



North elevation / front of the main residence



South elevation & west elevation of the utility room / carport



West elevation / side of the main residence



Utility room north elevation & house east elevation

Plumbing Requirements

1. Provide a 30" clear width and 24" clear space in front of the water closet. [CPC 402.5]
2. Showers are to have a minimum interior area of 1024 square inches and shall be capable of encompassing a 30 inch circle. [CPC 408.6]

Mechanical Requirements

(Warm-Air Furnaces - General Requirements)

1. Every dwelling unit shall be provided with heating facilities capable of maintaining a minimum room temperature of 68 degrees F at a point 3 feet above the floor and 2 feet from exterior walls in all habitable rooms. [CRC R303.9]
2. Provide 30 inch deep unobstructed working space in front of warm-air furnace. [CMC 304].
3. Provide a 42" high guard where any portion of rooftop equipment is less than 6 feet from the edge of a roof or similar hazard. [CMC 303]
4. Access opening to attic or under floor furnace shall be no more than 20 feet from furnace. [CMC 904.10].
5. Provide protection from damage to furnace or other gas-fired equipment by automobiles, at rear of garage. Pilots, burners, or heating elements shall be 18" minimum above floor. [CMC 305].

Smoke Detector / Carbon Monoxide Alarms

1. Provide 120 volt hard-wired, interconnected smoke alarms: (with battery back-up) at all new construction per CRC R314.3. They are to be provided:
In each sleeping room(s).
On the wall or ceiling outside each separate sleeping area in the immediate vicinity of the bedrooms. Minimum of (1) detector in each story including basements and habitable attics (with alarm audible in sleeping rooms).

2. Smoke alarms:
 - shall be placed a minimum of 20 feet horizontally from a permanently installed cooking appliance unless listed for that use (Exceptions: Ionization smoke alarms with an alarm silencing switch or photoelectric smoke alarms may be installed 10 feet or greater from a permanently installed cooking appliance; photoelectric smoke alarms may be installed 6 feet or greater from a permanently installed cooking appliance where the kitchen or cooking area and adjacent spaces have no clear interior partitions and the 10 foot distance would prohibit the placement of a smoke alarm or smoke detector required by other sections of the code)
 - shall, where possible, not be placed within 3 feet horizontally of a door to a bathroom that contains a bathtub or a shower
 - where stairs lead to other occupied levels, shall be located so that smoke rising in the stairway cannot be prevented from reaching the smoke alarm or smoke detector by an intervening door or obstruction
 - for basements shall be located on the basement ceiling near the entry to the stairs
 - for tray-shaped ceilings (coffered ceilings), shall be installed on the highest portion of the ceiling or on the sloped portion of the ceiling within 12 inches vertically down from the highest point
 - for sloped ceilings with beams running up the slope, shall be placed on the ceiling between beams
 - for sloped ceilings with beams running parallel to the ridge or for sloped ceilings with beam pockets formed by intersecting beams, shall be located at the bottom of the beam
3. When an addition or alteration valuation exceeds \$1,000.00, smoke detectors are required to be installed in existing sleeping rooms and areas providing access to sleeping areas in addition to those required for new construction (CRC R314.6). Unless the repair or remodel does not involve the removal of wall and ceiling finishes and there is no means of access by means of an attic, basement, or crawlspace, alarms are to be interconnected such that activation of one alarm shall activate all of the alarms in that individual unit. They are to be provided:
 - In each sleeping room(s).
 - On the wall or ceiling outside each separate sleeping area in the immediate vicinity of the bedrooms.
 - Minimum of (1) detector in each story including basements and habitable attics (with alarm audible in sleeping rooms).
4. Per CRC R315, provide 120 volt hard-wired, interconnected Carbon Monoxide Alarm (with battery back-up) at all new dwelling units and in sleeping units within which fuel-burning appliances are installed and in dwelling units or sleeping units that have attached garages. Alarms are to be interconnected such that activation of one alarm shall activate all of the alarms in that individual unit. They are to be provided:
Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s)
On every level of a dwelling unit including basements
5. When an addition or alteration valuation exceeds \$1,000.00, Carbon Monoxide Alarm (with battery back-up) at all new dwelling units and in sleeping units within which fuel-burning appliances are installed and in dwelling units or sleeping units that have attached garages (CRC R315.2). Unless the repair or remodel does not involve the removal of wall and ceiling finishes and there is no means of access by means of an attic, basement, or crawlspace, alarms are to be interconnected such that activation of one alarm shall activate all of the alarms in that individual unit. They are to be provided:
Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s)
On every level of a dwelling unit including basements

Energy Conservation Requirements

(Lighting - Rooms other than bathrooms, garages, laundry rooms and utility rooms)

1. All interior residential lighting is to be high efficacy. Luminaires with integral sources (e.g., LED luminaires) and changeable lamps must be CEC certified as meeting the requirements of JA8. (Note: Listing of CA certified fixtures is located on the California Energy Commission website at the following hyperlink: <http://appliances.energy.ca.gov/advancedsearch.aspx>.)
2. Lighting not automatically classified as high efficacy by the CA Energy Commission (e.g., pin-based fluorescent luminaires, pulse-start halide luminaires, high pressure sodium luminaires) is to have a light source or lamp installed in them at the time of inspection that meets the requirements of Joint Appendix JA8.
3. Recessed downlighting is to contain light sources that are JA8-certified, shall not contain screw based lamps and shall not contain light sources that are labeled "not for use in enclosed fixtures" or "not for use in recessed fixtures". They shall be listed for zero clearance, have a label that certifies the luminaire as airtight when tested in accordance with ASTM E283 (with the exception of exhaust fan housings) and be readily accessible for ballast or driver maintenance and replacement.
4. Except for closets less than 70 square feet and hallways, all luminaires that are installed with JA8-certified light sources are required to be controlled by either a dimmer or vacancy sensor.
5. The number of electrical boxes located more than 5 feet above finished floor that do not contain a luminaire or other device shall not exceed the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor or fan speed control. [California Energy Code Section 150 (k) 1 (B)]

(Lighting - Bathrooms, garages, laundry rooms and utility rooms)

6. At least one luminaire each bathroom, garage, laundry room, and utility room shall be controlled by a manual on/automatic-off vacancy sensor. [California Energy Code Section 150 (k) 2 (J)]

(Outdoor Lighting)

7. Outdoor lighting permanently mounted to a single family dwelling or other buildings in the same lot shall be high efficacy and must be controlled by an on/off switch that does to override to ON the items listed below. Also, the lighting must by one of the following methods:

- i) Controlled by photocell and motion sensor. Controls that override to ON shall not be allowed unless the override automatically reactivates the motion sensor within 6 hours, or
- ii) Controlled by any of the following:
 - (1) Photocell and automatic time switch control. Controls that override to ON shall not be allowed unless the override automatically return the photocontrol and automatic time switch control to its normal operation within 6 hours, or
 - (2) Astronomical time clock. Controls that override to ON shall not be allowed unless the override automatically return the astronomical clock its normal operation within 6 hours and which is programmed to automatically turn the outdoor lighting OFF during daylight hours, or
 - (3) Energy management control system which meets all of the following requirements. At a minimum provides the functionality of an astronomical time clock in accordance with Section 110.9 of the standards; meets the Installation Certification requirements in Section 130.4n within of the standards; meets the requirements for an EMCS in Section 130.5 of the standards; does not have an override or bypass switch that allows the luminaire to be always ON; and, is programmed to automatically turn the outdoor lighting OFF during daylight hours.

(ECAP Measures - Santa Barbara County)

8. (September 1, 2015) For new single family residences, please note on the plans that two minimum 1" diameter metallic conduits be provided that originate at a readily accessible attic location with proximity to a solar zone area complying with California Energy Code Section 110.10 and terminate at a minimum 4" square approved electrical junction box located within 72" horizontally and 12" vertically of a main electrical panel. The electrical junction box and the segment of conduit run in the attic shall be permanently and visibly marked as "FOR FUTURE SOLAR PHOTOVOLTAIC". [Santa Barbara County Energy and Climate Action Plan (ECAP) Ordinance 15ORD-00

Roofing / Attic Access

1. Provide minimum 22"x 30" access to attics that exceed 30 square feet in area and have a vertical height of 30 inches or greater (30" x 30" if FAU or water heater is to be in attic.) [CRC R807]

Receptacles-Arc-Fault/Tamper/GFCI Requirements

1. Unless in accordance with CEC 210.12 (A) Exception 1, 2, or 3, all 120-volt, single phase, 15 and 20 ampere branch circuits supplying outlets installed in dwelling unit family room, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways or similar rooms or areas shall be protected by a listed arc-fault/branch circuit interrupter, combination type, installed to provide protection of the branch circuit. A general note on the electrical plan is adequate. [CEC 210.12].
2. Where branch-circuit wiring is modified, replaced or extended in areas specified in CEC 210.12(A), the branch circuit shall be protected by either a listed combination-type AFCI located at the origin of the branch circuit or a listed outlet branch-circuit type AFCI located at the first receptacle of the existing branch circuit. Please note this on plans. [CEC 210.12 (B)]
3. All non-locking type 125-volt, 15 and 20 ampere receptacles in a dwelling unit shall be listed tamper-resistant receptacles. (Exceptions: (1) receptacles more than 5'-6" above the floor, (2) receptacles part of a luminaire or appliance, (3) a single receptacle or a duplex receptacle for two appliances that are not easily moved and located within dedicated space and are chord-and-plug connected as per CEC 400.7, and (4) non-grounding receptacles used for replacements as permitted in CEC 406.4 (D) (2) (a). A general note on the electrical plan is adequate. [CEC 406.12].

Electrical Requirements (NEC)

1. A 30" wide x 36" deep unobstructed clearance must be provided in front of electrical panels and/or sub-panels. Revise plans accordingly. [CEC 110.26].
2. Electrical panels and/or sub-panels are not permitted in the vicinity of easily ignitable material, such as in a clothes closet. They are also not permitted in bathrooms of residential occupancies. Revise plans accordingly. [CEC 240.24(D)(E)].
3. Electrical panels and/or sub-panels are not permitted over steps of a stairway. Revise plans accordingly. [CEC 240.24(F)].
4. Electrical receptacle location/spacing is to be in accordance with the California Electrical Code. Receptacles are required at wall spaces 2 feet or wider, not more than 6 feet from openings, not more than 12 feet on center. These receptacles are in addition to any receptacle that is part of a luminaire, appliance, controlled by a switch or located within cabinets or cupboards. Note that fixed glazing panels are considered wall space for purposes of this code section. [CEC 210.52(A)(1)(2)].
5. In kitchen, pantries, breakfast rooms, dining rooms and similar areas, countertop receptacles are required at each section of countertop 12" or wider. Receptacles are to be spaced such that no point along the wall line is more than 24" measured horizontally from a receptacle outlet in that space. Countertop space shall be considered continuous when the space is 12" or deeper behind a sink, countertop cooking unit or range placed parallel to a wall or 18" or deeper behind a sink, countertop cooking unit or range placed in a corner configuration (the 18" is measured to the inside corner of the wall along a line that is perpendicular to the rear of the sink, countertop cooking unit or range). [CEC 210.52(C)].
6. Provide a minimum of (1) waterproof/GFCI outdoor receptacle at front and rear of structure. All exterior outlets shall be waterproof/GFCI outdoor receptacles. [CEC 210.52 (E)(1)].
7. At least one receptacle outlet, in addition to those required for specific equipment, shall be installed in each basement, in each attached garage, and in each detached garage and/or accessory building with electric power. [CEC 210.52 (G)(1)].
8. In garages at least one receptacle outlet shall be installed for each car space. [CEC 210.52 (G)(1)].
9. Branch circuits supplying garage receptacle(s) shall not supply outlets outside of the garage. [CEC 210.52 (G)(1)].
10. At least one receptacle outlet shall be installed in each hallway 10 feet or more in length (hallway length shall be considered the length along the centerline of the hallway without passing through a doorway). [CEC 210.52(H)]
11. Receptacle outlets are required within 3' of the outside edge of each basin and shall be located on the wall or partition adjacent to the basin or in the countertop. Countertop receptacles must be listed for that use. Receptacles are to be GFCI protected. [CEC 210.52]
12. Provide a waterproof/GFCI outdoor receptacle within the perimeter of balconies, decks and porches that are attached to a dwelling unit and are accessible from the inside of the dwelling unit with a usable area greater than 20 square feet. [CEC 210.52 (E)(3)].
13. Provide a GFCI 15 or 20 amp receptacle at unfinished basement in addition to those specific for equipment. [CEC 210.52(G)]
14. Provide AIR conditioning unit with anchored seismic strapping on min. 4" concrete slab 3" above grade. Indicate (1) GFI/WP outlet within 20 feet of unit and a disconnect switch by the unit. [CEC 210.63]
15. All kitchen countertop receptacles are to be GFCI protected. Receptacles within 6 feet of the outside edge of any sink, bathtub or shower stall and laundry areas are to be GFCI protected. [CEC 210.8]
16. All receptacles in bathrooms to be GFCI protected. [CEC 210.8].
17. Receptacles on undedicated circuits in garage and basements to be GFCI protected. [CEC 210.8]

Receptacles Wet Locations

1. All receptacles in damp or wet locations (WP) shall be a listed weather-resistant type and be GFCI. [CEC 406.9].

Lighting Fixtures - General Requirements / Locations

1. Provide a minimum of one wall switch controlled lighting outlet in every habitable room: bathroom, hallways, stairways, attached garages, detached garages with electrical power and every outdoor entrance or exit which provides grade level access. [CEC 210.70].
2. Where one or more lighting outlets are installed at interior stairways, there shall be a wall switch at each floor level. Any landing level that includes an entry way where the stairway between floor levels has six or more risers shall also be provided with a switch. [CEC 210.70]

Lighting Fixtures - Wet Locations

1. Lighting fixtures in a hydro-massage tub/spa shall be recessed, nonmetallic and GFCI protected if within 76" of the maximum water level.

Electric Vehicle Charging Stations

1. New one- and two- family dwellings with attached private garages are to comply with Section A4.106.4.1 and Section A4.106.4.1.1 of the California Green Building Standards Code to facilitate future installation and use of EV chargers. For each dwelling unit, install a minimum 1" inside diameter listed raceway to accommodate a dedicated 208/240v branch circuit. Raceway shall originate at main or sub panel and terminate in a listed box in close proximity to the proposed EV charger location. Raceways must be continuous at enclosed, inaccessible, or concealed spaces. Service panel shall provide capacity to install 40 amp minimum dedicated branch circuit and spaces reserved to permit installation of a branch circuit overcurrent device, identify the reserved space and raceway termination for future EV as "EV CAPABLE." [Santa Barbara County (SBCO) Building Ordinance No. 4922]

California Green Building Standards Code

1. Mandatory provisions of Chapter 4 of the California Green Building Standards Code apply to additions or alterations of existing residential buildings where the addition or alteration increases the buildings conditioned area, volume or size. The requirements apply only to and/or within the specific area of the addition or alteration. Please address in plans as applicable. [CGBSC 301.1.1]
2. An approved County sorting/recycling facility must be utilized for construction waste management to comply with Construction Waste Reduction, Disposal and Recycling provisions of California Green Building Standards Code Section 4.408.1. Please list the approved waste management company on the cover sheet of the plans. Alternatively, a complete Construction Waste Management (CSM) Plan shall be submitted and approved prior to issuance. Contact the plans examiner for proper forms to be filled out if a CSM is to be utilized. [CGBSC 4.408]
3. Provide a note on the plans stating that at the time of final inspection, a manual, compact disc or web based reference shall be placed in the building. This manual shall include all of the items listed on California Green Building Standards Code Section 4.410.1. [CGBSC 4.410]
4. Residences built and available for use on or before January 1, 1994 undergoing alterations and/or additions are to replace all non-compliant plumbing fixtures with water-conserving plumbing fixtures. Non-compliant plumbing fixtures are as follows: (1) any toilet manufactured to use more than 1.6 gallons of water per flush, (2) any urinal manufactured to use more than one gallon of water per flush, (3) showerhead manufactured with a flow capacity of more than 2.5 gallons of water per minute, (4) any interior faucet that emits more than 2.2 gallons of water per minute. Please indicate this on the plans. [CGBSC 301; California Civil Code Section 1101.1]
5. Water closets, showerheads and lavatory faucets are to be water-conserving type plumbing fixtures and meet the following criteria: (1) the effective flush of water closets shall not exceed 1.28 gallons per flush, (2) showerheads shall have a maximum flow rate of 2.0 gallons per minute at 80 psi, (3) lavatory faucets shall have a maximum flow rate of 1.5 gallons per minute at 60 psi and shall have a minimum flow rate of 0.8 gallons per minute at 20 psi. Please note this on the plans. [CGBSC 4.303]
6. Kitchen faucets shall have a maximum flow rate of 1.8 gallons per minute at 60 psi. Faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. Please note this on the plans. [CGBSC 4.303]
7. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time. Please note this on the plans. (Note: A hand-held shower is to be considered a showerhead for purposes of this provision) [CGBSC 4.303]

Safety Glazing

1. Provide safety glazing in all fixed and operable panels of swinging, sliding and bi-fold doors. Show specific locations of safety glazing in door schedule or on floor plans. [CRC R308.4]
2. Unless there is an intervening wall or other permanent barrier, provide safety glazing in sidelights or windows adjacent to a door where the nearest vertical edge is within a 24 inch arc of the door in a closed position and whose bottom edge is less than 60 inches above the floor or walking surface. Show specific locations of safety glazing in door schedule or on floor plans. [CRC R308.4]
3. Unless protected by a horizontal protective railing at 34 inches to 38 inches above finish floor capable of withstanding a horizontal load of 50 pounds per linear foot, provide safety glazing at fixed or operable panels exceeding 9 square feet where the lower edge of the glazing is less than 18 inches above finish floor, the top edge is more than 36 inches above the floor and there are one or more walking surfaces within 36 inches of the glazing. Show specific locations of safety glazing in door schedule or on floor plans. [CRC R308.4]
4. Provide safety glazing in glass railings or balusters. [CRC R308.4]
5. Provide safety glazing in enclosures for or walls facing hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers where the bottom edge of the glass is less than 60 inches from the floor and within 5 feet of the water's edge. Provide safety glazing in enclosures for or walls adjacent to swimming pools, hot tubs and spas where the bottom edge of the glass is less than 60 inches from the floor and within 5 feet of the water's edge. Show specific locations of safety glazing in door schedule or on floor plans. [CRC R308.4]
6. Fixed or operable glass panels within 36 inches horizontally of the walking surface in stairways, ramps and landings, where the bottom edge of the glass is less than 36 inches above the finish surface, is to be of safety glazing unless protected by a horizontal protective railing with a minimum of 1½" cross sectional height located at 34 inches to 38 inches above finish floor capable of withstanding a horizontal load of 50 pounds per linear foot. Show specific locations of safety glazing in door schedule or on floor plans. [CRC R308.4]
7. Fixed or operable glass panels within 60 inches in any direction from the bottom tread of a stair, where the bottom edge of the glass is less than 36 inches above the finish surface, is to be of safety glazing unless protected by a guard or handrail complying with CRC R312 and the plane of glass is more than 18" from the guard. [CRC R308.4]

Wild-Urban Interface Area Construction

1. Roof covering for structures located within a State or Local Agency Very-High Fire Hazard Severity Zone pursuant CRC Section R327 is to be a fire-retardant roof covering that is at least Class A. Roof covering for structures in the Montecito Fire Protection District is to be fire-retardant roof covering that is at least Class A. Provide listing report number of approved Class A roofing on plans. [CRC R902; Montecito Fire Protection District Ordinance]
2. Roof covering for structures located within a State Agency High Fire Hazard Severity Zone or a Wildland-Urban Interface Fire Area pursuant CRC Section R327 is to be a fire-retardant roof covering that is at least Class A or B. Provide listing report number of approved Class A roofing on plans. [CRC R902]
When provided, valley flashings subject to CRC Section R327 are not to be less than 26 galvanized sheet gauge corrosion resistant metal installed over a minimum 36" wide underlayment consisting of one layer of minimum 72 pound mineral surfaced non-perforated cap sheet complying with ASTM D3909 installed over the combustible decking. [CRC R327.5.3]
3. Roof gutters subject to CRC Section R327 to be provided with means to prevent the accumulation of leaves and debris in the gutter. [CRC R327.5.4]
4. Attic vents on vertical surfaces are to be non-combustible and corrosion resistant. The opening size in any ventilation device or material (such as wire mesh) is to have a minimum opening size of 1/16 inch and maximum opening size not to exceed 1/8 inch. [CRC R327.6]
5. Exterior windows subject to CRC Section R327 are to be multi-pane glazing with a minimum of one tempered pane, or glass block units, or have a fire resistance rating of not less than 20 minutes when tested in accordance with ASTM 257, or conform to the performance requirements of SFM 12-7A-2. Window schedule shall clearly specify how products comply with these requirements (a general note is not adequate). [CRC 327.8]
6. Exterior door assemblies pursuant CRC Section R327 shall conform to the performance requirements of SFM 12-7A-1, shall be of approved noncombustible or ignition-resistant materials, shall be solid core wood having stiles and rails not less than 1½" thick with interior field panel thickness no less than 1¼" thick (except for the exterior perimeter of the raised panel that may taper to a tongue not less than 3/8" thick), or shall have a fire-resistance rating of not less than 20 minutes when tested in accordance with ASTM E 252. Glazing within exterior doors, including garage doors, are to be multi-pane tempered or have a fire resistance rating of not less than 20 minutes, when tested in accordance with ASTM 257, or conform to the performance requirements of SFM 12-7A-2. Door schedule shall clearly specify how products comply with these requirements (a general note is not adequate). [CRC R327.8]



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2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

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

| <div><div>Y</div><div>N/A</div><div>RESPON. PARTY</div></div> <div><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 O₃/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 indicating 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 & 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">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.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 <i>California Code of Regulations</i>, Title 17, commencing with section 94507.<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 <i>California Code of Regulations</i>, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.</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">Manufacturer's product specification.Field verification of on-site product containers.</div> | <div><div>Y</div><div>N/A</div><div>RESPON. PARTY</div></div> <div><p>TABLE 4.504.2 - SEALANT VOC LIMIT (Less Water and Less Exempt Compounds in Grams per Liter)</p><table><thead><tr><th>SEALANTS</th><th>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 colspan="2">SEALANT PRIMERS</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>500</td></tr><tr><td>MARINE DECK</td><td>760</td></tr><tr><td>OTHER</td><td>750</td></tr></tbody></table></div> | SEALANTS | VOC LIMIT | ARCHITECTURAL | 250 | MARINE DECK | 760 | NONMEMBRANE ROOF | 300 | ROADWAY | 250 | SINGLE-PLY ROOF MEMBRANE | 450 | OTHER | 420 | SEALANT PRIMERS | | ARCHITECTURAL | | NON-POROUS | 250 | POROUS | 775 | MODIFIED BITUMINOUS | 500 | MARINE DECK | 760 | OTHER | 750 | <div><div>Y</div><div>N/A</div><div>RESPON. PARTY</div></div> <div><p>TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS_{2,3}</p><p>GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS</p><table><thead><tr><th>COATING CATEGORY</th><th>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 colspan="2">SPECIALTY COATINGS</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 COATINGS¹</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, & 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 & 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 & 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 & 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></div> | COATING CATEGORY | VOC LIMIT | FLAT COATINGS | 50 | NON-FLAT COATINGS | 100 | NONFLAT-HIGH GLOSS COATINGS | 150 | SPECIALTY COATINGS | | ALUMINUM ROOF COATINGS | 400 | BASEMENT SPECIALTY COATINGS | 400 | BITUMINOUS ROOF COATINGS | 50 | BITUMINOUS ROOF PRIMERS | 350 | BOND BREAKERS | 350 | CONCRETE CURING COMPOUNDS | 350 | CONCRETE/MASONRY SEALERS | 100 | DRIVEWAY SEALERS | 50 | DRY FOG COATINGS | 150 | FAUX FINISHING COATINGS | 350 | FIRE RESISTIVE COATINGS | 350 | FLOOR COATINGS | 100 | FORM-RELEASE COMPOUNDS | 250 | GRAPHIC ARTS COATINGS (SIGN PAINTS) | 500 | HIGH TEMPERATURE COATINGS | 420 | INDUSTRIAL MAINTENANCE COATINGS | 250 | LOW SOLIDS COATINGS ¹ | 120 | MAGNESITE CEMENT COATINGS | 450 | MASTIC TEXTURE COATINGS | 100 | METALLIC PIGMENTED COATINGS | 500 | MULTICOLOR COATINGS | 250 | PRETREATMENT WASH PRIMERS | 420 | PRIMERS, SEALERS, & UNDERCOATERS | 100 | REACTIVE PENETRATING SEALERS | 350 | RECYCLED COATINGS | 250 | ROOF COATINGS | 50 | RUST PREVENTATIVE COATINGS | 250 | SHELLACS | | CLEAR | 730 | OPAQUE | 550 | SPECIALTY PRIMERS, SEALERS & UNDERCOATERS | 100 | STAINS | 250 | STONE CONSOLIDANTS | 450 | SWIMMING POOL COATINGS | 340 | TRAFFIC MARKING COATINGS | 100 | TUB & TILE REFINISH COATINGS | 420 | WATERPROOFING MEMBRANES | 250 | WOOD COATINGS | 275 | WOOD PRESERVATIVES | 350 | ZINC-RICH PRIMERS | 340 | <div><div>Y</div><div>N/A</div><div>RESPON. PARTY</div></div> <div><p>TABLE 4.504.5 - FORMALDEHYDE LIMITS¹</p><p>MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION</p><table><thead><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 FIBERBOARD²</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></div> | PRODUCT | CURRENT LIMIT | HARDWOOD PLYWOOD VENEER CORE | 0.05 | HARDWOOD PLYWOOD COMPOSITE CORE | 0.05 | PARTICLE BOARD | 0.09 | MEDIUM DENSITY FIBERBOARD | 0.11 | THIN MEDIUM DENSITY FIBERBOARD ² | 0.13 | <div><div>Y</div><div>N/A</div><div>RESPON. PARTY</div></div> <div><p>CHAPTER 7</p><p>INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS</p><p>702 QUALIFICATIONS</p><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">State certified apprenticeship programs.Public utility training programs.Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.Programs sponsored by manufacturing organizations.Other programs acceptable to the enforcing agency.<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">Certification by a national or regional green building program or standard publisher.Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.Successful completion of a third party apprentice training program in the appropriate trade.Other programs acceptable to the enforcing agency.<p>Notes:</p><ol style="list-style-type: none">Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.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).<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 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></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-----------|-------------------------|---------------|----------------------|-------------|--------------------------|------------------|-------------------------|---------|------------------------|--------------------------|--------------------|-------|------------------------|------------------------|------------------------------|---------------|---------------------------|------------|---------------------|--------|------------------------------------|---------------------|------------------------------|-------------|------------------------------------|-------|----------------------------|---|-------------------------------|-----------|---------------|-----|-------------------|-----|-----------------------------|-----|---------------------------|-----|-----------------------------|-----|-----------------------------|-----|----------------------------------|-----|---------------------------------|-----|---------------------|-----|--|-----|--------------------------|-----|------------------|----|-------------------------------|-----|-------------------------|-----|-------------------------|-----|---|------------------|------------------------|---------------|-------------------------------------|-------------------|---------------------------|-----------------------------|---------------------------------|---------------------------|----------------------------------|------------------------|---------------------------|-----------------------------|-------------------------|--------------------------|-----------------------------|-------------------------|---------------------|---------------|---------------------------|---------------------------|----------------------------------|--------------------------|------------------------------|------------------|-------------------|------------------|---------------|-------------------------|----------------------------|-------------------------|----------|----------------|-------|------------------------|--------|-------------------------------------|---|---------------------------|--------|---------------------------------|--------------------|----------------------------------|------------------------|---------------------------|--------------------------|-------------------------|------------------------------|-----------------------------|-------------------------|---------------------|---------------|---------------------------|--------------------|----------------------------------|-------------------|------------------------------|---|-------------------|---------------|------------------------------|------|---------------------------------|------|----------------|------|---------------------------|------|---|------|---|-----|--------|-----|--------------------|-----|------------------------|-----|--------------------------|-----|------------------------------|-----|-------------------------|-----|---------------|-----|--------------------|-----|-------------------|-----|---|---------|---------------|------------------------------|------|---------------------------------|------|----------------|------|---------------------------|------|---|------|--|
| SEALANTS | VOC LIMIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARCHITECTURAL | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARINE DECK | 760 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONMEMBRANE ROOF | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ROADWAY | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SINGLE-PLY ROOF MEMBRANE | 450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OTHER | 420 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SEALANT PRIMERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARCHITECTURAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NON-POROUS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POROUS | 775 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MODIFIED BITUMINOUS | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARINE DECK | 760 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OTHER | 750 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COATING CATEGORY | VOC LIMIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FLAT COATINGS | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NON-FLAT COATINGS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONFLAT-HIGH GLOSS COATINGS | 150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPECIALTY COATINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ALUMINUM ROOF COATINGS | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BASEMENT SPECIALTY COATINGS | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BITUMINOUS ROOF COATINGS | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BITUMINOUS ROOF PRIMERS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOND BREAKERS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONCRETE CURING COMPOUNDS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONCRETE/MASONRY SEALERS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DRIVEWAY SEALERS | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DRY FOG COATINGS | 150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAUX FINISHING COATINGS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FIRE RESISTIVE COATINGS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FLOOR COATINGS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FORM-RELEASE COMPOUNDS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRAPHIC ARTS COATINGS (SIGN PAINTS) | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HIGH TEMPERATURE COATINGS | 420 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INDUSTRIAL MAINTENANCE COATINGS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOW SOLIDS COATINGS ¹ | 120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MAGNESITE CEMENT COATINGS | 450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MASTIC TEXTURE COATINGS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| METALLIC PIGMENTED COATINGS | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MULTICOLOR COATINGS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRETREATMENT WASH PRIMERS | 420 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRIMERS, SEALERS, & UNDERCOATERS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REACTIVE PENETRATING SEALERS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RECYCLED COATINGS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ROOF COATINGS | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RUST PREVENTATIVE COATINGS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHELLACS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLEAR | 730 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OPAQUE | 550 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPECIALTY PRIMERS, SEALERS & UNDERCOATERS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STAINS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STONE CONSOLIDANTS | 450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SWIMMING POOL COATINGS | 340 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TRAFFIC MARKING COATINGS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TUB & TILE REFINISH COATINGS | 420 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WATERPROOFING MEMBRANES | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WOOD COATINGS | 275 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WOOD PRESERVATIVES | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZINC-RICH PRIMERS | 340 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRODUCT | CURRENT LIMIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HARDWOOD PLYWOOD VENEER CORE | 0.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HARDWOOD PLYWOOD COMPOSITE CORE | 0.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PARTICLE BOARD | 0.09 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEDIUM DENSITY FIBERBOARD | 0.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| THIN MEDIUM DENSITY FIBERBOARD ² | 0.13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div>Y</div><div>N/A</div><div>RESPON. PARTY</div></div> <div><p>TABLE 4.504.1 - ADHESIVE VOC LIMIT_{1,2} (Less Water and Less Exempt Compounds in Grams per Liter)</p><table><thead><tr><th>ARCHITECTURAL APPLICATIONS</th><th>VOC LIMIT</th></tr></thead><tbody><tr><td>INDOOR CARPET ADHESIVES</td><td>50</td></tr><tr><td>CARPET PAD ADHESIVES</td><td>50</td></tr><tr><td>OUTDOOR CARPET ADHESIVES</td><td>150</td></tr><tr><td>WOOD FLOORING ADHESIVES</td><td>100</td></tr><tr><td>RUBBER FLOOR ADHESIVES</td><td>60</td></tr><tr><td>SUBFLOOR ADHESIVES</td><td>50</td></tr><tr><td>CERAMIC TILE ADHESIVES</td><td>65</td></tr><tr><td>VCT & ASPHALT TILE ADHESIVES</td><td>50</td></tr><tr><td>DRYWALL & PANEL ADHESIVES</td><td>50</td></tr><tr><td>COVE BASE ADHESIVES</td><td>50</td></tr><tr><td>MULTIPURPOSE CONSTRUCTION ADHESIVE</td><td>70</td></tr><tr><td>STRUCTURAL GLAZING ADHESIVES</td><td>100</td></tr><tr><td>SINGLE-PLY ROOF MEMBRANE ADHESIVES</td><td>250</td></tr><tr><td>OTHER ADHESIVES NOT LISTED</td><td>50</td></tr><tr><td colspan="2">SPECIALTY APPLICATIONS</td></tr><tr><td>PVC WELDING</td><td>510</td></tr><tr><td>CPVC WELDING</td><td>490</td></tr><tr><td>ABS WELDING</td><td>325</td></tr><tr><td>PLASTIC CEMENT WELDING</td><td>250</td></tr><tr><td>ADHESIVE PRIMER FOR PLASTIC</td><td>550</td></tr><tr><td>CONTACT ADHESIVE</td><td>80</td></tr><tr><td>SPECIAL PURPOSE CONTACT ADHESIVE</td><td>250</td></tr><tr><td>STRUCTURAL WOOD MEMBER ADHESIVE</td><td>140</td></tr><tr><td>TOP & TRIM ADHESIVE</td><td>250</td></tr><tr><td colspan="2">SUBSTRATE SPECIFIC APPLICATIONS</td></tr><tr><td>METAL TO METAL</td><td>30</td></tr><tr><td>PLASTIC FOAMS</td><td>50</td></tr><tr><td>POROUS MATERIAL (EXCEPT WOOD)</td><td>50</td></tr><tr><td>WOOD</td><td>30</td></tr><tr><td>FIBERGLASS</td><td>80</td></tr></tbody></table><p>1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.</p><p>2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.</p></div> | ARCHITECTURAL APPLICATIONS | VOC LIMIT | INDOOR CARPET ADHESIVES | 50 | CARPET PAD ADHESIVES | 50 | OUTDOOR CARPET ADHESIVES | 150 | WOOD FLOORING ADHESIVES | 100 | RUBBER FLOOR ADHESIVES | 60 | SUBFLOOR ADHESIVES | 50 | CERAMIC TILE ADHESIVES | 65 | VCT & ASPHALT TILE ADHESIVES | 50 | DRYWALL & PANEL ADHESIVES | 50 | COVE BASE ADHESIVES | 50 | MULTIPURPOSE CONSTRUCTION ADHESIVE | 70 | STRUCTURAL GLAZING ADHESIVES | 100 | SINGLE-PLY ROOF MEMBRANE ADHESIVES | 250 | OTHER ADHESIVES NOT LISTED | 50 | SPECIALTY APPLICATIONS | | PVC WELDING | 510 | CPVC WELDING | 490 | ABS WELDING | 325 | PLASTIC CEMENT WELDING | 250 | ADHESIVE PRIMER FOR PLASTIC | 550 | CONTACT ADHESIVE | 80 | SPECIAL PURPOSE CONTACT ADHESIVE | 250 | STRUCTURAL WOOD MEMBER ADHESIVE | 140 | TOP & TRIM ADHESIVE | 250 | SUBSTRATE SPECIFIC APPLICATIONS | | METAL TO METAL | 30 | PLASTIC FOAMS | 50 | POROUS MATERIAL (EXCEPT WOOD) | 50 | WOOD | 30 | FIBERGLASS | 80 | <div><div>Y</div><div>N/A</div><div>RESPON. PARTY</div></div> <div><p>TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS_{2,3}</p><p>GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS</p><table><thead><tr><th>COATING CATEGORY</th><th>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 colspan="2">SPECIALTY COATINGS</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 COATINGS¹</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, & 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 & 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 & 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 & 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></div> | COATING CATEGORY | VOC LIMIT | FLAT COATINGS | 50 | NON-FLAT COATINGS | 100 | NONFLAT-HIGH GLOSS COATINGS | 150 | SPECIALTY COATINGS | | ALUMINUM ROOF COATINGS | 400 | BASEMENT SPECIALTY COATINGS | 400 | BITUMINOUS ROOF COATINGS | 50 | BITUMINOUS ROOF PRIMERS | 350 | BOND BREAKERS | 350 | CONCRETE CURING COMPOUNDS | 350 | CONCRETE/MASONRY SEALERS | 100 | DRIVEWAY SEALERS | 50 | DRY FOG COATINGS | 150 | FAUX FINISHING COATINGS | 350 | FIRE RESISTIVE COATINGS | 350 | FLOOR COATINGS | 100 | FORM-RELEASE COMPOUNDS | 250 | GRAPHIC ARTS COATINGS (SIGN PAINTS) | 500 | HIGH TEMPERATURE COATINGS | 420 | INDUSTRIAL MAINTENANCE COATINGS | 250 | LOW SOLIDS COATINGS ¹ | 120 | MAGNESITE CEMENT COATINGS | 450 | MASTIC TEXTURE COATINGS | 100 | METALLIC PIGMENTED COATINGS | 500 | MULTICOLOR COATINGS | 250 | PRETREATMENT WASH PRIMERS | 420 | PRIMERS, SEALERS, & UNDERCOATERS | 100 | REACTIVE PENETRATING SEALERS | 350 | RECYCLED COATINGS | 250 | ROOF COATINGS | 50 | RUST PREVENTATIVE COATINGS | 250 | SHELLACS | | CLEAR | 730 | OPAQUE | 550 | SPECIALTY PRIMERS, SEALERS & UNDERCOATERS | 100 | STAINS | 250 | STONE CONSOLIDANTS | 450 | SWIMMING POOL COATINGS | 340 | TRAFFIC MARKING COATINGS | 100 | TUB & TILE REFINISH COATINGS | 420 | WATERPROOFING MEMBRANES | 250 | WOOD COATINGS | 275 | WOOD PRESERVATIVES | 350 | ZINC-RICH PRIMERS | 340 | <div><div>Y</div><div>N/A</div><div>RESPON. PARTY</div></div> <div><p>TABLE 4.504.5 - FORMALDEHYDE LIMITS¹</p><p>MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION</p><table><thead><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 FIBERBOARD²</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></div> | PRODUCT | CURRENT LIMIT | HARDWOOD PLYWOOD VENEER CORE | 0.05 | HARDWOOD PLYWOOD COMPOSITE CORE | 0.05 | PARTICLE BOARD | 0.09 | MEDIUM DENSITY FIBERBOARD | 0.11 | THIN MEDIUM DENSITY FIBERBOARD ² | 0.13 | <div><div>Y</div><div>N/A</div><div>RESPON. PARTY</div></div> <div><p>DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)</p><p>4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)</p><p>See California Department of Public Health's website for certification programs and testing labs.</p><p>https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.</p><p>4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)</p><p>See California Department of Public Health's website for certification programs and testing labs.</p><p>https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.</p><p>4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.</p><p>4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed, at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)</p><p>See California Department of Public Health's website for certification programs and testing labs.</p><p>https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.</p><p>4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5</p><p>4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:</p><ol style="list-style-type: none">Product certifications and specifications.Chain of custody certifications.Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.Other methods acceptable to the enforcing agency.<p>4.505 INTERIOR MOISTURE CONTROL</p><p>4.505.1 General. Buildings shall meet or exceed the provisions of the <i>California Building Standards Code</i>.</p><p>4.505.2 CONCRETE SLAB FOUNDATIONS. Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section.</p><p>4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following:</p><ol style="list-style-type: none">A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with the concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.Other equivalent methods approved by the enforcing agency.A slab design specified by a licensed design professional.<p>4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:</p><ol style="list-style-type: none">Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.<p>Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.</p><p>4.506 INDOOR AIR QUALITY AND EXHAUST</p><p>4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:</p><ol style="list-style-type: none">Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of adjustment.A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)<p>Notes:</p><ol style="list-style-type: none">For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.Lighting integral to bathroom exhaust fans shall comply with the <i>California Energy Code</i>.<p>4.507 ENVIRONMENTAL COMFORT</p><p>4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:</p><ol style="list-style-type: none">The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Equipment Selection), or other equivalent design software or methods.<p>Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.</p></div> |
| ARCHITECTURAL APPLICATIONS | VOC LIMIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INDOOR CARPET ADHESIVES | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CARPET PAD ADHESIVES | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OUTDOOR CARPET ADHESIVES | 150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WOOD FLOORING ADHESIVES | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RUBBER FLOOR ADHESIVES | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUBFLOOR ADHESIVES | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CERAMIC TILE ADHESIVES | 65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VCT & ASPHALT TILE ADHESIVES | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DRYWALL & PANEL ADHESIVES | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COVE BASE ADHESIVES | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MULTIPURPOSE CONSTRUCTION ADHESIVE | 70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STRUCTURAL GLAZING ADHESIVES | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SINGLE-PLY ROOF MEMBRANE ADHESIVES | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OTHER ADHESIVES NOT LISTED | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPECIALTY APPLICATIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PVC WELDING | 510 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPVC WELDING | 490 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABS WELDING | 325 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PLASTIC CEMENT WELDING | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADHESIVE PRIMER FOR PLASTIC | 550 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONTACT ADHESIVE | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPECIAL PURPOSE CONTACT ADHESIVE | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STRUCTURAL WOOD MEMBER ADHESIVE | 140 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOP & TRIM ADHESIVE | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUBSTRATE SPECIFIC APPLICATIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| METAL TO METAL | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PLASTIC FOAMS | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POROUS MATERIAL (EXCEPT WOOD) | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WOOD | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FIBERGLASS | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COATING CATEGORY | VOC LIMIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FLAT COATINGS | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NON-FLAT COATINGS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONFLAT-HIGH GLOSS COATINGS | 150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPECIALTY COATINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ALUMINUM ROOF COATINGS | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BASEMENT SPECIALTY COATINGS | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BITUMINOUS ROOF COATINGS | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BITUMINOUS ROOF PRIMERS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOND BREAKERS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONCRETE CURING COMPOUNDS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONCRETE/MASONRY SEALERS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DRIVEWAY SEALERS | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DRY FOG COATINGS | 150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAUX FINISHING COATINGS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FIRE RESISTIVE COATINGS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FLOOR COATINGS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FORM-RELEASE COMPOUNDS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRAPHIC ARTS COATINGS (SIGN PAINTS) | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HIGH TEMPERATURE COATINGS | 420 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INDUSTRIAL MAINTENANCE COATINGS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOW SOLIDS COATINGS ¹ | 120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MAGNESITE CEMENT COATINGS | 450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MASTIC TEXTURE COATINGS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| METALLIC PIGMENTED COATINGS | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MULTICOLOR COATINGS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRETREATMENT WASH PRIMERS | 420 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRIMERS, SEALERS, & UNDERCOATERS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REACTIVE PENETRATING SEALERS | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RECYCLED COATINGS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ROOF COATINGS | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RUST PREVENTATIVE COATINGS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHELLACS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLEAR | 730 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OPAQUE | 550 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPECIALTY PRIMERS, SEALERS & UNDERCOATERS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STAINS | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STONE CONSOLIDANTS | 450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SWIMMING POOL COATINGS | 340 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TRAFFIC MARKING COATINGS | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TUB & TILE REFINISH COATINGS | 420 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WATERPROOFING MEMBRANES | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WOOD COATINGS | 275 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WOOD PRESERVATIVES | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZINC-RICH PRIMERS | 340 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRODUCT | CURRENT LIMIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HARDWOOD PLYWOOD VENEER CORE | 0.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HARDWOOD PLYWOOD COMPOSITE CORE | 0.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PARTICLE BOARD | 0.09 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEDIUM DENSITY FIBERBOARD | 0.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| THIN MEDIUM DENSITY FIBERBOARD ² | 0.13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



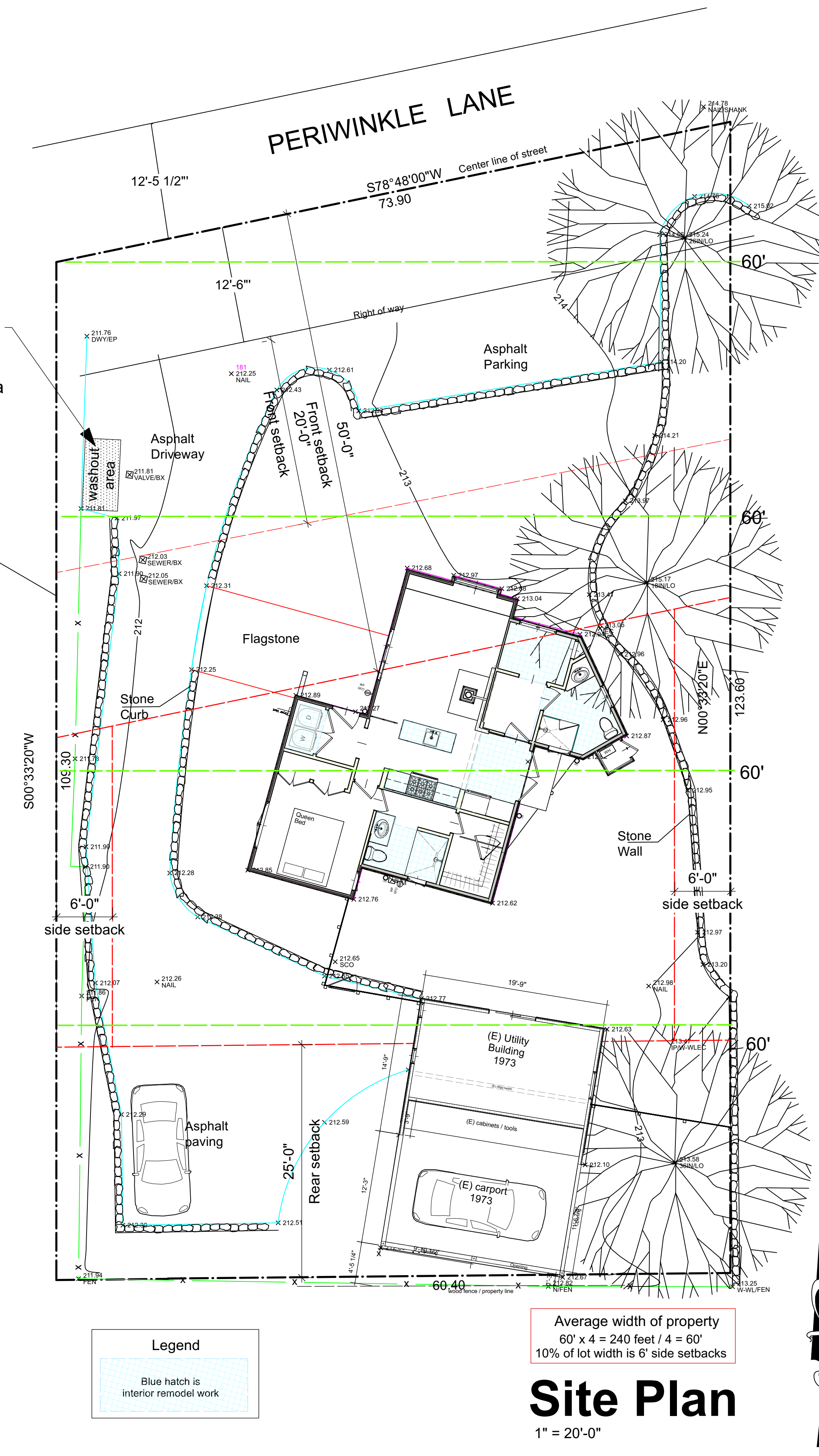
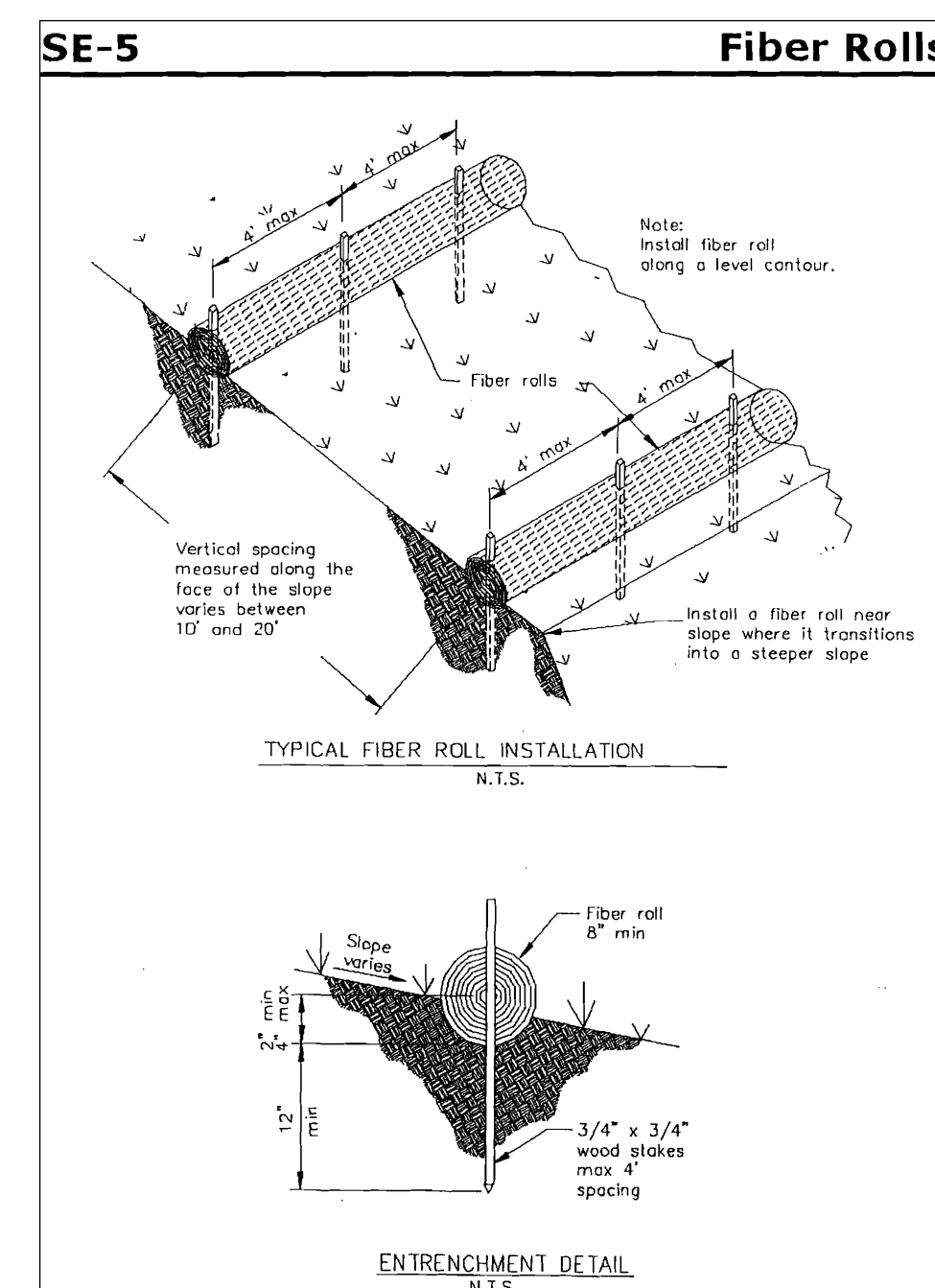
Calvin Design
(805) 969-0559
Sophie Calvin
P.O. Box 50716
Santa Barbara, CA 93150
sophiecalvin@cox.net

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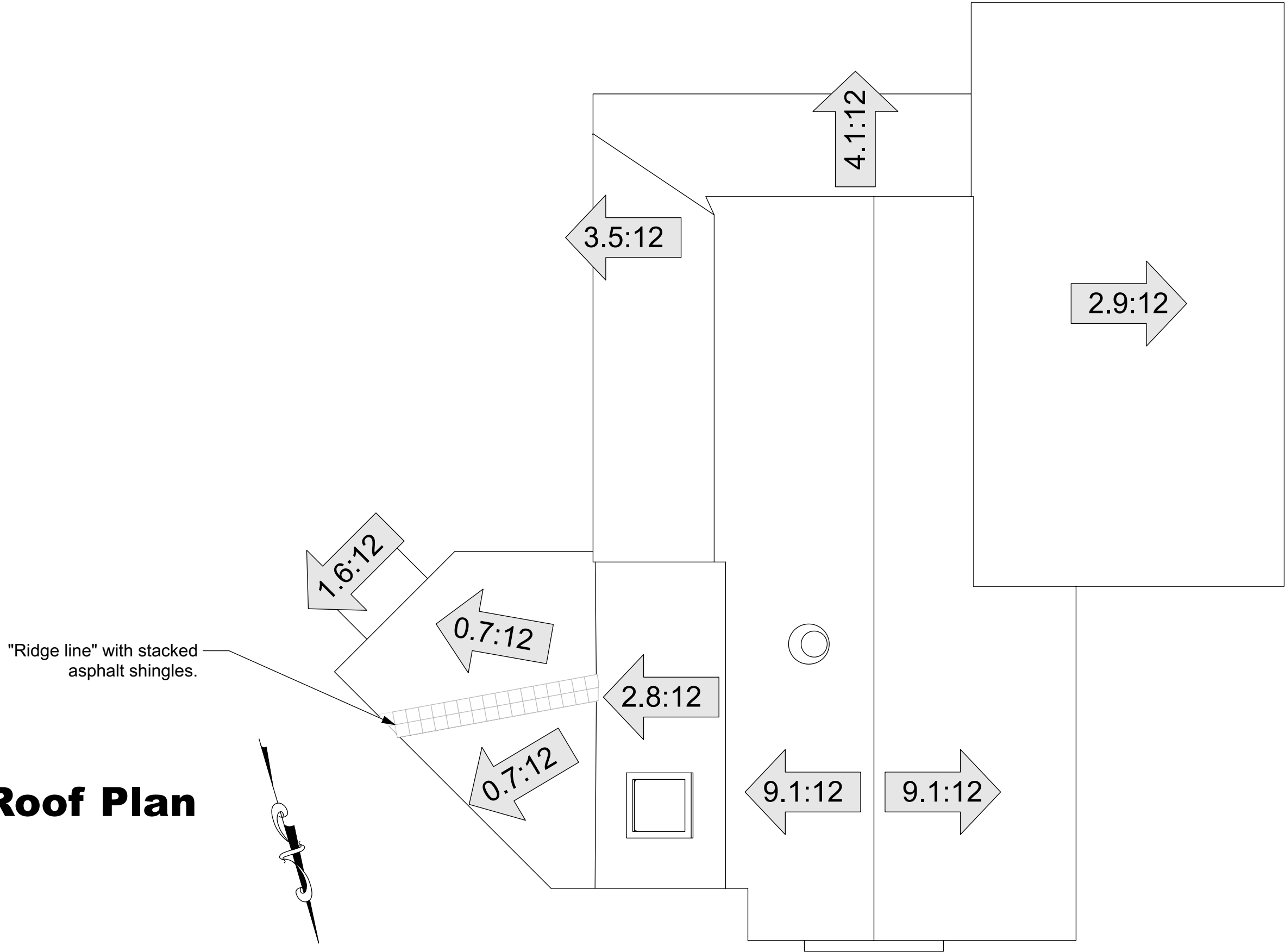


Construction wash out area, appropriate to size of project, to be maintained during construction. Provide multiple layers of heavy duty vinyl sheets or tarps, as required to contain all polluted water and materials for safe removal from site. Provide sand bag dam for complete surround to contain wash out area. Remove and clean surrounding area as required upon construction completion.



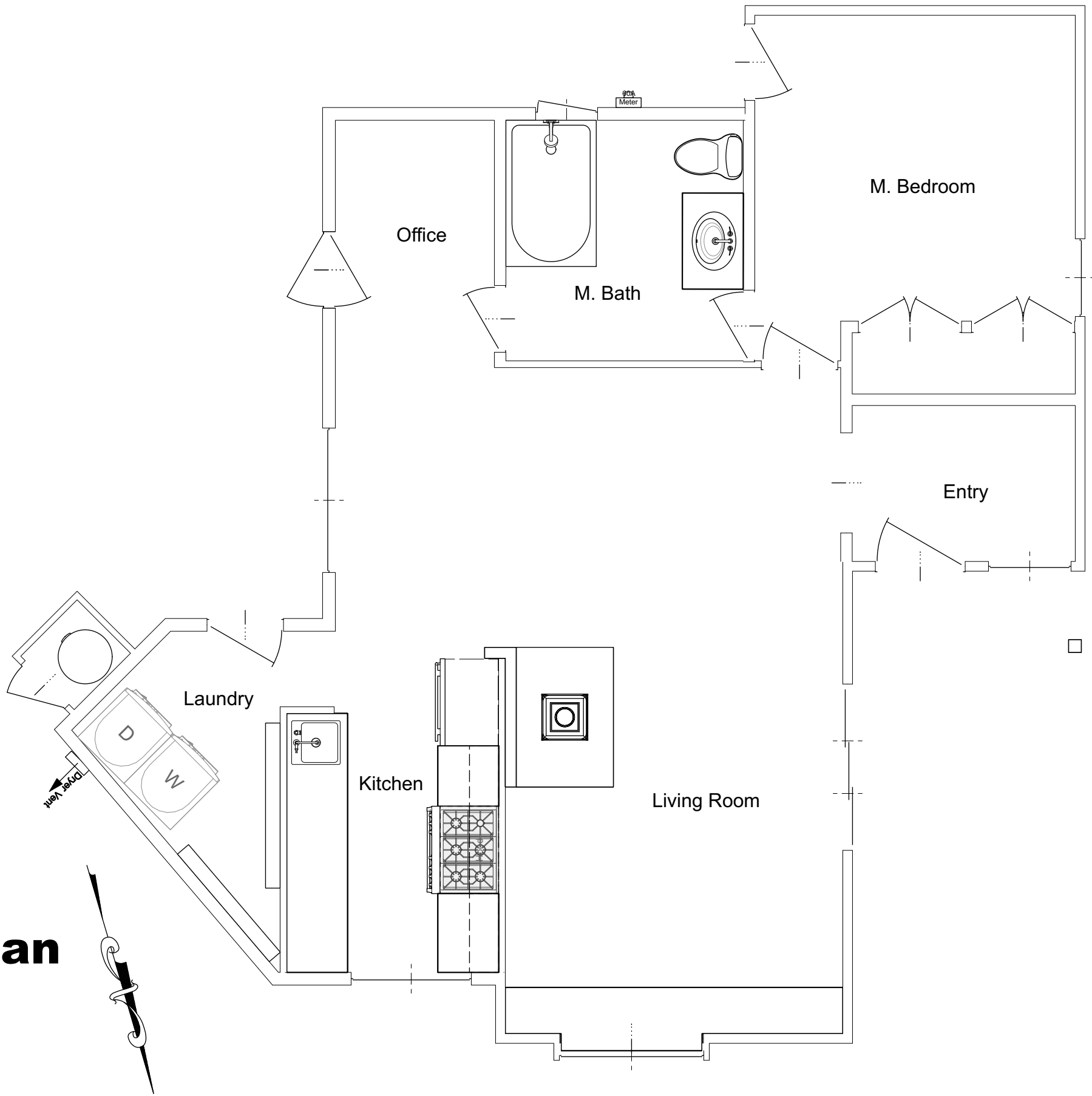
Existing Roof Plan

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



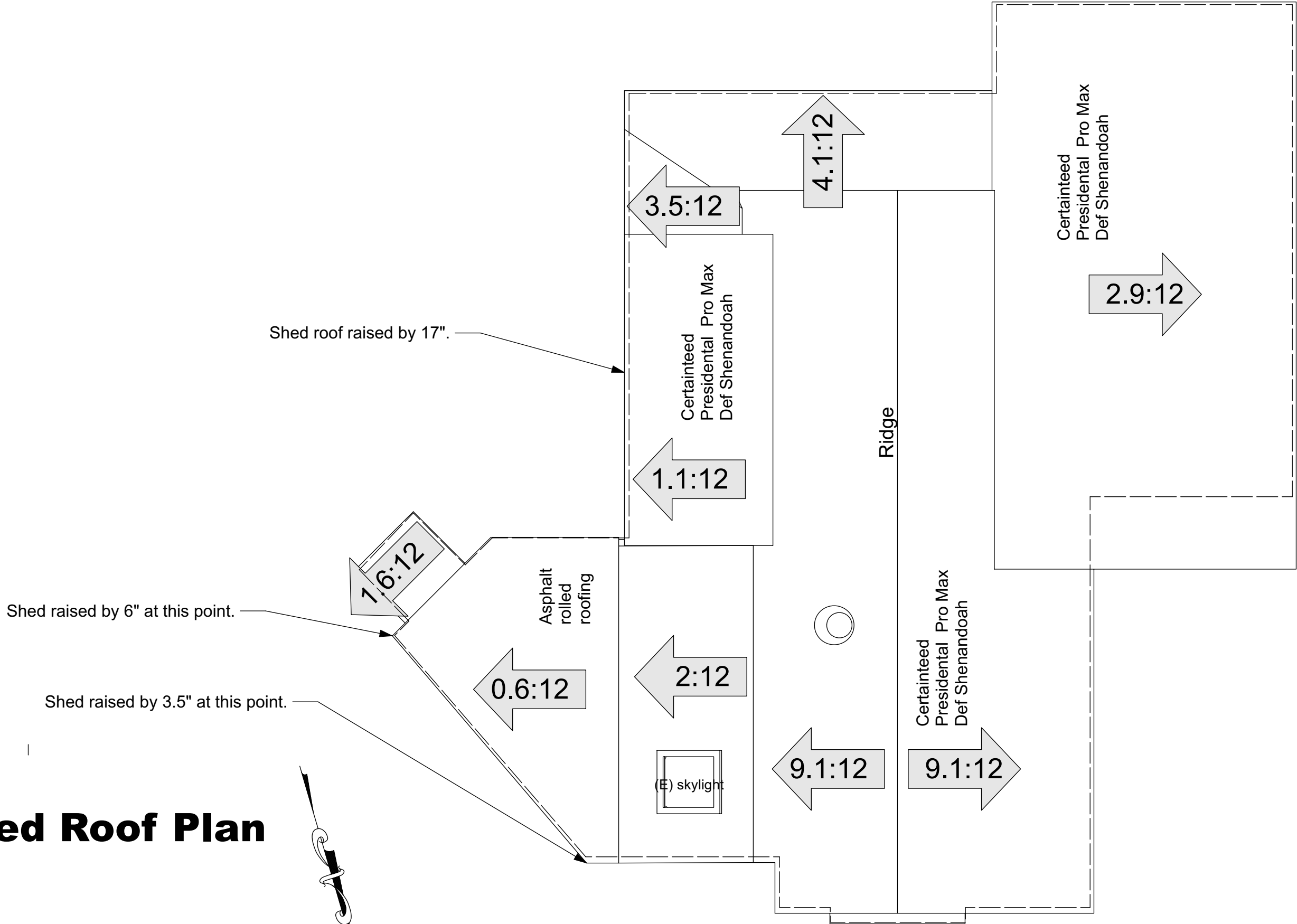
Existing Floor Plan

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



Proposed Roof Plan

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

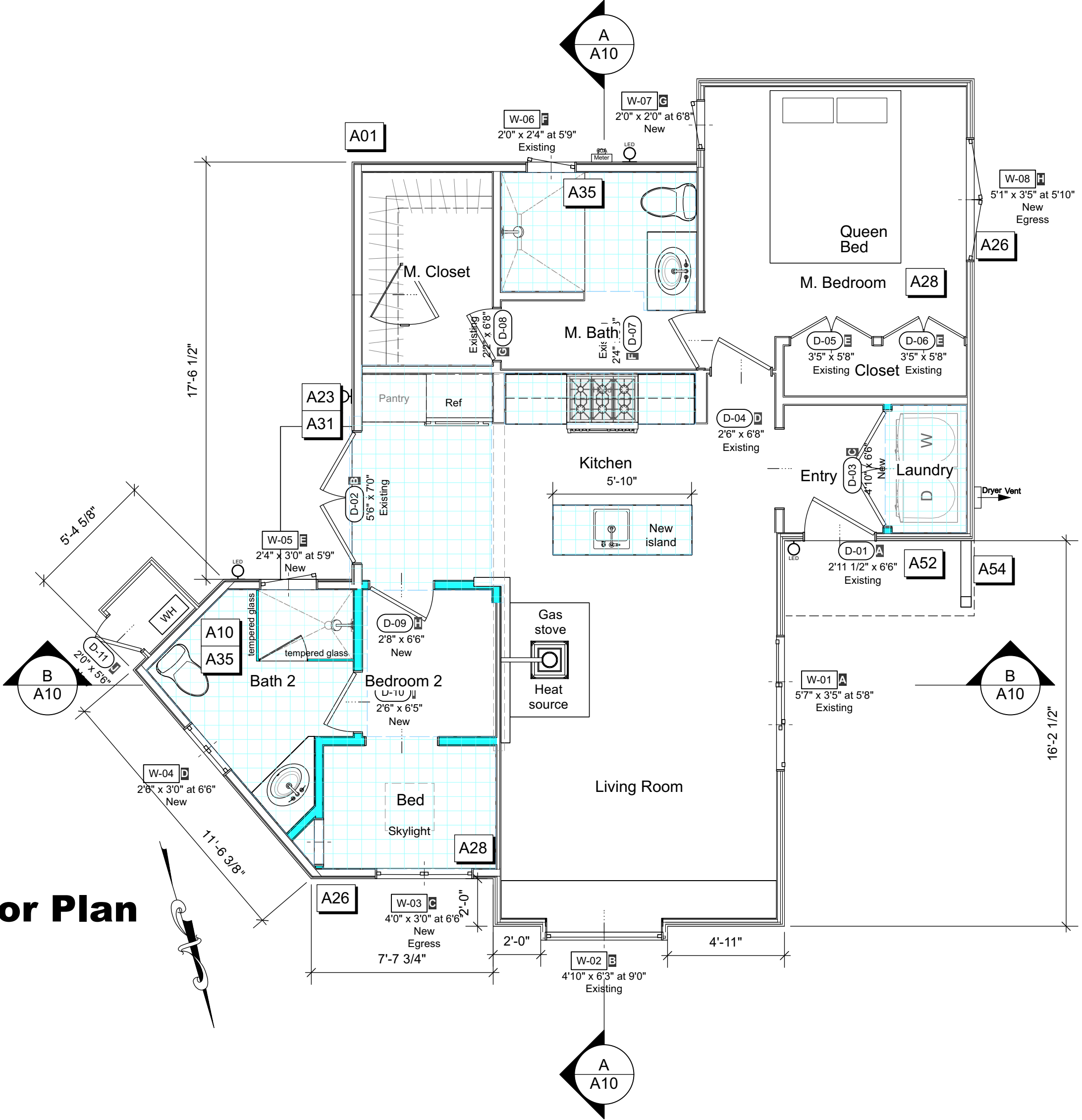


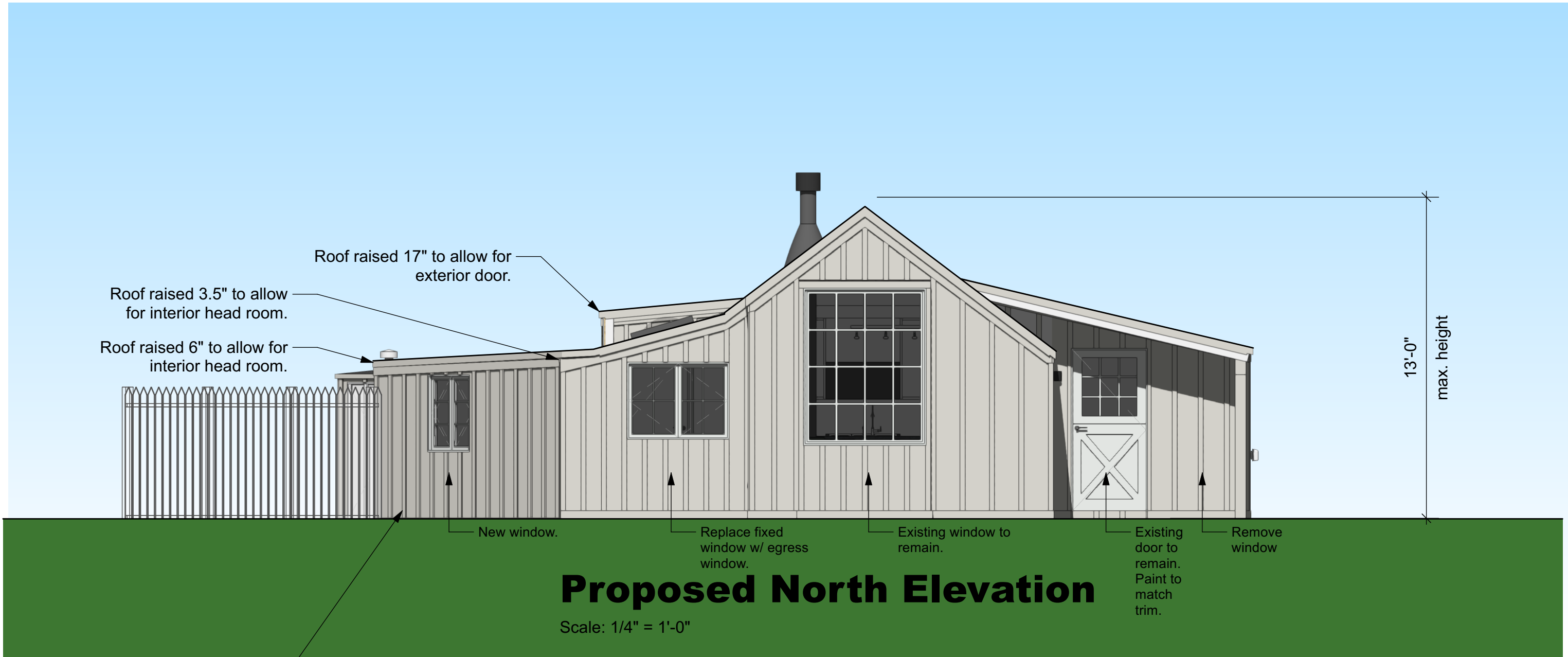
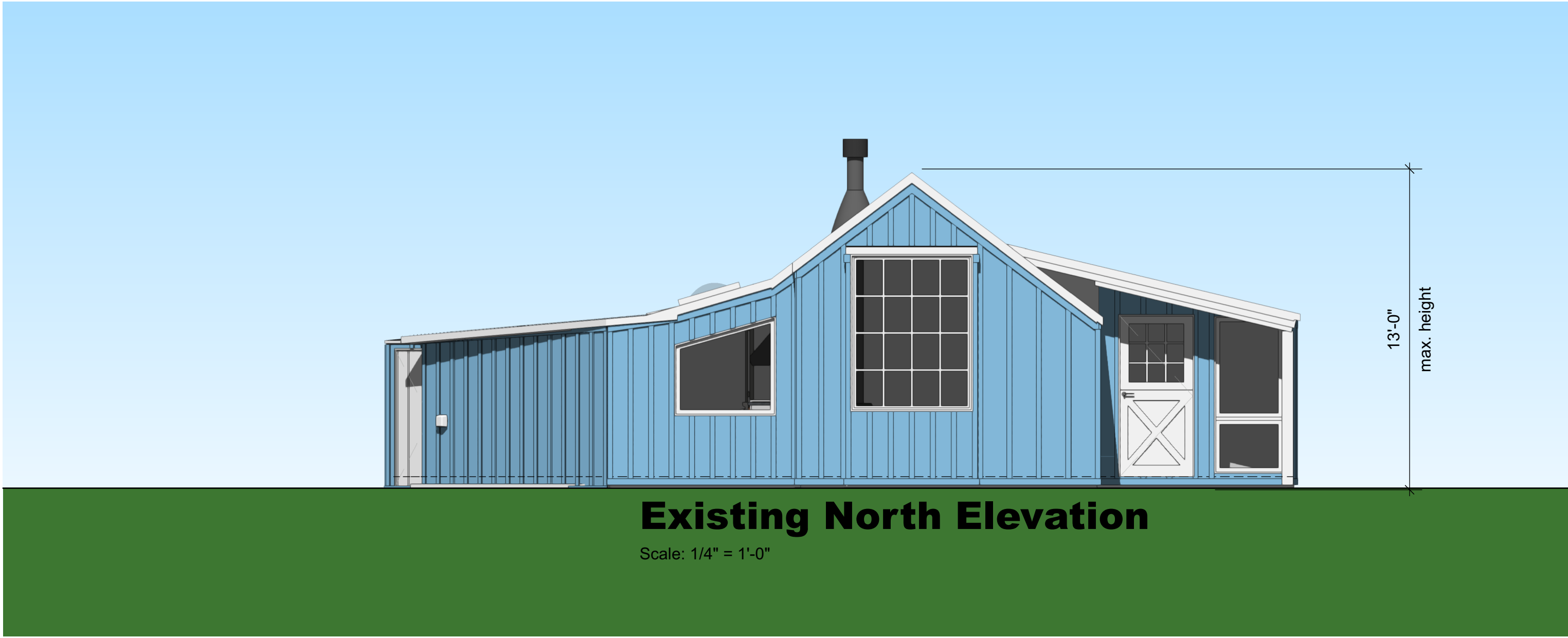
| Natural Light & Ventilation | |
|---|-------------|
| Bedroom 1 | |
| Area | 130.5 sq ft |
| Window Openings | 15 sq ft |
| Window Area / Room Area | 11.5% |
| > 4% (Ventilation) & > 8% (Natural Light) | |

| Natural Light & Ventilation | |
|---|------------|
| Bedroom 2 | |
| Area | 37.5 sq ft |
| Window Opening | 7.5 sq ft |
| Window Area / Room Area | 20.0% |
| > 4% (Ventilation) & > 8% (Natural Light) | |

Proposed Floor Plan

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

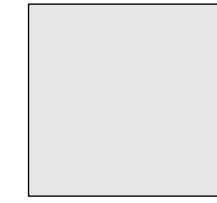




Original board and batten siding to remain. Any replacement board and batten siding shall match the original in material and appearance.

Replacement windows shall match the appearance of the house's historic window types in regard to the type and appearance of glazing bars.

Hinkley Silo 8" High Black LED Outdoor Wall Light (Dark Sky Compliant)



Exterior paint on windows and trim
SW Swiss Coffee



Certainteed
Pro Max Def
Shenandoah



Sherwin-Williams
SW 7028
Incredible White
LRV: 74



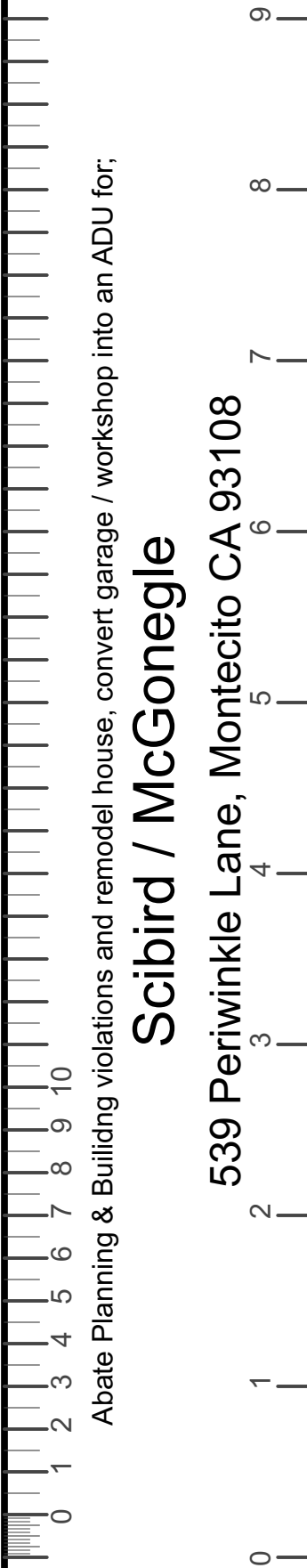
**Calvin
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Abate Planning & Building violations and remodel house, convert garage / workshop into an ADU for;

Scibird / McGonegle

539 Periwinkle Lane, Montecito CA 93108



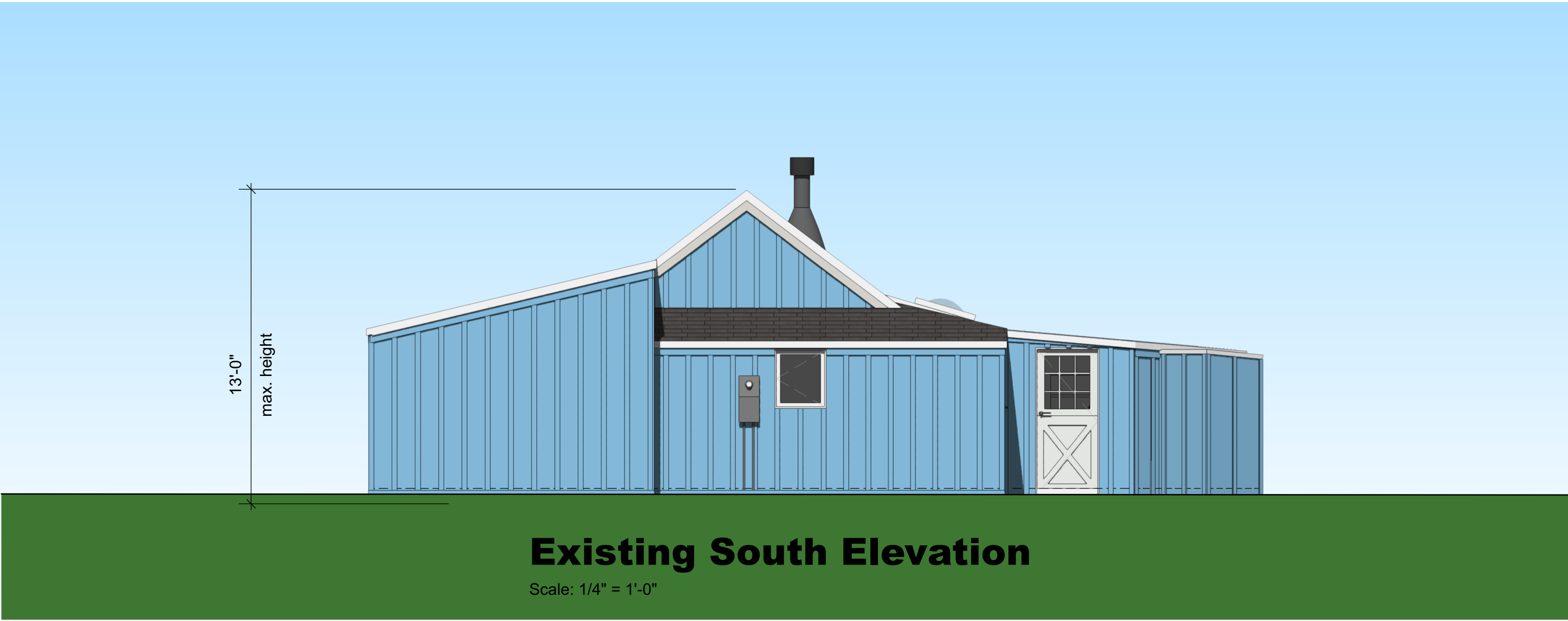
Residence Elevations

April 3, 2024

A8



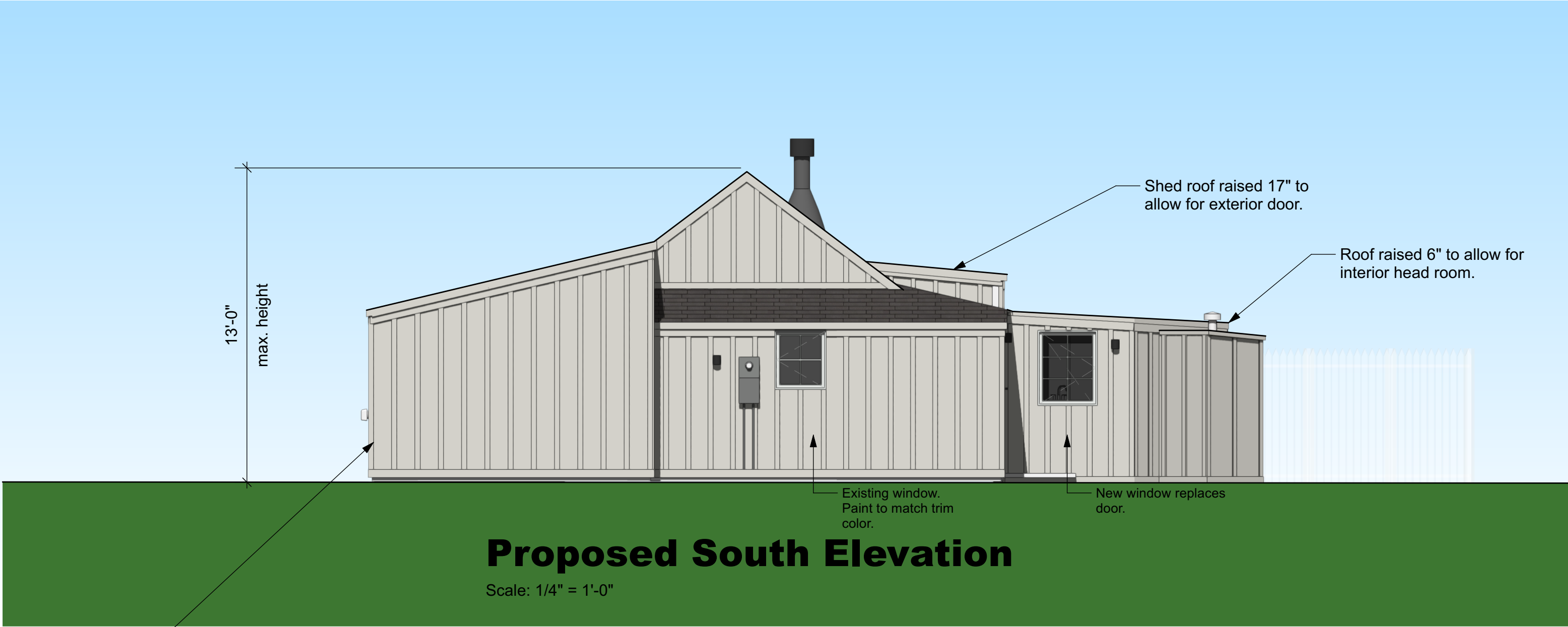
Existing East Elevation
Scale: 1/4" = 1'-0"



Existing South Elevation
Scale: 1/4" = 1'-0"



Proposed East Elevation
Scale: 1/4" = 1'-0"



Proposed South Elevation
Scale: 1/4" = 1'-0"

Original board and batten siding to remain. Any replacement board and batten siding shall match the original in material and appearance.

Replacement windows shall match the appearance of the house's historic window types in regard to the type and appearance of glazing bars.



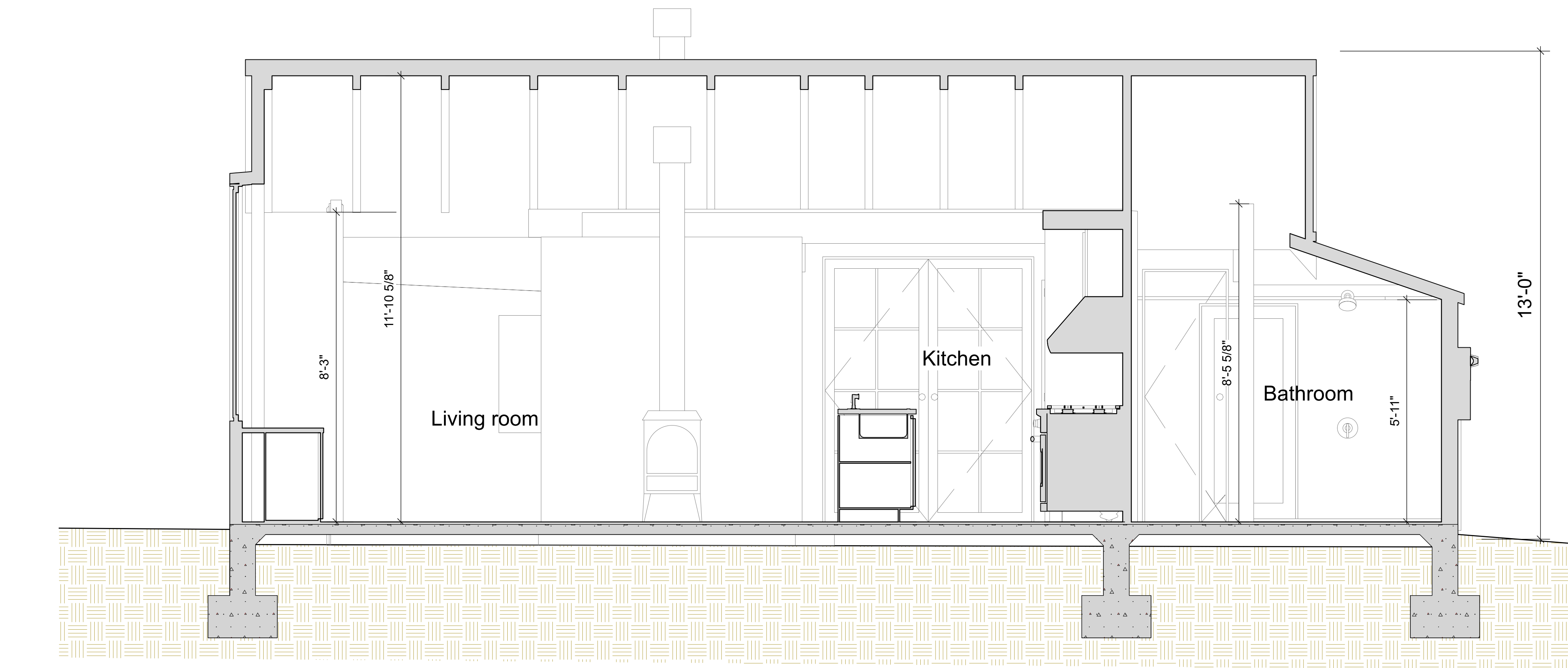
Hinkley Silo 8" High Black LED Outdoor Wall Light (Dark Sky Compliant)



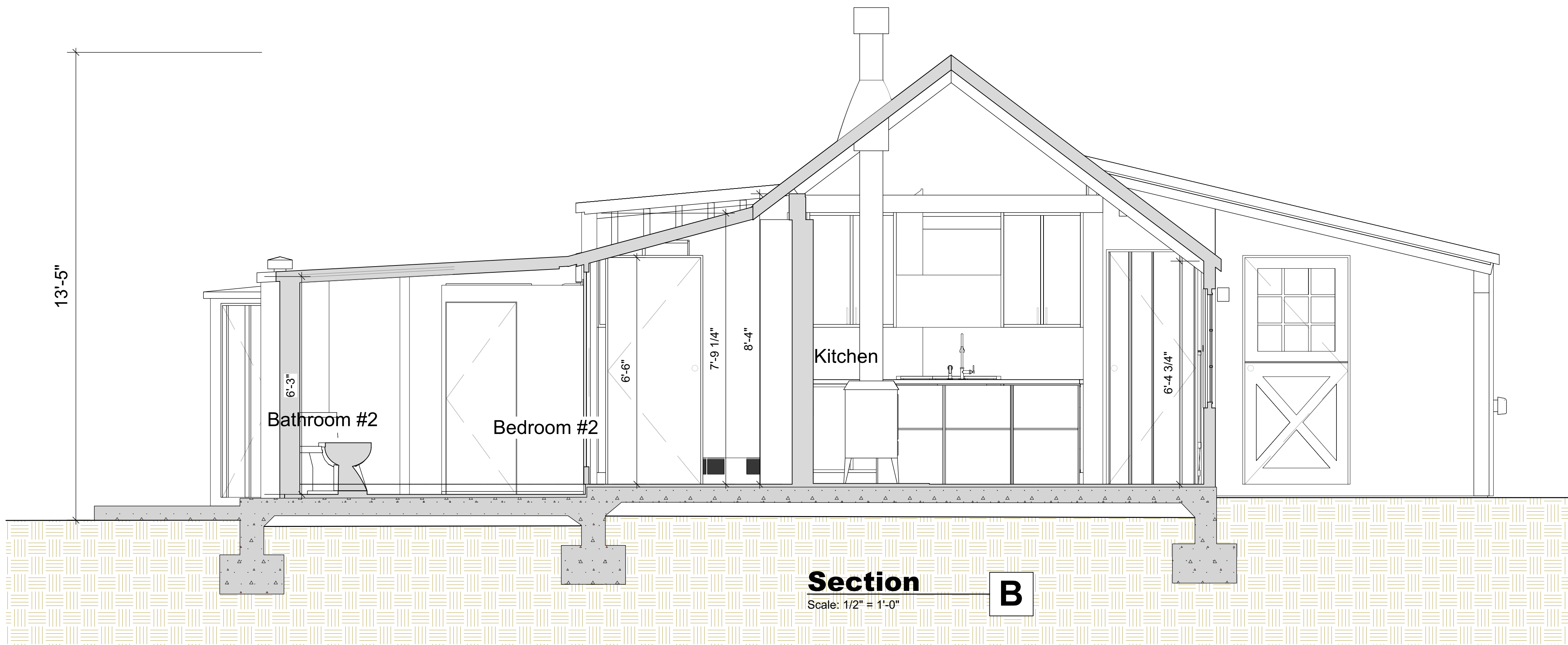
Exterior paint on windows and trim
SW Swiss Coffee

Certaainted Pro Max Def
Shenandoah

Sherwin-Williams
SW 7028
Incredible White
LRV: 74



Section A
Scale: 1/2" = 1'-0"



Section B
Scale: 1/2" = 1'-0"

PERFORMANCE PLUS® Non-Condensing Tankless Gas Water Heaters are designed to provide continuous hot water

- Efficiency**

 - .81 - .82 UEF with all-copper heat exchanger

Easy Installation and Service

 - 1/2" Gas line compatibility up to 24 ft.¹
 - **Exclusive! Maintenance Notice Setting** – Alerts homeowner, after 500 hours of use, to call for service (optional)
 - Connects to Metal Fab. Inc., 3"/5" concentric venting without an adapter
 - High-altitude capability – up to 8,400 ft. elevation above sea level²
 - Digital remote control shows temperature setting and service codes
 - Requires 120V power supply

Performance

 - **Industry Best! Low Flow Activation** – Minimum flow rate of .28 GPM and activation flow rate of .40 GPM ensures hot water in low demand situations
 - **Exclusive! Hot Start Programming** – Minimizes cold water bursts by staying in ready-fire state for back-to-back hot water needs

Technology

 - **EcoNet® Enabled** – all Tankless products from 2010 to present can connect to EcoNet mobile app via Tankless EcoNet Accessory Kit (REWR46307WH)
 - For higher demand applications, accessories available to link multiple units in a load-sharing system
- Environmentally Friendly**

 - **Low Emissions** – Ultra low NOx burner meets SCAQMD rule 1146.2 requirements
 - **Exclusive! Water Savings Setting** – upon activation, this setting can save up to 1,100 gallons water/year³ by reducing flow at the tap until set temperature is achieved (optional)

Safety

 - **Exclusive! Guardian OFW™ overheat film wrap** – prevents dangerous temperatures and provides industry best side-to-side clearance of 1/2 inch
 - Maximum water temperature is 140°F. For higher temperature applications, upgrade kits are available

Warranty

 - 12-Year heat exchanger – residential, 5-year heat exchanger – commercial, 5-year parts and 1-year labor

See Warranty Certificate for complete information



Outdoor
**PERFORMANCE PLUS
Non-Condensing
Tankless**
11,000-199,900 BTU/h



WhisperWarm DC
Specifications Submittal Data / Panasonic Ventilation Fan/Heater Light

Description: WhisperWarm DC is a new ceiling and wall-mounted ventilation fan/heater/light unit designed for residential use. It features a built-in LED light, a 100 CFM fan, and a 10,000 BTU heater. The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring. The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring.

Notes: The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring. The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring.

Features: The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring. The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring.

Benefits: The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring. The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring.

Technical Specifications: The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring. The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring.

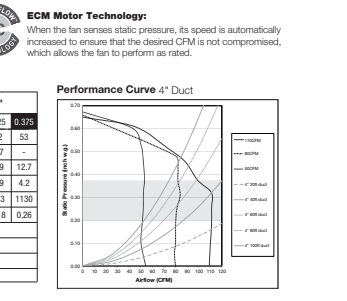
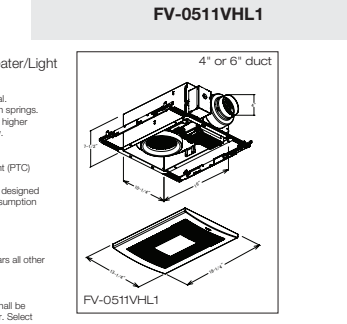
LED Lighting: The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring. The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring.

AFCEC Motor Technology: The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring. The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring.

Performance Curve #1 (Cfm): The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring. The unit is designed to be installed in a ceiling or wall and is compatible with standard 120V wiring.

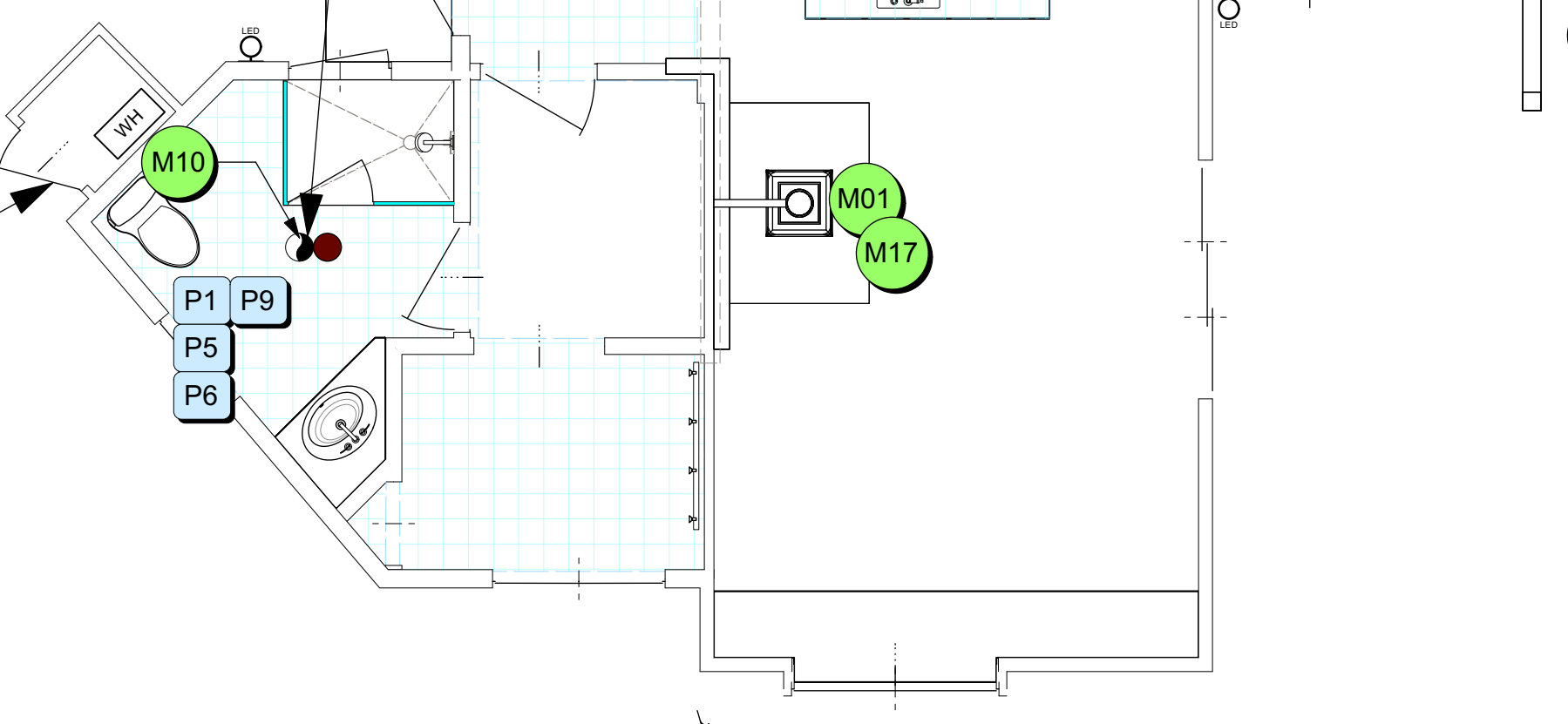
Model **Quantity** **Comments** **Project:**

Model **Quantity** **Comments** **Project:**



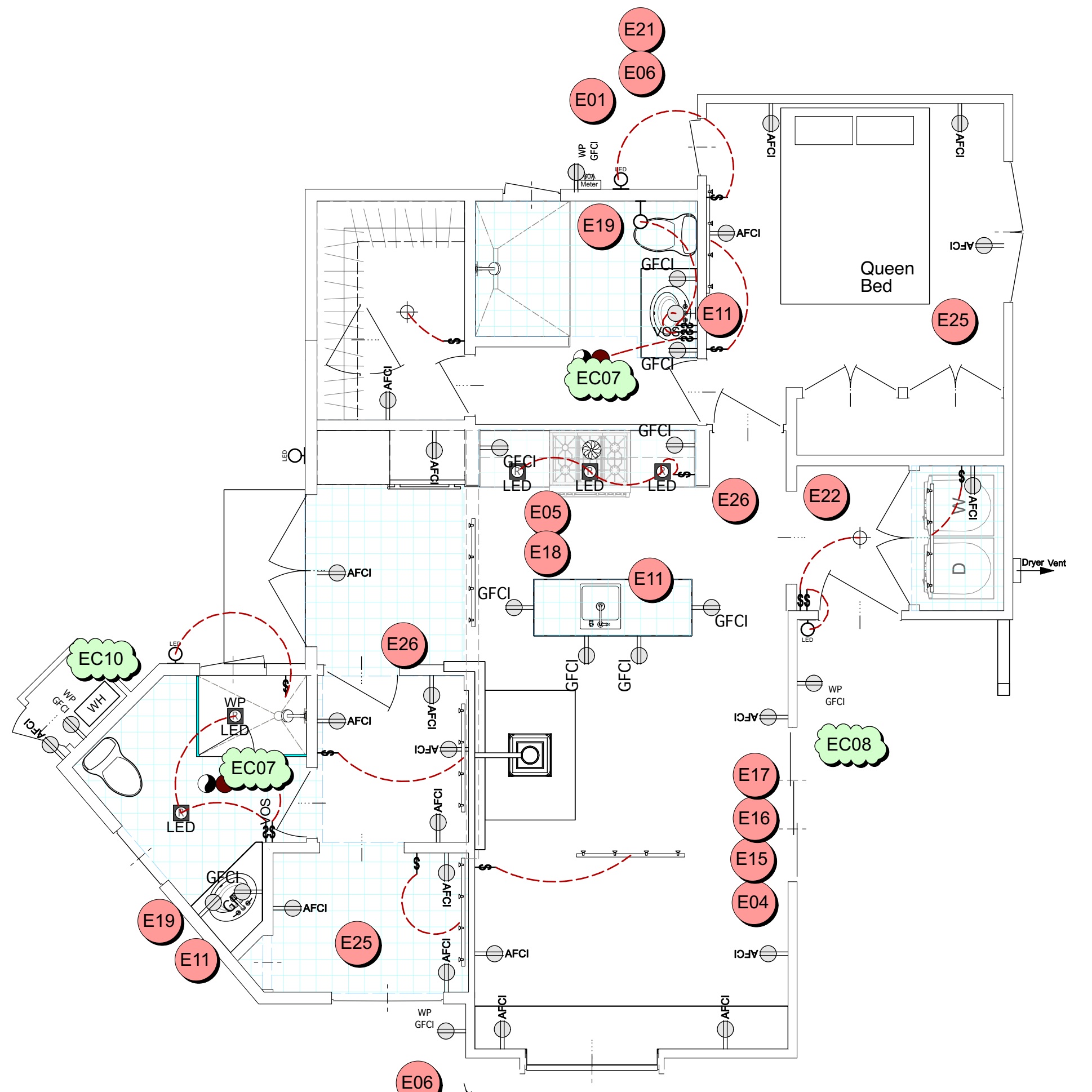
| Model | Quantity | Comments | Project: |
|-------|----------|----------|----------|
| | | | |

Panasonic



Mechanical Plan

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



Electrical Plan

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



**Calvin
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sophiecalvin@cox.net

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Abate Planning & Building violations and remodel house, convert garage / workshop into an ADU for;
Scibird / McGonegle
539 Periwinkle Lane, Montecito CA 93108

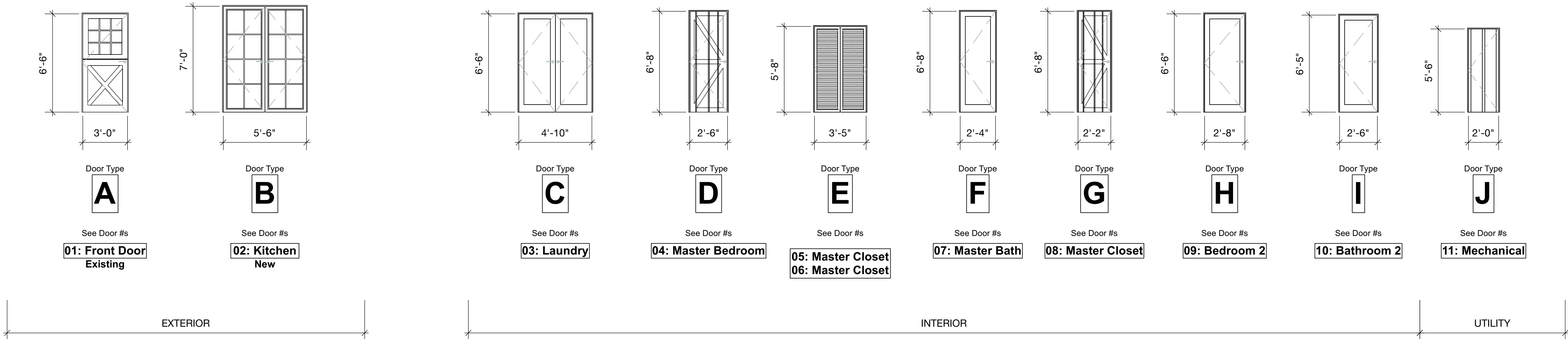
Electrical & Mechanical Plans

April 3, 2024

A11

Project Doors

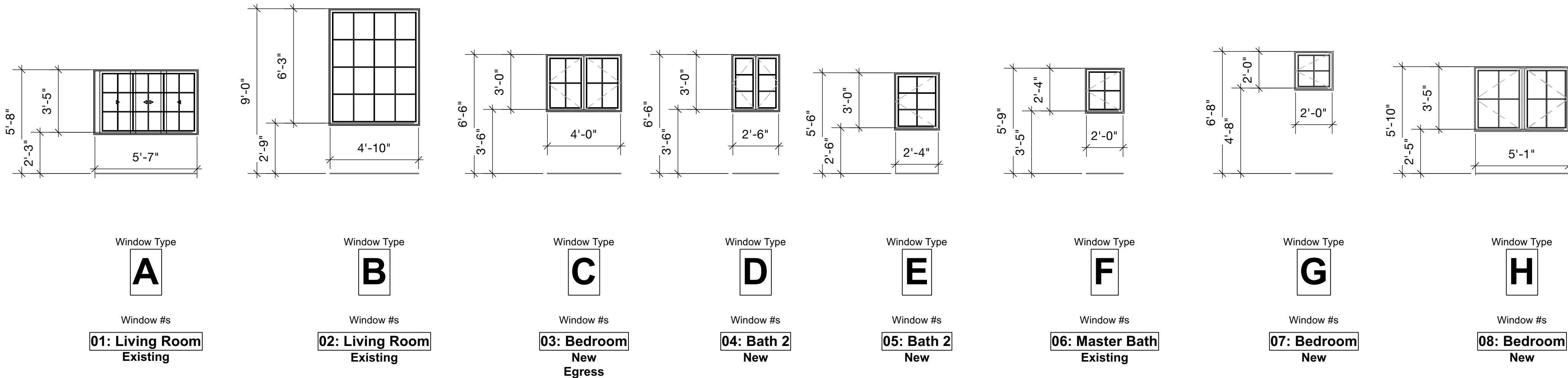
Scale: 1/4" = 1'-0"



| Door Schedule | | | | | | | | | | | U- factor of new glazing is not to exceed 0.3 and SHGC shall not exceed 0.23 | |
|---------------|------|-----------|--------|----------------|------------|-------------|--------------|----------------|-----------------|--|--|--|
| Nominal Size | | | | | | | | | | | | |
| # | Type | Width | Height | Door Operation | Leaf Style | Orientation | New/Existing | Location | Net Glazed Area | | | |
| D- 01 | A | 2'11 1/2" | 6'6" | Swing Simple | Dutch | 16° | Existing | Front Door | 5.3 sq ft | | | |
| D- 02 | B | 5'6" | 7'0" | Swing Bi-part | Glass | 106° | Existing | Kitchen | 5.3 sq ft | | | |
| D- 03 | C | 4'10" | 6'6" | Swing Bi-part | Panel | — | New | Laundry | | | | |
| D- 04 | D | 2'6" | 6'8" | Swing Simple | Panel | — | Existing | Master Bedroom | | | | |
| D- 05 | E | 3'5" | 5'8" | Swing Bi-part | Panel | — | Existing | Master Closet | | | | |
| D- 06 | E | 3'5" | 5'8" | Swing Bi-part | Panel | — | Existing | Master Closet | | | | |
| D- 07 | F | 2'4" | 6'8" | Swing Simple | Panel | — | Existing | Master Bath | | | | |
| D- 08 | G | 2'2" | 6'8" | Swing Simple | Panel | — | Existing | Master Closet | | | | |
| D- 09 | H | 2'8" | 6'6" | Swing Simple | Panel | — | New | Bedroom 2 | | | | |
| D- 10 | I | 2'6" | 6'5" | Swing Simple | Panel | — | New | Bathroom 2 | | | | |
| D- 11 | J | 2'0" | 5'6" | Swing Simple | Panel | — | New | Mechanical | | | | |

Project Windows

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



| Window Schedule | | | | | | | | | | | U- factor of new glazing is not to exceed 0.3 and SHGC shall not exceed 0.23 | |
|-----------------|------|------------|-------------|-----------|---------------------|-------------|----------------|-------------|-----------------|-------|--|--|
| Nominal Size | | | | | | | | | | | | |
| # | Type | O.A. Width | O.A. Height | Elevation | Sash Operation | Orientation | New / Existing | Location | Net Glazed Area | Notes | | |
| W- 01 | A | 5'7" | 3'5" | 5'8" | Horizontal Slider | 286° | Existing | Living Room | 15.2 sq ft | | | |
| W- 02 | B | 4'10" | 6'3" | 9'0" | Fixed Glass | 16° | Existing | Living Room | 26.6 sq ft | | | |
| W- 03 | C | 4'0" | 3'0" | 6'6" | Bi-parting Casement | 16° | New | Bedroom | 8.9 sq ft | | | |
| W- 04 | D | 2'6" | 3'0" | 6'6" | Bi-parting Casement | 16° | New | Bath 2 | 4.9 sq ft | | | |
| W- 05 | E | 2'4" | 3'0" | 5'9" | Casement | 196° | New | Bath 2 | 5.3 sq ft | | | |
| W- 06 | F | 2'0" | 2'4" | 5'9" | Casement | 196° | Existing | Master Bath | 3.3 sq ft | | | |
| W- 07 | G | 2'0" | 2'0" | 6'8" | Casement | 196° | New | Bedroom | 2.8 sq ft | | | |
| W- 08 | H | 5'1" | 3'5" | 5'10" | Bi-parting Casement | 286° | New | Bedroom | 13.6 sq ft | | | |

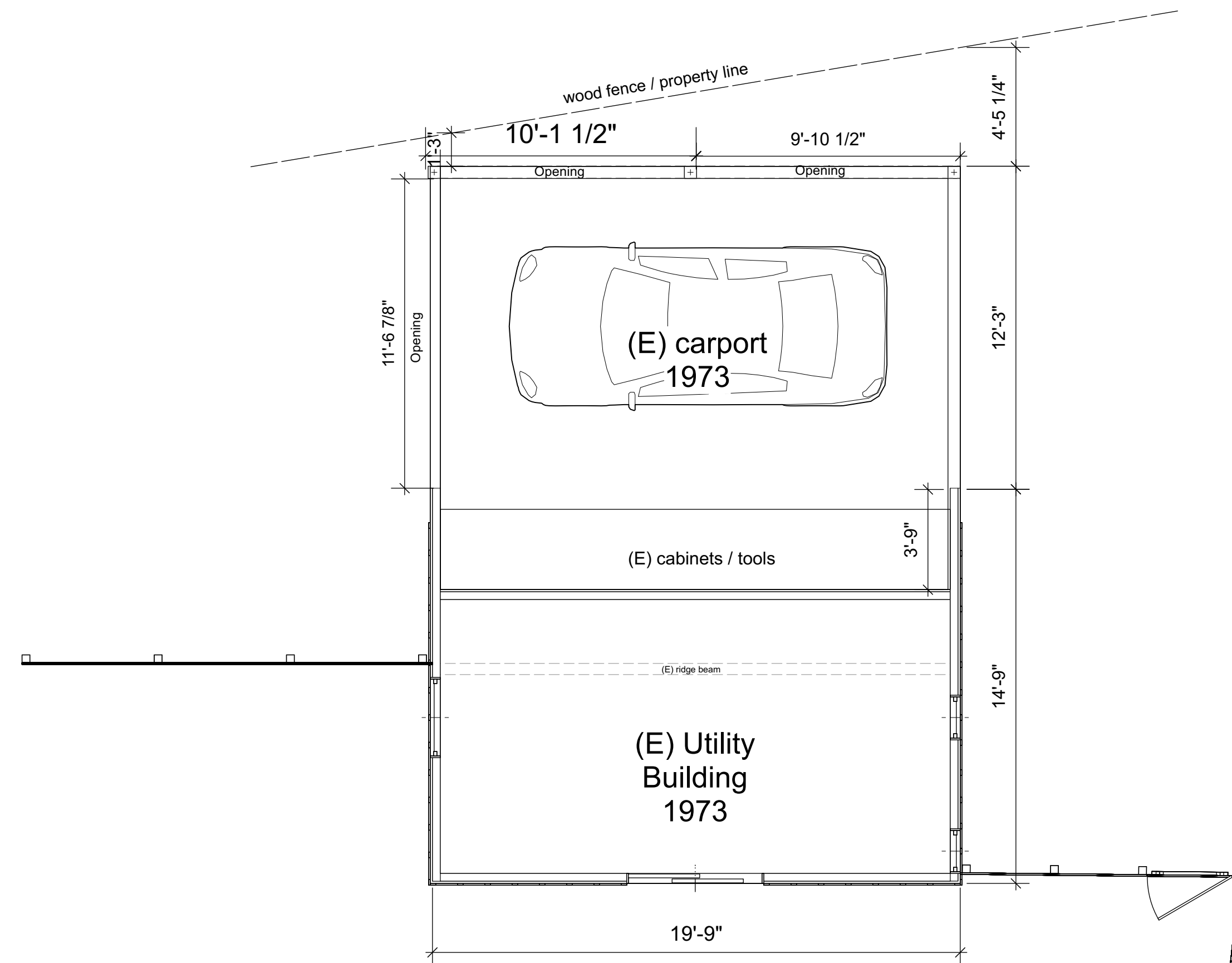
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Door & Window Schedules

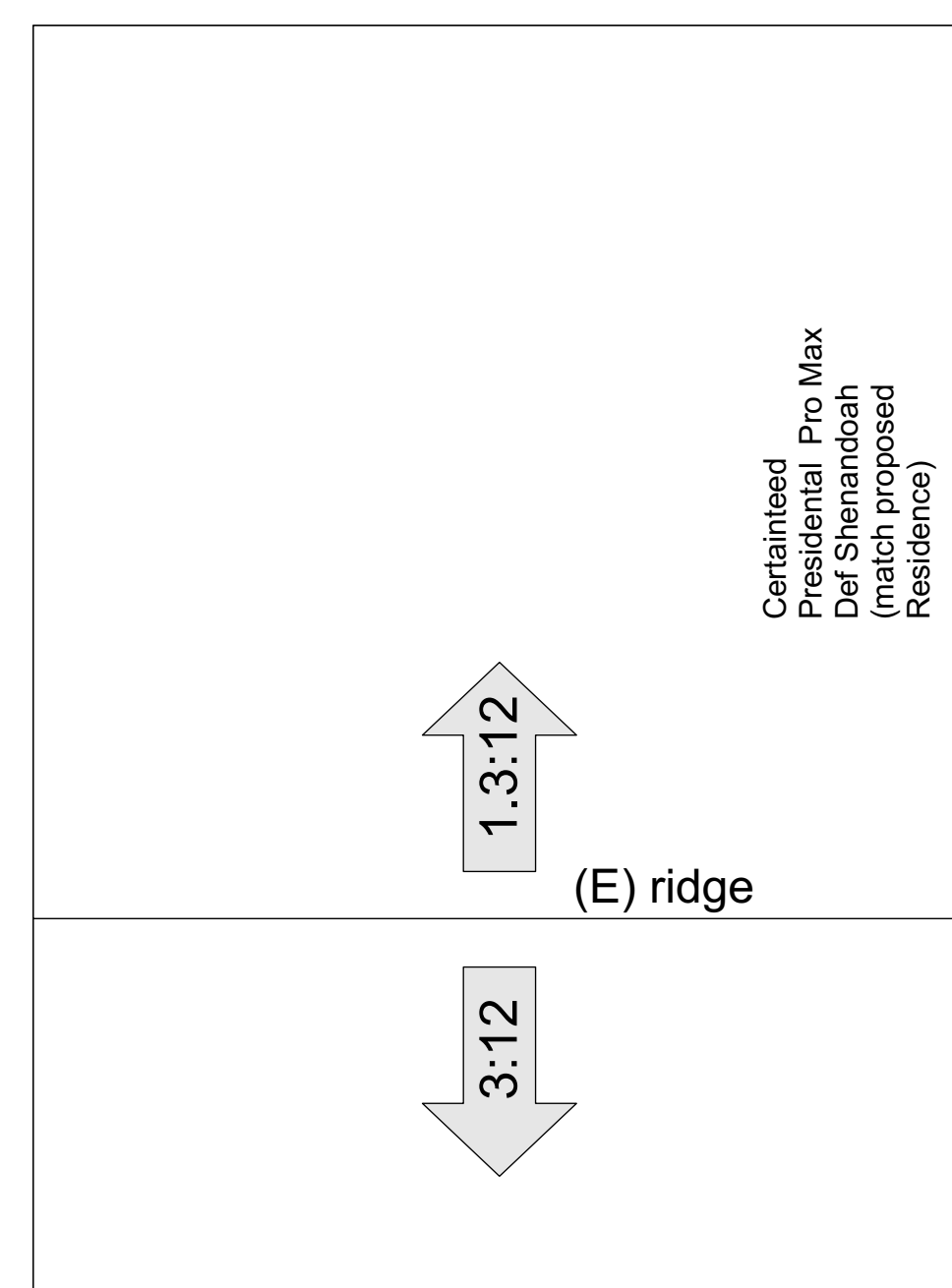
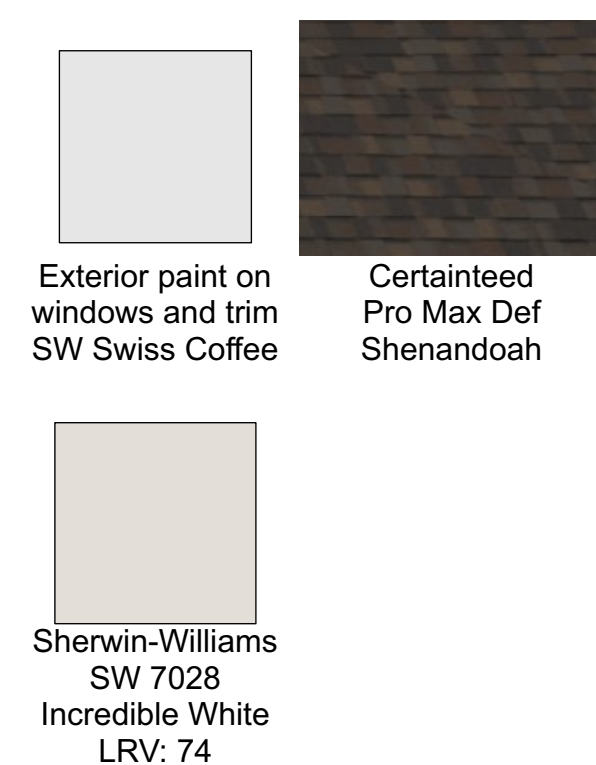
April 3, 2024



Existing Utility Room / Carport Floorplan

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

PAINT UTILITY/CARPORT TO MATCH RESIDENCE.
REPLACE ROOF TO MATCH RESIDENCE



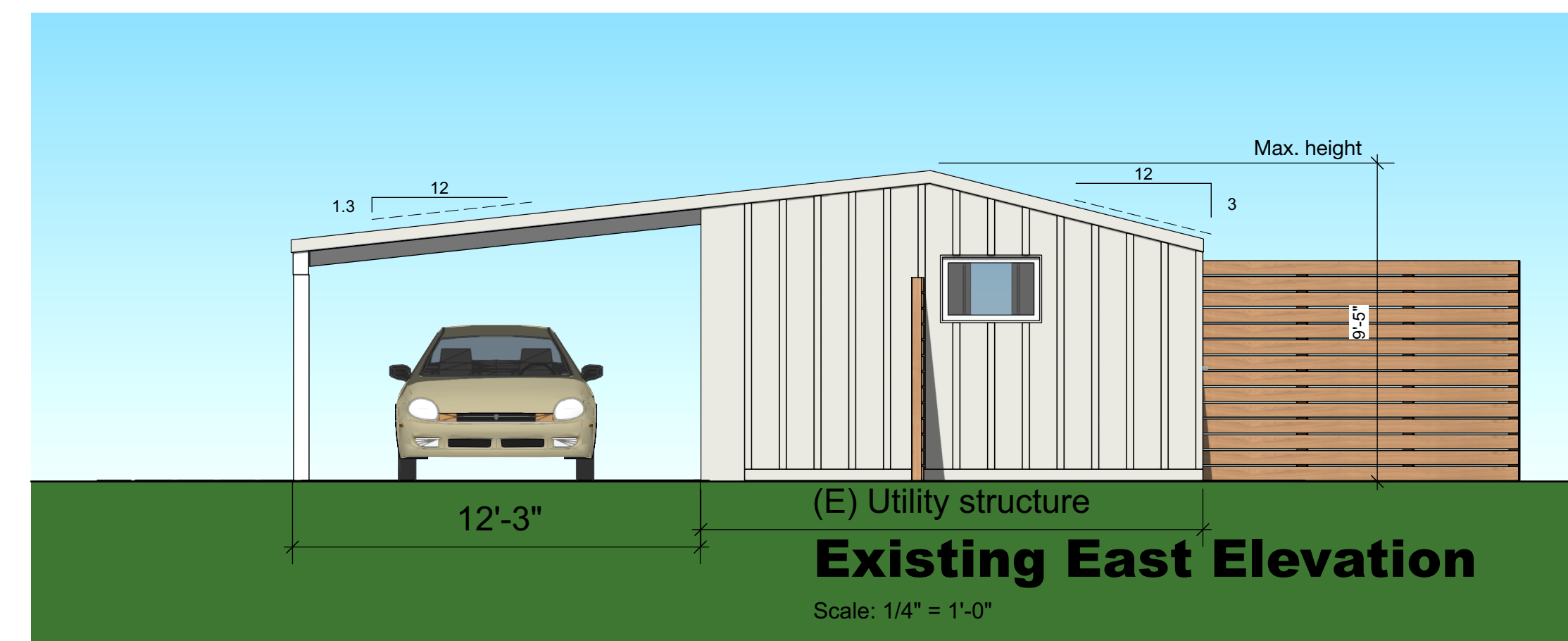
Existing Utility Room / Carport Roof

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



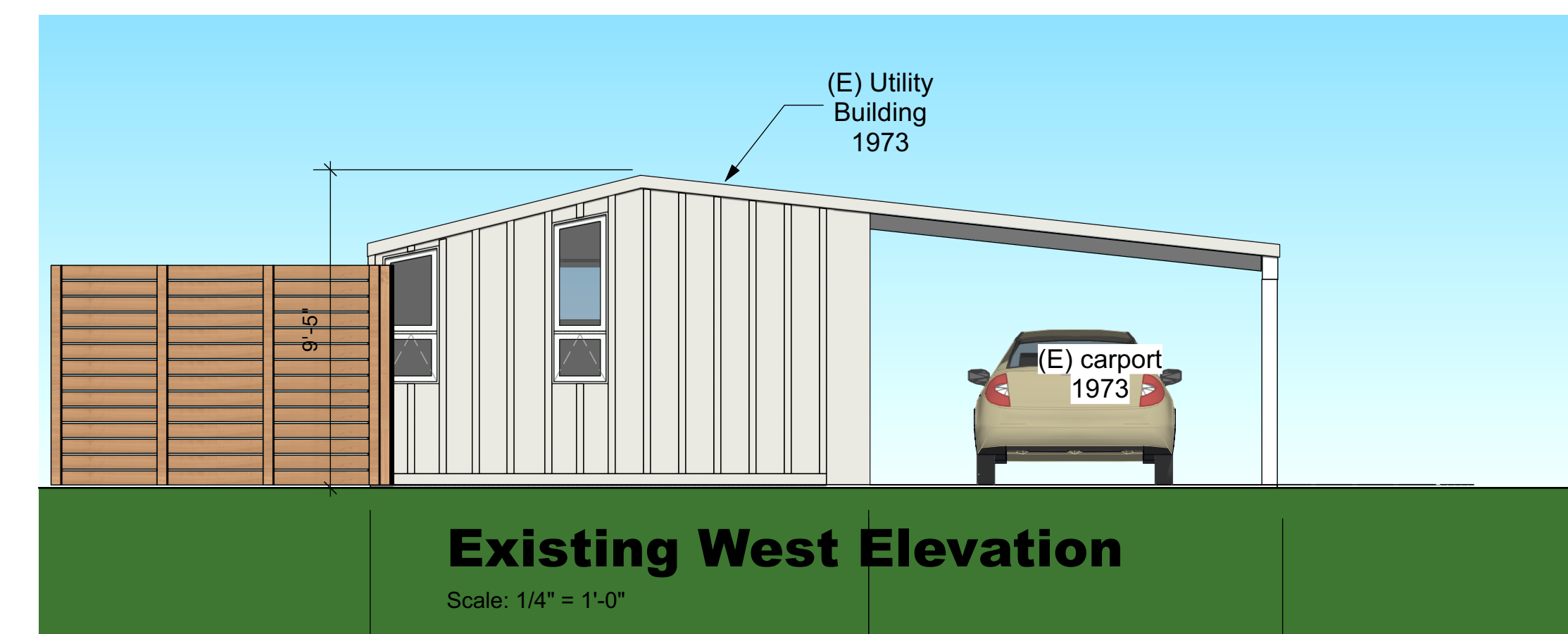
Existing North Elevation

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



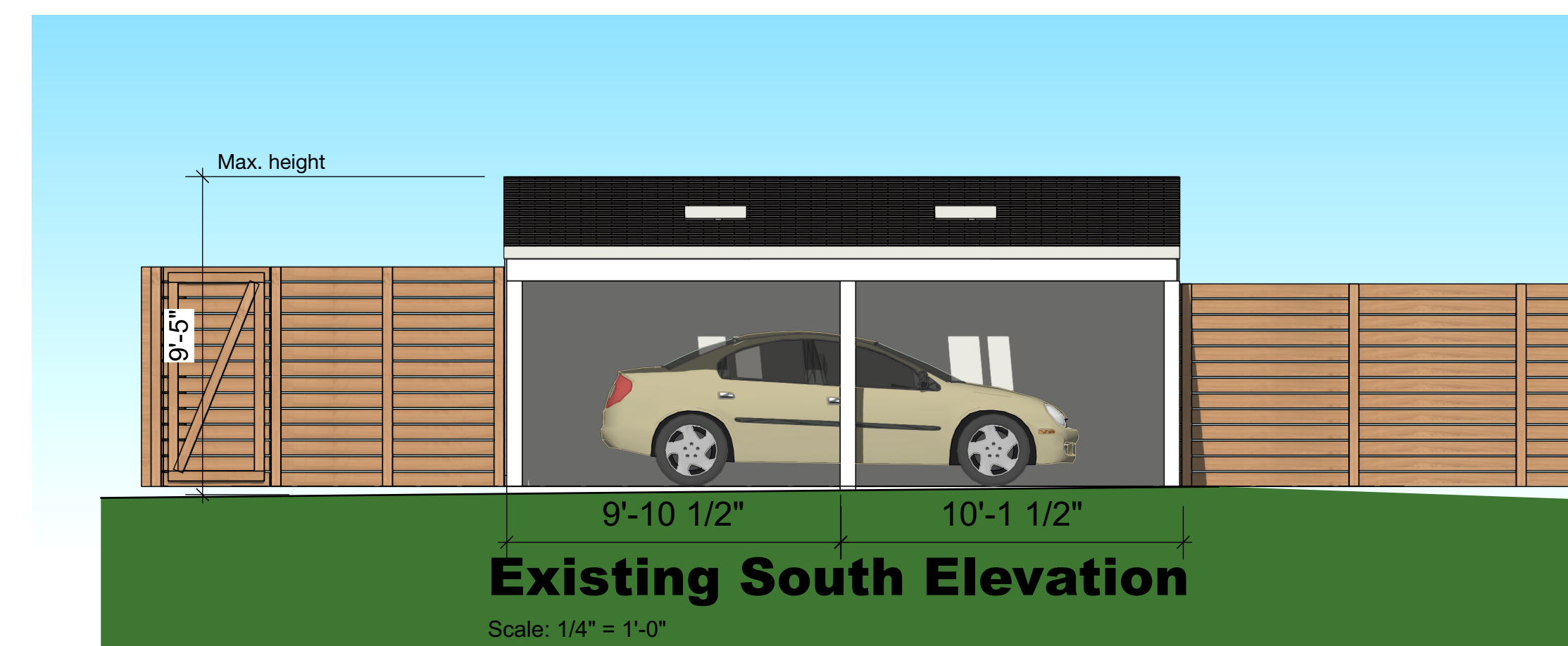
Existing East Elevation

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



Existing West Elevation

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



Existing South Elevation

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

Scibird Remodel

539 Periwinkle Ln.
Montecito, CA 93108

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Engineer of Record:

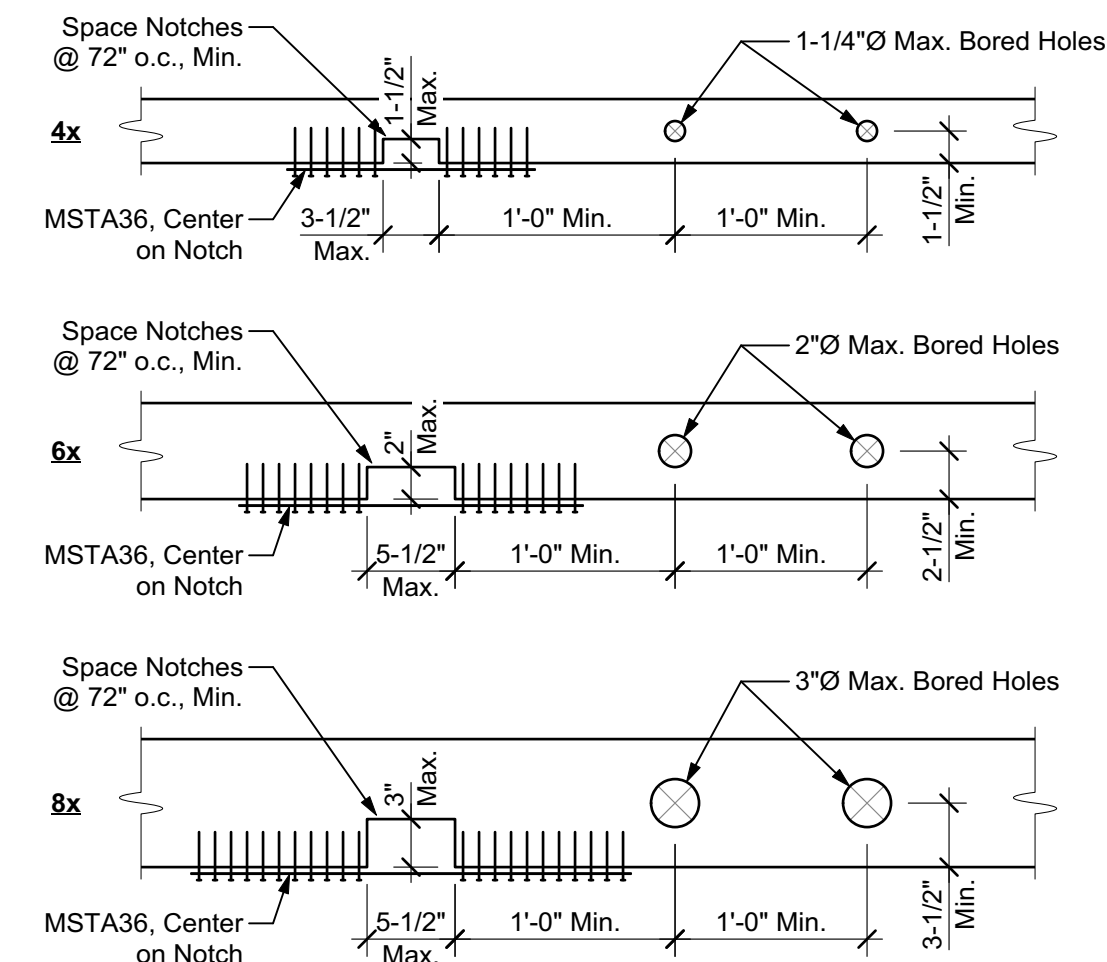


Scibird Remodel
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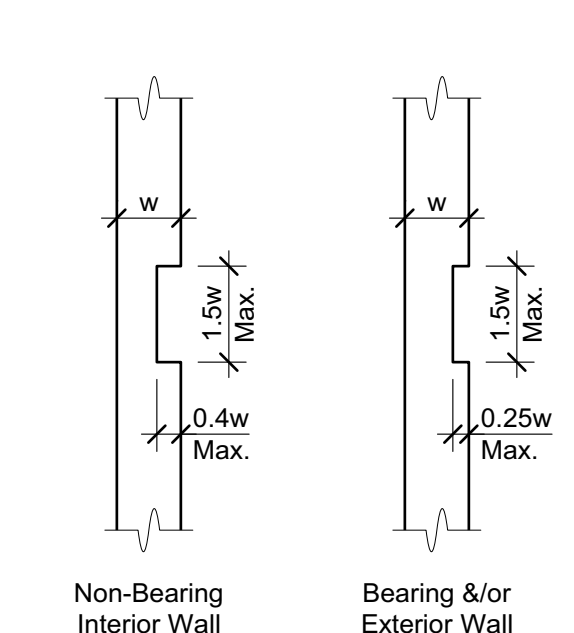
STANDARD DETAILS

9 TYPICAL NOTCHING & BORING

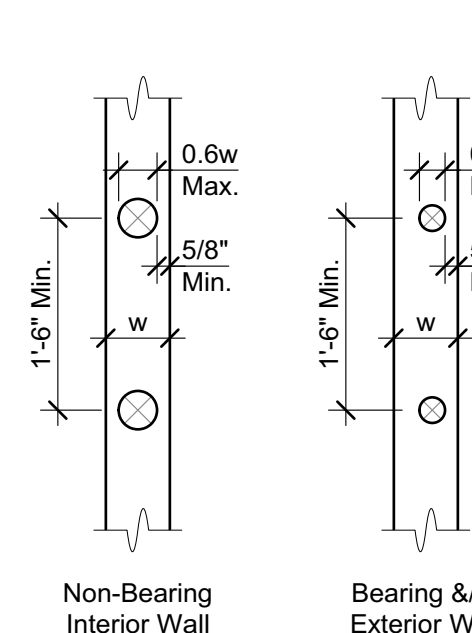
PENETRATIONS IN TOP PLATES & SILL PLATES



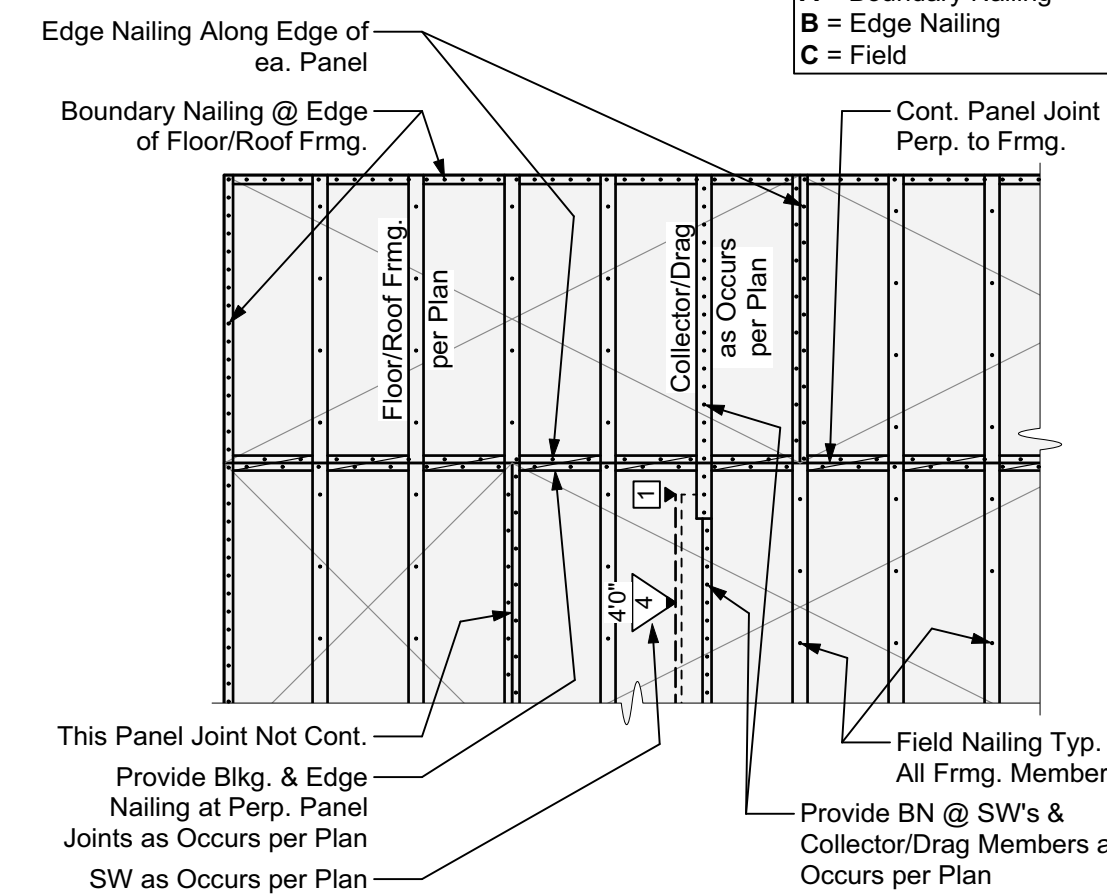
NOTCHING LIMITS FOR WOOD STUDS



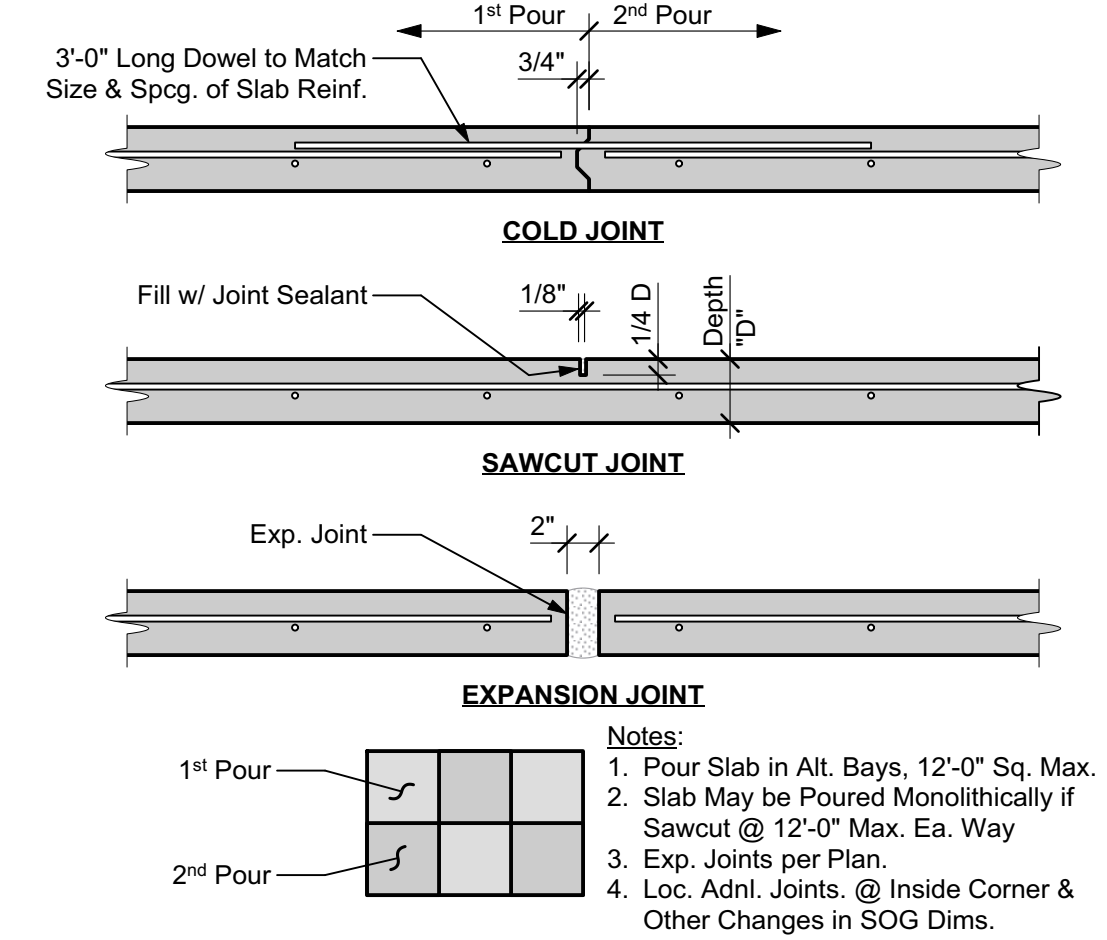
BORING LIMITS FOR WOOD STUDS



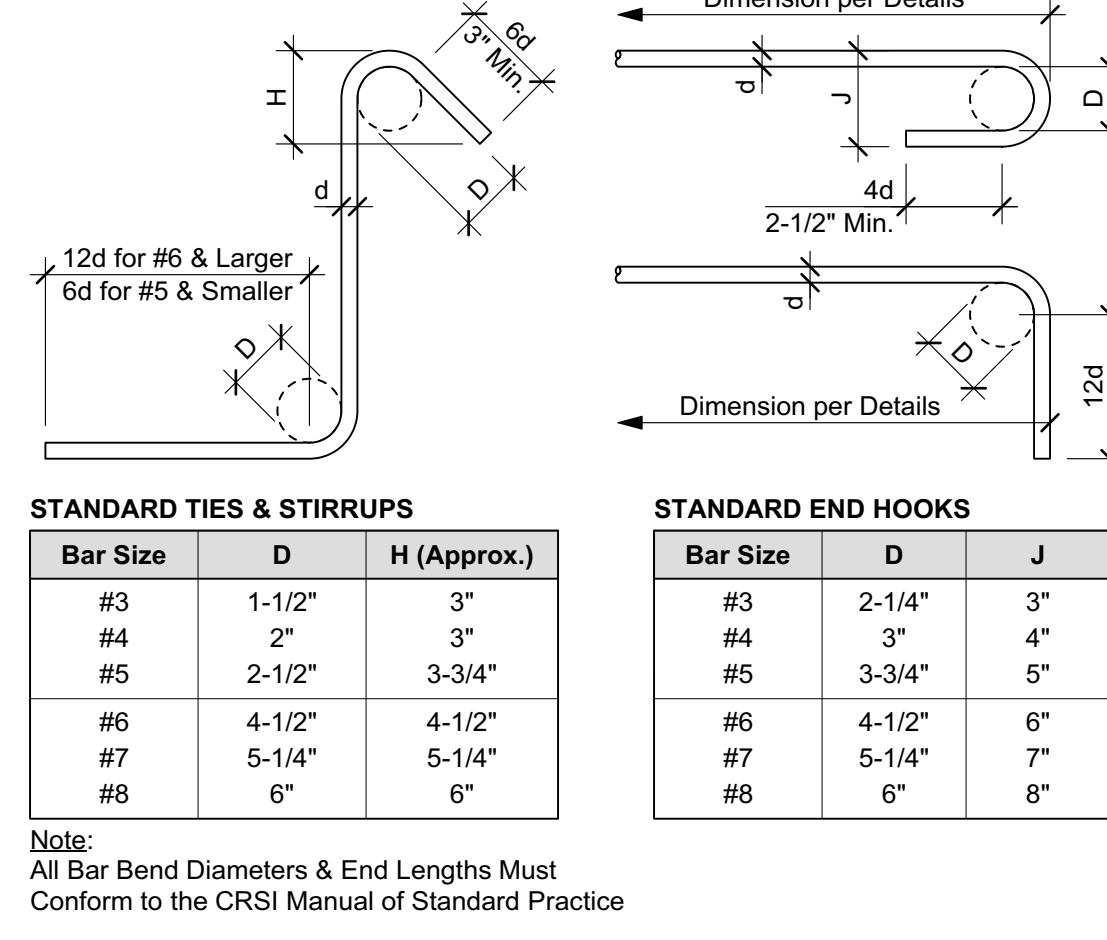
6 TYPICAL FLOOR / ROOF NAILING



4 TYPICAL CONCRETE SLAB JOINTS

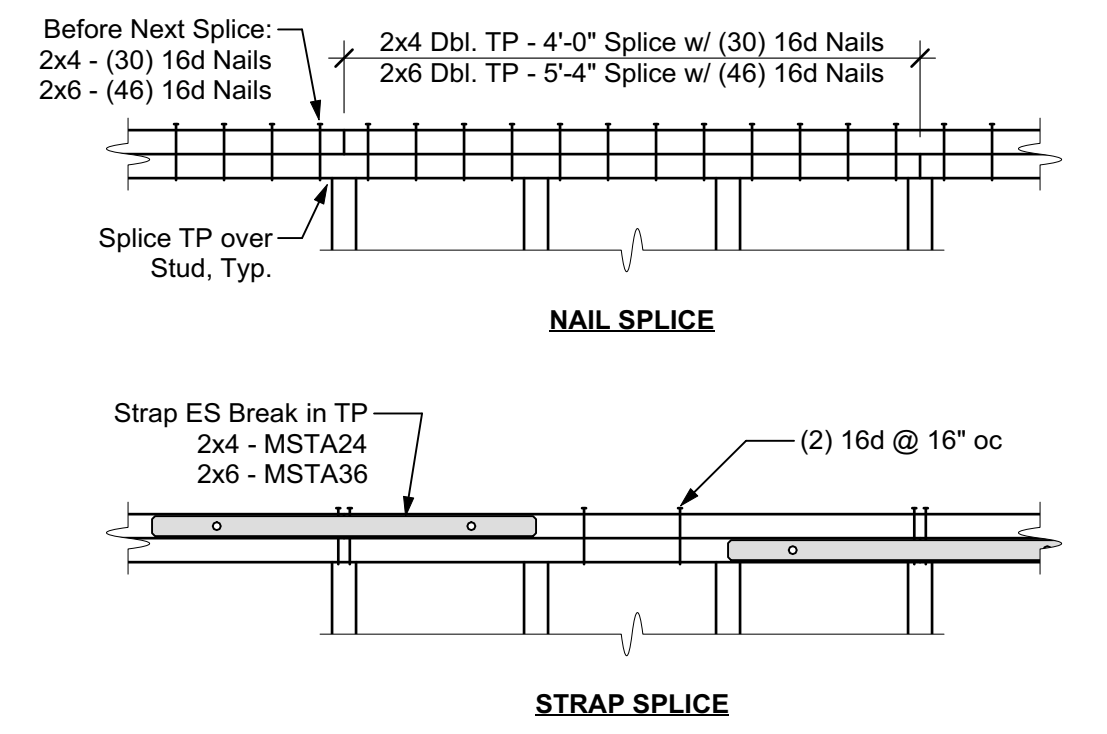


1 TYPICAL REINFORCING BAR BENDS

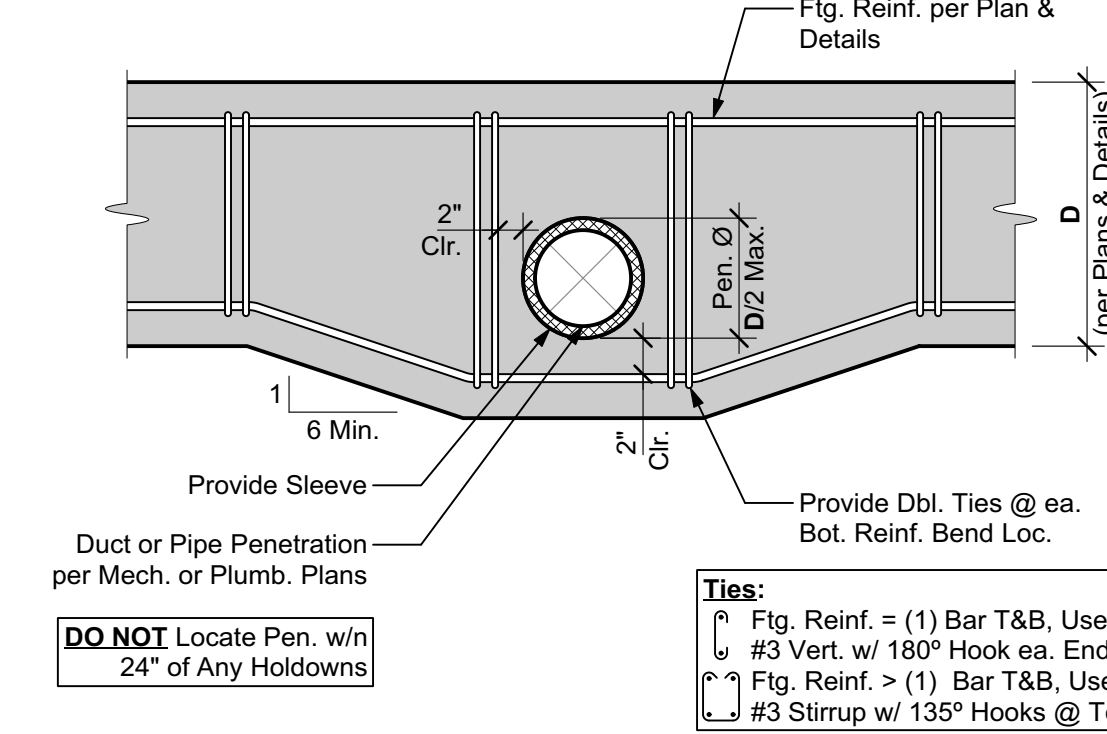


Note: All Bar Bend Diameters & End Lengths Must Conform to the CRSI Manual of Standard Practice

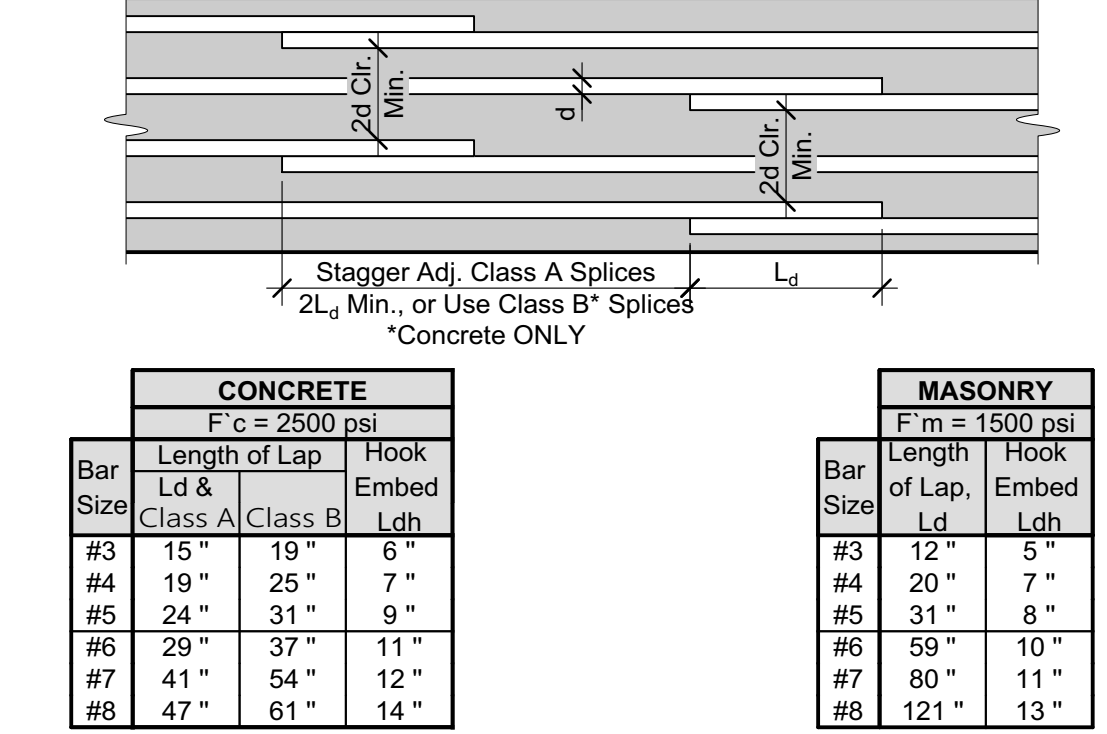
7 TYPICAL 2x TOP PLATE SPLICE



5 TYP. PENETRATION THROUGH FOUNDATION



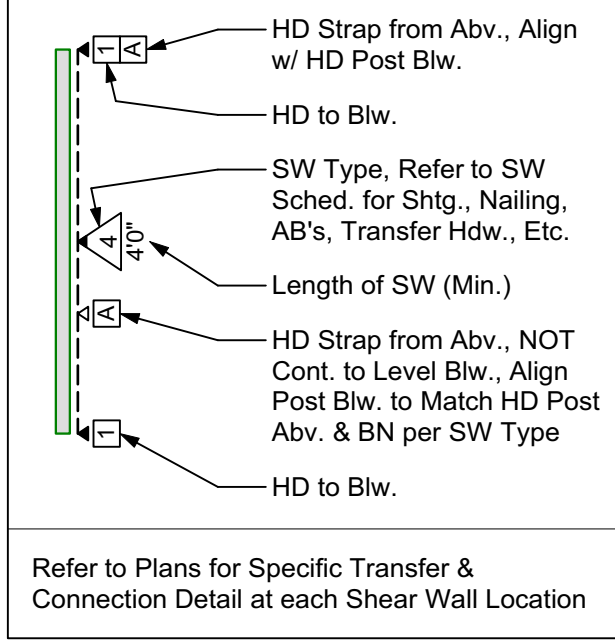
2 STD. DEVELOPMENT LENGTHS & LAP SPLICES



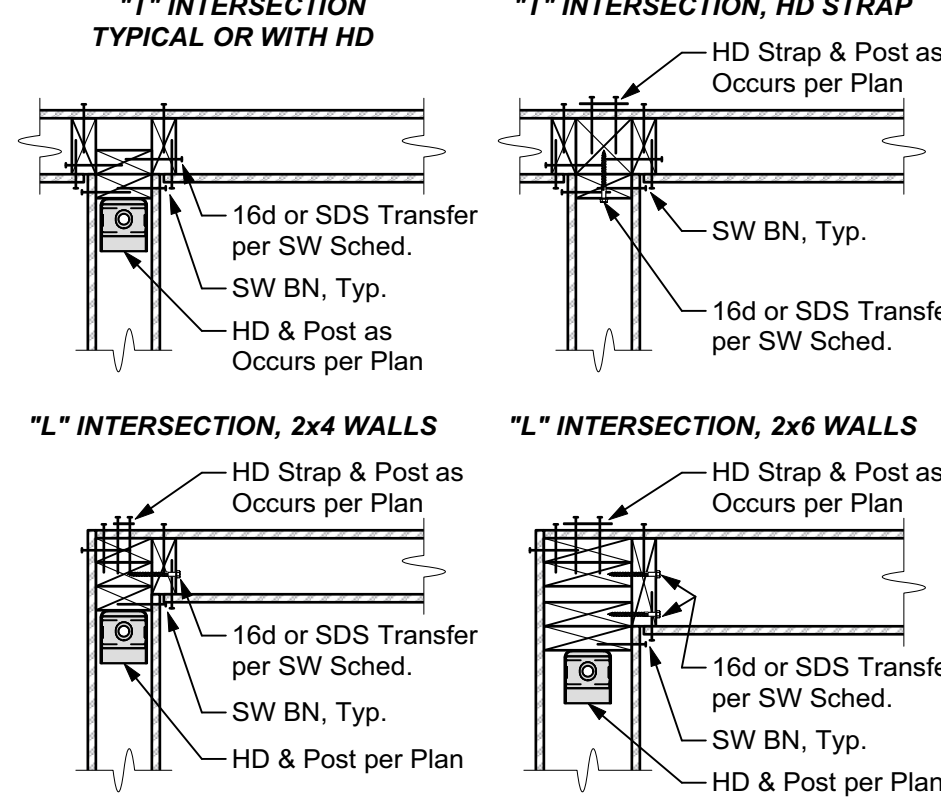
TYPICAL SHEAR WALL FRAMING NOTES:

- Single sided shear walls may be placed on EITHER side of the framed wall.
- Sill plates on masonry or concrete to be pressure treated per Timber / Lumber specifications. Sill plate thickness per SW Sched.
- Wall studs and blk. are required at all adjoining panel edges. Thickness of wall studs and blk. at panel edges per SW Sched.
- Where plywood is applied on both faces of a wall, edge nails shall be staggered on adjacent panel edges QES panel joints shall be offset to fall on different framing members. Plywood joint and sill plate nailing shall be staggered in all cases.
- Plywood panels shall butt along centerlines of framing members. Minimum plywood dimension for shearwall shall be 12".
- Nails shall be located at least 3/8" from all panel edges.
- The use of pneumatic nail guns for shear wall nailing is subject to continued satisfactory jobsite performance and subject to the review and approval by the Engineer of Record and/or Building Inspector. If the nail heads penetrate the outer ply more than would be normal for a hand held hammer, or if the minimum edge distances are not maintained, the performance will be deemed as unsatisfactory and the continued use of pneumatic nail for shear wall nailing will not be permitted.
- At all bearing walls (both exterior and interior walls) not noted as shear walls, continuous full depth blocking shall be provided between joists and rafters with LTP4 or A35 to top plates @ 32" oc at floors and 48" oc at roofs, unless noted otherwise per plan.
- Refer to material specifications for additional framing requirements.

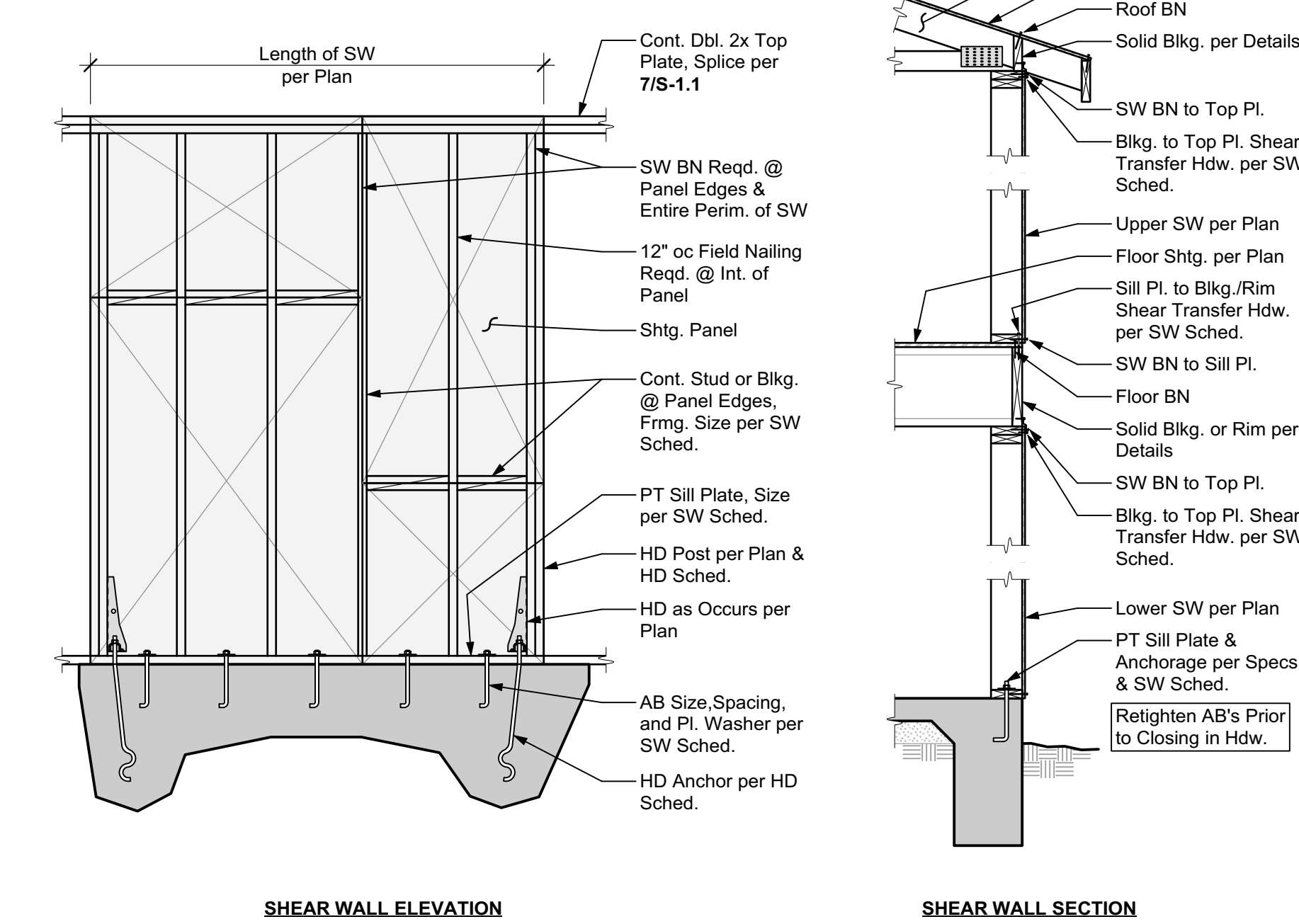
SHEAR WALL LEGEND



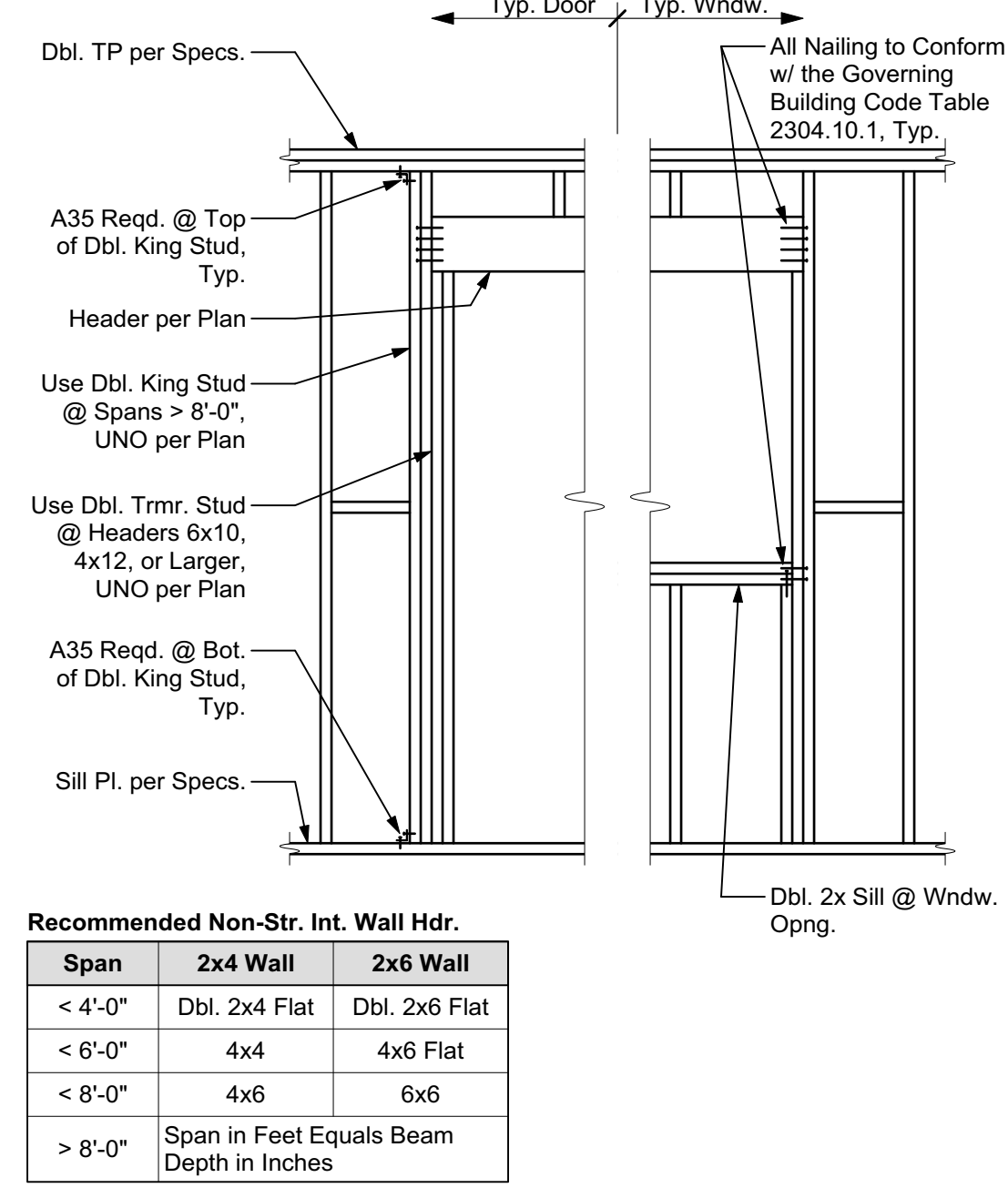
10 TYPICAL SHEAR WALL INTERSECTIONS



8 TYPICAL SHEAR WALL FRAMING



3 TYPICAL WOOD FRAMED OPENING



ABBREVIATIONS

| | | | |
|---------|----------------------------|----------|-----------------------------|
| AB | Anchor Bolt | Mas. | Masonry |
| A&B | Above and Below | Max. | Maximum |
| Abv. | Above | MB | Machine Bolt |
| Adn. | Addition (al) | MF | Moment Frame |
| Adj. | Adjacent, Adjustable | Mfr. | Manufacture(r) |
| Alt. | Alternate (ive) | Min. | Minimum, Minute |
| Appd. | Approved | Mod. | Modify(ing), (ication) |
| Arch. | Architect(ural) | Mtl. | Metal |
| Av. | Average | (N) | New |
| Bdy. | Boundary | N/A | Not Applicable |
| Bldg. | Building | Nat. | Natural |
| Blk(g). | Block (ing) | NTS | Not to Scale |
| Bm. | Beam | o/ | Over |
| BN | Boundary Nailing | oc | On Center |
| B-O | Bottom of | OD | Outside Diameter |
| BO | By Others | Oprng. | Opening |
| Bot. | Bottom | Opp. | Opposite |
| Brg. | Bearing | Opt. | Optional |
| Btwn. | Between | Para. | Parallel |
| BW | Both Ways | PCF | Pounds per Cubic Ft. |
| Cant. | Cantilever(ed) | Pen. | Penetrate, (tion) |
| CIP | Cast in Place | Perf. | Perforated |
| CJ | Ceiling Joist | Perim. | Perimeter |
| CJP | Complete Joint Penetration | Perp. | Perpendicular |
| CL | Center Line | PI | Panel Index |
| Clg. | Ceiling | PJP | Partial Joint Pen. |
| CMU | Conc. Masonry Unit | PL | Plate |
| Col. | Column | PLF | Lbs per Linear Ft. |
| Com. | Common | Ply. | Plywood |
| Comp. | Component | Prep. | Prepare, (ation) |
| Conc. | Concrete | Press. | Pressure |
| Conn. | Connection | Proj. | Project |
| Const. | Construction | Prop. | Property |
| Cont. | Continue (ous) | PSF | Lbs per Square Ft. |
| Ctr. | Center | PSI | Lbs per Square In. |
| d | Penny | PT | Pressure-Treated |
| Dbl. | Double | PV | Photovoltaic (Solar Panels) |
| Defl. | Deflection | R | Radius |
| Deg. | Degree | Rec(s). | Recommendation(s) |
| Demo. | Demolish(ion) | Rect. | Rectangular |
| Dep. | Depressed | Ref | Reference |
| DF | Douglas Fir | Reinf. | Reinforce(d), (ment), (ing) |
| Dia. | Diameter | Req(d). | Require(d) |
| Diaph. | Diaphragm | Req(re)d | Require(d) |
| Dif. | Different | Reqs. | Requirements |
| Dim. | Dimension | Ret. | Retain(ing) |
| Dist. | Distance | RJ | Roof Joist |
| DJ | Deck Joist | RR | Roof Rafter |
| DL | Dead Load | RW | Redwood |
| Dwg. | Drawing | SAD | See Arch Dwg's |
| (E) | Existing | Sched. | Schedule |
| Ea. | Each | Sgl. | Single |
| EF | Each Face | Shtg. | Sheathing |
| EPF | Equivalent Fluid | Sim | Similar |
| Elev. | Elevator, Elevation | SIP | Str. Insulated Panel |
| Embed. | Embed(ed), (ment) | SM | Sheet Metal |
| Eng. | Engineer | SMS | Sheet Metal Screw |
| EOR | Engineer of Record | SOG | Slab on Grade |
| Eq. | Equal, Equivalent | Spec | Specification |
| ES | Each Side | Sq. | Square |
| EW | Each Way | SS | Structural Steel |
| Exp. | Expand, Expansion | Std. | Standard |
| Ext. | Exterior | Stag. | Stagger(ed) |
| Fdn. | Foundation | Stl. | Steel |
| FF | Finished Floor | Struc. | Structure, (al) |
| FJ | Floor Joist | SW | Shear Wall |
| FR(g). | Face of Concrete | Sym. | Symmetrical, (ical) |
| FOM | Face of Masonry | T&B | Top and Bottom |
| FOS | Face of Studs | Temp. | Temporary |
| FOW | Face of Wall | Thk. | Thickness |
| Frg. | Framing | Thru | Through |
| Ft. | Foot, Feet | TN | Toe-Nail |
| Flg. | Footing | TP | Top Plate |
| Ga. | Gage, Gauge | T-O | Top of |
| Galv. | Galvanized | TOB | Top of Beam |
| GB | Grade Beam | TOC | Top of Concrete |
| Gyp. | Gypsum | TOG | Top of Grade |
| GC | General Contractor | TOM | Top of Masonry |
| HD | Holdown | TOS | Top of Steel |
| Hdr. | Header | TOW | Top of Wall |
| Hdw. | Hardware | TRU | To Remain |
| Hgr. | Hanger | Unch. | Unchanged |
| Horiz. | Horizontal | Trimr. | Trimmer Stud |
| Ht. | Height | Typ. | Typical |
| ID | Inside Diameter | UNO | Unless Noted Otherwise |
| In. | Inches | Vert. | Vertical |
| Insp. | Inspection | VIF | Verify in Field |
| Int. | Interior | VWA | Verify with Arch |
| Inv. | Invert, Inverted | w/ | With |
| Jst. | Joist | w/in | Within |
| K | Kips (1,000 pounds) | w/o | Without |
| KLF | Kips per Linear Ft. | WS | Wood Screw |
| King | King Stud | Wdw. | Window |
| KP | King Post | Wt. | Weight |
| KSF | Kips per Square Ft. | WWF | Welded Wire Fabric |
| KSI | Kips per Square In. | Yd. | Yard |
| Lb(s). | Pound(s) | @ | At |
| LL | Live Load | Ø | Degrees |
| Loc. | Location | > | Greater Than |
| LC | Light Weight | < | Less Than |
| | | # | Number, Pound(s) |
| | | % | Percent(age) |
| | | ± | Plus or Minus |

PROJECT INFORMATION

CLIENT:
Richard & Lisa Scibird & Mackenzie McGonigle
539 Periwinkle Ln.
Montecito, CA 93108

ARCHITECT / DESIGNER:
Calvin Design
P.O. Box 50716
Santa Barbara, CA 93150
(805) 969-0559

DESIGN PARAMETERS

GENERAL PARAMETERS

| | |
|--------------------------|------------|
| Building Code | 2019 CBC * |
| Roof Loads | |
| Dead Loads** (DL) | 15 psf |
| *Includes 3 psf PV Loads | |
| Live Loads (LL) | 20 psf |
| Floor Loads - Typ. | |
| Dead Loads (DL) | 15 psf |
| Live Loads (LL) | 40 psf |
| Floor Loads - Deck | |
| Dead Loads (DL) | 11 psf |
| Live Loads (LL) | 60 psf |

SOILS VALUES

(Per Soils Report)

| | |
|------------------|----------|
| Bearing Pressure | 1500 psf |
|------------------|----------|

WIND DESIGN BASIS

| | |
|--------------------------------|--------|
| Ultimate Wind Speed, V_{ULT} | 92 mph |
| Nominal Wind Speed, V_{ASD} | 71 mph |
| Risk Category | II |
| Exposure | B |
| Importance Factor, I_w | 1.00 |

SEISMIC DESIGN BASIS

| | |
|-------------------------|---|
| Seismic Design Category | E |
| Site Class | D |
| Seismic Factors | |
| S_B / S_1 | 2.117 / 0.780 |
| S_{DS} / S_{D1} | 1.694 / 0.884 |
| Risk Category | II |
| Resisting System: | Wood Shear Walls |
| Response Mod. | |
| Coefficient, R | 6.5 |
| Design Base Shear | $V = 0.261W$ |
| Analysis Procedure: | Eqv. Lateral Force (ASCE 7-16, T. 12.6-1) |

* The 2019 California Building Code (CBC), based on the 2018 International Building Code (IBC), is the governing code in the State of California.

SHEET INDEX

| | |
|-------|---|
| S-1.1 | Structural Title Sheet |
| S-1.2 | Structural Specifications & Special Inspections |
| S-2.1 | Foundation Plan-Main House |
| S-2.2 | Roof Framing Plan-Main House |
| S-2.3 | Foundation Plan - Garage |
| S-2.4 | Roof Framing Plan - Garage |
| S-3.1 | Structural Details |
| S-3.2 | Structural Details |
| S-3.3 | Structural Details |

Proj. Engr.: C. Huffman Phone Ext.: 142

Proj. Mng.: P. Belmont

Date: 17 Oct. 2022 Scale: NTS

A&V Job No.: 211851

STRUCTURAL TITLE SHEET

S-1.1

DO NOT SCALE THESE DRAWINGS. Refer to Architectural plans for all dimensions

1. This Statement of Special Inspection is submitted in fulfillment of the requirements of the Governing Building Code, Section 1704 and 1705.
2. Special Inspections and Testings will be performed in accordance with the approved plans and specifications, this statement and the Governing Building Code, Section 1704 , 1705 , 1707 , and 1708.
3. The schedule of Special Inspections summarizes the Special Inspections and tests required. Special Inspectors will refer to the approved plans and specifications for detailed special inspection requirements. Any additional tests and inspections required by the approved plans and specifications will also be performed.
4. Interim reports will be submitted to the Building Official and the Registered Design Professional in Responsible Charge in accordance with the Governing Building Code Section 1704.2.4.
5. A Final Report of Special Inspections documenting required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy (Section 1704.2.4). The final Report will document:
 - (a) Required special inspections.
 - (b) Correction of discrepancies noted in inspections.
6. The Owner recognizes his or her obligation to ensure that the construction complies with the approved permit documents and to implement this program of special inspections. In the partial fulfillment of these obligations, the Owner will retain and direct pay for the Special Inspections as required in the Governing Building Code, Section 1704.2.
7. 1704.4 Contractor responsibility. Each contractor responsible for the construction of a main wind- or seismic force-resisting system, designated seismic system or a wind- or seismic force-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the building official and the owner or the owner's authorized agent prior to the commencement of work on the system or component. The contractor's statement of responsibility shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspection.

The following are the testing agencies and special inspectors that will be retained to conduct tests and inspection on this project.

Description of seismic-force-resisting system and designated seismic systems subject to special inspections per Section 1705.12:

Light-framed walls sheathed with wood structural panels rated for shear resistance or steel sheets (ASCE 7, Table 12.2-1, Line A.15)

The extent of the main seismic-force-resisting system is defined in more detail in the construction documents.

| |
|--|
| Description of main wind-force-resisting system and designated seismic systems subject to special inspections per Section 1705.11: |
|--|

| |
|----------------|
| Not Applicable |
|----------------|

The extent of the main wind-force-resisting system is defined in more detail in the construction documents.

Column Header Notation Used in Table:

- C Indicates continuous inspection is required.
- P Indicates periodic inspections are required. The notes and/or contract documents should clarify.

Box Entry Notation Used in Table:
X Is placed in the appropriate column to denote either "C" continuous or "P" periodic inspections.

-- Denotes a one-time activity or one whose frequency is defined in some other manner. Additional details regarding inspections are provided in the project specifications or notes on the drawings.

FOOTNOTES:

1. Prior to epoxy placement, it must be verified that the hole is clean, dry, and free of loose debris
2. Periodic inspection shall take place such that the installation of a minimum of two (2) anchors per each shear wall are observed

1. The following notes, details, schedules & specifications shall apply to all phases of this project unless specifically noted otherwise. Notes and details on the structural plans shall take precedence over general notes and typical details. Where no details are given, construction shall be as shown for similar work.
2. All drawings are considered to be part of the contract documents. The Contractor shall be responsible for the review and coordination of all drawings and specifications prior to the start of construction. Any discrepancies shall be brought to the attention of the Engineer prior to the start of construction so that a clarification can be issued. Any work performed in conflict with the contract documents or any applicable code requirements shall be corrected by the Contractor at no expense to the Owner or Engineer.
3. All information on existing conditions shown on the structural plans are based on best present knowledge available, but without guarantee of accuracy. The Contractor shall be responsible for the verifications of all dimension and conditions at the site. Any discrepancies between actual site conditions and information shown on the drawings or in the specifications shall be brought to the attention of the EOR prior to the start of construction.
4. Refer to the Architectural plans for the following:
 - (a) Dimensions
 - (b) Size and location of all interior and exterior wall locations.
 - (c) Size and location of all floor, roof and wall openings
 - (d) Size and location of all drains, slopes, depressions, steps, etc.
 - (e) Specification of all finishes & waterproofing
 - (f) All other non-structural elements

5. Refer to the mechanical, electrical and plumbing plans for the following:
 - (a) Size and location of all equipment
 - (b) Pipe runs, sleeves, hangers and trenches
 - (c) All other mechanical, electrical or plumbing related elements
6. **DO NOT** scale structural plans. Contractor shall use all written dimensions on Architectural plans.
7. Construction materials shall be uniformly spread out if placed on floor or roof so as to not overload the framing. Load shall not exceed the design live load per square foot. It is the Contractor's responsibility to provide adequate shoring and/or bracing as required.
8. Specifications and detailing of all waterproofing and drainage items, while sometimes shown on the structural plans for general information purposes only, are solely the design responsibility of others.

program of coordination with the construction manager shall be agreed upon and understood that the Contractor or his/her agent(s) shall supervise and direct all work and shall be solely and completely responsible for all construction means, methods, techniques, sequences, procedures and conditions on the job site, including safety of all persons and property during the entire period of construction. Periodic observations by the Engineer, his staff or representatives are not intended to include verification of dimensions or review the adequacy of the Contractor's safety measures on or near the construction site.

10. Modifications of the plans, notes, details and specifications shall not be permitted without the written approval of the Engineer.

11. All workmanship shall conform to the best practice prevailing in the various trades performing the work. The Contractor shall be responsible for coordinating the work of all trades.

12. It is the Contractor's responsibility to ensure that only approved structural plans are used during the course of construction. The use of unapproved documents shall be at the contractor's own risk. Corrections of all work based on such documents shall be performed at the Contractor's expense.

13. The plans and specifications represent the structural design only. No information nor warranty is provided for the work of any other Consultant (Architect, Mechanical, Electrical, etc). This includes, but is not limited to, waterproofing, drainage, ventilation, accessibility, or dimensions.

1. Refer to Structural Design Parameters section on sheet S-1.1 for all soil design values used in calculations.
2. Soil values per geologic/geotechnical report (or "soils report") by GSI Soil Inc., Project No. S8910291-1, dated December, 2020. This report and all recommendations contained therein are to be considered a part of these plans.
3. It is the Contractor's responsibility to obtain a copy of the soils report from the Owner. A copy of the soils report shall be on the job site during the course of construction.
4. Unexpected Soil Conditions: Allowable values and subsequent foundation designs are based on soil conditions which are shown by test borings. Actual soil conditions which deviate appreciably from that shown in the test borings shall be reported to the EOR and/or soils engineer immediately.
5. All compaction, fill, backfilling and site preparation shall be performed in accordance with project soils report or the Governing Building Code Chapter 18 & Appendix J. All such work shall be performed per the recommendations of the project soils engineer.
6. Excavate to required depths and dimensions (as indicated in the drawings), cut square and smooth with firm level bottoms. Care shall be taken not to over-excavate foundation at lower elevation and prevent disturbance of soils around high elevation.
7. Foundations shall be poured in neat, finished concrete.
8. Excavate all foundations to required depths into compacted fill or natural soil (as per plans and details) and as verified by the building official and/or soils engineer.
9. All foundations shall be inspected and approved by the appropriate building official and/or a representative of the soils engineer prior to forming and placement of reinforcing or concrete.
10. Foundations shall not be poured until all required reinforcing steel, framing hardware, sleeves, inserts, conduits, pipes, etc. and formwork is properly placed and inspected by the appropriate building official and/or soils engineer.
11. It is the responsibility of the contractor in charge of framing to properly position all holdown bolts, anchor bolts, column bases, and all other cast-in-place hardware. Refer to typical details. All hardware to be secured prior to foundation inspections.
12. The sides and bottoms of dry excavations must be moistened to optimum moisture content or just above, just prior to placing concrete. Conversely, de-water footings as required to remove standing water and to maintain optimum working conditions.
13. The contractor shall be responsible for all safety responsibilities including lagging, shoring, and the protection of adjacent property, structures, streets, and utilities in accordance with all federal, state and local safety ordinances. The Contractor shall provide for the design and installation of all cribbing, bracing and shoring required.

1. Special inspection is required, unless specifically noted otherwise. Special inspection services shall conform to the Governing Building Code, Chapter 17 and shall be provided by an ICC certified inspector or Building Department approved engineer. The Building Department reserves the right to waive or require the special inspection requirements (ICC Building Code Sections 1701.0 and 1704.0) if the plans in these plans waives the Building Department's right to require special inspection at any point and on any material.
2. Epoxy for anchoring bolts, rods, and reinforcing bars shall be as follows:
 - (a) Concrete: Hilti HIT RE 500 V3 (ICC ESR-3814), Hilti HY 200 (ICC ESR-3187), or Simpson SET-3G (ICC ESR-4057).
 - (b) Full Grouted Masonry: Hilti HY 200 (ICC ESR-3187), or Hilti HY 270 (ICC 2682), or Simpson SET-3G (ICC ESR-4057).
 - (c) Hollow Cell Masonry Units and Unreinforced Masonry: Hilti HY 270 (ICC 2682), or Simpson ET-HP (ICC ESR 3372).
3. Anchors shall be installed in accordance with the manufacturer's printed installation instructions by qualified personnel trained to install epoxy anchors.
4. Holes for post-installed anchors shall be drilled with a carbide tipped concrete/masonry drill bit using an electro-pneumatic hammer drill bit set in "rotation and hammer" mode. Hole diameter shall be 1/8" larger than the anchor diameter specified, unless noted otherwise. For installation in brick or hollow cell masonry units with a screen tube, the hole diameter shall be 1/4" larger than the anchor diameter, unless noted otherwise.
5. DO NOT drill through existing reinforcing. A small diameter test hole shall be drilled at the installation location. If existing reinforcing is encountered, the installation location shall be relocated to avoid conflict and the abandoned hole shall be filled with non-shrink grout or drypack. For holes drilled into columns and beams, remove the rebar cover in order to properly locate the rebar location and avoid the holes and the rebar. Other non-destructive means may be used to identify the positions and depth of reinforcing.
6. Holes shall be cleaned of dust and debris by blowing with 90 psi oil-free compressed air, brushing with a wire brush two times, and blowing with compressed air again to achieve a relatively dust-free wall surface.
7. The base material shall be a minimum of 28 days old, within a temperature range of 50°F - 100°F, and dry at the time of epoxy installation. The base material shall have a minimum strength as follows:
 - (a) Concrete: 2,500 psi
 - (b) Full Grouted Masonry: 1,500 psi
8. Fill each hole 1/2 - 2/3 full with the epoxy, starting from the bottom of the hole to prevent air pockets. Withdraw the nozzle as the hole fills with epoxy. Insert clean, oil-free anchor, turning slowly until the anchor contacts the bottom of the hole. DO NOT disturb anchor until fully cured. Cure time shall be per the manufacturer's installation instructions.

1. All concrete shall have:
 - (a) an ultimate compressive strength (f'_c) of 3,000 psi at 28 days (UNO).
 - (b) a maximum slump of 5" at point of placement.
 - (c) a w/c ratio of 0.55 or less for all slabs, walls, and columns, and 0.60 or less for all foundations.
 - (d) a normal dry-weight density (UNO).
2. Special inspection is NOT required as the foundations have been *designed* with f'_c = 2,500 psi in accordance with the Governing Building Code, section 1705.3, exceptions 1, 2.1, and 2.3, unless explicitly specified herein, on the structural plans, or by the Building Department. As a minimum, special inspection is always required on:
 - (a) structural slabs, flat plates
 - (b) walls, columns, beams
 - (c) piles, caissons
 - (d) welding of reinforcement, installation of mechanical bar splice devices, epoxy application
- When required or specified, special inspection services shall conform to the Governing Building Code, Chapter 17 and shall be provided by an ICC certified inspector or Building Department approved engineer. The Building Department reserves the right to waive or require the special inspection requirements [Section 1704.1 and 1704.4]. Nothing in these plans waives the Building Department's right to require special inspection at any point and on any material.
3. Testing of materials used in concrete construction must be performed as noted on structural plans or at the request of the Building Department to determine if materials are quality specified. Tests of materials and of concrete shall be made by an approved agency and at the request of the engineer. The following tests shall be made in accordance with standards listed in the Governing Building Code, Table 1705.3. When testing of concrete is required, four (4) test cylinders shall be taken from each 150 yards, or fraction thereof, poured in any one day. One (1) cylinder shall be tested at seven (7) days; two (2) at 28 days; one (1) shall be held in reserve. Where 4x8 cylinders are used, (5) test cylinders shall be taken, with (3) cylinders tested at 28 days. If Contractor elects to have additional tests performed for "early-break" results, additional test cylinders must be taken. At no time shall the Contractor initiate testing until the Engineer has been notified and performance is different than what is required by the Engineer. Contractor is responsible for complying with applicable testing requirements of the Building Department. Copies of all test reports shall be provided to Engineer and Building Department for review in a timely manner.
4. The Contractor shall remove and replace any concrete which fails to attain specified 28 day compressive strength if so directed by the Engineer. Any defects in the hardened concrete shall be repaired to the satisfaction of the Engineer and/or Architect or the hardened concrete will be replaced at the Contractor's expense.
5. All concrete work shall conform with the Governing Building Code, Chapter 19.
6. All cement shall be Portland Cement Type I or II and shall conform to ASTM C 150.
7. All aggregates shall conform to ASTM C33. All maximum aggregate sizes:

- (a) Footings: 1-1/2"
- (b) All other work: 3/4"
8. Where not specifically detailed, the minimum concrete cover on reinforcing steel shall be:
 - (a) Permanently exposed to earth or weather
 - i. Cast against earth: 3"
 - ii. Cast against forms: 2"
 - (b) Not exposed to earth or weather
 - i. Slabs, walls, joists: 3/4"
 - ii. Beams, girders, columns: 1-1/2"
9. The minimum lap splice length for all reinforcing steel shall be as noted in the typical details on sheet S-1.1. All lap splices to be staggered.
10. All reinforcing steel, anchor bolts, dowels, inserts, and any other hardware to be cast in concrete shall be well secured in position prior to foundation inspection. All hardware to be installed in accordance with respective manufacturer's specifications. Refer to architectural and structural plans for locations of embedded items.
11. Locations of all construction joints, other than specified on the structural plans, shall be approved by the Architect and Engineer prior to forming. Construction joints shall be thoroughly air and water cleaned and heavily roughened so as to expose coarse aggregates. All surfaces to receive fresh concrete shall be maintained continuously wet at least three (3) hours in advance of concrete placement. Unless specifically detailed or otherwise noted, construction and cast joints shall be provided in all concrete slabs-on-grade. Joints shall be located such that the area does not exceed 400 sq. feet.
12. The Architect, Engineer and appropriate inspectors shall be notified in a timely manner for a reinforcement inspection prior to the placement of any concrete.
13. The Contractor shall obtain approval from the Architect and the Engineer prior to placing sleeves, pipes, ducts, chases, coring and opening on or through structural concrete beams, walls, floors and roof slabs unless specifically detailed or noted on the plans. All piles or conduits passing through concrete members shall be sleeved with standard steel pipe sections.
14. The Contractor is responsible for design, installation, maintenance and removal of all formwork. Forms shall be properly constructed, sufficiently tight to prevent leakage, sufficiently strong, and braced to maintain their shape and alignment until no longer needed for concrete support. Joints in formwork shall be tightly fitted and blocked, and shall produce a finished concrete surface that is true and free from blemishes. Forms for exposed concrete shall be pre-approved by the Architect to ensure conformance with design intent.
15. Remove formwork in accordance with the following schedule:
 - (a) Forms at slab edge: 1 day
 - (b) Side forms at footings: 2 days
 - (c) All other vertical surfaces: 7 days
 - (d) Beams, columns, girders: 15 days
 - (e) Elevated slabs: 28 days

Engineer reserves the right to modify removal schedule above based on field observations, concrete conditions, and/or concrete test results.

16. Retaining walls shall not be backfilled until concrete has set a minimum of 14 days. Refer to structural plans for slab and/or framing installation sequencing.

17. All concrete (except slabs-on-grade "6" or less) shall be mechanically vibrated as it is placed. Vibrator to be operated by experienced personnel. The vibrator shall be used to consolidate the concrete. The vibrator shall not be used to convey concrete, nor shall it be placed on reinforcing and/or forms.

- (6) feet, use tremie, pump or other method consistent with applicable standards.
20. When specified ultimate compressive strength is greater than 2500 psi, Contractor shall submit mix designs to Architect and Engineer for approval seven (7) days prior to placement. Mix designs shall be prepared by an approved testing laboratory. Sufficient data must be provided for all admixtures.
21. Refer to Architectural plans for locations of all dimensions, slab depressions, slopes, drains, curbs, and control joints.

1. Reinforcing steel shall be deformed, clean, free of rust, grease or any other material likely to impair concrete bond.
2. All bars shall conform to ASTM A615, Grade 60 minimum (UNO on structural plans). It is welded wire fabric (WWF) shall conform to ASTM A185.
3. Reinforcing steel that is to be welded shall conform to ASTM A706. All welding of reinforcement shall be subject to special inspection.
4. Contractor shall take necessary steps (standard ties, anchorage devices, etc.) to secure all reinforcing steel in their true position and prevent displacement during concrete placement.
5. Fabrication, placement and installation of reinforcing steel shall conform to:
 - (a) Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice
 - (b) The Governing Building Code.
6. Shop drawings for fabrication of reinforcing steel shall be approved by the Contractor and submitted to the Architect and Engineer for review and approval prior to fabrication. Shop drawings are not required for slabs-on-grade or foundations unless specifically noted on the structural plans.
7. Heating of reinforcing steel to aid in bending and shaping of bars is not permitted. All bends in reinforcing steel are to be made cold. All bend radii shall conform to CRSI Manual of Standard Practice.
8. Refer to Concrete and Masonry notes for specific minimum splice length and splice staggering requirements. Lap welded wire fabric (WWF) reinforcement two (2) modules minimum (UNO). All splices are to be staggered.

1. Refer to latest edition of the Governing Building Code, Table 2304.10.1. for all minimum nailing requirements.
2. Refer to individual sections for applicable material specifications.
3. Fabricate, size, install, connect, fasten, bore, notch, and cut wood and plywood with joints true, light, and well-nailed, screwed or bolted as required, all members to have solid bearing without shimming, unless noted otherwise. Set horizontal members subject to bending with the crown up. Install framing plumb, square, true and cut for full bearing. Splices are not permitted between bearings. Use full lengths unless otherwise specified.
4. Metal framing angles, anchor, clips, straps, ties, holdowns, etc. shall be mfg by Simpson Strong-Tie Co. No substitutions shall be permitted without prior approval of the Engineer.
5. All walls are to have continuous double 2x top plates spaced as followings unless specifically noted otherwise on the plans and details.
6. Wall Studs:
 - (a) Unless specifically noted on the plan and details, use the following guidelines for wall framing:
 - i. Use 2x4 studs at 16" oc for walls less than 9'-0" tall.
 - ii. Walls 9'-0" to 16'-0" tall shall be constructed of 2x6 studs at 16" oc
 - iii. Specifically engineered wall details for walls greater than 16'-0" tall.
7. Blocking:
 - (a) Provide min. one row of nominal 2" thick blocking of same width as stud, fitted snugly and spiked into studs at mid-height of partitions or walls over 8' high.
 - (b) All foundation cripple walls (or "pony walls") less than 14" in height shall be solid blocking.
 - (c) Refer to shearwall section for additional blocking requirements.
8. Notching:
 - (a) Is not permitted of any structural member without prior approval
 - (b) In exterior and bearing walls, notches shall not exceed 25% of the stud depth.
 - (c) Non-bearing partition walls, notches shall not exceed 40% of the stud depth.
 - (d) Successive notches in the same member shall be spaced a min of 18" apart.
9. Boring:
 - (a) Is not permitted of any structural member without prior approval
 - (b) In exterior and bearing walls, holes shall not exceed 40% of the stud depth.
 - (c) Non-bearing partition walls, may be drilled not greater than 60% of stud depth.
 - (d) Successive holes in the same member shall be spaced a minimum of 18" apart.
10. Bearing:
 - (a) Provide a min. of 1-1/2" of bearing for all 2x joists and hdsr 4x10 / 6x8 & smaller.
 - (b) Provide a min. of 3" of bearing for all beams and hdsr 4x12 / 6x10 & larger, UNO on plans.
 - (c) Members bearing on prefabricated hangers are to have full bearing and nailing per manufacturer's specifications.

1. Posts:
 - (a) Posts inside walls shall bear on sill plates and shall be continuous between top and bottom plates, unless specifically noted otherwise.
 - (b) Provide posts under all beams, girders or double joists equal to the width of the supported member.
 - (c) Posts on upper levels are to be stacked on posts of equal size at levels below, unless a larger post is specified on the plans.
 - (d) Vertically oriented blocking ("squash blocking") shall be used to fully transfer the post area through floors to foundation. Vertical blocking shall be equal to floor thickness plus 1/16".
 - (e) Joists framing into continuous posts without trimmer studs shall be supported in Simpson HUC hangers unless noted otherwise on the plans.
 - (f) Posts when isolated, shall be seated in Simpson post or column bases, unless noted otherwise on the plans
12. Roof Framing:
 - (a) Provide wood joists, as specified, laid with the crown up and spaced as indicated.
 - (b) Provide a minimum of 1-1/2" end bearing unless otherwise shown.
 - (c) Provide full depth solid 2x12 or cross-bridging between the joists at 8' oc max.
 - (d) Provide all cricket framing required to achieve positive drainage per Arch.
 - (e) Install plywood panels with the face grain across the framing and close joints and nail at each support. Fully nail with common nails per the plans.
 - (f) Plywood panels shall not be less than 4' x 8' except at boundaries and changes in framing direction, where the minimum panel dimension shall be no less than 24", unless all edges of sheathed panels are supported by and fastened to framing members or blocking.
 - (g) Provide Simpson "PSCCL" clips at all plywood joints perpendicular to framing. Provide clips midway between framing members at the unsupported edges of plywood when members are spaced at 24" oc or greater. If clips are not used, provide solid blocking for joints perpendicular to framing.
13. Floor Framing:
 - (a) Provide wood joists, as specified, laid with the crown up and spaced as indicated.
 - (b) Provide a minimum of 1-1/2" end bearing unless otherwise shown.
 - (c) Provide full depth solid 2x12 blocking or cross-bridging between the joists at 8' oc max. For floors framed with I joists, refer to the mfg's spec's for bkg requirements.
 - (d) Provide full depth solid 2x12 blocking between the joists under all walls and partitions where the wall or partition is perpendicular to the floor framing (including floors framed with I joists)
 - (e) Install plywood sheathing with the face grain across supports, and supports staggered, and the edges of sheets centered over supports. If T&G plywood is used, blocking need not be provided at all plywood edges (UNO per plan). If T&G plywood is not used, blocking shall be provided at all plywood edges. Glue plywood to joists and fully nail with common nails per the plans.
 - (f) Plywood panels shall not be less than 4' x 8' except at boundaries and changes in framing direction, where the minimum panel dimension shall be no less than 24", unless all edges of sheathed panels are supported by and fastened to framing members or blocking.
14. Shear Walls:
 - (a) Refer to plans for all shearwall locations, length type and nailing.
 - (b) Refer to Shearwall Schedule on title sheet for additional information.
 - (c) Shear wall lengths specified on plans are minimum required.
 - (d) Shear walls to be nailed with common nails. All nails to have minimum 3/8" edge distance to pans or framing member.
 - (e) Where 3x framing is required per the shear wall schedule, stagger edge nailing.
 - (f) Oriented Strand Board (OSB) may be used in lieu of plywood.

1. All structural lumber shall be Douglas Fir-Larch, S4S and shall conform to the Governing Building Code, section 2303.1.1.
2. The minimum lumber grade of each member shall be as follows (unless specifically noted otherwise on plans and details):
 - (a) 2x studs, blocking, plates: Stud
 - (b) 2x joists #2 or better
 - (c) 4x4, 4x6, or 6x6 beams or posts #2 or better
 - (d) 4x8, 6x8, or larger beams or posts #1 or better

It is recommended (but not required) that all exposed members be Select Structural or better and free of heart center due to visual characteristics.
3. All lumber in contact with concrete or masonry shall be pressure treated Douglas Fir. Whenever it is necessary to cut, notch, bore or splice pressure treated material, all newly cut surfaces shall be thoroughly painted with the same preservative.
4. Maximum moisture content for all structural members shall not exceed 19%.
5. All plywood sheathing shall be CDX grade (or better) Douglas Fir with exterior glue. All sheathing shall conform to the Governing Building Code and grade-marked by the American Plywood Association (APA). Panel index to be 40/20 for floors and 24/0 for roofs unless specifically noted otherwise on the plans and details.

| Gl-Uminated Beams (GLB): | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--------------------|---------------------------------|--------------------------------------|-------------------------------------|----------------------------------|----------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| (a) laminated have the following properties: | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Use | EWS Combination Symbol | Species / Grade | Flexural Stress, Fb (psi) | Modulus of Elasticity, E (ksi) | Horiz. Shear Stress, Fv (psi) | Compression Fc para. (psi) | Compression Fc perp. (psi) | | | | | | | | | | | | | | | | | | | |
| Simple Span Bm. | 24F-V4 | DF | +2,400/-1,850 | 1,800 | 265 | 1,650 | 650 | | | | | | | | | | | | | | | | | | | |
| Continuous or Cantilever Bm. | 24F-V8 | DF | +/- 2,400 | 1,800 | 265 | 1,650 | 650 | | | | | | | | | | | | | | | | | | | |
| Columns | 2 | DF / L2 | +/- 1,800 | 1,600 | 265 | 1,650 | 650 | | | | | | | | | | | | | | | | | | | |
| (b) shall not be notched, cut or drilled without prior approval from the Engineer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (c) shall have exterior glue and weather-treatment prior to installation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (d) shall be fabricated by an approved manufacturer & in accordance with ANSI A 190.1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (e) shall have factory standard camber of 3,500-5,000 ft in beams UNO per Plan | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Laminated Veneer Lumber (LVL) : | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (a) shall be 1-3/4" minimum thickness with the following minimum properties: | | | | | | | | | | | | | | | | | | | | | | | | | | |
| i. | E = | 2000 ksi | | | | | | | | | | | | | | | | | | | | | | | | |
| ii. | Fb = | 2600 psi | | | | | | | | | | | | | | | | | | | | | | | | |
| iii. | Fv = | 285 psi | | | | | | | | | | | | | | | | | | | | | | | | |
| iv. | Fc (parallel) = | 2500 psi | | | | | | | | | | | | | | | | | | | | | | | | |
| v. | Fc (perp.) = | 750 psi | | | | | | | | | | | | | | | | | | | | | | | | |
| vi. | Ft (parallel) = | 1500 psi | | | | | | | | | | | | | | | | | | | | | | | | |
| vii. | Specific Gravity = | 0.50 | | | | | | | | | | | | | | | | | | | | | | | | |
| (b) shall be fabricated by an approved manufacturer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (c) shall bear a minimum of 3-1/2" on specified supports. Provide full depth solid blocking at all bearing points | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (d) shall be nailed in accordance with mfg's specifications. Unless otherwise approved, nailing into the top edge shall not be spaced any closer than: | | | | | | | | | | | | | | | | | | | | | | | | | | |
| i. | 16d @ 6" oc, 10d @ 4" oc, and 8d @ 3" oc | | | | | | | | | | | | | | | | | | | | | | | | | |
| ii. | When nailing must be reduced, stagger rows a minimum of 1/2" apart while maintaining proper edge distances. | | | | | | | | | | | | | | | | | | | | | | | | | |
| (e) shall be, when comprised of multiple members, connected with 16d nail, 1/2" bolts or 1/4" lag screws in accordance with manufacturer's specifications. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (f) shall not be cut, notched or drilled without specific written approval of the EOR. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Laminated Strand Lumber (LSL) : | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (a) shall be 1-1/4" minimum thickness with the following minimum properties: | | | | | | | | | | | | | | | | | | | | | | | | | | |
| i. | E = | 1550 ksi | | | | | | | | | | | | | | | | | | | | | | | | |
| ii. | Fb = | 2325 psi | | | | | | | | | | | | | | | | | | | | | | | | |
| iii. | Fv = | 310 psi | | | | | | | | | | | | | | | | | | | | | | | | |
| iv. | Fc (parallel) = | 2500 psi | | | | | | | | | | | | | | | | | | | | | | | | |
| v. | Fc (perp.) = | 800 psi | | | | | | | | | | | | | | | | | | | | | | | | |
| vi. | Ft (parallel) = | 1070 psi | | | | | | | | | | | | | | | | | | | | | | | | |
| vii. | Specific Gravity = | 0.50 | | | | | | | | | | | | | | | | | | | | | | | | |
| (b) shall be fabricated by an approved manufacturer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (c) shall bear a minimum of 3-1/2" on specified supports. Provide full depth solid blocking at all bearing points | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (d) shall be nailed in accordance with mfg's specifications. Unless otherwise approved, nailing into the top edge shall not be spaced any closer than: | | | | | | | | | | | | | | | | | | | | | | | | | | |
| i. | 16d @ 6" oc, 10d @ 4" oc, and 8d @ 3" oc | | | | | | | | | | | | | | | | | | | | | | | | | |

- (d) shall be with "common" nails unless noted otherwise.
- (e) shall not be driven closer than 1/2 their length nor closer than 1/4 of their length to the edge or end of a member, except for sheathing.
- (f) shall be installed in pre-drilled lead holes if necessary to avoid splitting.
- (g) shall be hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper when in contact with preservative-treated wood.
- i. When used in exterior applications, nails shall have coating types and weights in accordance with the treated wood or bolt manufacturer's rec's. A minimum of ASTM A653, type G185 zinc-coated galvanized steel (or equiv.) shall be used.
- ii. When used in an interior, dry environment in SBX/DOT or zinc borate preservative-treated wood, plain carbon nails shall be permitted.
- (h) All nailing shall conform to the Governing Building Code, Table 2304.10.1.

2. Lag screws:

- (a) shall be installed into pre-drilled lead holes. Lubricant (or soap) shall be used to facilitate installation and prevent damage to the screws.
- (b) shall be hot-dipped zinc-coated galvanized steel or stainless steel when in contact with preservative-treated wood.
- i. When used in exterior applications, bolts shall have coating types and weights in accordance with the treated wood or bolt manufacturer's rec's. A minimum of ASTM A653, type G185 zinc-coated galvanized steel (or equiv.) shall be used.
- ii. When used in dry interior environments in SBX/DOT or zinc borate preservative-treated wood, plain carbon screws, nuts, and washers shall be permitted.

3. Bolts:


- (a) shall conform to ASTM A307, UNO specifically on plans and details.
- (b) shall be installed in pre-drilled holes with a max of 1/16" larger than the specified bolt dia.
- (c) when installed against wood surfaces, shall have standard washers under the heads and nuts.
- (d) shall be hot-dipped zinc-coated galvanized steel or stainless steel when in contact with preservative-treated wood.
- i. When used in exterior applications, bolts shall have coating types and weights in accordance with the treated wood or bolt manufacturer's rec's. A minimum of ASTM A653, type G185 zinc-coated galvanized steel (or equiv.) shall be used.
- ii. When used in dry interior environments in SBX/DOT or zinc borate preservative-treated wood, plain carbon screws, nuts, and washers shall be permitted.

4. Anchor Bolts:

- (a) shall be installed at all exterior walls and all interior shear and/or bearing walls.
- (b) shall be 5/8" diameter with 2x8x22" steel plate washers at shear walls.
- (c) shall be 5/8" diameter with 2x2x16" steel plate washers at non-shear walls.
- (d) shall have 7" minimum embedment. (Contractor to coordinate length of bolts with sill plate thicknesses).
- (e) shall conform to ASTM F1554, Grade 36.
- (f) shall be hot-dipped zinc-coated galvanized steel or stainless steel when in contact with preservative-treated wood.
- i. When used in exterior applications, bolts shall have coating types and weights in accordance with the treated wood or bolt manufacturer's rec's. A minimum of ASTM A653, type G185 zinc-coated galvanized steel (or equiv.) shall be used.
- ii. When used in dry interior environments in SBX/DOT or zinc borate preservative-treated wood, plain carbon screws, nuts, and washers shall be permitted.
- (g) shall not be spaced greater than 72" o.c. or Refer to shearnall schedule for specific anchor bolt spacing requirements.
- (h) shall be placed a maximum of 12" from wall corners, wall ends, and sill plate splices (but not less than 7 dia.), and a min. of two bolts per piece of sill plate is required.
- (i) shall be secured in place prior to foundation inspection.

5. Powder Actuated Shot Pins:

- (a) shall be installed at all interior non-bearing, non-shear walls.
- (b) shall be 0.145x3" with 1.5" diameter steel washers.
- (c) shall not be spaced greater than 32" o.c.

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|  <p>Ashley & Vance ENGINEERING, INC.</p> | <p>210 East Cota Street Santa Barbara, CA 93101 (805) 962-9966 www.ashlevyance.com</p> | | | | | | | | | | | | | | | | |
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| <p>Engineer of Record:</p> <div style="text-align: center;">  PLAN REVIEW SET NO. 1000 CONSTRUCTION CIVIL STATE OF CALIFORNIA </div> | | | | | | | | | | | | | | | | | |
| <h1 style="margin: 0;">Scibird Remodel</h1> <p style="font-size: 1.2em; margin: 0;">539 Periwinkle Ln. Montecito, CA 93108</p> | | | | | | | | | | | | | | | | | |
| <p>Revision:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 5%;">△</td><td style="width: 95%;"></td></tr> <tr><td>△</td><td></td></tr> <tr><td>△</td><td></td></tr> <tr><td>△</td><td></td></tr> <tr><td>△</td><td></td></tr> <tr><td>△</td><td></td></tr> <tr><td>△</td><td></td></tr> <tr><td>△</td><td></td></tr> </table> | | △ | | △ | | △ | | △ | | △ | | △ | | △ | | △ | |
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| <p>Proj. Engr.: C. Huffman Phone Ext.: 142 Proj. Mng'r.: P. Belmont</p> <p>Date: 17 Oct. 2022 Scale: NTS</p> <p>A&V Job No.: 211851</p> | | | | | | | | | | | | | | | | | |
| <p>STRUCTURAL SPECIFICATIONS & SPECIAL INSPECTIONS</p> <h1 style="margin: 0;">S-1.2</h1> | | | | | | | | | | | | | | | | | |

