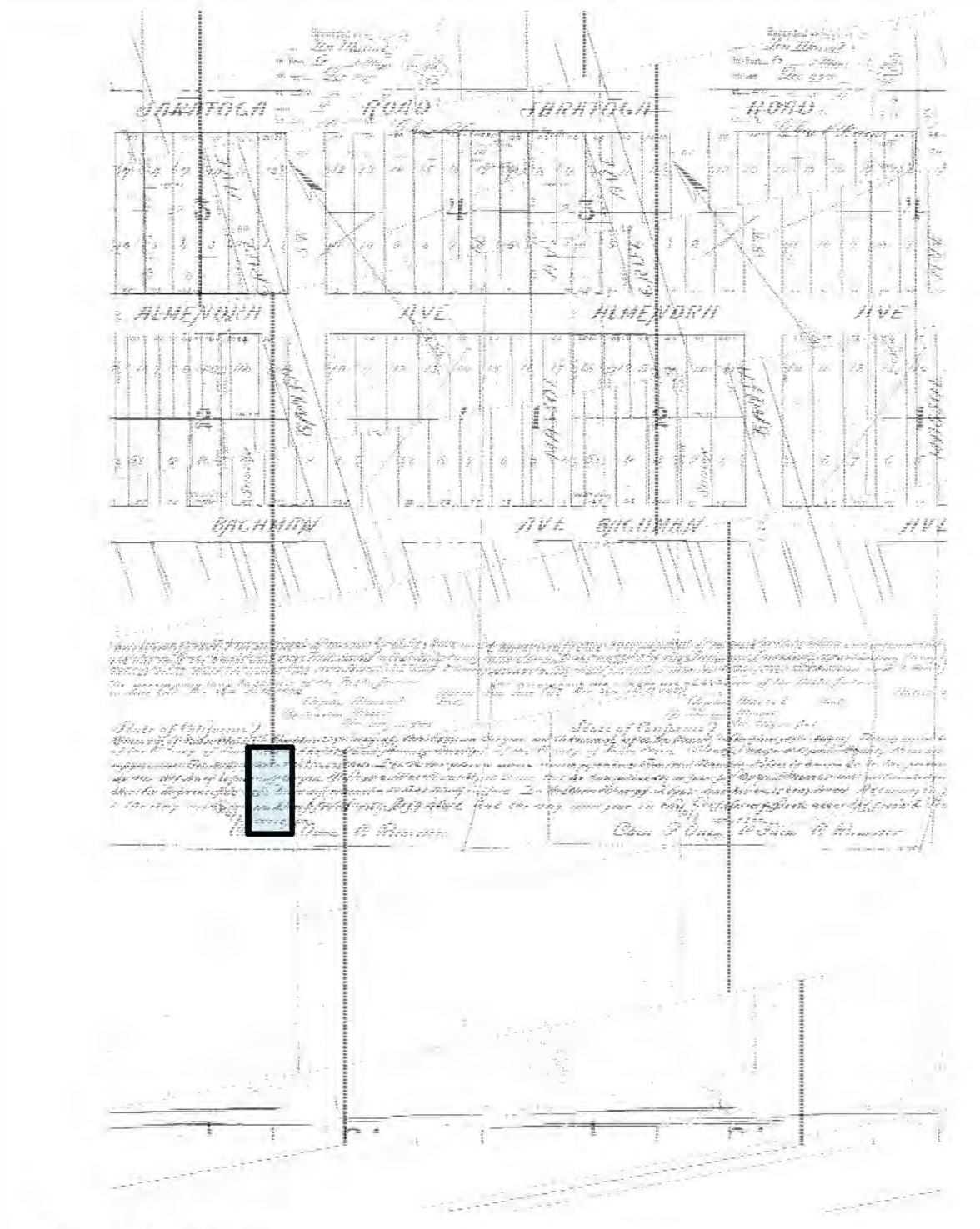
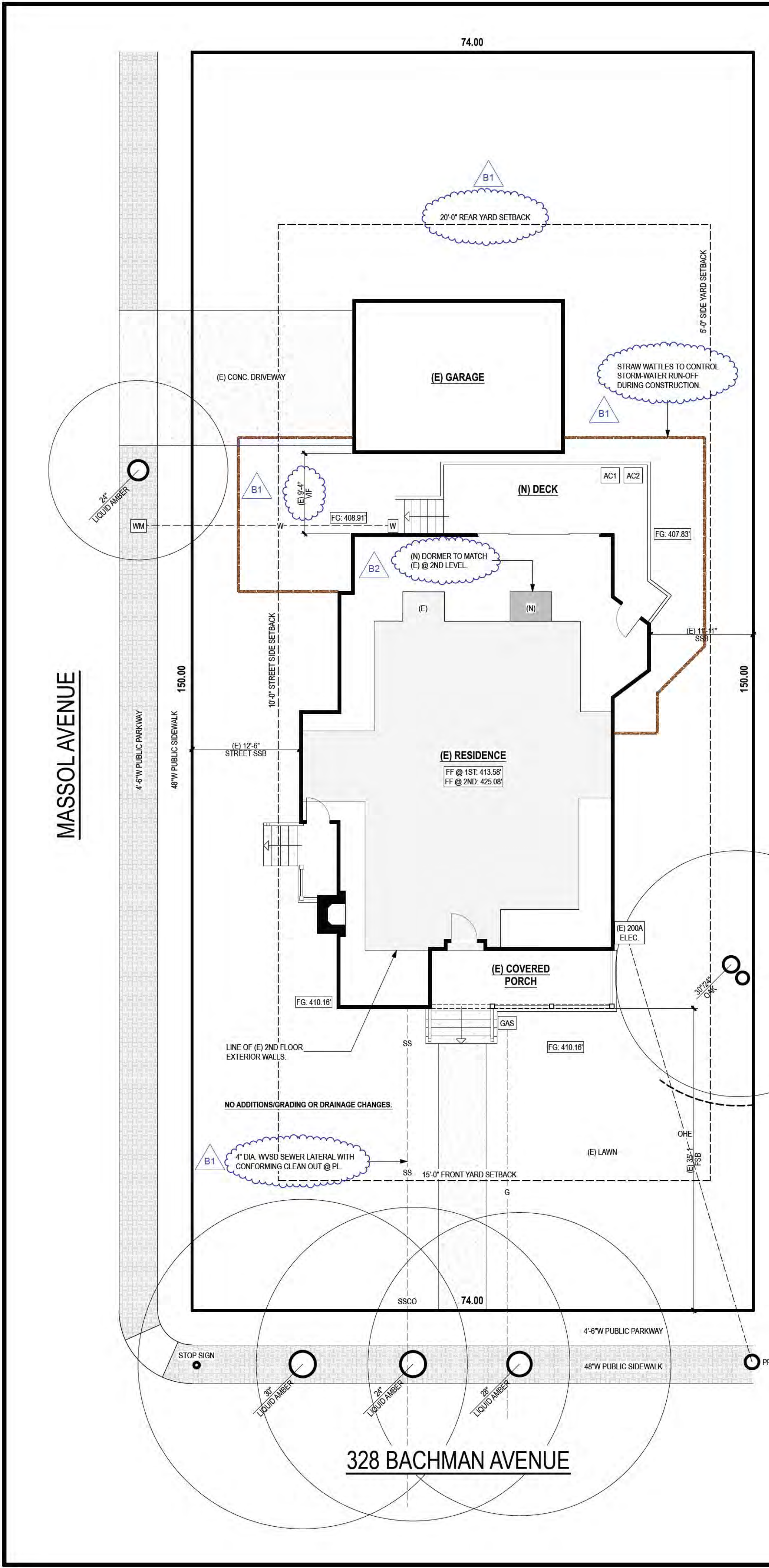




SITE PLAN NOTES:

- WHEN REQUIRED BASED ON THE SCOPE OF WORK, SEE THE CIVIL ENGINEER'S "GRADING & DRAINAGE PLANS" AS APPLICABLE AND/OR REQUIRED FOR TOPOGRAPHY, SITE WORK & UNDERGROUND CONSTRUCTION (TYP) ALL GRADING SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL CODES & REQUIREMENTS. CIVIL ENGINEER'S PLANS SHALL TAKE PRECEDENCE OVER ANY ARCHITECTURAL SITE PLANS AND/OR LANDSCAPE PLANS.
- WHEN REQUIRED AND AS APPLICABLE, A LICENSED CIVIL ENGINEER OR LICENSED LAND SURVEYOR SHALL PROVIDE WRITTEN CERTIFICATION OF SETBACK COMPLIANCE FROM PROPERTY LINES AND ALL RELATIVE PAD ELEVATIONS FOR ALL NEW CONSTRUCTION ON THE SITE.
- UNLESS NOTED OTHERWISE ON CIVIL ENGINEERING PLANS (GRADING AND DRAINAGE), THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF 2% FOR A MINIMUM DISTANCE OF 10'-0" MEASURED PERPENDICULAR TO THE FACE OF THE WALL. IF PHYSICAL OBSTRUCTIONS OR LOT LINES PROHIBIT 10'-0" OF HORIZONTAL DISTANCE, A 5% SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATIVE METHOD OF DIVERTING WATER AWAY FROM THE FOUNDATION. DRAINAGE SWALE USED FOR THIS PURPOSE SHALL BE SLOPED 2% WHERE LOCATED WITHIN 10'-0" OF THE BUILDING FOUNDATION. IMPERVIOUS SURFACES WITHIN 10'-0" OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2% AWAY FROM THE BUILDING. CBC1804.4. SEE EXCEPTION FOR ALLOWABLE FINISH GRADE SLOPE REDUCTION TO 2% AWAY FROM STRUCTURE.
- WHEN EXISTING SEWER LATERALS ARE APPROVED FOR REUSE, EXISTING LINES SHALL BE TELEVIEWED & APPROVED BY THE LOCAL SANITATION DISTRICT PRIOR TO FINAL INSPECTION. PROVIDE A NEW CLEAN OUT LOCATED @ THE PROPERTY LINE WITH AN APPROVED BACK FLOW PREVENTION DEVICE APPROVED BY THE SANITATION DEPARTMENT (AS APPLICABLE).
- IN NEW CONSTRUCTION, ALL UTILITIES SHALL BE INSTALLED UNDERGROUND (UNO). SEE THE UTILITY PROVIDER'S PLANS & SPECIFICATIONS FOR LAYOUT, DETAIL & SERVICES TO BE PROVIDED. VERIFY JURISDICTION FOR SPECIAL MUNICIPAL REQUIREMENTS.
- ALL TREES MARKED ON THE "SITE PLAN" NOT SCHEDULED FOR REMOVAL SHALL BE PROTECTED BY THE APPROPRIATE TREE PROTECTION MEASURES IDENTIFIED BY THE CONSULTING ARBORIST OF RECORD AND/OR LOCAL PLANNING JURISDICTION AS APPLICABLE & REQUIRED AS A CONDITION OF APPROVAL. NO EQUIPMENT, MATERIALS OR WORK SHALL COMMENCE UNTIL ALL TREE PROTECTION FENCING IS INSTALLED. TREE PROTECTION FENCING SHALL REMAIN IN PLACE UNTIL THE PROJECT IS READY FOR FINAL INSPECTION. ANY WORK REQUIRED WITHIN THE FENCED PROTECTED AREA SHALL BE PERFORMED WITH HAND TOOLS.
- AS APPLICABLE, SEE CONSULTING LANDSCAPE ARCHITECT'S DRAWINGS FOR PLANTWORK, PAVING, RECREATIONAL FIXTURES, PROPOSED PLANTING & IRRIGATION INSTALLATIONS.
- R181.1 ADDRESS IDENTIFICATION. BUILDINGS SHALL BE PROVIDED WITH APPROVED ADDRESS IDENTIFICATION. THE ADDRESS IDENTIFICATION SHALL BE LEGIBLE AND PLACED IN A POSITION THAT IS VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBERS SHALL NOT BE SPELLED OUT. EACH CHARACTER SHALL BE NOT LESS THAN 4 INCHES (102 MM) IN HEIGHT WITH A STROKE WIDTH OF NOT LESS THAN 0.5 INCH (12.7 MM). WHERE REQUIRED BY THE FIRE CODE OFFICIAL, ADDRESS IDENTIFICATION SHALL BE PROVIDED IN ADDITIONAL APPROVED LOCATIONS TO FACILITATE EMERGENCY RESPONSE. WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD & THE BUILDING ADDRESS CANNOT BE VIEWED FROM THE PUBLIC WAY, A MONUMENT, POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. ADDRESS IDENTIFICATION SHALL BE MAINTAINED.

SITE PLAN

37° 13' 44" N
121° 59' 03" W

ADDRESS: 328 BACHMAN AVENUE
APN: 510-14-037
LOT SIZE: 11,100 SF (.25 ACRES)
ZONING: R-1D:LHP
TRACT: #35 (MASSOL SUBDIVISION)
BUILT: 1900
WUI: NO

0 4' 8' 16'
1/8" = 1'-0"

PROJECT DATA:

PROJECT ADDRESS: 328 BACHMAN AVENUE
LOS GATOS, CA 95030
510-14-037

APN: 510-14-037
CONSTRUCTED: 1900
LOT AREA: 11,100 SF (0.25 ACRES)
ZONING: R-1D:LHP
TRACT: 35 (MASSOL SUBDIVISION)
OCCUPANCY: R3U (SINGLE FAMILY RESIDENCE)
CONSTRUCTION TYPE: V-B (NON-SPRINKLERED)
WUI ZONE: NO
JURISDICTION: TOWN OF LOS GATOS
FIRE SPRINKLERS: NO

SETBACKS	PROPOSED	ALLOWED
FRONT:	(E) 35'-1"	15'-0"
LEFT SIDE:	(E) 12'-6"	10'-0"
RIGHT SIDE:	(E) 11'-11"	5'-0"
REAR:	(E) 54'-1"	20'-0"

BUILDING HT.	PROPOSED	ALLOWED
RESIDENCE	(E) 28'-5"	30'-0"

HABITABLE AREAS	EXISTING	PROPOSED	ALLOWED
LIVING AREA @ 1ST	1,647 SF	1,647 SF	(B2)
LIVING AREA @ 2ND	997 SF	1,055 SF	
CELLAR (N/C IN FAR)	(1,393 SF)	(1,393 SF)	

HABITABLE TOTAL: 2,702 SF 3,300 SF (FAR = 30)

GARAGE AREA	EXISTING	PROPOSED
(E) GARAGE AREA:	360 SF	360 SF

GARAGE TOTAL: 360 SF 360 SF 921 SF (FAR = .093)

NON-HABITABLE AREAS	EXISTING	PROPOSED
(E) COVERED PORCH	180 SF	180 SF
(N) WOOD DECK:		291 SF

NON-HABITABLE TOTAL: 471 SF N/A

PROJECT INFO:

OWNER: 328 BACHMAN AVENUE
LOS GATOS, CA 95030

DESIGNER: STUDIO 3 DESIGN
CONTACT: BESS WERSEMA
bess@studio-three.com
638 UNIVERSITY AVENUE
LOS GATOS, CA 95032
408.292.3252 (OFFICE)

STRUCTURAL ENGINEER: CHARLES WILLIAMS R.C.E.
MR. CHARLES WILLIAMS P.E.
PO BOX 1152
MOUNTAIN VIEW, CA 94042
(850) 279-8766
cwilliams@aol.com

T24 ANALYST: FRI CONSULTING INC.
CONTACT: NICK BIGNARDI
nick@fconsulting.com
21 N. HARRISON STREET
SUITE 210
CAMPBELL, CA 95008
408.866.1620

SHEET INDEX:

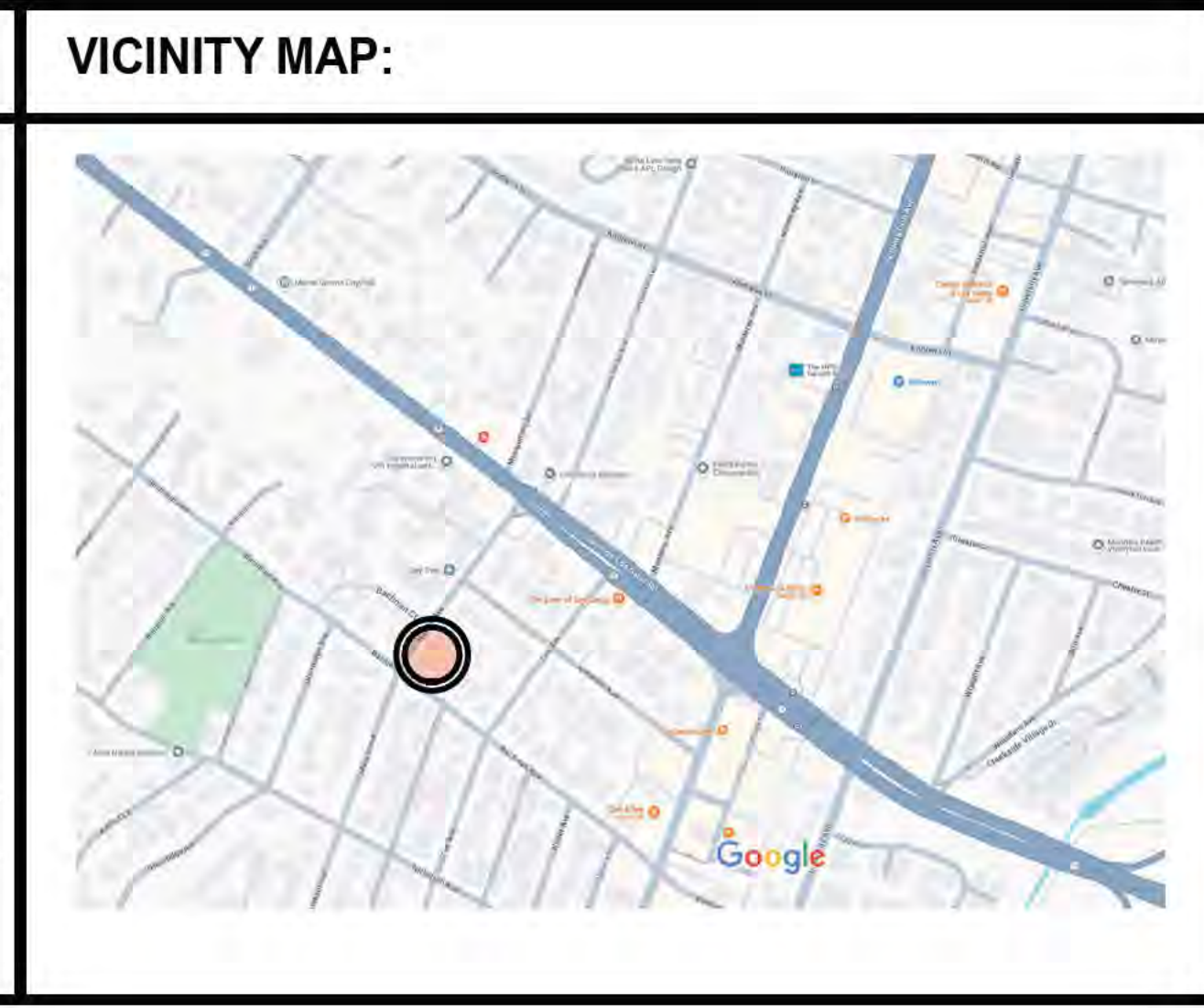
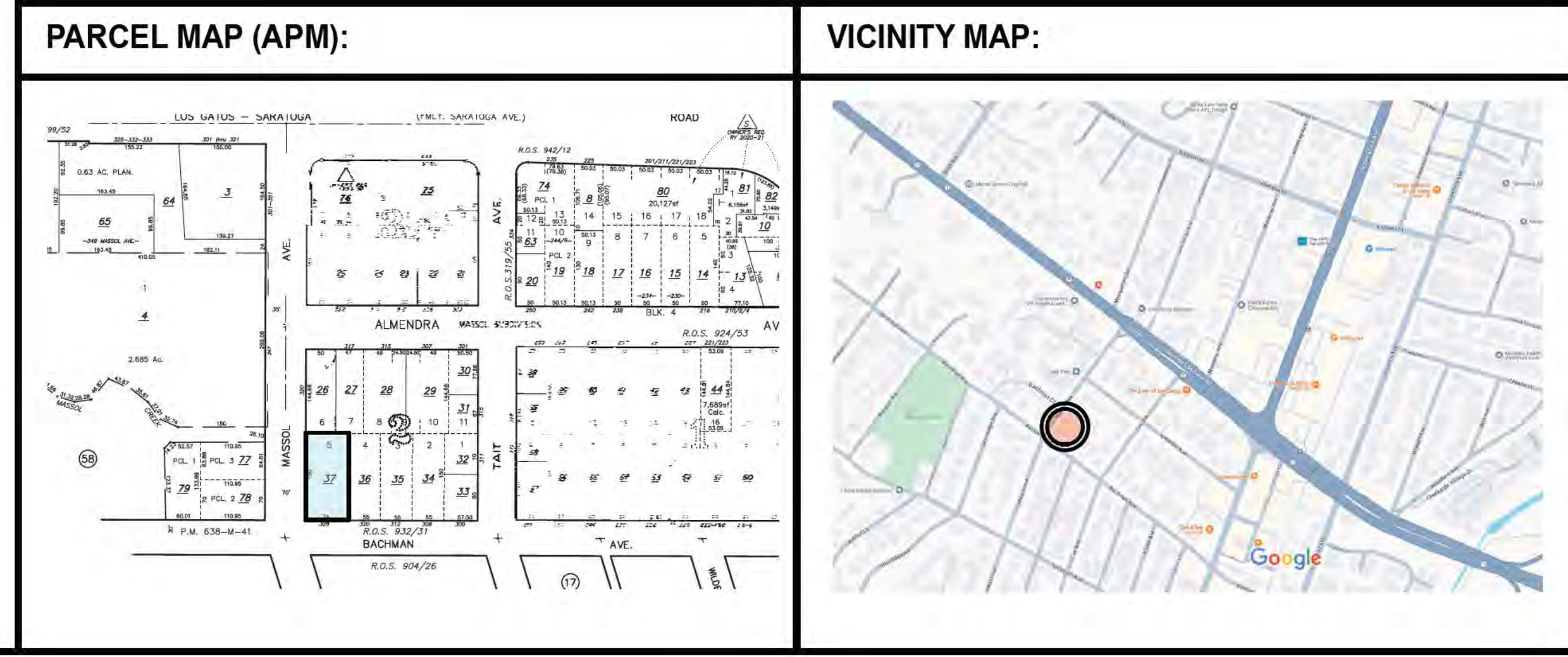
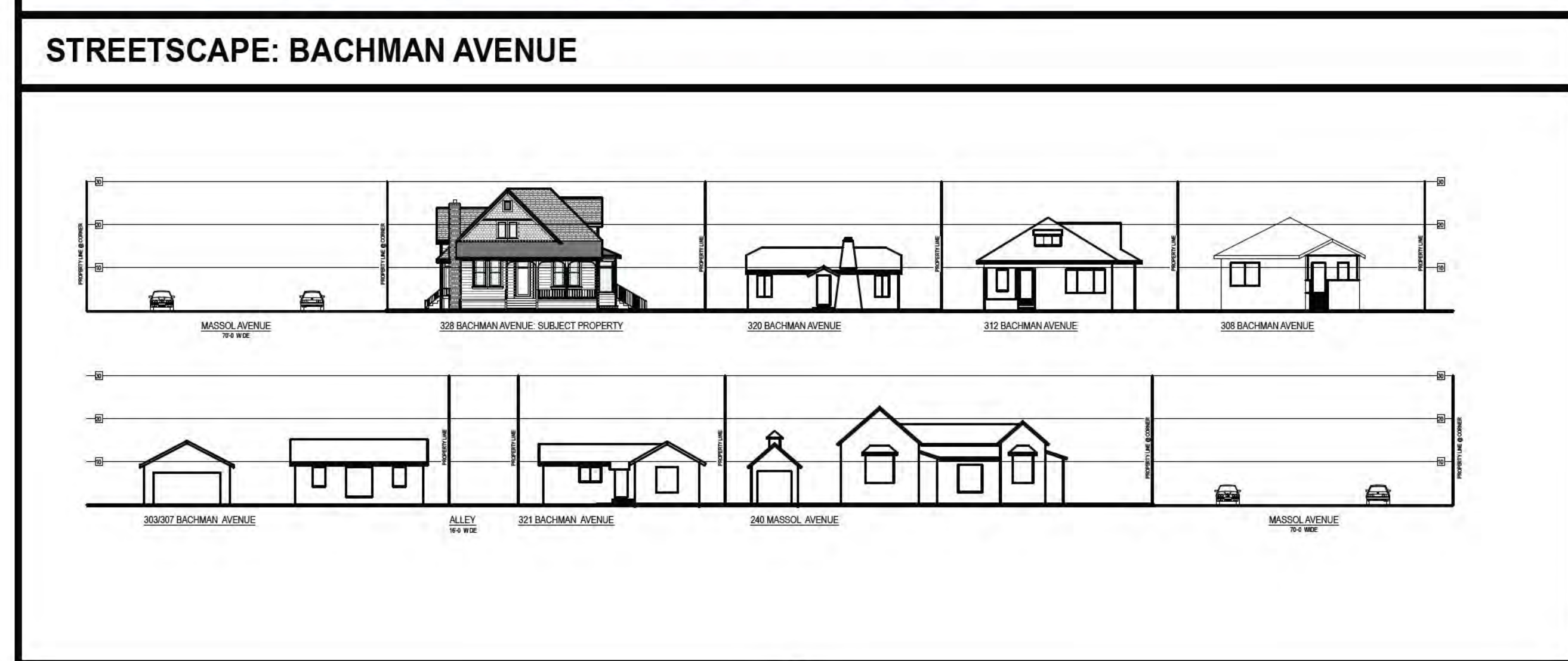
A1.1	TITLE SHEET/RITE PLAN
A1.2	CAL GREEN TABLES
A1.3	CAL GREEN TABLES
A1.4	LOS GATOS BMP
A1.5	LOS GATOS CONDITIONS OF APPROVAL
A2.1	(E & N) CELLAR FLOOR PLANS - DEMOLITION
A2.2	(E & N) 1ST LEVEL FLOOR PLANS - DEMOLITION
A2.3	(E & N) 2ND LEVEL FLOOR PLANS - DEMOLITION
A2.4	(E & N) ROOF PLAN
A2.5	(E) EXTERIOR WALL DEMO & COLORIZED ELEVATIONS
A3.1	(E & N) FRONT ELEVATIONS
A3.2	(E & N) LEFT SIDE ELEVATIONS
A3.3	(E & N) REAR ELEVATIONS
A3.4	(E & N) RIGHT SIDE ELEVATIONS
A4.1	BUILDING SECTIONS
A4.2	WALL DETAILS
D.1	STAR DETAILS
D.2	DOOR/WINDOW NOTES
DW.1	SCGFD JOB SITE SAFETY
GN.1	CRC NOTES
GN.2	CRC NOTES
ME.1	BASEMENT/CELLAR MEP
ME.2	1ST LEVEL MEP
ME.3	2ND LEVEL MEP
ME.4	CA ELECTRICAL CODE
ME.5	CA ENERGY CODE
ME.6	CA MECHANICAL CODE
P.1	CA PLUMBING CODE
S.1	FOUNDATION PLAN
S.2	2ND FLOOR FRAMING PLAN
S.3	ROOF FRAMING PLAN
SD.1	STRUCTURAL DETAILS
SD.2	STRUCTURAL DETAILS
SD.3	STRUCTURAL DETAILS
SD.4	STRUCTURAL DETAILS
SN.1	STRUCTURAL NOTES
SN.2	STRUCTURAL NOTES
T24.1	TITLE 24 CALCULATIONS
T24.2	TITLE 24 CALCULATIONS

GOVERNING CODES:

1. GOVERNING CODES: ALL WORK SHALL CONFORM TO THE FOLLOWING CODES AND STANDARDS:

- A) 2022 CALIFORNIA BUILDING CODE (CBC): TITLE 24, PART 2 (BASED ON 2021 IBC)
- B) 2022 CALIFORNIA RESIDENTIAL CODE (CRC): TITLE 24, PART 2.5 (BASED ON 2021 IRC)
- C) 2022 CALIFORNIA ELECTRIC CODE (CEC): TITLE 24, PART 3 (BASED ON 2020 NEC)
- D) 2022 CALIFORNIA MECHANICAL CODE (CMC): TITLE 24, PART 4 (BASED ON 2021 UMC)
- E) 2022 CALIFORNIA PLUMBING CODE (CPC): TITLE 24, PART 5 (BASED ON 2021 UPC)
- F) 2022 CALIFORNIA ENERGY CODE (CENC): TITLE 24, PART 6 (CA BUILDING STANDARDS COMMISSION)
- G) 2022 CALIFORNIA FIRE CODE (CFC): TITLE 24, PART 9 (BASED ON 2021 IFC)
- H) 2022 CALIFORNIA GREEN BUILDING CODE: TITLE 24, PART 11 (CA BUILDING STANDARDS COMMISSION)

IN ADDITION TO THE CODES REFERENCED ABOVE, ALL WORK SHALL CONFORM TO ALL LOCAL ORDINANCES & CODES AS APPLICABLE. CROSS REFERENCE ALL CODE NUMBERS AND VERIFY CONSISTENCY AS REQUIRED.



STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

638 UNIVERSITY AVE
LOS GATOS
CALIFORNIA
95032

t 408.292.3252
f 253.399.1125

05/15/25
10/08/25

RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

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

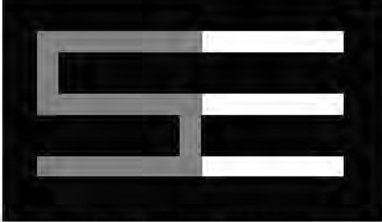
TITLE/SITE PLAN

A1.1

ATTACHMENT 3

Y	NA	RESPON- PARTY	CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL 301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7. 301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration. The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application. Note: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section. Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates. 301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings or high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used. SECTION 302 MIXED OCCUPANCY BUILDINGS 302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy. Exceptions: 1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable. 2. [HCD] For purposes of CALGreen, live/work units, complying with Section 4.19 of the <i>California Building Code</i>, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable. DIVISION 4.1 PLANNING AND DESIGN ABBREVIATION DEFINITIONS: HCD Department of Housing and Community Development BSC California Building Standards Commission DSA-SS Division of the State Architect, Structural Safety QSHPD Office of Statewide Health Planning and Development LR Low Rise HR High Rise AA Additions and Alterations N New CHAPTER 4 RESIDENTIAL MANDATORY MEASURES SECTION 4.102 DEFINITIONS 4.102.1 DEFINITIONS The following terms are defined in Chapter 2 (<i>and are included here for reference</i>) FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water. WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls. 4.106 SITE DEVELOPMENT 4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section. 4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site. 1. Retention basins of sufficient size shall be utilized to retain storm water on the site. 2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency. 3. Compliance with a lawfully enacted storm water management ordinance. Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil. (Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html) 4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following: 1. Swales 2. Water collection and disposal systems 3. French drains 4. Water retention gardens 5. Other water measures which keep surface water away from buildings and aid in groundwater recharge. Exception: Additions and alterations not altering the drainage path. 4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the <i>California Electrical Code</i>, Article 625. Exceptions: 1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions: 1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power. 1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project. 2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities. 4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous and enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the <i>California Electrical Code</i>. 4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE." The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."	Y	NA	RESPON- PARTY	4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities. When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the requirements of Sections 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details. 4.106.4.2.1 Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section. 1. EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the <i>California Electrical Code</i>. Exceptions: 1. When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces. 2. When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed. Notes: a. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use. 2. EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit. Exception: Areas of parking facilities served by parking lifts. 4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section. 1. EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the <i>California Electrical Code</i>. Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required. Notes: a. Construction documents shall show locations of future EV spaces. b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use. 2. EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit. Exception: Areas of parking facilities served by parking lifts. 3. EV Chargers. Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests. When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces. 4.106.4.2.2.1 Electric vehicle charging stations (EVCS). Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1. Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See <i>California Building Code</i>, Chapter 11B, for applicable requirements. 4.106.4.2.2.1.1 Location. EVCS shall comply with at least one of the following options: 1. The charging space shall be located adjacent to an accessible parking space meeting the requirements of the <i>California Building Code</i>, Chapter 11A, to allow use of the EV charger from the accessible parking space. 2. The charging space shall be located on an accessible route, as defined in the <i>California Building Code</i>, Chapter 2, to the building. Exception: Electric vehicle charging stations designed and constructed in compliance with the <i>California Building Code</i>, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section 4.106.4.2.2.1.2, Item 3. 4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions. The charging spaces shall be designed to comply with the following: 1. The minimum length of each EV space shall be 18 feet (5486 mm). 2. The minimum width of each EV space shall be 9 feet (2743 mm). 3. One in every 25 charging spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm). a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction. 4.106.4.2.2.1.3 Accessible EV spaces. In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall comply with the accessibility provisions for EV chargers in the <i>California Building Code</i>, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with <i>California Building Code</i>, Chapter 11A, Section 1109A. 4.106.4.2.3 EV space requirements. 1. Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the location or the proposed location of the EV space. Construction documents shall identify the raceway termination point, receptacle or charger location, as applicable. The service panel and/or subpanel shall have a 40-ampere minimum dedicated branch circuit, including branch circuit overcurrent protective device installed, or space(s) reserved to permit installation of a branch circuit overcurrent protective device. Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space, at the time of original construction in accordance with the <i>California Electrical Code</i>. 2. Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on amperage of installed or future receptacles or EVSE, raceway method(s), wiring schematics and electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.	Y	NA	RESPON- PARTY	Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space at the time of original construction in accordance with the <i>California Electrical Code</i>. 4.106.4.2.4 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the <i>California Electrical Code</i>. 4.106.4.2.5 Electric Vehicle Ready Space Signage. Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s). 4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings. When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Notes: 1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. 2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use. DIVISION 4.2 ENERGY EFFICIENCY 4.201 GENERAL 4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the <i>California Energy Commission</i> will continue to adopt mandatory standards. DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION 4.303 INDOOR WATER USE 4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with Sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.1.4. Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates. 4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets. Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush. 4.303.1.2 Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush. 4.303.1.3 Showerheads. 4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads. 4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time. Note: A hand-held shower shall be considered a showerhead. 4.303.1.4 Faucets. 4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 80 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi. 4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi. 4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle. 4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 80 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction. 4.303.1.4.5 Pre-rinse spray valves. When installed, shall meet the requirements in the <i>California Code of Regulations</i>, Title 20 (Appliance Efficiency Regulations), Sections 1805.1 (h)(4) Table H-2, Section 1805.3 (h)(4)(A), and Section 1807 (d)(7) and shall be equipped with an integral automatic shutoff. FOR REFERENCE ONLY: The following table and code section have been reprinted from the <i>California Code of Regulations</i>, Title 20 (Appliance Efficiency Regulations), Section 1805.1 (h)(4) and Section 1805.3 (h)(4)(A). TABLE H-2 STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019 <table><tr><th>PRODUCT CLASS [spray force in ounce force (ozf)]</th><th>MAXIMUM FLOW RATE (gpm)</th></tr><tr><td>Product Class 1 (≤ 5.0 ozf)</td><td>1.00</td></tr><tr><td>Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)</td><td>1.20</td></tr><tr><td>Product Class 3 (> 8.0 ozf)</td><td>1.28</td></tr></table> Title 20 Section 1805.3 (h)(4)(A). Commercial pre-rinse spray valves manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf) [113 grams-force (gf)] 4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings. Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the <i>California Plumbing Code</i>. 4.303.3 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the <i>California Plumbing Code</i>, and shall meet the applicable standards referenced in Table 1701.1 of the <i>California Plumbing Code</i>. NOTE: THIS TABLE COMPLETES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER. TABLE - MAXIMUM FIXTURE WATER USE <table><tr><th>FIXTURE TYPE</th><th>FLOW RATE</th></tr><tr><td>SHOWER HEADS (RESIDENTIAL)</td><td>1.8 GMP @ 80 PSI</td></tr><tr><td>LAVATORY FAUCETS (RESIDENTIAL)</td><td>MAX. 1.2 GPM @ 80 PSI MIN. 0.8 GPM @ 20 PSI</td></tr><tr><td>LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS</td><td>0.5 GPM @ 60 PSI</td></tr><tr><td>KITCHEN FAUCETS</td><td>1.8 GPM @ 60 PSI</td></tr><tr><td>METERING FAUCETS</td><td>0.2 GAL/CYCLE</td></tr><tr><td>WATER CLOSET</td><td>1.28 GAL/FLUSH</td></tr><tr><td>URINALS</td><td>0.125 GAL/FLUSH</td></tr></table>	PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)	Product Class 1 (≤ 5.0 ozf)	1.00	Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20	Product Class 3 (> 8.0 ozf)	1.28	FIXTURE TYPE	FLOW RATE	SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI	LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 80 PSI MIN. 0.8 GPM @ 20 PSI	LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI	KITCHEN FAUCETS	1.8 GPM @ 60 PSI	METERING FAUCETS	0.2 GAL/CYCLE	WATER CLOSET	1.28 GAL/FLUSH	URINALS	0.125 GAL/FLUSH	Y	NA	RESPON- PARTY	4.304 OUTDOOR WATER USE 4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with a local water efficient landscape ordinance or the current <i>California Department of Water Resources' Model Water Efficient Landscape Ordinance</i> (MWELO), whichever is more stringent. NOTES: 1. The <i>Model Water Efficient Landscape Ordinance</i> (MWELO) is located in the <i>California Code Regulations</i>, Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are available at: https://www.water.ca.gov/ DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY 4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE 4.406.1 RODENT PROOFING. Annual spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency. 4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING 4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance. Exceptions: 1. Excavated soil and land-clearing debris. 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite. 3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility. 4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency. 1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale. 2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream). 3. Identify diversion facilities where the construction and demolition waste material collected will be taken. 4. Identify construction methods employed to reduce the amount of construction and demolition waste generated. 5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both. 4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1. Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company. 4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1 4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1 4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5, Section 4.408.3 or Section 4.408.4. Notes: 1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section. 2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle). 4.410 BUILDING MAINTENANCE AND OPERATION 4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building: 1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure. 2. Operation and maintenance instructions for the following: a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment. b. Roof and yard drainage, including gutters and downspouts. c. Space conditioning systems, including condensers and air filters. d. Landscape irrigation systems. e. Water reuse systems. 3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations. 4. Public transportation and/or carpool options available in the area. 5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range. 6. Information about water-conserving landscape and irrigation design and controllers which conserve water. 7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. 8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc. 9. Information about state solar energy and incentive programs available. 10. A copy of all special inspections verifications required by the enforcing agency or its code. 11. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures. 12. Information and/or drawings identifying the location of grab bar reinforcements. 4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive. Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42849.82 (a)(2)(A) et seq. are not required to comply with the organic waste portion of this section.	Y	NA	RESPON- PARTY	4.404 OUTDOOR WATER USE 4.404.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. 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DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.



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CA 95030

A.P.N. 510-14-037

4/2/25
BUILDING SUBMITTAL SET

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

2022 CalGreen

A 1.2

Y	N/A	RESPON.	PARTY																																																																			
				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). Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.																																																																		
				MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.																																																																		
				PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging). Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).																																																																		
				REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.																																																																		
				VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).																																																																		
☐	☐			4.503 FIREPLACES 4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.																																																																		
☐	☐			4.504 POLLUTANT CONTROL 4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.																																																																		
☐	☐			4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.																																																																		
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☐	☐			4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.																																																																		
☐	☐			4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROG 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 48.																																																																		
☐	☐			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: - Manufacturer's product specification. - Field verification of on-site product containers.																																																																		
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TABLE 4.504.2 - SEALANT VOC LIMIT	
(Less Water and Less Exempt Compounds in Grams per Liter)	
SEALANTS	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS _{2,3}	
GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS	
COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS ¹	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

- GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS
- THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
- 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.

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				DIVISION 4.5 ENVIRONMENTAL QUALITY (continued) 4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01550) See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDCPP/DEOD/CEHLB/IAQ/Pages/VOC.aspx. 4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01550) See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDCPP/DEOD/CEHLB/IAQ/Pages/VOC.aspx. 4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1. 4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed, at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01550) See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDCPP/DEOD/CEHLB/IAQ/Pages/VOC.aspx. 4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5 4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following: - 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 S3 standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards. - Other methods acceptable to the enforcing agency. 4.505 INTERIOR MOISTURE CONTROL 4.505.1 General. Buildings shall meet or exceed the provisions of the <i>California Building Standards Code</i>. 4.505.2 CONCRETE SLAB FOUNDATIONS. Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section. 4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following: - A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-08. - Other equivalent methods approved by the enforcing agency. - A slab design specified by a licensed design professional. 4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following: - 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 101.3 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. Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure. 4.506 INDOOR AIR QUALITY AND EXHAUST 4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following: - 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) Notes: - 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>. 4.507 ENVIRONMENTAL COMFORT 4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods: - 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. Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.																

[illegible]

STUDIO THREE DESIGN

INTERIORS
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ADDITIONS
NEW CONSTRUCTION

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95032

t 408.292.3252
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RESIDENCE
328 BACHMAN AVENUE,
LOS GATOS,
CA 95030

A.P.N. 510-14-037

4/2/25
BUILDING SUBMITTAL SET

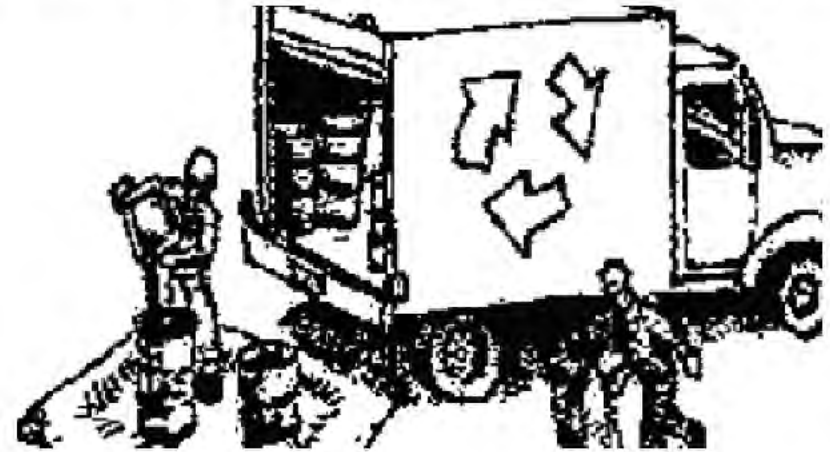
SCALE: 1/4" = 1'-0"

2022 CalGreen

Construction Best Management Practices (BMPs)



Materials, Waste, and Sediment Management



Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls, and stabilize all construction entrances and exits to sufficiently control erosion, sediment discharges and tracking of sediment offsite.
- ❑ Sweep or vacuum immediately any tracking of sediment offsite and secure sediment source to prevent further tracking. Never hose down streets or sidewalks.

Non-Hazardous Materials and Dust Control

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or when they are not in use. Weigh down and secure tarps for wind protection.
- ❑ Keep materials off the ground (e.g., store bagged materials on wood pallets, store loose materials on tarps not pavement, etc.).
- ❑ Use captured water from other activities (e.g., testing fire lines) for dust control.
- ❑ Ensure dust control water doesn't leave site or discharge to storm drains. Only use enough to control dust. Contain and dispose of excess water properly.

Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with City, County, State and Federal regulations.
- ❑ Store hazardous materials and wastes in watertight containers, store in appropriate secondary containment, and cover them at the end of every workday, during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and do not use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes. Have all pertinent Safety Data Sheets (i.e., SDS/MSDS/PSDS) onsite.

Waste Management

- ❑ Inform trash-hauling contractors that you will accept only watertight dumpsters for onsite use. Repair/replace any dumpster that is not watertight or leaking.
- ❑ Cover and maintain dumpsters. Check frequently for leaks. Place dumpsters under roofs or cover with tarps or plastic sheeting secured around the outside of the dumpster. If the dumpster leaks, place a plastic liner underneath the dumpster to collect leaks. Never clean out a dumpster by hosing it down on the construction site – clean with dry methods, clean offsite or replace dumpster.
- ❑ Place portable toilets and hand wash stations away from storm drains. Make sure they are equipped with containment pans (secondary containment) and are in good working order. Check frequently for leaks.
- ❑ Dispose of all wastes and demolition debris properly per SDS and applicable regulations. Recycle or compost materials and wastes as feasible and appropriate, including solvents, water-based paints, vehicle fluids, broken asphalt and concrete, wood, and cleared vegetation.
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste per SDS.
- ❑ Keep site free of litter (e.g., lunch items, water bottles, cigarette butts and plastic packaging).
- ❑ Prevent litter from uncovered loads by covering loads that are being transported to and from site.

Equipment Management & Spill Control



Vehicle and Equipment Maintenance

- ❑ Designate an area of the construction site equipped with appropriate BMPs, well away from creeks or storm drain inlets, for auto and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle/equipment washing offsite.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or creeks.
- ❑ Do not clean vehicles or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment, and do not use diesel oil to lubricate equipment or parts onsite.

Spill Prevention and Control

- ❑ Always keep spill cleanup materials (e.g., rags, absorbents, and cat litter) available at the construction site.
- ❑ Maintain all vehicles and heavy equipment. Inspect frequently for leaks. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up leaks, drips and other spills immediately using dry cleanup methods whenever possible (absorbent materials, cat litter and/or rags) and dispose of cleanup materials properly.
- ❑ Sweep up spilled dry materials immediately. Never attempt to "wash them away" with water or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills to the appropriate local spill response agencies immediately. If the spill poses a significant hazard to human health and safety, property or the environment, report it to the State Office of Emergency Services at (800) 852-7550 (24 hours).

Earthmoving



Grading and Earthwork

- ❑ Schedule grading and excavation work during dry weather.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, drainage courses and creeks by installing and maintaining appropriate BMPs tailored to the site's specific characteristics and conditions. Examples of such BMPs may include silt fences, gravel bags, fiber rolls, temporary swales, compost socks, etc. Ensure that BMPs are installed in accordance with manufacturer's specifications and properly maintained throughout the duration of construction activities.
- ❑ Stabilize all denuded areas and install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when necessary. Plant temporary vegetation to prevent erosion on slopes or in areas where construction is not immediately planned.
- ❑ Keep excavated soil and/or transfer it to dump trucks, onsite, not in the streets. Ensure all subcontractors working onsite are implementing appropriate BMPs.

Contaminated Soils

- ❑ If any of the following conditions are observed, test for contamination and contact the [Regional Water Quality Control Board](#) and the local agency: 1) Unusual soil conditions, discoloration, or odor. 2) Abandoned underground tanks. 3) Abandoned wells. 4) Buried barrels, debris, or trash.
- ❑ If the above conditions are observed, document any signs of potential contamination, clearly mark areas and fence/tape them off so they are not disturbed by construction activities.

Landscaping

- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.
- ❑ Store materials onsite, not in the street.

Concrete Management & Dewatering



Concrete Management

- ❑ Store both dry and wet concrete-related materials under cover, protected from rainfall and runoff and away from storm drains or creeks. Store materials off the ground on pallets. Protect dry materials from wind.
- ❑ Avoid pouring concrete in wet weather or when rainfall is imminent to prevent concrete that has not cured from contacting stormwater runoff.
- ❑ Wash out concrete equipment/mixers/trucks offsite, or onsite only in designated washout containers/areas where the water will flow into a temporary lined waste pit and in a manner that will prevent leaching into the underlying soils. (See CASQA Construction Stormwater BMP Handbook for temporary concrete washout facility details).
- ❑ Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile or dispose properly.
- ❑ Make sure that construction waste (e.g., concrete, stucco, cement wastewater, or residual materials) is collected, removed, and disposed of only at authorized disposal areas. Do not dispose of construction waste in storm drains, ditches, streets, creeks, dirt areas, or the sanitary sewer.

Dewatering

- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible, send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer, obtain permission from the local wastewater treatment plant.
- ❑ Divert water originating from offsite away from all onsite disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call the local agency to determine whether the groundwater must be tested. Pumped groundwater may need to be collected and hauled offsite for treatment and proper disposal.
- ❑ For additional information, refer to the CASQA's Sheet NS-2 "Dewatering Operations."

Paving/Asphalt Work



Paving

- ❑ Avoid paving and seal coating in wet weather or when rain is forecast to prevent materials that have not cured from contacting with stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, slurry seal, fog seal, or similar materials.
- ❑ When construction is complete, remove all covers from storm drain inlets and manholes.
- ❑ Collect and recycle or properly dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters, storm drains, streets, dirt areas, or the sanitary sewer.

Sawcutting & Asphalt/Concrete Removal

- ❑ Protect storm drain inlets during saw cutting.
- ❑ When making saw cuts, use as little water as possible.
- ❑ Residue from saw cutting, coring and grinding operations shall be picked up by means of a vacuum device.
- ❑ Shovel, absorb, or vacuum saw cut slurry deposits and dispose of all waste properly and as soon as reasonably possible. Sawcutting residue should not be left on pavement surface.
- ❑ If saw cut slurry enters a storm drain inlet, clean it up immediately and notify the local municipality.

Copper Architectural Features

Discharges to storm drains generated by installing, cleaning, treating or washing copper architectural features, is a violation of the municipal stormwater ordinance and may be subject to a fine. These BMPs must be implemented to prevent prohibited discharges to storm drains:

During Installation

- ❑ If possible, purchase copper materials that have been pre-patinated at the factory.
- ❑ If patination done on site, implement one or more of the following BMPs:
 1. Discharge the rinse water to landscaping. Ensure that the rinse water does not flow to the street or storm drain. Block off storm drain inlet if needed.
 2. Collect rinse water in a tank and pump to the sanitary sewer. Contact your local sanitary sewer agency before discharging to the sanitary sewer.
 3. Collect the rinse water in a tank and haul off-site for proper disposal.
- ❑ Consider coating the copper materials with an impervious coating that prevents further corrosion and runoff. This will also maintain the desired color for a longer time, requiring less maintenance.

During Maintenance such as, power washing roof, re-patination, or re-application of impervious coating:

- ❑ Block storm drain inlets as needed to prevent runoff from entering storm drains.
- ❑ Discharge the wash water to landscaping or to the sanitary sewer (with permission from the local sanitary sewer agency). If this is not an option, haul the wash water off-site for proper disposal.

Painting & Paint Removal



Painting Cleanup and Removal

- ❑ Never clean brushes or rinse paintcontainers to landscaping, dirt areas or into a street, gutter, storm drain, or creek.
- ❑ For water-based paints, paint out brushes to the extent possible, and then rinse into a drain connected to the sanitary sewer. Never pour paint down a storm drain inlet.
- ❑ For oil-based paints, paint out brushes to the extent possible, and then clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Sweep up or collect paint chips and dust generated from non-hazardous dry stripping and sand blasting into plastic drop cloths and dispose of as trash.
- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead- based paint removal requires a state-certified contractor.



Storm drain polluters may be liable for fines of up to \$10,000 per day!

CONDITIONS OF APPROVAL – March 20, 2025

328 Bachman Avenue
Minor Residential Application MR-24-016

Consider a Request for Approval for Construction of a Second-Story Addition Exceeding 100 Square Feet on Property Zoned R-1D:LHP. APN 510-14-037. Categorically Exempt Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Section 15301: Existing Facilities.
PROPERTY OWNER: Snigdha Uday Dharmavaram.
APPLICANT: Bess Wiersema.

TO THE SATISFACTION OF THE DIRECTOR OF COMMUNITY DEVELOPMENT:

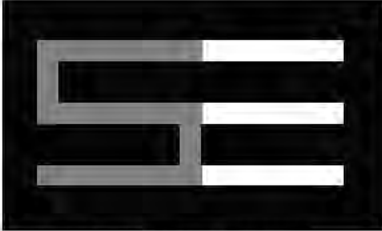
Planning Division

1. APPROVAL: This application shall be completed in accordance with all of the conditions of approval and in substantial compliance with the approved plans. Any changes or modifications to the approved plans and/or business operation shall be approved by the Community Development Director, DRC or the Planning Commission depending on the scope of the changes.
2. EXPIRATION: The approval will expire two years from the approval date pursuant to Section 29.20.320 of the Town Code, unless the approval has been vested.
3. OUTDOOR LIGHTING: Exterior lighting shall be kept to a minimum, and shall be down directed fixtures that will not reflect or encroach onto adjacent properties. No flood lights shall be used unless it can be demonstrated that they are needed for safety or security.
4. TREE REMOVAL PERMIT: A Tree Removal Permit shall be obtained for any trees to be removed, prior to the issuance of a building or grading permit.
5. EXISTING TREES: All existing trees shown on the plan and trees required to remain or to be planted are specific subjects of approval of this plan, and must remain on the site.
6. TREE FENCING: Protective tree fencing and other protection measures shall be placed at the drip line of existing trees prior to issuance of demolition and building permits and shall remain through all phases of construction. Include a tree protection plan with the construction plans.
7. TREE STAKING: All newly planted trees shall be double-staked using rubber tree ties.
8. FRONT YARD LANDSCAPE: Prior to issuance of a Certificate of Occupancy the front yard must be landscaped.
9. STORY POLES/PROJECT IDENTIFICATION SIGNAGE: Story poles and/or project identification signage on the project site shall be removed within 30 days of approval of the Minor Residential Development application.
10. TOWN INDEMNITY: Applicants are notified that Town Code Section 1.10.115 requires that any applicant who receives a permit or entitlement ("the Project") from the Town shall defend (with counsel approved by Town), indemnify, and hold harmless the Town, its agents, officers, and employees from and against any claim, action, or proceeding (including without limitation any appeal or petition for review thereof) against the Town or its agents, officers or employees related to an approval of the Project, including without limitation any related application, permit, certification, condition, environmental determination, other approval, compliance or failure to comply with applicable laws and

regulations, and/or processing methods ("Challenge"). Town may (but is not obligated to) defend such Challenge as Town, in its sole discretion, determines appropriate, all at applicant's sole cost and expense.

Applicant shall bear any and all losses, damages, injuries, liabilities, costs and expenses (including, without limitation, staff time and in-house attorney's fees on a fully-loaded basis, attorney's fees for outside legal counsel, expert witness fees, court costs, and other litigation expenses) arising out of or related to any Challenge ("Costs"), whether incurred by Applicant, Town, or awarded to any third party, and shall pay to the Town upon demand any Costs incurred by the Town. No modification of the Project, any application, permit certification, condition, environmental determination, other approval, change in applicable laws and regulations, or change in such Challenge as Town, in its sole discretion, determines appropriate, all the applicant's sole cost and expense. No modification of the Project, any application, permit certification, condition, environmental determination, other approval, change in applicable laws and regulations, or change in processing methods shall alter the applicant's indemnity obligation.

11. COMPLIANCE MEMORANDUM: A memorandum shall be prepared and submitted with the building plans detailing how the Conditions of Approval will be addressed.
12. DEMOLITION AFFIDAVIT: Prior to issuance of a building permit, a demolition affidavit must be submitted and signed by the property owner, project architect, project engineer and contractor.



STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

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RESIDENCE
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LOS GATOS,
CA 95030

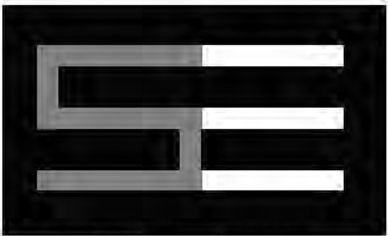
A.P.N. 510-14-037

4/2/25
BUILDING SUBMITTAL SET

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

LOS GATOS COA

A 1.5



STUDIO THREE DESIGN

INTERIORS
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B1 05/15/25

B2 10/08/25

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LOS GATOS,
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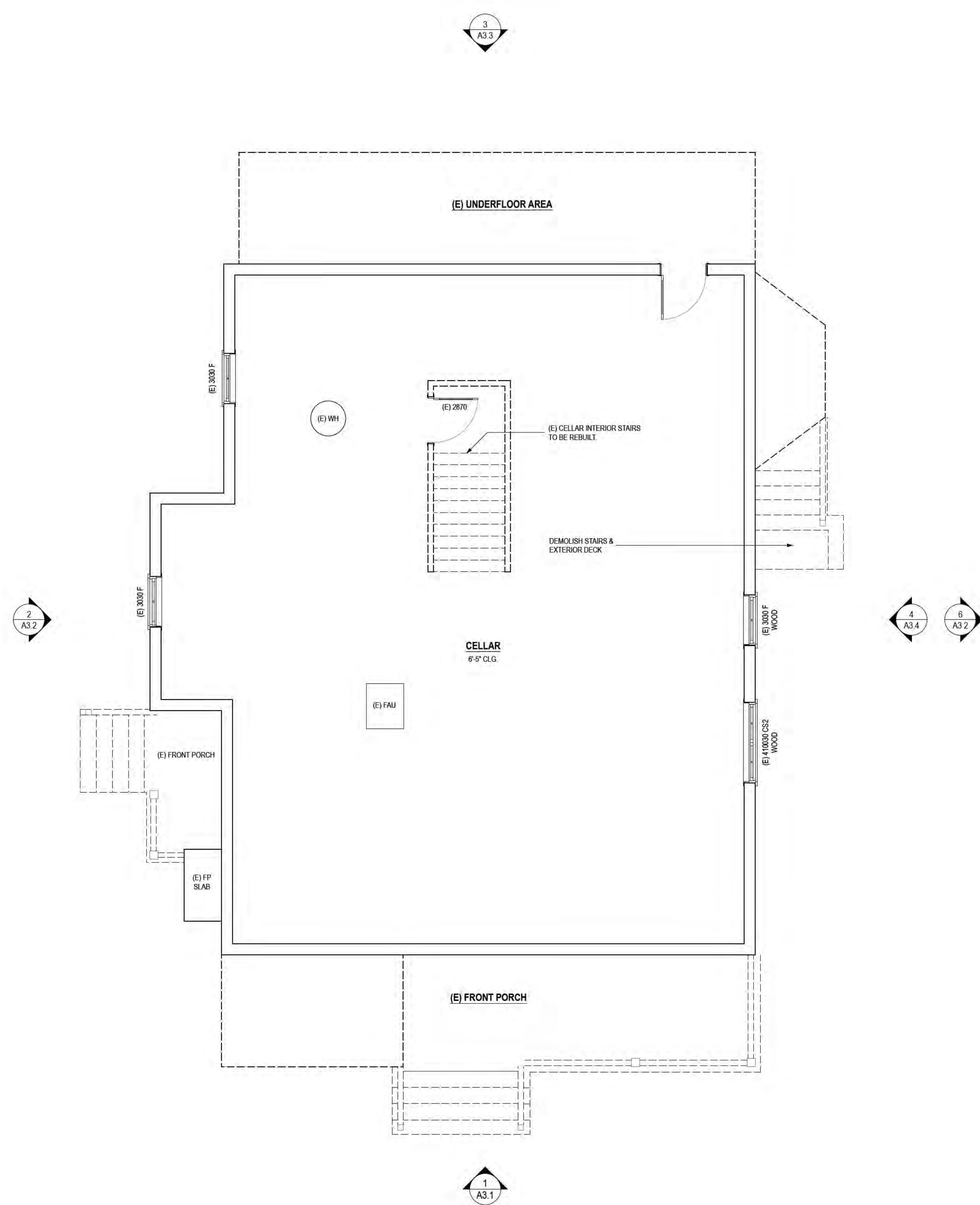
A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

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

CELLAR PLANS

A2.1



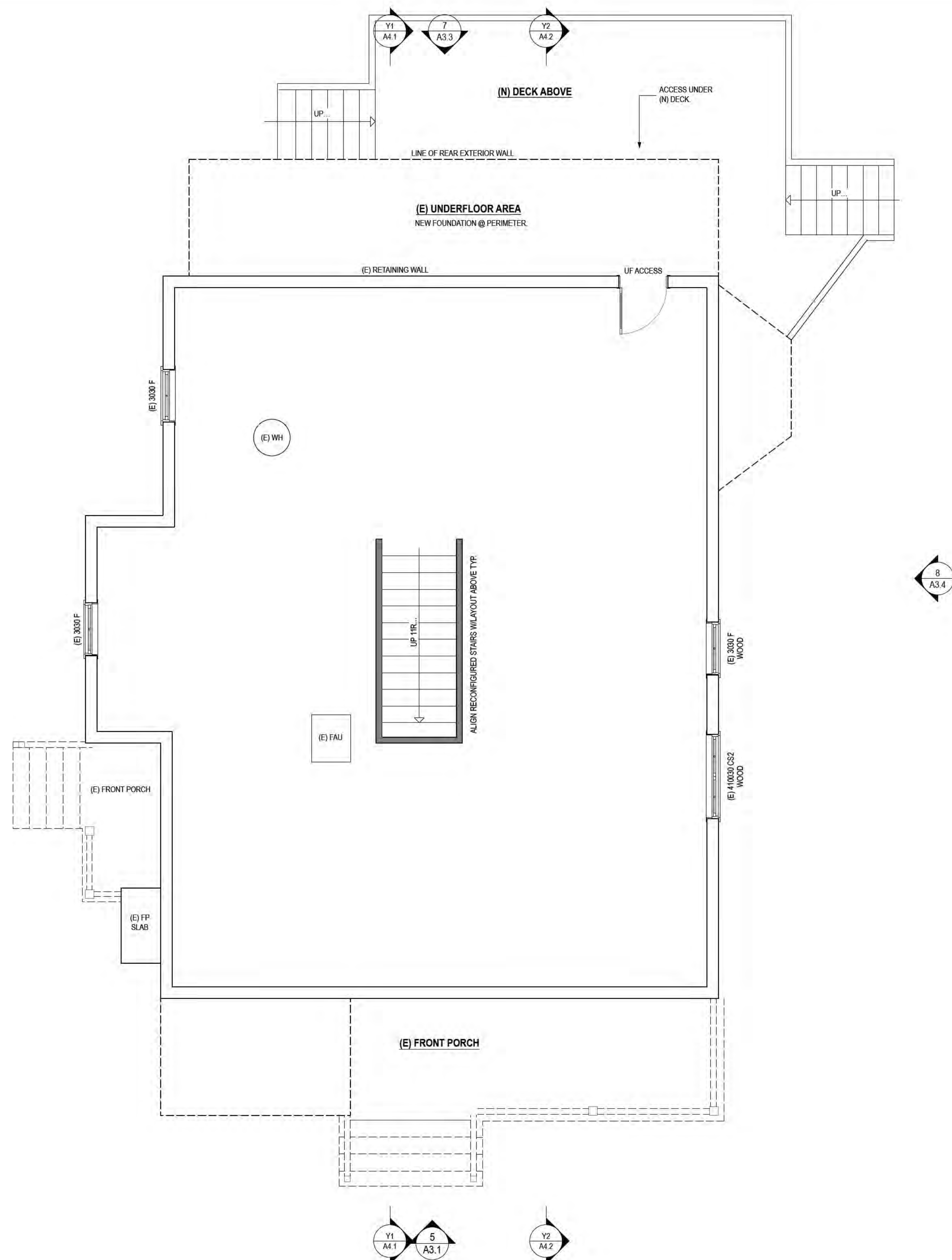
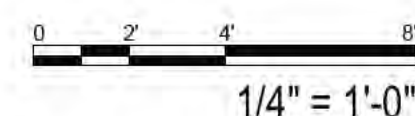
NORTH

37° 13' 44" N
121° 59' 03" W

EXISTING CELLAR PLAN

- (E) CONC. RW WALL TO BE REMOVED
- (E) 2X DF STUD WALL TO REMOVE

(E) CELLAR AREA: 1,393 SF



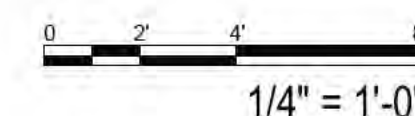
NORTH

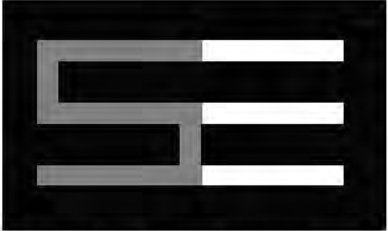
37° 13' 44" N
121° 59' 03" W

PROPOSED CELLAR PLAN

- (E) CONC. RW WALL TO BE REMOVED
- (N) 2X DF STUD WALL TO CONSTRUCT
USE 2X4 DF STUDS @ 16"OC.

(E) CELLAR AREA: 1,393 SF





STUDIO THREE DESIGN

INTERIORS
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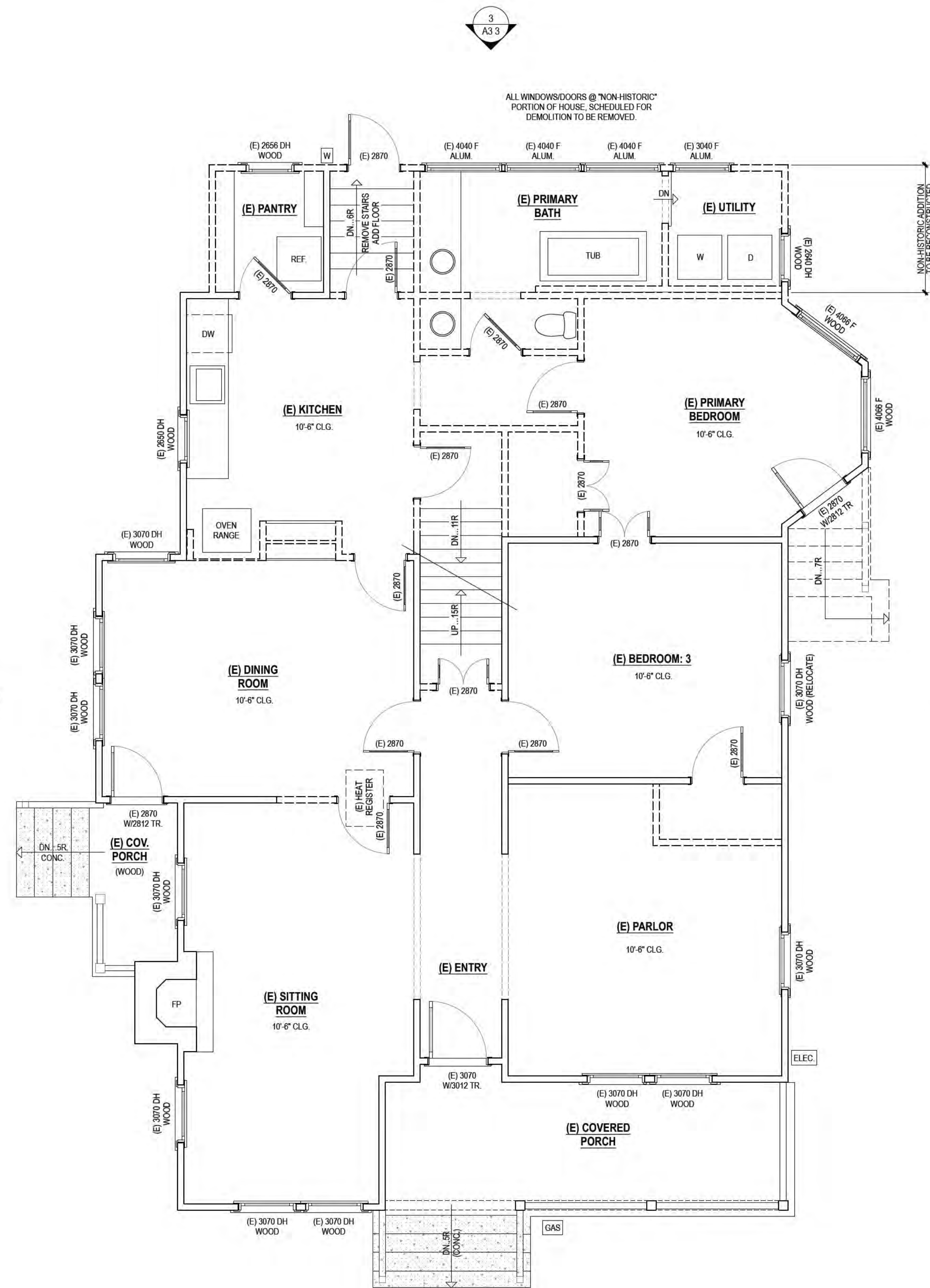
A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

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

1ST FLOOR PLANS

A2.2



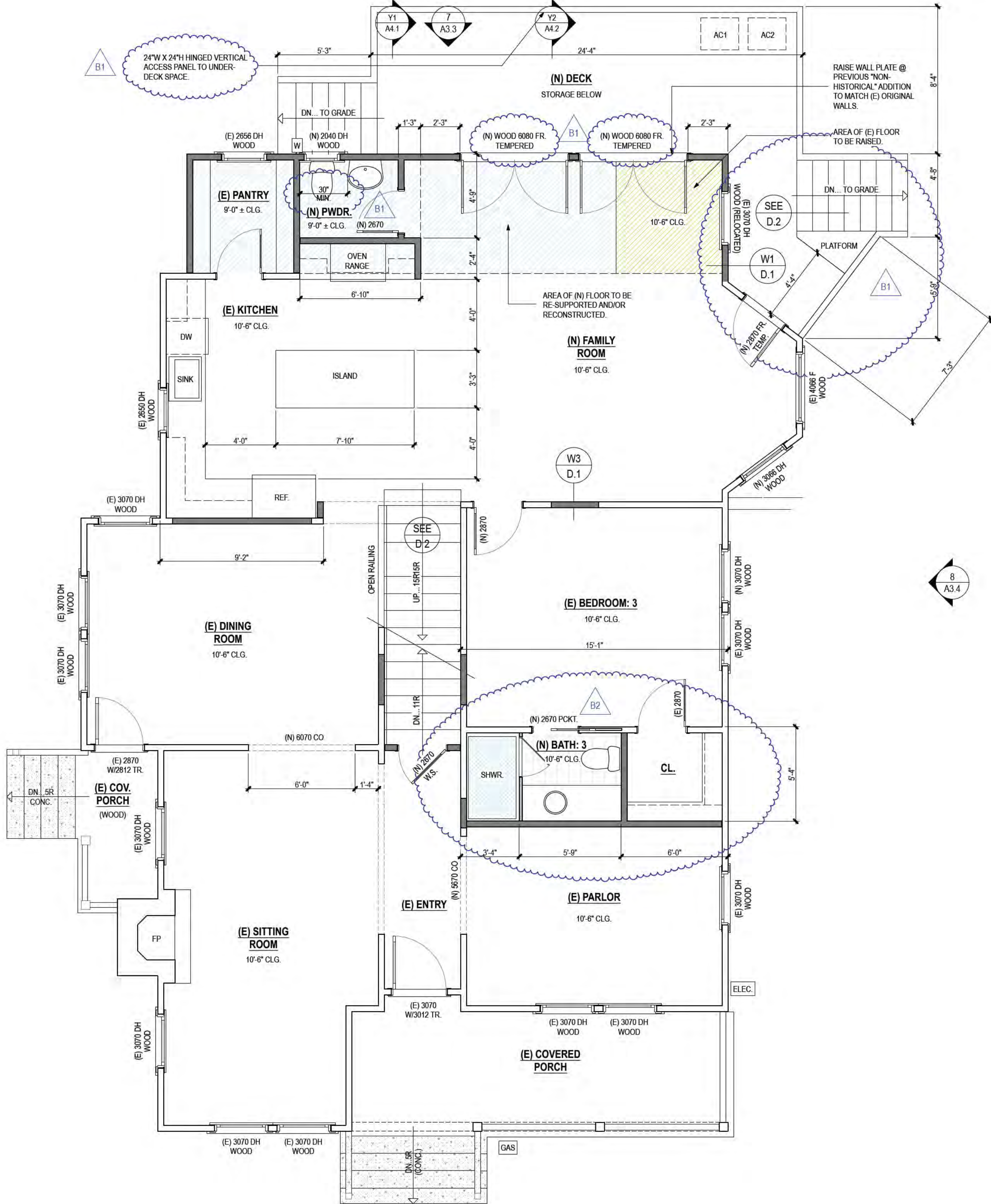
EXISTING 1ST LEVEL
FLOOR PLAN/DEMO



NORTH
37° 13' 44" N
121° 59' 03" W

- (E) 2X DF STUD WALL TO REMAIN
- - - (E) 2X DF STUD WALL TO REMOVE

(E) LIVING AREA: 1,647 SF (STAIRWAY/SHAFT EXCLUDED)
(E) COVERED PORCH: 143 SF (ENTRY @ BACHMAN AVE.)
(E) COVERED PORCH: 37 SF (ENTRY @ MASSOL AVE.)



NO NEW FLOOR AREA

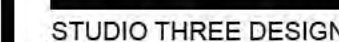
PROPOSED 1ST LEVEL
FLOOR PLAN



NORTH
37° 13' 44" N
121° 59' 03" W

- (E) 2X DF STUD WALL TO REMAIN
- - - (N) 2X DF STUD WALL TO CONSTRUCT
USE 2X4 DF STUDS @ 16"OC TYP. (UNO)

(E) LIVING AREA: 1,647 SF (STAIRWAY/SHAFT EXCLUDED)
(E) COVERED PORCH: 143 SF (ENTRY @ BACHMAN AVE.)
(E) COVERED PORCH: 37 SF (ENTRY @ MASSOL AVE.)
(N) WOOD DECK: 291 SF (@ REAR)



638 UNIVERSITY AVE
LOS GATOS
CALIFORNIA
95032



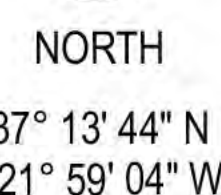
B2 10/08/25

A.P.N. 510-14-037

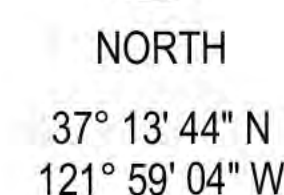
SCALE: 1/4" = 1'-0"

2ND FLOOR PLANS

A2.3

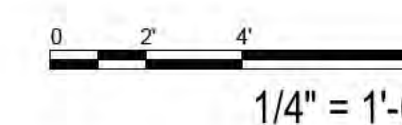


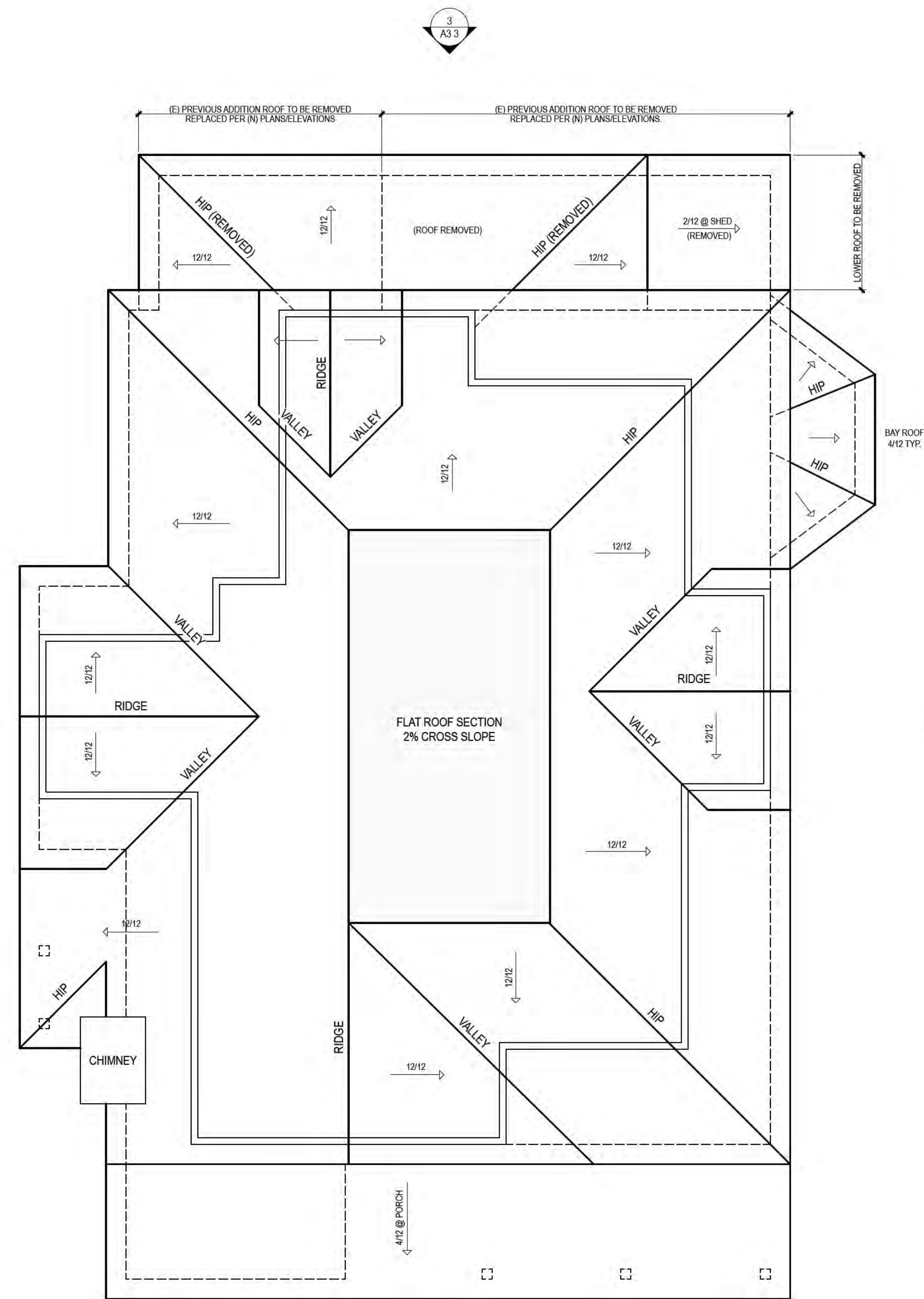
 (E) 2X DF STUD WALL TO REMAIN
 (E) 2X DF STUD WALL TO REMOVE



 (E) 2X DF STUD WALL TO REMAIN
 (N) 2X DF STUD WALL TO CONSTRUCT
 USE 2X4 DF STUDS @ 16"OC TYP. (UNO)

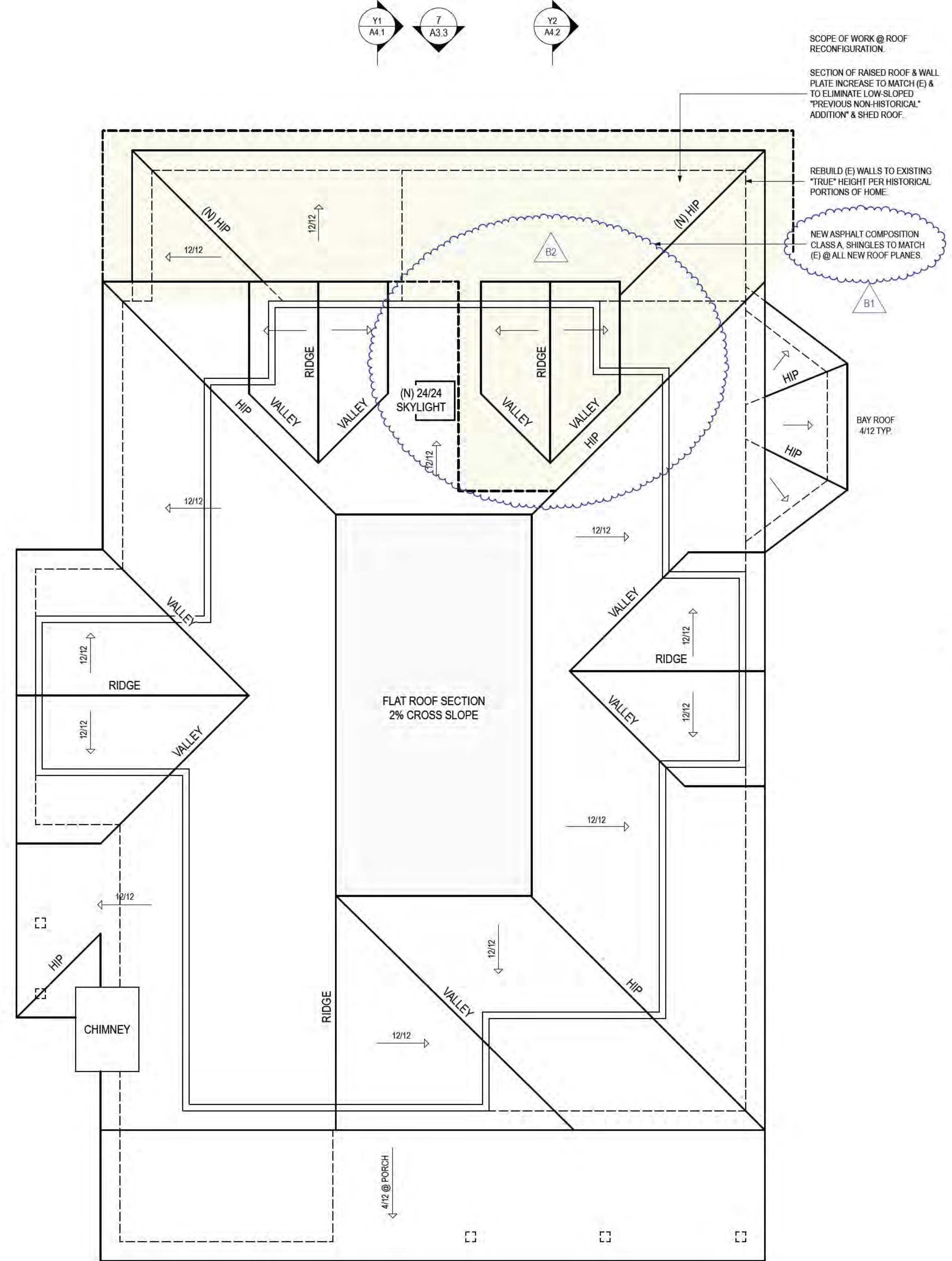
(E) LIVING AREA: 997 SF
(N) ADDITION: 44 SF (UNDER EXISTING ROOF LINE)
(N) ADDITION: 14 SF (@ NEW DORMER)






 NORTH
 37° 18' 23" N
 121° 54' 38" W

EXISTING ROOF PLAN
 (E) ROOF SLOPE: 12/12 (UNO)
 (E) ROOFING MATERIAL: CLASS A, ASPHALT SHINGLES.
 (E) OVERHANG: 12" TYP. W/CLOSED EAVE




 NORTH
 37° 18' 23" N
 121° 54' 38" W

PROPOSED ROOF PLAN
 (E) ROOF SLOPE: 12/12 (UNO)
 (E) ROOFING MATERIAL: CLASS A, ASPHALT SHINGLES.
 (E) OVERHANG: 12" TYP. W/CLOSED EAVE

SCOPE OF WORK @ ROOF RECONFIGURATION:
 SECTION OF RAISED ROOF & WALL PLATE INCREASE TO MATCH (E) & TO ELIMINATE LOW-SLOPED "PREVIOUS NON-HISTORICAL ADDITION" & SHED ROOF.
 REBUILD (E) WALLS TO EXISTING "TRUE" HEIGHT PER HISTORICAL PORTIONS OF HOME.
 NEW ASPHALT COMPOSITION CLASS A SHINGLES TO MATCH (E) @ ALL NEW ROOF PLANES.



STUDIO THREE DESIGN

INTERIORS
 REMODELS +
 ADDITIONS
 NEW CONSTRUCTION

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 f 253.399.1125


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 10/08/25

RESIDENCE
 328 BACHMAN AVENUE.
 LOS GATOS,
 CA 95030

AP.N. 510-14-037

10/23/25
 BUILDING SUBMITTAL SET

SCALE: 1/4" = 1'-0"
 (E) & (N) ROOF PLAN



STUDIO THREE DESIGN

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B2 10/08/25

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CA 95030

A.P.N. 510-14-037

10/22/25
BUILDING SUBMITTAL SET

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

(E) 2ND FLOOR PLAN/DEMO

A2.5



593 SF OF EXTERIOR WALL SIDING.
0 SF OF EXTERIOR WALL SIDING REMOVED. (0%) FACING PUBLIC STREET.

EXISTING FRONT ELEVATION (SOUTHWEST)

1/8" = 1'-0" 0 4' 8' 16'



BLUE/PURPLE SHADED
AREA DOES NOT HAV
SIDING AND IS ONLY
INCLUDED FOR LF CALCS.

NOTE: ALL OF THE SIDING BEING
REMOVED ON THIS ELEVATION IS
"NON HISTORICAL" T1-T11
ADDITION SIDING.

896 SF OF EXTERIOR WALL SIDING.
113 SF OF EXTERIOR WALL SIDING REMOVED. (13%) FACING A PUBLIC STREET.

EXISTING LEFT SIDE ELEVATION (NORTHWEST)

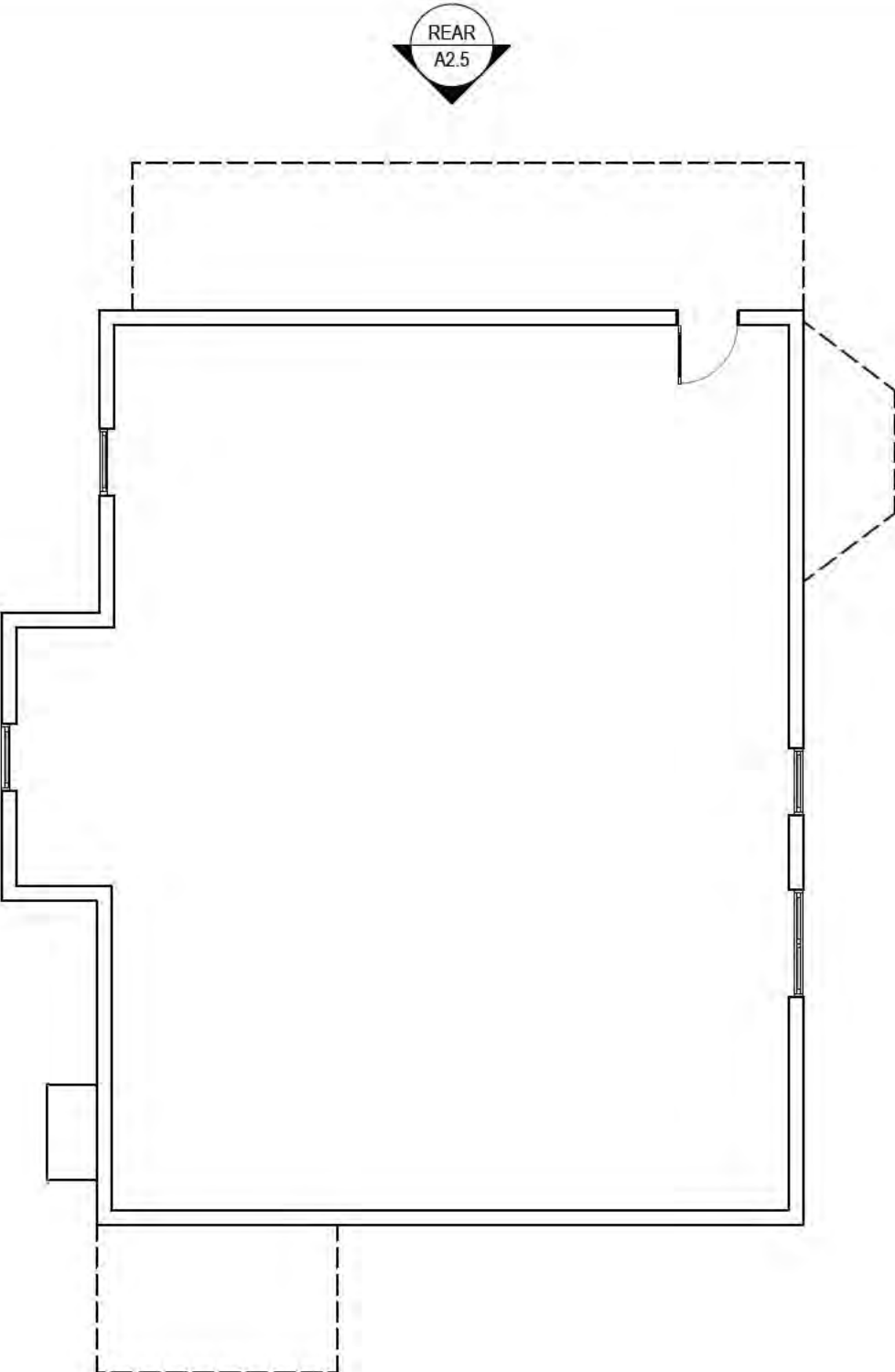
1/8" = 1'-0" 0 4' 8' 16'



905 SF OF EXTERIOR WALL.
176 SF OF EXTERIOR WALL SIDING REMOVED. (19%) NOT FACING A PUBLIC STREET.

EXISTING RIGHT SIDE ELEVATION (NORTHEAST)

1/8" = 1'-0" 0 4' 8' 16'



EXISTING CELLAR LEVEL EXTERIOR WALL DEMO 1/8" = 1'-0"

(E) 2X DF STUD WALL TO REMAIN
(E) 2X DF STUD WALL TO REMOVE



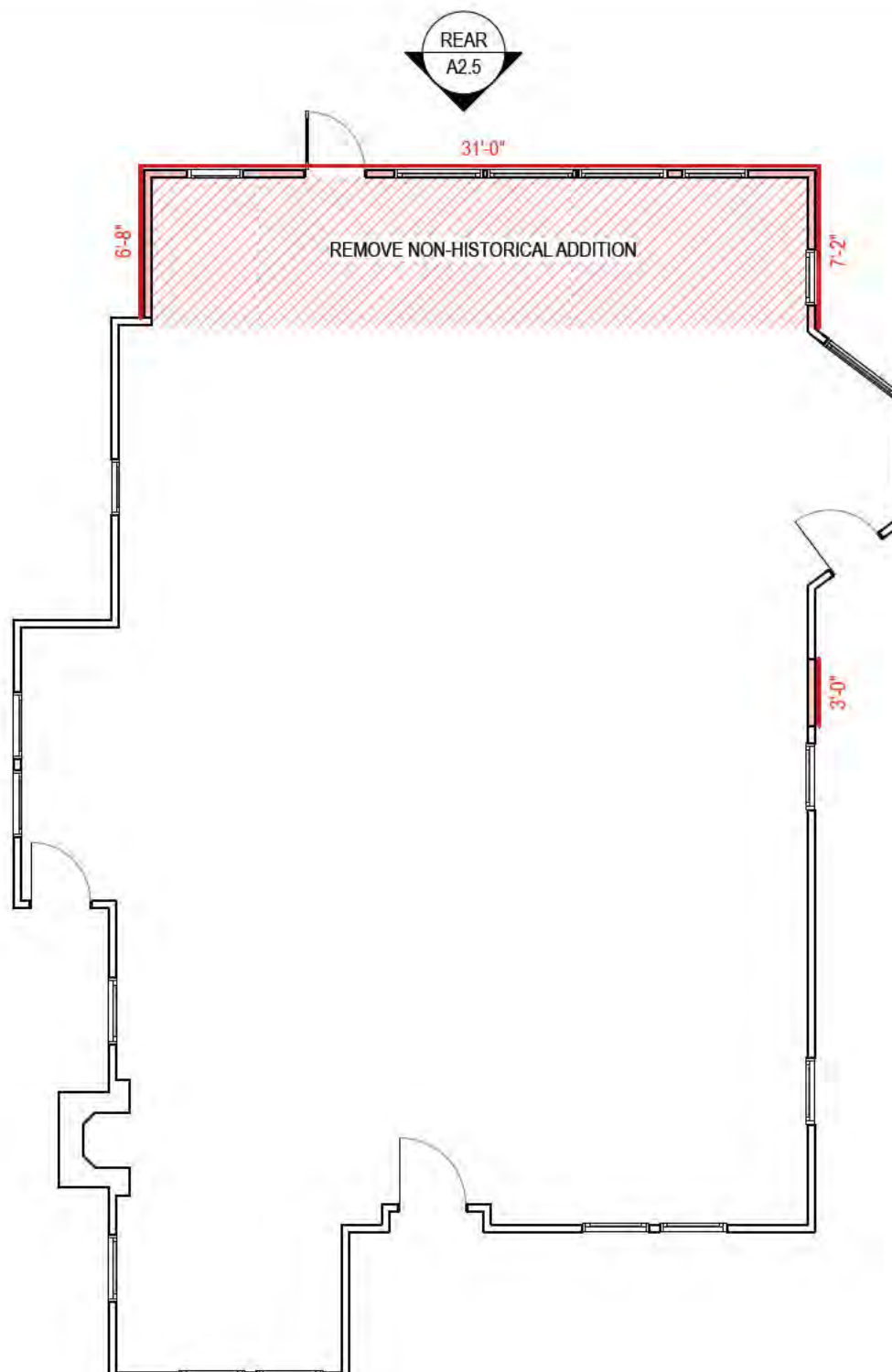
BLUE/PURPLE SHADED
AREA DOES NOT HAV
SIDING AND IS ONLY
INCLUDED FOR LF CALCS.

NOTE: ALL OF THE SIDING BEING
REMOVED ON THIS ELEVATION IS
"NON HISTORICAL" T1-T11
ADDITION SIDING.

632 SF OF EXTERIOR WALL SIDING.
411 SF OF EXTERIOR WALL SIDING REMOVED. (65%) NOT FACING A PUBLIC STREET.

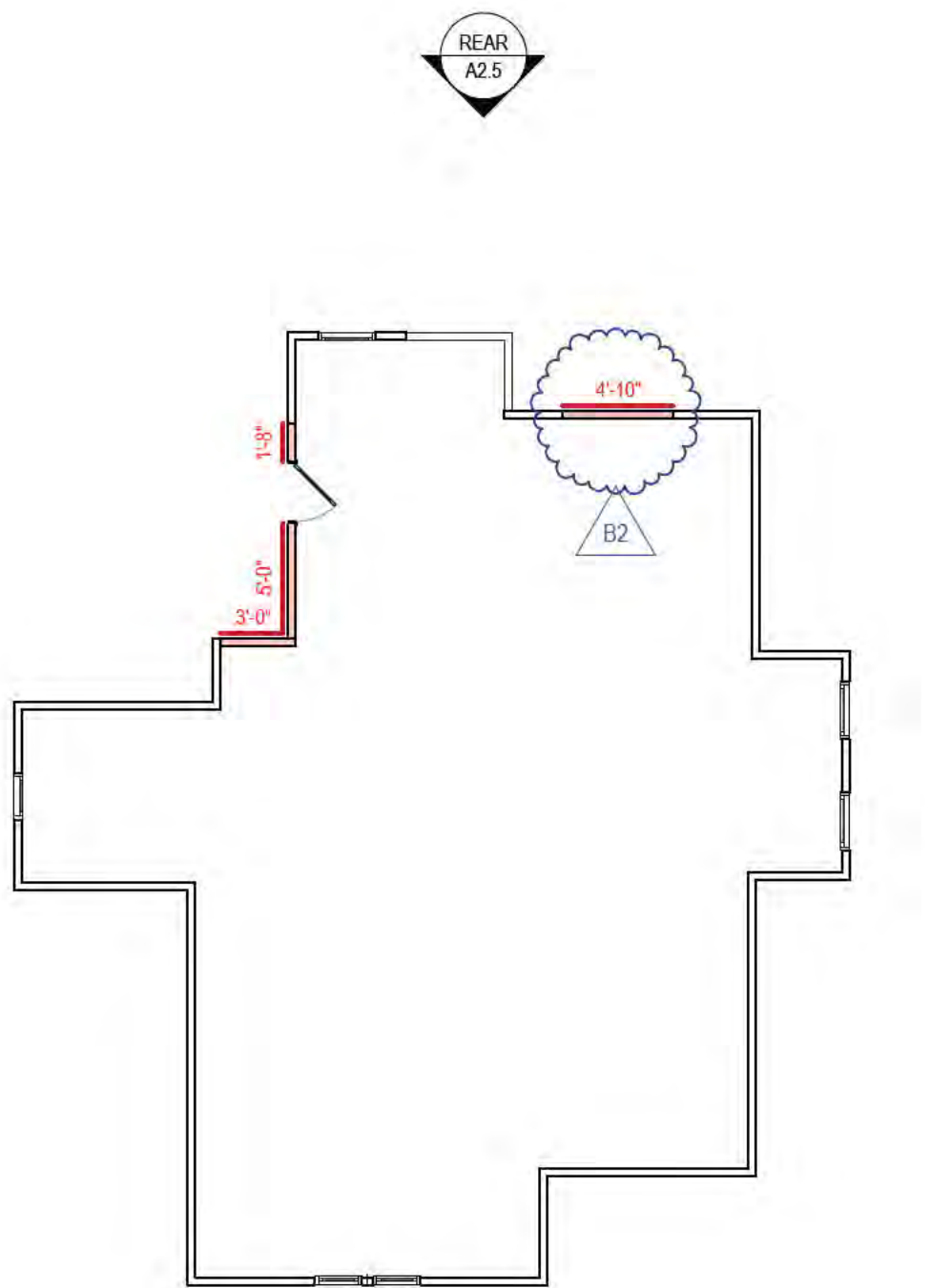
EXISTING REAR ELEVATION (NORTHWEST)

1/8" = 1'-0" 0 4' 8' 16'



EXISTING 1ST LEVEL EXTERIOR WALL DEMO 1/8" = 1'-0"

(E) 2X DF STUD WALL TO REMAIN
(E) 2X DF STUD WALL TO REMOVE



EXISTING 2ND LEVEL EXTERIOR WALL DEMO 1/8" = 1'-0"

(E) 2X DF STUD WALL TO REMAIN
(E) 2X DF STUD WALL TO REMOVE

B2

TOWN OF LOS GATOS DEMOLITION CALCS (TOTAL EXTERIOR WALLS)

	TOTAL EXT. WALL AREA (SF)	WALL AREA TO BE REMOVED (SF)	WALL AREA TO REMAIN (SF)
FRONT	593	0	593
LEFT SIDE	896	72	824
REAR	632	392	240
RIGHT SIDE	905	76	829
TOTALS	3026.00	540.00	2486
TOTAL PROPOSED (%)		17.85%	82.15%
		17.85% < 50% THEREFORE NO TECHNICAL DEMO	

- REMOVAL IS LESS THAN 25% OF ALL EXTERIOR WALLS FACING A PUBLIC STREET. **NO TECHNICAL DEMOLITION.**
- REMOVAL IS LESS THAN FIFTY 50% OF ALL EXTERIOR WALLS. **NO TECHNICAL DEMOLITION.**
- AN EXTERIOR WALL ENCOMPASSES THE TOTAL HEIGHT AND WIDTH OF THE STUDIOS/STRUCTURAL ELEMENTS USED IN FRAMING THE SIDE OF THE BUILDING.
- MEASUREMENT OF EXISTING EXTERIOR WALLS, FOR THE PURPOSE OF DEMOLITION CALCULATION, IS A LINEAR MEASUREMENT OF THE PERIMETER OF EACH FLOOR OF THE BUILDING (THE PERIMETER OF THE FIRST FLOOR PLUS THE PERIMETER OF THE SECOND FLOOR).

THERE IS AN EXEMPTION FOR REPAIR. PLEASE SEE SECTION 29.10.020 FOR THE EXEMPTION.

ADDITIONAL INFORMATION:

- DRY ROT OR ANY OTHER DAMAGE DOES NOT EXEMPT THE PROJECT FROM ANY PROVISION SET FORTH BY SECTION 29.10.030. IF YOU FIND DRY ROT AND NEED TO REPAIR IT, **STOP WORK** AND CONTACT THE PLANNING DIVISION AT (408) 354-6872 TO DISCUSS THE CHANGES BEFORE YOU PROCEED.
- IF YOU ENCOUNTER AN UNANTICIPATED SITUATION THAT CHANGES THE SCOPE OF WORK, **STOP WORK** AND CONTACT THE PLANNING DIVISION AT (408) 354-6872 TO DISCUSS THE CHANGES BEFORE YOU PROCEED.
- THE INSTALLATION OF NEW DOORS OR WINDOWS WITHIN EXISTING DOOR AND WINDOW OPENINGS DOES NOT COUNT AS DEMOLITION.

TOWN OF LOS GATOS DEMOLITION CALCS (TOTAL EXTERIOR WALLS FACING PUBLIC)			
	TOTAL EXT. WALL AREA (SF)	WALL AREA TO BE REMOVED (SF)	WALL AREA TO REMAIN (SF)
FRONT	593	0	593
LEFT SIDE	896	72	824
TOTALS	1489.00	72.00	1417
TOTAL PROPOSED (%)		4.84%	95.16%
		4.84% < 25% THEREFORE NO TECHNICAL DEMO	



BACHMAN AVE. STREET VIEW



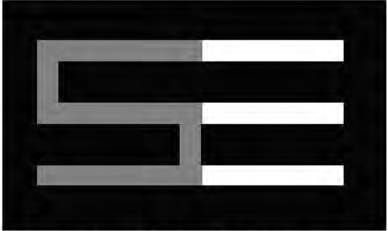
FRONT PORCH RAILING DETAIL



1. EXISTING FRONT ELEVATION (SOUTHWEST)
BACHMAN AVENUE SIDE
1/4" = 1'-0"



5. PROPOSED FRONT ELEVATIO (SOUTHWEST)
BACHMAN AVENUE SIDE
1/4" = 1'-0"



STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

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RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

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

(E & N) FRONT ELEVATIONS

A3.1



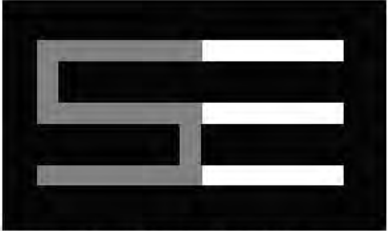
MASSOL AVE. STREET VIEW



2. EXISTING LEFT SIDE ELEVATION (NORTHWEST)
MASSOL AVENUE SIDE
1/4" = 1'-0"



6. PROPOSED LEFT SIDE ELEVATION (NORTHWEST)
MASSOL AVENUE SIDE
1/4" = 1'-0"



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B2 10/08/25

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10/23/25
BUILDING SUBMITTAL SET

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

(N & E) LEFT ELEVATIONS

A3.2

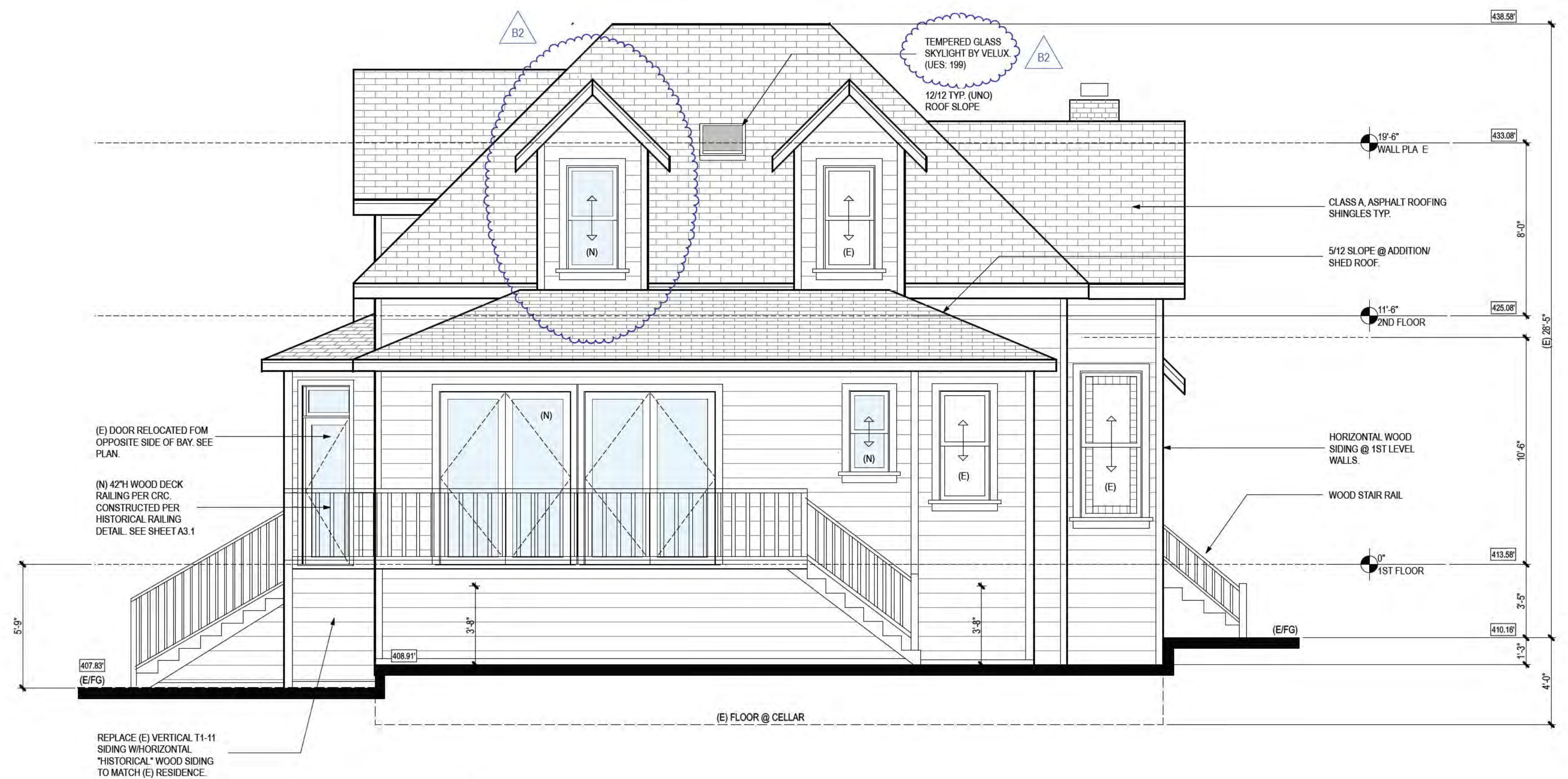


NON-HISTORICAL ADDITION TO REMOVE



3. EXISTING REAR ELEVATION (NORTHWEST)

1/4" = 1'-0"



3. PROPOSED REAR ELEVATION (NORTHWEST)

1/4" = 1'-0"

EXTERIOR ELEVATION FINISH SCHEDULE

ROOFING

@ (N) ADDITION ROOF: CLASS A, 40-YEAR (MIN.) ASPHALT ROOFING SHINGLES TO MATCH EXISTING O/MINIMUM 30# BUILDING PAPER OR EQUAL, O/ CDX OR OSB ROOF SHEATHING. ROOF MATERIAL COLORS AND/OR MANUFACTURERS SHALL BE SELECTED & APPROVED BY THE PROPERTY OWNER. WHERE ROOF SLOPES ARE LESS THAN 4/12, USE (2) LAYERS OF ROOFING UNDERLAYMENT. CRC R905.2.2 & R905.7.2

EXTERIOR SIDING

@ (N) EXTERIOR WALLS: HORIZONTAL WOOD SIDING, & "SCALLOPED SHINGLES", O/(1) LAYER 30# BUILDING PAPER OR EQUAL, O/CDX/OSB WALL SHEATHING, NAILED @ 6/12 MAXIMUM. SEE ENGINEER'S "SHEAR WALL SCHEDULE" FOR SPECIFIED PLYWOOD THICKNESS & MINIMUM NAILING REQUIREMENTS. FLASHING INSTALLED IN ACCORDANCE WITH SECTION R703.4 AND INTENDED TO DRAIN TO THE WATER-RESISTIVE BARRIER SHALL BE DIRECTED BETWEEN THE LAYERS.

NON SHEAR WALLS: PROVIDE A MINIMUM OF 3/8" CDX PLYWOOD WALL SHEATHING, "FULL WRAP". NAIL W/8D @ 6/12 MINIMUM. FOR REMODEL PROJECTS, ONLY NEW WALLS SHALL RECEIVE FULL WRAP SHEATHING (UNO).

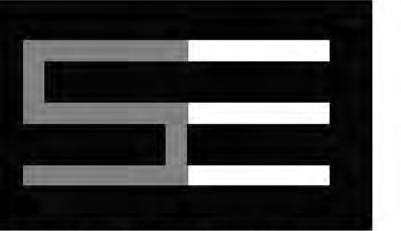
WALL BASE: A MINIMUM 0.019-INCH (0.5 MM) (NO. 26 GALVANIZED SHEET GAUGE), CORROSION-RESISTANT WEEP SCREED OR PLASTIC WEEP SCREED, WITH A MINIMUM VERTICAL ATTACHMENT FLANGE OF 3-1/2 INCHES (89 MM) SHALL BE PROVIDED AT OR BELOW THE FOUNDATION PLATE LINE ON EXTERIOR STUD WALLS IN ACCORDANCE WITH ASTM C 926. THE WEEP SCREED SHALL BE PLACED A MINIMUM OF 4 INCHES (102 MM) ABOVE THE EARTH OR 2 INCHES (51 MM) ABOVE PAVED AREAS & SHALL BE OF A TYPE THAT WILL ALLOW TRAPPED WATER TO DRAIN TO THE EXTERIOR OF THE BUILDING. THE WEATHER-RESISTANT BARRIER SHALL LAP THE ATTACHMENT FLANGE. THE EXTERIOR LATH SHALL COVER AND TERMINATE ON THE ATTACHMENT FLANGE OF THE WEEP SCREED.

DOORS AND WINDOWS

ALL EXTERIOR DOORS (WITH GLASS) & WINDOWS SHALL BE CONSTRUCTED WITH DUAL PANED, LOW "E" GLAZING. TEMPERED GLAZING SHALL BE REQUIRED PER CRC SECTIONS R308 & R311. DOOR & WINDOW MANUFACTURER SHALL BE SELECTED AND APPROVED BY THE PROPERTY OWNER. SEE SHEET DW.1 AND/OR DW.2 (AS APPLICABLE) FOR ADDITIONAL DOOR & WINDOW NOTES & SCHEDULES.

ACCENTS

SEE EXTERIOR ELEVATIONS AND/OR ROOF PLAN FOR ADDITIONAL WALL & ROOF DETAILS AND SPECIFICATIONS.



STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

638 UNIVERSITY AVE
LOS GATOS
CALIFORNIA
95032

T 408.292.3252
F 253.399.1125



B1 05/15/25

B2 10/08/25

RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

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

(N & E) REAR ELEVATIONS

A3.3



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

(N & E) RIGHT ELEVATIONS

A3.4



4. EXISTING RIGHT SIDE ELEVATION (NORTHEAST)

1/4" = 1'-0"



8. PROPOSED RIGHT SIDE ELEVATION (NORTHEAST)

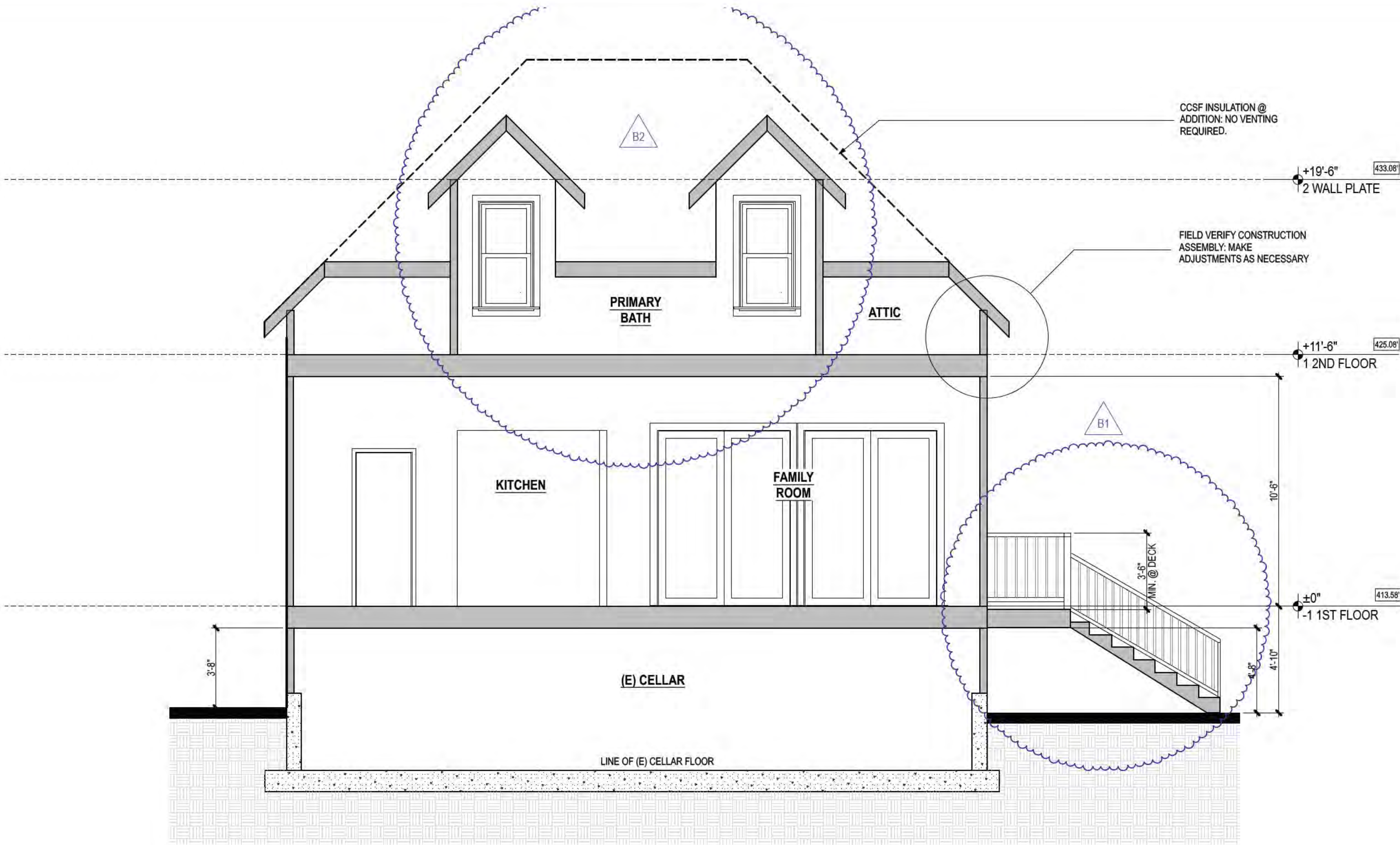
1/4" = 1'-0"

BUILDING SECTION NOTES:

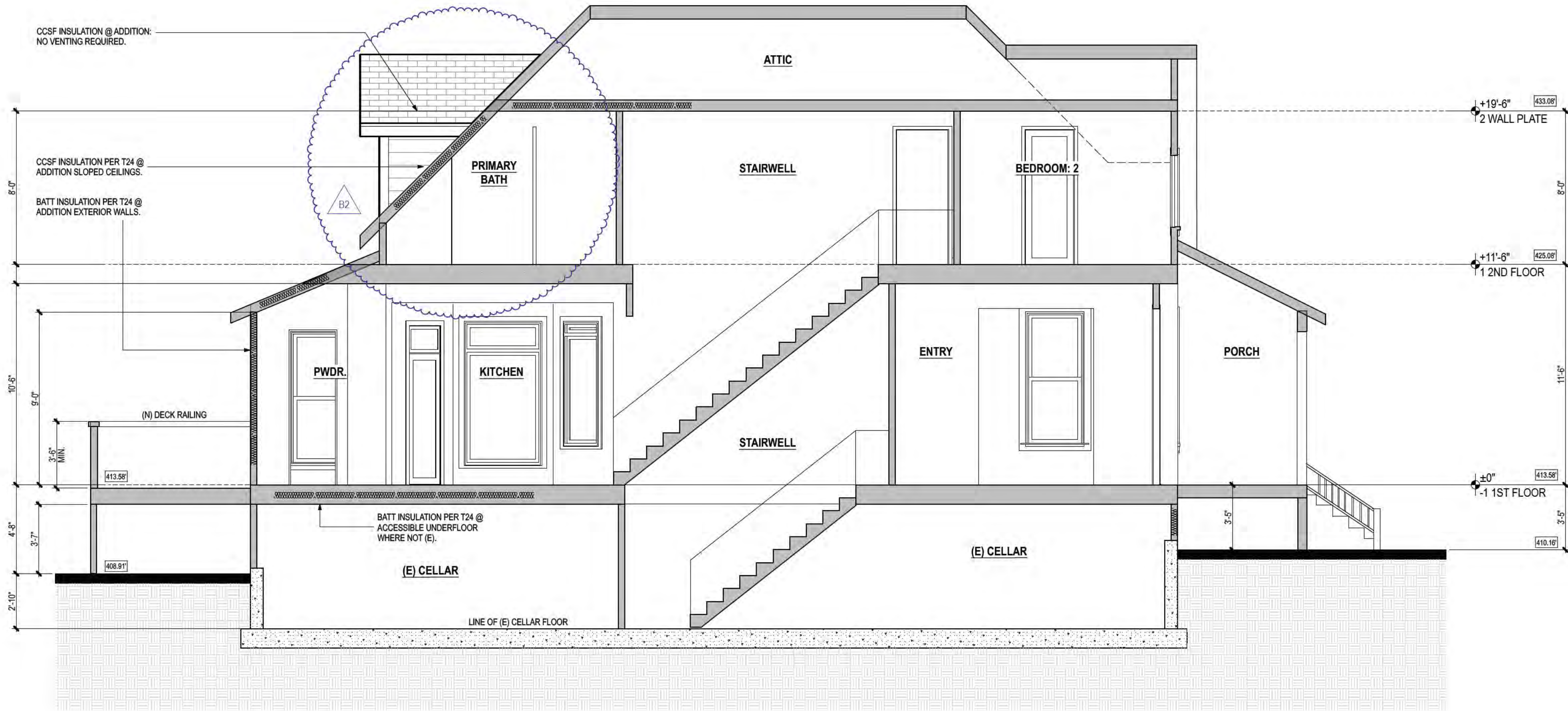
- ROOF ASSEMBLY:**
- SEE ROOF PLAN AND/OR EXTERIOR ELEVATIONS FOR SPECIFICATION OF ROOF SLOPE, ROOFING MATERIALS & UNDERLAYMENT. PROVIDE "RADIANT BARRIER" SHEATHING AS SPECIFIED IN THE TITLE 24 ENERGY REPORT AS APPLICABLE.
 - SEE ROOF FRAMING PLAN FOR SIZES & SPACING OF FRAMING MEMBERS.
 - ALL OPEN ATTIC SPACES SHALL BE VENTED PER CRC SECTION R806.2. SEE ROOF NOTES & VENTILATION CALCULATIONS PROVIDED.
- CEILING ASSEMBLY:**
- SEE CEILING FRAMING PLAN(S) & HEADER/CEILING JOIST FRAMING SCHEDULE (SHEET SN.2) FOR SIZES & SPACING OF FRAMING MEMBERS NOT SPECIFICALLY DESIGNATED OR IDENTIFIED ON THE FRAMING PLAN(S).
- WALL ASSEMBLY:**
- USE 2X4 OR 2X6 DF#2 STUDS @ 16"OC (TYP.) UNO. AS NOTED ON FLOOR/FRAMING PLAN(S).
 - USE 2X6 DF#2 STUDS @ ALL "BALLOON FRAMED" WALLS & WALLS OVER 10'-0" IN HEIGHT.
 - PROVIDE 2X DF#2 SOLID FIRE BLOCKING @ 10'-0"OC HORIZONTAL & VERTICAL
 - SEE SHEET SD.1 (DETAILS) FOR CONVENTIONAL FRAMING APPLICATIONS (WALLS, HEADERS, ALLOWABLE HOLES/ NOTCHING, ETC...)
 - SEE FRAMING PLAN(S) FOR ALL DESIGNATED SHEAR WALLS & CONSTRUCT ACCORDING TO STRUCTURAL DESIGN & FRAMING PLAN(S).
- FLOOR ASSEMBLY:**
- SEE FOUNDATION & FLOOR FRAMING PLAN(S) FOR SIZES & SPACING OF FRAMING MEMBERS (JOISTS, FLOOR BEAMS, SUPPORTING POSTS, ETC...)

INTERIOR WALL FINISHES			
CEILING	WALL	FIRE SEPARATION WALL	FLOOR MATERIAL
5/8" GYP. BD. SMOOTH TEXTURE	5/8" GYP. BD. TEXTURE TBD BY OWNER	5/8" "TYPE X" GYP. BD.	SELECTED BY OWNER
INSULATION			
FLAT CEILING	VAULTED CEILING	WALL	UNDERFLOOR
BATT (UNO) PER T24 AS APPLICABLE.	CLOSED CELL SPRAY FOAM (R6.5 PER INCH) MIN. VALUES PER T24.	BATT PER T24 @ 2X4 WALLS BATT PER T24 @ 2X6 WALLS	BATT PER T24 (UNO)

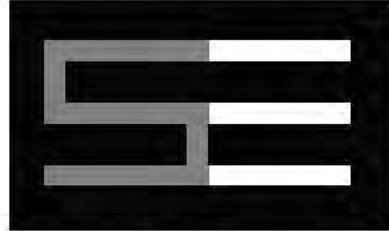
- SEE TITLE 24 ENERGY REPORT (AS APPLICABLE) FOR MINIMUM INSULATION "R" VALUES.
- EQUIVALENT T24 CALCULATIONS SPECIFIED "R" VALUE RIGID AND/OR CLOSED CELL SPRAY FOAM MAY BE SUBSTITUTED FOR MINIMUM BATT INSULATION NOTED ABOVE (UNO).
- WHERE ADDITIONAL STC (SOUND TRANSMISSION CONTROL) OR 1-HOUR FIRE RATING IS DESIRED, USE 5/8" QUIET ROCK 530™ GYP. BOARD @ BOTH SIDES OF WALLS AND/OR (2) LAYERS @ CEILINGS. (UL: U309) ASTM E90-09
- USE JAMES HARDIE "HARDIE-BACKER" WATERPROOF CEMENT BOARD W/HYDRO-DEFENSE TECHNOLOGY @ ALL WALLS & FLOORS @ WET LOCATIONS. (ANSI A118.10 & ASTM E136 NON-COMBUSTIBLE)
- CLOSED CELL SPRAY FOAM INSULATION = BASF, INC. (ESR-2298).



X1. BUILDING SECTION



Y1. BUILDING SECTION



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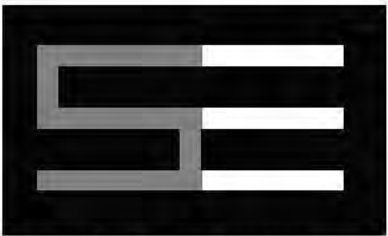
10/23/25
BUILDING SUBMITTAL SET

P1 12/09/24

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

SECTIONS

A4.1



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P1 12/09/24

B2 10/08/25

RESIDENCE
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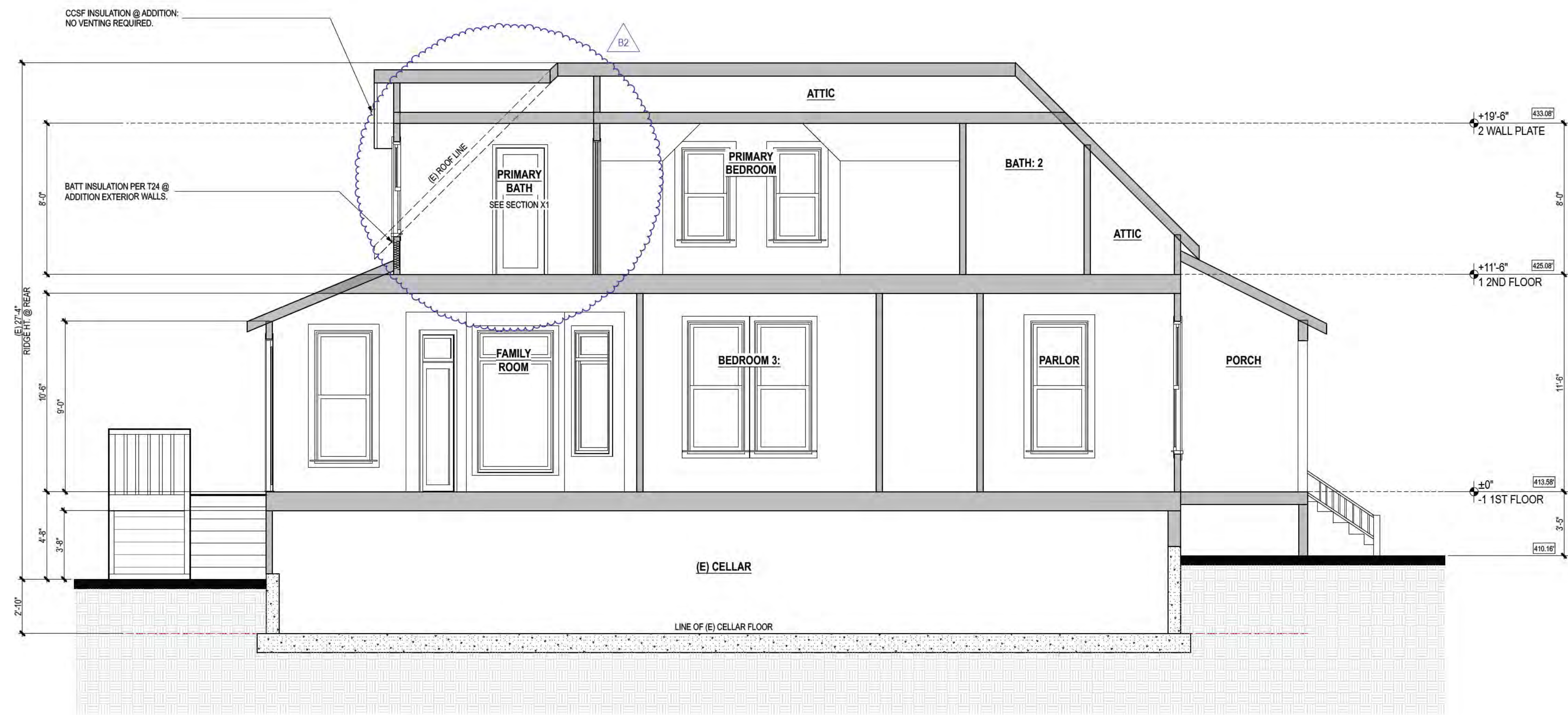
A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

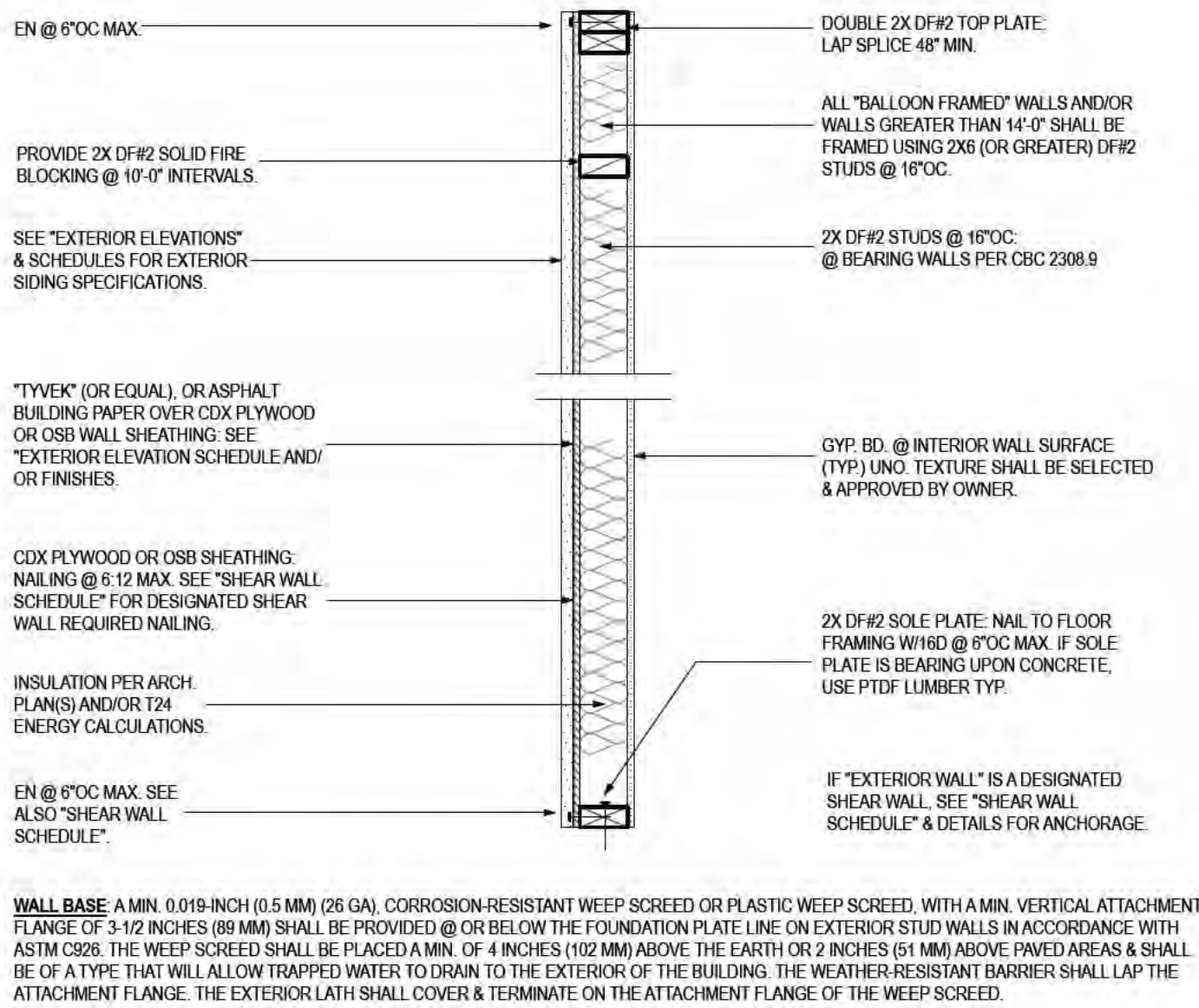
SCALE: 1/4" = 1'-0"

SECTIONS

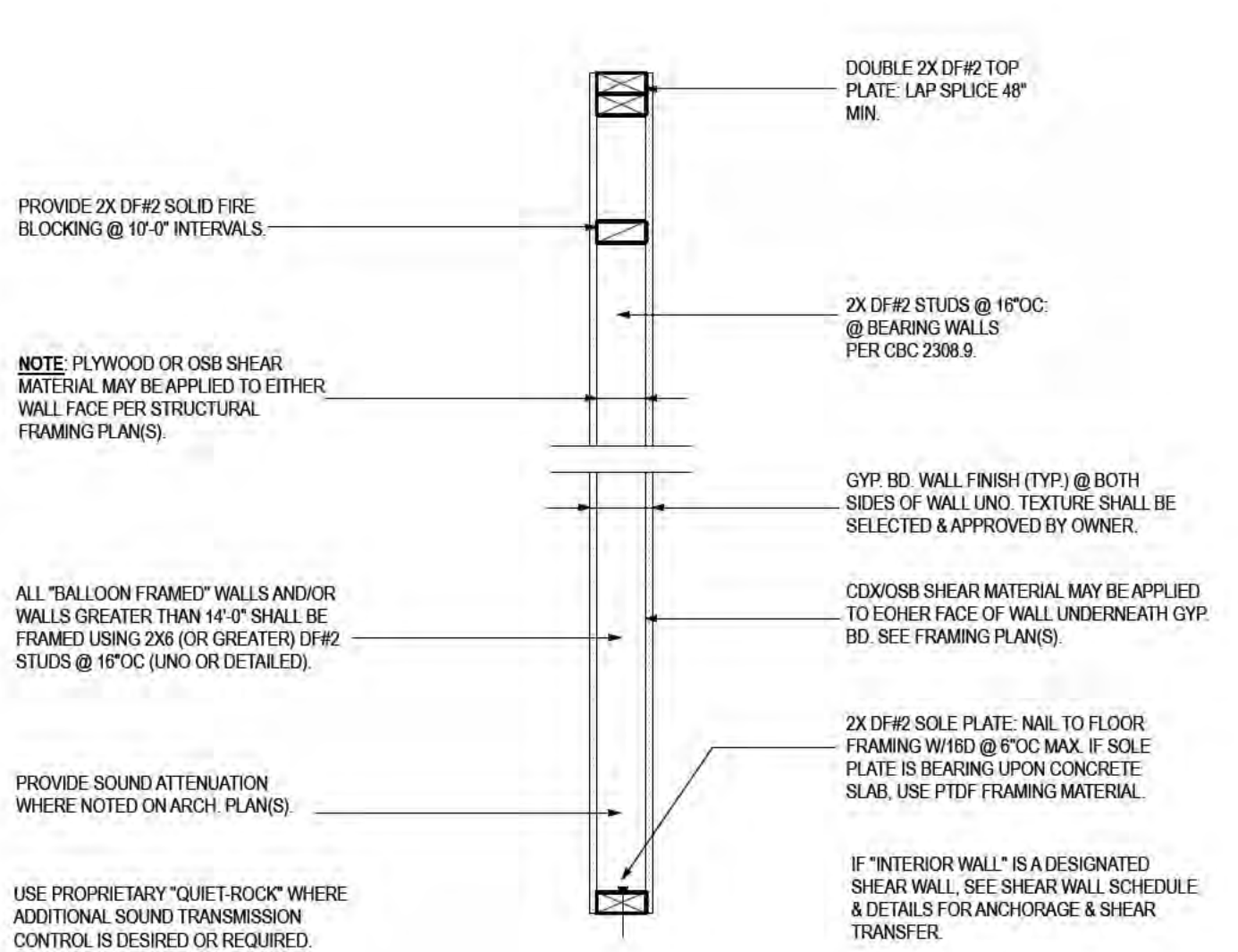
A4.2



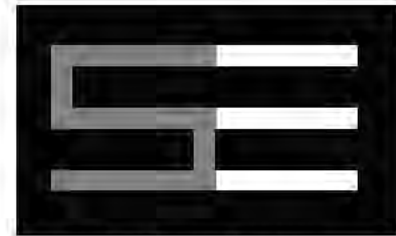
Y2. BUILDING SECTION



W1 WALL: TYP. EXTERIOR WALL ASSEMBLY



W3 WALL: TYP. INTERIOR WALL ASSEMBLY



STUDIO THREE DESIGN

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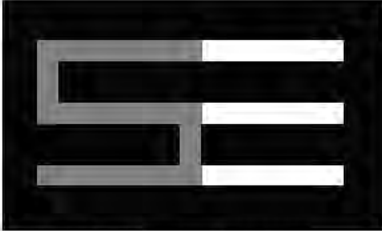
A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

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

WALL DETAILS

D.1

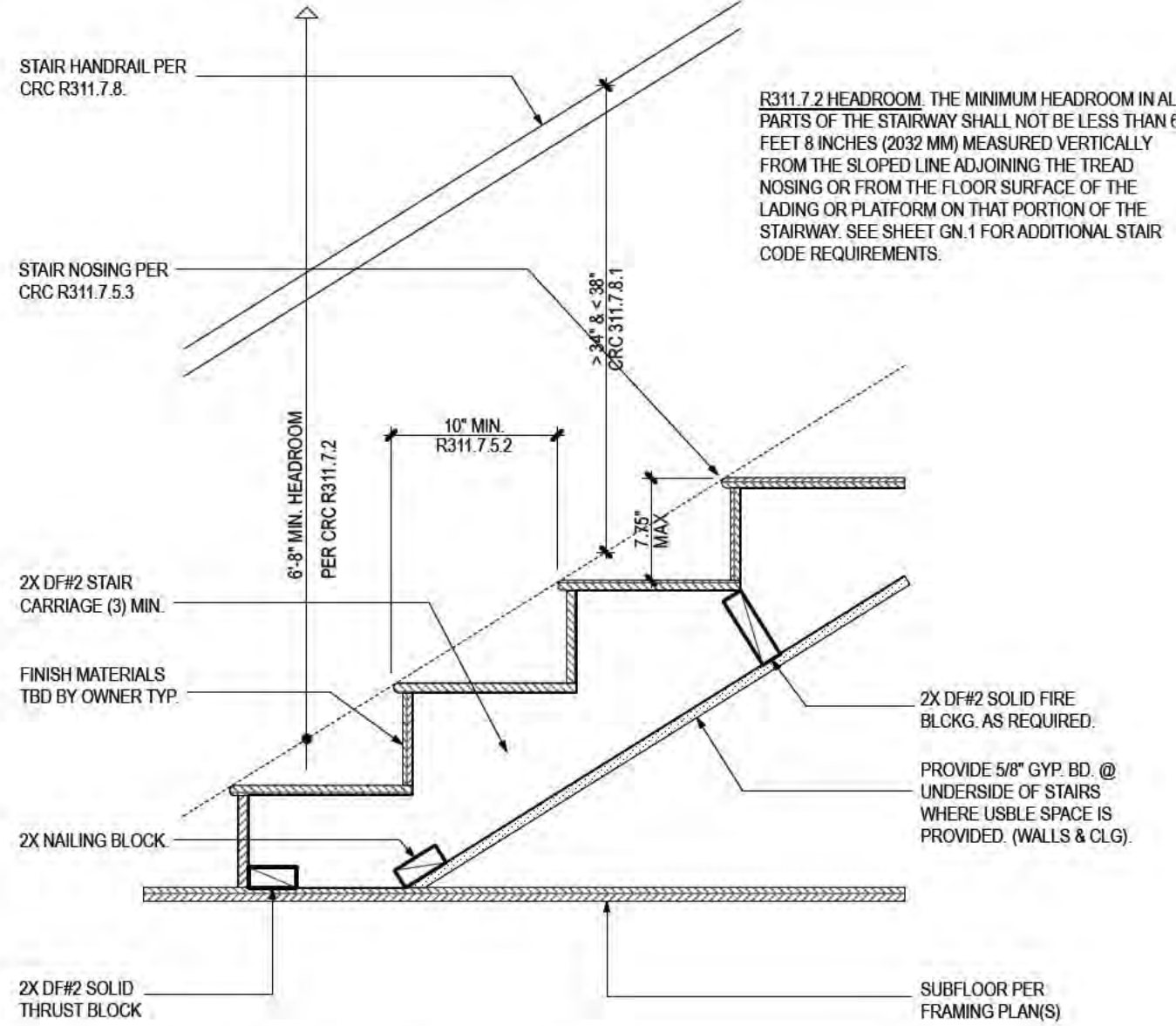


STUDIO THREE DESIGN

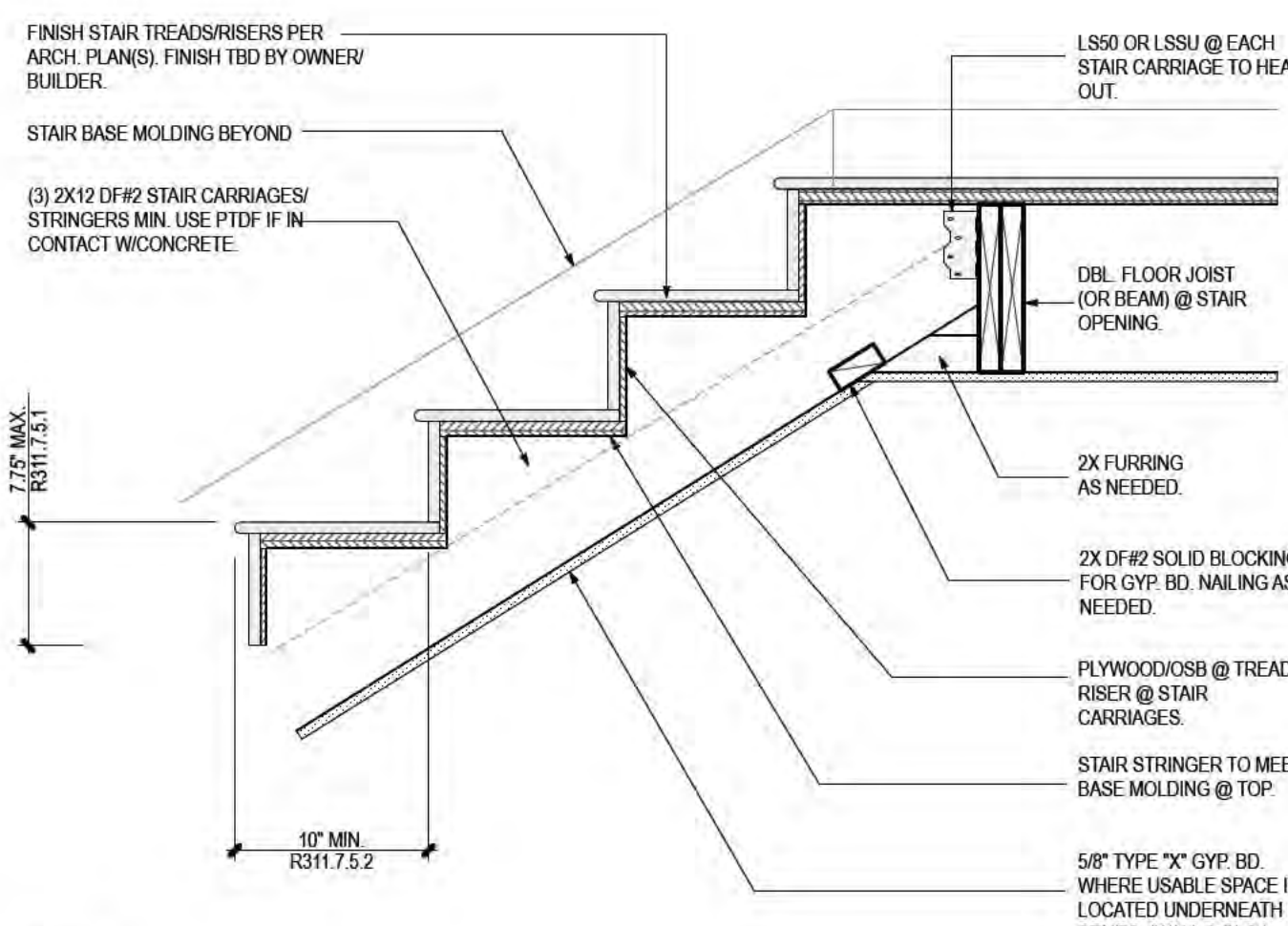
INTERIORS
REMODELS +
ADDITIONS
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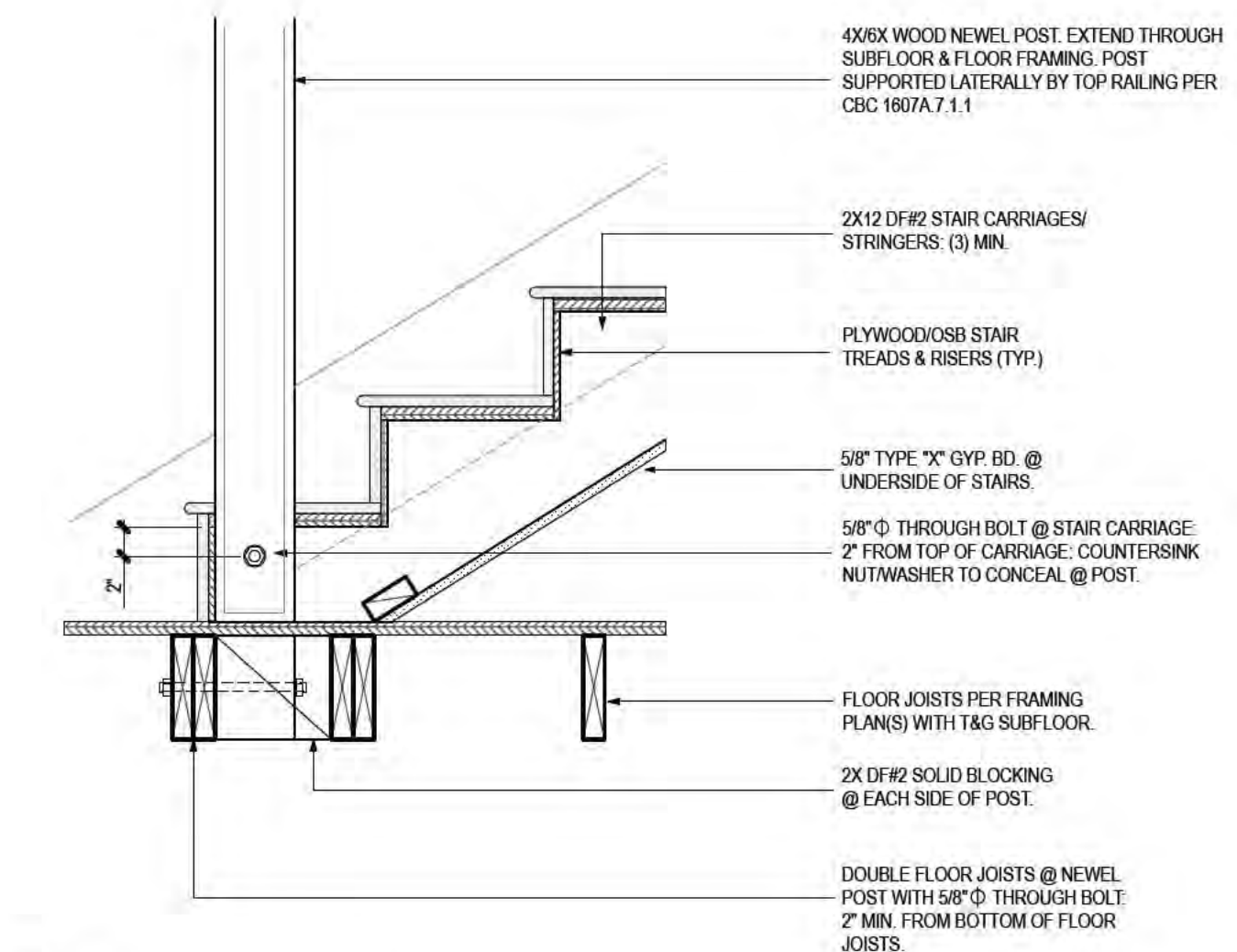


AS1 WOOD STAIR FRAMING - CODE REQ.
DETAIL 1: INFORMATIONAL ONLY: NOT REPRESENTATIONAL OF ACTUAL FINISHES TO BE USED.



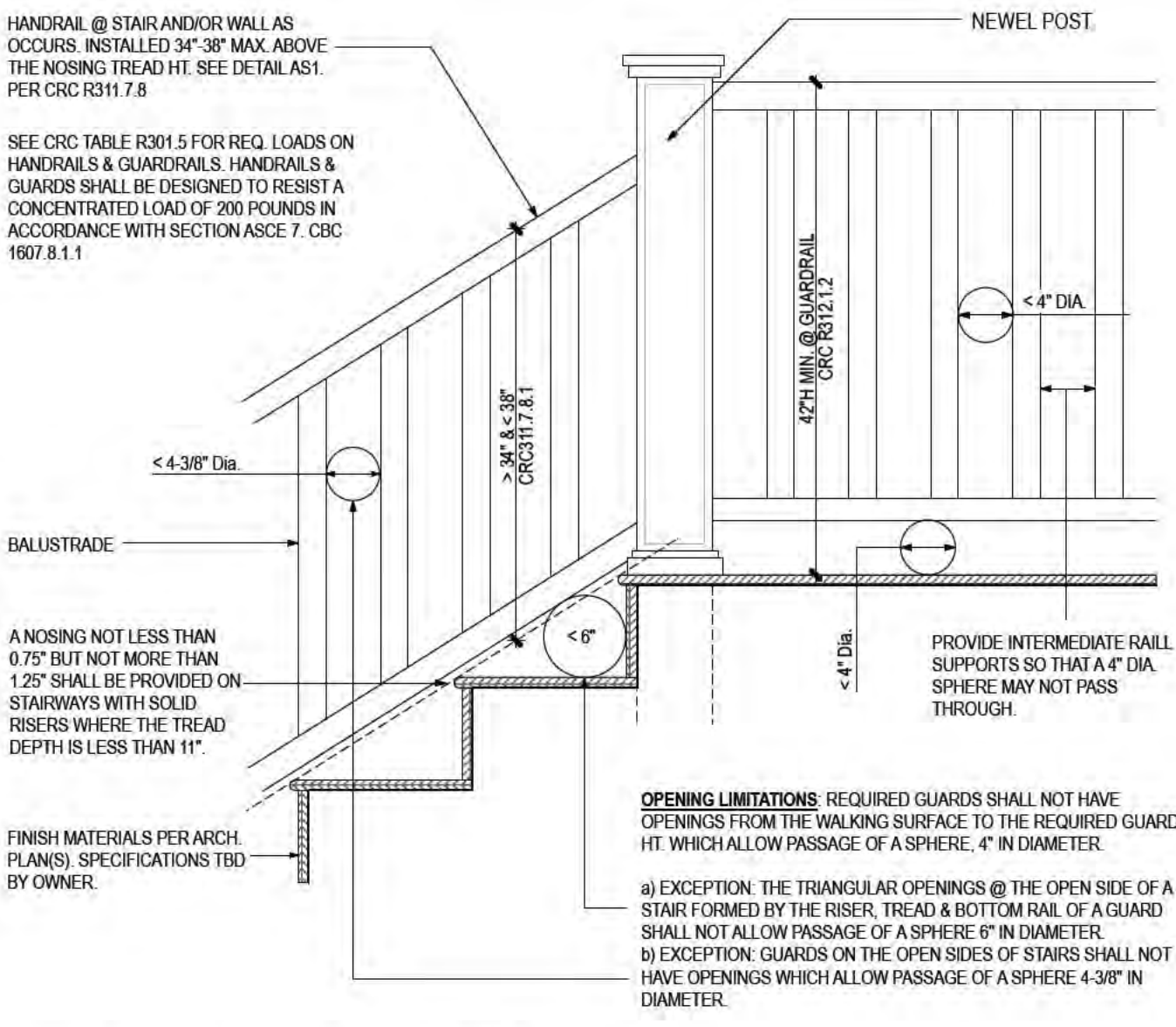
NOTES
1. RISE FROM FINISH FLOOR TO FIRST TREAD EQUALS TYPICAL RISER HEIGHT.
2. ALL RISERS SHALL BE EQUAL DIMENSIONS.

AS5 WOOD STAIR FRAMING @ CARRIAGE/STRINGER
TOP OF CARRIAGE @ TOP LEVEL.

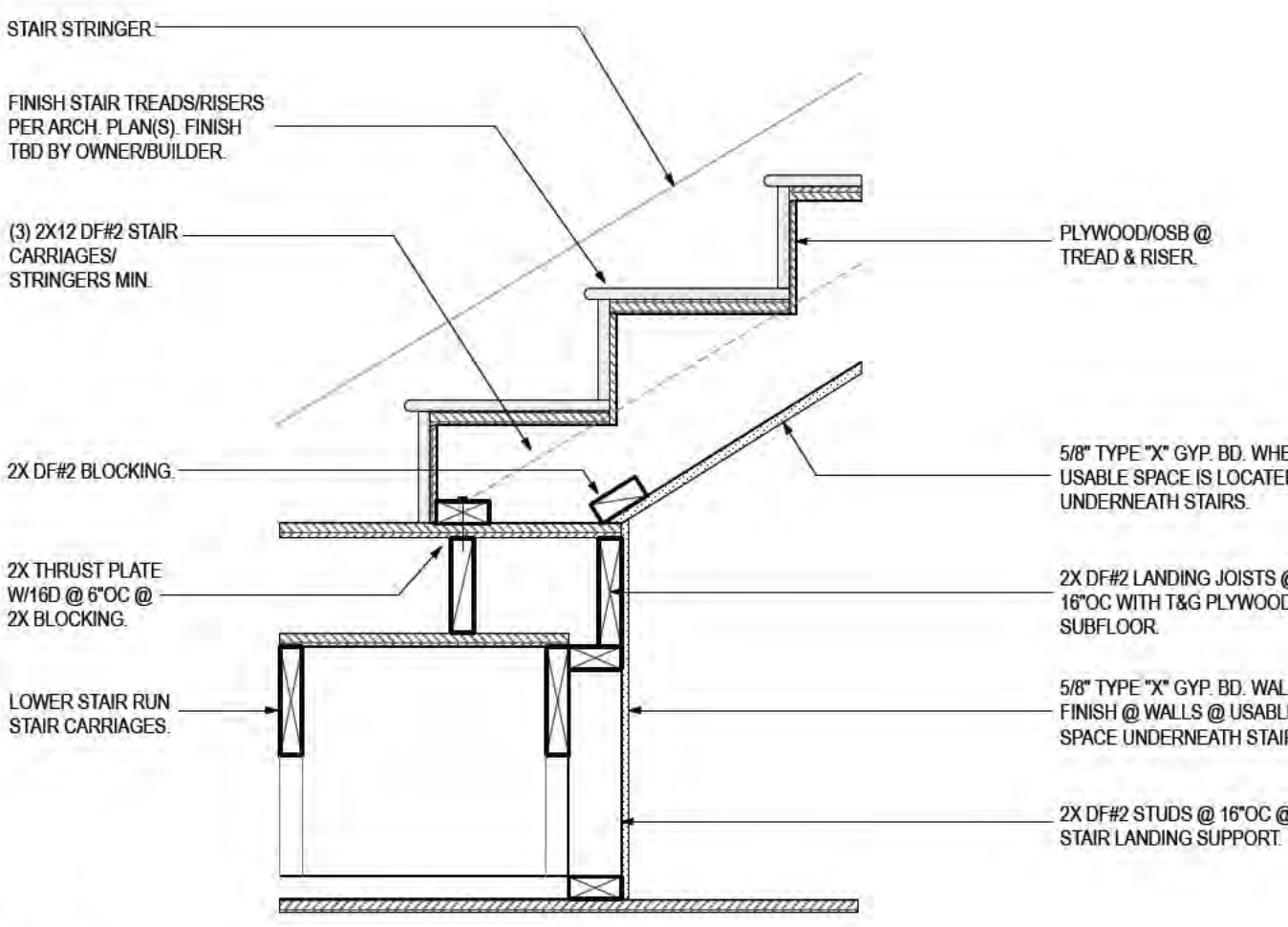


NOTES
1. SEE FLOOR PLAN(S) FOR LOCATIONS OF NEWEL POSTS.

AS10 WOOD STAIR FRAMING @ NEWEL POST

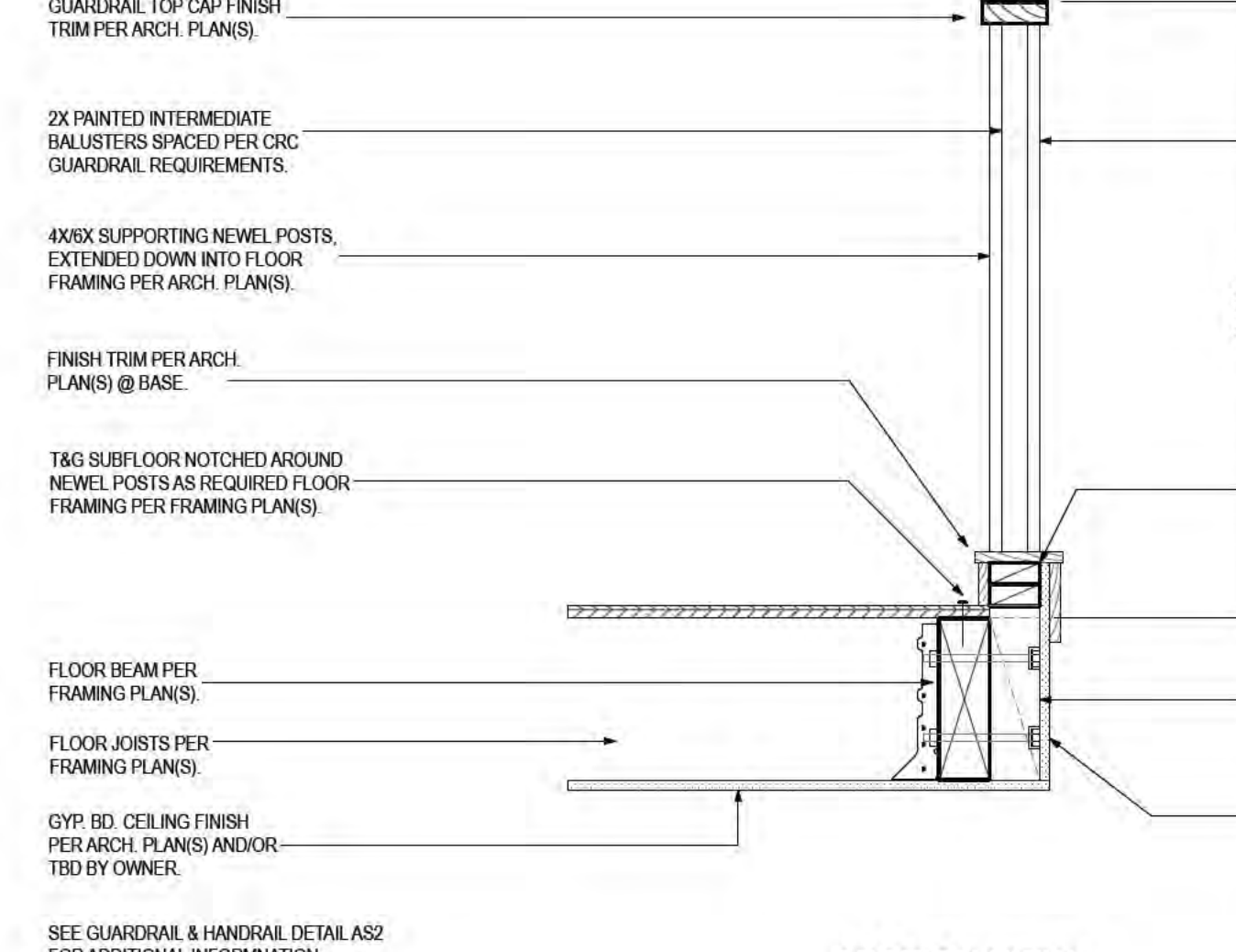


AS2 WOOD STAIR FRAMING - CODE REQ.
DETAIL 2: INFORMATIONAL ONLY: NOT REPRESENTATIONAL OF ACTUAL FINISHES TO BE USED.



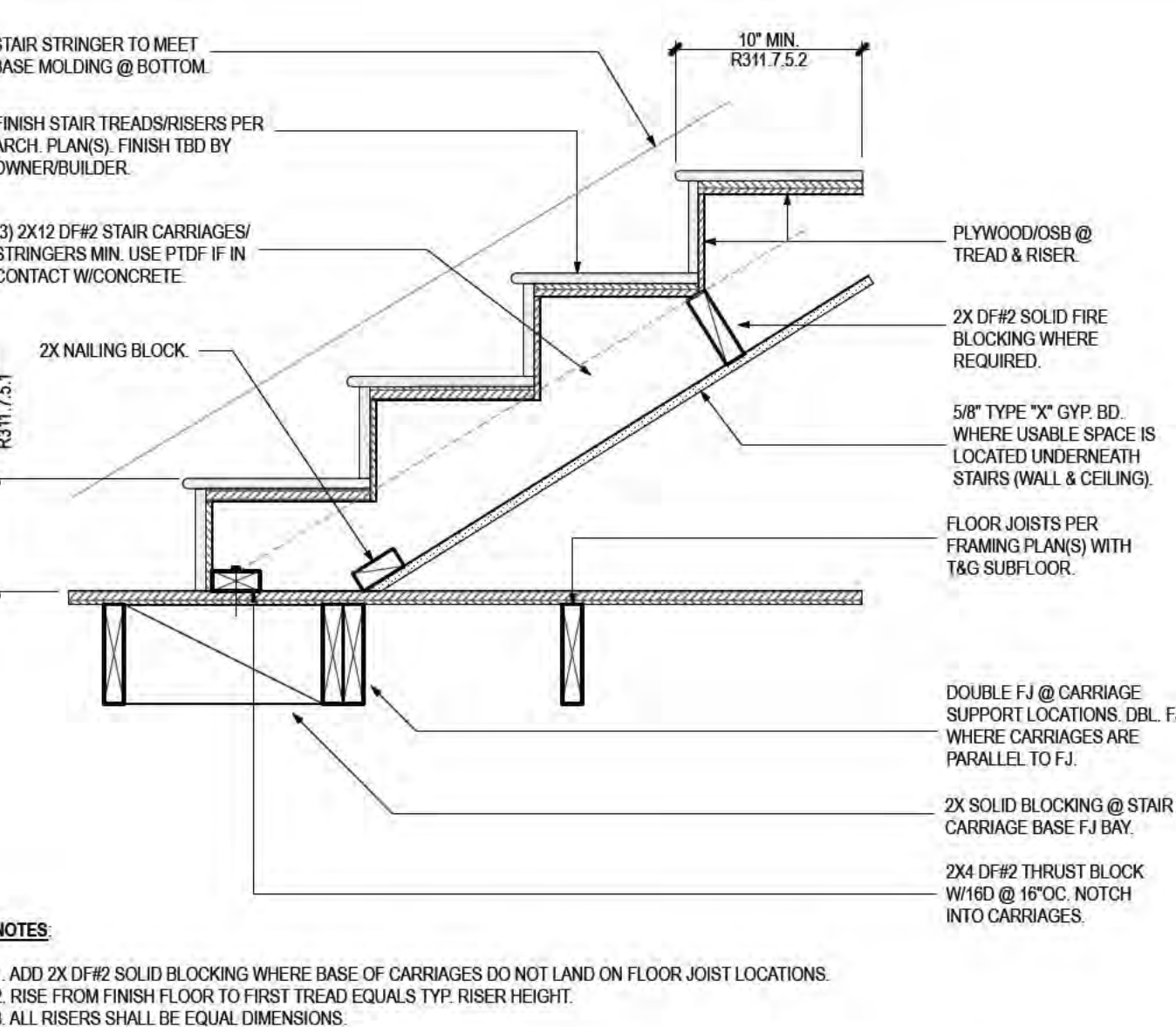
NOTES
1. SEE FLOOR PLAN(S) FOR CHANGE OF DIRECTION @ STAIRWAY.
2. RISE FROM FINISH FLOOR TO FIRST TREAD EQUALS TYPICAL RISER HEIGHT.
3. ALL RISERS SHALL BE EQUAL DIMENSIONS.
4. SEE DETAILS AS7 & AS8 FOR OPTIONAL BALUSTRADE EDGES OF STAIRWAYS.

AS6 WOOD STAIR FRAMING @ LANDING
BOTTOM OF CARRIAGE/STRINGER @ LAND NG

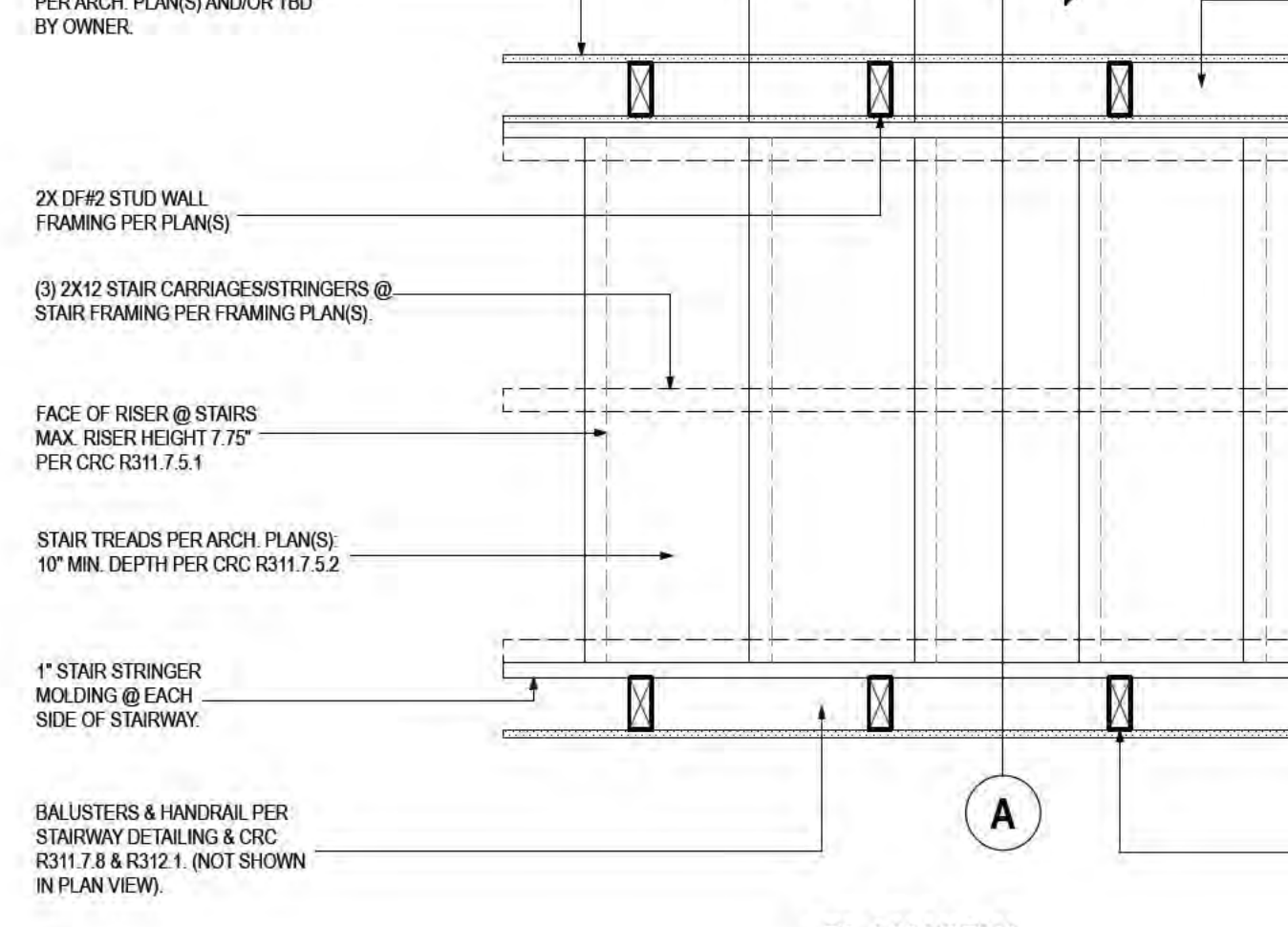


NOTES
1. SEE CRC TABLE R301.5 FOR REQ. LOADS ON HANDRAILS & GUARDRAILS. HANDRAILS & GUARDS SHALL BE DESIGNED TO RESIST A CONCENTRATED LOAD OF 200 POUNDS IN ACCORDANCE WITH SECTION ASCE 7, CBC 1607.8.1.1.

AS7 WOOD STAIR FRAMING @ RAILING W/CURB
PLAN VIEW

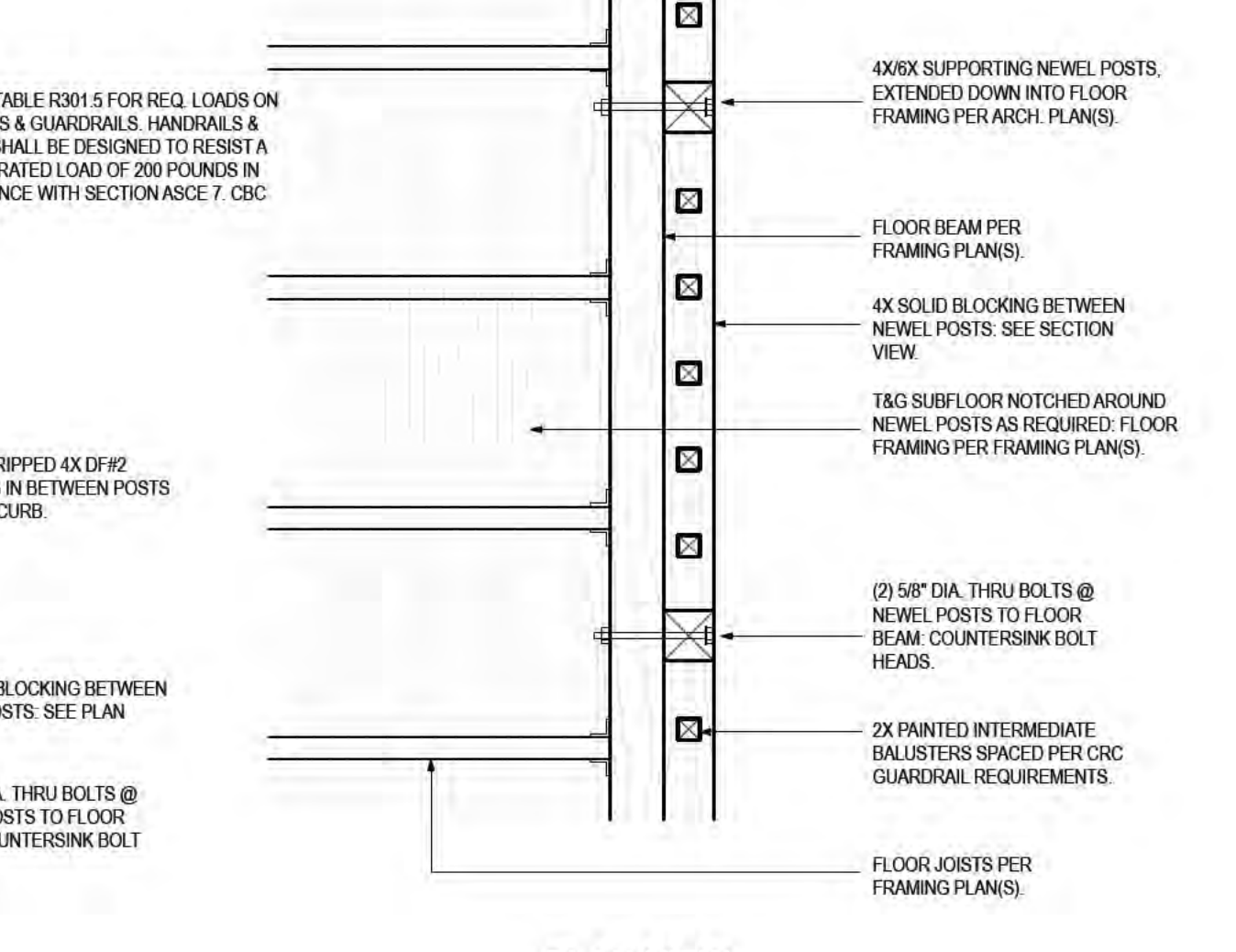


AS3 WOOD STAIR FRAMING @ CARRIAGE/STRINGER
BOTTOM OF CARRIAGE @ LOWER FLOOR



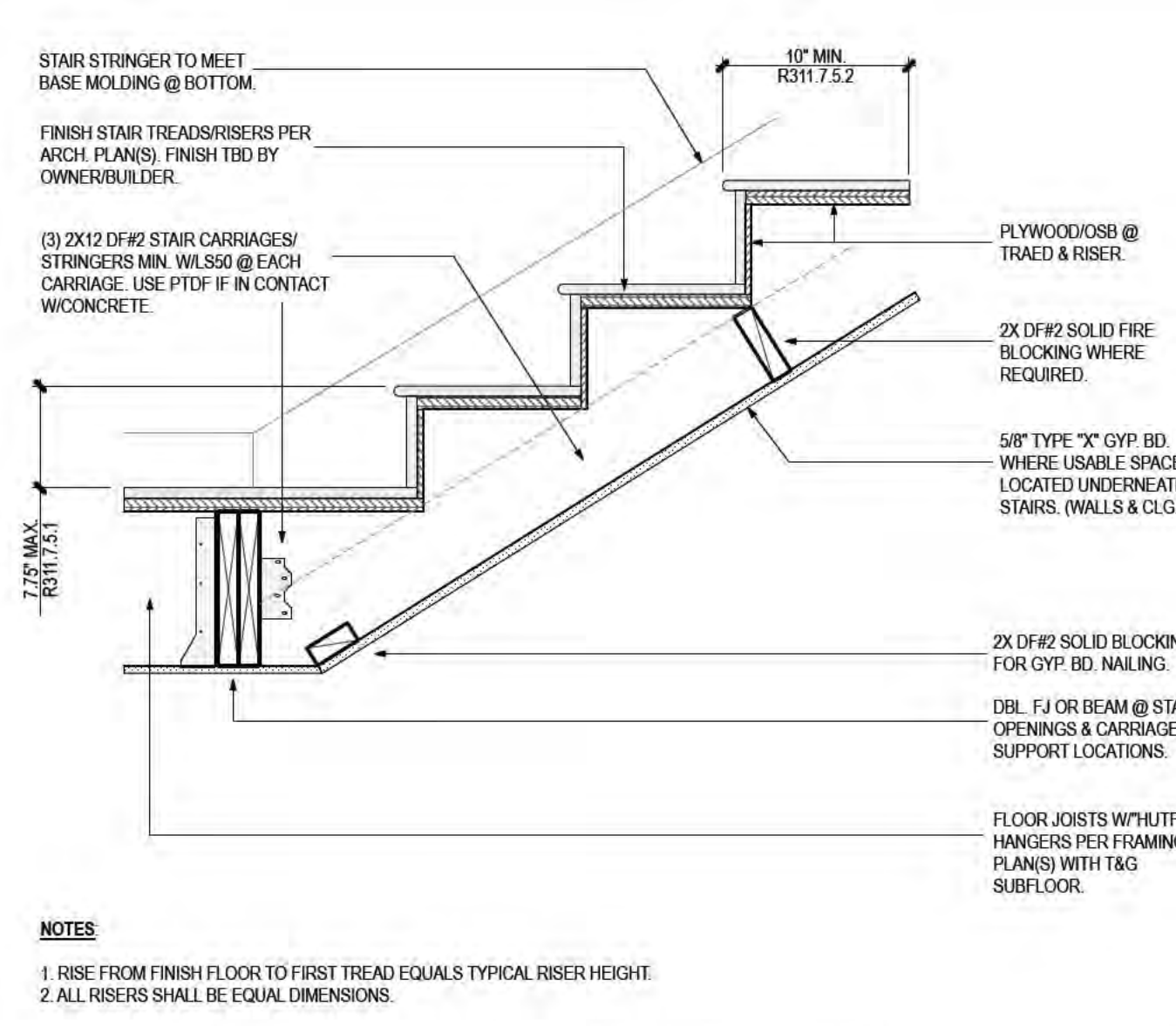
NOTES
1. SEE CRC SECTION R311.7 AND/OR TYP. STAIR CONSTRUCTION CODE REQUIREMENTS.
2. SEE SHEET ON 1 FOR ADDITIONAL STAIR CONSTRUCTION CODE REQUIREMENTS NOT INDICATED HERE.

AS4 WOOD STAIR FRAMING @ CARRIAGE/STRINGER
BOTTOM OF CARRIAGE @ INTERMEDIATE LEVEL.

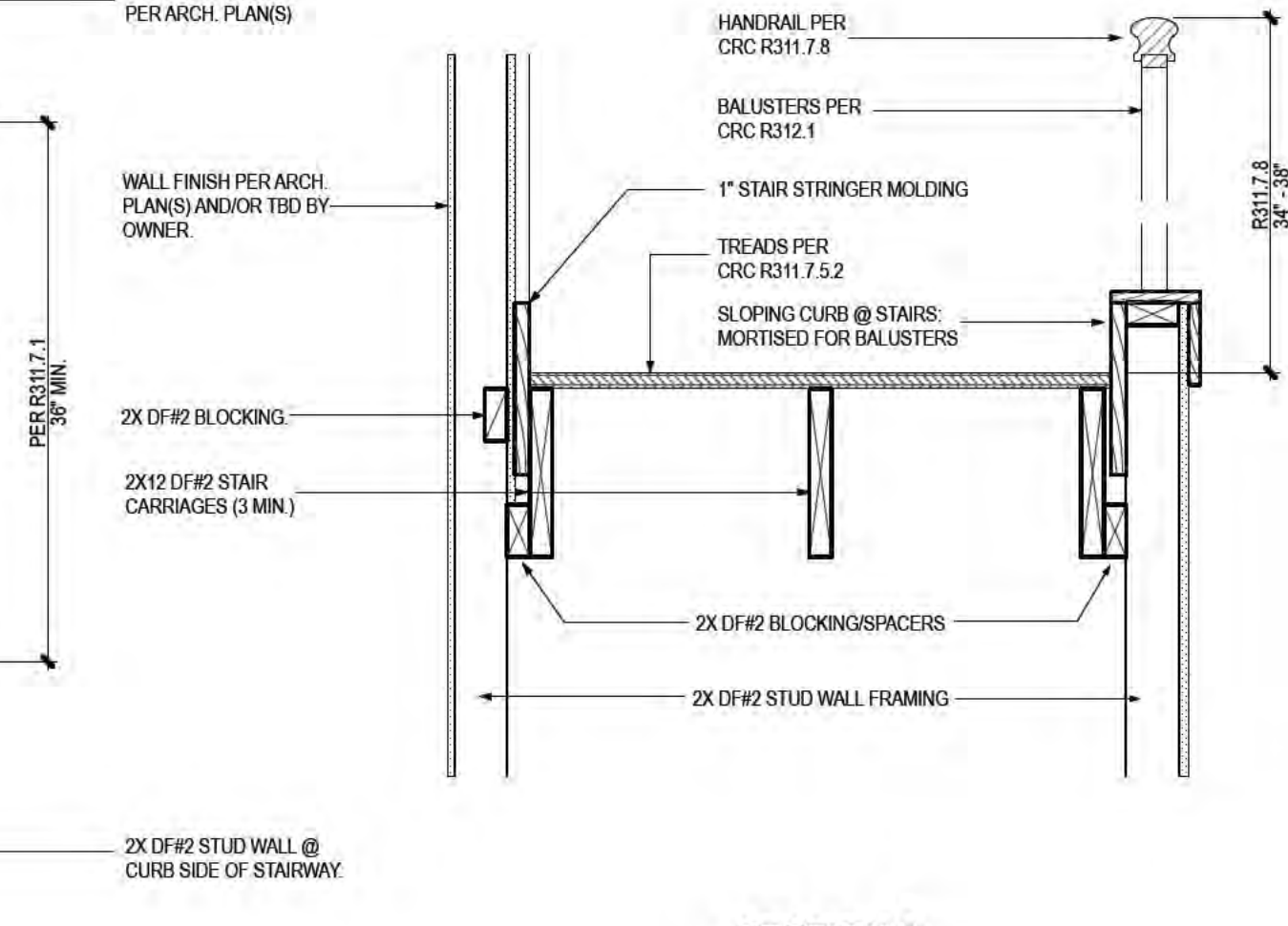


NOTES
1. SEE CRC TABLE R301.5 FOR REQ. LOADS ON HANDRAILS & GUARDRAILS. HANDRAILS & GUARDS SHALL BE DESIGNED TO RESIST A CONCENTRATED LOAD OF 200 POUNDS IN ACCORDANCE WITH SECTION ASCE 7, CBC 1607.8.1.1.

AS7 WOOD STAIR FRAMING @ RAILING W/CURB
PLAN VIEW



AS7 WOOD STAIR FRAMING @ RAILING W/CURB
PLAN VIEW



NOTES
1. SEE CRC SECTION R311.7 AND/OR TYP. STAIR CONSTRUCTION CODE REQUIREMENTS.
2. SEE SHEET ON 1 FOR ADDITIONAL STAIR CONSTRUCTION CODE REQUIREMENTS NOT INDICATED HERE.

AS7 WOOD STAIR FRAMING @ RAILING W/CURB
PLAN VIEW



NOTES
1. SEE CRC SECTION R311.7 AND/OR TYP. STAIR CONSTRUCTION CODE REQUIREMENTS.
2. SEE SHEET ON 1 FOR ADDITIONAL STAIR CONSTRUCTION CODE REQUIREMENTS NOT INDICATED HERE.

AS7 WOOD STAIR FRAMING @ RAILING W/CURB
PLAN VIEW

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

STAIR DETAILS

D.2

DOOR & WINDOW GENERAL NOTES:

PER CAL. FORM 16 RESIDENTIAL CODE (CRC) SECTIONS R308, R310, R311 (EXCEPTS), R312 (EXCEPTS) & R609.
SEE "GENERAL FLOOR PLAN NOTES" @ SHEETS 04.1 THROUGH 04.3 FOR OPENINGS LOCATED IN WALLS SEPARATING DWELLINGS AND GARAGES AND OTHER INFORMATION/REQUIREMENTS NOT CONTAINED IN THESE NOTES.

SECTION R308: GLAZING

R308.1 IDENTIFICATION. EXCEPT AS INDICATED IN SECTION R308.1.1 EACH PANE OF GLAZING INSTALLED IN HAZARDOUS LOCATIONS AS DEFINED IN SECTION R609.1 SHALL BE IDENTIFIED BY THE MANUFACTURER'S DESIGNATION SPECIFYING WINDOW APPLICATION, THE DESIGNATION, DESIGNATION NO. TYPE OF GLASS AND THE SAFETY GLAZING STANDARD WITH WHICH IT COMPLIES, WHICH IS VISIBLE IN THE FINAL INSTALLATION. THE DESIGNATION SHALL BE A CODE ETCHED, SAND-BLASTED, CERAMIC-FIRED, LASER ETCHED, EMBOSSED, OR BE OF A TYPE WHICH, ONCE APPLIED, CANNOT BE REMOVED WITHOUT BEING DESTROYED. A LABEL SHALL BE PERMITTED IN THE CASE OF THE MANUFACTURER'S DESIGNATION EXCEPTS:

1. FOR OTHER THAN TEMPERED GLASS, MANUFACTURER'S DESIGNATIONS ARE NOT REQUIRED PROVIDED THE BUILDING OFFICIAL APPROVES THE USE OF A CERTIFICATE, AFFIDAVIT OR OTHER EVIDENCE, CONFIRMING COMPLIANCE WITH THIS CODE.
2. TEMPERED SPANDREL GLASS IS PERMITTED TO BE IDENTIFIED BY THE MANUFACTURER WITH A REMOVABLE PAPER DESIGNATION.
- R308.1.1 IDENTIFICATION OF MULTIPLE ASSEMBLIES.** MULTI-PANE ASSEMBLIES HAVING INDIVIDUAL PANES NOT EXCEEDING 1 SQUARE FOOT (0.09 M²) IN EXPOSED AREA SHALL HAVE AT LEAST ONE PANE IN THE ASSEMBLY IDENTIFIED IN ACCORDANCE WITH SECTION R308.1. ALL OTHER PANES IN THE ASSEMBLY SHALL BE LABELED "CSPC 16 CFR 1201" OR "ANSI Z97.1" AS APPROPRIATE.

R308.2 LOUVERED WINDOWS OR JALOUSIES. REGULAR, FLOAT, WIRED OR PATTERNED GLASS IN JALOUSIES AND LOUVERED WINDOWS SHALL BE NO THINNER THAN NOMINAL 3/16 INCH (5 MM) AND NO LONGER THAN 48 INCHES (1219 MM). EXPOSED GLASS EDGES SHALL BE SMOOTH.

R308.2.1 WIRED GLASS PROHIBITED. WIRED GLASS WITH WIRE EXPOSED ON LONGITUDINAL EDGES SHALL NOT BE USED IN JALOUSIES OR LOUVERED WINDOWS.

R308.3 HUMAN IMPACT LOADS. INDIVIDUAL GLAZED AREAS, INCLUDING GLASS IN DOORS IN HAZARDOUS LOCATIONS SUCH AS THOSE INDICATED AS DEFINED IN SECTION R609.4, SHALL PASS THE TEST REQUIREMENTS OF SECTION R308.3.1.

- EXCEPTS:**
1. LOUVERED WINDOWS AND JALOUSIES SHALL COMPLY WITH SECTION R308.2.
 2. MIRRORS AND OTHER GLASS PANELS MOUNTED OR HUNG ON A SURFACE THAT PROVIDES A CONTINUOUS BACKING SUPPORT.
 3. GLASS UNIT MASONRY COMPLYING WITH SECTION R610.
 - R308.3.1 IMPACT TEST.** WHERE REQUIRED BY OTHER SECTIONS OF THE CODE, GLAZING SHALL BE TESTED IN ACCORDANCE WITH "CSPC 16 CFR 1201." GLAZING SHALL COMPLY WITH THE TEST CRITERIA FOR CATEGORY II UNLESS OTHERWISE INDICATED IN TABLE R308.3.1(1). EXCEPTION: GLAZING NOT IN DOORS OR ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS AND SHOWERS SHALL BE TESTED IN ACCORDANCE WITH ANSI Z97.1. GLAZING SHALL COMPLY WITH THE TEST CRITERIA FOR CLASS A UNLESS INDICATED IN TABLE R308.3.1(2).

R308.4 HAZARDOUS LOCATIONS. THE LOCATIONS SPECIFIED IN SECTIONS R308.4.1 THROUGH R308.4.7 SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS FOR THE PURPOSES OF GLAZING.

R308.4.1 GLAZING IN DOORS. GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION.

- EXCEPTS:**
1. GLAZED OPENINGS OF A SIZE THROUGH WHICH A 3 INCH DIAMETER (76 MM) SPHERE IS UNABLE TO PASS.
 2. DECORATIVE GLAZING.
 - R308.4.2 GLAZING ADJACENT DOORS.** GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) ABOVE THE FLOOR OR WALKING SURFACE AND IT MEETS EITHER OF THE FOLLOWING CONDITIONS:
 1. WHERE THE GLAZING IS WITHIN 24 INCHES (610 MM) OF EITHER SIDE OF THE DOOR, THE PLANE OF THE DOOR IS LOCATED POSITION.
 2. WHERE THE GLAZING IS ON A WALL PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSED POSITION AND WITHIN 24 INCHES (610 MM) OF THE HINGE SIDE OF AN INSWINGING DOOR.

- EXCEPTS:**
1. DECORATIVE GLAZING.
 2. WHEN THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND THE GLAZING.
 3. WHERE ACCESS THROUGH THE DOOR IS TO A LOCKER OR STORAGE AREA 3 FEET (914 MM) OR LESS IN DEPTH. GLAZING IN THIS APPLICATION SHALL COMPLY WITH SECTION R308.4.3.

R308.4.3 GLAZING THAT IS ADJACENT TO THE FIXED PANEL OF PATIO DOORS.

R308.4.3 GLAZING IN WINDOWS. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS SHALL BE CONSIDERED A HAZARDOUS LOCATION:

1. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET (0.836 M²).
2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES (457 MM) ABOVE THE FLOOR.
3. THE TOP EDGE OF THE GLAZING IS MORE THAN 36 INCHES (914 MM) ABOVE THE FLOOR; AND
4. ONE OR MORE WALKING SURFACES ARE WITHIN 36 INCHES (914 MM), MEASURED HORIZONTALLY AND/ OR A STRAIGHT LINE, OF THE GLAZING.

- EXCEPTS:**
1. DECORATIVE GLAZING.
 2. WHEN A HORIZONTAL RAIL IS INSTALLED ON THE ACCESSIBLE SIDE(S) OF THE GLAZING 34 TO 38 INCHES (864 TO 965 MM) ABOVE THE WALKING SURFACE. THE RAIL SHALL BE CAPABLE OF WITHSTANDING A HORIZONTAL LOAD OF 50 POUNDS PER LINEAR FOOT (730 N/M) WITHOUT CONTACTING THE GLASS AND BE A MINIMUM OF 1-1/2 INCHES (38 MM) IN CROSS SECTIONAL HEIGHT.

3. OUTBOARD PANES IN INSULATING GLASS UNITS AND OTHER MULTIPLE GLAZED PANELS WHEN THE BOTTOM EDGE OF THE GLASS IS 25 FEET (7620 MM) OR MORE ABOVE GRADE, A ROOF, WALKING SURFACE OR OTHER HORIZONTAL SURFACE WITHIN 45 DEGREES (0.79 RAD) OF HORIZONTAL SURFACE ADJACENT TO THE GLASS EXTERIOR.

R308.4.4 GLAZING GUARDS AND RAILINGS. GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL INFILL PANELS, REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION.

R308.4.5 GLAZING AND WET SURFACES. GLAZING IN WALLS, ENCLOSURES OR FENCES CONTAINING OR ADJACENT TO HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND OTHER OUTDOOR SWIMMING POOLS SHALL BE CONSIDERED A HAZARDOUS LOCATION WHERE THE EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION. THIS SHALL APPLY TO SINGLE GLAZING AND ALL PANES IN MULTIPLE GLAZING.

EXCEPTION: GLAZING THAT IS MORE THAN 60 INCHES (1524 MM) MEASURED HORIZONTALLY FROM THE WATER'S EDGE OF A BATHTUB, HOT TUB, SPA, WHIRLPOOL OR SWIMMING POOL OR FROM THE EDGE OF A SHOWER, SAUNA OR STEAM ROOM.

R308.4.6 GLAZING ADJACENT STAIRS AND RAMPS. GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36 INCHES (914 MM) ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS SHALL BE CONSIDERED A HAZARDOUS LOCATION.

- EXCEPTS:**
1. WHEN A RAIL IS INSTALLED ON THE ACCESSIBLE SIDE(S) OF THE GLAZING 34 TO 38 INCHES (864 TO 965 MM) ABOVE THE WALKING SURFACE. THE RAIL SHALL BE CAPABLE OF WITHSTANDING A HORIZONTAL LOAD OF 50 POUNDS PER LINEAR FOOT (730 N/M) WITHOUT CONTACTING THE GLASS AND BE A MINIMUM OF 1-1/2 INCHES (38 MM) IN CROSS SECTIONAL HEIGHT.
 2. GLAZING 36 INCHES (914 MM) OR MORE MEASURED HORIZONTALLY FROM THE WALKING SURFACE.

R308.4.7 GLAZING ADJACENT TO THE BOTTOM STAIR LANDING. GLAZING ADJACENT TO THE LANDINGS AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 36 INCHES (914 MM) ABOVE THE LANDINGS AND WITHIN 18 INCHES (457 MM) HORIZONTAL AREA LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOS SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.

EXCEPTION: THE GLAZING IS PROTECTED BY A GUARD COMPLYING WITH SECTION R312 AND THE PLANE OF THE GLASS IS MORE THAN 18 INCHES (457 MM) FROM THE GUARD.

R308.5 SITE-BUILT WINDOWS. SITE-BUILT WINDOWS SHALL COMPLY WITH SECTION 2404 OF THE CALIFORNIA BUILDING CODE.

R308.6 SKYLIGHTS AND SLOPED GLAZING. SKYLIGHTS AND SLOPED GLAZING SHALL COMPLY WITH THE FOLLOWING SECTIONS:

- R308.6.1 DEFINITIONS. THE FOLLOWING TERMS ARE DEFINED IN CHAPTER 2:**
- SKYLIGHT, UNIT**
SKYLIGHTS AND SLOPED GLAZING
TUBULAR DAYLIGHT DEVICE (TDD)
- R308.6.2 MATERIALS.** THE FOLLOWING TYPES OF GLAZING SHALL BE PERMITTED TO BE USED:
1. LAMINATED GLASS WITH A MINIMUM 0.015 INCH (0.38 MM) POLYVINYL BUTYRAL INTERLAYER FOR GLASS PANES 16 SQUARE FEET (1.5 M²) OR LESS IN AREA LOCATED SUCH THAT THE HIGHEST POINT OF THE GLASS IS NOT MORE THAN 12 FEET (3658 MM) ABOVE A WALKING SURFACE OR OTHER ACCESSIBLE AREA. FOR HIGHER OR LARGER SIZES, THE MINIMUM INTERLAYER THICKNESS SHALL BE 0.030 INCH (0.76 MM).
 2. FULLY TEMPERED GLASS.
 3. HEAT-STRENGTHENED GLASS.
 4. WIRED GLASS.
 5. APPROVED RIGID PLASTICS.

R308.6.3 SCREENS, GENERAL. FOR FULLY TEMPERED OR HEAT-STRENGTHENED GLASS, A BROKEN GLASS RETENTION SCREEN MEETING THE REQUIREMENTS OF SECTION R308.6.7 SHALL BE INSTALLED BELOW THE FULL AREA OF THE GLASS, EXCEPT FOR CONDITION 1 OR 2 LISTED IN SECTION R308.6.5. OTHER PANES IN THE MULTIPLE GLAZING SHALL BE OF ANY TYPE LISTED IN SECTION R308.6.2.

R308.6.4 SCREENS WITH MULTIPLE GLAZING. WHERE THE INDIVIDUAL PANE IS FULLY TEMPERED, HEAT-STRENGTHENED, OR WIRE GLASS, A BROKEN GLASS RETENTION SCREEN MEETING THE REQUIREMENTS OF SECTION R308.6.7 SHALL BE INSTALLED BELOW THE FULL AREA OF THE GLASS, EXCEPT FOR CONDITION 1 OR 2 LISTED IN SECTION R308.6.5. OTHER PANES IN THE MULTIPLE GLAZING SHALL BE OF ANY TYPE LISTED IN SECTION R308.6.2.

R308.6.5 SCREENS NOT REQUIRED. SCREENS SHALL NOT BE REQUIRED WHERE LAMINATED GLASS COMPLYING WITH ITEM 1 OF SECTION R308.6.2 IS USED AS SINGLE GLAZING OR THE INBOARD PANE IN MULTIPLE GLAZING. SCREENS SHALL NOT BE REQUIRED WHERE FULLY TEMPERED GLASS IS USED AS SINGLE GLAZING OR THE INBOARD PANE IN MULTIPLE GLAZING AND EITHER OF THE FOLLOWING CONDITIONS IS MET:

1. GLASS AREA 16 SQUARE FEET (1.49 M²) OR LESS, HIGHEST POINT OF GLASS NOT MORE THAN 12 FEET (3658 MM) ABOVE A WALKING SURFACE OR OTHER ACCESSIBLE AREA, NOMINAL GLASS THICKNESS NOT MORE THAN 3/16 INCH (4.8 MM), AND/ OR (FOR MULTIPLE GLAZING ONLY) THE OTHER PANE OR PANES FULLY TEMPERED, LAMINATED OR WIRED GLASS.
2. GLASS AREA GREATER THAN 16 SQUARE FEET (1.49 M²), GLASS SLOPED 30 DEGREES (0.52 RAD) OR LESS FROM VERTICAL, AND HIGHEST POINT OF GLASS NOT MORE THAN 10 FEET (3048 MM) ABOVE A WALKING SURFACE OR OTHER ACCESSIBLE AREA.

R308.6.6 GLASS IN GREENHOUSES. ANY GLAZING MATERIAL IS PERMITTED TO BE INSTALLED WITHOUT SCREENING IN THE SLOPED AREAS OF GREENHOUSES PROVIDED THE GREENHOUSE HEIGHT AT THE RIDGE DOES NOT EXCEED 20 FEET (6096 MM) ABOVE GRADE.

R308.6.7 SCREEN CHARACTERISTICS. THE SCREEN AND ITS FASTENING SHALL BE CAPABLE OF SUPPORTING TWICE THE WEIGHT OF THE GLAZING, BE FIRMLY AND SUBSTANTIALLY FASTENED TO THE FRAME MEMBERS, BE INSTALLED WITHIN 4 INCHES (102 MM) OF THE GLASS, AND HAVE A MESH OPENING OF NOT GREATER THAN 1 INCH X 1 INCH (25 MM X 25 MM).

R308.6.8 CURBS FOR SKYLIGHTS. ALL UNIT SKYLIGHTS INSTALLED IN A ROOF WITH A PITCH FLATTER THAN THREE UNITS VERTICAL IN 12 UNITS HORIZONTAL (25-PERCENT SLOPE) SHALL BE MOUNTED ON A CURB EXTENDING AT LEAST 4 INCHES (102 MM) ABOVE THE PLANE OF THE ROOF UNLESS OTHERWISE SPECIFIED IN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

R308.6.9 TESTING AND LABELING. UNIT SKYLIGHTS AND TUBULAR DAYLIGHTING DEVICES SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY AND BEAR A LABEL IDENTIFYING MANUFACTURER, PERFORMANCE GRADE, RATING AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF ANSIA/WDMA/CSA 1011.5 21A40.

SECTION R310: EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 EMERGENCY ESCAPE AND RESCUE OPENING REQUIRED. BASEMENTS, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE NOT LESS THAN ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. WHERE BASEMENTS HAVE ONE OR MORE SLEEPING ROOMS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE REQUIRED IN EACH SLEEPING ROOM. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY OR TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY.

EXCEPTS: (SEMI)

1. BASEMENT WITH A CEILING HEIGHT OF LESS THAN 80 INCHES (2032 MM) SHALL NOT BE REQUIRED TO HAVE EMERGENCY ESCAPE AND RESCUE OPENINGS.
2. EMERGENCY ESCAPE AND RESCUE OPENINGS ARE NOT REQUIRED FROM BASEMENT OR SLEEPING ROOMS THAT HAVE AN EXIT DOOR OR EXIT ACCESS DOOR THAT OPENS DIRECTLY INTO A PUBLIC WAY, OR TO A YARD, COURT OR EXTERIOR EGRESS BALCONY THAT OPENS TO A PUBLIC WAY.
3. BASEMENTS WITHOUT HABITABLE SPACES AND HAVING NOT MORE THAN 200 SQUARE FEET (18.6 M²) IN FLOOR AREA SHALL NOT BE REQUIRED TO HAVE EMERGENCY ESCAPE AND RESCUE OPENINGS.
4. STORM SHELTERS ARE NOT REQUIRED TO COMPLY WITH THIS SECTION WHERE THE SHELTER IS CONSTRUCTED IN ACCORDANCE WITH IC 500.
5. WHERE THE DWELLING UNIT OR TOWNHOUSE UNIT IS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION R313, SLEEPING ROOMS IN BASEMENTS SHALL NOT BE REQUIRED TO HAVE EMERGENCY ESCAPE AND RESCUE OPENINGS PROVIDED THAT THE BASEMENT HAS ONE OF THE FOLLOWING:

- 5.1 ONE MEANS OF EGRESS COMPLYING WITH SECTION R311 AND ONE EMERGENCY ESCAPE AND RESCUE OPENING.
- 5.2 TWO MEANS OF EGRESS COMPLYING WITH SECTION R311.

R310.1.1 OPERATIONAL CONSTRAINTS AND OPENING CONTROL DEVICES. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE MAINTAINED FREE OF ANY OBSTRUCTIONS OTHER THAN THOSE ALLOWED BY THIS SECTION AND SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE. WINDOW OPENING CONTROL DEVICES AND FALL PREVENTION DEVICES ARE COMPLYING WITH ASTM F2080 SHALL BE PERMITTED FOR USE ON WINDOWS SERVING AS A REQUIRED EMERGENCY ESCAPE AND RESCUE OPENING NOT MORE THAN 70 INCHES (178 CM) ABOVE THE FINISHED FLOOR. THE RELEASE MECHANISM SHALL BE MAINTAINED OPERABLE AT ALL TIMES. SUCH BARS, GRILLES, GRATES, OR ANY SIMILAR DEVICES SHALL BE EQUIPPED WITH AN APPROVED EXTERIOR RELEASE DEVICE FOR USE BY THE FIRE DEPARTMENT, ONLY WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION, WHERE SECURITY BARS (BURGLAR BARS) ARE INSTALLED ON EMERGENCY EGRESS AND RESCUE WINDOWS OR DOORS, ON OR AFTER JULY 1, 2000, SUCH DEVICES SHALL COMPLY WITH CALIFORNIA BUILDING STANDARDS CODE, PART 12, CHAPTER 12-3 AND OTHER APPLICABLE PROVISIONS OF THIS CODE.

R310.2 EMERGENCY ESCAPE AND RESCUE OPENINGS. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM DIMENSIONS IN ACCORDANCE WITH SECTIONS R310.2.1 THROUGH R310.2.4.

R310.2.1 MINIMUM OPENING AREA. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5.7 SQUARE FEET (0.53 M²).

EXCEPTION: THE MINIMUM NET CLEAR OPENING FOR GRADE FLOOR EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE 5.0 SQUARE FEET (0.46 M²).

R310.2.2 MINIMUM DIMENSIONS. THE MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24 INCHES (610 MM). THE MINIMUM NET CLEAR OPENING WITH DIMENSION SHALL BE 20 INCHES (508 MM). THE NET CLEAR OPENING DIMENSIONS SHALL BE THE RESULT OF NORMAL OPERATION OF THE OPENING.

R310.2.3 MAXIMUM HEIGHT FROM FLOOR. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE THE BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44 INCHES (1118 MM) MEASURED FROM THE FINISHED FLOOR.

R310.2.4 EMERGENCY ESCAPE AND RESCUE OPENINGS UNDER DECKS, PORCHES AND CANTILEVERS. EMERGENCY ESCAPE AND RESCUE OPENINGS INSTALLED UNDER DECKS, PORCHES OR CANTILEVERS SHALL BE FULLY OPERABLE AND PROVIDE A PATH NOT LESS THAN 36 INCHES (914 MM) IN HEIGHT AND 36 INCHES (914 MM) IN WIDTH TO A YARD OR COURT.

R310.3 EMERGENCY ESCAPE AND RESCUE DOORS. WHERE A DOOR IS PROVIDED AS THE REQUIRED EMERGENCY ESCAPE AND RESCUE OPENING, IT SHALL BE A SIDE-HINGED DOOR OR A SLIDER.

R310.4 AREA WELLS. AN EMERGENCY ESCAPE AND RESCUE OPENING WHERE THE BOTTOM OF THE CLEAR OPENING IS BELOW THE ADJUTANT GRADE SHALL BE PROVIDED WITH AN AREA WELL IN ACCORDANCE WITH SECTIONS R310.4.1 THROUGH R310.4.4.

R310.4.1 MINIMUM SIZE. THE HORIZONTAL AREA OF THE AREA WELL SHALL BE NOT LESS THAN 8 SQUARE FEET (0.74 M²) WITH A HORIZONTAL PROJECTION AND WIDTH OF NOT LESS THAN 36 INCHES (914 MM). THE SIZE OF THE AREA WELL SHALL ALLOW THE EMERGENCY ESCAPE AND RESCUE OPENING TO BE FULLY OPENED.

EXCEPTION: THE LADDER OR STEPS REQUIRED BY SECTION R310.4.2 SHALL BE PERMITTED TO ENCRoACH NOT MORE THAN 6 INCHES (152 MM) INTO THE REQUIRED DIMENSIONS OF THE AREA WELL.

R310.4.2 LADDERS AND STEPS. AREA WELLS WITH A VERTICAL DEPTH GREATER THAN 44 INCHES (1118 MM) SHALL BE EQUIPPED WITH AN APPROVED, PERMANENTLY AFFIXED LADDER OR STEPS. THE LADDER OR STEPS SHALL NOT BE OBSTRUCTED BY THE EMERGENCY ESCAPE AND RESCUE OPENING WHERE THE WINDOW OR DOOR IS IN THE OPEN POSITION. LADDERS OR STEPS REQUIRED BY THIS SECTION SHALL NOT BE REQUIRED TO COMPLY WITH SECTION R317.

R310.4.2.1 LADDERS. LADDERS AND RUNGS SHALL HAVE AN INSIDE WIDTH OF NOT LESS THAN 12 INCHES (305 MM), SELF PROJECT, NOT LESS THAN 3 INCHES (76 MM) FROM THE WALL AND SPACED NOT MORE THAN 18 INCHES (457 MM) ON CENTER.

R310.4.2.2 STEPS. STEPS SHALL HAVE AN INSIDE WIDTH OF NOT LESS THAN 12 INCHES (305 MM), A MINIMUM TREAD DEPTH OF 5 INCHES (127 MM) AND A MAXIMUM RISE HEIGHT OF 18 INCHES (457 MM) FOR THE FULL HEIGHT OF THE AREA WELL.

R310.4.3 DRAINAGE. AREA WELLS SHALL BE DESIGNED FOR PROPER DRAINAGE BY CONNECTING TO THE BUILDING'S FOUNDATION DRAINAGE SYSTEM REQUIRED BY SECTION R405.

EXCEPTION: A DRAINAGE SYSTEM FOR AREA WELLS IS NOT REQUIRED WHERE THE FOUNDATION IS ON WELL DRAINED SOIL OR SAND GRAVEL MIXTURE SOILS IN ACCORDANCE WITH THE UNITED SOILS CLASSIFICATION SYSTEM, GROUP 1 SOILS, AS DETAILED IN TABLE R405.1.

R310.4.4 BARS, GRILLES, COVERS AND SCREENS. WHERE BARS, GRILLES, COVERS, SCREENS OR SIMILAR DEVICES ARE PLACED OVER EMERGENCY ESCAPE AND RESCUE OPENINGS, BULKHEAD ENCLOSURES OR AREA WELLS THAT SERVE SUCH OPENINGS, THE MINIMUM NET CLEAR OPENING SIZE SHALL COMPLY WITH SECTIONS R310.2.2 AND R310.4.1. SUCH DEVICES SHALL BE EASILY REMOVED OR REMOVABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR TOOL LESS THAN 8 SQUARE FEET (0.74 M²) WITH A HORIZONTAL PROJECTION AND WIDTH OF NOT LESS THAN 36 INCHES (914 MM). THE RELEASE MECHANISM SHALL BE MAINTAINED OPERABLE AT ALL TIMES. SUCH BARS, GRILLES, GRATES, OR ANY SIMILAR DEVICES SHALL BE EQUIPPED WITH AN APPROVED EXTERIOR RELEASE DEVICE FOR USE BY THE FIRE DEPARTMENT, ONLY WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION, WHERE SECURITY BARS (BURGLAR BARS) ARE INSTALLED ON EMERGENCY ESCAPE AND RESCUE WINDOWS OR DOORS, ON OR AFTER JULY 1, 2000, SUCH DEVICES SHALL COMPLY WITH CALIFORNIA BUILDING STANDARDS CODE, PART 12, CHAPTER 12-3 AND OTHER APPLICABLE PROVISIONS OF THIS CODE.

R310.5 REPLACEMENT WINDOWS FOR EMERGENCY ESCAPE AND RESCUE OPENINGS. REPLACEMENT WINDOWS INSTALLED IN BUILDINGS MEETING THE SCOPE OF THIS CODE SHALL BE EXEMPT FROM SECTIONS R310.2 AND R310.4.4, PROVIDED THAT THE REPLACEMENT WINDOW MEETS THE FOLLOWING CONDITIONS:

1. THE REPLACEMENT WINDOW IS THE MANUFACTURER'S LARGEST STANDARD SIZE WINDOW THAT WILL FIT WITHIN THE EXISTING FRAME OR EXISTING ROUGH OPENING. THE REPLACEMENT WINDOW IS OF THE SAME OPERATING STYLE AS THE EXISTING WINDOW OR A STYLE THAT PROVIDES FOR AN EQUAL OR GREATER WINDOW OPENING EARLIER THAN THE EXISTING WINDOW.
2. THE REPLACEMENT WINDOW IS NOT PART OF A CHANGE OF OCCUPANCY.

R310.6 DWELLING ADDITIONS. WHERE DWELLING ADDITIONS CONTAIN SLEEPING ROOMS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE PROVIDED IN EACH NEW SLEEPING ROOM WHERE DWELLING ADDITIONS HAVE BASEMENTS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE PROVIDED IN THE NEW BASEMENT.

EXCEPTS:

1. AN EMERGENCY ESCAPE AND RESCUE OPENING IS NOT REQUIRED IN A NEW BASEMENT THAT CONTAINS A SLEEPING ROOM WITH AN EMERGENCY ESCAPE AND RESCUE OPENING.
2. AN EMERGENCY ESCAPE AND RESCUE OPENING IS NOT REQUIRED IN A NEW BASEMENT WHERE THERE IS AN EMERGENCY ESCAPE AND RESCUE OPENING IN AN EXISTING BASEMENT THAT IS ACCESSIBLE FROM THE NEW BASEMENT.
3. AN OPERABLE WINDOW COMPLYING WITH SECTION R310.7.1 SHALL BE ACCEPTABLE AS AN EMERGENCY ESCAPE AND RESCUE OPENING.

R310.7 ALTERATIONS OR REPAIRS OF EXISTING BASEMENTS. NEW SLEEPING ROOMS CREATED IN AN EXISTING BASEMENT SHALL BE PROVIDED WITH EMERGENCY ESCAPE AND RESCUE OPENINGS IN ACCORDANCE WITH SECTION R310.1, OTHER THAN NEW SLEEPING ROOMS WHERE AN EXISTING BASEMENT UNDERGOES ALTERATIONS OR REPAIRS, AN EMERGENCY ESCAPE AND RESCUE OPENING IS NOT REQUIRED EXCEPT AN OPERABLE WINDOW COMPLYING WITH SECTION R310.7.1 SHALL BE ACCEPTABLE AS AN EMERGENCY ESCAPE AND RESCUE OPENING.

R310.7.1 EXISTING EMERGENCY ESCAPE AND RESCUE OPENINGS. WHERE A CHANGE OF OCCUPANCY WOULD REQUIRE AN EMERGENCY ESCAPE AND RESCUE OPENING IN ACCORDANCE WITH SECTION R310.1, OPERABLE WINDOWS SERVING AS THE EMERGENCY ESCAPE AND RESCUE OPENING SHALL COMPLY WITH THE FOLLOWING:

1. AN EXISTING OPERABLE WINDOW SHALL PROVIDE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET (0.53 M²) WITH A MINIMUM NET CLEAR HEIGHT OPENING OF 22 INCHES (559 MM) AND A MINIMUM NET CLEAR OPENING WIDTH OF 20 INCHES (508 MM).
2. A REPLACEMENT WINDOW, WHERE SUCH WINDOW COMPLIES WITH BOTH OF THE FOLLOWING:
 - 2.1 THE REPLACEMENT WINDOW MEETS THE SIZE REQUIREMENTS IN ITEM 1.
 - 2.2 THE REPLACEMENT WINDOW IS THE MANUFACTURER'S LARGEST STANDARD SIZE WINDOW THAT WILL FIT WITHIN THE EXISTING FRAME OR EXISTING ROUGH OPENING. THE REPLACEMENT WINDOW SHALL BE PERMITTED TO BE OF THE SAME OPERATING STYLE AS THE EXISTING WINDOW OR A STYLE THAT PROVIDES FOR AN EQUAL OR GREATER WINDOW OPENING AREA THAN THE EXISTING WINDOW.

SECTION R311: MEANS OF EGRESS

R311.1 MEANS OF EGRESS. DWELLINGS SHALL BE PROVIDED WITH A MEANS OF EGRESS IN ACCORDANCE WITH THIS SECTION. THE MEANS OF EGRESS SHALL PROVIDE A CONTINUOUS AND UNOBSTRUCTED PATH OF VERTICAL AND HORIZONTAL EGRESS TRAVEL FROM ALL PORTIONS OF THE DWELLING TO THE REQUIRED EGRESS DOOR WITHOUT REQUIRING TRAVEL THROUGH A GARAGE. THE REQUIRED EGRESS DOOR SHALL OPEN DIRECTLY INTO A PUBLIC WAY OR TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY.

R311.2 EGRESS DOOR. NOT LESS THAN ONE EGRESS DOOR SHALL BE PROVIDED FOR EACH DWELLING UNIT. THE EGRESS DOOR SHALL BE SIDE-HINGED, AND SHALL PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES (813 MM) MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES (1.57 RAD). THE CLEAR HEIGHT OF THE DOOR OPENING SHALL BE NOT LESS THAN 78 INCHES (1981 MM) IN HEIGHT MEASURED FROM THE TOP OF THE THRESHOLD TO THE BOTTOM OF THE STOP. OTHER DOORS SHALL NOT BE REQUIRED TO COMPLY WITH THESE MINIMUM DIMENSIONS. EGRESS DOORS SHALL BE READILY OPENABLE FROM INSIDE OF THE DWELLING WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

R311.3 FLOORS AND LANDINGS AT EXTERIOR DOORS. THERE SHALL BE A LAND OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LAND OR FLOOR SHALL BE NOT LESS THAN THE DOOR SERVED. EVERY LANDING SHALL HAVE A MINIMUM DIMENSION OF 36 INCHES (914 MM) MEASURED IN THE DIRECTION OF TRAVEL. EXTERIOR LANDINGS SHALL BE PERMITTED TO HAVE A SLOPE NOT TO EXCEED 1/4 UNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT).

EXCEPTION: EXTERIOR BALCONIES LESS THAN 60 SQUARE FEET (5.6 M²) AND ANY ACCESSIBLE FROM A DOOR ARE PERMITTED TO HAVE A LANDING LESS THAN 36 INCHES (914 MM) MEASURED IN THE DIRECTION OF TRAVEL.

R311.3.1 FLOOR ELEVATIONS AT THE REQUIRED EGRESS DOORS. LANDINGS OR FINISHED FLOORS AT THE REQUIRED EGRESS DOOR SHALL NOT BE MORE THAN 1/2 INCH (12.7 MM) LOWER THAN THE TOP OF THE THRESHOLD.

EXCEPTION: THE LANDING OR FLOOR ON THE EXTERIOR SIDE SHALL NOT BE MORE THAN 7/32 INCHES (196 MM) BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING OR FLOOR.

WHERE EXTERIOR LANDINGS OR FLOORS OR EGRESS DOORS ARE NOT AT GRADE, THEY SHALL BE PROVIDED WITH ACCESS TO GRADE BY MEANS OF A RAMP IN ACCORDANCE WITH SECTION R311.8 OR A STAIRWAY IN ACCORDANCE WITH SECTION R311.7.

R311.3.2 FLOOR ELEVATIONS FOR OTHER EXTERIOR DOORS. DOORS OTHER THAN THE REQUIRED EGRESS DOOR SHALL BE PROVIDED WITH LANDINGS OR FLOORS NOT MORE THAN 7/32 INCHES (196 MM) BELOW THE TOP OF THE THRESHOLD.

EXCEPTION: A TOP LANDING IS NOT REQUIRED WHERE A STAIRWAY OF NOT MORE THAN TWO RISERS IS LOCATED ON THE EXTERIOR SIDE OF THE DOOR. PROVIDED THAT THE DOOR DOES NOT SWING OVER THE STAIRWAY.

R311.4 STORM AND SCREEN DOORS. STORM AND SCREEN DOORS SHALL BE PERMITTED TO SWING OVER ALL EXTERIOR STAIRS AND LANDINGS.

SECTION R609: EXTERIOR WINDOWS AND DOORS

R609.1 GENERAL. THIS SECTION PRESCRIBES PERFORMANCE AND CONSTRUCTION REQUIREMENTS FOR EXTERIOR WINDOWS AND DOORS INSTALLED IN WALLS. WINDOWS AND DOORS SHALL BE INSTALLED IN ACCORDANCE WITH THE FENESTRATION MANUFACTURER'S WRITTEN INSTRUCTIONS. WINDOW AND DOOR OPENINGS SHALL BE FLASHED IN ACCORDANCE WITH SECTION R703.4. WRITTEN INSTALLATION INSTRUCTIONS SHALL BE PROVIDED BY THE FENESTRATION MANUFACTURER FOR EACH WINDOW OR DOOR.

R609.2 PERFORMANCE. EXTERIOR WINDOWS AND DOORS SHALL BE DESIGNED TO RESIST THE DESIGN WIND LOADS SPECIFIED IN TABLE R301.2(2), ADJUSTED FOR HEIGHT AND EXPOSURE, IN ACCORDANCE WITH TABLE R301.2(3) OR DETERMINED IN ACCORDANCE WITH ASCE 7 USING THE ALLOWABLE STRESS DESIGN LOAD COMBINATIONS OF ASCE 7. DESIGN WIND LOADS FOR EXTERIOR GLAZING NOT PART OF A LABELED ASSEMBLY SHALL BE PERMITTED TO BE DETERMINED IN ACCORDANCE WITH CHAPTER 24 OF THE CALIFORNIA BUILDING CODE.

R609.3 TESTING AND LABELING. EXTERIOR WINDOWS AND SLIDING DOORS SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, AND BEAR A LABEL, IDENTIFYING MANUFACTURER, PERFORMANCE CHARACTERISTICS AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH ANSIA/WDMA/CSA 1011.5 21A40. EXTERIOR SIDE-HINGED DOORS SHALL BE TESTED AND LABELED AS CONFORMING TO ANSIA/WDMA/CSA 1011.5 21A40 OR AMD 100, OR COMPLY WITH SECTION R609.5.

EXCEPTION: DECORATIVE GLAZED OPENINGS.

R609.3.1 COMPARATIVE ANALYSIS. STRUCTURAL WINDOW LOAD DESIGN PRESSURES FOR WINDOWS AND DOOR UNITS DIFFERENT THAN THE SIZE TESTED IN ACCORDANCE WITH SECTION R609.3 SHALL BE PERMITTED TO BE DIFFERENT THAN THE DESIGN VALUE OF THE TESTED UNIT WHERE DETERMINED IN ACCORDANCE WITH ONE OF THE FOLLOWING COMPARATIVE ANALYSIS METHODS:

1. STRUCTURAL WINDOW LOAD DESIGN PRESSURES FOR WINDOW AND DOOR UNITS SMALLER THAN THE SIZE TESTED IN ACCORDANCE WITH SECTION R609.3 SHALL BE PERMITTED TO BE HIGHER THAN THE DESIGN VALUE OF THE TESTED UNIT PROVIDED SUCH HIGHER PRESSURES ARE DETERMINED BY ACCEPTED ENGINEERING ANALYSIS. COMPONENTS OF THE SMALLER UNIT SHALL BE THE SAME AS THOSE OF THE TESTED UNIT WHERE SUCH CALCULATED DESIGN PRESSURES ARE USED, THEY SHALL BE VALIDATED BY AN ADDITIONAL TEST OF THE WINDOW OR DOOR UNIT HAVING THE HIGHEST ALLOWABLE DESIGN PRESSURE.
2. IN ACCORDANCE WITH WDMA S-11.

R609.4 GARAGE DOORS. GARAGE DOORS SHALL BE TESTED IN ACCORDANCE WITH EITHER ASTM E330 OR ANSIA/MSA 108, AND SHALL MEET PASSAGE CRITERIA OF ANSIA/MSA 108.

R609.4.1 GARAGE DOOR LABELING. GARAGE DOORS SHALL BE LABELED WITH A PERMANENT LABEL PROVIDED BY THE GARAGE DOOR MANUFACTURER. THE LABEL SHALL IDENTIFY THE GARAGE DOOR MANUFACTURER, THE GARAGE DOOR MODEL/USER'S NUMBER, THE POSITIVE AND NEGATIVE DESIGN WIND PRESSURE RATING, THE INSTALLATION INSTRUCTION DRAWING REFERENCE NUMBER, AND THE APPLICABLE TEST STANDARD.

R609.5 OTHER EXTERIOR WINDOW AND DOOR ASSEMBLIES. EXTERIOR WINDOWS AND DOOR ASSEMBLIES NOT INCLUDED WITHIN THE SCOPE OF SECTION R609.3 OR R609.4 SHALL BE TESTED IN ACCORDANCE WITH ASTM E330. GLASS IN ASSEMBLIES COVERED BY THIS EXCEPTION SHALL COMPLY WITH SECTION R609.3.

R609.6 WIND-BORNE DEBRIS PROTECTION. PROTECTION OF EXTERIOR WINDOWS AND GLASS DOORS IN BUILDINGS LOCATED IN WIND-BORNE DEBRIS REGIONS SHALL BE IN ACCORDANCE WITH SECTION R301.2.2.

R609.6.1 FENESTRATION TESTING AND LABELING. FENESTRATION SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, LISTED BY AN APPROVED MANUFACTURER, PERFORMANCE CHARACTERISTICS, AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF THE FOLLOWING SPECIFICATIONS:

1. ASTM E1886 AND ASTM E1986, OR ASTM A506.

R609.6.2 IMPACT PROTECTIVE SYSTEMS TESTING AND LABELING. IMPACT PROTECTIVE SYSTEMS SHALL BE TESTED FOR IMPACT RESISTANCE BY AN APPROVED INDEPENDENT LABORATORY FOR COMPLIANCE WITH ASTM E1886 AND ASTM E1986. IMPACT PROTECTIVE SYSTEMS SHALL BE TESTED FOR DESIGNED WIND PRESSURE BY AN APPROVED INDEPENDENT LABORATORY FOR COMPLIANCE WITH ASTM E330. REQUIRED DESIGNED WIND PRESSURES SHALL BE DETERMINED IN ACCORDANCE WITH TABLE R301.2.1(1), ADJUSTED FOR HEIGHT AND EXPOSURE. IN ACCORDANCE WITH TABLE R301.2.1(2) OR D



**FIRE DEPARTMENT
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STANDARD DETAILS & SPECIFICATIONS

SUBJECT: Construction Site Fire Safety

Spec No SI-7
Rev. Date 04/30/02
Eff. Date 12/17/02
Approved By _____
Page 1 of 9

SCOPE

This Standard is intended to prescribe minimum safeguards for new building construction, demolition or significant building alteration projects in order to provide a reasonable degree of safety to life and property from fire. This Standard is based on the provisions for fire safety during building construction or demolitions as set forth in the 2007 California Fire Code Chapter 14 and National Fire Protection Association Standard 241. This Standard shall not be construed to be in lieu of other applicable State or Federal laws and regulations related to construction site safety. The general contractor (or other designee of the building owner) shall be responsible for compliance with the provisions of this Standard. When the term "shall" is used in this Standard, it means a mandatory requirement.

REQUIREMENTS

I. Fire Protection Plan

A written Fire Protection Plan shall be developed for significant or complex construction projects at the discretion of the fire department. The plan shall be approved by the fire department prior to proceeding past foundation work for new buildings or commencement of demolition work in alteration projects. The written plan shall be consistent with the fire safety precautions as specified in this Standard. The general contractor is responsible for carrying out the provisions of the Fire Protection Plan and communicating it to all subcontractors. Additionally, the Fire Marshal shall be notified of any change affecting the utilization of information contained in the Fire Protection plan. The Fire Protection Plan shall include the following:

- Procedures for reporting emergencies to the Fire department.
- Procedures for emergency notification, evacuation and /or relocation of all persons in the building under construction and on the site.
- Procedures for hot work operations, management of hazardous materials and removal of combustible debris and maintenance of emergency access roads.
- Floor plans identifying the locations of exits, exit stairs, exit routes and portable fire extinguishers.
- Site plans identifying the designated exterior assembly areas for each evacuation route.
- Site plans identifying required fire apparatus access roadways and on-site fire hydrants.

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IV. Means of Egress Requirements

A. **Minimum number of Exits:** All new buildings under construction shall have a least one unobstructed exit. All exits shall be identified on the Fire Protection Plan.

B. **Multi-Story Buildings:** Each level above the first story in new multi-story buildings shall be provided with at least two usable exit stairs after the floor decking is installed. The stairways shall be continuous and discharge to grade level. Stairways serving more than two floor levels shall be enclosed (with openings adequately protected) after exterior walls / windows are in place. Exit stairs in new and in existing, occupied buildings shall be lighted and maintained clear of debris and construction materials at all times.

Exception: For new multi-story buildings, one of the required exit stairs may be obstructed on not more than two contiguous floor levels for the purposes of stairway construction (i.e., installation of gypsum board, painting, flooring, etc.).

C. **Assembly Points:** Designated exterior assembly points shall be established for all construction personnel to relocate to upon evacuation. The assembly points shall also be identified in the Fire Protection Plan.

V. Area Separation Walls

When area separation walls are required, the wall construction shall be completed (with all openings protected) immediately after the building is sufficiently weather-protected at the location of the wall(s).

VI. Special Operation Requirements

A. **Hot Work:** Hot work includes any work involving operations capable of initiating fires or explosions, including cutting, welding, brazing, soldering, grinding, thermal spraying, thawing pipe, torch applied roofing, or any other similar activity. The use of hot work equipment shall be in accordance with the following guidelines, including a pre-site inspection, fire watch and post inspection procedures.

- Pre-site Inspection:** An inspection of the hot work site shall be conducted by the General Contractor or his/her designee prior to hot work operations to ensure:

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- The name and contact phone number of the person(s) responsible for compliance with the Fire Protection Plan.

II. General Safety Requirements

A. **Fire Department Access Roadways:** All construction sites shall be accessible by fire department apparatus by means of roadways having an all-weather driving service of not less than 20ft. of unobstructed width. The roads shall have the ability to withstand the live loads of fire apparatus, and have a minimum 13ft. 6 in. of vertical clearance. Dead end fire access roads in excess of 150 ft. in length shall be provided with approved turnarounds.

When approved by the Chief, temporary access roadways may be utilized until such time that the permanent roadways are installed. As a minimum, the roadway shall consist of a compacted sub base and six (6) inches of road base material (Class 2 aggregate base rock) both compacted to a minimum 95%. The perimeter edges of the roadway shall be contained and delineated by curb and gutter or other approved method. The use of geotextile reinforcing fabric underlayment or soils lime-treatment may be required if so determined by the project civil engineer. Provisions for surface drainage shall also be provided where necessary. The integrity of the roadway shall be maintained at all times.

Key boxes: Key boxes and /or approved padlocks shall be required when necessary for access through locked gates or structures.

B. **Fire hydrants:** Where underground water mains and hydrants are required for the building(s) under construction, they shall be installed, completed, and in service prior to combustible construction materials accumulating on site.

C. **Telephone service:** Provisions shall be provided at the construction site for emergency notification of the fire department via telephone. The street address of the construction site shall be posted adjacent to the telephone, along with the number for the public safety answering point.

D. **Premises identification:** The address numbers of the property or project location shall be plainly visible and legible from the street or road fronting the property at the fire apparatus access point or as otherwise approved.

E. **Combustible debris:** Wood, cardboard, packing material, form lumber and similar combustible debris shall not be accumulated within buildings. Such debris, rubbish and waste material shall be removed from buildings on a daily basis.

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- the hot work site is clear of combustibles or that combustibles are protected;
- exposed construction is of noncombustible materials or that combustible materials are protected;
- openings are protected;
- there are no exposed combustibles on the opposite side of partitions, walls, ceilings, floors, etc.;
- fire extinguishers are available, fully charged and operable; and
- fire watch personnel are assigned, equipped and trained.

2. **Fire Watch:** The sole duty of fire watch personnel shall be to watch for the occurrence of fire during and after hot work operations. Individuals designated to fire watch duty shall have fire extinguishing equipment readily available and shall be trained in the use of such equipment. Personnel assigned to fire watch shall be responsible for extinguishing spot fires and communicating an alarm. Fire watch personnel shall be provided with at least one means for notification of the fire department. Hot work conducted in areas with vertical and horizontal fire exposures that cannot be observed by a single individual shall have additional personnel assigned to fire watches to ensure that all exposed areas are monitored.

3. **Post-inspection:** The fire watch shall be maintained a minimum of 30 minutes after the conclusion of the work to look out for leftover sparks, slag or smoldering combustibles.

B. **Asphalt and tar kettles:** Asphalt kettles shall not be located within 20 feet of any combustible material, combustible building surface or building opening. With the exception of thermostatically controlled kettles, an attendant shall be within 100 feet of a kettle when the heat source is operating. Ladders or similar obstacles shall not form a part of the route between the attendance and the kettle. Kettles shall be equipped with tight-fitting covers. A minimum 3A 40-B-C rated portable fire extinguisher shall be located within 30 feet of each asphalt kettle when the heat source is operating. Minimum 3A 40-B-C rated portable fire extinguishers also shall be located on roofs during asphalt coating operations.

C. **Motor Equipment:** Motorized equipment including internal-combustion-powered construction equipment shall be used in accordance with the following:

- Equipment shall be located so that exhausts do not discharge against combustible materials.
- When possible, exhausts should be piped to the outside of the building.

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F. **Oily rags:** Oily rags and similar material shall be stored in metal or other approved containers equipped with tight-fitting covers.

G. **Temporary heating equipment:** Temporary heaters, such as those that are LPG fueled, shall be listed and shall be installed, used, and maintained in accordance with the manufacturer's instructions (See LPG storage and use requirements below). Heating devices shall be secured properly and kept clear from combustible materials. Refueling operations shall be conducted in an approved manner.

H. **Smoking:** Smoking is prohibited anywhere inside or on the roof of new buildings under construction or in the project work area of buildings undergoing alteration. A suitable number of 'No Smoking' signs shall be posted to ensure that smoking is controlled.

I. **Vehicle parking:** All vehicles shall be parked a minimum of 20 feet from new buildings under construction.

Exceptions: 1. Vehicles that are temporarily parked for loading/unloading or other construction related operations. Such vehicles shall not be left unattended.

2. Private vehicles may be parked in parking garages of Type I construction if the automatic fire sprinkler system is in service and vertical openings are protected.

J. **Combustible material storage:** Combustible construction materials shall be stored a minimum of 20 feet from buildings under construction or undergoing remodel.

Exceptions: 1. Materials that are staged for installation on a floor level.
2. When approved by the Fire Department, materials may be stored in parking garages of Type I construction if the automatic fire sprinkler system is in service and vertical openings are protected.

III. Fire Protection Systems

A. **Fire Sprinkler Systems:** Where automatic fire sprinkler systems are required to be installed in new buildings, the system shall be placed in service as soon possible. Immediately upon the completion of sprinkler pipe installation on each floor level, the piping shall be hydrostatically tested and inspected. After inspection approval from the Fire department, each floor level of sprinkler piping shall be connected to the system supply riser and placed into service with all sprinkler heads uncovered. Protective caps may be

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- Equipment shall not be refueled while in operation.
- Fuel for equipment shall be stored in an approved area outside of the building.

(Ref: CFC Articles 87 & 13 – also 49, 79 and 11)

VII. Hazardous Materials

A. **Liquefied Petroleum Gas (LPG-Gas)** - Storage and use shall comply with the following:

- Propane containers may be used in buildings under construction or undergoing major renovation as a fuel source for temporary heating for curing concrete, drying plaster and similar applications in accordance with the following:

(a) Heating elements (other than integral heater-container units) shall be located at least 6 feet from any LP-Gas container.

(b) Integral heater-container units specifically designed for the attachment of the heater to the container, or to a supporting standard attached to the container, may be used provided they are designed and installed so as to prevent direct or radiant heat application to the LP-Gas container.

(c) Blower and radiant type units shall not be directed toward any LP-Gas container within 20 feet.

(d) Heat producing equipment shall be installed with clearance to the combustibles in accordance with the manufacturer's installation instructions.

(e) Cylinders shall comply with DOT cylinder specifications and shall be secured in an upright position.

(f) Regulators shall be approved for use with LP-Gas. Fittings shall be designed for at least 250 psig service pressure.

(g) Hose shall be designed for a working pressure of at least 350 psig (unless limited to 5 psig) and shall be a maximum of 6 feet in length.

(h) Portable heaters shall be equipped with an approved automatic device to shut off the flow of gas to the main burner and to the pilot in the event of flame extinguishment or combustion failure. Portable heaters with an input of more than 50,000 Btu/hr shall be equipped with either a pilot that must be proved before the main burner can be turned on or an approved electronic ignition system.

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installed on the active sprinklers during the installation of drywall, texturing and painting, but shall be removed immediately after this work is completed. For system activation notification, an exterior alarm bell can be installed and connected to the sprinkler waterflow device prior to installation of the monitoring system.

For buildings equipped with fire sprinkler systems that are undergoing alterations, the sprinkler system(s) shall remain in service at all times except when system modifications are necessary. Fire sprinkler systems undergoing modifications shall be returned to service at the end of each workday unless otherwise approved by the fire department. The General contractor or his/her designee shall check the sprinkler control valve(s) at the end of each workday to confirm that the system has been restored to service.

B. **Standpipes:** Where standpipes are required, the standpipes shall be installed when the progress of construction is not more than 35 ft. in height above the lowest level of the fire department access. Standpipes shall be provided with fire department hose connections and outlets at accessible locations adjacent to usable stairs. The standpipe system shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring. Each floor shall be provided a 2 1/2-inch valve outlet for fire department use. Where construction height requires installation of a Class III standpipe, fire pumps and water main connections shall be provided to serve the standpipe.

C. **Fire Extinguishers:** Portable fire extinguishers shall be provided and shall be mounted on a wall or post at each usable stairway and such that the travel distance to any extinguisher does not exceed 75 ft. Mounting height to the top of the extinguisher shall not exceed 5 feet. Extinguishers shall not have less than a 2A10BC rating or as otherwise directed by the fire department. The general contractor shall ensure that an adequate number of individuals are trained in the proper use of portable fire extinguishers. Fire extinguishers shall also be located in storage sheds and contractor trailers.

D. **Fire Alarm Systems:** Fire alarm systems shall be maintained operational at all times during building alterations. When an alteration requires modification to a portion of the fire alarm system, the portion of the system requiring work shall be isolated and the remainder of the system shall be kept in service whenever practical. When it is necessary to shut down an entire fire alarm system a fire watch or other mitigation approved by the fire department shall be implemented by the general contractor until the system is returned to full service.

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4

- In addition to the above, for LPG storage/ use in buildings undergoing alteration and that are fully or partially occupied, the following shall also apply:

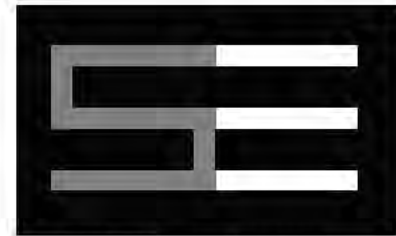
- Specific approval must be obtained from the fire department prior to bringing LP-Gas containers on-site.
- The maximum water capacity of individual containers shall be 5-gallon water capacity and the number of containers in the building shall not exceed the number of workers assigned to using the LP-Gas.
- Containers having a water capacity greater than 2 1/2 lb. [1 quart] shall not be left unattended.

B. Storage, Use and Dispensing of Flammable and Combustible Liquids

- Storage areas for flammable and combustible liquids shall be kept free of weeds and extraneous combustible material. Open flames and smoking are prohibited in flammable or combustible liquid storage areas.
- Tanks and containers shall be marked with the name of the product and FLAMMABLE-KEEP FIRE AND FLAME AWAY. Tanks (containers in excess of 60 gallons) shall also be labeled KEEP 50 FEET FROM BUILDINGS.
- Metal containers for Class I or II liquids shall be in accordance with DOT requirements or shall be of an approved design. Discharge devices shall not cause an internal pressure on the container. Individual containers shall not be interconnected and shall be kept closed when not in use.
- Secondary containment or a means of spill control, drainage control, and diking is required for large containers (such as 55 gallon drums) and tanks as approved by the fire department.
- Plans for the installation/ use of any aboveground storage tank (containers greater than 60 gallons) shall be submitted to the fire department for review and permit prior to the proposed tank arriving at the site.

C. Compressed Gases

- Gas cylinders shall be marked with the name of the contents.
- Gas cylinders shall be stored upright and secured to prevent falling.
- When not in use, valve protective caps shall be in place.
- Gas cylinders shall be protected against physical damage.
- When stored, gas cylinders shall be separated from each other based on their hazard classes.
- Combustible materials shall be kept a minimum of 10 feet from gas containers.
- Gas cylinders shall not be placed near elevators, unprotected platform edges or other areas where they would drop more than 2 feet.
- Gas cylinders shall not be placed in areas where they may be damaged by falling objects.
- Ropes, chains or slings shall not be used to suspend gas cylinders, unless the cylinder was manufactured with appropriate lifting attachments.



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CA 95030

A.P.N. 510-14-037

4/2/25
BUILDING SUBMITTAL SET

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

SCCFD JOB SAFETY

F. 1

B1

304.4 APPLIANCES IN ATTICS AND UNDER-FLOOR SPACES. AN ATTIC OR UNDER-FLOOR SPACE IN WHICH AN APPLIANCE IS INSTALLED SHALL BE ACCESSIBLE THROUGH AN OPENING AND PASSAGEWAY NOT LESS THAN THE LARGEST COMPONENT OF THE APPLIANCE, AND NOT LESS THAN 22 INCHES BY 30 INCHES (559 MM BY 762 MM).

304.4.1 LENGTH OF PASSAGEWAY. WHERE THE HEIGHT OF THE PASSAGEWAY IS LESS THAN 6 FEET (1829 MM), THE DISTANCE FROM THE PASSAGEWAY ACCESS TO THE APPLIANCE SHALL NOT EXCEED 20 FEET (6096 MM) MEASURED ALONG THE CENTERLINE OF THE PASSAGEWAY. [NFPA 54-9.5.1.1]

304.4.2 WIDTH OF PASSAGEWAY. THE PASSAGEWAY SHALL BE UNOBSTRUCTED AND SHALL HAVE SOLID FLOORING NOT LESS THAN 24 INCHES (610 MM) WIDE FROM THE ENTRANCE OPENING TO THE APPLIANCE. [NFPA 54-9.5.1.2]

304.4.3 WORK PLATFORM. A LEVEL WORKING PLATFORM NOT LESS THAN 30 INCHES BY 30 INCHES (762 MM BY 762 MM) SHALL BE PROVIDED IN FRONT OF THE SERVICE SIDE OF THE APPLIANCE. [NFPA 54-9.5.2]

EXCEPTION: A WORKING PLATFORM NEED NOT BE PROVIDED WHERE THE FURNACE IS CAPABLE OF BEING SERVICED FROM THE REQUIRED ACCESS OPENING. THE FURNACE SERVICE SIDE SHALL NOT EXCEED 12 INCHES (305 MM) FROM THE ACCESS OPENING.

304.4.4 LIGHTING AND CONVENIENCE OUTLET. A PERMANENT 120V RECEPTACLE OUTLET AND A LUMINAIRE SHALL BE INSTALLED NEAR THE APPLIANCE. THE SWITCH CONTROLLING THE LUMINAIRE SHALL BE LOCATED AT THE ENTRANCE TO THE PASSAGEWAY. [NFPA 54-9.5.3]

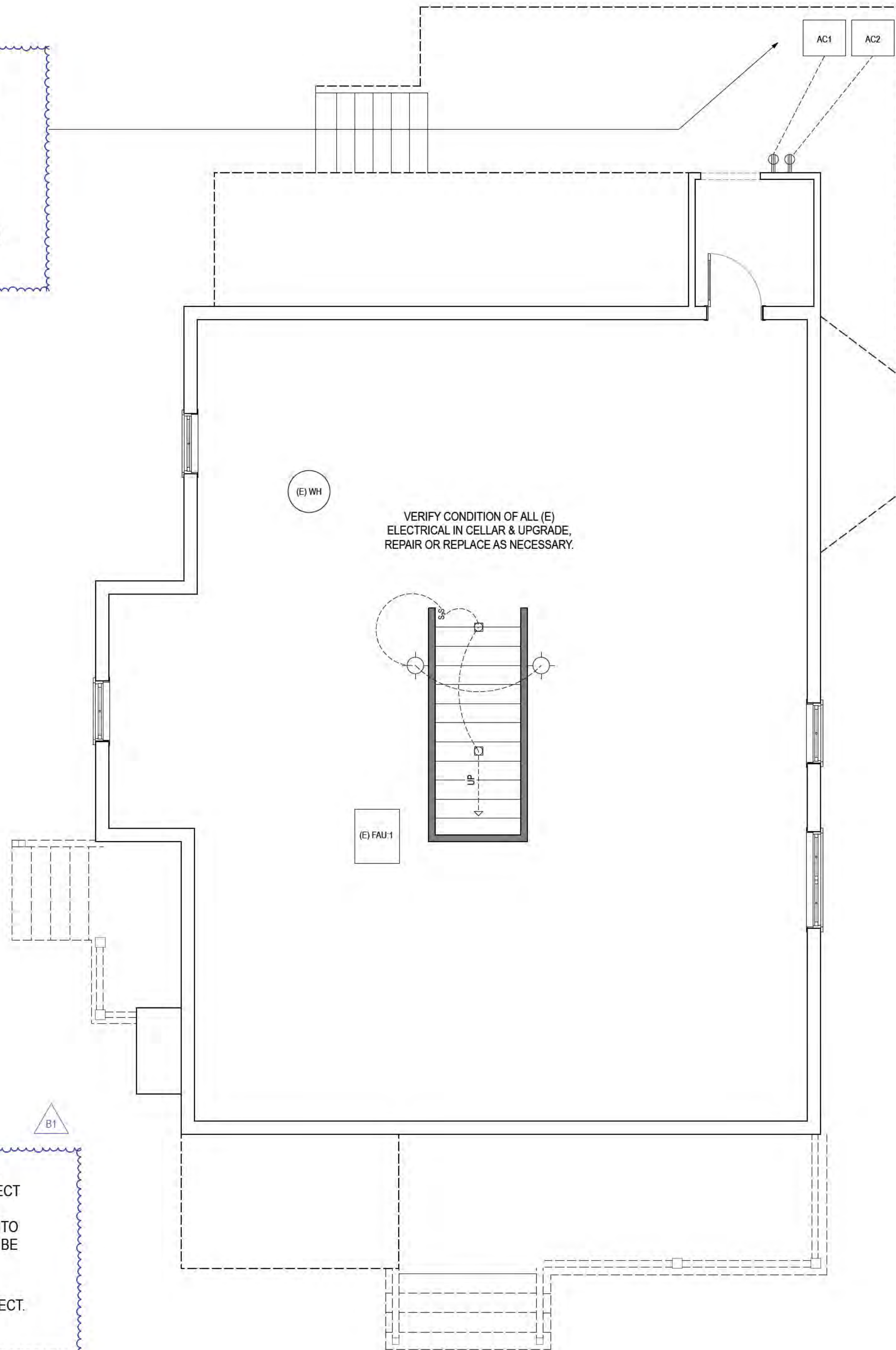
ATTIC/CS INSTALLED FAU/AC:

ME LEGEND

ELECTRICAL & MECHANICAL LEGEND	
GAS CONNECTION. PROVIDE SHUTOFF VALVE OUTSIDE FIREBOX AND WITHIN 6 FEET OF UNIT	ETHERNET LINE CONNECTION (CAT 6)
SUPPLY REGISTER F = FLOOR, C = CEILING, HW = HIGH WALL, LW = LOW WALL	VERTICAL LED LIGHT IN CABINET
SUPPLY REGISTER TOE SPACE	UNDER CABINET PUCK LIGHT
INTEGRAL EXHAUST FAN + LIGHT COMBO. PROVIDE SEPARATE SWITCH CONTROLS. HUMIDISTAT CONTROLLED	SURFACE MOUNTED LIGHT FIXTURE
EXHAUST FAN W/ TIMER SWITCH (HUMIDISTAT CONTROLLED)	WALL MOUNTED LIGHT FIXTURE, INTERIOR
ENERGY STAR RATED WHOLE HOUSE FAN. MANUAL SWITCH MUST BE LABELED. ADDITION LESS THAN 1,000 SF. FAN NOT REQ.	WALL MOUNTED LIGHT FIXTURE, EXTERIOR
C.A.R. COLD AIR RETURN IN WALL	RECESSED LIGHT FIXTURE HIGH EFFICACY OR LED
C.A.R. COLD AIR RETURN IN CEILING	RECESSED CAN LIGHT FIXTURE WET-PROOF (AIRTIGHT+ RATED FOR WET LOCATIONS)
THERMOSTAT	RECESSED ART FIXTURE
CENTRAL AIR VACUUM SYSTEM	RECESSED LIGHTS @ RISERS
OUTLET, DUPLEX	RECESSED LIGHTS @ COLUMNS
OUTLET, 220 VOLT	OUTDOOR FLOOD LIGHTS
OUTLET, 4-PLEX	CABINET LED LIGHT STRIP
OUTLET, WATER PROOF, GROUND-FAULT CIRCUIT INTERRUPTER	CABLE LIGHT
OUTLET, GROUND-FAULT CIRCUIT INTERRUPTER W/ WATER PROOF COVER	STRING LIGHT
FLOOR OUTLET W/ COVER PLATE	SURFACE MOUNTED LED LIGHT PANEL
EAVE OUTLET	CEILING FAN
OUTLET, WINDOW TREATMENTS	CABLE TELEVISION / SATELLITE CONNECTION
SWITCH, SINGLE POLE VS = VACANCY SENSOR, T = TIMER	SMOKE DETECTOR W/ BATTERY BACK-UP (AC-DC AND INTERCONNECTED)
SWITCH, 3-WAY POLE VS = VACANCY SENSOR	CARBON MONOXIDE DETECTOR W/ BATTERY BACK-UP (AC-DC & INTERCONNECTED)
DIMMER POLE SWITCH VS = VACANCY SENSOR	CHIME DOOR BUZZER, BELL OR CHIME SHALL BE HARD WIRED @ PRIMARY RESIDENCE.
TELEPHONE/DATA LINE CONNECTION	

SPECIAL LG PLANNING NOTE: PRIOR TO FINAL - EXT LIGHTING: PRIOR TO FINAL OCCUPANCY ALL EXTERIOR LIGHTING SHALL BE KEPT TO A MINIMUM & SHALL BE DOWNWARD DIRECTED FIXTURES THAT WILL NOT REFLECT OR ENCR OACH ONTO ADJACENT PROPERTIES. ALL LIGHTING SHALL UTILIZE SHIELDS SO THAT NO BULB IS VISIBLE & TO ENSURE THAT THE LIGHT IS DIRECTED TO THE GROUND SURFACE & DOES NOT SPILL LIGHT OINTO NEIGHBORING PARCELS OR PRODUCE GLARE WHEN SEEN FROM NEARBY HOMES. NO FLOOD LIGHTS SHALL BE USED UNLESS IT CAN BE DEMONSTRATED THAT THEY ARE NEEDED FOR SAFETY OR SECURITY.

1. PROVIDE CF2R-LTG-01-E TO INSPECTOR PRIOR TO FINAL INSPECTION. (AS APPLICABLE)
2. BUILDER SHALL PROVIDE PROPERTY OWNER A SCHEDULE OF LUMINAIRES USED THROUGHOUT THE PROJECT.
3. ALL LIGHTING SHALL BE LED (HIGH EFF CACY) TYPICAL.
4. ALL NEW EXTERIOR LIGHTING SHALL BE DOWNWARD DIRECTED & SHIELDED.
5. VERIFY EXISTENCE OF SMOKE DETECTORS IN ALL SLEEPING ROOMS & EGRESS HALLWAYS. PROVIDE AS NECESSARY.
6. FOLLOW ALL REQUIREMENTS IN THE TITLE 24 ENERGY CALCULATIONS.
7. SEE SHEET ME.4 FOR CA ELECTRICAL CODE NOTES.
8. SEE SHEET ME.5 FOR CA ENERGY CODE NOTES.
9. SEE SHEET ME.6 FOR CA MECHANICAL CODE REQUIREMENTS.

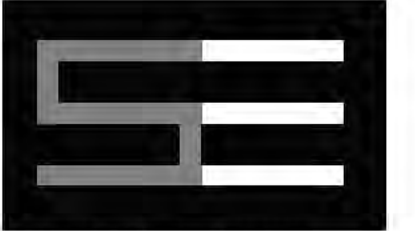


NORTH
37° 13' 44" N
121° 59' 03" W

PROPOSED CELLAR ELECTRICAL PLAN

0 2' 4' 8'
1/4" = 1'-0"

- (E) 2X DF STUD WALL TO REMAIN
- (N) 2X DF STUD WALL TO CONSTRUCT
USE 2X4 DF STUDS @ 16"OC TYP. (UNO)



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B1 05/15/25

B2 10/08/25

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LOS GATOS,
CA 95030

A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

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

CELLAR ELECTRICAL

ME.1



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

1ST FLOOR ELECTRICAL

ME.2

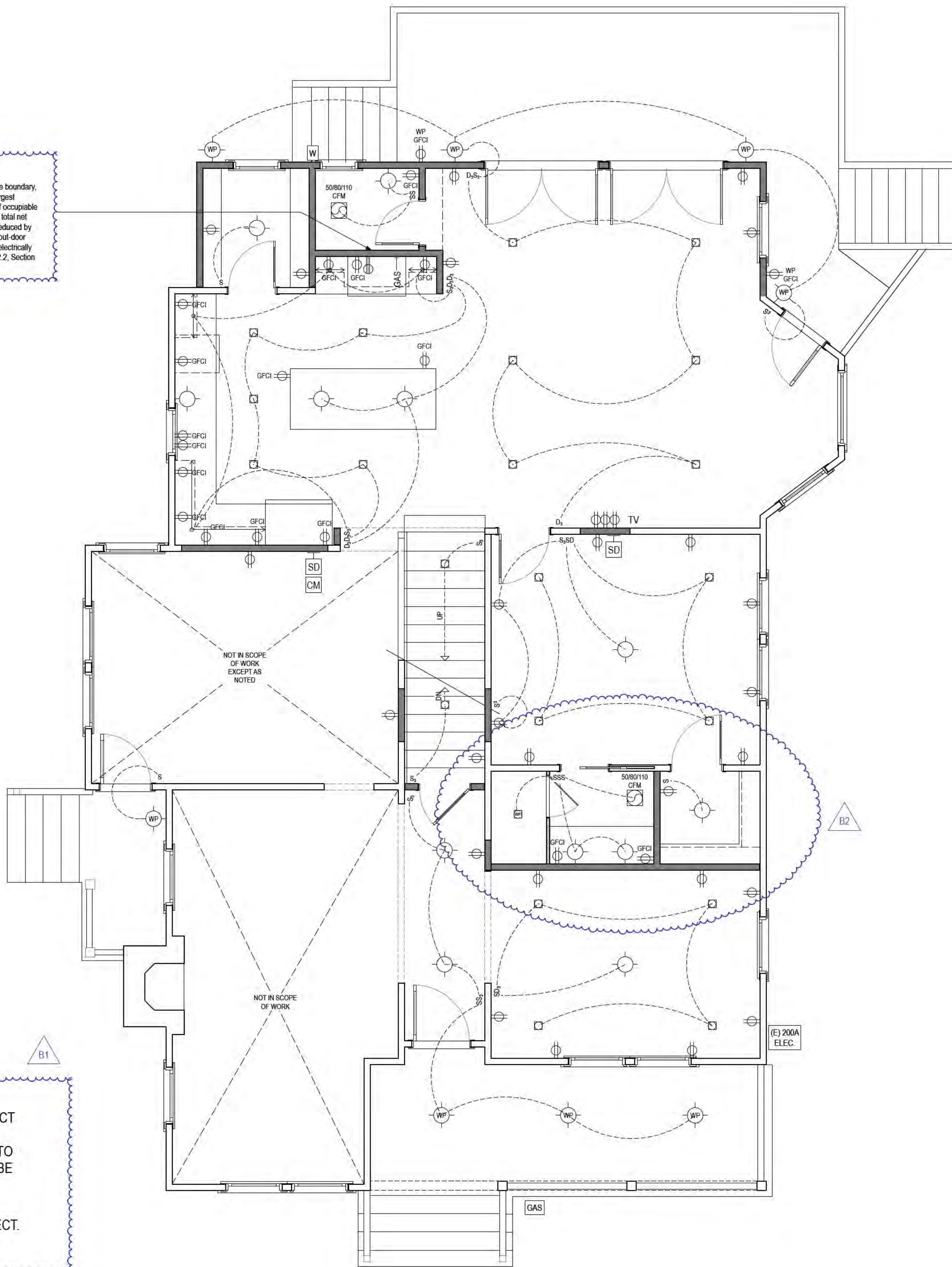
ME LEGEND

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7. SEE SHEET ME.4 FOR CA ELECTRICAL CODE NOTES.
8. SEE SHEET ME.5 FOR CA ENERGY CODE NOTES.
9. SEE SHEET ME.6 FOR CA MECHANICAL CODE REQUIREMENTS.

NEW HOOD RANGE, WITH VERTICAL EXHAUST
Where combustion appliances or solid-fuel burning appliances are located inside the pressure boundary, the maximum allowable net exhaust flow of the two largest exhaust fans shall not exceed 15 cfm per 100 sq. ft. of occupiable space, when operating at full capacity. If the designed total net flow exceeds this limit, the net exhaust flow must be reduced by reducing the exhaust flow or providing compensating out-door airflow (note: if make-up air fan is installed it must be electrically interlocked with the largest exhaust fan)*, ASHRAE 62.2, Section 6.4



NORTH

37° 13' 44" N
121° 59' 03" W

PROPOSED 1ST LEVEL ELECTRICAL PLAN

0 2' 4' 8'
1/4" = 1'-0"

- (E) 2X DF STUD WALL TO REMAIN
- (N) 2X DF STUD WALL TO CONSTRUCT
USE 2X4 DF STUDS @ 16"OC TYP. (UNO)

B1

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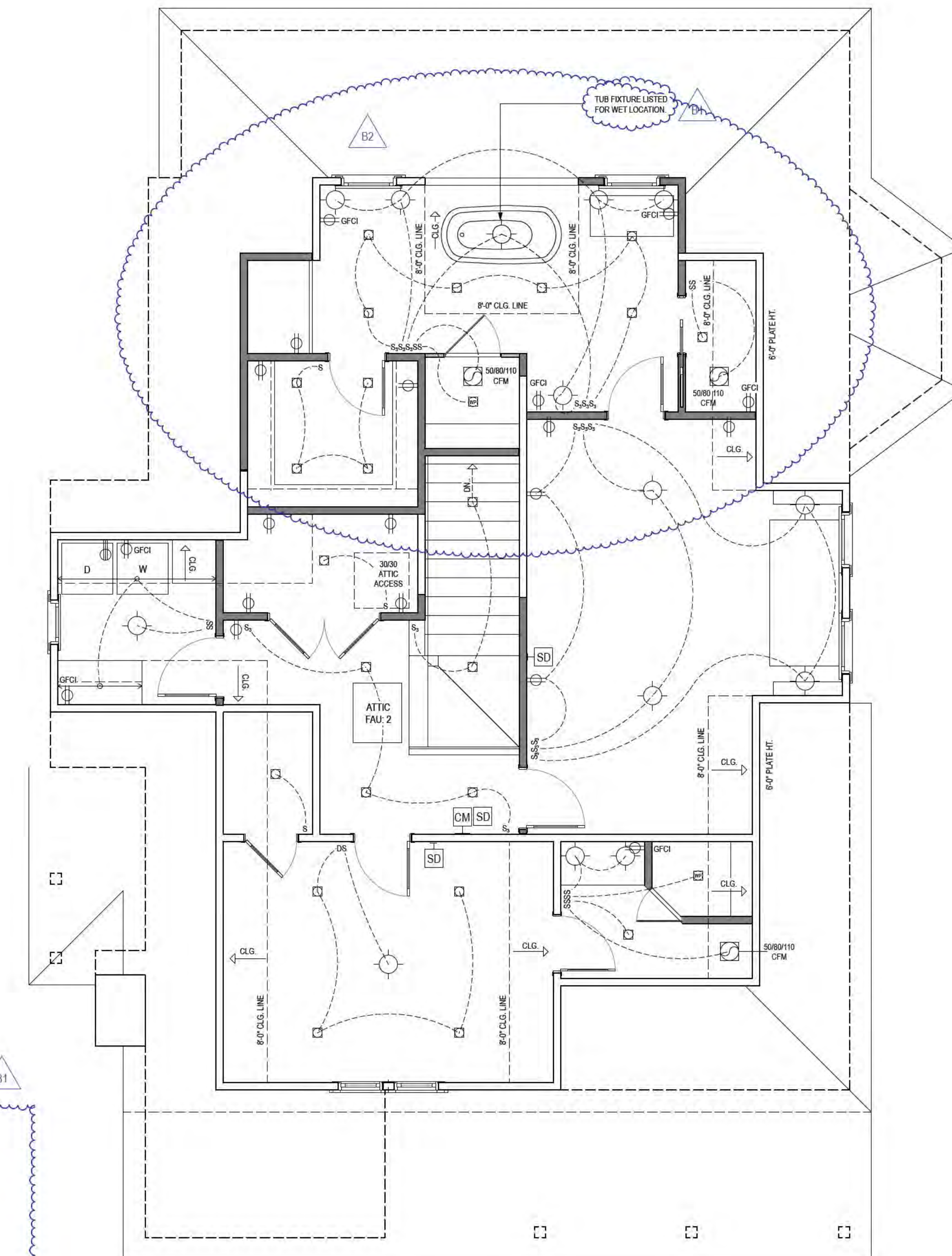
ME LEGEND

ELECTRICAL & MECHANICAL LEGEND	
GAS	GAS CONNECTION. PROVIDE SHUTOFF VALVE OUTSIDE FIREBOX AND WITHIN 6 FEET OF UNIT
F	SUPPLY REGISTER F = FLOOR, C = CEILING, HW = HIGH WALL, LW = LOW WALL
SUPPLY REGISTER	TOE SPACE
INTEGRAL EXHAUST FAN	INTEGRAL EXHAUST FAN + LIGHT COMBO, PROVIDE SEPARATE SWITCH CONTROLS, HUMIDISTAT CONTROLLED
EXHAUST FAN	EXHAUST FAN W/ TIMER SWITCH (HUMIDISTAT CONTROLLED)
ENERGY STAR RATED WHOLE HOUSE FAN	MANUAL SWITCH MUST BE LABELED. ADDITION LESS THAN 1,000 SF. FAN NOT REQ'D
CAR	COLD AIR RETURN IN WALL
CAR	COLD AIR RETURN IN CEILING
THERMOSTAT	
VAC	CENTRAL AIR VACUUM SYSTEM
OUTLET, DUPLEX	
OUTLET, 220 VOLT	
OUTLET, 4-PLEX	
OUTLET, WATER PROOF, GROUND-FAULT CIRCUIT INTERRUPTER	
WP GFCI	OUTLET, GROUND-FAULT CIRCUIT INTERRUPTER W/ WATER PROOF COVER
FLR	FLOOR OUTLET W/ COVER PLATE
EAVE	EAVE OUTLET
WT	OUTLET, WINDOW TREATMENTS
SWITCH, SINGLE POLE	VS = VACANCY SENSOR, T = TIMER
SWITCH, 3-WAY POLE	VS = VACANCY SENSOR
DIMMER POLE SWITCH	VS = VACANCY SENSOR
TELEPHONE/DATA LINE CONNECTION	
ETHERNET LINE CONNECTION (CAT 6)	
VERTICAL LED LIGHT IN CABINET	
UNDER CABINET PUCK LIGHT	
SURFACE MOUNTED LIGHT FIXTURE	
WALL MOUNTED LIGHT FIXTURE, INTERIOR	
WP WALL MOUNTED LIGHT FIXTURE, EXTERIOR	
RECESSED LIGHT FIXTURE	HIGH EFFICACY OR LED
WP RECESSED CAN LIGHT	FIXTURE WET-PROOF (AIRTIGHT+ RATED FOR WET LOCATIONS)
A RECESSED ART FIXTURE	
RECESSED LIGHTS @ RISERS	
RECESSED LIGHTS @ COLUMNS	
OUTDOOR FLOOD LIGHTS	
CABINET LED LIGHT STRIP	
CABLE LIGHT	
STRING LIGHT	
LED SURFACE MOUNTED LED LIGHT PANEL	
CEILING FAN	
TV CABLE TELEVISION / SATELLITE CONNECTION	
SD SMOKE DETECTOR W/ BATTERY BACK-UP (AC-DC AND INTERCONNECTED)	
CM CARBON MONOXIDE DETECTOR W/ BATTERY BACK-UP (AC-DC & INTERCONNECTED)	
CHIME DOOR BUZZER, BELL OR CHIME SHALL BE HARD WIRED @ PRIMARY RESIDENCE	

SPECIAL LG PLANNING NOTE: PRIOR TO FINAL - EXT LIGHTING: PRIOR TO FINAL OCCUPANCY ALL EXTERIOR LIGHTING SHALL BE KEPT TO A MINIMUM & SHALL BE DOWNWARD DIRECTED FIXTURES THAT WILL NOT REFLECT OR ENCROACH ONTO ADJACENT PROPERTIES. ALL LIGHTING SHALL UTILIZE SHIELDS SO THAT NO BULB IS VISIBLE & TO ENSURE THAT THE LIGHT IS DIRECTED TO THE GROUND SURFACE & DOES NOT SPILL LIGHT OINTO NEIGHBORING PARCELS OR PRODUCE GLARE WHEN SEEN FROM NEARBY HOMES. NO FLOOD LIGHTS SHALL BE USED UNLESS IT CAN BE DEMONSTRATED THAT THEY ARE NEEDED FOR SAFETY OR SECURITY.

1. PROVIDE CF2R-LTG-01-E TO INSPECTOR PRIOR TO FINAL INSPECTION. (AS APPLICABLE)
2. BUILDER SHALL PROVIDE PROPERTY OWNER A SCHEDULE OF LUMINAIRES USED THROUGHOUT THE PROJECT.
3. ALL LIGHTING SHALL BE LED (HIGH EFFICACY) TYPICAL.
4. ALL NEW EXTERIOR LIGHTING SHALL BE DOWNWARD DIRECTED & SHIELDED.
5. VERIFY EXISTENCE OF SMOKE DETECTORS IN ALL SLEEPING ROOMS & EGRESS HALLWAYS. PROVIDE AS NECESSARY.
6. FOLLOW ALL REQUIREMENTS IN THE TITLE 24 ENERGY CALCULATIONS.
7. SEE SHEET ME.4 FOR CA ELECTRICAL CODE NOTES.
8. SEE SHEET ME.5 FOR CA ENERGY CODE NOTES.
9. SEE SHEET ME.6 FOR CA MECHANICAL CODE REQUIREMENTS.

B1



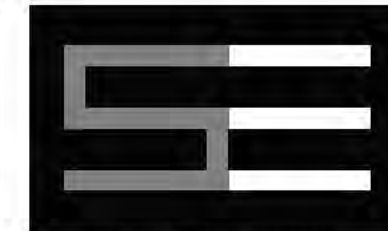
NORTH

37° 13' 44" N
121° 59' 04" W

PROPOSED 2ND LEVEL ELECTRICAL PLAN

- (E) 2X DF STUD WALL TO REMAIN
- (N) 2X DF STUD WALL TO CONSTRUCT
- USE 2X4 DF STUDS @ 16"OC TYP. (UNO)

0 2' 4' 8'
1/4" = 1'-0"



STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

638 UNIVERSITY AVE
LOS GATOS
CALIFORNIA
95032

t 408.292.3252
f 253.399.1125



B1 05/15/25

B2 10/08/25

RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

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

2ND FLOOR ELECTRICAL

ME.3

2022 CALIFORNIA MECHANICAL CODE:

For a complete description of any and all planning code requirements, it is strongly recommended for a copy of the California Mechanical Code (Current Edition Entered) to be readily available for review and reference at all times during construction.

CHAPTER 3 GENERAL REQUIREMENTS (See entire Chapter for additional information)

302.1 Installation. Appliances, except as otherwise provided in this code, the installation of appliances regulated by this code shall be in accordance with the conditions of listing. The appliance installer shall leave the manufacturer's installation and operating instructions attached to the appliance. Clearances of listed appliances from combustible materials shall be as specified in the listing or on the rating plate.

302.2 Anchorage of Appliances. Appliances designed to be fixed in position shall be securely fastened in place in accordance with the manufacturer's installation instructions. Supports for appliances shall be designed and constructed to sustain vertical and horizontal loads within the stress limitations specified in the building code.

304.3 Accessibility for Service.

304.1 General. All appliances shall be located with respect to building construction and other equipment so as to permit access to the appliance. Sufficient clearance shall be maintained to permit clearing of heating surfaces; the replacement of filters, burners, valves, controls, and vent connections; the installation of moving parts where necessary; the adjustment and clearance of burners and pilots; and the proper functioning of explosion vents, if provided. For attic installation, the passageway and servicing area adjacent to the appliance shall be finished (NFPA 54 9.3.2).

Unless otherwise specified, not less than 30 inches (762 mm) in depth, width, and height of working space shall be provided. *Exception:* A platform shall not be required for unit heaters or room heaters.

304.5 Sloped Roof. Where equipment or appliances that require service are installed on a roof having a slope of 4 units vertical in 12 units horizontal (33 percent slope) or more, a level platform of not less than 30 inches (762 mm) by 30 inches (762 mm) shall be provided at the service side of the equipment or appliance.

304.4 Appliances in Attics and Under-Floor Spaces. An attic or under-floor space in which an appliance is installed shall be accessible through an opening and passageway not less than the largest component of the appliance, and not less than 22 inches by 30 inches (559 mm by 762 mm).

304.4.1 Length of Passageway. Where the height of the passageway is less than 6 feet (1829 mm), the distance from the passageway access to the appliance shall not exceed 20 feet (6096 mm) measured along the centerline of the passageway (NFPA 54 9.3.1.1).

304.4.2 Width of Passageway. The passageway shall be unobstructed and shall have solid flooring not less than 24 inches (610 mm) wide from the appliance (NFPA 54 9.3.1.2) **304.4.3 Work Platform.** A level working platform not less than 30 inches by 30 inches (762 mm by 762 mm) shall be provided in front of the service side of the appliance. (NFPA 54 9.3.2)

Exception: A working platform need not be provided where the furnace is capable of being serviced from the required access opening. The furnace service side shall not exceed 12 inches (305 mm) from the access opening.

304.4.4 Lighting and Convenience Outlet. A permanent 120V receptacle and a luminaire shall be installed near the appliance. The switch controlling the luminaire shall be located at the entrance to the passageway. (NFPA 54 9.3.3)

305.3 Location.

305.1 Installation in Garages. Appliances in garages and in adjacent spaces that open to the garage and are not part of the living space of a dwelling unit shall be installed so that burners and burner ignition devices are located not less than 10 inches (457 mm) above the floor unless listed as flameless vapor ignition resistant. (NFPA 54 9.1.10.1)

305.1.1 Physical Damage. Appliances installed in garages, warehouses, or other areas subject to mechanical damage shall be guarded against such damage by being installed behind protective barriers or by being elevated or located out of the normal path of vehicles.

305.1.2 Access from Outside. Where appliances are installed within a garage and are enclosed in a separate enclosed space having access only from the garage, such appliances shall be permitted to be installed at a raised level, provided the required combustion air is taken from the exterior of the garage (NFPA 54 9.1.10.3)

305.2 Automatic Control Devices.

305.1 General. Heating appliances shall be equipped with a listed device that will shut off the fuel supply to the main burner or burners in the event of pilot or ignition failure. Liquefied petroleum gas-air-burning heating appliances shall be equipped with a listed automatic device or devices that will shut off the flow of gas to the pilot in the event of ignition failure. *Exception:* The listed shut-off devices shall not be required on range or cooking tops, gas griddles, grills, or other open-flame manually operated appliances, or listed appliances not requiring such devices and specific industrial appliances as approved by the Authority Having Jurisdiction. Heating appliances and automatic control devices are readily accessible from the main portion of the building where heated shall be equipped with remote control. Forced-air and gravity warm air furnaces shall be equipped with a listed air-aided temperature limit control that cannot be set for temperatures exceeding 200 °F (121 °C). Such controls shall be located in the control or plenum, within 2 feet (610 mm) of the discharge side of the heating element of gravity furnaces or in accordance with the conditions of listing. Electric duct heaters shall be equipped with an approved automatic reset air-aided temperature limit control that will limit the outlet air temperature to not exceed 200 °F (93 °C). The electric elements of the heater shall be equipped with fusible links or a manual reset temperature limit control that will prevent outlet air temperature in excess of 200 °F (121 °C).

311.0 Heating or Cooling Air System.

311.1 Source. A heating or cooling air system shall be provided with return air; outside air, or both. A heating or cooling air system regulated by this code and designed to replace required ventilation shall be arranged to discharge into a conditioned space not less than the amount of outside air specified in Chapter 4.

311.3 California Energy Code Requirement for Residential Air Intrusion. In mechanically ventilated residential buildings, air filters shall be provided to clean outdoor air and return air prior to its delivery to occupied spaces where specified in California Energy Code Sections 150.9(m)(2 and 160.2)(b). The air filters shall comply with California Energy code requirements for filtering ventilation system design and installation, air filter, efficiency, and air filter pressure drop.

312.0 Plumbing Connections.

312.1 General. Viller supply, sanitary drainage, and back-flow protection shall be in accordance with the California Plumbing Code.

316.0 Protection of Piping, Tubing, Materials, and Structures.

316.1 General. Piping or tubing passing under or through walls shall be protected from breakage. Piping passing through or under eaves or other combustible materials shall be protected from external corrosion in an approved manner. Approved provisions shall be made for expansion of hot water piping. Voids around piping and tubing passing through concrete floors on the ground shall be sealed.

316.2 Installation. Piping or tubing shall be installed so that the piping, tubing, or connections will not be subject to undue strains or stresses, and provisions shall be made for expansion, contraction, and structural settlement. No piping or tubing, unless designed and listed for such use, shall be directly embedded in concrete or masonry. No structural member shall be seriously weakened or impaired by cutting, notching, or otherwise as defined in the building code.

316.3 Corrosion, Erosion, and Mechanical Damage. Piping, or tubing subject to corrosion, erosion, or mechanical damage shall be protected in an approved manner.

316.4 Protectively Coated Pipe. Protectively coated pipe or tubing shall be inspected and tested, and a visible void, damage, or imperfection to the pipe coating shall be repaired in an approved manner.

316.5 Fire-Resistant Construction. Piping, tubing, and duct system penetrations of fire-resistance-rated walls, partitions, floors, floor/ceiling assemblies, roof/ceiling assemblies, or shaft enclosures shall be protected in accordance with the requirements of the building code.

316.6 Steel Nail Plates. Plastic piping or tubing, copper or copper alloy piping or tubing, and ducts penetrating framing members to which 1 inch (25.4 mm) of the exposed framing shall be protected by steel nail plates not less than No. 16 gage (0.047 inches) (1.2141 mm) thickness. The steel nail plate shall extend along the framing member not less than 1-1/2 inches (38 mm) beyond the outside diameter of the pipe (16 1.7 of listing. *Exception:* See Section 1517.2.2)

316.1 Sleeves. Sleeves shall be provided to protect piping not passing through concrete and masonry walls and concrete floors. *Exception:* Sleeves shall not be required where pipes are drilled or bored.

CHAPTER 4 VENTILATION AIR SUPPLY (See entire Chapter for additional information)

401.1 General.

401.1 Applicability. This chapter contains requirements for ventilation air supply, exhaust, and makeup air requirements for occupiable spaces within a building. (OSHPD 1, 1R, 2, 3, 4 & 5) See Sections 404.0 through 410.0. (SFM) Air filters shall comply with all requirements of Part 1, Title 24, Chapter 12.71, SFM Standard 12.71-1. Spaces within buildings, except those within a dwelling unit, in residential occupancies where occupants are non-transient, shall comply with Section 402.0, through Section 404.0. Requirements for ventilation, air rate for dwelling units in residential occupancies, where the occupants are non-transient, shall be in accordance with Section 405.0.

401.2 Filters (BAC-DO, DOAS-ES & DRA-SSQ). In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual in compliance with Chapter 5, Division 5.5 of the California Green Building Standards Code. (CALGreen).

402.0 Ventilation Air. (See Supplement to OSHPD 1, 2, 3, 4 & 5)

402.1 Occupiable Spaces. Occupiable spaces listed in Table 402.1 (OSHPD 1, 1R, 2, 3, 4 & 5) and Table 4-A shall be designed to have ventilation (outdoor air) in accordance with the chapter (DRA-SS & DRA-SSQ). Ventilation air requirements for occupancies regulated by the California Energy Commission are found in the California Energy Code. (CEC) Ventilation air requirements for occupancies regulated by the California Energy Commission and found in the California Energy Code supersede those of the California Mechanical Code.

402.1.1 Construction Documents. The outdoor air ventilation rate and air distribution assumptions made in the design of the ventilation system shall be clearly identified on the construction documents. **402.1.2 Dwelling.** Requirements for ventilation air rate for single-family dwellings shall be in accordance with this chapter or ASHRAE 62.2.

402.2 Natural Ventilation. Natural ventilation systems shall be designed in accordance with this section and shall include mechanical ventilation systems designed in accordance with Section 403.0, Section 404.0, or both.

402.2.1 General. An engineered natural ventilation system where approved by the Authority Having Jurisdiction need not comply with Section 402.2. *Exception (2).* The mechanical ventilation systems shall not be required where:

(a) Natural ventilation openings that comply with the requirements of Section 402.2 and are permanently open or have controls that prevent the openings from being closed during periods of expected occupancy.

(b) The zone is not served by heating or cooling equipment (ASHRAE 62.1.6.4).

402.2.1 Floor Area to Be Ventilated. Spaces, or portions of spaces, to be naturally ventilated shall be located within a distance based on the ceiling height, as determined in accordance with Section 402.2.1.1, Section 402.2.1.2, or Section 402.2.1.3, from operable wall openings in accordance with the requirements of Section 402.2.2. For spaces with ceilings which are not parallel to the floor, the ceiling height shall be determined in accordance with Section 402.1.4. (ASHRAE 62.1.6.4.1)

402.2.2 Location and Size of Openings. Spaces, or portions of spaces, to be naturally ventilated shall be permanently open to operable wall openings directly to the outdoors, the operable area of which is a minimum of 4 percent of the net occupable floor area. Where openings are covered with louvers or other obstructed, operable area shall be based on the net free unobstructed area through the opening. Where interior spaces or portions of interior spaces, without direct openings to the outdoors are ventilated through adjoining rooms, the opening between rooms shall be permanently unobstructed and shall have a free area of not less than 8 percent of the area of the interior room nor less than 25 square feet (2.3 m²). (ASHRAE 62.1.6.4.2)

402.3 Mechanical Ventilation. Where natural ventilation is not permitted by this section or the building code, mechanical ventilation systems shall be designed, constructed, and installed to provide a method of supply air and exhaust air. Mechanical ventilation systems shall include controls, manual or automatic, that enable the fan system to operate wherever the spaces served are occupied. The system shall be designed to maintain minimum outdoor airflow as required by Section 403.0 under any load condition.

402.4 Outdoor Air Intake Protection. Required outdoor air intakes shall be covered with a screen having not less than 1/4 inch (6.4 mm) openings, and shall have not more than 1/2 inch (12.7 mm) openings.

405.0 Indoor Air Quality for Residential Occupancies.

405.1 General. Rooms or occupied spaces within residential occupancies, where the occupants are non-transient, shall be designed to have mechanical ventilation and exhaust air in accordance with Section 402.2.1, Section 402.2.1.2, or Section 402.2.1.3. **405.2 Ventilation Air Rate.** The required mechanical ventilation outdoor air rate (Q_{req}) shall be calculated in accordance with Equation 405.2. See subsections 4 and 5 as applicable.

405.3 Bathroom Exhaust. A mechanical exhaust directly to the outdoors shall be provided in each room containing a bathtub, shower, or tub/shower combination. The fan shall run intermittently (on demand) or continuously. A readily accessible manual control device to be operated as needed or an automatic control shall be provided for intermittent operation. (IRC & IBC 2.1) Each bathroom shall also be mechanically ventilated in accordance with Division 4.5 of the California Green Building Standards Code (CALGreen). See subsection as applicable.

405.4 Kitchen Exhaust. A mechanical exhaust directly to the outdoors shall be provided in each kitchen. The fan shall run intermittently (on demand) or continuously. A readily accessible manual control device to be operated as needed or an automatic control shall be provided for intermittent operation.

405.4.1 Exhaust Rate. For intermittent controlled operations, the exhaust rate shall not be less than 10 cfm/min. (0.47 m³/min) for range hoods or 300 fcfm/min. (0.141 m³/s) for mechanical fans including downdraft appliances. For continuous operation, the exhaust rate not less than 1 air changes per hour based on kitchen volume for enclosed kitchens.

405.5 Ventilation Openings. Occupiable spaces shall be provided with a readily accessible ventilation opening, operable to the outdoors. The opening shall not be less than 5 square feet (0.46 m²) or a percent of the occupied floor area. The operable area shall be based on free, unobstructed area through the opening.

CHAPTER 5 EXHAUST SYSTEMS (See entire Chapter for additional information)

501.1 General.

501.1 Applicability. This chapter includes requirements for environmental air ducts, product-conveying systems, and commercial hoods and kitchen ventilation. Part 1 addresses environmental air ducts and product-conveying systems. Part 1 addresses commercial hoods and kitchen ventilation.

502.0 Termination.

502.1 Exhaust Opening Protection. Exhaust openings terminating to the outdoors shall be covered with a corrosion-resistant screen having not less than 1/4 of an inch (6.4 mm) openings, and shall have not more than 1/2 of an inch (12.7 mm) openings. *Exception:* Clothes dryers.

502.2 Termination of Exhaust Ducts. Exhaust ducts shall terminate in accordance with Section 502.2.1 through Section 502.2.3.

502.2.1 Environmental Air Ducts. Environmental air ducts shall terminate not less than 3 feet (914 mm) from a property line, 10 feet (3048 mm) from an exhaust air inlet, and 3 feet (914 mm) from openings into the building. The discharge of environmental exhaust ducts shall not directed onto a public walkway.

502.3 Environmental Air Ducts.

502.4 General. Where not specified in this chapter, exhaust ducts shall be constructed and installed in accordance with Chapter 4, and shall be subject to the requirements of the Authority Having Jurisdiction. Environmental air ducts that have an alternate function as part of an approved smoke-control system do not require design as Class 1 product-conveying ducts. See exceptions.

502.4 Independent Exhaust Systems. Single or combined mechanical exhaust systems shall be independent of other exhaust systems.

502.4.1 Domestic Range Ducts used for domestic kitchen range ventilation shall be of metal and shall have smooth interior surfaces. *Exception:* Ducts used for domestic kitchen draft grill-range ventilation installed under a concrete slab floor shall be permitted to be of approved Schedule 40 PVC.

(3) The under-floor trench in which the duct is installed shall be completely backfilled with sand or gravel.

(4) Not more than 1 inch (25.4 mm) of 6 inch diameter (152 mm) PVC coupling shall be permitted to protrude above the concrete floor surface.

(5) PVC pipe joints shall be solvent cemented to provide an air and grease tight joint.

(6) The duct shall terminate above grade outside the building and shall be equipped with a back-draft damper.

502.4.2 Clothes Dryers. A clothes dryer exhaust duct shall not be connected to a vent connector, gas vent, chimney, and shall not terminate into a crawl space, attic, or other concealed space. Exhaust ducts shall not be assembled with screws or other fastening means that extend into the duct and that are capable of catching lint, and that reduce the cross-sectional area of the duct. Exhaust ducts shall be constructed of rigid metallic material. Transition ducts used to connect the dryer to the exhaust duct shall be listed for that application or installed in accordance with the clothes dryer manufacturer's installation instructions. Clothes dryer exhaust ducts shall terminate to the outdoors in the building in accordance with Section 502.2.1 and shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination. Devices, such as fire or smoke dampers, that will obstruct the flow of the exhaust ducts shall not be used. Where joining of ducts, the male end shall be inserted in the direction of airflow.

504.4.1 Provisions for Makeup Air. Makeup air shall be provided in accordance with the following:

(1) Makeup air shall be provided for Type 1 clothes dryers in accordance with the manufacturer's installation instructions. (NFPA 54 10.4.3.1), Where a closet is designed for the installation of a clothes dryer, a closet on the floor shall be provided with 100 square inches (0.65 m²) for make up air at the back of the closet in the door or by other approved means.

(2) Provisions for make up air shall be provided for Type 2 clothes dryers, with a minimum of 1 square inch (0.0006 m²) thermal units per room (Bluh) (0.253 W) total input rating of the dryers) installed. (NFPA 54 10.4.3.2)

504.4.2 Domestic Clothes Dryers. Where a compartment or space for a Type 1 clothes dryer is provided, not less than 4 inches nominal (102 mm) exhaust duct of approved material shall be installed in accordance with Section 504.0. Type 1 clothes dryer exhaust ducts shall be of rigid metal and shall have smooth interior surfaces. The diameter shall be not less than 4 inches nominal (102 mm) and the thickness shall not be less than 0.015 of an inch (0.38 mm).

504.4.2.1 Length Limitation. Unless otherwise permitted or required by the dryer manufacturer's instructions and approved by the Authority Having Jurisdiction, domestic dryer moisture exhaust ducts shall not exceed a total combined horizontal and vertical length of 14 feet (4267 mm), including two 90 degree (1.57 rad) elbows, a length of 2 feet (610 mm) shall be deducted for each 90 degree (1.57 rad) elbow in excess of two.

504.4.2.2 Transition Ducts. Listed clothes dryer transition ducts not more than 6 feet (1829 mm) in length shall be permitted to be used to connect the Type 1 dryer to the exhaust ducts. Transition ducts and flexible clothes dryer transition ducts shall not be concealed within construction, and shall be installed in accordance with the manufacturer's installation instructions.

CHAPTER 6 DUCT SYSTEMS (See entire Chapter for additional information)

601.0 General.

601.1 Applicability. Ducts and plenums that are portions of a heating, cooling, absorption or evaporative cooling, or exhaust system shall comply with the requirements of this chapter and Chapter 5.

601.2 Design Requirements. Duct systems shall be sized in accordance with applicable standards in Chapter 17, or by other approved methods. *Exception:* Residential duct system shall be sized in accordance with ACGA Manual D, ACGA Manual Z1, as applicable, or by other approved methods.

602.0 Material.

602.1 General. Materials used for duct system shall comply with Section 602.2 through Section 602.6 as applicable.

602.0 Installation of Ducts.

602.1 General. Air ducts shall be installed in accordance with this chapter and the installation instructions.

602.2 Under Floor or Crawl Space. Air ducts installed under a floor or in a crawl space shall be installed in accordance with the following:

(1) Shall not prevent access to an area of the crawlspace.

(2) Where it is required to move under ducts for access to areas of the crawl space, a vertical clearance of not less than 18 inches (457 mm) shall be provided.

602.0 Installation of Ducts.

602.1 General. Air ducts conveying air at temperatures exceeding 140 °F (60 °C) shall be insulated to maintain an insulation value of not less than R-10 (0.05 m² K/W). Factory-made air ducts and insulation intended for interior or exterior use shall be tightly joined with the name of the manufacturer, the thermal resistance (R) value at installed thickness, flame-spread index and smoke developed index of the composite material. Internal duct joints and insulation shall be installed in accordance with SMACNA HVAC Duct Construction Standards Metal and Flexible. (2019) 1, 2, 3, 4 & 5 Cold air ducts shall be insulated wherever necessary or to prevent condensation. See *Exceptions*.

602.1 Smoke Dampers. Smoke dampers shall comply with UL 555, and shall be installed in accordance with the manufacturer's installation instructions where required by the building code.

602.2 Fire Dampers. Fire dampers shall comply with UL 555, and shall be installed in accordance with the manufacturer's installation instructions where required by the building code. Fire dampers shall have been tested for closure under airflow conditions and shall be labeled for both maximum airflow permitted and direction of flow. Where more than one damper is installed at a point, the ducts not less than 10 inches (254 mm) apart shall be passing through the damper. Each damper shall be connected to damper levers or assemblies in accordance with the fire damper manufacturer's installation instructions.

602.0 Use of Under-Floor Space as Supply Plenum for Dwelling Units.

602.1 General.

602.2 Dwelling Units. The use of under-floor space shall be limited to dwelling units not more than two stories in height. Except for the floor immediately above the under-floor plenum, supply ducts shall be provided extending from the plenum in registers on other floor levels. *Exception:* In flood hazard areas, under-floor spaces shall not be used as supply plenums unless the flood opening requirements in the building code are met.

602.3 Enclosed. Such spaces shall be cleaned of all loose combustible scrap material and shall be tightly enclosed.

602.4 Flammable Materials. The enclosing material of the under-floor space, including the sidewall insulation, shall be not more flammable than 1 inch (25.4 mm) nominal wood boards (flame-spread index of 200). Installation of insulation is regulated by the building code.

602.5 Access. Access shall be through an opening in the floor and shall be not less than 24 inches by 24 inches (610 mm) by 610 mm.

602.6 Automatic Control. A furnace supplying warm air to under-floor space shall be equipped with an automatic control that will shut the air circulating fan where the furnace outlet reaches a temperature not exceeding 100 °F (38 °C). Such control shall be one that cannot be set to exceed 100 °F (38 °C).

602.7 Temperature Limit. A furnace supplying warm air to such space shall be equipped with an approved temperature limit control that will limit outlet air temperature to 200 °F (93 °C).

602.8 Floor Registers. Floor registers shall be designed for easy removal in order to give access for cleaning the receptacles.

CHAPTER 7 COMBUSTION AIR (See entire Chapter for additional information)

701.0 General.

701.1 Applicability. Air for combustion, ventilation, and dilution of the gases from appliances installed in buildings shall be obtained by application of one of the methods covered in Section 701.4 through Section 701.3.3. Where the requirements of Section 701.4 are not met, outdoor air shall be introduced in accordance with methods covered in Section 701.3.3.

Exceptions: (1) This provision shall not apply to direct-vent appliances. (2) Type 1 clothes dryers that are provided with make up air in accordance with Section 504.4.1 (NFPA 54 9.3.1.1).

701.3 Makeup Air. Where exhaust clothes dryers, and kitchen ventilation interfere with the operation of appliances, makeup air shall be provided. (NFPA 54 9.3.1.3)

701.4 Indoor Combustion Air. The required volume of indoor air shall be determined in accordance with the method in Section 701.4.1 or Section 701.4.2, that where the air infiltration rate is known to be less than 0.40 ACH (air change per hour), the method in Section 701.4.2 shall be used. The total required volume shall be the sum of the required volume calculated for appliances located within the space, rooms that communicate directly with the space in which the appliances are installed through openings not furnished with doors, and through combustion air openings sized and located in accordance with Section 701.9 are considered a part of the required volume. (NFPA 54 9.3.2)

701.5 Indoor Opening Size and Location. Openings used to connect indoor spaces shall be sized and located in accordance with the following:

(1) Combining spaces on the same story. Each opening shall have a minimum free area of one square inch per 1000 Bluh (0.02 m²/m³) of the total input rating of all appliances in the space, but not less than 100 inches (0.65 m²). One persons with open doors (0.02 m²) shall be 12 inches (305 mm) of the top of the opening shall be provided in accordance with the method in Section 701.5. (See Figure 701.5.1)

(2) Combining spaces in different stories. The volume of spaces in different stories shall be considered as communicating spaces where such spaces are connected by one or more permanent openings indoors or floors, having a total minimum free area of 2 square inches per 1000 Bluh (0.02 m²/m³) of the total input rating of all appliances (NFPA 54 9.3.2.2)

701.6 Outdoor Combustion Air. Outdoor combustion air shall be provided through openings to the outdoors in accordance with the methods in Section 701.6.1 or Section 701.6.2. The minimum dimension of air openings shall be not less than 3 inches (76 mm). (NFPA 54 9.3.3)

701.6.1 Two Permanent Openings Method. Two permanent openings, one communicating within 12 inches (305 mm) of the top of the enclosure and one communicating within 10 inches (255 mm) of the bottom of the enclosure, shall be provided in accordance with the methods in Section 701.6.1.1 and Figure 701.6.1.1.

701.6.2 One Permanent Opening Method. One permanent opening, communicating within 12 inches (305 mm) of the top of the enclosure, shall be provided. The appliance shall have clearances of not less than 1 inch (25.4 mm) from the bottom of the enclosure, shall be greater than 6 inches (152 mm) from the front of the appliance. The opening shall directly communicate with the outdoors or shall communicate through a vertical or horizontal duct to the outdoors or spaces that freely communicate with the outdoors. See Figure 701.6.2 and shall have a free area not less than the following:

(1) One square inch per 3000 Bluh (0.0007 m²/m³) of the total input rating of appliances located in the enclosure.

(2) Not less than the sum of the areas of vent connectors in the space. (NFPA 54 9.3.3.2)

701.7 Combination Indoor and Outdoor Combustion Air

The use of a combination of indoor and outdoor combustion air shall be in accordance with Section 701.7.1 through Section 701.7.2. (See Appendix B for example calculations.) (NFPA 54 9.3.4)

701.9 Mechanical Combustion Air Supply. Where all combustion air is provided by a mechanical air supply system, the combustion air shall be supplied from air that is not less than 10 cubic feet (0.28 m³) per 1000 Bluh (0.034 m³/m³W) for appliances located in the space. (NFPA 54 9.3.5)

701.9.1 Louvers and Screens. The required size of openings for combustion, ventilation, and dilution air shall be based on the free area of each opening. Where the free area through a design of lower, grille, or screen is less than the required free area, calculating the size openings required to provide the free area specified. Where the lower and grille design and free area are not known, if the lower and grille are adjustable, the lower and grille shall be set to provide the free area specified. 75 percent free area. Non-motorized louvers and grilles shall be fixed in the open position. (NFPA 54 9.3.7.1)

701.9.1.1 Minimum Screen Mesh Size. Screens shall not be smaller than 1/4 of an inch (6.4 mm) mesh. (NFPA 54 9.3.7.2)

701.10 Motorized Louvers. Motorized louvers shall be interlocked with the appliance so they are proven in the full open position prior to main burner ignition and during main burner operation.

CHAPTER 8 CHIMNEYS AND VENTS (See entire Chapter for additional information)

801.0 General.

801.1 Applicability. The requirements of this govern the venting of hot-burning appliances.

801.2 Venting of Gas Appliances. Low-head and medium-head gas appliances shall be vented in accordance with this chapter. Other gas appliances shall be vented in accordance with NFPA 211 or other applicable standards.

802.0 Venting of Appliances.

802.1 Listing. Type B and Type B-W gas vents shall comply with UL 441. Type I gas vents shall comply with UL 641.

802.1.1 Installation. Listed vents shall be installed in accordance with this chapter and the manufacturer's installation instructions. (NFPA 54 12.1.2.1)

802.1.2 Prohibition. Appliance vents shall not discharge into a space enclosed by screens having openings less than 1/4 of an inch (6.4 mm) mesh.

802.3 Minimum Safe Performance. Venting systems shall be designed and constructed to convey all fuel and vent gases to the outdoors. (NFPA 54 12.1.2.1)

B1

PRIOR TO PERMIT ISSUANCE, THE SHORING CONTRACTOR/ENGINEER SHALL PROVIDE DRAWINGS, CALCULATIONS & SEQUENCING PLANS TO THE TOWN OF LOS GATOS BUILDING DIVISION FOR REVIEW & APPROVAL.

BASEMENT CONSTRUCTION SHORING/SEQUENCING:

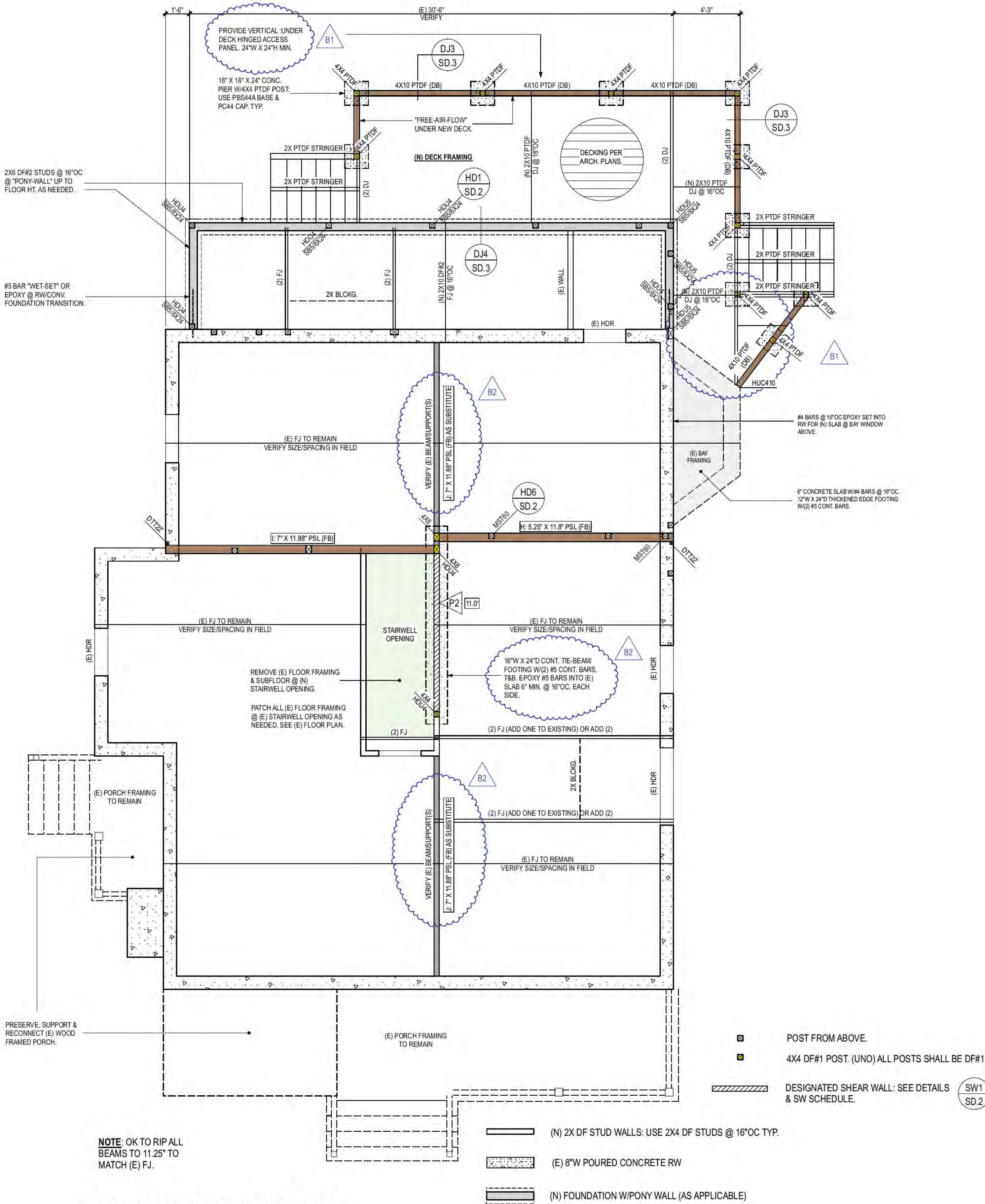
- SHORING:** SHORING PLANS & CALCULATIONS WILL BE REQUIRED FOR ALL EXCAVATIONS WHICH EXCEED FIVE (5) FEET IN DEPTH OR WHICH REMOVE LATERAL SUPPORT FROM ANY EXISTING BUILDING, ADJACENT PROPERTY, OR THE PUBLIC RIGHT-OF-WAY. SHORING PLANS & CALCULATIONS SHALL BE PREPARED BY A CALIFORNIA LICENSED ENGINEER & SHALL CONFORM TO CAL-OSHA REGULATIONS. PLANS SHALL BE SUBMITTED, REVIEWED & APPROVED PRIOR TO BUILDING PERMIT ISSUANCE.
- BASEMENT EXCAVATION CONSTRUCTION SEQUENCE & EARTH STABILIZATION METHODS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR & SHALL BE IN ACCORDANCE WITH REQUIREMENTS NOTED BELOW.
- SHORING PLANS & CALCULATIONS MAY BE REQUIRED FOR ALL EXCAVATIONS WHICH EXCEED FIVE (5) FEET IN DEPTH OR WHICH REMOVE LATERAL SUPPORT FROM AN EXISTING BUILDING, AN ADJACENT PROPERTY, OR THE PUBLIC RIGHT OF WAY.
- IF EXCAVATIONS WILL BE LESS THAN FIVE FEET IN DEPTH & NO SHORING WILL BE PROVIDED, THEN PLEASE PROVIDE TWO (2) WET STAMPED & SIGNED LETTERS FROM A SOILS ENGINEER STATING THE HEIGHT OF EXCAVATION REQUIRED FOR CONSTRUCTION OF THE BASEMENT IS IN COMPLIANCE WITH HIS/HER REPORT, THAT THERE IS NO INDICATION OF A POTENTIAL CAVE-IN, & THAT NO SHORING WILL BE PROVIDED PER CAL-OSHA SECTION 1541.1.1(A)(1), EXCEPTION (B).
- IF SHORING WILL BE REQUIRED, THEN A SHORING PLAN & SUPPLEMENTAL CALCULATIONS SHALL BE PREPARED BY A LICENSED ENGINEER & SHALL CONFORM TO CAL-OSHA REGULATIONS SUBCHAPTER 4, ARTICLE 6.
- ANY SHORING PLAN PROVIDED BY THE ENGINEER OF RECORD IS ONLY ONE SUGGESTED METHOD & THE PROPERTY OWNER AND/OR GENERAL CONTRACTOR RETAIN THE RIGHT TO PROVIDE ALTERNATIVE METHODS AT THEIR EXPENSE AND LIABILITY.

UNDERFLOOR VENTILATION CALCS (CRC R408)

	(N) UNDERFLOOR AREA @ 1/150	
AREA OF ACCESSIBLE UNDERFLOOR TO BE VENTILATED	N/A: BASEMENT/CELLAR BELOW	
AREA/150 PER CRC R408.2 UNDERFLOOR VENTILATION REQUIRED.		
NUMBER OF VENTS REQUIRED (60X 14.50/VENT = .60 SF)		
TOTAL VENTILATION PROVIDED		

FOUNDATION/FLOOR FRAMING NOTES

- | | |
|--------------------|--|
| TYPE & SIZE | CONVENTIONAL SPREAD FOOTING & STEM WALL: (16ØW X 24Ø FTG. W/8ØV STEM WALL) POURED CONCRETE RETAINING WALL: 10ØV @ STRUCTURE, 8ØV @ LIGHT-WELLS |
| CONCRETE | COMPRESSIVE STRENGTH (F _{CD}) OF 2500 PSI @ 28 DAYS (UNO) |
| REINFORCING | SEE DETAILS PROVIDED AND NOTES BELOW. |
| MUD SILL | 2X OR 3X PTFD: (SEE SHEAR WALL SCHEDULE & DETAILS) |
| MUD SILL ANCHORAGE | 5/8ØDIA. X 12Ø(HDG) AB @ 48ØC (UNO) SEE SHEAR WALL SCHEDULE & NOTES BELOW |
- SOIL ENGINEER AND/OR STRUCTURAL ENGINEER SHALL BE RETAINED TO PROVIDE TESTING, OBSERVATION AND/OR SPECIAL INSPECTION SERVICES AS REQUIRED DURING THE GRADING & FOUNDATION CONSTRUCTION PHASES OF THE PROJECT (AS APPLICABLE). ALL REPORTS SHALL BE SUBMITTED IN WRITING TO THE ENFORCING AGENCY FOR REVIEW AND APPROVAL.
 - THE GENERAL CONTRACTOR SHALL INVESTIGATE THE (E) FOUNDATION (AS APPLICABLE) TO CONFIRM THAT THE EXISTING TYPE OF FOUNDATION MATCHES THE PROPOSED FOUNDATION SHOWN ON THE APPROVED PLANS. THE GENERAL CONTRACTOR SHALL NOTIFY THE PROJECT ARCHITECT/DESIGNER & STRUCTURAL ENGINEER OF RECORD, PRIOR TO THE COMMENCEMENT OF ANY WORK, OF ANY & ALL DISCREPANCIES INCLUDING, BUT NOT LIMITED TO, EXISTENCE OF DRILLED PIERS, GRADE BEAMS, SLABS WITH PRE-OR POST TENSIONED CABLES, OR ANYTHING ELSE NOT SHOWN ON THE APPROVED PLANS. THE GENERAL CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY & LIABILITY FOR ANY & ALL DAMAGES THAT MAY OCCUR FROM THE FAILURE OF PROVIDING THIS NOTIFICATION.
 - THE GENERAL CONTRACTOR SHALL VERIFY TYPE AND CONSTRUCTION OF ALL EXISTING CONCRETE SLABS PRIOR TO PERFORMING ANY SAW-CUTTING OR SLAB MODIFICATION.
 - ALL STEEL REINFORCING SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING OF CONCRETE.
 - ALL METAL FASTENERS AND/OR ANCHORS THAT ARE IN CONTACT WITH PTFD LUMBER OR EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED (HDG) METAL OR STAINLESS STEEL (SS).
 - WET SET ANCHOR BOLTS: PROVIDE 5/8ØDIAMETER X 12Ø @ 48ØC MAXIMUM SPACING W/ 229ØX 3ØX 3Ø WASHERS PER CBC 2305.3.11. SEE SHEAR WALL SCHEDULE FOR ANCHOR BOLT SPACING @ DESIGNATED SHEAR WALL LINES.
 - RETROFIT ANCHOR BOLTS: 5/8ØOR 7/8ØDIAMETER THREADED RODS AS NOTED ON FOUNDATION PLAN W/ 229ØX 3Ø X 3Ø WASHERS PER CBC 2305.3.11. ANCHORS SET INTO EXISTING CONCRETE SHALL BE PROVIDED WITH SIMPSON SET-XPCEPOXY (ICC-ESR 2508).
 - PROTECTION FOR WOOD & WOOD BASED PRODUCTS AGAINST DECAY SHALL BE IN COMPLIANCE WITH CRC R317.
 - DOUBLE ALL FLOOR JOISTS/FRAMING MEMBERS UNDER BEARING WALLS ABOVE, PARALLEL TO JOIST DIRECTION.
 - DOUBLE ALL FLOOR JOISTS/FRAMING MEMBERS @ PERIMETER OF FLOOR DIAPHRAGM OPENINGS & SIDE EDGES OF FLOOR CANTILEVERS.
 - VERIFY LOCATIONS OF CONCENTRATED POINT LOADS FROM ABOVE & VERIFY/PROVIDE CONCRETE FOOTING/ ISOLATED PIER AS APPLICABLE.
 - PROVIDE 4X/6X DF#1 SOLID COMPRESSION BLOCKING IN FLOOR ASSEMBLY UNDER ALL CONCENTRATED POINT



FOUNDATION PLAN

- SEE SHEET SN.1 & SN.2 FOR ADDITIONAL STRUCTURAL NOTES.
- SEE SHEET SN.2 FOR HEADER/CJ SPAN TABLES AS APPLICABLE.

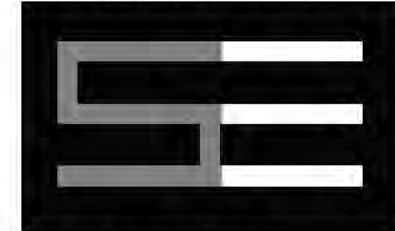
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10/15/25	B2

CW

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P.E.

650.279.8756 (CELL)
clwrc@aol.com

ARCHITECTURAL DESIGN BY:



STUDIO THREE DESIGN

RESIDENCE

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LOS GATOS, CA 95030

FOUNDATION PLAN			
DRAWING:	10/21/25	AS NOTED	MAR
SAVED:			
SCALE:			
DRAWN BY:			



10/21/2025
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S.1

SHEAR WALL SCHEDULE							
TYPE	SHEAR MATERIAL	SHEAR WALL NAILING	SHEAR WALL TRANSFER	SOLE PLATE NAILING	ANCHOR BOLTS @ (E) 2X PTDF MUD SILL	ANCHOR BOLTS @ (N) 3X PTDF MUD SILL	HOLD DOWN TYPE
P1	3/8"CDX PLYWD. OR 15/32"OSB	8D @ 6"OC (EDGE) 8D @ 12"OC (FIELD)	A35 RBC OR LTP4 CLIPS @ 24"OC	16D @ 6"OC	5/8"ODIA X 12"OAB @ 16"OC	5/8"ODIA X 12"OAB @ 32"OC	HDU2 MST37
P2	3/8"CDX PLYWD. OR 15/32"OSB	8D @ 3"OC (EDGE) 8D @ 12"OC (FIELD)	A35 RBC OR LTP4 CLIPS @ 16"OC	16D @ 3"OC	5/8"ODIA X 12"OAB @ 12"OC	5/8"ODIA X 12"OAB @ 16"OC	HDU4 MST48/MST90
P3	1/2"CDX PLYWD. OR 19/32"OSB	10D @ 3"OC (EDGE) 10D @ 12"OC (FIELD)	A35 RBC OR LTP4 CLIPS @ 8"OC	5/8"ODIA X 5"LAG SCREW @ 8"OC	NOT PERMITTED	5/8"ODIA X 12"OAB @ 12"OC	HDU5/HDU8 MST90

- SHEAR WALL SCHEDULE NOTES:**
- SEE FOUNDATION PLAN(S) & FRAMING PLAN(S) FOR LOCATIONS, SIZE & ANCHORAGE OF HOLD DOWNS.
 - ALL HARDWARE SHALL BE MANUFACTURED BY **CHIMPSON STRONG TIE COMPANY INC.** OR EQUAL (UNO). REVIEW THE LATEST CATALOG PRIOR TO INSTALLATION FOR ANY SPECIAL REQUIREMENTS, INSTALLATION, PROCEDURES, ALTERNATIVE OPTIONS, ETC. **USE COMMON NAILS TYP. (BOX NAILS PROHIBITED)**
 - INSTALL 5/8"ODIA X 12"OAB ANCHOR BOLTS @ 48"OC MAXIMUM SPACING @ ALL NON-SHEAR WALLS. FOLLOW THIS SCHEDULE FOR ANCHOR BOLT SPACING WHERE SHEAR WALLS ARE DESIGNATED ON FRAMING PLAN(S). ALL ANCHOR BOLTS SHALL HAVE A 7"MIN. EMBEDMENT INTO CONCRETE. **USE 229"OX 3"OX 3" SQUARE WASHERS (TYP.) OR SIMPSON EQUIVALENT PROPRIETARY PRODUCT. ALL MUD SILLS SHALL HAVE (2) ANCHOR BOLTS PER PIECE MINIMUM & (1) ANCHOR BOLT WITHIN 12" FROM EACH END & NO CLOSER THAN 6" FROM EACH END OF THE MUD SILL.**
 - FOR NEW CONSTRUCTION, ALL ANCHOR BOLTS SHALL BE INSTALLED ON 3X PTDF MUD SILL OR EQUAL.
 - USE **CHIMPSON** DESIGNATED ANCHOR/HOLD BOLTS OR ENGINEER OF RECORD APPROVED ANCHORS/THREADED RODS WITH NUT/WASHER/NUT @ ALL HOLD DOWN LOCATIONS SHOWN ON FOUNDATION & FRAMING PLAN(S).
 - ALL HOLD DOWN AND ANCHOR BOLTS SHALL BE SECURELY TIED IN PLACE PRIOR TO FOUNDATION STEEL INSPECTION. **USE CHIMPSON ANCHOR MATE/BOLT HOLDERS OR PROPRIETARY TEMPLATES AS APPLICABLE.**
 - ALL ANCHOR BOLTS (WET SET AND RETROFIT) & OTHER HARDWARE IN DIRECT CONTACT WITH PTDF LUMBER SHALL BE HOT DIPPED GALVANIZED (HDG) OR STAINLESS STEEL (SS).
 - USE 4X10 DF#1 POSTS @ ALL SHEAR WALL ENDS PER FRAMING PLAN(S) & USE (2) 2X (STITCH NAILED PER CBC NAILING TABLE) OR 3X DF STUDS @ ALL INTERMEDIATE ABUTTING SHEAR PANEL VERTICAL JOINTS. STAGGER EDGE NAILING @ JOINT PER WALL TYPE @ SW SCHEDULE.
 - USE (2) 2X (STITCH NAILED PER CBC NAILING TABLE), OR 3X DF STUDS @ 16"OC @ SHEAR WALLS WHERE SHEAR MATERIAL IS APPLIED TO BOTH SIDES OF THE WALL. **USE 4X10 DF#1 POSTS @ INTERMEDIATE ABUTTING PANEL VERTICAL JOINTS. STAGGER EDGE NAILING @ JOINT. SPACING PER WALL TYPE @ SW SCHEDULE. STAGGER ABUTTING PANEL EDGES @ MULTI-STORY APPLICATIONS.**
 - USE ONE PIECE PLYWOOD PANELS @ SHEAR WALLS 48" WIDE OR LESS IN WIDTH. ALL SHEAR WALLS SHALL BE 24" WIDE MINIMUM. USE FULL HEIGHT SHEAR WALL PANELS WHERE POSSIBLE. WHERE CUT, MINIMUM PANEL HEIGHT SHALL BE 12'0" PROVIDE 3X DF SOLID BLOCKING WEDGE NAILING PER WALL TYPE @ SW SCHEDULE @ ALL HORIZONTAL PANEL JOINTS.
 - ALL INTERIOR SHEAR WALL PANELS SHALL BE EXTENDED TO THE FULL HEIGHT OF THE ROOF. PROVIDE RR & EN (TYP.) SEE APPLICABLE DETAILS AS PROVIDED.**
 - KEEP 1/8" CLEAR BETWEEN ALL PLYWOOD PANEL EDGES (TYP).
 - OSB WALL SHEATHING MAY BE SUBSTITUTED FOR CDX PLYWOOD UPON ENGINEER OF RECORD'S APPROVAL AND/OR SPECIFICATION.
 - SEE APPLICABLE SHEAR WALL DETAILS @ **CDOS** SHEETS AS PROVIDED.

1

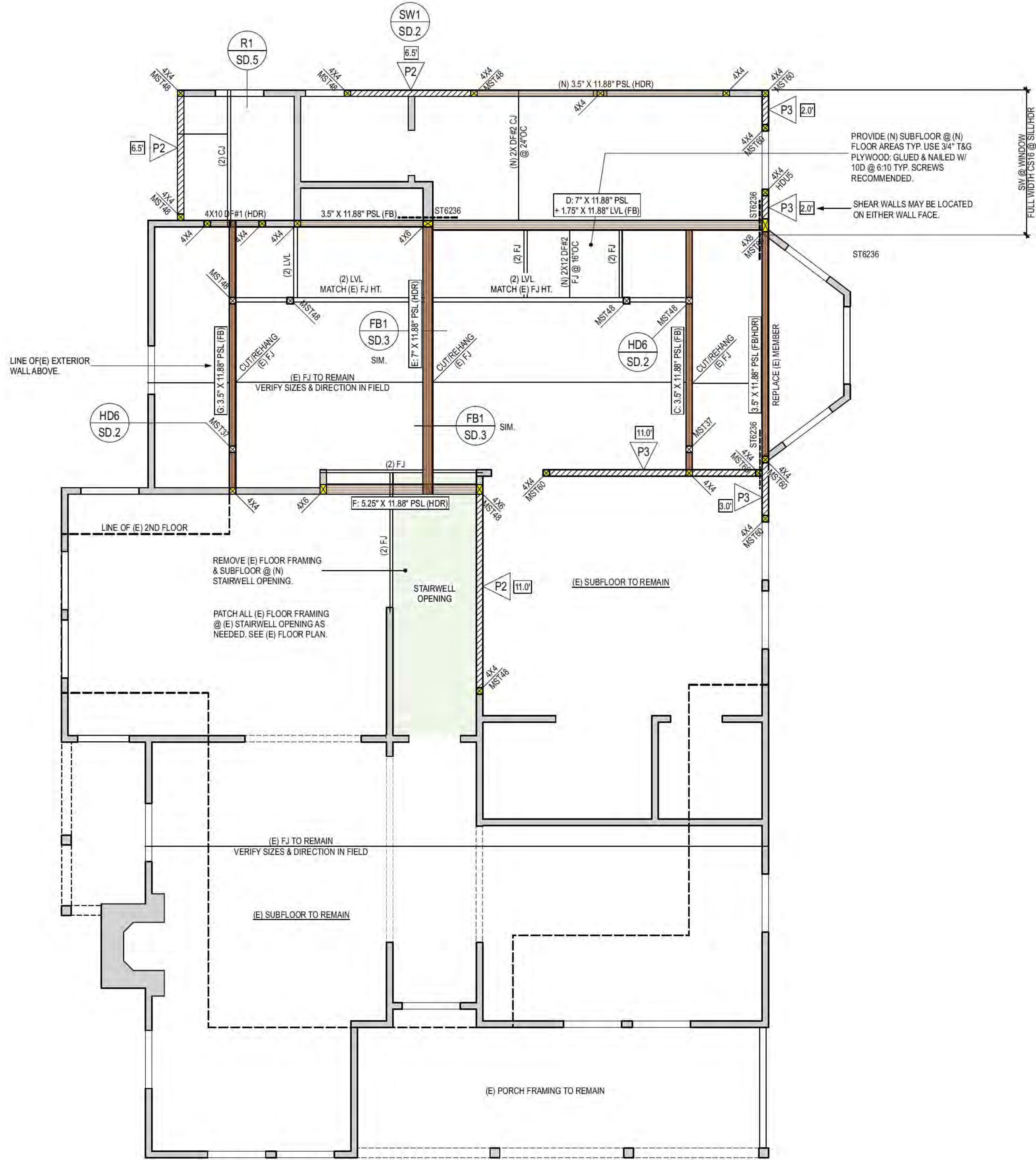
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BEAM SCHEDULE:						
SYML	DESCRIPTION	GRADE	LEFT/TOP	CENTER	RIGHT/BOTTOM	POST BASE
A	OMIT					
B	OMIT					
C	3.5"OX 11.88" PSL (FLOOR BEAM) RIP TO 11.25"	2.0E	BEAM D: HU412TF		4X4: ST6236	BC40
D	7"OX 11.88"PSL (FLOOR BEAM) RIP TO 11.25"OW 11.75"OX 11.88"OVL	2.0E/1.9E	4X6/BEAM E: HGLT9	OR OTHER SIM	4X8: ST6236	BC460/BC480
E	7"OX 11.88" PSL (FLOOR BEAM) RIP TO 11.25"	2.0E	4X6: ST6236		BEAM F: (1) TS22	BC480
F	5.25"OX 11.88"PSL (HDR)	2.0E	4X6: ST6236		4X6: ST6236	(2) A35
G	3.5"OX 11.88"PSL (FLOOR BEAM) RIP TO 11.25"	2.0E	4X HDR: (1) TS22		4X4: ST6236	BC40
H	5.25"OX 11.88"PSL (FLOOR BEAM) RIP TO 11.25"	2.0E	4X8: ST6236		RW: DT122	CRSQ48
I	7"OX 11.88" PSL (FLOOR BEAM) RIP TO 11.25"	2.0E	4X6: ST6236		RW: DT122	HDU
J	7"OX 11.88" PSL (FLOOR BEAM) RIP TO 11.25" (REPLACE EXISTING)	2.0E	4X/RW: ST6236/DT122		4X/RW: ST6236/DT122	BCO

NOTES:

- ALL HARDWARE SHALL BE MANUFACTURED BY **CHIMPSON STRONG TIE COMPANY INC.** OR EQUAL (UNO). REVIEW THE LATEST CATALOG PRIOR TO INSTALLATION FOR ANY SPECIAL REQUIREMENTS, INSTALLATION, PROCEDURES, ALTERNATIVE OPTIONS, ETC.
- USE ST22 MIN. STRAP @ ALL KING POSTS TO WALL OR BEAMS BELOW.
- Ø110**- FULL HEIGHT POST. USE ST6236 STRAP (HORIZONTAL) ACROSS TOP PLATES WHERE FULL HEIGHT POSTS ARE INSTALLED & CONTINUOUS TOP PLATES ARE INTERRUPTED.
- SEE SHEET SD.1 FOR TYPICAL POST/HEADER AND POST/FLUSH BEAM FRAMING CONNECTIONS.
- SEE SHEET SN.2 FOR HEADER SPAN TABLE FOR ALL BEAM/HEADERS NOT LISTED IN THIS TABLE.
- ØTOP** FLUSH HEADER/BEAM/ØS DEFINED AS A HEADER/BEAM WHERE THE TOP OF THE MEMBER IS INSTALLED FLUSH WITH THE WALL TOP PLATES.
- ØFLUSH** HEADER/BEAM/ØS DEFINED AS A HEADER/BEAM WHERE THE BOTTOM OF THE MEMBER IS INSTALLED FLUSH WITH THE WALL TOP PLATES.
- NOMINAL BEAM/HEADERS (IE: DF/PTDF) MAY BE SUBSTITUTED WITH ENGINEERED LUMBER (PSL, LVL, ETC.) OF THE SAME DIMENSION OR GREATER.
- ANY OTHER BEAM SUBSTITUTION (IE: SIZE, GRADE, ETC.) MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD. (S.O.R.)
- FOR ANY HARDWARE/CONNECTOR/FASTENER SUBSTITUTIONS, PLEASE CONTACT THE STRUCTURAL ENGINEER OF RECORD (S.O.R.) PRIOR TO INSTALLATION.

1



- POST FROM ABOVE.
- 4X4 DF#1 POST. (UNO) ALL POSTS SHALL BE DF#1

DESIGNATED SHEAR WALL: SEE DETAILS & SW SCHEDULE.

SW1
SD.2

NOTE: OK TO RIP ALL BEAMS TO 11.25" TO MATCH (E) FJ.

2ND LEVEL FLOOR FRAMING PLAN

1/4" = 1'-0"

- SEE SHEET SN.1 & SN.2 FOR ADDITIONAL STRUCTURAL NOTES.
- SEE SHEET SN.2 FOR HEADER/CJ SPAN TABLES AS APPLICABLE.
- ALL (N) RETROFIT FLOOR FRAMING BEAMS MAY BE RIPPED TO 11.25".

0 2' 4' 8'

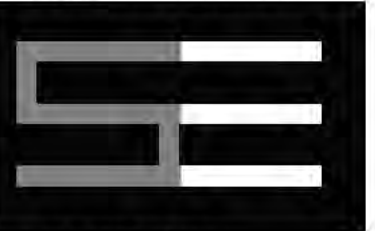
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DRAWING: 2ND FLR FRAMING

SAVED: 10/21/25

SCALE: AS NOTED

DRAWN BY: MAR



10/21/2025

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S.2

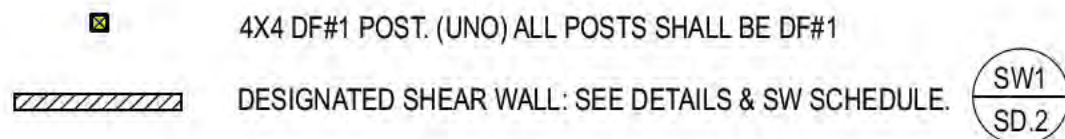
SHEAR WALL SCHEDULE NOTES:

1. SEE FOUNDATION PLAN(S) & FRAMING PLANS FOR LOCATIONS, SIZE & ANCHORAGE OF HOLD DOWNS.
2. ALL HARDWARE SHALL BE MANUFACTURED BY SIMPSON STRONG TIE COMPANY OR FOR EQUAL (UNCL). REVIEW THE LATEST CATALOG PRIOR TO INSTALLATION FOR ANY SPECIAL REQUIREMENTS. INSTALLATION, STAGGERED OR ALTERNATE OPTIONS, ETC. USE COMMON NAILS TYPE (BOXNAIL OR PITCHNAIL).
3. INSTALL 5/8"x14" x 120"CHORD BOLTS @ 48"OC MAXIMUM SPACING @ ALL NON-SHEAR WALLS. FOLLOW THIS SCHEDULE FOR ANCHOR BOLT SPACING WHERE SHEAR WALLS ARE DESIGNATED FOR ANCHORED BOLTS. ALL ANCHOR BOLTS SHALL HAVE A MINIMUM EMBEDMENT INTO CONCRETE USE 2290K OR 3Q304RE WASHERS (TYP) OR SIMPSON EQUIVALENT PROPERLY IDENTIFIED PRODUCT. ALL MUD SILLS SHALL HAVE (4) ANCHOR BOLTS PER PIECE MINIMUM & (1) ANCHOR BOLT WITHIN 120CFM FROM EACH END & NO CLOSER THAN 6"FROM EACH END OF THE MUD SILL.
4. FOR NEW CONSTRUCTION, ALL ANCHOR BOLTS SHALL BE INSTALLED ON 3X PTDF MID-SPAN OR EQUAL.
5. USE SIMPSON DESIGNATED ANCHORHOLD BOLTS OR ENGINEER OF RECORD APPROVED ANCHORS/THEADED RODS WITH WASHERNUT @ ALL HOLD DOWN LOCATIONS SHOWN ON FOUNDATION & FRAMING PLANS).
6. ALL HOLD DOWN ANCHOR BOLT SHALL BE SECURELY TIED IN PLACE PRIOR TO FOUNDATION SETL INSPECTION. USE SIMPSON ANCHOR MATEBOARD HOLDERS OR PROPRIETARY TEMPLATES AS APPLICABLE.
7. ALL ANCHOR BOLTS (WET SET AND RETROFIT) & OTHER HARDWARE IN DIRECT CONTACT WITH PTDF LUMBER SHALL BE HOT DIPPED GALVANIZED (#40) OR STAINLESS STEEL (SS).
8. ALL ANCHOR BOLTS POSTS @ ALL SHEAR WALL ENDS PER FRAMING PLANS & (2) X 2X (STITCH NAILED PER CBC NAILING TABLE) OR 3X OF STUDS @ ALL INTERMEDIATE ABUTTING SHEAR PANEL VERTICAL JOINTS. STAGER EDGE NAILING & JOINT PER TYPE & SW SCHEDULE
9. USE (2) X 2X (STITCH NAILED PER CBC NAILING TABLE) OR 3X OF STUDS @ 16"OC @ SHEAR WALLS WHERE SHEAR MATERIAL IS APPLIED TO BOTH SIDES OF THE WALL. USE 4X6X DF#1 POSTS @ INTERMEDIATE ABUTTING PANEL VERTICAL JOINTS. STAGER EDGE NAILING @ JOINT, SPACING PER WALL TYPE & SW SCHEDULE. STAGER ABUTTING PANEL EDGES @ MULTI-PANEL WALLS.
10. USE ONE PIECE PTDF MEDIANE @ SHEAR WALLS 48"OR MORE OR LESS IN WIDTH. ALL SHEAR WALLS SHALL BE 24"OVERRIDE MINIMUM. USE FULL HEIGHT SHEAR WALL PANELS WHERE POSSIBLE. WHERE CUT, MINIMUM PANEL HEIGHT SHALL BE 120"PROVIDE 3' OF SOLID BLOCKING BEHIND NAILING PER WALL TYPE & SW SCHEDULE @ ALL HORIZONTAL PANEL JOINTS.
11. **ALL INTERIOR SHEAR WALL PANELS SHALL BE EXTENDED TO THE FULL HEIGHT OF THE ROOF PROVIDE R&R IN TVTY. SEE APPLICABLE DETAILS AS PROVIDED.**
12. REINFORCING BEDDING ALL PTDF WALL EDGES (TYP)
13. OSB WALL SHEATHING MAY BE SUBSTITUTED FOR CDX plywood UNLESS ENGINEER OF RECORD'S APPROVAL AND/OR SPECIFICATION.
14. SEE APPLICABLE SHEAR WALL DETAILS @ 000SHOTSAS AS PROVIDED.

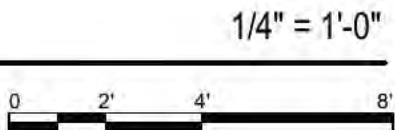
B2		BEAM SCHEDULE:				
SYML DESCRIPTION		GRADE	LEFT/TOP	CENTER	RIGHT/BOTTOM	POST BASE
A	OMIT					
B	OMIT					
C	3.5"X 11.88" PSL (FLOOR BEAM) RIP TO 11.250	2.0E	BEAM D: H1412TF		4X4: ST8236	BC40
D	70K 11.88"PSL (FLOOR BEAM) RIP TO 11.250W1.750X 11.88"CLVL	2.0E/1.9E	4X6/BEAM E: HGLT9	OR OTHER SIM.	4X8: ST8236	BC460/BC480
E	70K 11.88"PSL (FLOOR BEAM) RIP TO 11.250	2.0E	4X6: ST8236		BEAM F: (1) TS22	BC460
F	5.25"X 11.88"PSL (HDR)	2.0E	4X6: ST8236		4X6: ST8236	(2) A35
G	3.5"X 11.88"PSL (FLOOR BEAM) RIP TO 11.250	2.0E	4X HDR: (1) TS22		4X4: ST8236	BC40
H	5.25"X 11.88"PSL (FLOOR BEAM) RIP TO 11.250	2.0E	4X6: ST8236		RW DT122	CBSQ45
I	70K 11.88"PSL (FLOOR BEAM) RIP TO 11.250	2.0E	RW DT122		4X8: ST8236	H10
J	70K 11.88"PSL (FLOOR BEAM) RIP TO 11.250(REPLACE EXISTING)	2.0E	4X/RW: ST8236/DT122		4X/RW: ST8236/DT122	BC0

NOTES:

- ALL HARDWARE SHALL BE MANUFACTURED BY SIMPSON STRONG TIE COMPANY INC. OR EQUAL (UNO). REVIEW THE LATEST CATALOG PRIOR TO INSTALLATION FOR ANY SPECIAL REQUIREMENTS, INSTALLATION, PROCEDURES/ALTERNATIVE OPTIONS, ETC.
- USE ST22 MIN. STRAP @ ALL KING POSTS TO WALL OR BEAMS BELOW.
- Ø10" FULL HEIGHT POST. USE ST8236 STRAP (HORIZONTAL) ACROSS TOP PLATES WHERE FULL HEIGHT POSTS ARE INSTALLED & CONTINUOUS TOP PLATES ARE INTERRUPTED.
- SEE SHEET SD 1 FOR TYPICAL POST/HEADER AND POST/FLUSH BEAM FRAMING CONNECTIONS.
- SEE SHEET SN 2 FOR HEADER SPAN TABLE FOR ALL BEAMS/HEADERS NOT LISTED IN THIS TABLE.
- Ø6P FLUSH HEADER/BEAMS DEFINED AS A HEADER/BEAM WHERE THE TOP OF THE MEMBER IS INSTALLED FLUSH WITH THE WALL TOP PLATES.
- Ø8 FLUSH HEADER/BEAMS DEFINED AS A HEADER/BEAM WHERE THE BOTTOM OF THE MEMBER IS INSTALLED FLUSH WITH THE WALL TOP PLATES.
- NOMINAL BEAMS/HEADERS (IE: Ø6P/Ø8) MAY BE SUBSTITUTED WITH ENGINEERED LUMBER (PSL, LVL, ETC.) OF THE SAME DIMENSION OR GREATER.
- ANY OTHER BEAM/SUBSTITUTION (IE: SIZE, GRADE, ETC.) MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD. (S.O.R.)
- FOR ANY HARDWARE/CONNECTOR/FASTENER SUBSTITUTIONS, PLEASE CONTACT THE STRUCTURAL ENGINEER OF RECORD (S.O.R.) PRIOR TO INSTALLATION.



1. SEE SHEET SN.1 & SN.2 FOR ADDITIONAL STRUCTURAL NOTES.
2. SEE SHEET SN.2 FOR HEADER/CJ SPAN TABLES AS APPLICABLE.
3. MATCH ROOF SLOPES/OVERHANGS AS APPLICABLE.



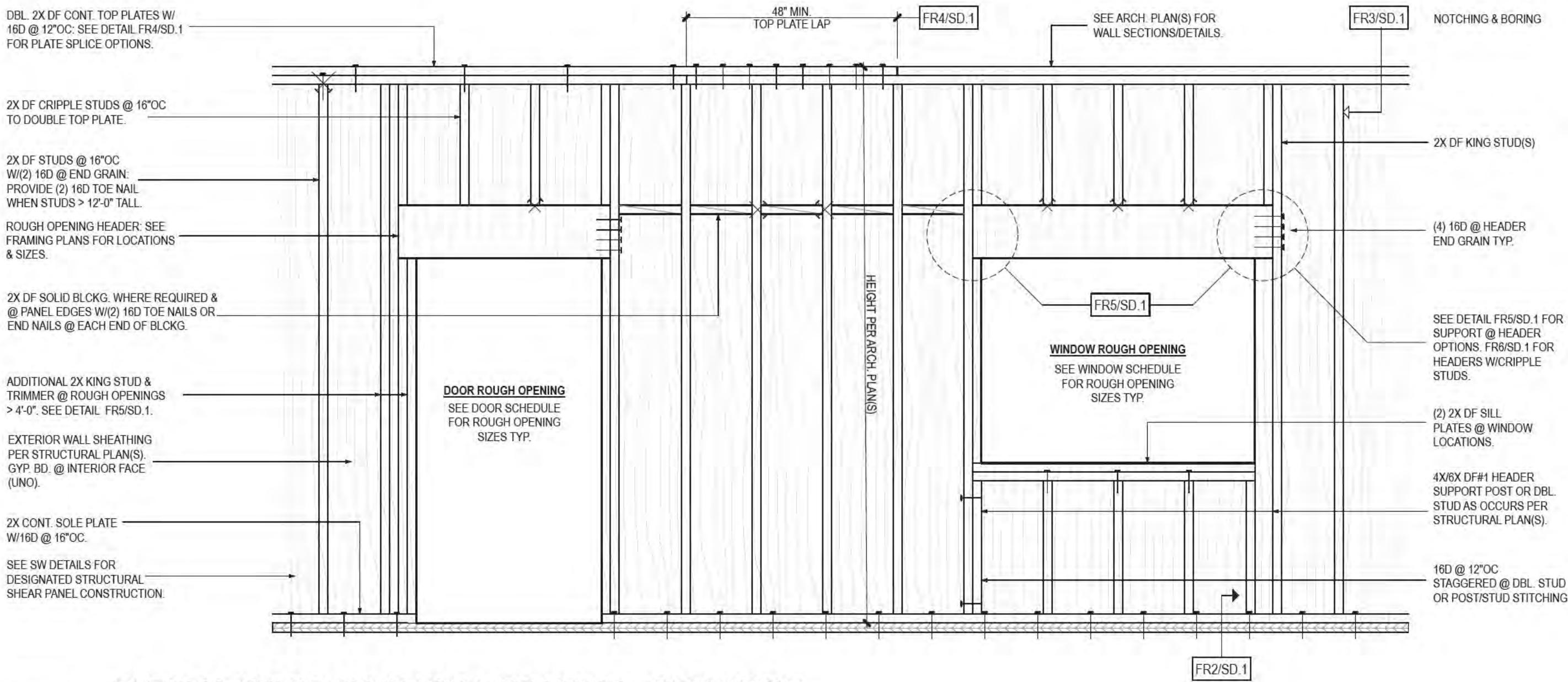
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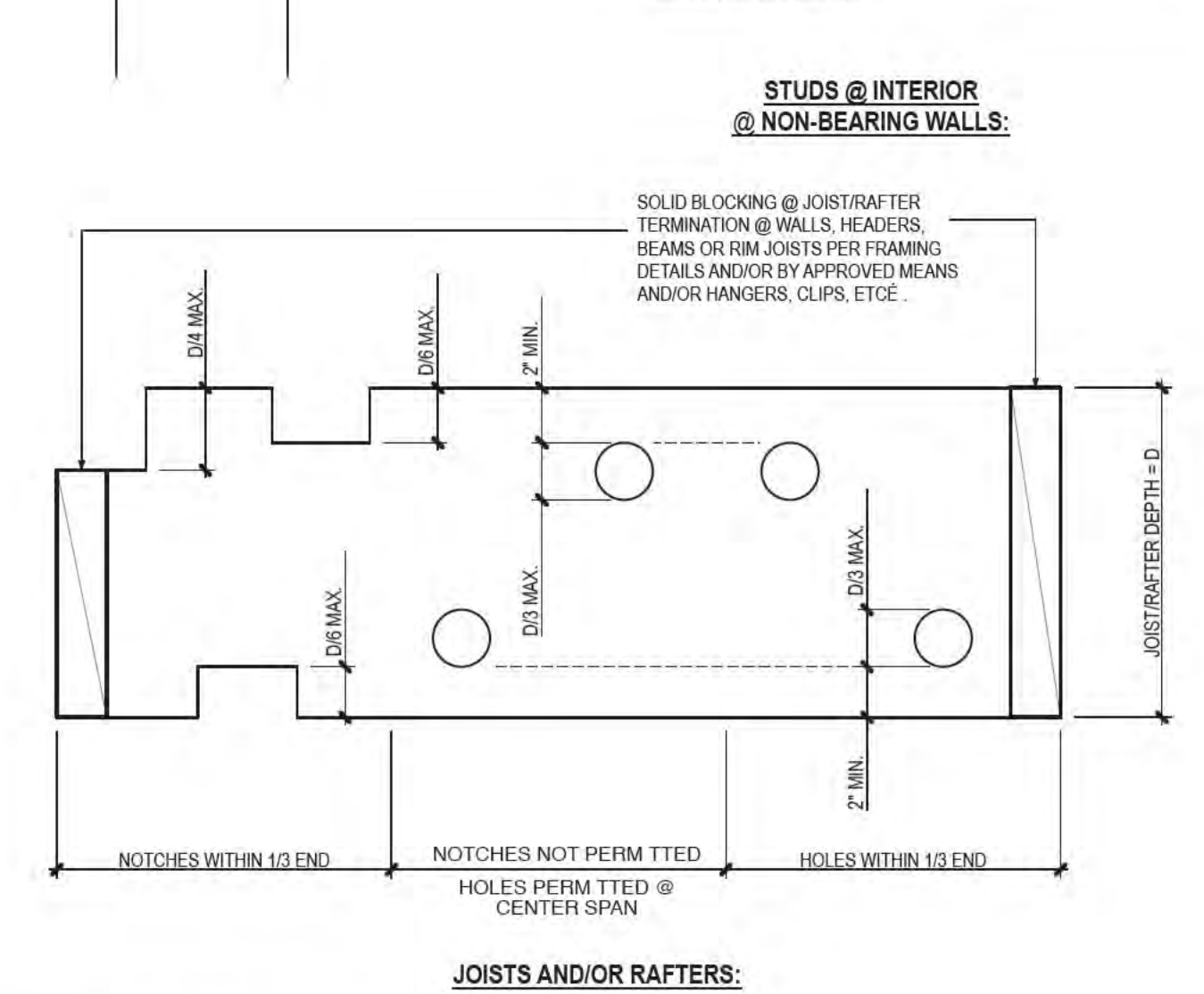
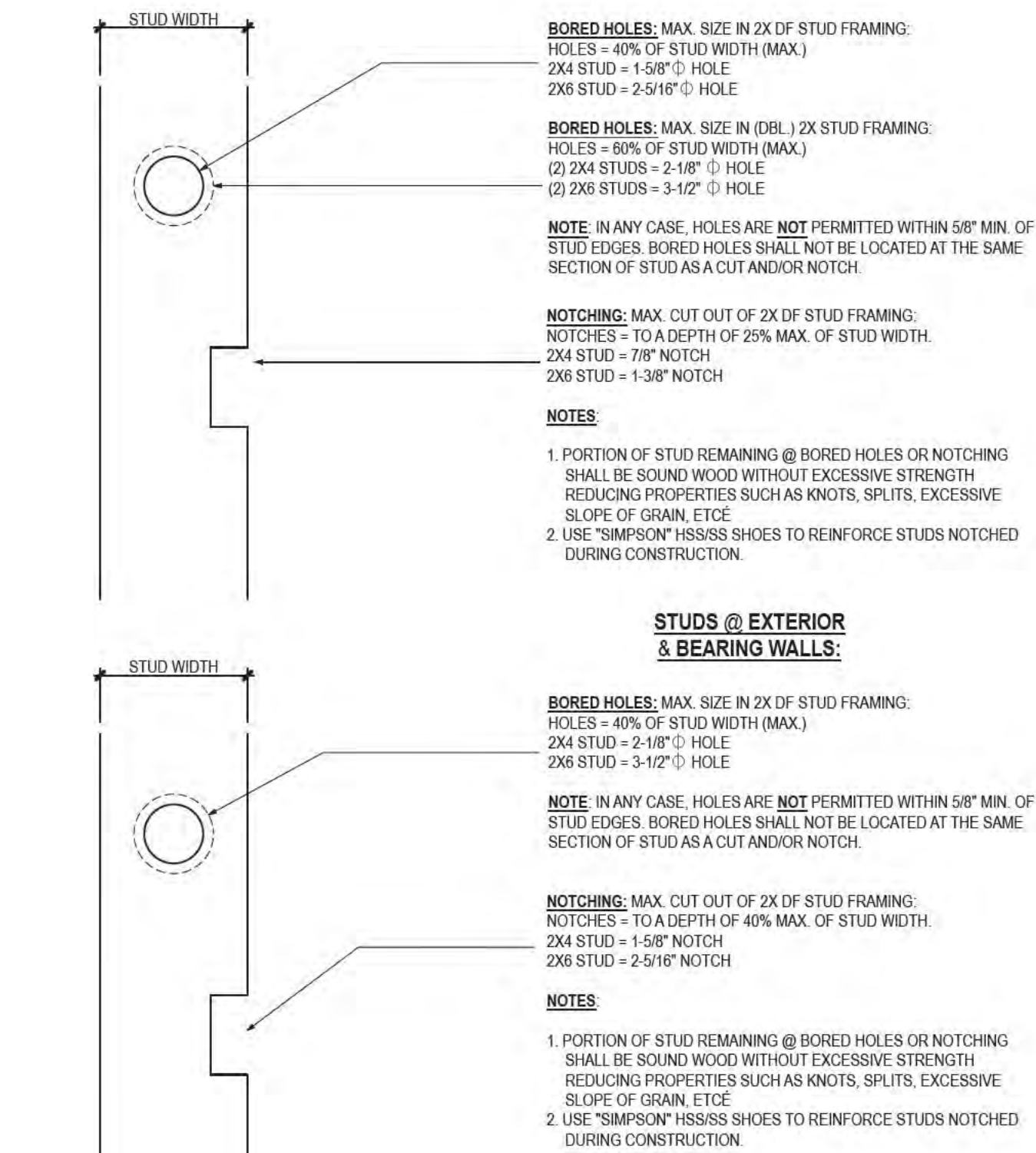
STUDIO THREE DESIGN

DRAWING:	ROOF FRAMING PLAN
SAVED:	10/21/25
SCALE:	AS NOTED
DRAWN BY:	IMAR <i>mc</i>

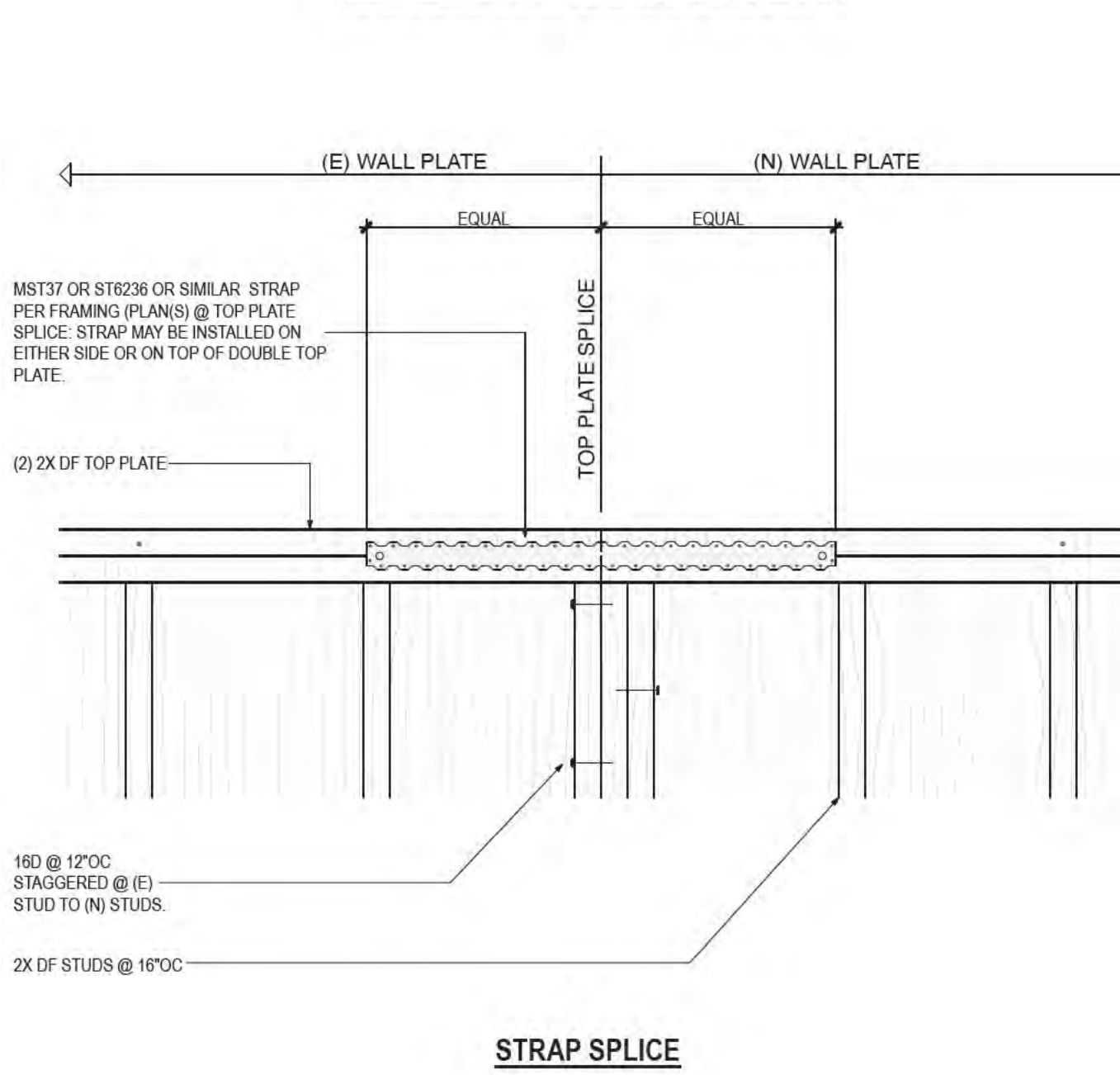
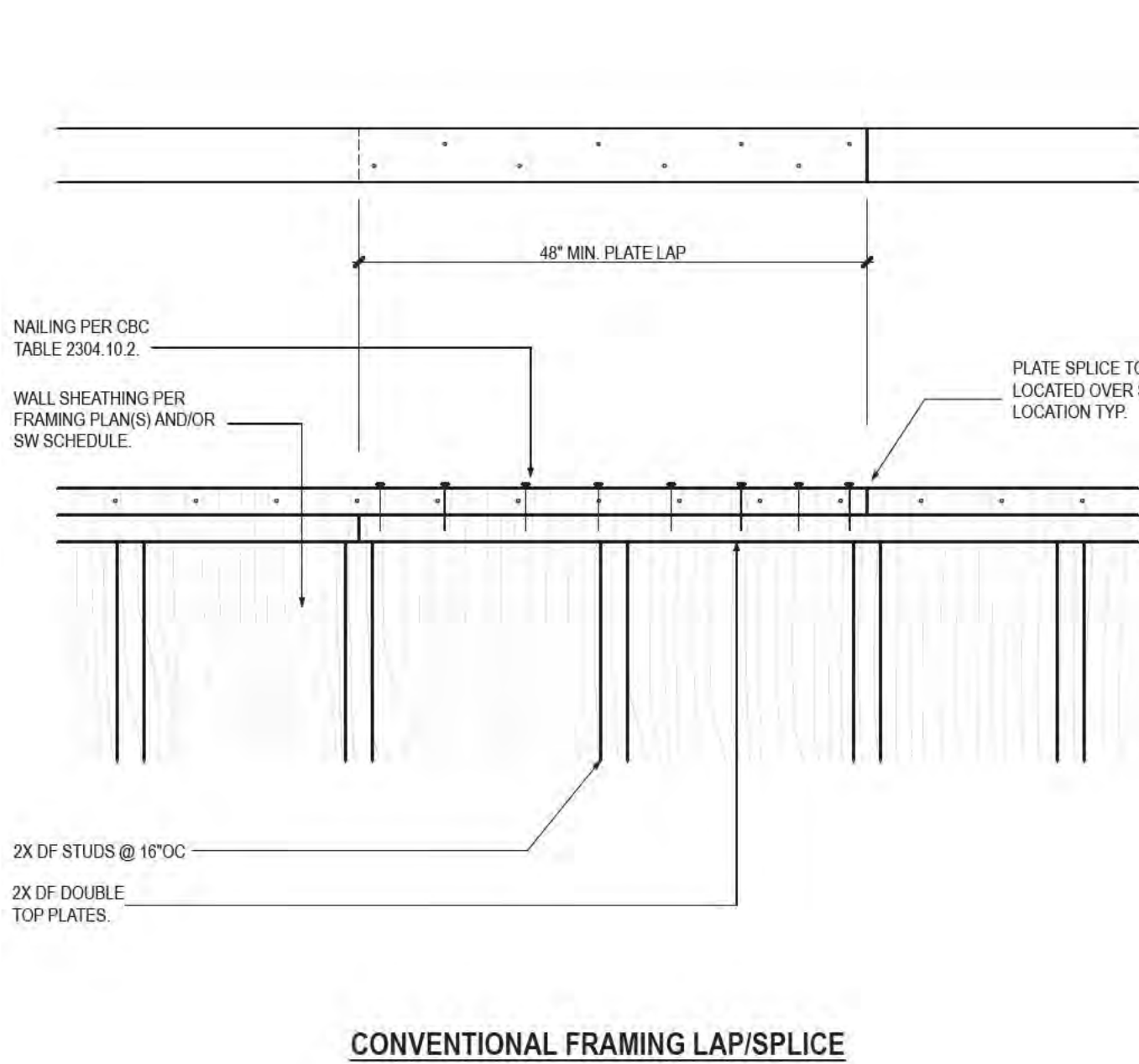




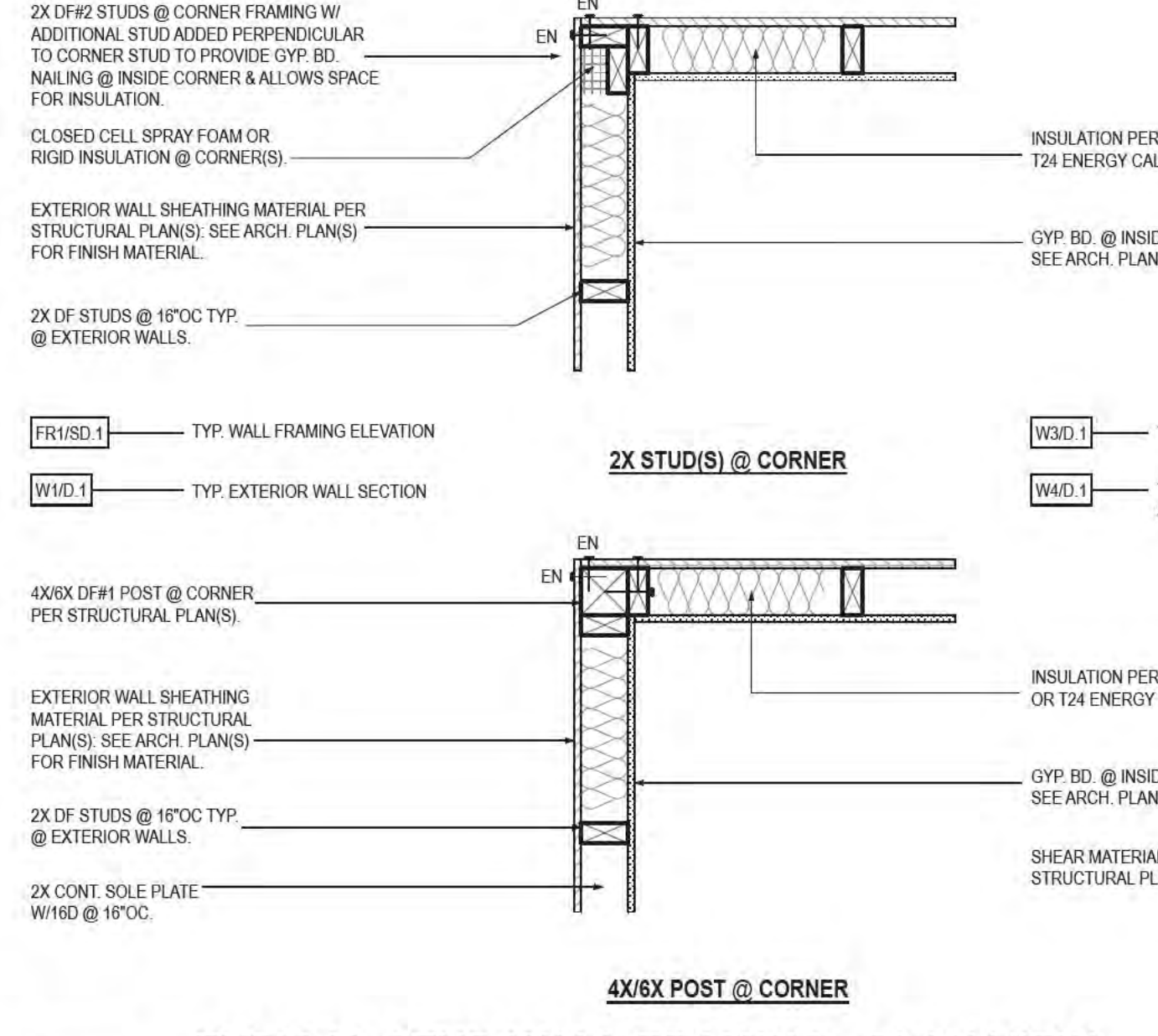
FR1 TYPICAL WOOD STUD WALL FRAMING - ELEVATION
SEE CBC TABLE 2304.10.2 FOR NAILING REQUIREMENTS NOT NOTED ON THIS DRAWING.



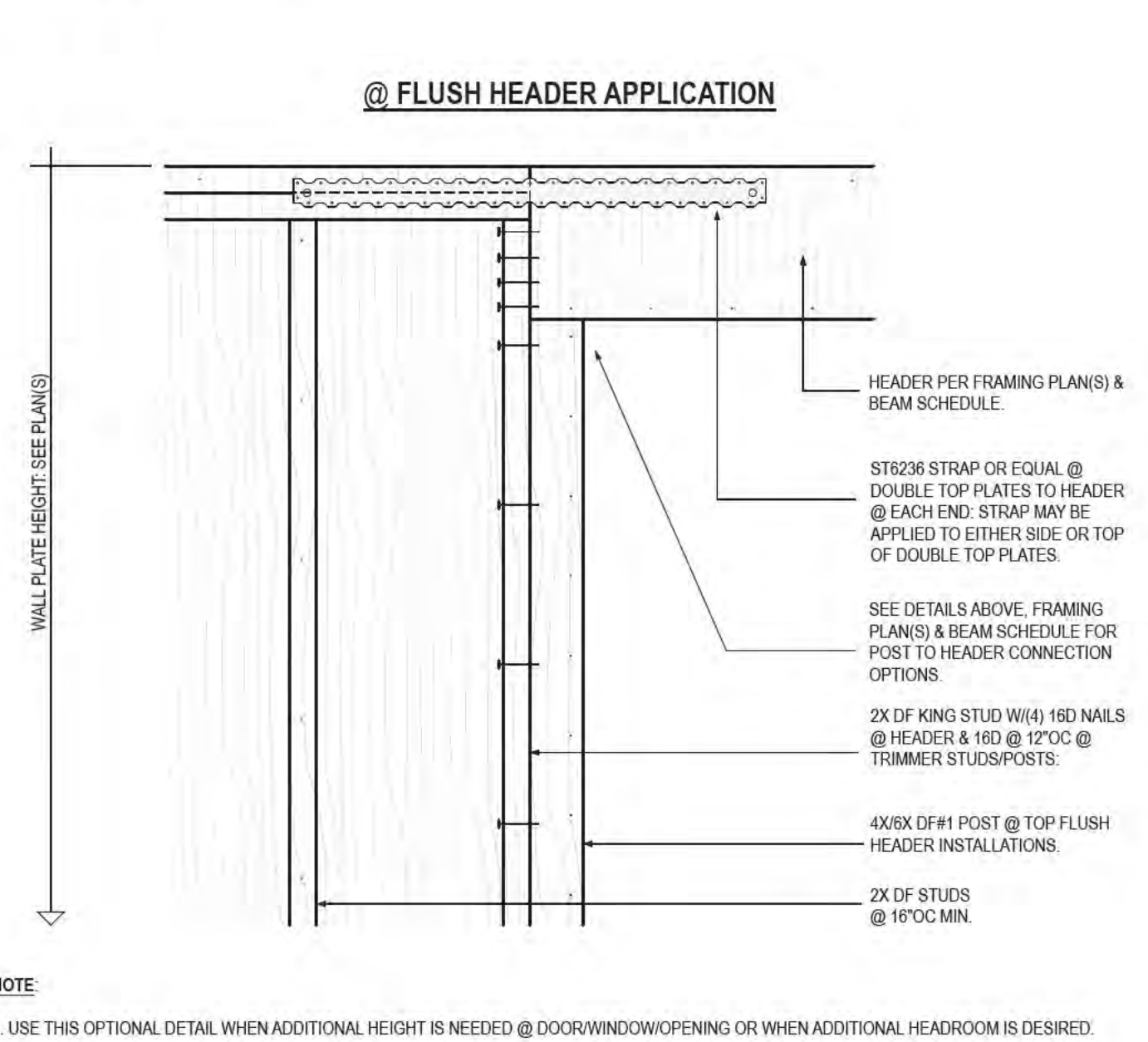
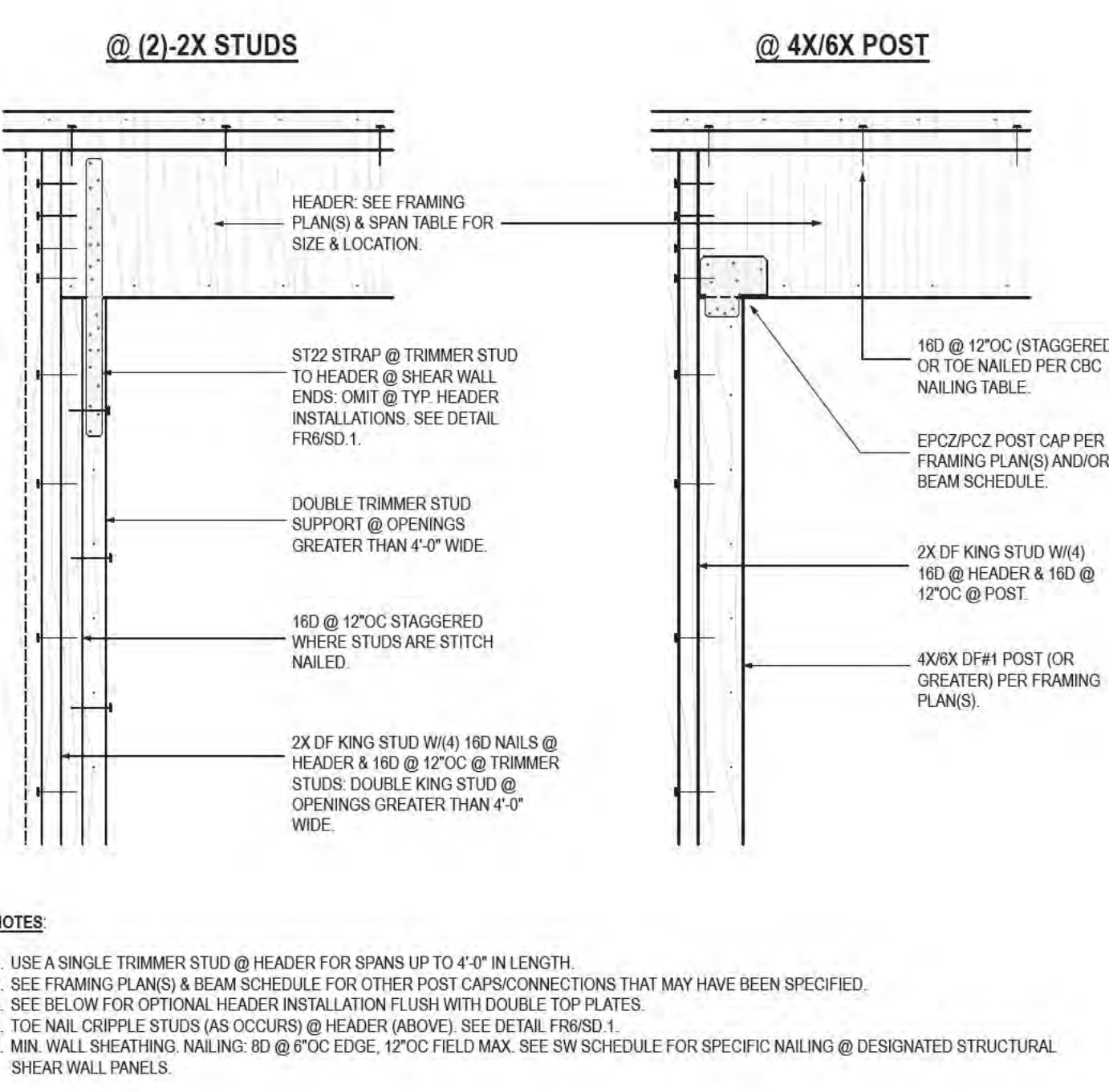
FR3 NOTCHING & BORING
1. VARIATIONS OF NOTED HOLES, CUTS & NOTCHES MAY BE APPROVED BY THE S.O.R.



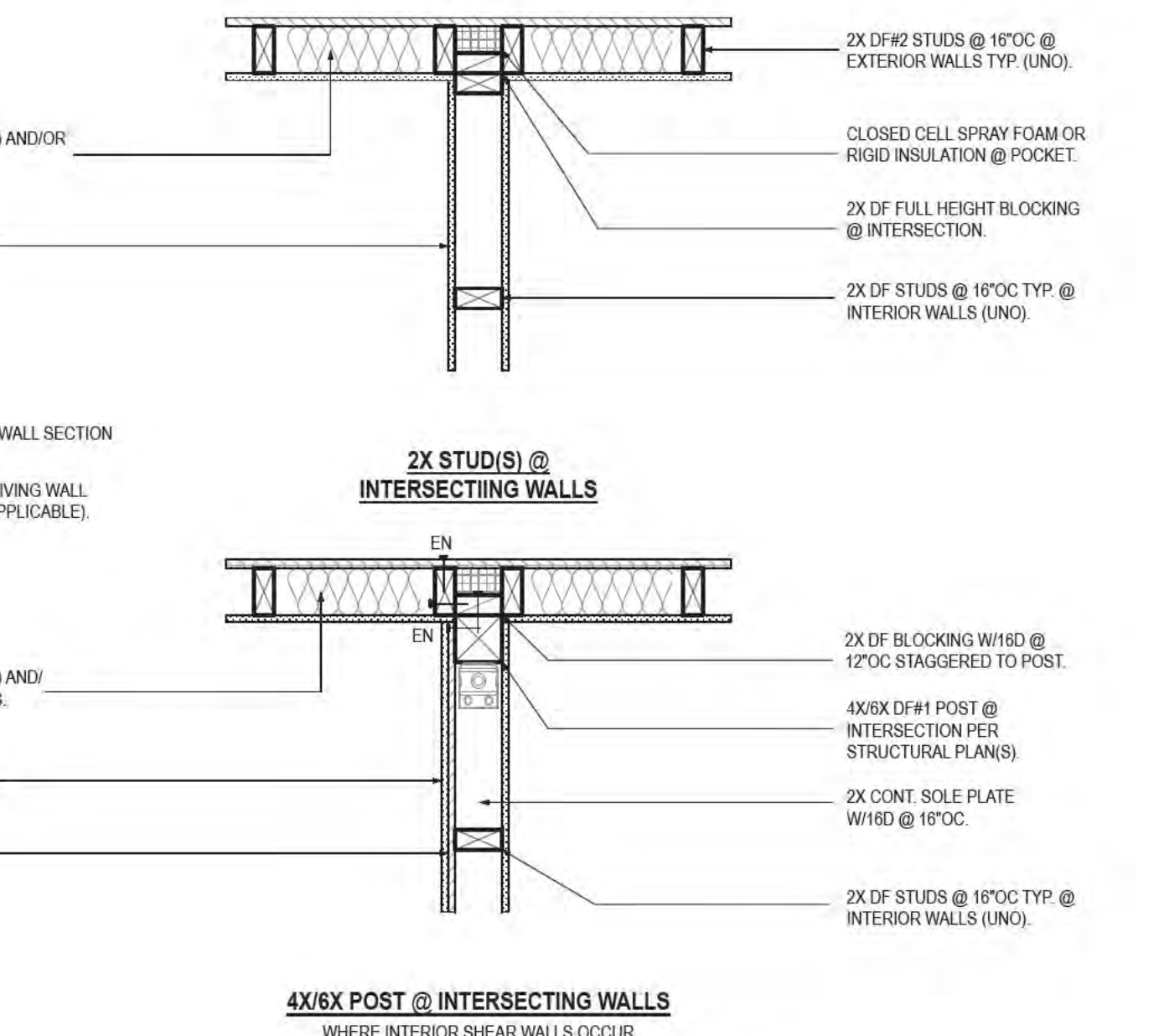
FR4 DOUBLE TOP PLATE LAP/SPLICE



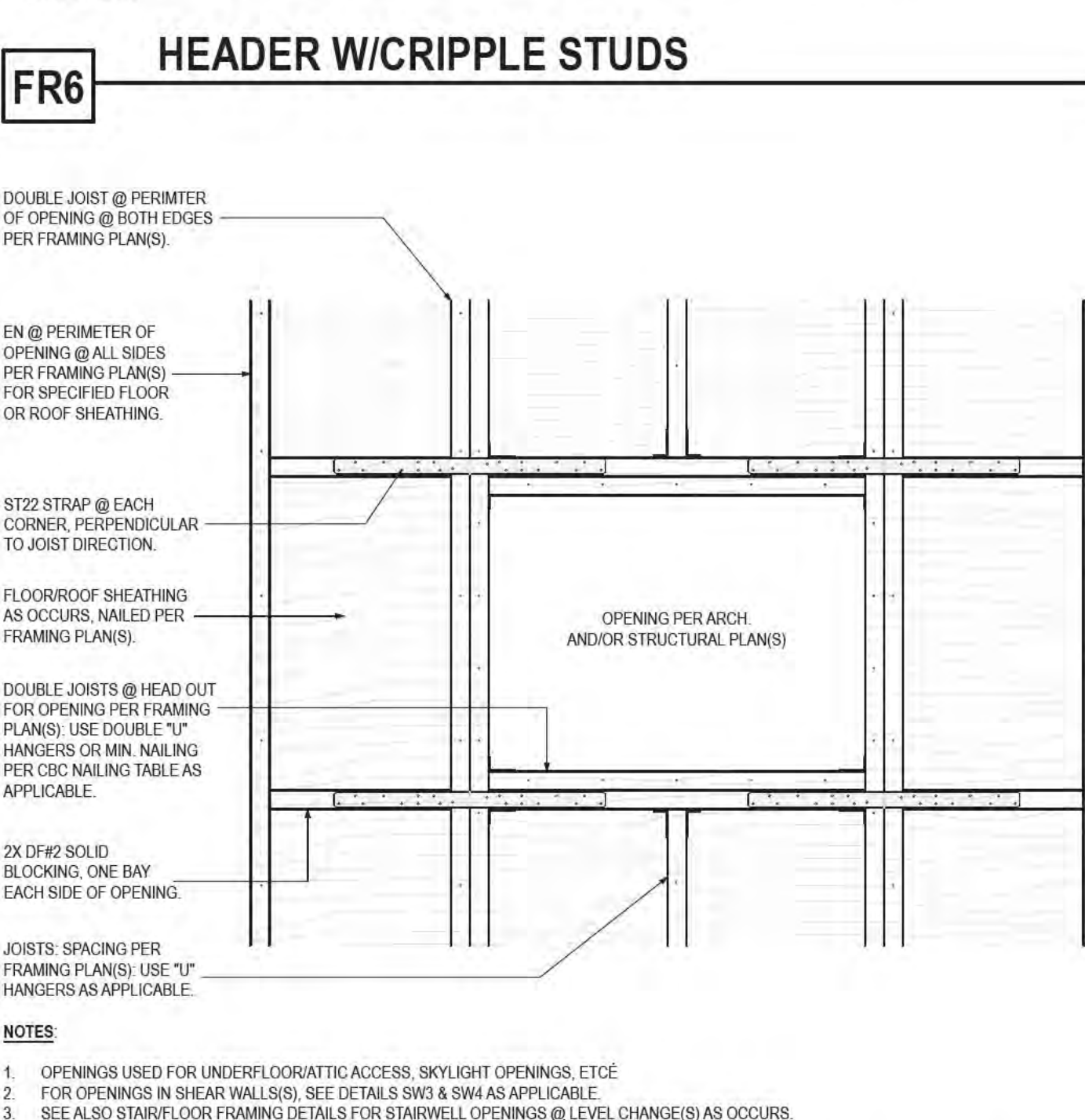
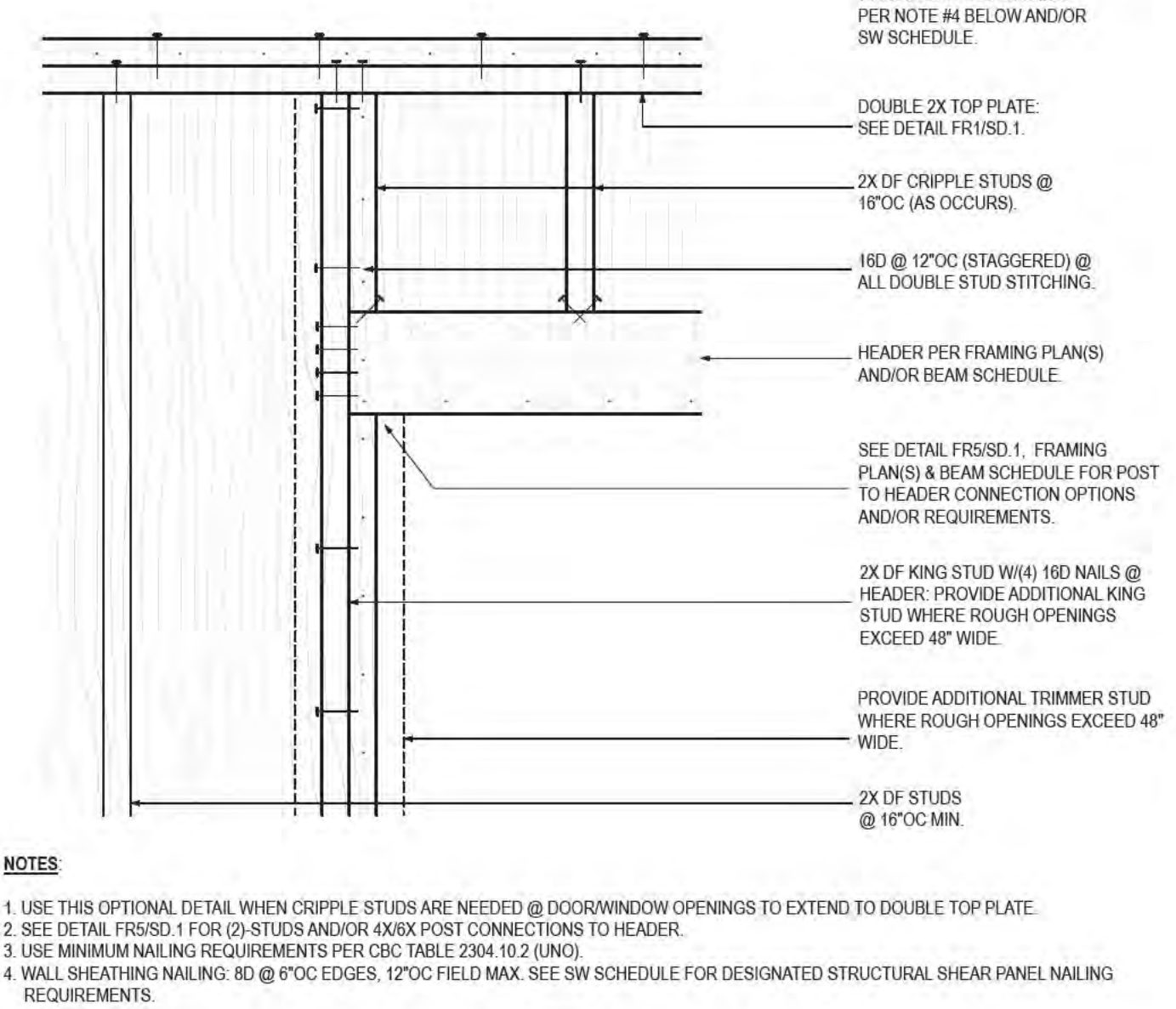
FR2 TYPICAL STUD WALL FRAMING - PLAN VIEW
SEE CBC TABLE 2304.10.2 FOR NAILING REQUIREMENT NOT NOTED ON THIS DRAWING.



FR5 HEADER @ STUDS/POSTS



FR6 HEADER W/CRIPPLE STUDS



FR7 OPENING @ FLOOR, CEILING AND/OR ROOF

REVISIONS:

#

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ARCHITECTURAL DESIGN BY:

STUDIO THREE DESIGN

RESIDENCE

328 BACHMAN AVENUE
LOS GATOS, CA 95030

FRMG. DETAILS

10/21/25

AS NOTED

MAR

DRAWING:

SAVED:

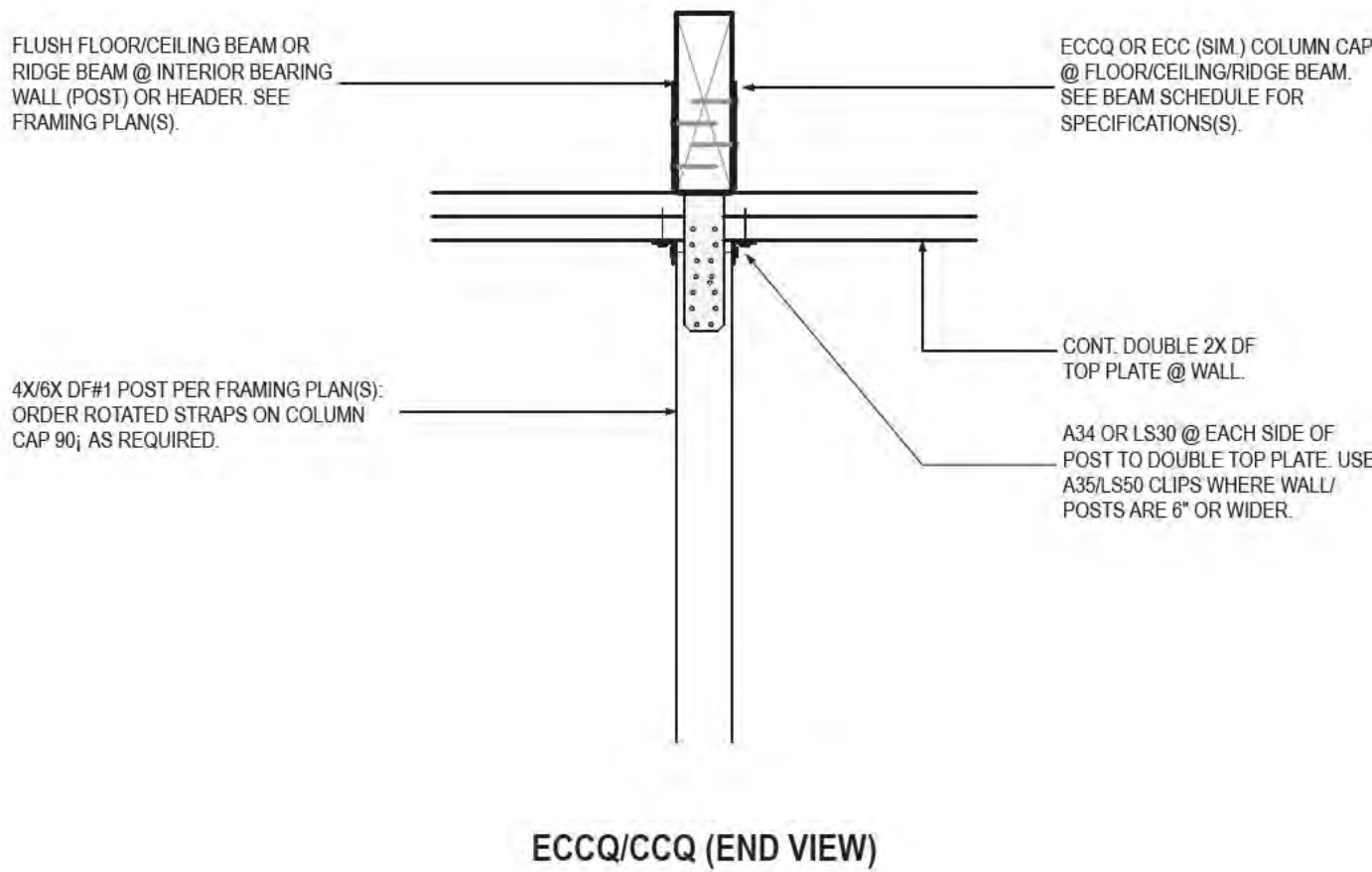
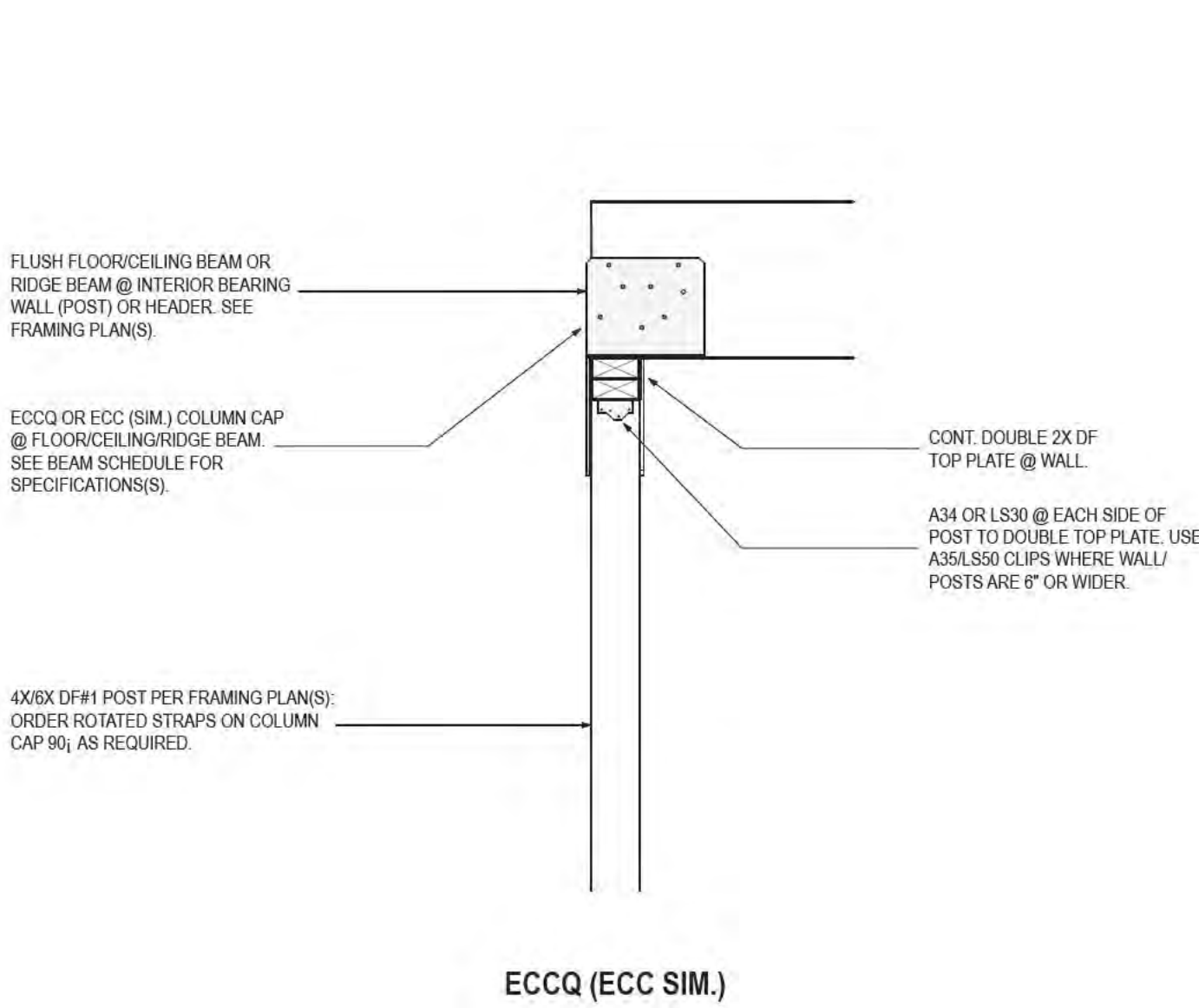
SCALE:

DRAWN BY:

10/21/2025

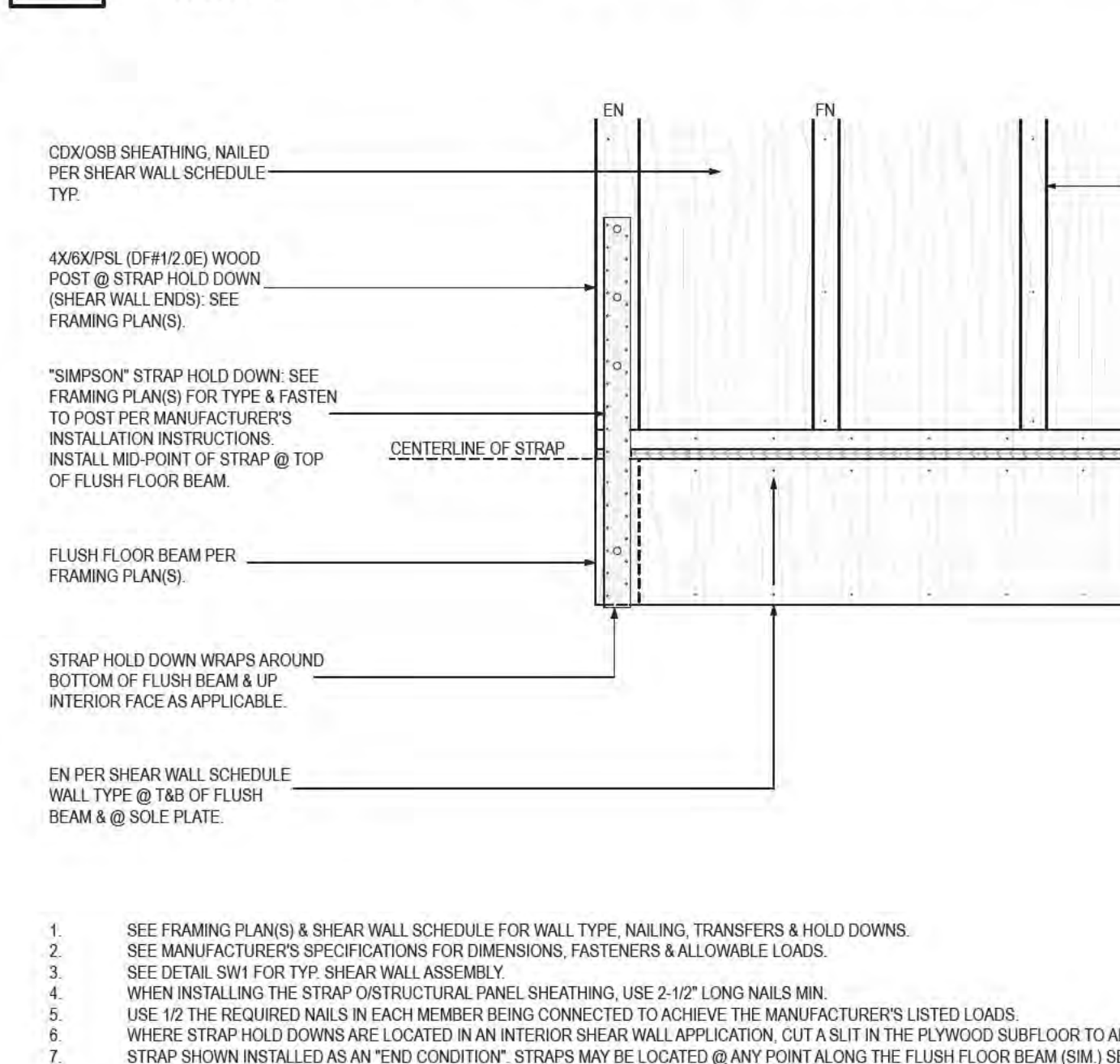
PROFESSIONAL STAMP

SD.1



- NOTES
1. VERIFY ROTATION OF STRAPS AS NEEDED @ ECCQ/ECCQ/CCQ COLUMN CAP & ORDER ACCORDINGLY.
 2. SEE FRAMING PLAN(S) & BEAM SCHEDULE FOR SPECIFIED COLUMN CAPS & POSSIBLE ALTERNATIVES.
 3. CEILING JOISTS, FLOOR JOISTS AND/OR RAFTERS (AS OCCURS) NOT SHOWN FOR CLARITY.
 4. FLUSH BEAM(S) SUPPORTED BY HEADER/BEAM BELOW DOUBLE TOP PLATES, SIM.

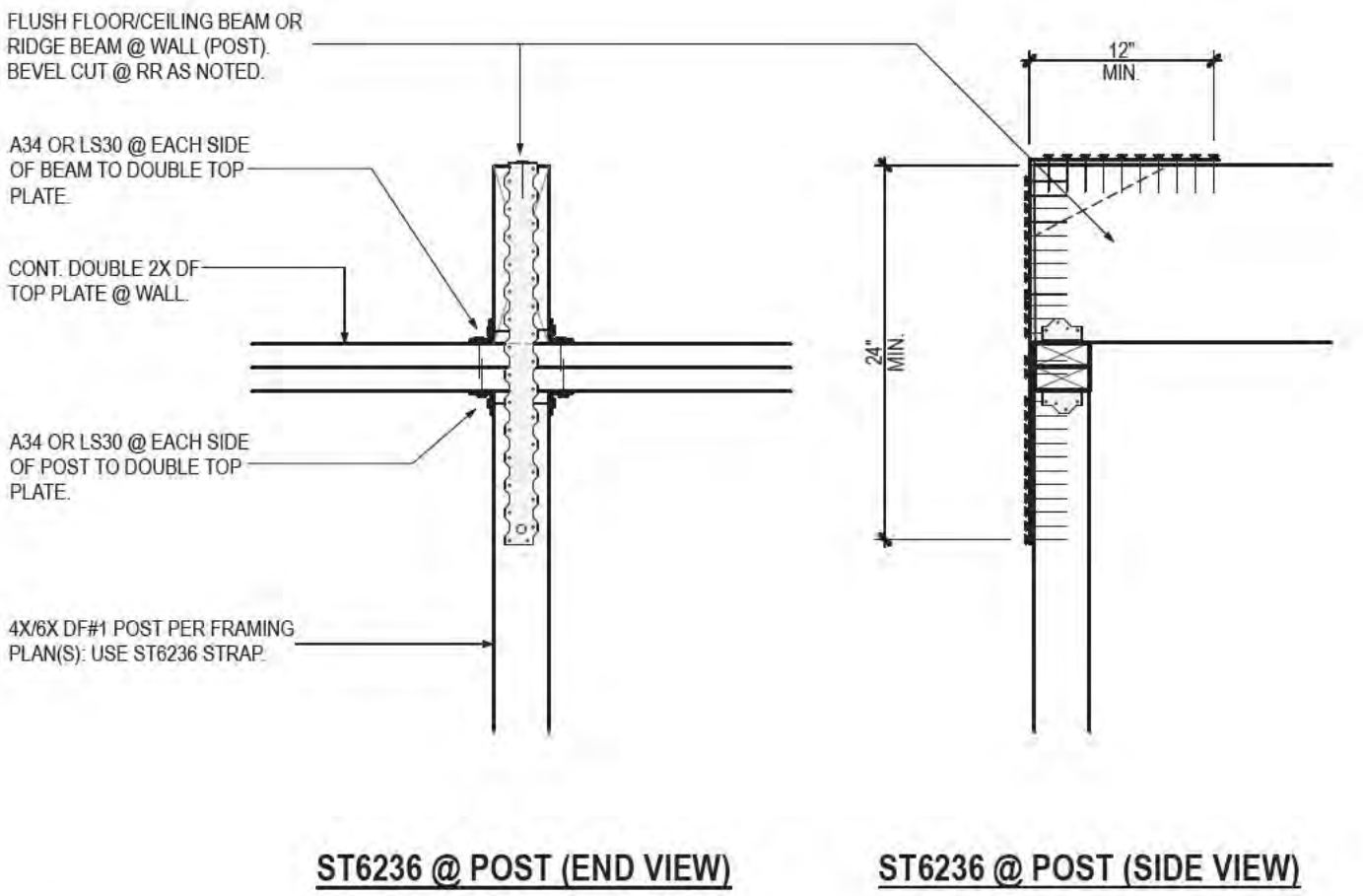
FR8 FLUSH WOOD BEAM @ POST W/CCQ/ECCQ



1. SEE FRAMING PLAN(S) & SHEAR WALL SCHEDULE FOR WALL TYPE, NAILING, TRANSFERS & HOLD DOWNS.
2. SEE MANUFACTURER'S SPECIFICATIONS FOR DIMENSIONS, FASTENERS & ALLOWABLE LOADS.
3. SEE DETAIL SW1 FOR TYP. SHEAR WALL ASSEMBLY.
4. WHEN INSTALLING THE STRAP O/STRUCTURAL PANEL SHEATHING, USE 2-1/2" LONG NAILS MIN.
5. USE 1/2 THE REQUIRED NAILS IN EACH MEMBER BEING CONNECTED TO ACHIEVE THE MANUFACTURER'S LISTED LOADS.
6. WHERE STRAP HOLD DOWNS ARE LOCATED IN AN INTERIOR SHEAR WALL APPLICATION, CUT A SLIT IN THE PLYWOOD SUBFLOOR TO ALLOW STRAP INSERTION THROUGH THE FLOOR TO POST BELOW.
7. STRAP SHOWN INSTALLED AS AN "END CONDITION". STRAPS MAY BE LOCATED @ ANY POINT ALONG THE FLUSH FLOOR BEAM (SIM.) SEE FRAMING PLAN(S).

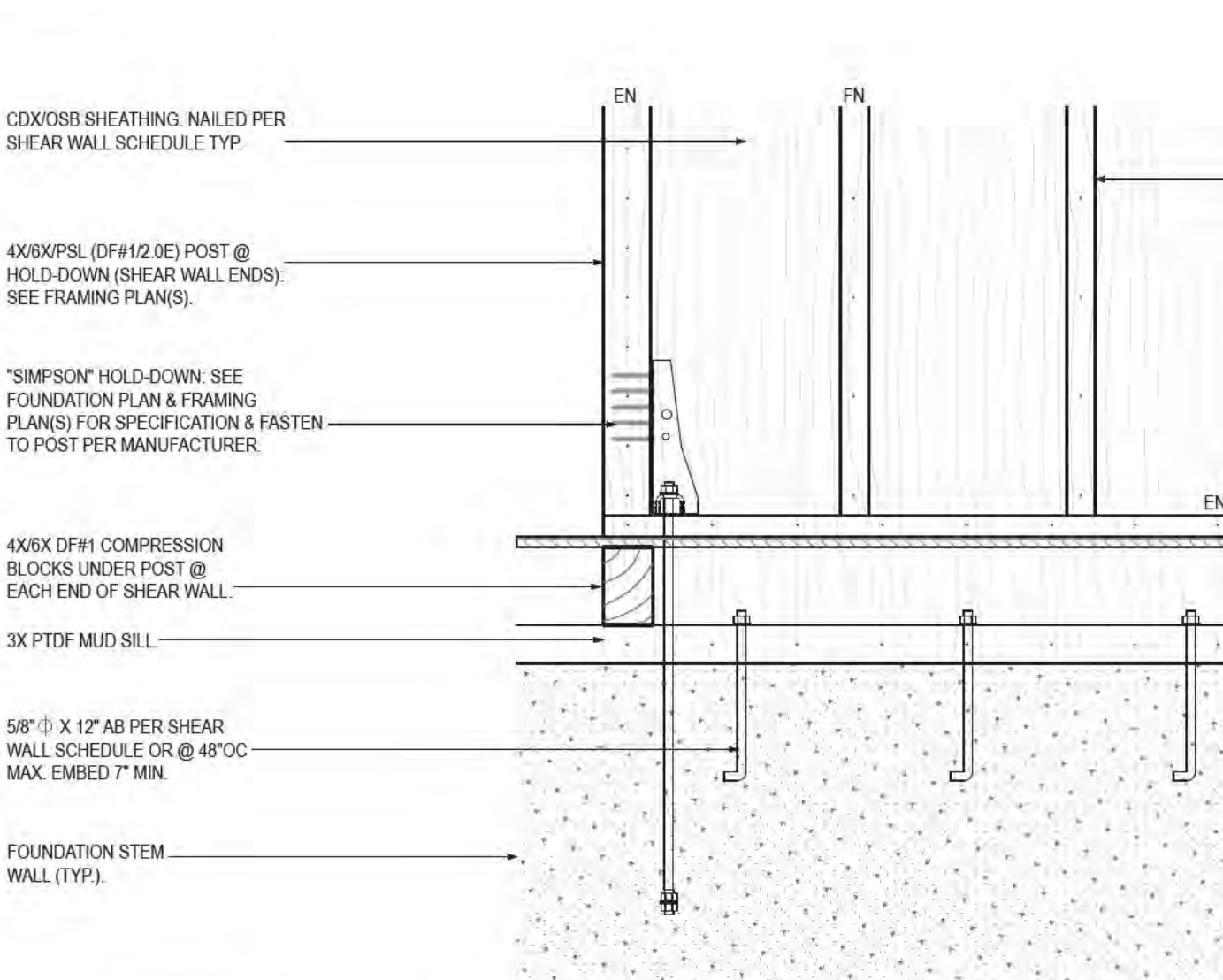
HD6 STRAP HOLD DOWN @ 2ND LEVEL - BEAM BELOW

SHEAR WALLS SUPPORTED BY FLOOR BEAM(S)



- NOTES
1. USE ALL RECOMMENDED FASTENERS PER SIMPSON STRONG TIE.
 2. IN ADDITION TO HARDWARE SPECIFIED, PROVIDE MINIMUM NAIL NG PER CBC TABLE 2304.10.2.
 3. BEVEL CUT FLUSH BEAM @ RR AS PERMITTED (SIM LAR).
 4. HEADERS MAY BE NSTALLD FLUSH UP TO BEAM: SEE BEAM SCHEDULE FOR INDICATION.

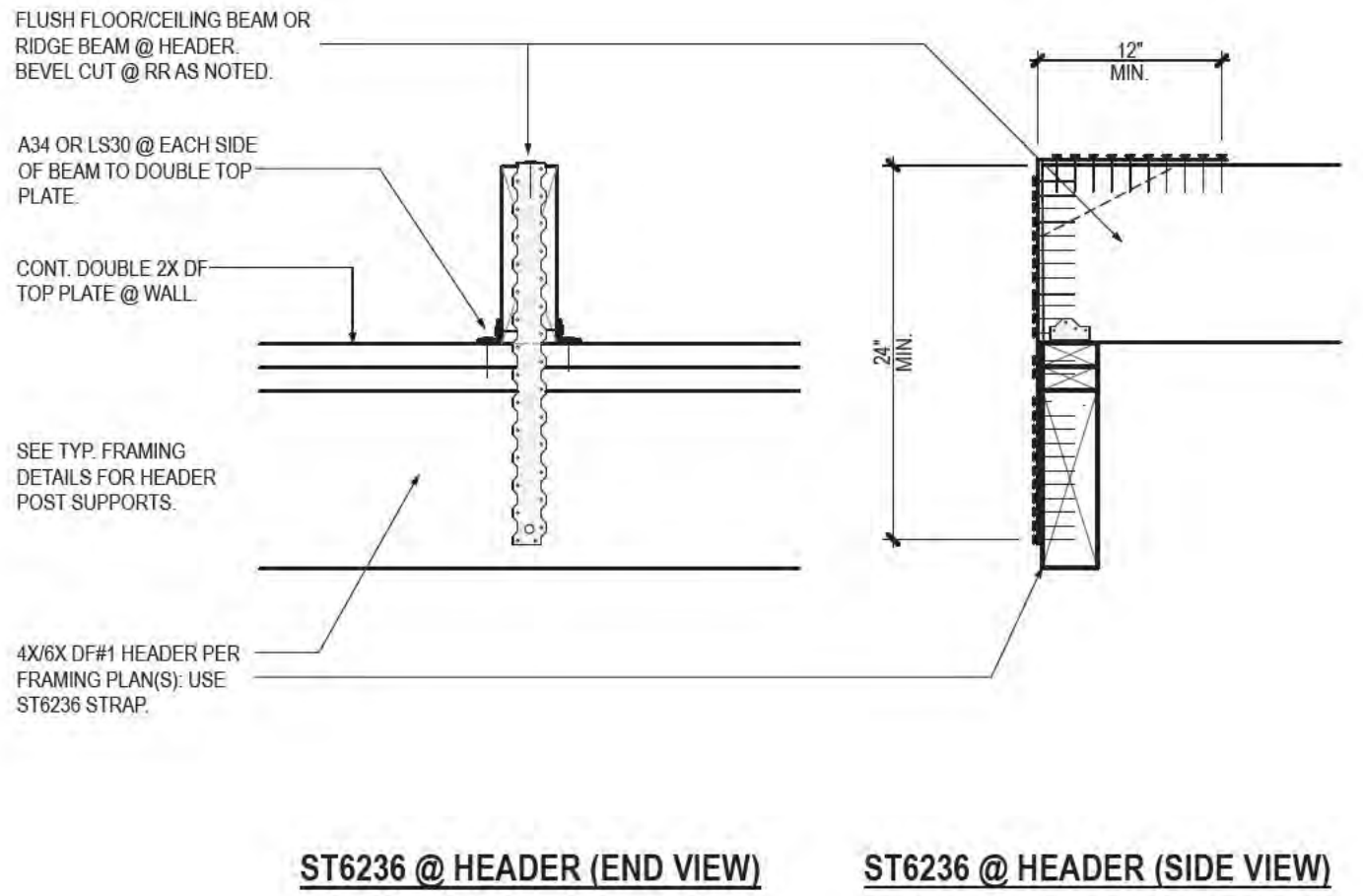
FR9 FLUSH WOOD BEAM @ POST/HEADER W/ST6236



1. SEE MANUFACTURER'S SPECIFICATIONS FOR DIMENSIONS, FASTENERS & ALLOWABLE LOADS.
2. SEE MANUFACTURER'S SPECIFICATIONS FOR HOLD-DOWN BOLT INFORMATION.
3. SECURE ALL STEEL REINFORCING IN PLACE PRIOR TO CURING OF CONCRETE.
4. USE SIMPSON "ANCHOR MATE" (AM) FOR ALL WET SET ANCHORS & "ANCHOR BOLT STABILIZER" (ABS) IN ADDITION FOR ALL HOLD-DOWN ANCHORS.
5. USE 229 X 3" X 3" HOT DIPPED GALVANIZED (HDG) OR STAINLESS STEEL (SS) SQUARE WASHERS @ ALL ABS TYP. (UNO).

HD1 HOLD DOWN @ RAISED WOOD FLOOR

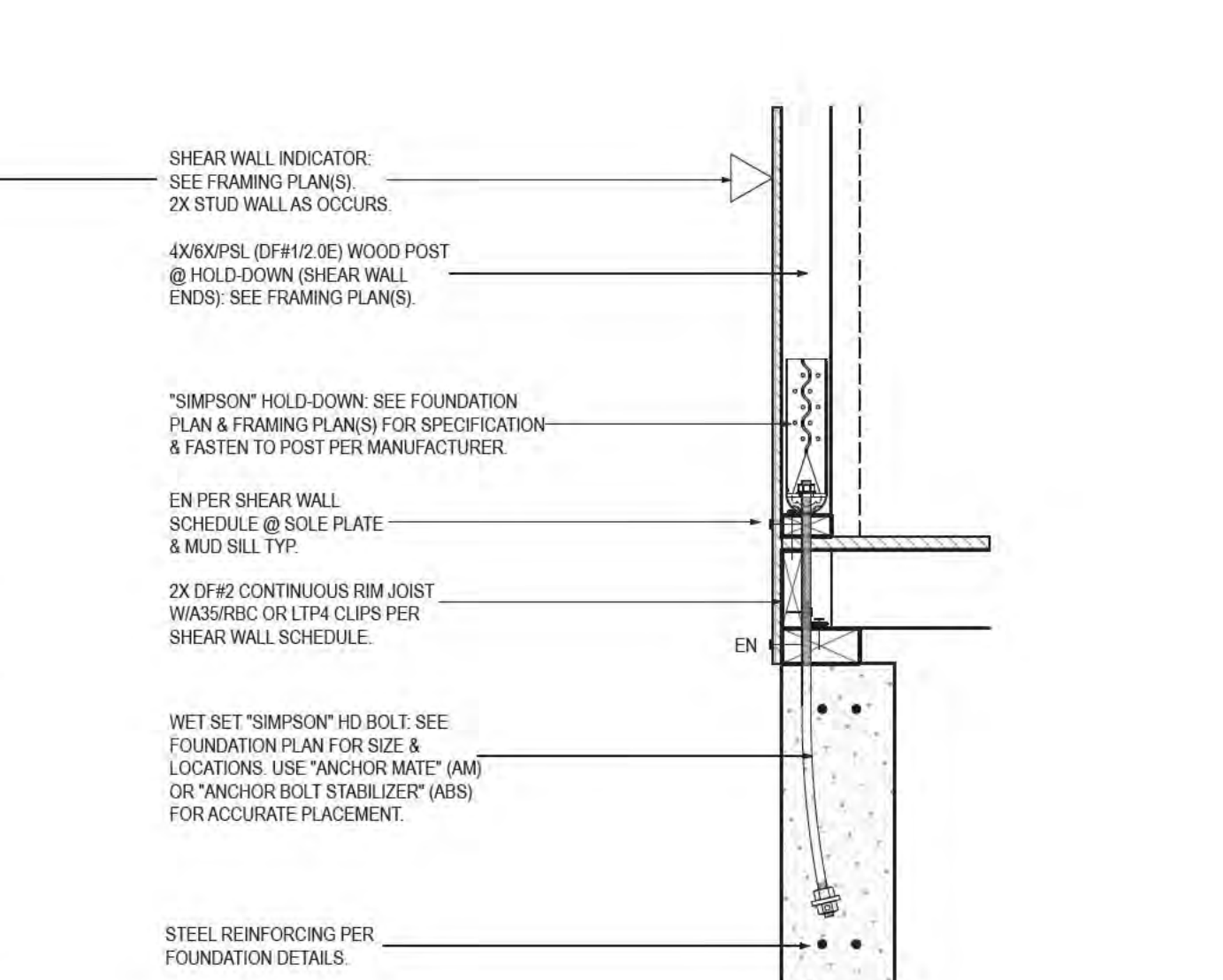
"WET-SET" APPLICATION



- NOTES
1. USE ALL RECOMMENDED FASTENERS PER SIMPSON STRONG TIE.
 2. IN ADDITION TO HARDWARE SPECIFIED, PROVIDE MINIMUM NAILING PER CBC TABLE 2304.10.2.
 3. FLUSH BEAM SUPPORTED BY HEADER/BEAM BELOW DOUBLE TOP PLATES, SIMILAR.
 4. BEVEL CUT TOP OF FLUSH BEAM TO ALIGN WITH TOP EDGE OF RRS.
 5. SEE TYPICAL EAVE DETAILS FOR INFORMATION NOT SHOWN HERE.

FR11 FLUSH WOOD BEAM @ EAVE

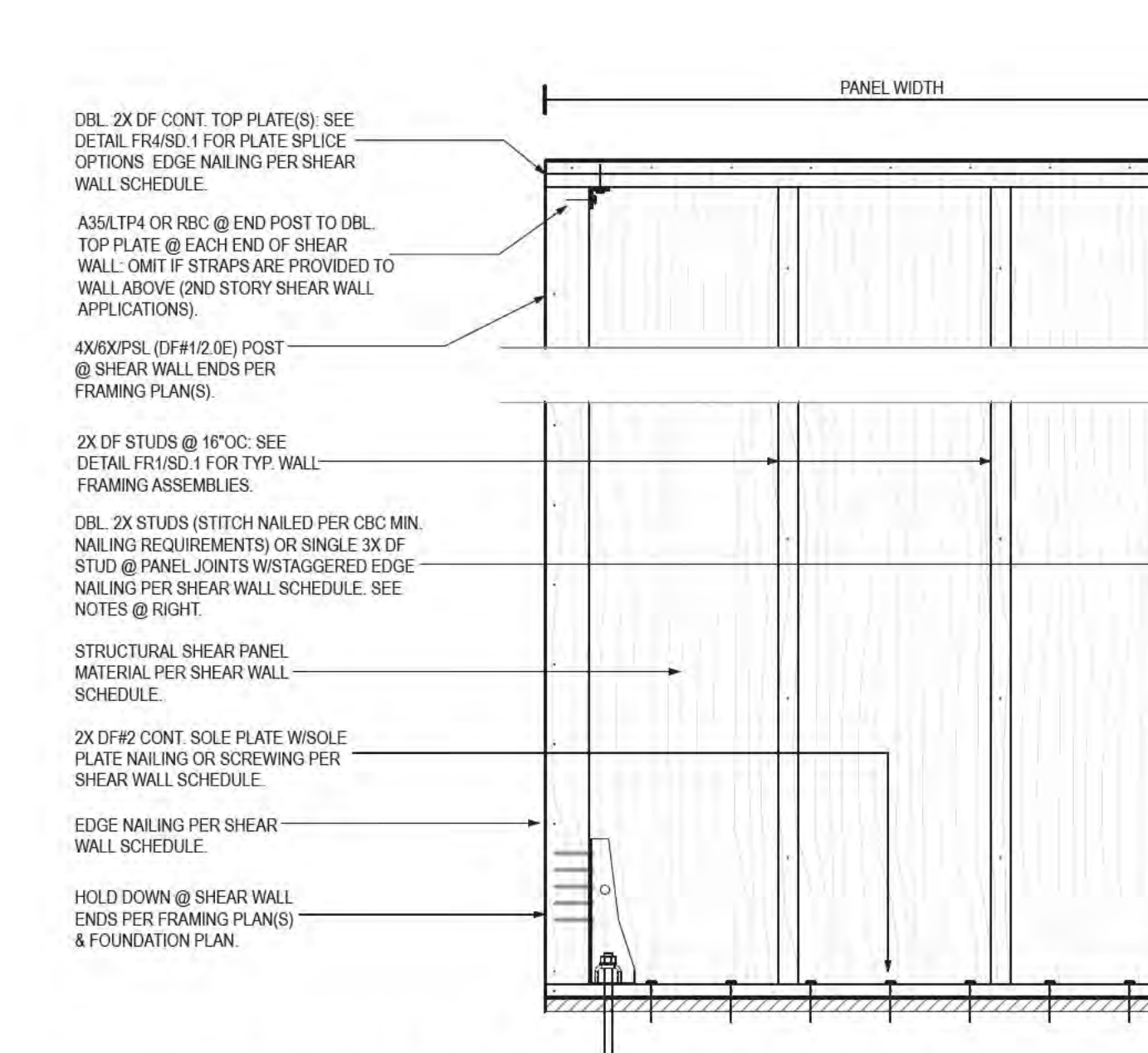
BEVEL CUT @ RAFTERS W/MTS STRAP



1. SEE FRAMING PLAN(S) & FOUNDATION PLAN FOR SHEAR WALL LOCATIONS & HOLD DOWN TYPES.
2. SEE DETAILS HD1/HD2/HD3 (AS APPLICABLE) FOR HOLD DOWN & ANCHOR BOLT ANCHORAGE/INSTALLATION.
3. SHEAR PANELS SHALL BE FULL HEIGHT WHERE POSSIBLE. WHERE CUT, MINIMUM PANEL HEIGHTS SHALL BE 12" WITH 3X SOLID BLOCKING & EDGE NAILING PER SHEAR WALL SCHEDULE @ HORIZONTAL JOINTS.
4. SHEAR PANELS SHALL BE ONE PIECE @ SHEAR WALLS 48"W OR LESS. MINIMUM SHEAR PANELS SHALL BE 24"W.
5. MAINTAIN 1/16" G/LR BETWEEN ALL PANEL EDGES.
6. PROVIDE 4X6XPSL (DF#1/2 OE) POSTS @ VERTICAL PANEL JOINTS, WHERE SHEAR MATERIAL IS APPLIED TO BOTH WALL FACES.
7. FIELD NAILING OF STRUCTURAL SHEAR PANEL MATERIAL PER SHEAR WALL SCHEDULE.
8. SEE DETAIL SW2 FOR 2-STORY STACKING SHEAR WALLS.

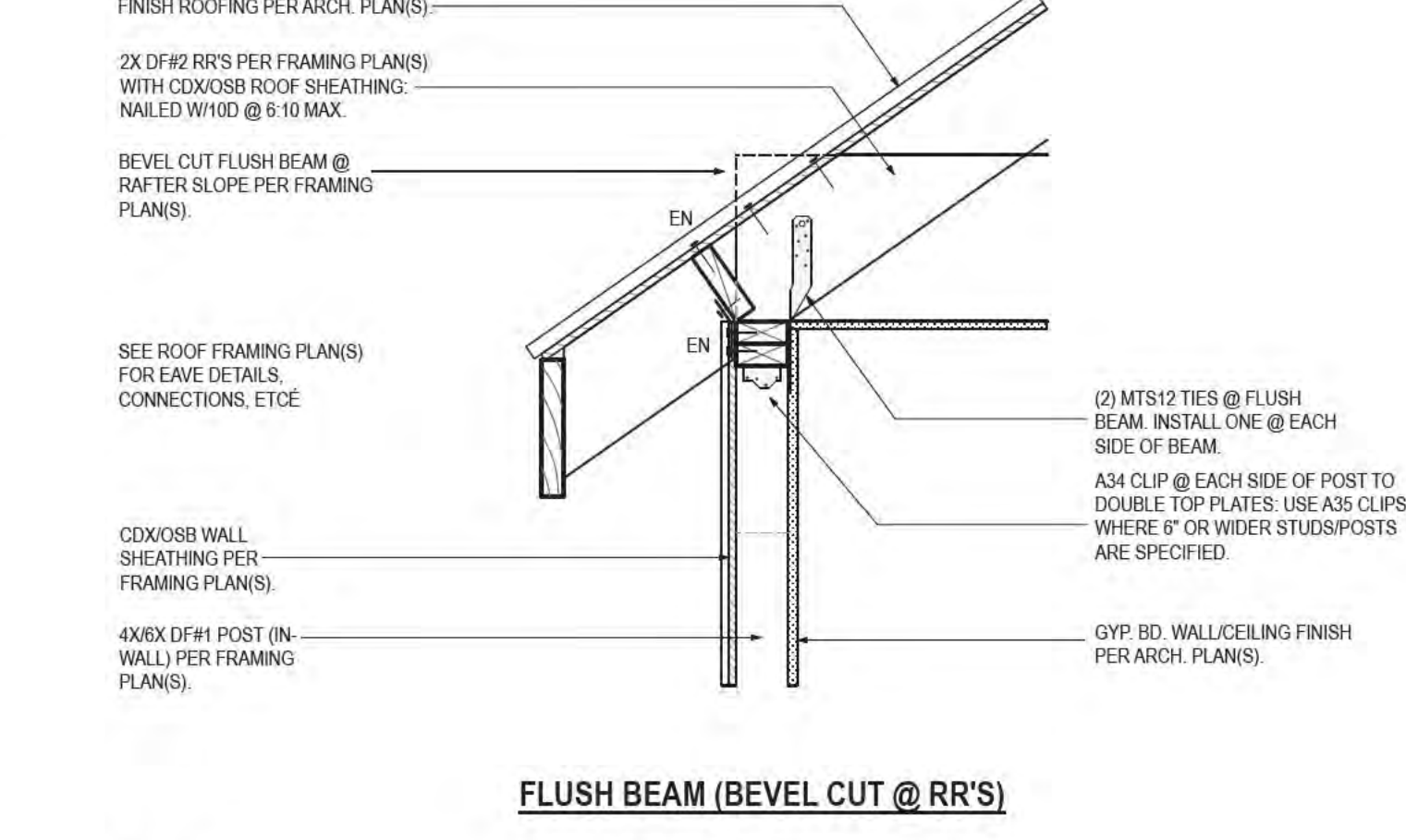
HD1 HOLD DOWN @ RAISED WOOD FLOOR

"WET-SET" APPLICATION



SW1 SHEAR WALL: ONE-STORY SHEAR WALL

SEE SHEAR WALL SCHEDULE FOR SHEAR WALL TYPE, MATERIAL, NAILING & ANCHORAGE



- NOTES
1. USE ALL RECOMMENDED FASTENERS PER SIMPSON STRONG TIE.
 2. IN ADDITION TO HARDWARE SPECIFIED, PROVIDE MINIMUM NAILING PER CBC TABLE 2304.10.2.
 3. FLUSH BEAM SUPPORTED BY HEADER/BEAM BELOW DOUBLE TOP PLATES, SIMILAR.
 4. BEVEL CUT TOP OF FLUSH BEAM TO ALIGN WITH TOP EDGE OF RRS.
 5. SEE TYPICAL EAVE DETAILS FOR INFORMATION NOT SHOWN HERE.

FR11 FLUSH WOOD BEAM @ EAVE

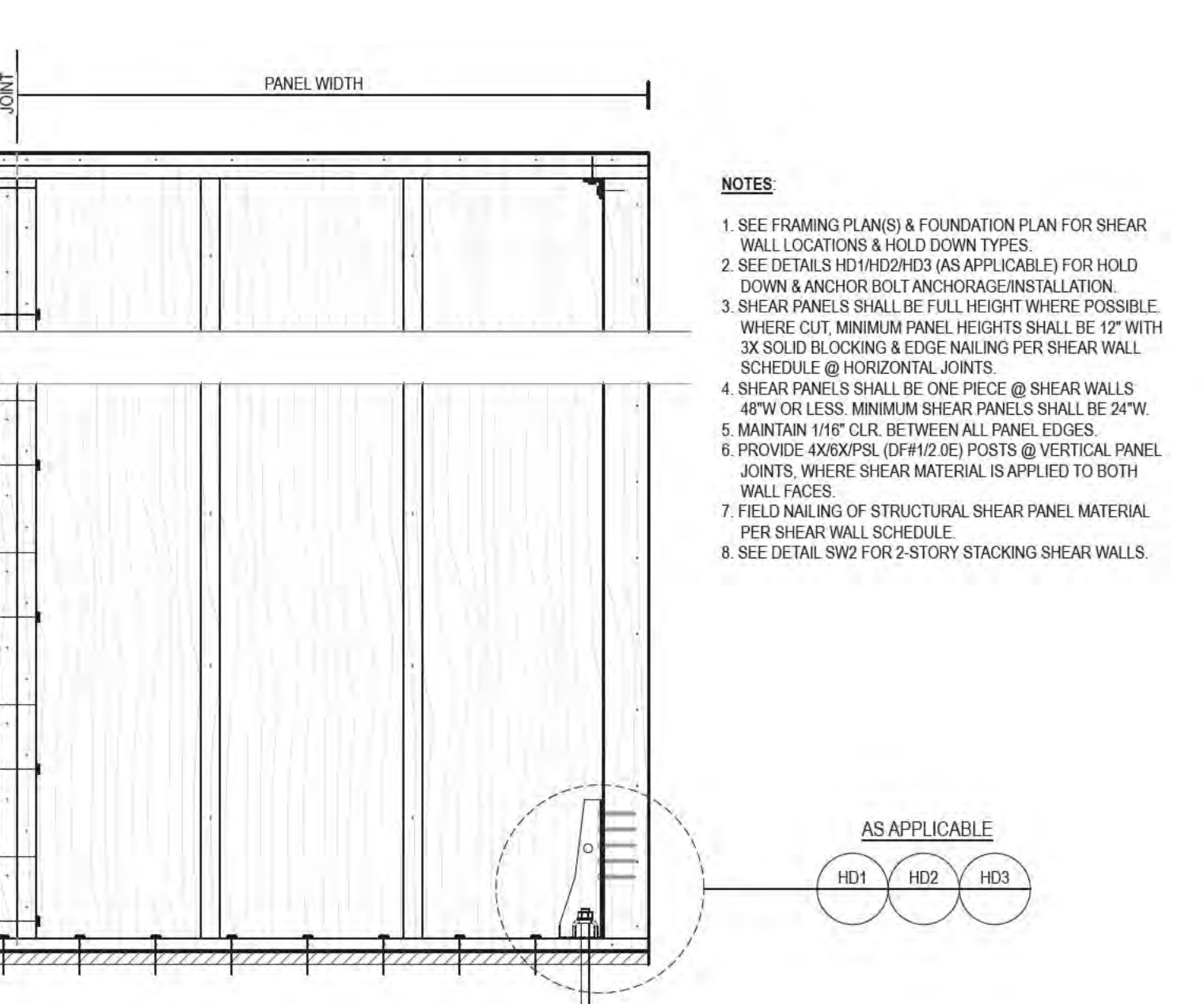
BEVEL CUT @ RAFTERS W/MTS STRAP



1. SEE FRAMING PLAN(S) & FOUNDATION PLAN FOR SHEAR WALL LOCATIONS & HOLD DOWN TYPES.
2. SEE DETAILS HD1/HD2/HD3 (AS APPLICABLE) FOR HOLD DOWN & ANCHOR BOLT ANCHORAGE/INSTALLATION.
3. SHEAR PANELS SHALL BE FULL HEIGHT WHERE POSSIBLE. WHERE CUT, MINIMUM PANEL HEIGHTS SHALL BE 12" WITH 3X SOLID BLOCKING & EDGE NAILING PER SHEAR WALL SCHEDULE @ HORIZONTAL JOINTS.
4. SHEAR PANELS SHALL BE ONE PIECE @ SHEAR WALLS 48"W OR LESS. MINIMUM SHEAR PANELS SHALL BE 24"W.
5. MAINTAIN 1/16" G/LR BETWEEN ALL PANEL EDGES.
6. PROVIDE 4X6XPSL (DF#1/2 OE) POSTS @ VERTICAL PANEL JOINTS, WHERE SHEAR MATERIAL IS APPLIED TO BOTH WALL FACES.
7. FIELD NAILING OF STRUCTURAL SHEAR PANEL MATERIAL PER SHEAR WALL SCHEDULE.
8. SEE DETAIL SW2 FOR 2-STORY STACKING SHEAR WALLS.

HD1 HOLD DOWN @ RAISED WOOD FLOOR

"WET-SET" APPLICATION



SW1 SHEAR WALL: ONE-STORY SHEAR WALL

SEE SHEAR WALL SCHEDULE FOR SHEAR WALL TYPE, MATERIAL, NAILING & ANCHORAGE

REVISIONS:

#

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ARCHITECTURAL DESIGN BY:

STUDIO THREE DESIGN

RESIDENCE

328 BACHMAN AVENUE
LOS GATOS, CA 95030

STRUCTURAL DETAILS

DRAWING: 10/21/25

SAVED: AS NOTED

SCALE: MAR

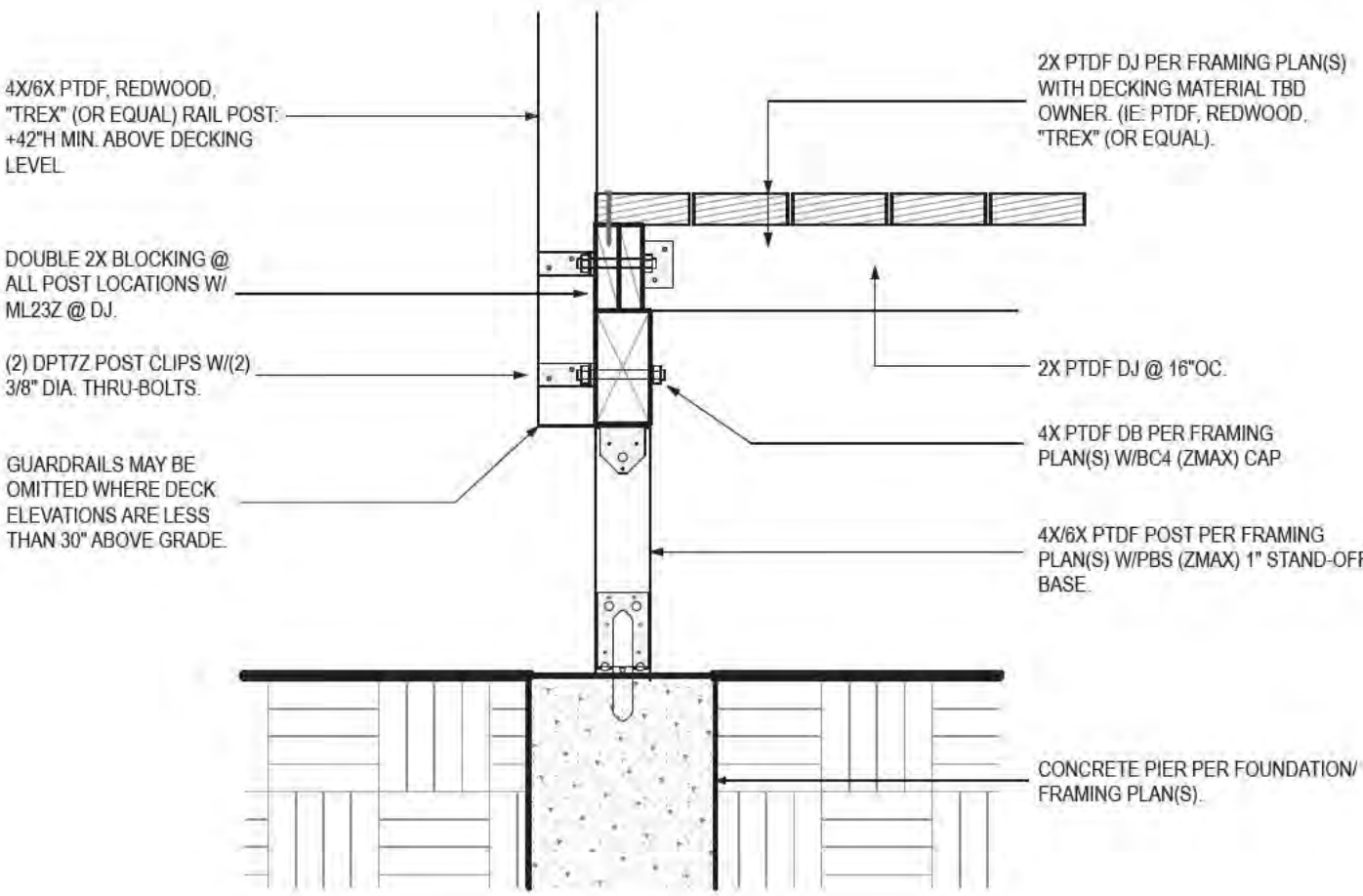
DRAWN BY: M.

REGISTERED PROFESSIONAL ENGINEER
CHARLES WILLIAMS
NO. C 44768
Exp. 6-30-27
CIVIL
STATE OF CALIFORNIA

10/21/2025

PROFESSIONAL STAMP

SD.2

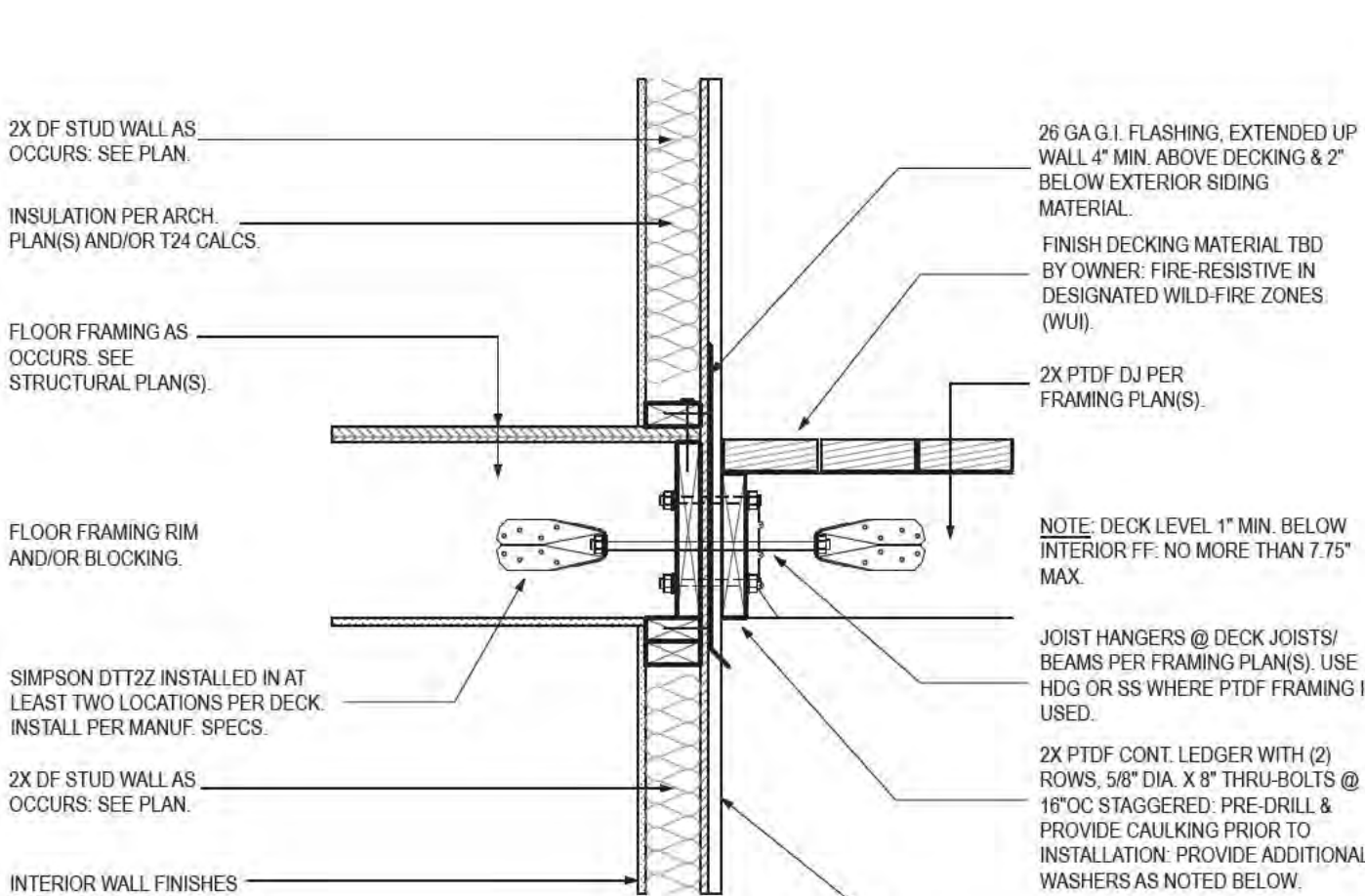


DECK @ EDGE

NOTES

1. F DECK IS LOCATED WITHIN A DESIGNATED W/LD FIRE ZONE. "WALKING SURFACE" SHALL BE OF FIRE-RESISTANT COMPOSITION.
2. USE HDG, "ZMAX" OR SS FASTENERS/CONNECTORS WHERE P.T.D.F. MATERIAL IS USED.

DJ3 DECK FRAMING: @ EDGE (GUARDRAIL)

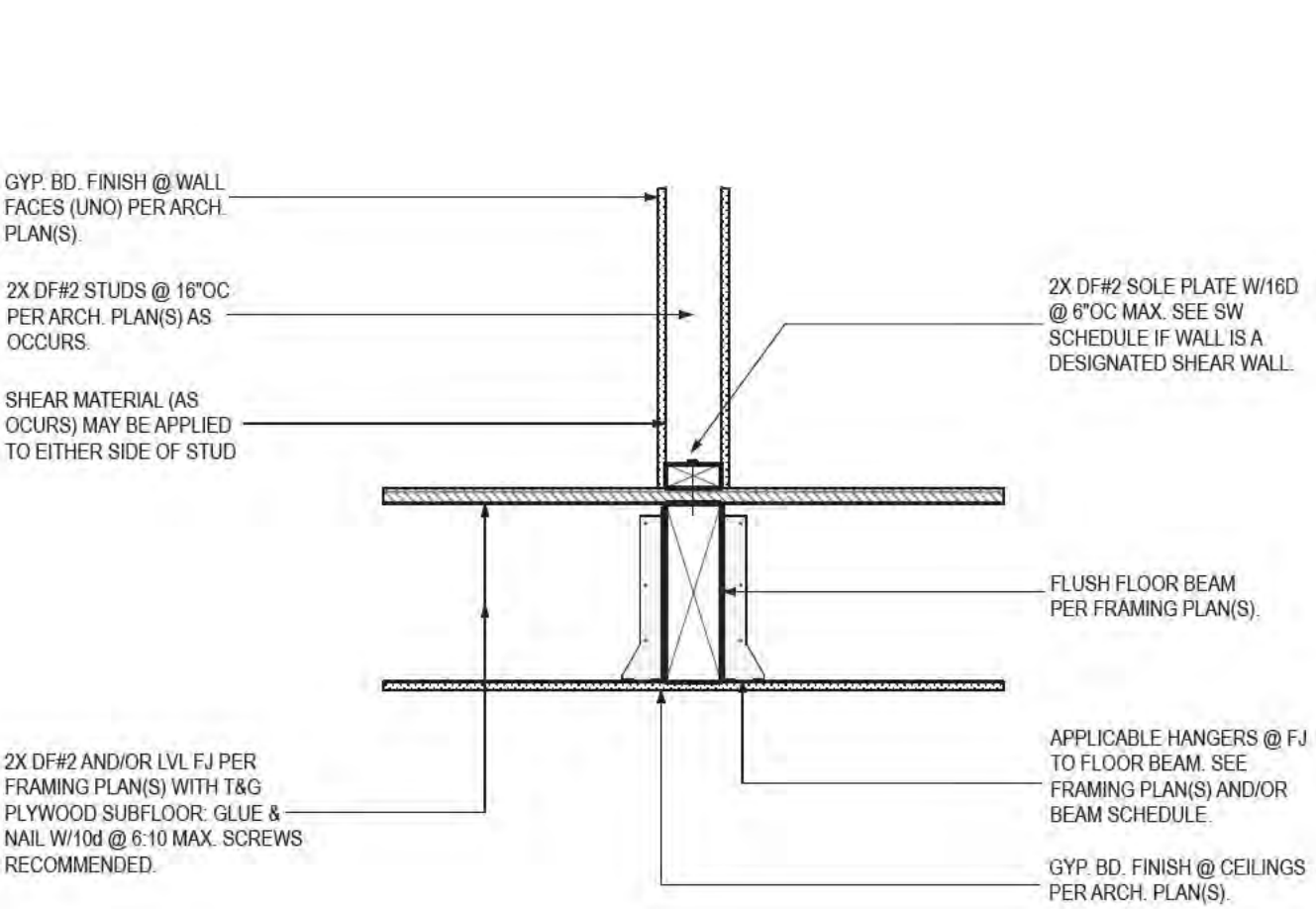


DECK @ 2ND LEVEL

NOTES

1. F DECK IS LOCATED WITHIN A DESIGNATED W/LD FIRE ZONE. "WALKING SURFACE" SHALL BE OF FIRE-RESISTANT COMPOSITION.
2. USE HDG OR SS FASTENERS/CONNECTORS WHERE P.T.D.F. MATERIAL IS USED.
3. USE 12 X 150MM, H2.3 PACKER @ EACH BOLT LOCATION.
4. USE 50 X 3MM THICK EPDM WASHER BETWEEN PACKER/SHEATHING & LEDGER/PACKER.

DJ4 DECK FRAMING: @ 2ND FLOOR WALL



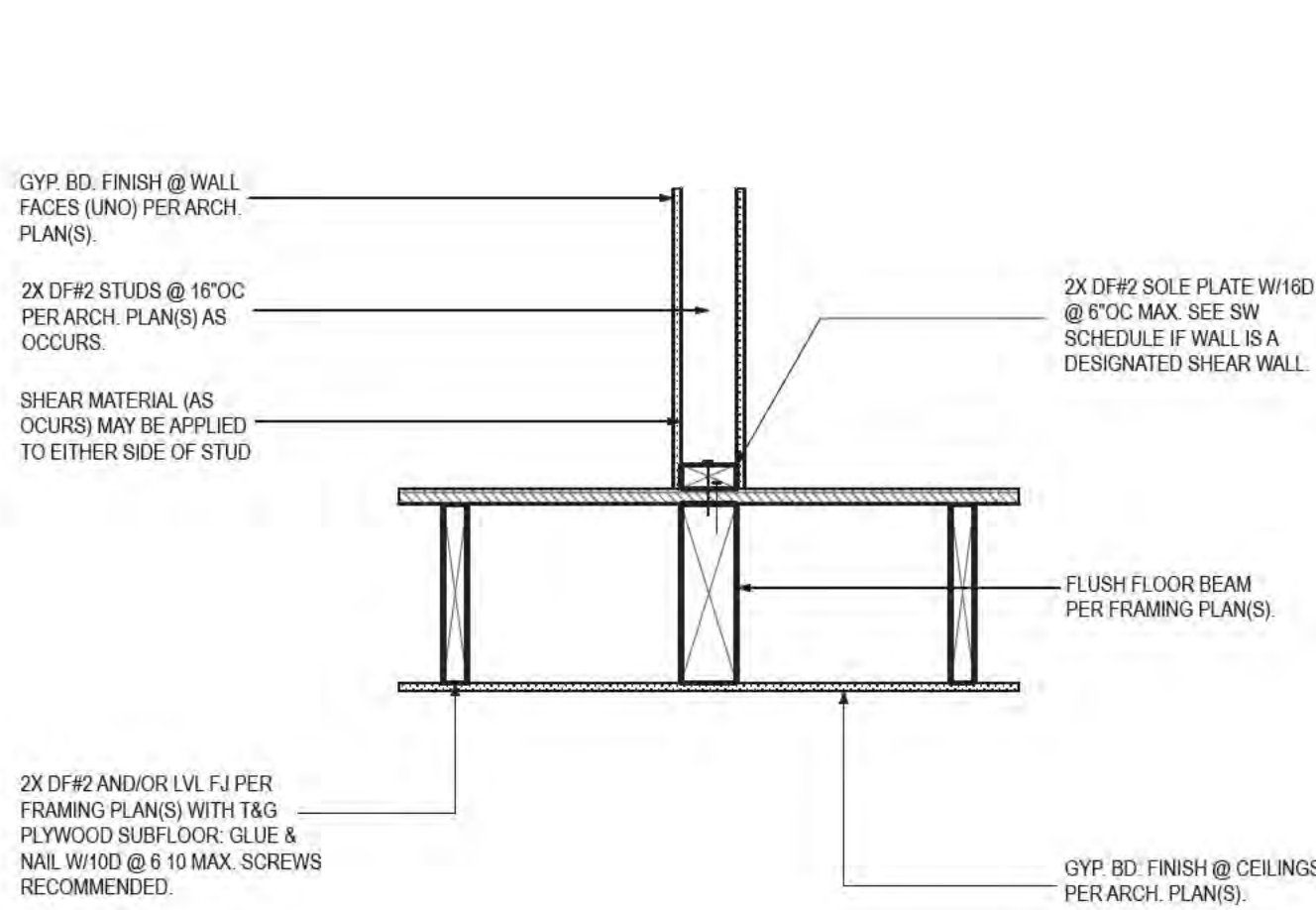
FLOOR JOISTS PERPENDICULAR TO BEAM

NOTES

1. SEE SHEAR WALL DETAILS WHERE DESIGNATED SHEAR WALLS OCCUR @ 2ND LEVEL FLOORS.
2. SEE HOLD DOWN DETAIL @ FLUSH BEAM WHERE OCCURS PER FRAMING PLAN(S).

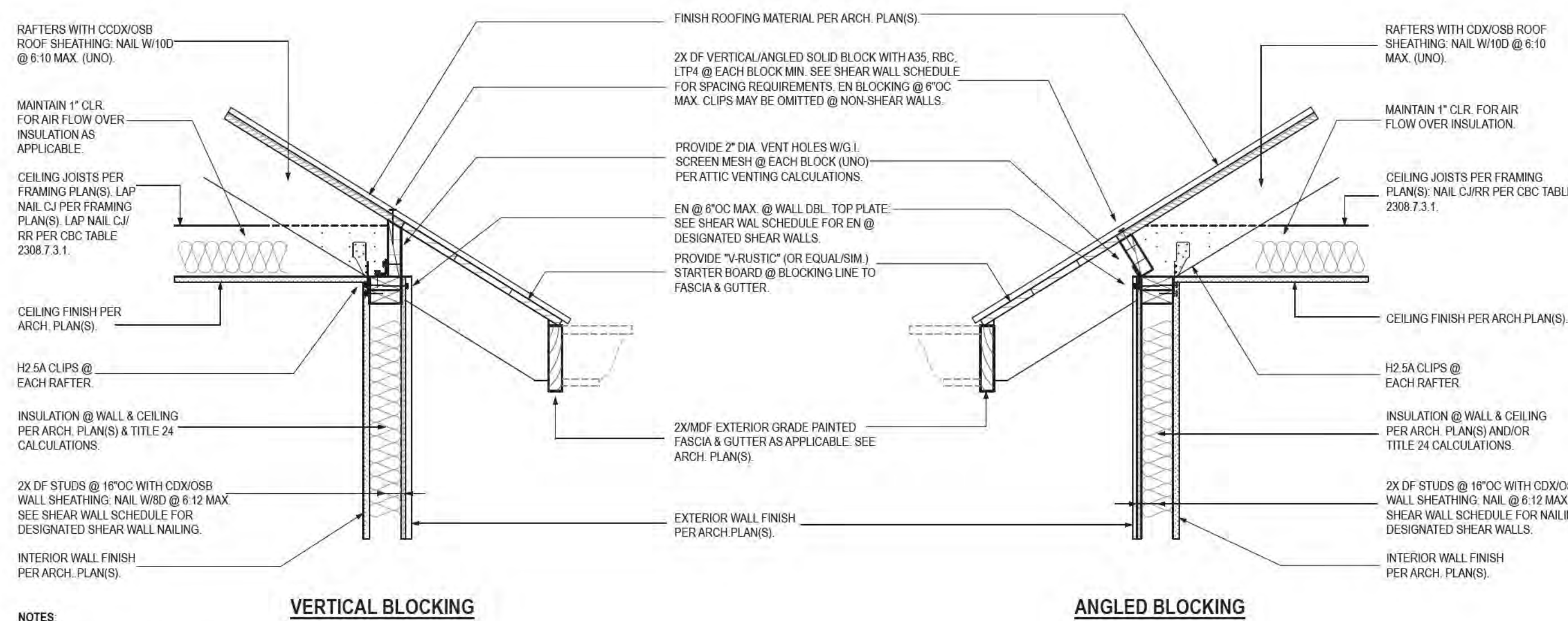
FB1 FLOOR BEAM: @ 2X FLOOR JOISTS

FJ PERPENDICULAR & PARALLEL TO BEAM

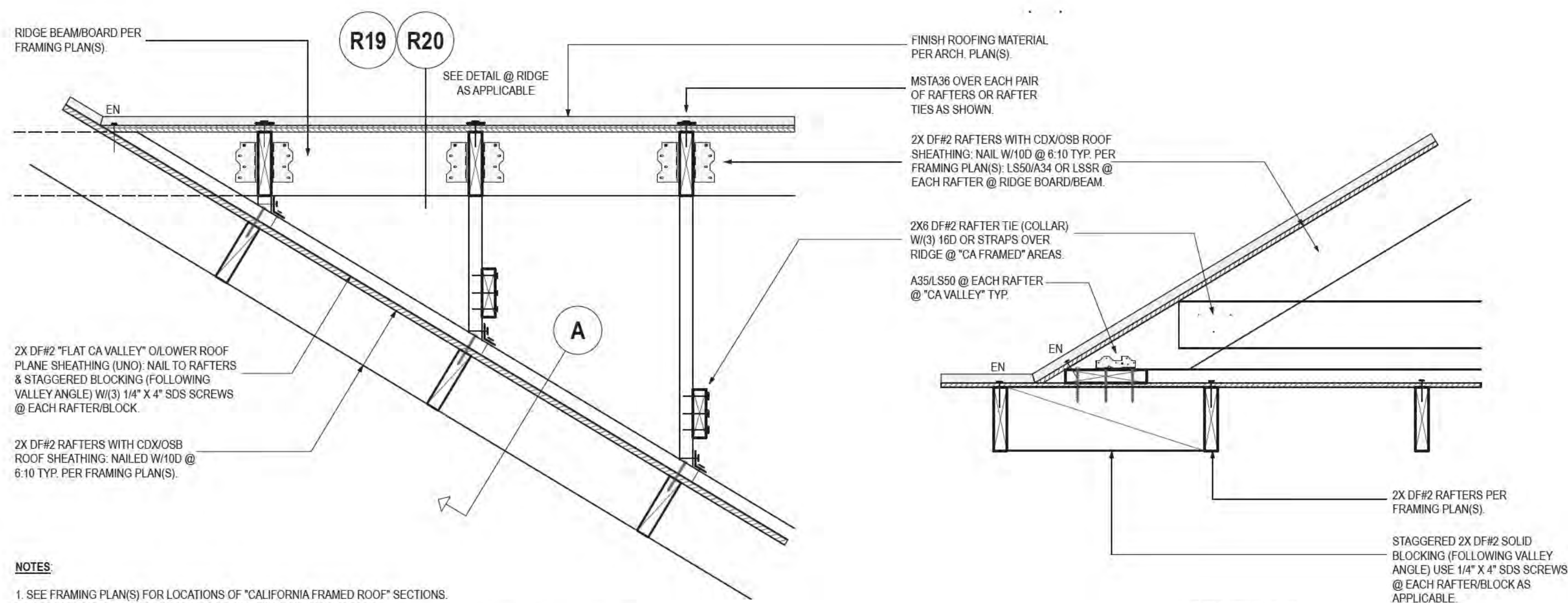


FLOOR JOISTS PARALLEL TO BEAM

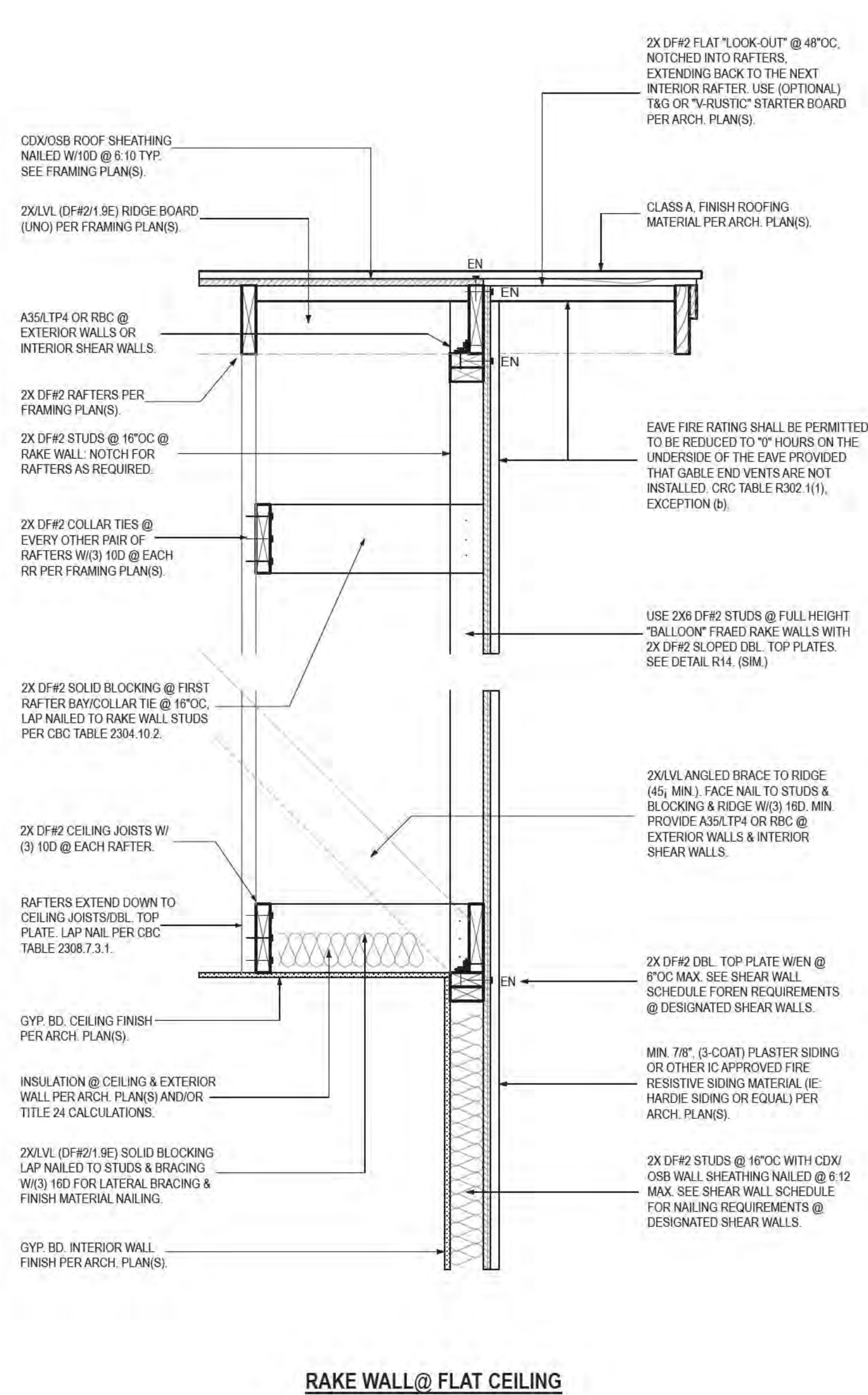
REVISIONS:		#
CW CHARLES WILLIAMS P.E. 650.279.8756 (CELL) cwrc@acl.com		
ARCHITECTURAL DESIGN BY: STUDIO THREE DESIGN		
RESIDENCE 328 BACHMAN AVENUE LOS GATOS, CA 95030		
STRUCTURAL DETAILS	10/21/25	AS NOTED
DRAWING:	SAVED:	SCALE:
DRAWN BY:		MAR
REGISTERED PROFESSIONAL ENGINEER CHARLES L. WILLIAMS NO. C 44768 Exp 6-30-27 CIVIL STATE OF CALIFORNIA 10/21/2025 PROFESSIONAL STAMP		
SD.3		



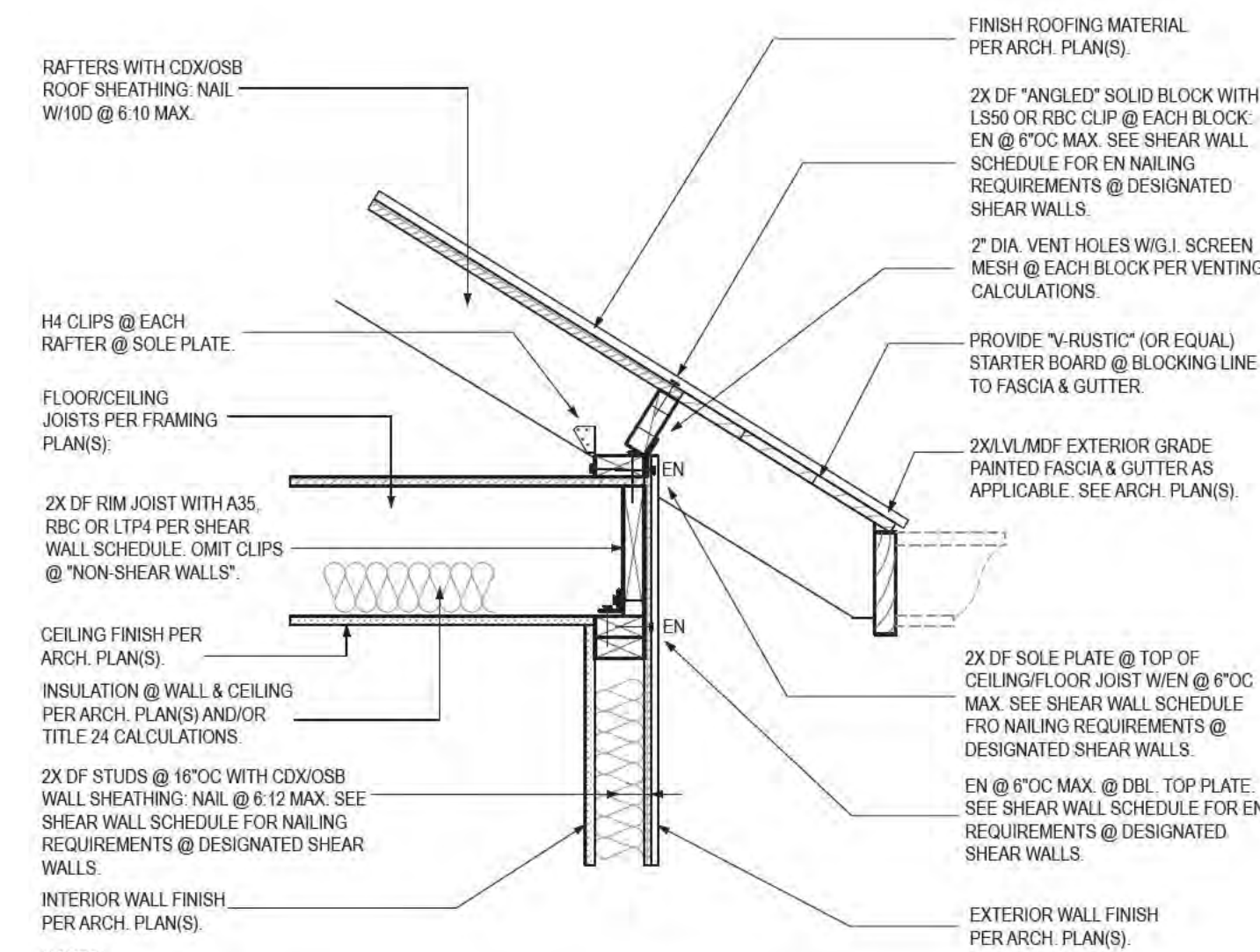
TYP. EAVE DETAIL - EXPOSED RAFTER TAILS



CALIFORNIA "CA" ROOF FRAMING



EAVE @ RAKE WALL: FIRE RATED



EAVE @ TOP OF FLOOR/CEILING JOIST

REVISIONS:

#

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ARCHITECTURAL DESIGN BY:

STUDIO THREE DESIGN

RESIDENCE

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LOS GATOS, CA 95030

STRUCTURAL DETAILS

10/21/25

AS NOTED

MAR

DRAWING:

SAVED:

SCALE:

DRAWN BY:

REGISTERED PROFESSIONAL ENGINEER
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NO. C 445168
Exp. 6-30-27
CIVIL
STATE OF CALIFORNIA

10/21/2025

PROFESSIONAL STAMP

SD.4

10/21/2025
PROFESSIONAL STAMP

SD.4

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Bachman Ave Residence

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2025-10-21T13:26:34-07:00

Input File Name: 0250228 Bachman Ave Residence minus basement.rbd22x

CFIR-PRF-01-E
(Page 1 of 14)

GENERAL INFORMATION

01	Project Name	Bachman Ave Residence									
02	Run Title	Title 24 Analysis									
03	Project Location	126 Bachman Avenue									
04	City	Los Gatos									
05	Zip code	95030									
06	Climate Zone	4									
07	Software Version	Enrgyplus 9.4									
08	Front Orientation (deg/ Cardinal)	225									
09	Building Type	Single family									
10	Number of Dwelling Units	1									
11	Project Scope	Addition and/or Alteration									
12	Number of Bedrooms	3									
13	Number of Stories	2									
14	Additional Cond. Floor Area (ft²)	156									
15	Penetration Average U-factor	0.35									
16	Existing Cond. Floor Area (ft²)	2648									
17	Glazing Percentage (%)	21.75%									
18	Total Cond. Floor Area (ft²)	2702									
19	ADU Bedroom Count	n/a									
20	ADU Conditioned Floor Area	n/a									
21	Fuel Type	Natural gas									
22	No Dwelling Unit										

COMPLIANCE RESULTS

01

Building Complies with Computer Performance

02

This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.

03

Building does not incorporate special features

Registration Number: 425-P0103175804-000-000-0000000-0000

Registration Date/Time: 10/21/2025 13:33

HERS Provider: CHEERS

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CA Building Energy Efficiency Standards - 2022 Residential Compliance

Report Version: 2022.6.000

Report Generated: 2025-10-21 13:29:56

254

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Bachman Ave Residence

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2025-10-21T13:26:34-07:00

Input File Name: 0250228 Bachman Ave Residence minus basement.rbd22x

CFIR-PRF-01-E
(Page 5 of 14)

ENERGY USE SUMMARY

Energy Use	Standard Design Source Energy (E _{SDS}) (kBtu/ft²-yr)	Standard Design TMY Energy (E _{TMY}) (kBtu/ft²-yr)	Proposed Design Source Energy (E _{DES}) (kBtu/ft²-yr)	Proposed Design TMY Energy (E _{TMY}) (kBtu/ft²-yr)	Margin (E _{DES})	Margin (E _{TMY})
Space Heating	0	55.22	0	50.24	0	5.08
Space Cooling	0	03.96	0	65.52	0	-3.56
IAQ Ventilation	0	0	0	0	0	0
Water Heating	0	25.66	0	25.86	0	-0.2
Self Utilization/Flexibility Credits				0		0
Efficiency Compliance Total	0	142.84	0	141.52	0	1.32
Photovoltaics			0	0		
Battery			0	0		
Heatpump						
Indoor Lighting	0	6.51	0	6.51		
Appl. & Cooking	0	16.43	0	16.43		
Plug Loads	0	20.98	0	20.98		
Outdoor Lighting	0	1.66	0	1.66		
TOTAL COMPLIANCE	0	190.42	0	189.1		

Registration Number: 425-P0103175804-000-000-0000000-0000

Registration Date/Time: 10/21/2025 13:33

HERS Provider: CHEERS

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CA Building Energy Efficiency Standards - 2022 Residential Compliance

Report Version: 2022.6.000

Report Generated: 2025-10-21 13:29:56

254

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Bachman Ave Residence

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2025-10-21T13:26:34-07:00

Input File Name: 0250228 Bachman Ave Residence minus basement.rbd22x

CFIR-PRF-01-E
(Page 7 of 14)

ENERGY USE INTENSITY

	Standard Design (kBtu/ft²-yr)	Proposed Design (kBtu/ft²-yr)	Margin (kBtu/ft²-yr)	Margin Percentage
Gross EUI ¹	30.09	29.05	1.04	3.46
Net EUI ²	30.09	29.05	1.04	3.46

Notes

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

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.
• NO SPECIAL FEATURES REQUIRED

HERS FEATURE SUMMARY

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

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Bachman Ave Residence	2702	1	3	3	DHW Sys 1	Existing Unchanged

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Status
1st Floor	Conditioned	HVAC System1	1667	10.5	DHW Sys 1	Existing Unchanged

Registration Number: 425-P0103175804-000-000-0000000-0000

Registration Date/Time: 10/21/2025 13:33

HERS Provider: CHEERS

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CA Building Energy Efficiency Standards - 2022 Residential Compliance

Report Version: 2022.6.000

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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ORNAKE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Asmuth	Orientation	Gross Area (ft²)	Window and Door Area (ft²)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Roof 2	1st Floor	R-19 Roof Attic	n/a	n/a	472	n/a	n/a		Existing	No
Roof 3	2nd Floor	R-19 Roof Attic	n/a	n/a	237	n/a	n/a		Existing	No
Roof 4	2nd Floor	R-19 Roof Attic	n/a	n/a	803	n/a	n/a		Existing	No
Roof 5	2nd Floor Addition	R-19 Roof Attic	n/a	n/a	58	n/a	n/a		New	n/a
Raised Floor	1st Floor	R-10 Floor No Crawlspace	n/a	n/a	997	n/a	n/a		Existing	No
Ceiling	1st Floor	R-10 Roof No Attic	n/a	n/a	997	n/a	n/a		Existing	No
Ceiling 2	1st Floor	R-10 Roof No Attic	n/a	n/a	58	n/a	n/a		Existing	No
Floor	1st Floor	R-10 Floor No Crawlspace	n/a	n/a	18	n/a	n/a		Existing	No
Floor 2	1st Floor	R-10 Floor No Crawlspace	n/a	n/a	1169	n/a	n/a		Existing	No

ATTIC

01	02	03	04	05	06	07	08	09	10
Name	Construction	Type	Roof R-19	Roof R-19	Roof R-19	Roof R-19	Roof R-19	Status	Verified Existing Condition
Attic 1st Floor	Attic Roof/1st Floor	Ventilated	10.3784	0.1	0.85	No	No	Existing	No
Attic 2nd Floor	Attic Roof/2nd Floor	Ventilated	9.62888	0.1	0.85	No	No	Existing	No
Attic 2nd Floor Addition	Attic Roof/2nd Floor Addition	Ventilated	12	0.1	0.85	No	No	New	n/a

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Asmuth	Window (ft²)	High U-Factor	U-Factor	U-Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition		
Window	Window	Front Wall	Front	225	1	21	0.58	Table 110.6-A	0.05	Table 110.6-B	Bug Screen	Existing	No		
Window 2	Window	Front Wall	Front	225	1	21	0.58	Table 110.6-A	0.05	Table 110.6-B	Bug Screen	Existing	No		
Window 3	Window	Front Wall	Front	225	1	21	0.58	Table 110.6-A	0.05	Table 110.6-B	Bug Screen	Existing	No		
Window 4	Window	Front Wall	Front	225	1	21	0.58	Table 110.6-A	0.05	Table 110.6-B	Bug Screen	Existing	No		
Entry Door	Window	Front Wall	Front	225	1	21	0.58	Table 110.6-A	0.05	Table 110.6-B	Bug Screen	Existing	No		
Door	Window	Front Wall	Front	225	1	21.8	0.58	Table 110.6-A	0.05	Table 110.6-B	Bug Screen	Existing	No		
Window 5	Window	Left Wall	Left	315	1	21	0.58	Table 110.6-A	0.05	Table 110.6-B	Bug Screen	Existing	No		
Window 6	Window	Left Wall	Left	315	1	21	0.58	Table 110.6-A	0.05	Table 110.6-B	Bug Screen	Existing	No		
Window 7	Window	Left Wall	Left	315	1	21	0.58	Table 110.6-A	0.05	Table 110.6-B	Bug Screen	Existing	No		
Window 8	Window	Left Wall	Left	315	1	21	0.58	Table 110.6-A	0.05	Table 110.6-B	Bug Screen	Existing	No		
Window 9	Window	Left Wall	Left	315	1	12.5	0.58	Table 110.6-A	0.05	Table 110.6-B	Bug Screen	Existing	No		

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WATER HEATING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gall)	Heating Efficiency Type	Efficiency	Reheat Input Type	Input Rating (kW)	Tank Insulation R-value (ft²-in)	Standby Loss or Recovery (ft²-in)	1st H ₂ O Flow Rate (gpm)	Tank Location	Status	Verified Existing Condition	
DHW Heater 1	Gas	Residential-Duty Commercial Storage	1	75	UE1	0.59	BUH1	10000	0	80	80	80	Altered	No	

WATER HEATING - HERS VERIFICATION

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

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Status	Verified Existing Condition	Existing HVAC System					
HVAC System1	Heating and cooling system other	Heating Component 1	2	Cooling Component 1	2	HVAC Fan 1	Air Distribution System 1	New	No						

HVAC - HEATING UNIT TYPES

01	02	03	04	05	06	07	08	09
Name	System Type	Number of Units	Efficiency Metric	Efficiency EER/EER2/CIEER	Efficiency SEER/SEER2	Zoneally Controlled	Multi-speed Compressor	HERS Verification
Cooling Component 1	Central split AC	2	EER/SEER	11.7	14	Not Zoned	Single Speed	Cooling Component 1: 4-tons coil

HVAC COOLING - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEER/SEER2	Verified Refrigerant Charge			
Cooling Component 1: 4-tons coil	Required	350	Not Required	Not Required	Not Required			

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Design Type	Duct Insulation R-value	Duct Leakage	Supply Return Ratio	Supply Return Ratio	Supply Return Ratio	Bypass Duct	Duct Leakage	HERS Verification	Status	Verified Existing Condition	Existing Distribution system	New Ducts > 24 in	
Air Distribution System 1	Unconditioned and attic	Non-Verified	R-8	R-8	Attic	Attic	n/a	No Bypass Duct	Sealed and Insulated	Air Distribution System 1: 4-tons coil	New	n/a		n/a	

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ORNAKE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-10 Wall 1	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-10	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Outside Finish: Gypsum Board
Attic Roof 1st Floor	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-10	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/shedding/decking Cavity / Frame: no insul. / 2x4
Attic Roof 2nd Floor	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-10	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/shedding/decking Cavity / Frame: no insul. / 2x4
Attic Roof 2nd Floor Addition	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-10	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/shedding/decking Cavity / Frame: no insul. / 2x4
R-19 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-19	None / None	0.049	Over Ceiling Joists: R-19 insul. Cavity / Frame: R-19 / 2x4 Inside Finish: Gypsum Board
R-30 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-30	None / None	0.032	Over Ceiling Joists: R-30 insul. Cavity / Frame: R-30 / 2x4 Inside Finish: Gypsum Board
R-10 Floor No Crawlspace	Exterior Floors	Wood Framed Floor	2x12 @ 16 in. O. C.	R-10	None / None	0.24	Floor Surface: Carpeted Floor Deck: Wood Siding/shedding/decking Cavity / Frame: no insul. / 2x12

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WATER DISTRIBUTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low Leakage Handler	Duct Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1: 4-tons coil	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1: 4-tons fan	HVAC Fan	0.4	HVAC Fan 1: 4-tons fan

HVAC FAN SYSTEMS - HERS VERIFICATION

01	02	03	04
Name	Verified Fan Motor Draw	Required Fan Efficiency (Watts/CFM)	
HVAC Fan 1: 4-tons fan	Required	0.4	

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DOCUMENTATION AUTHORITY'S DECLARATION STATEMENT

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

Documentation Author Name: Nicholas Bignardi

Signature Date: 10/21/2025

CFIR HERS Certification Identification (if applicable): 5770 WINFIELD BLVD SP15

Address: 5770 Winfield Blvd, San Jose, CA 95123

Phone: (408) 866-1620

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. I am a duly licensed contractor under the Business and Professions Code to accept responsibility for the building design described on this Certificate of Compliance.

2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.

3. The building design features and performance specifications identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Person Name: Boss Wiersma

Signature Date: 10/21/2025

Address: 688 University Avenue

City/State/Zip: Los Gatos, CA 95032

Phone: 4082923252

Registration Number: 425-P0103175804-000-000-0000000-0000

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2022 Single-Family Residential Mandatory Requirements Summary

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

Building Envelope:

§ 110.6(a)	Air Leakage. Manufactured fenestration, exterior doors, and exterior walls must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/NWMA/CA 1011a §24440.2011.
§ 110.6(a)(i)	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 110.6(a)(ii).
§ 110.6(a)(ii)	Field Fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Table 110.6.1, 110.6.2, or 110.6.3 for exterior doors. They must be caulked around weather-stopping.
§ 110.7.	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stopped.
§ 110.8(a)	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHSGS).
§ 110.8(b)	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(f).
§ 110.8(b)	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(b) and be labeled per 110.113 when the installation of a roof is specified on the CFR.
§ 110.8(f)	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a)	Roof Deck, Ceiling and Rafter Roof Insulation. Roof decks in newly constructed units in climate zones 4 and 5-6 are weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling, or are-weighted average U-factor must not exceed U-0.184. Insulation must be installed in direct contact with a roof or ceiling using a U-factor of 0.054 or less. Airle access doors must have permanently attached insulation using adhesive or mechanical fasteners. The traffic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.
§ 150.0(b)	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c)	Insulation. Minimum R-19 insulation in 2nd inch wood framing wall or ceiling, or are-weighted average U-factor of 0.054 or less, or R-20 in 2.6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framing assemblies must have an overall assembly U-factor not exceeding 0.10. Masonry walls must meet Tables 150.1-A or B.
§ 150.0(d)	Raised-floor Insulation. Minimum R-19 insulation in raised wood framing floor or 0.037 maximum U-factor.*
§ 150.0(e)	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(b).
§ 150.0(f)	Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)(1)	Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of insulation in all exterior walls, vented attics, and unvented attics with air-sealing insulation.
§ 150.0(g)(2)	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or are-weighted average U-factor of all fenestration must not exceed 0.45.
§ 150.0(h)	Fireplaces, Decorative Gas Appliances, and Gas Log:
§ 110.5(f)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)(1)	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)(2)	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(f)(3)	Fue Damper. Masonry or factory-built fireplaces must have a fue damper with a readily accessible control.*
Space Conditioning, Water Heating, and Plumbing System:	
§ 110.5(f) 110.1-3	Certification. Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showheads, faucets, and all other plumbing and water heating equipment must be certified to the maximum efficiency of the Energy Conservation Code.
§ 110.5(f)(2)	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2.2-A through Table 110.2.4-N.
§ 110.5(f)(2)	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone, and either the cut-out temperature for compression heating is higher than the set-point temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the set-point temperature for supplementary heating.
§ 110.5(f)(3)	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.
§ 110.5(f)(3)(i)	Insulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank or tankless water heaters (TWHs).
§ 110.5(f)(3)(ii)	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

5/6/22



2022 Single-Family Residential Mandatory Requirements Summary

\$ 110.5	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces, household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour), and pool and spa heaters.
\$ 150.0(h)1	Building Cooling and Heating Loads. Heating and/or cooling loads must be calculated in accordance with the ASHRAE Handbook, Equipment, Volumes and Volumes, and Fundamentals Volume, the SMACNA Residential Comfort System Installation Standards Manual, or the ACCA Manual J using design conditions specified in § 150.0(h)2.
\$ 150.0(h)3A	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any duct.
\$ 150.0(h)3B	Liquid Line Drift. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
\$ 150.0(h)1	Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in § 809.11 of the California Plumbing Code.
\$ 150.0(h)1	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as specified in § 120.30. Insulation exposed to weather must be water resistant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant supply piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
\$ 150.0(h)1	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5 x 2.5 x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the conditions in this designated space and the water heater location, and a condensate drain no more than 2" higher than the base of the water heater.
\$ 150.0(h)3	Solar Water-heating System Piping and Components. Piping and components must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.
Ducts and Fans:	
\$ 110.8(d)3	Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If the contractor installs the insulation, the contractor must orally testify to the customer, in writing, that the insulation meets this requirement.
\$ 150.0(h)1	CMC Compliance. All air-distribution system ducts and plenums must meet CMC § 601.0-8.05 and ASHRAE/SMACNA-2006.14.3.8 minimum construction Standards for Ducts and Plenums, and the ducts and plenums must be tested and sealed in accordance with R-6.0 or higher, ducts located entire in conditioned space as confirmed through field verification and diagnostic testing (ASME A308 HVAC) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than 3/8". If mastic or tape is used, Building cavities, air handler support plenums, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support plenums may contain ducts; ducts installed in these spaces must not be compressed.
\$ 150.0(h)2	Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and coatings, and joints and seals of duct systems and their components must not be sealed with cloth back ruber adhesive duct tape or other tape that does not meet the requirements for combination air and steam ducts.
\$ 150.0(h)3	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
\$ 150.0(h)7	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic damper.
\$ 150.0(h)3	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
\$ 150.0(h)9	Protection of Insulation. Insulation must be protected from damage due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protection by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water repellent and solar radiation-resistant coating.
\$ 150.0(h)10	Porous Inner Core Flex Duct. Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
\$ 150.0(h)11	Duct System Sealing and Leakage Test. When space conditioning systems use forced air ducts systems to supply conditioned air to an occupiable space, the ducts must be sealed and the system pressure tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Test Appendix RA.3.1.
\$ 150.0(h)12	Air Filtration. Space conditioning systems with ducts exceeding 10' long and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch 8 sized per Equation 150.0.14. Clean-air filter pressure drop and labeling must meet the requirements in § 510.0(h)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to prevent air from bypassing filter.

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2022 Single-Family Residential Mandatory Requirements Summary

§ 50.0(m)13:	Space Conditioning System Airflow Rate and Fan Efficiency. Space conditioning systems that use ducts to supply cooling must have a hole for the placement of an airflow probe, or a permanently isolated static pressure source in the supply plenum. Airflow must be at least 350 CFM per ton of nominal cooling capacity, and air-handling unit fan efficiency is 0.45 watts per CFM for gas furnace air handlers and 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficiency is 0.42 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *
Ventilation and Indoor Air Quality:	
§ 50.0(o)1:	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 50.0(o)1. *
§ 50.0(o)1B:	Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling-unit ventilation airflow rate of § 50.0(o)1. CFI air handlers must be installed on the ventilation ducts that prevent air leakage through the space conditioning duct system when the damper(s) is closed and controlled per § 50.0(o)1B&C. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with § 50.0(o)1C.
§ 50.0(o)1C:	Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses. Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 50.0(o)1C&I.
§ 50.0(o)1G:	Local Mechanical Exhaust. Kitchens and bathrooms must have local mechanical exhaust; nonrescued kitchens must have demand-controlled exhaust system meeting requirements of § 50.0(o)1G(i) enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting § 50.0(o)1G. Airflow must be measured by the installer per ASHRAE 62.2 § 7.2 and no less than the minimum airflow rate required by § 50.0(o)1G. *
§ 50.0(o)1H&I:	Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems. The airflow required per § 50.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet. ASHRAE 62.2 § 7.2 and no less than the minimum airflow rate required by § 50.0(o)1G. *
§ 50.0(o)2:	Field Verification and Diagnostic Testing. Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficiency must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hood must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per § 50.0(o)1G.
Pool and Spa Systems and Equipment:	
§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listed in AEDS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent waterproof plate or cap with operating instructions; and must not have electric resistance heater.
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections must allow for future solar storage.
§ 110.4(b)2:	Heaters. Outdoor pools or spas that use gas for heat must have a cover.
§ 110.4(c):	Drainage Inlets. Time Switches for Pools. Pools that have drainage inlets must adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to turn only during off-peak electrical demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must have a continuously burning pilot light.
§ 110.5(p):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.
Lighting:	
§ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *
§ 50.0(o)1A:	Luminaire Efficiency. All installed luminaires must meet the requirements in Table 50.0.1, and lighting integral to drawers, kitchen range hoods, bath vanity mirrors, and garage door openers, requiring lighting less than 5 watts; and lighting integral to drawers, cabinets, and linen closets with an efficiency of at least 45 lumens per watt.
§ 50.0(o)1B:	Screw-based Luminaires. Screw-based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 50.0(o)1C:	Recycled Luminaires. Luminaires must be made of recycled materials. Luminaires must be made of recycled materials, must be air-tight, and must be sealed with a gasket or cork. California Electrical Code § 410.116 must also meet.
§ 50.0(o)1D:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the ASHRAE 90.1 temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 50.0(o)1E:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the ASHRAE 90.1 temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires or other device shall be no more than the number of bedrooms. These boxes must be serviced by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 50.0(o)1F:	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust fans) must meet the applicable requirements of § 150.0(d).

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§ 150.001(C)	Screw-based luminaires. Screw-based luminaires must contain lamps that comply with Reference Joint Appendix A-8 .
§ 150.001(H)	Light Sources in Enclosed or Recessable Luminaires. Lamps and other separable light sources that are not compliant with the JAB elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.001(J)	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources installed in drawers, cabinets or linen closets are not required to comply with Table 150.0.4 or be controlled by vacancy sensors provided that they are related to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.001(ZA)	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SL 7A.
§ 150.001(ZB)	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems.*
§ 150.001(ZC)	Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off.
§ 150.001(ZD)	Multiple Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.001(J).
§ 150.001(ZE)	Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.001(ZF)	Energy Management Control Systems. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.001(ZA).
§ 150.001(ZG)	Automatic Shutoff Controls. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.001(ZH)	Dimmers. Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SL 7A.
§ 150.001(ZI)	Independent controls. Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.001(ZJ)	Residential Outdoor Lighting. For residential buildings, outdoor lighting for residential buildings shall be required to be installed on other buildings on the same lot, must have a manual cutoff switch and either a photocell and motion sensor or automatic time switch control or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.001(ZK)	Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.001(L)	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 170.5, 130.2, 130.1, 130.4, 140.6, and 141.0.
Solar Readiness:	
§ 110.100(a)	Single-Family Residences. Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.100(c)-(e).
§ 110.100(b)	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with existing pathway, driveway, parking, and spacing requirements, and shall be subject to the requirements of the 24 or 4 in requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhanging of the building and have a total area no less than 250 square feet.
§ 110.100(b)(2)	Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.100(b)(3A)	Shading. The solar zone must not contain any other obstructions, including but not limited to vents, chimneys, architectural features, and roof-mounted equipment.
§ 110.100(b)(3B)	Shading. Any obstruction located on the roof or any part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone.
§ 110.100(b)(4)	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.100(c)	Interconnection Pathways. The construction documents must indicate a location reserved for inverters and metering equipment and a pathway reserved for routing of conduct from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.100(d)	Documentation. A copy of the construction documents or comparable document indicating the information from § 110.100(b)-(c) must be provided to the applicant.
§ 110.100(e)	Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.100(f)	Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."
§ 110.100(g)	

Electric and Energy Storage Ready

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150 (g)	Energy Storage System (ESS) Riser. All single-phase residences must meet all of the following: Either ESS-riser interconnection equipment with backed up capacity of 60 amps or more and/or four or more ESS supplied branch circuits, or dedicated riser from the main service to a subpanel that supplies the branch circuits in § 150 (d), at least one branch circuit must be identified as having the panel relocated at a safe distance from the building exterior wall, away from the driveway, away from the main supply line, away from the primary entry, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation/entransfer switch within 3' of the meter located, with the manufacturer and the ratchet lock and the switch location and the switch label clearly visible;
§ 150 (h)	Heat Pump Space Heater Riser. Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240v branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150 (i)	Electric Cooktop Riser. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240v branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150 (j)	Electric Clothes Dryer Riser. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240v branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Bachman Ave Residence		Date 10/21/2025	
System Name HVAC System		Floor Area 2,702	

ENGINEERING CHECKS		SYSTEM LOAD			
Number of Systems	2	COIL COOLING PEAK		COIL HTG. PEAK	
		CFM	Sensible	Latent	CFM
Heating System					
Output per System	60,000	Total Room Loads			
Total Output (Btuh)	120,000				
Output (Btuh/sqft)	44.4				
Cooling System					
Output per System	1	Return Vented Lighting Return Air Ducts Return Air Ventilation Supply Fan Supply Air Ducts			
Total Output (Btuh)	2				
Total Output (Tons)	0.0				
Total Output (Btuh/sqft)	0.0				
Total Output (sqft/Ton)	18,212.000				
		TOTAL SYSTEM LOAD			
			48,729	1,145	63.41

Air System		HVAC EQUIPMENT SELECTION	
CFM per System	0		
Airflow (cfm)	0	2	0
Airflow (cfm/sqft)	0.00		
Airflow (cfm/Ton)	0.0		
Outside Air (%)	0.0%	2	0
Outside Air (cfm/sqft)	0.00		
		Total Adjusted System Output (Adjusted for Peak Design conditions)	

TIME OF SYSTEM PEAK		Aug 3 PM	Jan 1 A
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Note: values above given at ARI conditions

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)	
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The diagram shows a heating process on a psychrometric chart. The supply air (top right) has a temperature of 105°F. The return air (bottom left) has a temperature of 66°F. The outside air (far left) has a temperature of 26°F and a humidity ratio of 0 cfm. The heating coil is represented by a red vertical rectangle. The air flow path is indicated by arrows: outside air enters, mixes with return air, passes through the heating coil, and enters the room. The room air temperature is 68°F.

COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)	
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The diagram shows a cooling process on a psychrometric chart. The supply air (top right) has a temperature of 55/54°F. The return air (bottom left) has a temperature of 76/62°F. The outside air (far left) has a temperature of 90/67°F and a humidity ratio of 0 cfm. The cooling coil is represented by a blue vertical rectangle. The air flow path is indicated by arrows: outside air enters, mixes with return air, passes through the cooling coil, and enters the room. The room air temperature is 75/62°F. The coil efficiency is 46.9%.

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