1)(G): | <b>Local Mechanical Exhaust.</b> Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(i)(1)(ii) enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(i)(1)(ii)-iv. Airflow must be measured by the installer per §150.0(i)(1)(G), and rated for sound per §150.0(i)(1)(G)-v. *                                                                                                                                                              |
| § 150.0(i)(1)(H): | <b>Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.</b> The airflow required per § 150.0(i)(1)(C) must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(i)(1)(C).                                                                                                                 |
| § 150.0(i)(2):    | <b>Field Verification and Diagnostic Testing.</b> Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound ratings, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(i)(1)(G).                                                                                                                                      |

Pool and Spa Systems and Equipment:

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| § 110.4(a):    | <b>Certification by Manufacturers.</b> Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. * |
| § 110.4(b)(1): | <b>Piping.</b> Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.                                                                                                                                                                                                   |
| § 110.4(b)(2): | <b>Covers.</b> Outdoor pools or spas that have a heat pump or gas heater must have a cover.                                                                                                                                                                                                                                                                                                                                                                     |
| § 110.4(b)(3): | <b>Directional Inlets and Time Switches for Pools.</b> Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.                                                                                                                                                                                                          |
| § 110.5:       | <b>Pilot Light.</b> Natural gas pool and spa heaters must not have a continuously burning pilot light.                                                                                                                                                                                                                                                                                                                                                          |
| § 150.0(p):    | <b>Pool Systems and Equipment Installation.</b> Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *                                                                                                                                                                                                                                                                           |

Lighting:

|                 |                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| § 110.9:        | <b>Lighting Controls and Components.</b> All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *                                                                                                                                                                                                     |
| § 150.0(k)(1A): | <b>Luminaire Efficacy.</b> All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt. |
| § 150.0(k)(1B): | <b>Screw based luminaires.</b> Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *                                                                                                                                                                                                                                           |
| § 150.0(k)(1C): | <b>Recessed Downlight Luminaires in Ceilings.</b> Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.                                                                                                                       |
| § 150.0(k)(1D): | <b>Light Sources in Enclosed or Recessed Luminaires.</b> Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.                                                                                                   |
| § 150.0(k)(1E): | <b>Blank Electrical Boxes.</b> The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.                                          |
| § 150.0(k)(1F): | <b>Lighting Integral to Exhaust Fans.</b> Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).                                                                                                                                                               |

5/6/22



2022 Single-Family Residential Mandatory Requirements Summary

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

Building Envelope:

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| § 110.6(a)(1): | <b>Air Leakage.</b> Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AIAA/WDMA/CSA 1011.S.2/A440-2011. *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| § 110.6(a)(5): | <b>Labeling.</b> Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| § 110.6(b):    | <b>Field fabricated exterior doors and fenestration products</b> must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| § 110.7:       | <b>Air Leakage.</b> All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| § 110.8(a):    | <b>Insulation Certification by Manufacturers.</b> Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| § 110.8(g):    | <b>Insulation Requirements for Heated Slab Floors.</b> Heated slab floors must be insulated per the requirements of § 110.8(g).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| § 110.8(i):    | <b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CFI-R.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| § 110.8(j):    | <b>Radiant Barrier.</b> When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| § 150.0(a):    | <b>Roof Deck, Ceiling and Rafter Roof Insulation.</b> Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling, or area-weighted average U-factor must not exceed 0.04. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling. |
| § 150.0(b):    | <b>Loose-fill Insulation.</b> Loose fill insulation must meet the manufacturer's required density for the labeled R-value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| § 150.0(c):    | <b>Wall Insulation.</b> Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| § 150.0(d):    | <b>Raised-floor Insulation.</b> Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| § 150.0(f):    | <b>Slab Edge Insulation.</b> Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).                                                                                                                                                                                                                                                                                                                                                                                                                            |
| § 150.0(g)(1): | <b>Vapor Retarder.</b> In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| § 150.0(g)(2): | <b>Vapor Retarder.</b> In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| § 150.0(q):    | <b>Fenestration Products.</b> Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45, or area-weighted average U-factor of all fenestration must not exceed 0.45.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

Fireplaces, Decorative Gas Appliances, and Gas Log:

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| § 110.5(e):    | <b>Pilot Light.</b> Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.                                                                                                                                                                |
| § 150.0(e)(1): | <b>Closable Doors.</b> Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.                                                                                                                         |
| § 150.0(e)(2): | <b>Combustion Intake.</b> Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and light-tighting damper or combustion-air control device. * |
| § 150.0(e)(3): | <b>Flue Damper.</b> Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *                                                                                                                                                    |

Space Conditioning, Water Heating, and Plumbing System:

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| § 110.0-§ 110.3: | <b>Certification.</b> Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.                                                                                                                                                                                                                                                                               |
| § 110.2(a):      | <b>HVAC Efficiency.</b> Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *                                                                                                                                                                                                                                                                                                                                                                                        |
| § 110.2(b):      | <b>Controls for Heat Pumps with Supplementary Electric Resistance Heaters.</b> Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating. |
| § 110.2(c):      | <b>Thermostats.</b> All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *                                                                                                                                                                                                                                                                                                                                                            |
| § 110.3(c)(3):   | <b>Insulation.</b> Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.                                                                                                                                                                                                                                                                                                                                                 |
| § 110.3(c)(6):   | <b>Isolation Valves.</b> Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.                                                                                                                                                                                                                                    |

5/6/22



2022 Single-Family Residential Mandatory Requirements Summary

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| § 150.0(k)(1)(G): | <b>Screw based luminaires.</b> Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *                                                                                                                                                                                                                                                                                                                                                                           |
| § 150.0(k)(1)(H): | <b>Light Sources in Enclosed or Recessed Luminaires.</b> Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.                                                                                                                                                                                                                                   |
| § 150.0(k)(1)(I): | <b>Light Sources in Drawers, Cabinets, and Linen Closets.</b> Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.                                                      |
| § 150.0(k)(2A):   | <b>Interior Switches and Controls.</b> All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.                                                                                                                                                                                                                                                                                                                                                                      |
| § 150.0(k)(2B):   | <b>Interior Switches and Controls.</b> Exhaust fans must be controlled separately from lighting systems. *                                                                                                                                                                                                                                                                                                                                                                                          |
| § 150.0(k)(2A):   | <b>Accessible Controls.</b> Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *                                                                                                                                                                                                                                                                                                                                                 |
| § 150.0(k)(2B):   | <b>Multiple Controls.</b> Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).                                                                                                                                                                                                                                                                                                                            |
| § 150.0(k)(2C):   | <b>Mandatory Requirements.</b> Lighting controls must comply with the applicable requirements of § 110.9.                                                                                                                                                                                                                                                                                                                                                                                           |
| § 150.0(k)(2D):   | <b>Energy Management Control Systems.</b> An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)(2A).                                                                                                                                                                                                           |
| § 150.0(k)(2E):   | <b>Automatic Shutoff Controls.</b> In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.                                                                                                             |
| § 150.0(k)(2F):   | <b>Dimmers.</b> Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.                                                                                                                                                               |
| § 150.0(k)(2K):   | <b>Independent controls.</b> Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.                                                                                                                                                                                                                             |
| § 150.0(k)(3A):   | <b>Residential Outdoor Lighting.</b> For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements. |
| § 150.0(k)(4):    | <b>Internally illuminated address signs.</b> Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.                                                                                                                                                                                                                                                                                                                                         |
| § 150.0(k)(5):    | <b>Residential Garages for Eight or More Vehicles.</b> Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.                                                                                                                                                                                                                                              |

Solar Readiness:

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| § 110.10(a)(1):  | <b>Single-family Residences.</b> Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed must comply with the requirements of § 110.10(b)(1).                                                                                                                                                                                                                                                                                                                                                                                                                |
| § 110.10(b)(1A): | <b>Minimum Solar Zone Area.</b> The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. * |
| § 110.10(b)(2):  | <b>Azimuth.</b> All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| § 110.10(b)(3A): | <b>Shading.</b> The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| § 110.10(b)(3B): | <b>Shading.</b> Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| § 110.10(b)(4):  | <b>Structural Design Loads on Construction Documents.</b> For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| § 110.10(c):     | <b>Interconnection Pathways.</b> The construction documents must indicate a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.                                                                                                                                                                                                                                                                                                                                                                 |
| § 110.10(d):     | <b>Documentation.</b> A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| § 110.10(e)(1):  | <b>Main Electrical Service Panel.</b> The main electrical service panel must have a minimum busbar rating of 200 amps.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| § 110.10(e)(2):  | <b>Main Electrical Service Panel.</b> The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Electric and Energy Storage Ready:

5/6/22



2022 Single-Family Residential Mandatory Requirements Summary

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| § 110.5:        | <b>Pilot Lights.</b> Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters. *                                                                                                                                                                                                                                                                                |
| § 150.0(h)(1):  | <b>Building Cooling and Heating Loads.</b> Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)(2).                                                                                                                                                                                                                                             |
| § 150.0(h)(3A): | <b>Cleanances.</b> Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| § 150.0(h)(3B): | <b>Liquid Line Drier.</b> Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.                                                                                                                                                                                                                                                                                                                                                                                                           |
| § 150.0(j):     | <b>Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.</b> All domestic hot water piping must be insulated as specified in § 608.11 of the California Plumbing Code. *                                                                                                                                                                                                                                                                                                                                                                       |
| § 150.0(j)(2):  | <b>Insulation Protection.</b> Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by §120.3(i). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve. |
| § 150.0(n)(1):  | <b>Gas or Propane Water Heating Systems.</b> Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater.                                                                                                                         |
| § 150.0(n)(3):  | <b>Solar Water-heating Systems.</b> Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.                                                                                                                                                                                                                                            |

Ducts and Fans:

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| § 110.8(d)(3):  | <b>Ducts.</b> Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| § 150.0(m)(1):  | <b>CMC Compliance.</b> All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than 1/4", if mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. * |
| § 150.0(m)(2):  | <b>Factory-Fabricated Duct Systems.</b> Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| § 150.0(m)(3):  | <b>Field-Fabricated Duct Systems.</b> Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| § 150.0(m)(7):  | <b>Backdraft Damper.</b> Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| § 150.0(m)(8):  | <b>Gravity Ventilation Dampers.</b> Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| § 150.0(m)(9):  | <b>Protection of Insulation.</b> Insulation must be protected from damage due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| § 150.0(m)(10): | <b>Porous Inner Core Flex Duct.</b> Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| § 150.0(m)(11): | <b>Duct System Sealing and Leakage Test.</b> When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| § 150.0(m)(12): | <b>Air Filtration.</b> Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)(12). Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the installed filters to and prevents air from bypassing the filter. *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

5/6/22

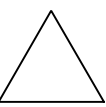
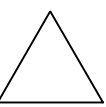


2022 Single-Family Residential Mandatory Requirements Summary

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| § 150.0(s): | <b>Energy Storage System (ESS) Ready.</b> All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source. |
| § 150.0(t): | <b>Heat Pump Space Heater Ready.</b> Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready"; and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use. *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| § 150.0(u): | <b>Electric Cooktop Ready.</b> Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready"; and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use. *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| § 150.0(v): | <b>Electric Clothes Dryer Ready.</b> Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready"; and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use. *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

\*Exceptions may apply.

REVISION / DATE



PROJECT: SFD ADDITION

SITE ADDRESS: 648 51ST STREET  
SAN DIEGO, CA 92114

OWNER:

DATE

8/9/2024

SCALE

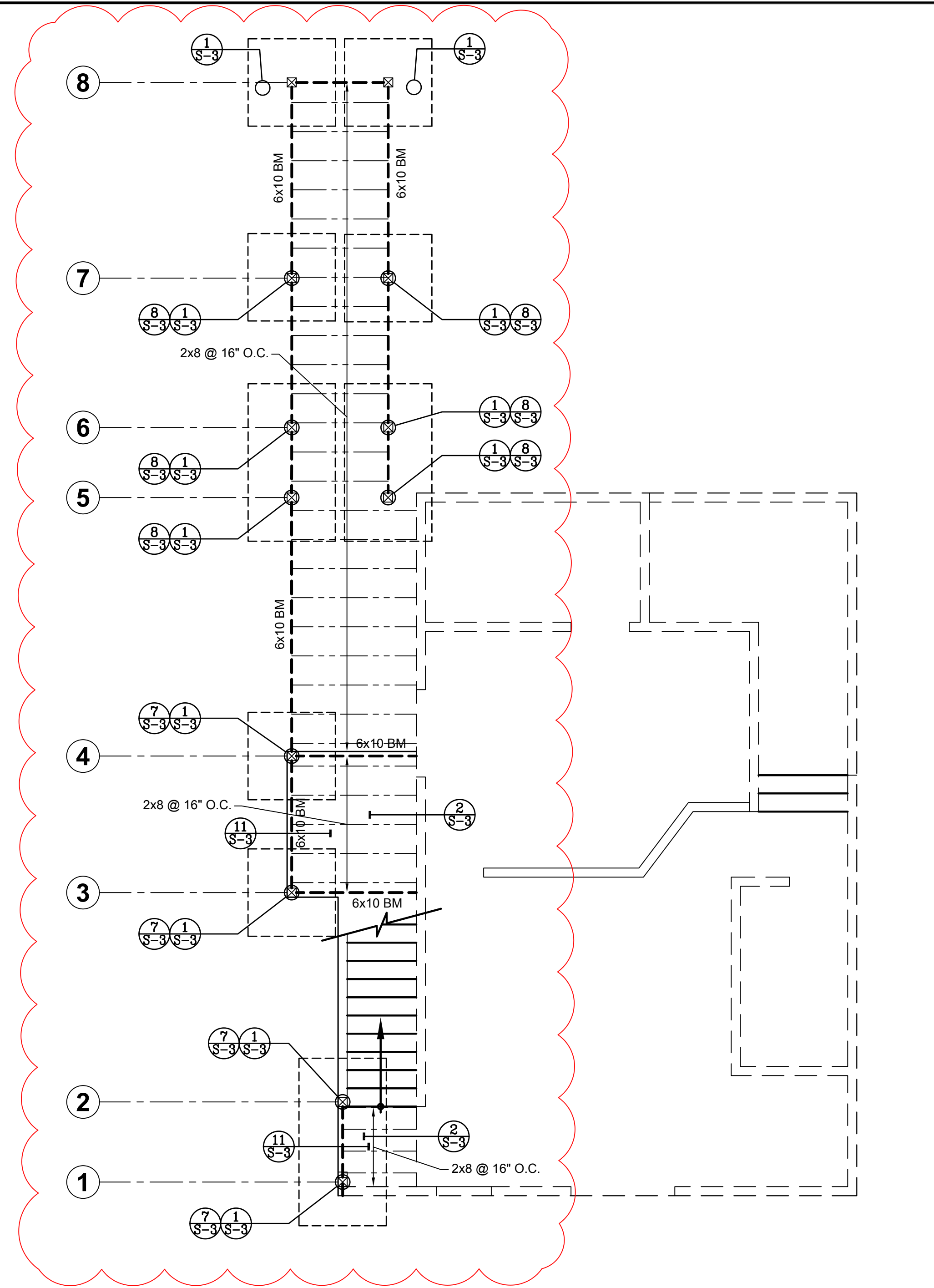
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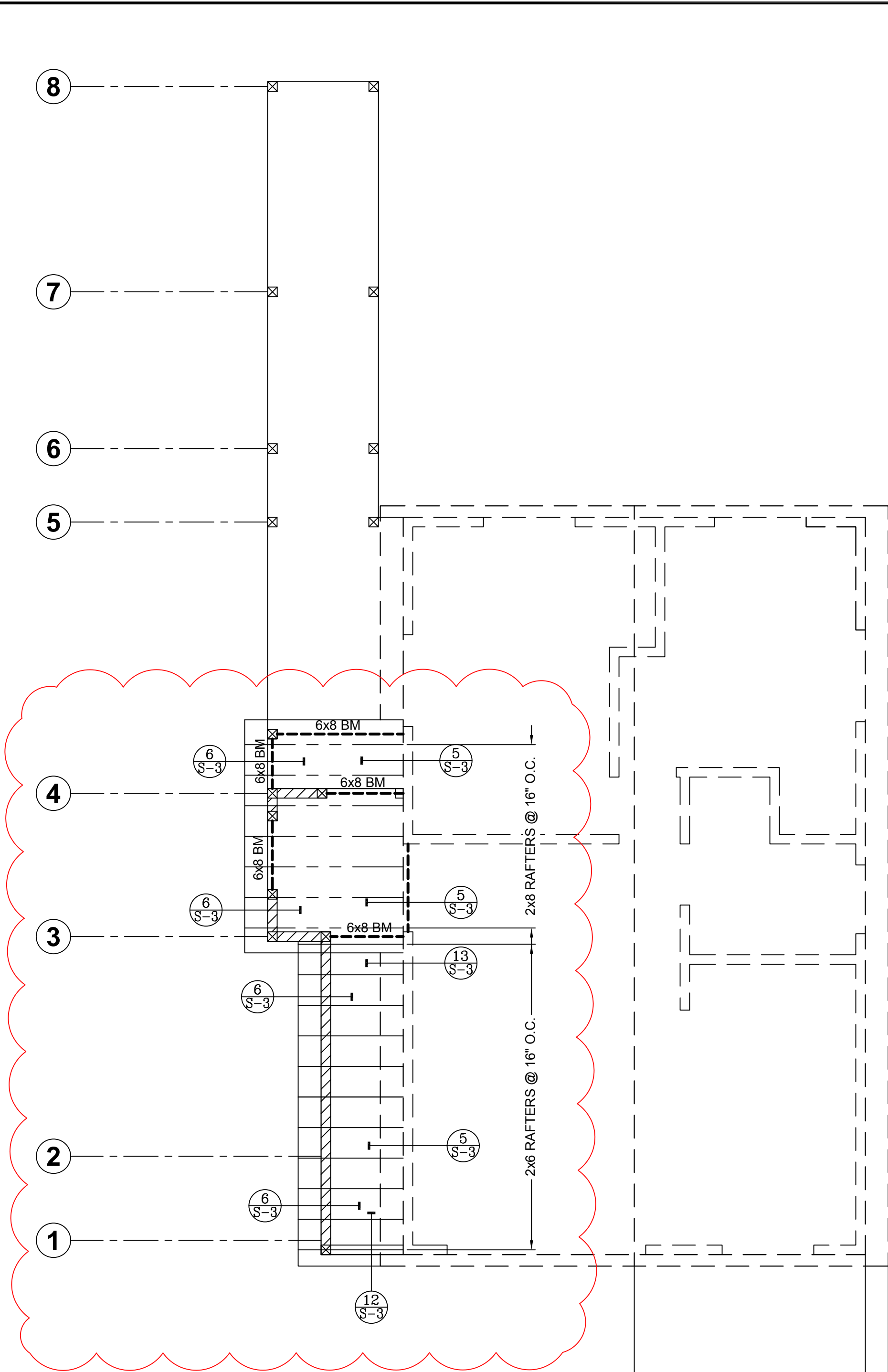
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SHEETS

| GENERAL STRUCTURAL NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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TRUSSES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| 1. THE NOTES AND SPECIFICATIONS ON STRUCTURAL DRAWINGS GOVERN IN CASE OF CONFLICT WITH OTHER SPECIFICATIONS.<br><br>2. NOTES AND DETAILS ON STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES, AND SPECIFICATIONS WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.<br><br>3. GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.<br><br>4. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS. TYPICAL DETAILS AND GENERAL NOTES ARE MINIMUM REQUIREMENTS TO BE USED WHEN CONDITIONS ARE NOT SHOWN OTHERWISE.<br><br>5. ALL WORK SHALL CONFORM TO THE 2022 CALIFORNIA BUILDING CODE STANDARDS, AND REGULATIONS OF THE STATE OF CALIF. DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES.<br><br>6. THE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE AND IS NOT LIMITED TO BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC.<br><br>7. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.<br><br>8. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.<br><br>9. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON ROOF. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | 1. ALL DRAG/GABLE TRUSSES SHALL RECEIVE ROOF DIAPHRAGM BOUNDARY NAILING TO THE TOP CHORD OF THE TRUSS AND SHALL BE FASTENED FROM THE BOTTOM CHORD TO THE TOP PLATE OF THE WALL BELOW AS CALLED UNDER SHEAR WALL'S RM TO TOP PLATE FASTENING.<br><br>2. CONTRACTOR SHALL PROVIDE CERTIFIED (BY CALIFORNIA PE) CALCULATIONS AND DRAWINGS FOR ALL MANUFACTURED TRUSSES AND JOISTS PRIOR TO BUILDING PERMIT/FABRICATION/ERECTION. ALL TRUSSES SHALL BE CAPABLE OF CARRYING THE DESIGN LOADS IDENTIFIED ON THIS SHEET. THE ENGINEER/ARCHITECT OF RECORD SHALL REVIEW AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.<br><br><b>LUMBER</b><br><br>1. ALL STRUCTURAL LUMBER SHALL BE GRADED IN ACCORDANCE WITH THE GRADING AND DRESSING RULES #16 OF THE WEST COAST LUMBER INSPECTION BUREAU.<br><br>2. ALL WOOD BEARING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR.<br><br>3. HOLES AND BOLTS SHALL BE BORED WITH A BIT 1/32" TO 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER.<br><br>4. ALL BOLTS SHALL BE RE-TIGHTENED PRIOR TO APPLICATION OF PLYWOOD, PLASTER, ETC.<br><br>5. STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, ETC. UNLESS SPECIFICALLY NOTED OR DETAILED.<br><br>6. 2x SOLD BLOCKING SHALL BE PLACED BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS.<br><br>7. ALL BOLTS BEARING ON WOOD SHALL HAVE STANDARD CUT WASHERS UNDER HEAD AND NUTS, UNLESS NOTED OTHERWISE.<br><br>8. ALL JOIST HANGERS SHALL BE "SIMPSON" OR APPROVED EQUAL & HAVE AN ICBO APPROVAL NUMBER.<br><br>9. ALL STRUCTURAL LUMBER SHALL BE DOUGLAS FIR-LARCH OF THE FOLLOWING GRADES, UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS:<br><br>STUDS, PLATES, BLOCKING ----- #2<br>BEAMS, STRINGERS ----- #2<br>4x & LARGER MEMBERS ----- #1<br>POST & MULLIONS ----- #1<br>JOIST PLANKING & DECKING ----- COM. DEX<br>JOISTS & PLANKING & RAFTERS ----- #2<br>BOARDS, SHEATHING & STRIPPING ----- CONST. GRADE<br>SILLS, PLATES, SLEEPERS, POSTS ----- CONST. GRADE<br>OR WOOD IN CONTACT WITH CONCRETE ----- PRESSURE TREATED<br>WHICH IS IN CONTACT WITH EARTH ----- |  | 1. GLU-LAMINATED BEAMS SHALL CONFORM TO LATEST AITC SPECIFICATION AND BE COMBINATIONS "24F-V4" D/F/D/ INDUSTRIAL APPEARANCE GRADE WHERE NOT EXPOSED AND ARCHITECTURAL APPEARANCE GRADE WHERE EXPOSED. USE "24F-V6" -- D/F/D/ FOR CANTILEVER AND OVERHANG SPANS.<br><br>2. EXTERIOR GLUE SHALL BE USED WHERE LAMINATED BEAMS ARE EXPOSED TO WEATHER.<br><br>3. ALL STRUCTURAL GLU-LAMINATED LUMBER SHALL BE INSPECTED DURING LAMINATION BY AN APPROVED INSPECTION AGENCY -- PROVIDE CERTIFICATE OF INSPECTION TO THE BUILDING DEPARTMENT.<br><br>4. EACH PIECE OF STRUCTURAL GLU-LAMINATED LUMBER SHALL BE STAMPED WITH AN IDENTIFYING NUMBER AND SHALL BE ACCOMPANIED BY A CERTIFICATE OF INSPECTION AS REQUIRED BY THE CALIFORNIA BUILDING CODE.<br><br>5. INDUSTRIAL APPEARANCE LAMINATED BEAMS MAY BE GROUP WRAPPED. ARCHITECTURAL APPEARANCE LAMINATED BEAMS SHALL BE INDIVIDUALLY WRAPPED.<br><br>6. ADEQUATE BRACING SHALL BE PROVIDED DURING ERECTION.<br><br>7. THE GLU-LAMINATED BEAMS SHALL BE FURNISHED AND DETAILED BY A LICENSED FABRICATOR SPECIALIZING IN THIS TYPE OF WORK.<br><br>8. ALL GLU-LAMINATED BEAMS SHALL BE FABRICATED WITH CAMBER AS NOTED ON DRAWINGS.<br><br>9. FOR STRUCTURAL GLUE-LAMINATED TIMBER MEMBERS, AN AITC CERTIFICATION OF CONFORMANCE OR A CERTIFICATE OF CONFORMANCE ISSUED BY A CURRENT ICBO APPROVED QUALITY CONTROL AGENCY, MUST BE SUBMITTED TO THE BUILDING INSPECTOR PRIOR TO INSTALLATION. |  | 1. CONCRETE BLOCK SHALL BE HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS CONFORMING TO C80 GRADE N, TYPE I, MEDIUM WEIGHT. USE UNITS OPEN ONE END, AND BOND BEAM UNITS AT HORIZONTAL REINFORCING.<br><br>2. CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.<br><br>3. MORTAR MIX SHALL CONFORM TO REQUIREMENTS FOR TYPE 5 AND PROJECT SPECIFICATIONS. MORTAR SHALL ATTAIN A COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS. ADMIXTURE SHALL BE SIKO GROUT AID TYPE II.<br><br>4. GROUT SHALL CONFORM TO REQUIREMENTS FOR COARSE GROUT. GROUT SHALL ATTAIN COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS. ADMIXTURE SHALL BE SIKO GROUT AID TYPE II.<br><br>5. ADMIXTURES SHALL BE ADDED TO MORTAR OR GROUT RESPECTIVELY PER MANUFACTURER'S RECOMMENDATIONS.<br><br>6. PROVIDE A MINIMUM OF 1/2 INCH GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.<br><br>7. LOW-LIFT CONSTRUCTION: MAXIMUM GROUT POUR HEIGHT IS 4 FEET. ALL OVERHANGING MORTAR AND MORTAR DROPPINGS SHALL BE REMOVED PRIOR TO GROUTING.<br><br>8. ALL CELLS IN CONCRETE BLOCK SHALL BE FILLED SOLID WITH GROUT.<br><br>9. CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CORES CONTAINING REINFORCING STEEL.<br><br>10. REFER TO ARCHITECTURAL DRAWING FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN AND JOINT TYPE.<br><br>11. ASSUMED ULTIMATE COMPRESSIVE STRENGTH OF COMPLETED MASONRY WALL IS 2,500 PSI U.N.O.<br><br>12. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE POUR OF GROUT NOT LESS THAN 1/2 INCH NOR MORE THAN 2 INCHES BELOW THE TOP OF THE UPPERMOST UNIT GROUTED. HORIZONTAL STEEL SHALL BE FULLY EMBEDDED IN GROUT IN AN UNINTERRUPTED FOUR.<br><br>13. PROVIDE APPROVED WIRE BRACKETS TO KEEP REINFORCING BARS IN CORRECT POSITION.<br><br>14. PROVIDE 1 INCH MINIMUM GROUT AROUND ALL ANCHOR BOLTS AND GROUT SOLID.<br><br>15. CONTRACTOR SHALL REMAIN SOLELY RESPONSIBLE FOR INSTALLING/ MAINTAINING ADEQUATE BRACING DURING CONSTRUCTION UNTIL THE STRUCTURE IS SUFFICIENTLY COMPLETE TO PROVIDE SUPPORT FOR THE CONCRETE BLOCK WALLS.<br><br>16. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL BE PROVIDED AS SHOWN ON DRAWINGS. |  | <b>CONTRACTOR REQUIREMENTS:</b><br><br>1. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE AS DESCRIBED IN THE CONTRACT DOCUMENTS PRIOR TO STARTING CONSTRUCTION AND TO CROSS-CHECK DETAILS AND DIMENSIONS ON THE ARCHITECTURAL, STRUCTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT PRIOR TO CONSTRUCTION. ALL TRADES SHALL VERIFY AT THE PROJECT SITE CONDITIONS AND MEASUREMENTS RELATED TO THEIR WORK AND COORDINATE THEIR WORK THROUGH THE GENERAL CONTRACTOR WITH ALL TRADES WORKING IN THE VICINITY OF THEIR WORK.<br><br>2. CONTRACTOR SHALL SUPERVISE AND DIRECT ALL THE WORK. THE CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY AND CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES AND COORDINATION OF ALL PORTIONS OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.<br><br>3. CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE PERFORMANCE OF THE CONTRACT. SAFETY PRECAUTIONS AND PROGRAMS SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED ONLY TO NORMAL WORKING HOURS, THE CONTRACT DOCUMENTS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.<br><br>4. CONTRACTOR SHALL MAKE EVERY EFFORT TO MAINTAIN A CLEAN WORKPLACE, DUST POLLUTION AND PREVENTION OF DUST CONTAMINATION OF RELATED SPACE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR ON ONGOING BASIS. ALL CONSTRUCTION AND DEMOLITION DEBRIS IS TO BE REMOVED DAILY AND DISPOSED OF IN A LEGAL MANOR.<br><br>5. CONTRACTOR SHALL PROVIDE ADEQUATE MEANS TO PROTECT FINISHED PARTS OF MATERIALS, EQUIPMENT AND FURNISHINGS AGAINST DAMAGE, FROM ANY CAUSE DURING THE PROGRESS OF THE WORK AND UNTIL ACCEPTANCE BY OWNER.<br><br>6. CONTRACTOR SHALL CONTACT THE OWNER 48 HOURS MINIMUM IN ADVANCE OF ANY RESTRICTION OF OWNER ACCESS OR UTILITY OUTAGES. AUTHORIZATION FROM THE OWNER SHALL BE RECEIVED IN WRITING.<br><br>7. CONTRACTOR SHALL PATCH AND REPAIR TO MATCH ADJACENT CONDITIONS AND DAMAGED AREAS BEHIND OR SURROUNDING ITEMS THAT ARE REMOVED, COORDINATE EXTENT OF ALL DEMOLITION WITH NEW WORK REQUIREMENTS.<br><br>8. UNLESS NOTED OTHERWISE, DIMENSIONS TO EXISTING CONSTRUCTION ARE TO FACE OF FINISH AND DIMENSIONS TO NEW CONSTRUCTION ARE TO FACE OF STUD (OR STRUCTURE).<br><br>9. "PROVIDE" SHALL MEAN THAT THE CONTRACTOR AT HIS/HER EXPENSE, SHALL FURNISH AND INSTALL THE WORK COMPLETE IN PLACE AND READY FOR USE, INCLUDING FURNISHING OF NECESSARY LABOR, MATERIALS, TOOLS, EQUIPMENT AND TRANSPORTATION.<br><br>10. "EXISTING", "+/-", "SIZE TO FIT" AND SIMILAR PHRASES REQUIRE THE CONTRACTOR TO VERIFY AND COORDINATE THE DIMENSION OR CONDITION INDICATED ON THE DRAWING WITH THE ACTUAL FIELD CONDITION(S). DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT AT ONCE FOR DIRECTIONS ON HOW TO PROCEED.<br><br>11. KEYNOTES AND DETAIL INDICATORS SHALL APPLY TYPICALLY TO ALL LIKE CONDITIONS ON THE DRAWINGS, WHETHER OR NOT "TYP" OR "TYPICAL" IS INDICATED OR NOT.<br><br>12. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS AND ELEVATIONS PRIOR TO CONSTRUCTION THE ENGINEER AND ARCHITECT SHALL BE NOTIFIED IN WRITING OF ALL DISCREPANCIES, OMISSIONS, CONFLICTS, ETC. PRIOR TO CONSTRUCTION.<br><br>13. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE ALL UNDERGROUND SERVICES TO THE WORK.<br><br>14. NO STRUCTURAL MEMBERS SHALL BE CUT, SPLICED, NOTCHED, PENETRATED OR OTHERWISE INTERRUPTED OR ALTERED WITHOUT THE ENGINEERS PRIOR WRITTEN APPROVAL.<br><br>15. ALL MATERIAL WORKMANSHIP AND CONSTRUCTION SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE UBC AT TIME OF FRAMING.<br><br>16. THE CONTRACTOR SHALL CONFIRM WITH ALL OSHA AND LOCAL REQUIREMENT PRIOR TO AND DURING EXCAVATIONS AND GENERAL CONSTRUCTION WHERE APPLICABLE INCLUDING BUT NOT LIMITED TO JOB SITE SAFETY AND OBTAINING PERMITS AND APPROVALS WHEN NECESSARY.<br><br>17. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE JOBSITE SAFETY TO ALL PERSONS AND PROPERTY, INCLUDING BUT NOT LIMITED TO CONSTRUCTION PRACTICES AND PRECAUTIONS FOR THE SAFETY OF ALL DURING CONSTRUCTION. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE ENGINEER FREE AND HARMLESS FROM ALL CLAIMS, DAMAGES AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER.<br><br>18. THE CONTRACTOR SHALL BE REQUIRED TO CARRY PROPER INSURANCE AS REQUESTED BY THE CITY AND OWNER FOR THE INTENDED CONSTRUCTION.<br><br>19. EVALUATION OF USAGE OF ALTERNATE MATERIALS, DESIGN CHANGES AND/OR CONSTRUCTION ALTERNATES WILL REQUIRE ADDITIONAL FEES FROM THE CONTRACTOR. THIS WILL INCLUDE ENGINEERING FEES AND BUILDING DEPARTMENT APPROVAL TIME/COST. ALL EVALUATION REQUEST SHALL BE SUBMITTED IN WRITING FOR REVIEW PRIOR TO CONSTRUCTION.<br><br>20. OWNER, CO-OWNERS, PARTNERS, ENTITIES, CORPORATION, LLC, CONTRACTOR AND ITS SUBCONTRACTORS/AGENTS CANNOT HOLD THE ENGINEER OF RECORD AND ITS SUBCONSULTANTS LIABLE FOR ANY WORK NOT APPROVED OR PROVIDED BY THE ENGINEER OF RECORD. THE ENGINEER OF RECORD SHALL BE INDEMNIFIED FROM ANY HARMS OR SUITS FROM ALL PARTIES. |  | 1. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS FOR ACCURACY AND CONFIRMING THAT THE WORK IS BUILDABLE AS SHOWN BEFORE PROCEEDING WITH CONSTRUCTION. IF THERE ARE QUESTIONS REGARDING THESE OR OTHER COORDINATION QUESTIONS, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CLARIFICATION FORM ARCHITECT/OWNER BEFORE PROCEEDING WITH THE WORK IN QUESTION OR ANY RELATED WORK.<br><br>2. CONTRACTOR SHALL INFORM ARCHITECT/OWNER OF ANY CONFLICTS PRIOR TO CONSTRUCTION THAT EXIST IN LOCATIONS OF ANY AND ALL MECHANICAL, TELEPHONE, ELECTRICAL, LIGHTING, PLUMBING AND SPRINKLER EQUIPMENT (TO INCLUDE ALL PIPING, DUCTWORK AND CONDUIT) AND THAT ALL REQUIRED CLEARANCES FOR THE INSTALLATION AND MAINTENANCE OF ANY EQUIPMENT ARE PROVIDED PER MANUFACTURERS SPECS.<br><br>3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL WORK MATERIAL IN ACCORDANCE WITH ALL LOCAL REGULATORY AGENCIES, APPLICABLE BUILDING CODES AND REQUIREMENTS.<br><br>4. THE CONTRACTOR SHALL UNDERCUT BUILDING STANDARD INTERIOR DOORS AS REQUIRED TO CLEAR FLOORING MATERIAL BY 1/4".<br><br>5. ALL HEIGHTS ARE DIMENSIONED FROM TOP OF EXISTING SLAB UNLESS NOTED OTHERWISE "A.F.F." ABOVE FINISHED FLOOR.<br><br>6. CABINET CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ARCHITECT/OWNER FOR APPROVAL PRIOR TO CONSTRUCTION AND FABRICATION.<br><br>7. DO NOT SCALE DRAWINGS NOTED DIMENSIONS TAKE PRECEDENCE. ANYONE USING THESE DRAWINGS SHOULD VERIFY ALL CRITICAL DIMENSIONS BY PHYSICALLY MEASURING EXISTING CONDITIONS.<br><br>8. NEW INTERIOR FINISHES MUST COMPLY WITH THE CURRENT EDITION OF C.B.C.<br><br>9. ALL DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME RETARDANT CONDITION.<br><br>10. DRAFT STOPS SHALL BE INSTALLED IN FLOOR-CEILINGS, ATTICS, MANSARDS AND SIMILAR CONCEALED SPACES AND SHALL BE ABOVE AND INLINE WITH WALLS SEPARATING UNITS FROM EACH OTHER AND FROM OTHER USES.<br><br>11. SLEEPING ROOMS SHALL HAVE A WINDOW OR EXTERIOR DOOR FOR EMERGENCY ESCAPE. SILL HEIGHT SHALL NOT EXCEED 44" ABOVE THE FLOOR. WINDOWS MUST HAVE AN OPENABLE AREA OF AT LEAST 5.7 SQUARE FEET WITH THE MINIMUM OPENABLE WIDTH OF 20" AND A MINIMUM OPENABLE HEIGHT OF 24". THE EMERGENCY DOOR OR WINDOW SHALL BE OPENABLE FROM THE INSIDE TO PROVIDE A FULL CLEAR OPENING WITHOUT THE USE OF SEPARATE TOOLS.<br><br>12. BUILDINGS OVER ONE STORY AND CONTAINING COURTS SHALL HAVE AN ASSUMED PROPERTY LINE FOR THE PURPOSES OF DETERMINING REQUIRED WALL AND OPENING PROTECTION OF COURT WALLS. (SEC. 503.3)<br><br>13. WALL AND FLOORS SEPARATING DWELLING UNITS IN THE SAME BUILDING SHALL BE OF NOT LESS THAN ONE-HOUR FIRE-RESISTIVE CONSTRUCTION.<br><br>14. GUARDRAILS SHALL BE MIN. HEIGHT OF 42" (MIN. HEIGHT OF 36" IN INDIVIDUAL DWELLINGS) AND BE ABLE TO WITHSTAND 200 LB. POINT LOAD IN ANY DIRECTION.<br><br>15. OPENINGS IN GUARDRAILS SHALL BE LESS THAN 4". TRIANGULAR OPENINGS FORMED BY THE RAISER, TREAD AND BOTTOM ELEMENT OF A GUARDRAIL AT A STAIR SHALL BE LESS THAN 6". |  |
| <b>CONCRETE</b><br><br>1. ALL CONCRETE PLACEMENT AND DESIGN SHALL CONFORM TO THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE.<br><br>2. ALL CEMENT SHALL CONFORM TO A.S.T.M. C-150, TYPE II, LOW ALKALI.<br><br>3. FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33 FOR STANDARD WEIGHT CONCRETE.<br><br>4. ALL AGGREGATE SHALL BE COMPARABLE TO "SAN GABRIEL VALLEY" AGGREGATE. THE SHRINKAGE SHALL BE AS PER A.S.T.M. C-33 WITH THE AVERAGE DRYING SHRINKAGE AT 28-DAYS OF DRYING NOT EXCEEDING 0.04%.<br><br>5. DRY PACK SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT TO NOT MORE THAN THREE PARTS SAND.<br><br>6. HOLD DOWNS, ANCHOR BOLTS, DOWELS INSERT, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE, AND FOUNDATION INSPECTION.<br><br>7. CONCRETE SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 10-DAYS OR BY AN APPROVED CURING COMPOUND.<br><br>8. ALL CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28-DAYS, UNLESS NOTED OTHERWISE. THE WATER TO CEMENT RATIO SHALL NOT EXCEED 0.45. MINIMUM CEMENT CONTENT 564 LBS PER CUBIC YARD. MAX SLUMP=4".<br><br>9. ANCHOR BOLT, HOLD DOWN AND POST BASE SIZES AND LOCATIONS SHALL BE PER STRUCTURAL PLANS. THE PLACEMENT OF THESE ITEMS SHALL BE COORDINATED WITH THE FRAMING CONTRACTOR.<br><br>10. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ALL PENETRATIONS IN CONCRETE FLOORS,ROOFS,WALLS AND FOR LOCATIONS OF FLOOR FINISHES, DEPRESSIONS, PITS, ETC.<br><br>11. SLABS ON GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 302.1.<br><br>12. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT PLACED IN CAST-IN-PLACE CONCRETE.<br><br>MIN. COVER, INCHES<br><br>1. CONCRETE CAST AND PERMANENTLY EXPOSED TO EARTH. . . . . 3<br>2. CONCRETE EXPOSED TO EARTH OR WEATHER. . . . . 2<br>NO.6 THROUGH NO. 18 BAR. . . . . 1 1/2<br>NO.5 BAR, W#1 OR D#1 WIRE, AND SMALLER . . . . . 1 1/2<br>3. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND. . . . . 3/4<br>SLABS, WALLS, JOISTS: . . . . . 1 1/2<br>NO.14 AND NO.18 BAR. . . . . 1 1/2<br>NO. 11 BAR AND SMALLER. . . . . 3/4<br>BEAMS, COLUMNS: . . . . . 3/4<br>PRIMARY REINFORCEMENT, TIES, STRUTS,SPRALS. . . . . 1 1/2<br><br>13. CONCRETE SLABS ON GRADE SHALL BE DIVIDED BY EXPANSION. WEAKENED OR CONSTRUCTION JOINTS INTO AREAS NOT EXCEEDING 200 SQUARE FEET. THE RATIO OF THE LENGTH TO THE WIDTH SHALL NOT EXCEED 1 1/4 TO 1. DISTANCE BETWEEN JOINTS SHALL NOT EXCEED 15'-0". THERE SHALL BE AT LEAST A 48 HOUR WAITING PERIOD BETWEEN PLACING ADJACENT SLABS. POURING PROCEDURE AND A LAYOUT SHOWING LOCATION OF EXPANSION WEAKENED OR CONSTRUCTION JOINTS FOR SLABS ON GRADE SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. |  | <b>GENERAL NAILING NOTES</b><br><br>1. NAILS SHALL BE DRIVEN PERPENDICULAR WHERE POSSIBLE INSTEAD OF TOENAILS.<br><br>2. PRE-DRILL FOR ALL NAILS 20d OR LARGER.<br><br>3. ALL NAILS SHALL BE COMMON WIRE NAILS UNLESS NOTED OTHERWISE. ALL NAILING APPLICATION SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.<br><br><b>COMMON WIRE NAILS</b><br><br>1. JOIST OR RAFTERS AT ALL BEARINGS<br>TOP NAIL EACH SIDE ----- 3-8d<br>2. BRIDGING TO JOIST<br>TOP NAIL EACH END ----- 2-8d<br>3. 1" X 6" SUBFLOOR OR LESS TO EACH JOIST<br>FACE NAIL ----- 2-8d<br>WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST<br>FACE NAIL ----- 3-8d<br>5. 2" SUBFLOOR TO JOIST OR GIRDER<br>BLIND AND FACE NAIL ----- 2-16d<br>6. SOLE PLATE TO JOIST OR BLOCKING<br>FACE NAIL ----- 16d @ 16" O/C<br>7. TOP PLATE TO STUD<br>END NAIL ----- 2-16d<br>8. STUD TO SOLE PLATE<br>TOP NAIL ----- 4-8d<br>9. DOUBLE STUDS<br>FACE NAIL ----- 16d @ 24" O/C<br>10. DOUBLE TOP PLATES<br>FACE NAIL ----- 16d @ 16" O/C<br>11. TOP PLATES LAPS & INTERSECTIONS<br>FACE NAIL ----- 2-16d<br>12. CONTINUOUS HEADER TWO PIECES<br>ALONG EACH EDGE ----- 16d @ 16" O/C<br>13. CEILING JOIST TO PLATE<br>TOP NAIL ----- 3-8d<br>14. CONTINUOUS HEADER TO STUD<br>TOP NAIL ----- 4-8d<br>15. CEILING JOISTS, LAPS OVER PARTITIONS<br>FACE NAIL ----- 3-16d<br>16. CEILING JOISTS TO PARALLEL RAFTERS<br>FACE NAIL ----- 3-16d<br>17. RAFTER TO PLATE<br>TOP NAIL ----- 3-8d<br>18. 1" BRACE TO EACH STUD AND PLATE<br>FACE NAIL ----- 2-8d<br>19. 1" X 6" SHEATHING OR LESS TO EACH BEARINGS<br>FACE NAIL ----- 2-8d<br>20. WIDER THAN -" X 6" SHEATHING TO EACH BEARING<br>FACE NAIL ----- 3-8d<br>21. BUILT-UP CORNER STUDS ----- 16d @ 24" O/C<br>22. BUILT-UP GIRDER & BEAMS<br>AT TOP AND BOTTOM STAGGER ----- 20d @ 24" O/C<br>AT ENDS & AT EACH SPLICE ----- 2-20d<br>23. 2" PLANKS AT EACH BEARING ----- 2-16d<br><br>24. BLOCKING BETWEEN JOISTS OR RAFTERS<br>TO JOIST OR RAFTERS<br>TOP NAILS, EACH SIDE ----- 2-10d<br>TO JOIST OR RAFTER BEARINGS<br>TOP NAILS, EACH SIDE ----- 2-10d<br>25. JOIST OR RAFTERS TO SIDES OF STUDS<br>8" OR LESS ----- 3-16d<br>FOR EACH ADDITIONAL 4" IN DEPTH OF JOIST ----- 1-16d<br>26. BLOCKING BETWEEN STUDS,<br>EACH END ----- 2-16d<br>OR 2-10d TOENAILS<br>27. RIBBONS TO STUDS<br>1" RIBBONS ----- 2-8d<br>2" RIBBONS ----- 2-16d         |  | <b>REINFORCING STEEL</b><br><br>1. ALL REINFORCING SHALL BE A.S.T.M. A-615 GRADE 60 U.N.O.<br><br>2. ALL REINFORCING TO BE WELDED SHALL BE OF A WELDABLE GRADE SUCH AS A.S.T.M. A706.<br><br>3. USE LOW HYDROGEN ELECTRODES, GRADE E-70 FOR WELDED REINFORCING BARS.<br><br>4. ALL REINFORCING SHALL BE SECURELY TIED AND BRACED IN PLACE PRIOR TO POURING CONCRETE OR PLACING MASONRY.<br><br>5. REINFORCING BARS MARKED CONTINUOUS SHALL BE SPLICED WITH A MINIMUM LAP OF 55 BAR DIAMETERS IN MASONRY AND 30 BAR DIAMETERS IN CONCRETE.<br><br>6. REINFORCING STEEL SHOP DRAWINGS FOR STRUCTURAL CONCRETE SLAB AND BEAMS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER THROUGH ARCHITECT FOR REVIEW PRIOR TO FABRICATION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | <b>STRUCTURAL OBSERVATION NOTES</b><br><br>1. PER CBC CODE, THE OWNER SHALL EMPLOY THE ENGINEER TO PERFORM VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM.<br><br>(A) ALL HOLD DOWN LOCATIONS SHALL BE VERIFIED PRIOR TO FOUNDATION POURING. THIS INCLUDES ALL ANCHOR BOLTS, OTHER HARDWARE AND STEEL MEMBERS EMBEDDED INTO THE FOUNDATION.<br><br>(B) ALL HARDWARE PLACEMENT INCLUDING, BUT NOT LIMITED TO, STRAPS, FRAMING CLIPS, HANGERS AND BEAM CONNECTIONS. STEEL MEMBERS EMBEDDED INTO THE FOUNDATION.<br><br>(C) AT THE COMPLETION OF THE STRUCTURAL WORK FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS.<br><br>(D) THIS STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED BY THE 2022 CALIFORNIA BUILDING CODE (CBC).<br><br>2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ALLOW A 2-DAY LEAD-TIME FOR OBSERVATION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | <b>FIRE NOTES</b><br><br>1. BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE ACCORDANCE WITH CFC ARTICLE 87 (UPC/CFC SEC. 8701.)<br><br>2. TO VERIFY IN THE FIELD ADDRESS PROVIDED FOR EXISTING BUILDINGS IN A POSITION AS TO BE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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                                                                                                                                                                                         |  |



PROPOSED LOWER FLOOR PLAN



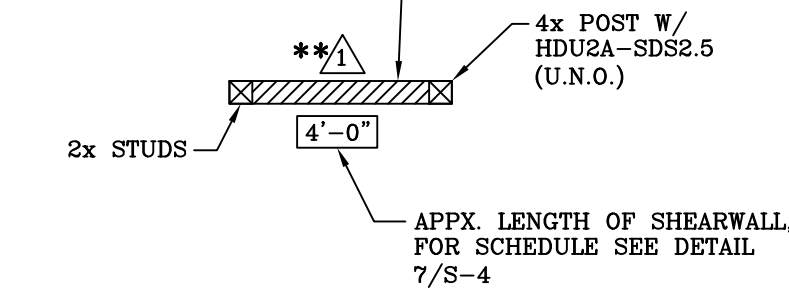
PROPOSED UPPER FLOOR PLAN

LEGEND:

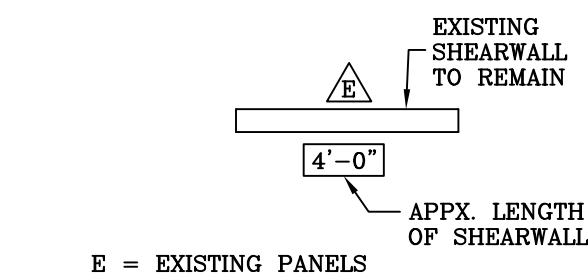
× 4x POST @ ENDS OF EACH SHEARWALL, OR 2-2x4 STUDS @ OTHER LOCATIONS INSIDE WALLS W/ HDU2A-SDS2.5. (U.N.O.)

■ HSS

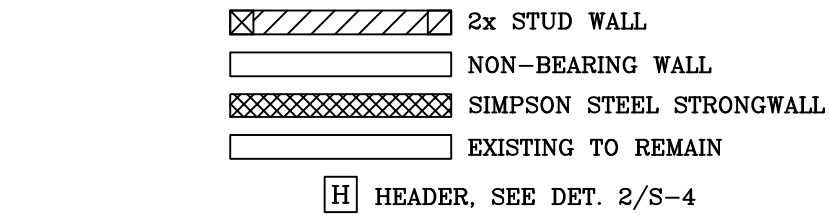
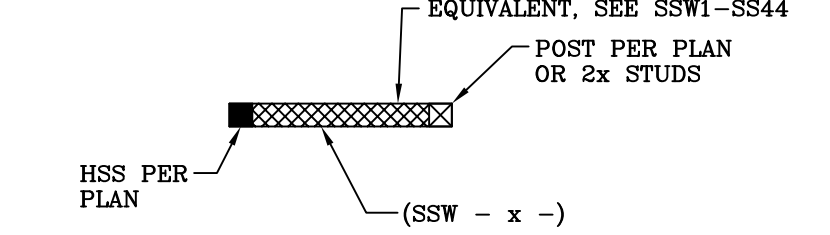
▨ 2-2x4 STUDS



\*\* = PANEL ON BOTH SIDES.



E = EXISTING PANELS



DRAG LINE

B.O.B. = BOTTOM OF BEAM  
B.O.R. = BOTTOM OF RAFTER  
B.O.T. = BOTTOM OF TRUSS  
T.O.P. = TOP OF PLATES  
PL. HT. = PLATE HEIGHT  
RD. HT. = RIDGE HEIGHT  
B.O.TJ = BOTTOM OF TJ

| DATE ISSUED |  |
|-------------|--|
| 1/31/2025   |  |
|             |  |
|             |  |

| # | DATE | REVISION | BY |
|---|------|----------|----|
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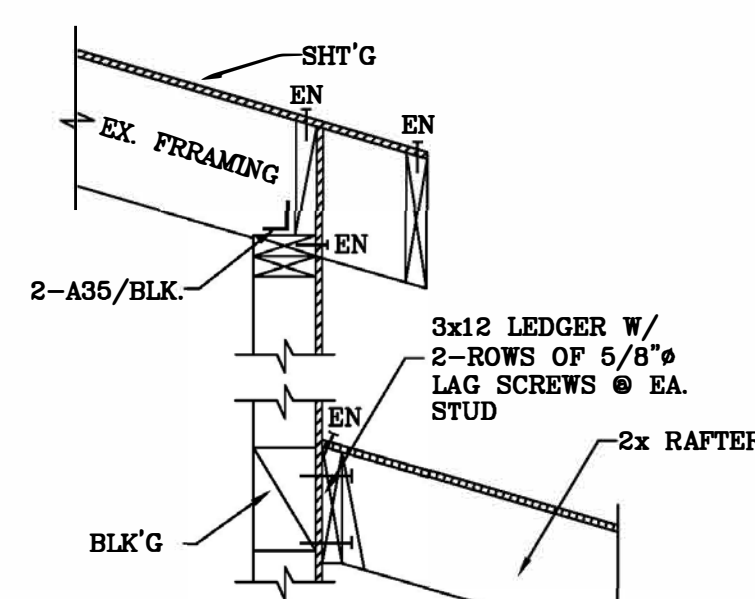
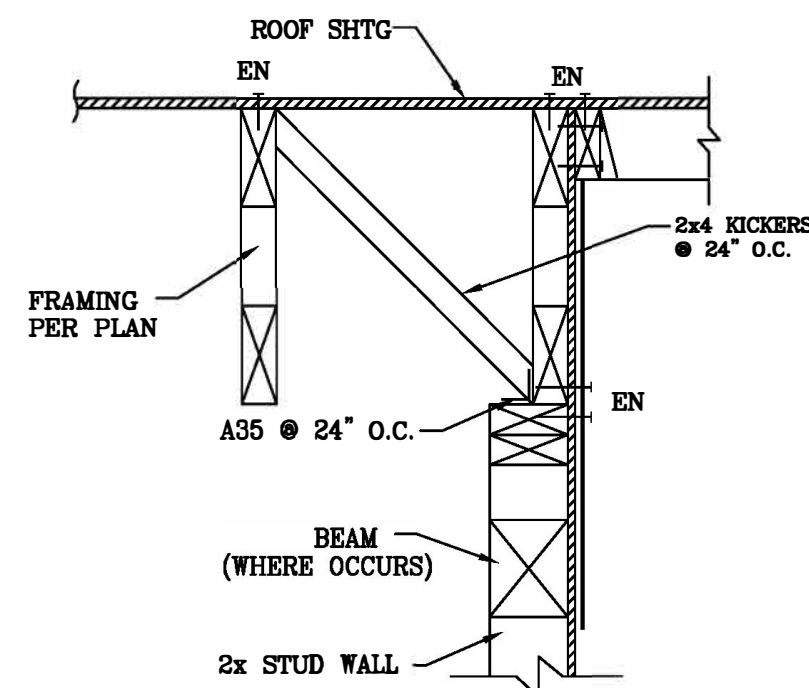
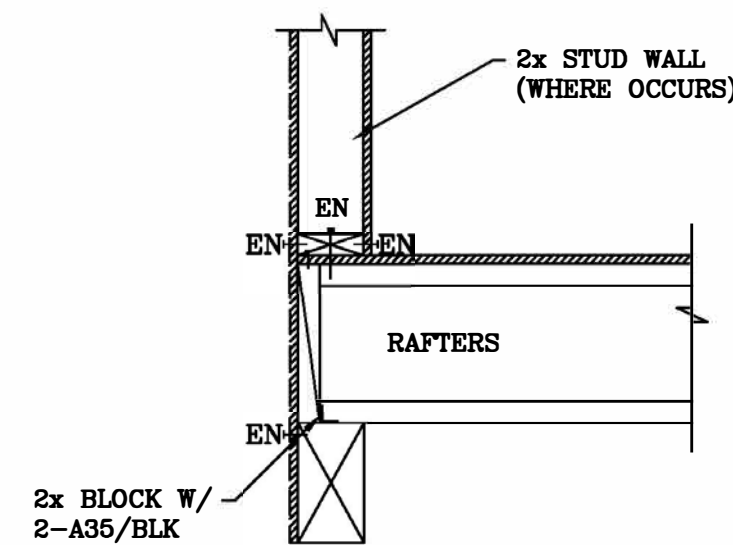
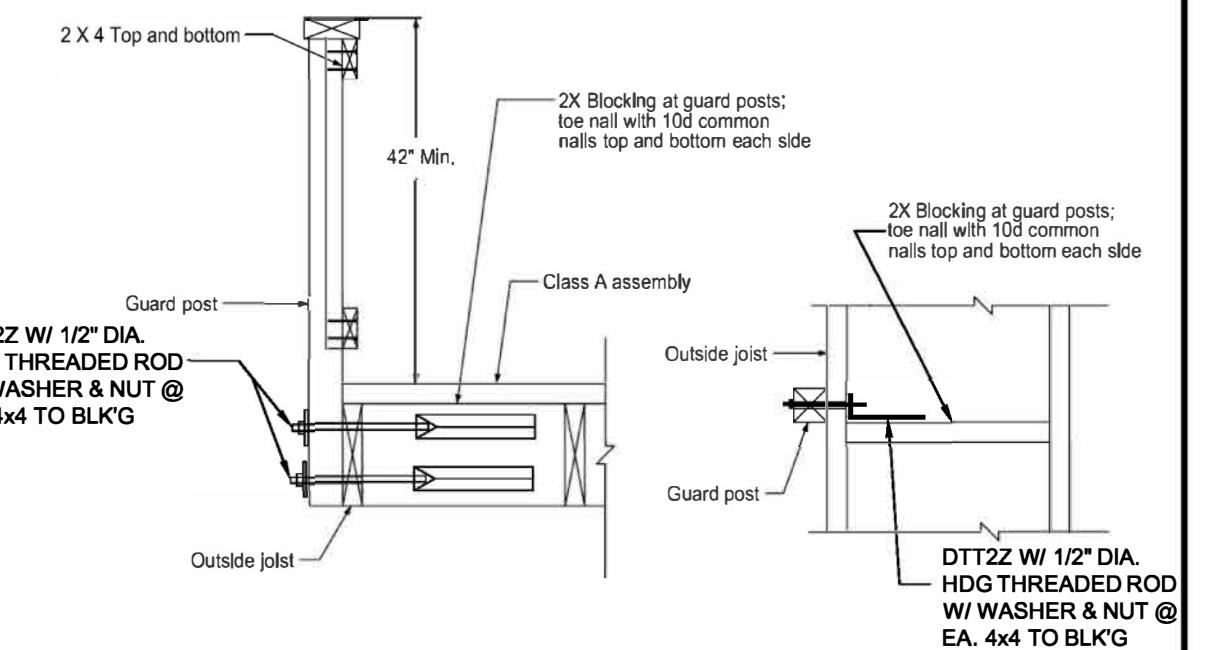
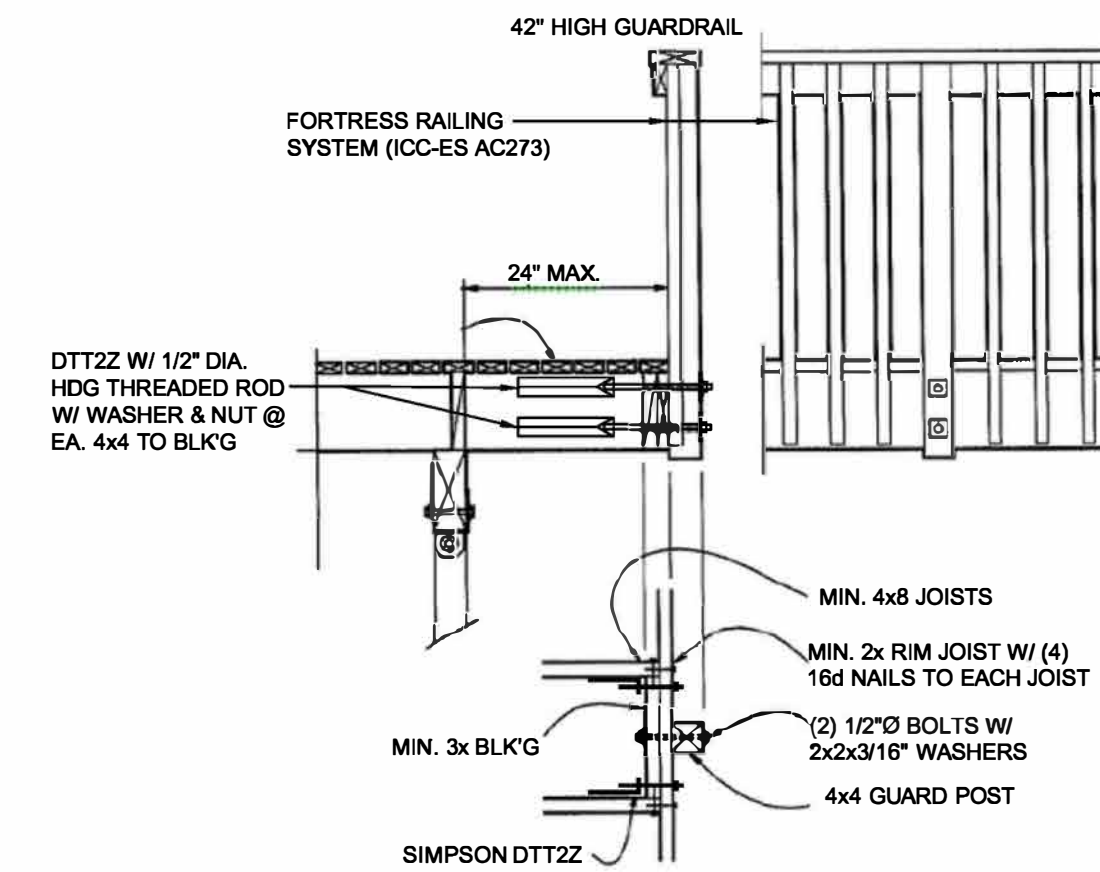
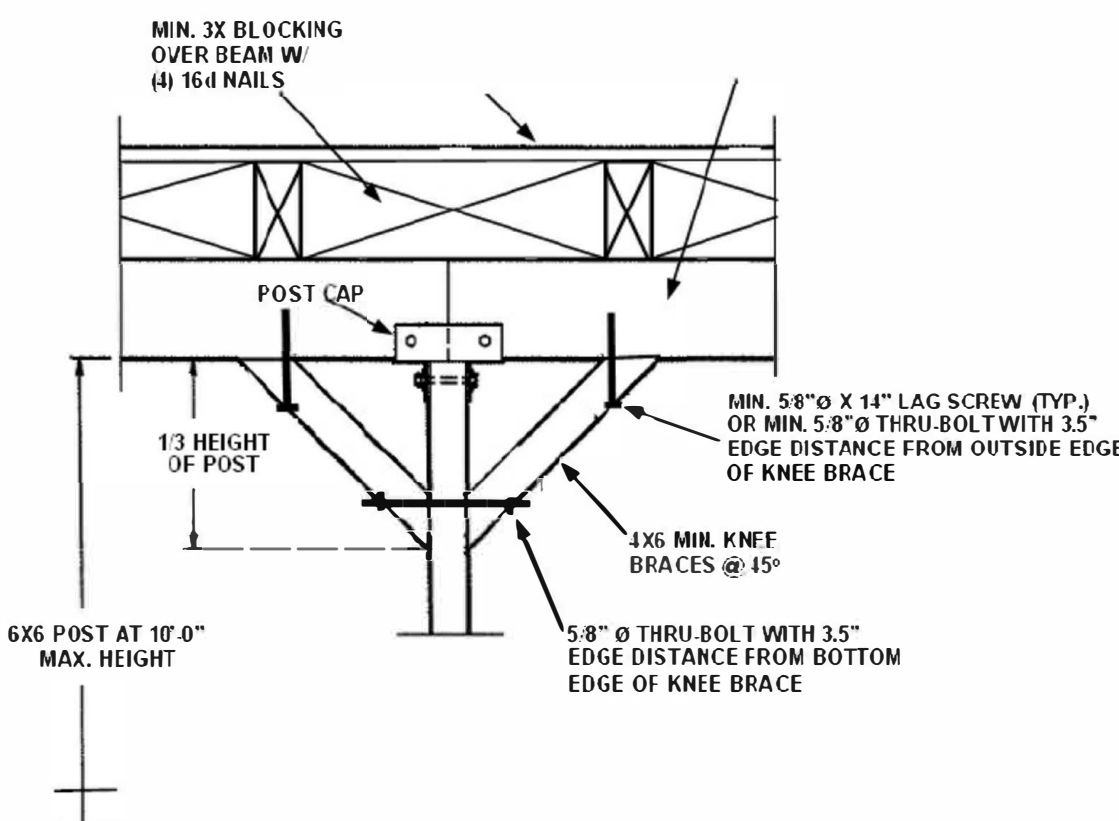
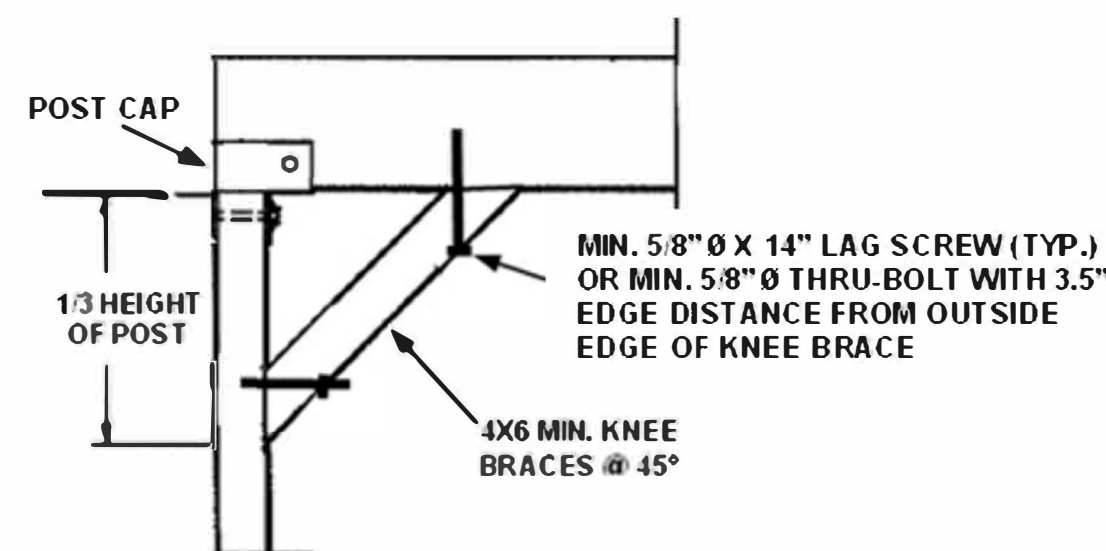
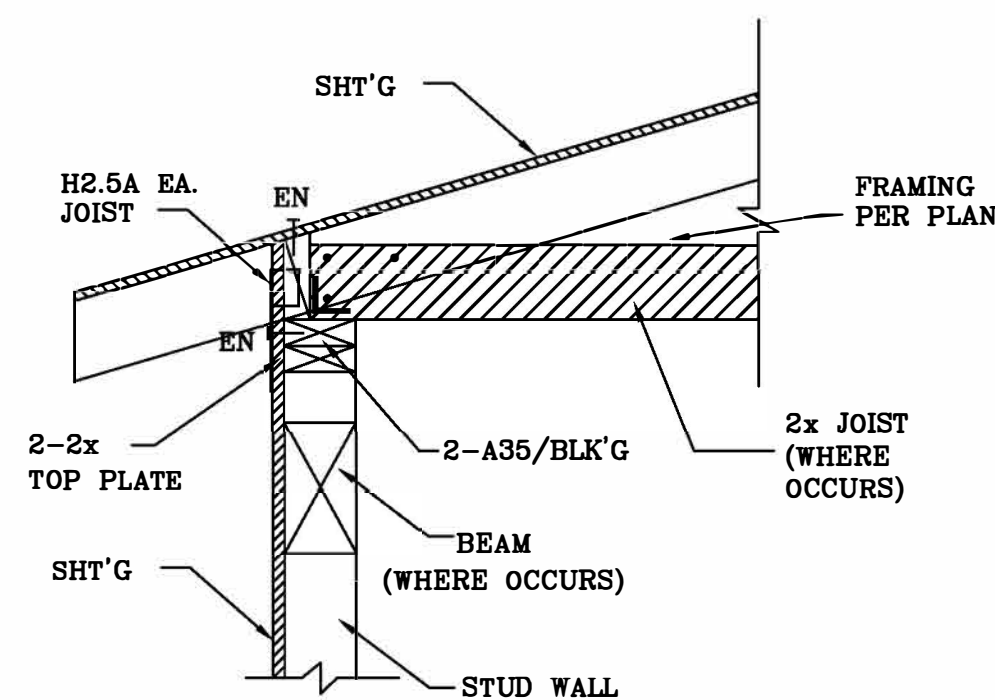
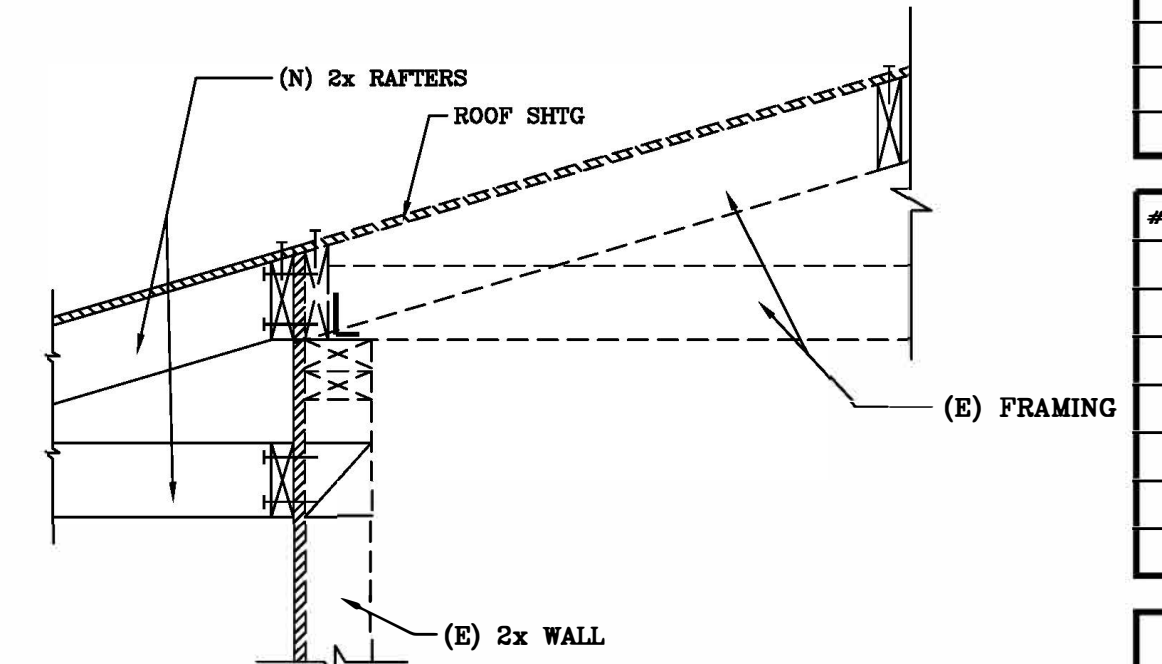
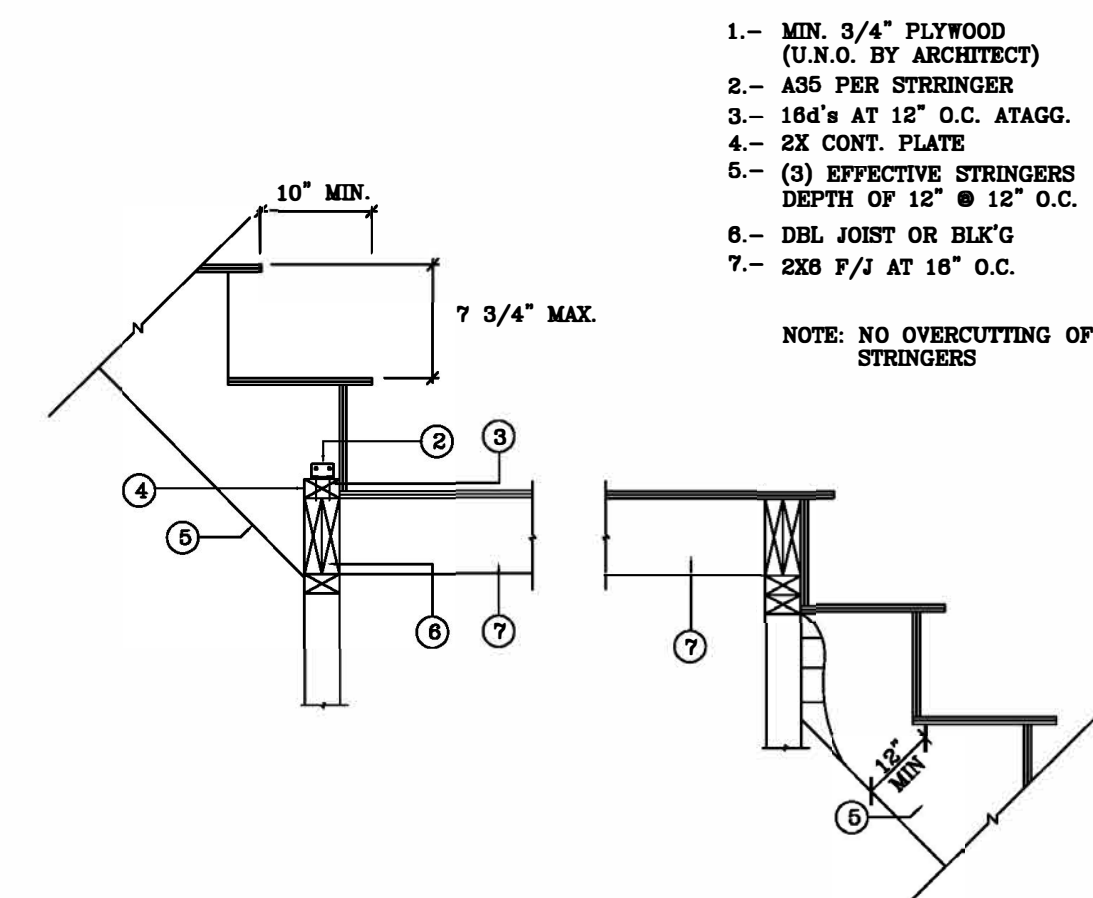
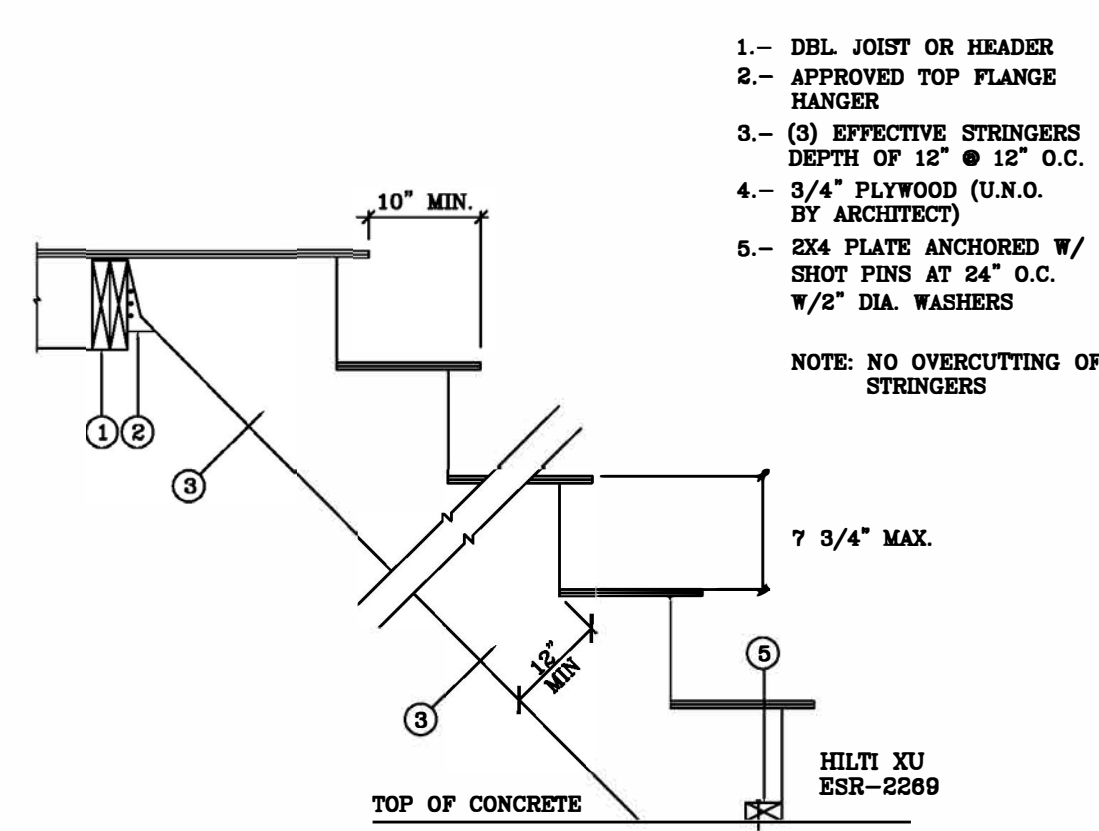
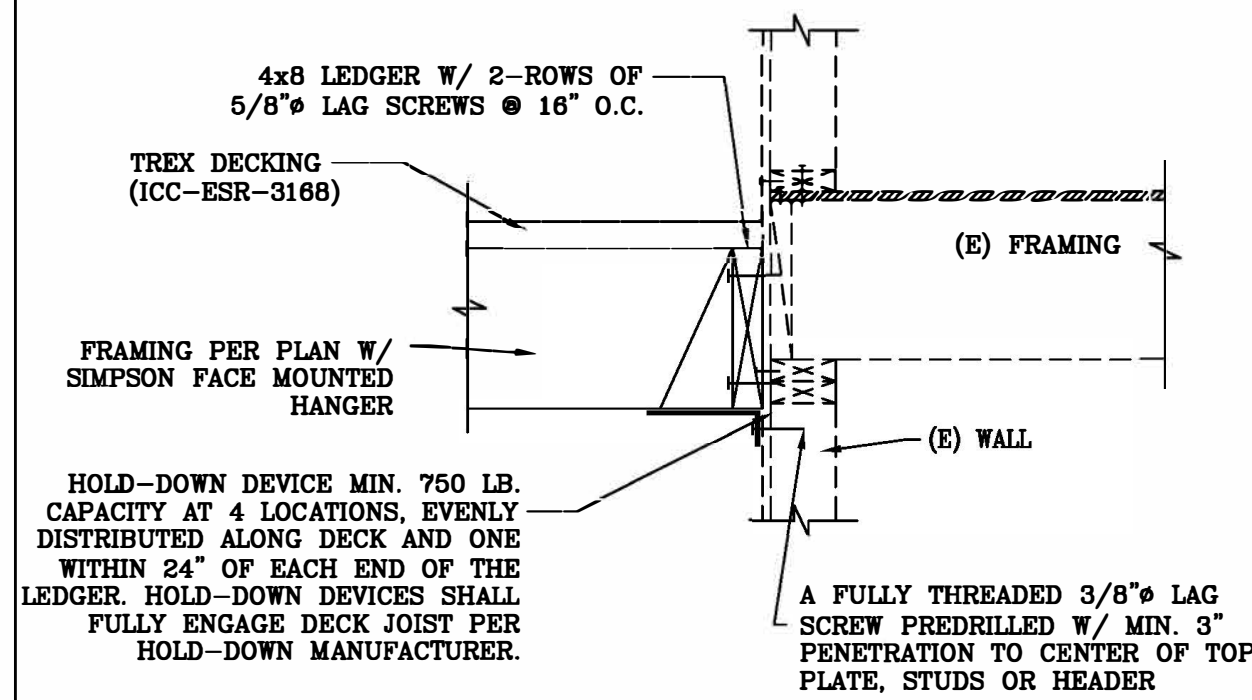
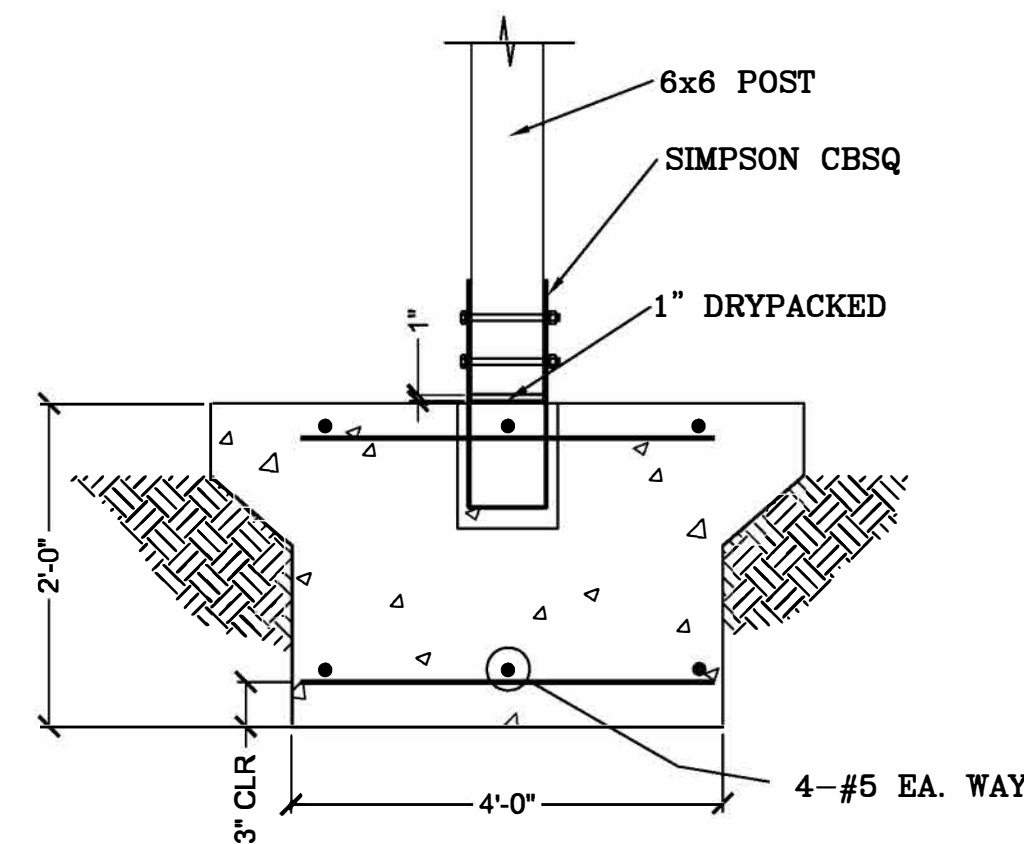
The contractor shall verify and be responsible for all dimensions and conditions on the job and this office must be notified in writing of any variation from the dimensions and conditions shown by these drawings.

PREPARED FOR:  
**648 51ST ST  
SAN DIEGO, CA 92114**

SHEET TITLE  
**FOUNDATION AND FRAMING PLAN**

SCALE: NTS  
DRAWN BY: GAD  
CHECKED BY: KMK  
START DATE: 09/12/2024  
JOB NO.: 24-011

**S-2**

[illegible]

1000000



The contractor shall verify and be responsible for all dimensions and conditions on the job and this office must be notified in writing of any variation from the dimensions and conditions shown by these drawings.

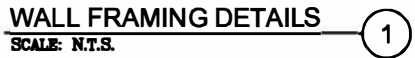
PREPARED FOR:

**648 51ST ST  
SAN DIEGO, CA 92114**

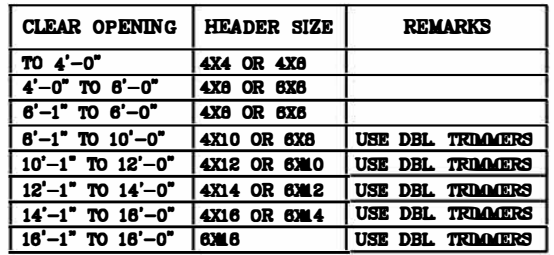
SHEET TITLE

STRUCTURAL  
DETAILS

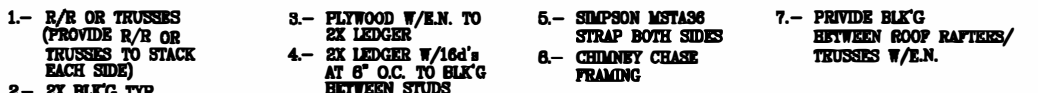
SCALE NTS  
DRAWN BY GAD  
CHECKED BY KMK  
START DATE 09/12/2024  
JOB NO. 24-011



- [illegible]



NOTE: 1. USE ABOVE SCHEDULE SIZES ONLY WHERE SIZE IS NOT INDICATED ON PLANS OR DETAILS.  
2. PROVIDE 2X TRIMMER AND KING STUD, TYPICAL U.O.N. NAILING PER NAILING SCHEDULE.

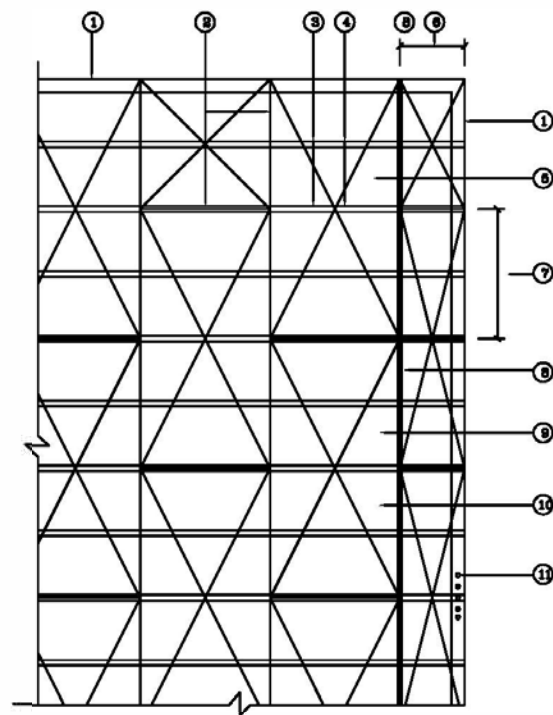


ROOF FRAMING PER INDICULAR & PARALLEL TO STACK  
SCALE: N.T.S.

[illegible]

| MARK | TYPE | SPLICE           | SHEAR<br>VALUE (k) |
|------|------|------------------|--------------------|
| 1    | 1    | 6 -16d NAILS     | 1179               |
| 2    | 1    | 10 -10d NAILS    | 13979              |
| 3    | 1    | 12 -16d NAILS    | 16769              |
| 4    | 1    | 14 -18d NAILS    | 19069              |
| 5    | 1    | 16 -18d NAILS    | 22349              |
| 6    | 2    | 2 - 3/4" O M.B.  | 19159              |
| 7    | 2    | 3 - 3/4" O M.B.  | 28159              |
| 8    | 2    | 4 - 3/4" O M.B.  | 35629              |
| 9    | 2    | 5 - 3/4" O M.B.  | 43819              |
| 10   | 2    | 6 - 5/4" O M.B.  | 47119              |
| 11   | 2    | 6 - 5/4" O M.B.  | 54399              |
| 12   | 3    | 4 - 5/4" O M.B.  | 64379              |
| 13   | 3    | 6 - 5/4" O M.B.  | 94699              |
| 14   | 3    | 10 - 3/4" O M.B. | 14,3829            |
| 15   | 3    | 12 - 3/4" O M.B. | 15,6359            |

SHEAR WALL TOP PLATE SPLICE



- |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11-11 | 11-DAPRISMAL BOUNDARY<br>11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038- |
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### TYPICAL PLYWOOD LAYOUT



- 1.- DEL TOP PLATE  
2.- RM., SEE PLAN  
3.- SIMPSON ST6236  
4.- POST, SEE PLAN  
5.- TYP. STUD  
6.- 16d's @ 12" O.C.  
STAGG. EA. SIDE TO  
POST, AND MIN. (6)  
16d's TO EA. SIDE OF  
BEAM  
7.- BLK'S OR RIM JOIST  
8.- (3) 16d TOP NAILS EA. SID  
9.- A34 EA. SIDE OF POST  
10.- 2X SILL PLATE  
11.- SOLID BLK'G  
12.- (5) 16d's

SHEAR WALL SCHED UE 7  
SCALE: N.T.S.



- |                                               |                                 |                        |
|-----------------------------------------------|---------------------------------|------------------------|
| 1.- HIP OR VALLEY PER PLAN                    | 7.- POST OR CORNER STUD         | 13.-EDGE NAIL          |
| 2.- RIDGE BOARD OR BEAM PER PLAN              | 8.- HEEL CUT HIP/VALLEY AT WALL | 14.-R/R PER PLAN       |
| 3.- SLOPED AND SKEWED HANGER                  | 9.- 8x4 BOE NAILS TO TOP PLATE  | 15.- 3" 16dS           |
| 4.- BEVEL TOP OF RSJCE TO ROOF PITCH          | 10.- 2X STUDS                   | 16.- APPROVE           |
| 5.- DEL TOP PLATE                             | 11.- 2X LEDGER                  | 17.- TOE NAIL OF 6.5FT |
| 6.- SIMPSON HML6 TO EA. SIDE TO DEL TOP PLATE | 12.- ROOF SHTG                  | 17.- SIMPSON           |



- |     |                          |      |                            |      |                   |
|-----|--------------------------|------|----------------------------|------|-------------------|
| 1 - | PLYWOOD BRG              | 10 - | STEEL TRUSS SEE PLAN NOTE: | 11 - | BALCON FRAM. WALL |
| 2 - | TRUSS BY MFR.            | 11 - | TOP UP                     | 12 - | TO SOFT. OF BALC/ |
| 3 - | E.P.                     | 12 - | 5X 8'S                     | 13 - | SPACER CLAB       |
| 4 - | DEL TOP PLATE OR BEAM    | 13 - | STANDARD SEE PER           |      |                   |
| 5 - | SPACER 42" AT 4"         | 14 - | ARCH. DRAWINGS             |      |                   |
| 6 - | STEEL PANEL, SEE PLAN    | 15 - | 2X4 PLAT OUTRIGERS         |      |                   |
| 7 - | AIR CONDITION WOOD       | 16 - | 2" DIA. C.                 |      |                   |
| 8 - | INSULATED 1" PLANKS      | 17 - | 10' 15' 20'                |      |                   |
| 9 - | 2X CONC. SLABTING W/     | 18 - | 12" 16" 2" O.C. (U.N.O.)   |      |                   |
|     | TRUSS AND TO DEL TOP     | 19 - | 2X 4X8'S AT 4" O.C.        |      |                   |
|     | PL. CONC. TO BACKING USE | 20 - | 100'S NAILS AT EACH        |      |                   |
|     | A-36 AT 46" O/C (U.N.O.) |      |                            |      |                   |



- 1.- ROOF SHOTG
- 2.- 2X BLOCKING
- 3.- EDGE NAILING
- 4.- 2X RIDGE BOARD, 1 SIZE DEEPER  
THAN R/R
- 5.- 2X 12 BEAM PER PLAN
- 6.- WALL OR BEAM PER PLAN
- 7.- (3/64 TO NAILS PER R/R TO  
ROAD)
- 8.- (3/64 TO NAILS PER BLOCK TO  
ROAD)
- 9.- APPROVED HANGING W/3(3) 60 TOE  
NAILS PER RAFTER FOR SPAN OF  
10 FT. OR LESS)
- 10.- R/R PER PLAN
- 11.- 12" X 12" ST116 @ 48" OC. - NAIL  
TO R/R
- 12.- SIMPSON ST216 @ 48" OC. - NAIL  
TO R/R
- 13.- STRAPS MAY BE OVER OR UNDER  
R/R
- 14.- CENTER BUTT JOINT OVER HEARING  
BEAM
- 15.- WALL OR BEAM BELOW  
R/R OR P/F PER PLAN
- 16.- 2X 12 MIN. HEARING
- 17.- 3 @ 1/2" MIN. LAP
- 18.- (2) 16d's
- 19.- 2X 24 MIN. SIDE JOINT
- 20.- 2X JOINT DEPTH SPEC W/4
- 21.- 2X 24 MIN. SIDE JOINT
- 22.- (4) 16d's



- 1.- BOTTOM CHORD OF TRUSSES
- 2.- CL/G DRYWALL
- 3.- SMDP. STC @ 24" O.C.
- 4.- SMDP. STC PER TRUSS
- 5.- 1X4 OVER 2X4 TOP PLATE TO  
CREATE 5/4" GAP
- 6.- WALL FINISH
- 7.- 2X 12 NON-BF'G WALL
- 8.- FLOOR TRUSS BY MFR
- 9.- 2X4 BLK'G @ 32" O.C. W/2-16d's  
PER TRUSS
- 10.- 16d's @ 12" O.C.
- 11.- CL/G JOIST
- 12.- TYP. EDGE NAILING
- 13.- 2X2X CONT.
- 14.- 2X2X BLK'G

**DRILLING & NOTCHING DETAILS**

10. - MAX. 40% OF THE STUD WIDTH OR ANY STUD. MAX. 60% OF THE STUD WIDTH IN NON-BEARING PORTIONS OR IN ALL CASES WHERE EACH SIDE IS DOUBLED, (MAX. 75 DBL STUD).
11. - MIN. 5/8" C.R. TO EDGE
12. - STMP. NS-2 EA. SIDE OF PLATE ○ HOLE UP TO 1 5/4" DIA.
13. - STMP. ST6224 OR ST625-40N. (6) NAILS TO EA. SIDE NOTCH
14. - IF NOTCH OR HOLE EXCEEDS 50% OF PL. WIDTH, USE ST STRAP ○ EA. SIDE OF PL.
15. - A.B.'S PER PLAN
16. - IF NOTCH OR HOLE EXCEEDS 1/3 OF PL. WIDTH, LOCATE A.B. WITHIN 12" OF EACH SIDE OF NOTCH OR HOLE



NOTE  
WHERE SILL PLATE  
IS NOTCHED OR  
DRILLED MORE THAN  
(1/5) THE WIDTH OF  
THE PLATE A.B.'S  
SHALL BE PLACED  
(8") EA. SIDE OF CUT.

2x OR 3x SILL PLATE W/ 5/8"  
x 12" LG. ANCHOR BOLTS  
AND 8" x 3" x 0.225" SQ.  
WASHER

**FOR USE WHEN SPECIFIC  
DETAILS ARE NOT CALLED OUT**

REGISTERED PROFESSIONAL ENGINEER  
RICHARD J. WELLS  
No. 67927  
CIVIL  
STATE OF CALIFORNIA

The contractor shall verify and be responsible for all dimensions and conditions on the job and this office must be notified in writing of any variation from the dimensions and conditions shown by these drawings.

PREPARED FOR:

**648 51ST ST  
SAN DIEGO, CA 92114**

SHEET TITLE

TYPICAL FRAMING  
DETAILS

SCALE NTS  
DRAWN BY GAD  
CHECKED BY KMK  
START DATE \_\_\_\_\_  
JOB NO. \_\_\_\_\_

**S-4**