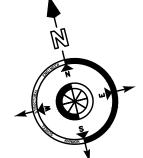


SITE PLAN SCALE: 1/8"=1'-0"



REFERENCE STANDARDS

and Intermediate Moment Frames)

ACI 318-19 (Concrete Design)

ACI 530-14 (Masonry Design)

AISC 360-16 (2010 Steel Specs13th ed)

AISC 341-16 (2010 Seismic Design for Steel Bldgs.)

AISC 358-10 (Prequalified Connections for Special



Sprouts Farmers Market Shop Better-for-you

Jack in the Box At Jack in The Box

Overlook at Blue Ravine

Raley's Never Miss A Great Deal

rbuckle Ave

HOSE BIBS

PROVIDE NON-REMOVABLE TYPE BACKFLOW PREVENTION DEVICE AT ALL HOSE BIBS PER 2022 CPC 602.3 PROVIDE A MINIMUM OF ONE HOSE BIB AT FRONT AND REAR OF THE DWELLING.

PROJECT SUMMARY

NEW 150 SQ. FT. ADDITION TO EXISTING RESIDENCE AND NEW 449 SQ. FT. COVERED PATIO. ALL NEW WINDOWS AND DOORS SHALL BE IN COMPLIANCE WITH TITLE 24.

<u>2022 CBC -</u> 1804.4 SITE GRADING GROUND ADJACENT TO FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT NOT LESS THAN 5% SLOPE FOR A MIN. DISTANCE OF 10 FEET, PERPENDICULAR TO THE FACE OF THE WALL. IF PHYSICAL OBSTRUCTION OR LOT LINE PROHIBIT 10 FEET OF DISTANCE, A 5% SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATE METHOD OF DIVERTING WATER AWAY FROM THE FOUNDATION. SWALES USED FOR THIS PURPOSE SHALL BE SLOPED MIN. 2% WHERE LOCATED WITHIN 10 FEET OF BUILDING FOUNDATION. IMPERVIOUS SURFACES WITHIN 10 FT. OF THE BUILDING FOUNDATION SHALL BE SLOPED MIN. 2% AWAY FROM THE BUILDING.

THE HEIGHT OF TOP OF FOUNDATION TO BE MIN. 12" PLUS 2% TO STREET GUTTER AT POINT OF DISCHARGE, 2022 CRC R403.1.7.3

2022 CODES REQUIRED

California Residential Code

California Mechanical Code

California Fire Code NFPA-13D

California Reference Standards Code

California Electrical Code

California Energy Code

California Plumbing Code

EASEMENTS, SETBACKS, DIMENSIONS BETWEEN PROPERTY LINE AND DWELLING, HOMEOWNERS ASSOCIATION REQUIREMENTS PRIOR TO CONSTRUCTION OF THIS PROJECT.

THIS IS NOT A SURVEY. VERIFY ALL

California Building Code, Vols. 1 & 2 ASCE 7-16 (Minimum Design Loads)

California Green Building Standards Code AF&PA/NDS-05 (Wood Design)

VERIFY PROPERTY LINE LOCATION WITH FINAL OFFICIAL MAPS

A.P.N. 07107800560000

BUILDING DEPT. DATA

PROJECT TYPE: Addition and Covered Patio TYPE OF CONSTRUCTION: V-B OCCUPANCY GROUP: LATERAL: 110 M.P.H. EXP. "C" 1972 SQ. FT. (E) LIVING SPACE: (N) LIVING SPACE TOTAL: 2122 SQ. FT. (E) GARAGE: 440 SQ. FT. (E) COVERED PORCH 111 SQ. FT. (N) COVERED PORCH TOTAL: 560 SQ. FT. 19'-8" MAX. BUILDING HEIGHT: SOIL PRESSURE: NO SOILS REPORT 1500 P.S.F. FLOOR LOAD: 40 L.L. + 10 D.L. + 5 D.L. CEILING LOAD: 10 L.L. + 10 D.L. ROOF LOAD 20 L.L. + 16 D.L. + 10 D.L.

DRAWINGS PREPARATION: Liz Tuch, N.S.S.E.

SHEET INDEX A1 BUILDING DATA, SHEET INDEX, SITE A1.2 GREEN BUILDING STANDARDS A1.3 GREEN BUILDING STANDARDS A1.4 LOW RISE RESIDENTIAL MANDATORY MEASURES T24 TITLE-24 ENERGY T24a TITLE-24 ENERGY A2 FLOOR PLAN

A3 ROOF PLAN A4 EXTERIOR ELEVATIONS A5 EXTERIOR ELEVATIONS

A6 SECTIONS E1 ELECTRICAL PLAN SC-1 STRUCTURAL GENERAL NOTES & DETAILS

SC-1a STRUCTURAL FASTENING SCHEDULE & DETAILS S1 FOUNDATION PLAN S2 ROOF FRAMING PLAN

AN-1 ARCHITECTURAL TYP. DETAILS AN-2 ARCHITECTURAL TYP. DETAILS AN-3 ARCHITECTURAL TYP. DETAILS SD-1 STRUCTURAL DETAILS

SD-2 STRUCTURAL DETAILS

SHEET AIINDEX AND SITE **ЈОВ NO.** 24131

No. 2567 Exp. 12 31-25 9/16/2024

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Sacramento Office

Fair Oaks, CA 95628 (916) 536-9585

info@nsse.com

AFFER ADDITION
102 HERRILL CT
FOLSOM, CA 95630

SH

PROJ. MGR.:

NGINEER:

REVISIONS:

DRAWN BY: LT

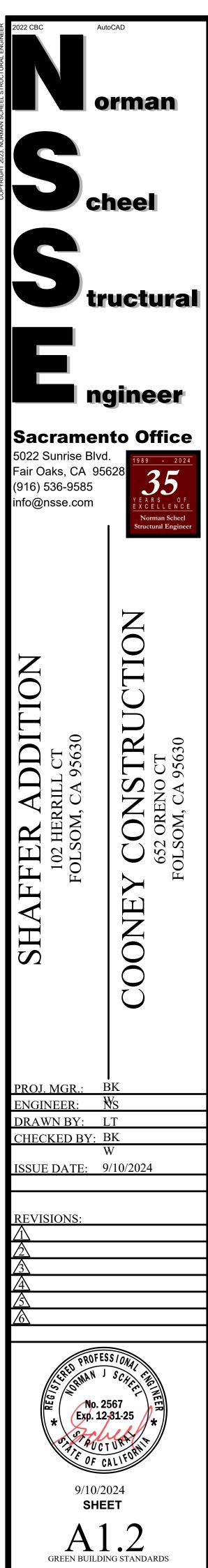
CHECKED BY: BK

SSUE DATE: 9/10/2024

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE RESIDENTIAL MANDATORY MEASURES, SHEET 1

DIVISION A4.6-TIER 1 AND TIER 2-CONTINUED SECTION A4.602

RESIDENTIAL OCCUPANCIES APPL	ICATION CHE	ECKLI	ST															
	LEVELS APPLICANT TO SELECT ELECTIVE ME			TIONS ENFO			LEVELS APPLICE SELECT ELECT				NS ENFORCI			LEVELS APPLICE SELECT ELECT			TIONS ENFOR	
FEATURE OR MEASURE	Prereq	quisites lectives	Enforcing Agency	Installer designer	Third	FEATURE OR MEASURE		Prerequ and elec	isites Enf	orcing In	staller	Third	FEATURE OR MEASURE		Prerequisites and electives	Enforcing Agency	Installer designer	Third
	Mandatory and ele Tier 2		7 ~ ~	All	All		Mandatory	Tier 2	Tier 1	All	All	All		Mandatory	Tier 2 Tie		All	All
PLANNING AND DESIGN						A4.106.9 Provide bicycle parking facilities as noted below or meet a local ordinance, whichever is more stringent. Number of bicycle parking spaces may be reduced, as approved by the enforcing agency, due to building site characteristics, including but not							A4.305.1 Piping i is installed to permit future use of a graywater irrigation system served by the clothes washer or other fixtures.					
Site Selection						approved by the enforcing agency, due to building site characteristics, including but not limited to, isolation from other development. 1. Provide short-term bicycle parking, per Section A4.106.9.1.							A4.305.2 Recycled water piping is installed.					
A4. 103.1 A site which complies with at least one of the following characteristics is selected:						2.Provide long-term bicycle parking for multifamily buildings, per Section A4.106.9.2, 3.Provide long-term bicycle parking for hotel and motel buildings, per Section							A4.305.3 Recycled water is used for landscape irrigation. Innovative Concepts and					
 An infill site is selected. A greyfield site is selected. 						A4.106.9.3. A4.106.10 [HR] Outdoor lighting systems shall be designed and installed to comply	1						Local Environmental Conditions.					
 3. An EPA-recognized Brownfield site is selected. A4.103.2 Facilitate community connectivity by one of the following methods: 						with: 1. The minimum requirements in the California Energy Code for Lighting Zones 1-4; and							A4.305.3 Recycled water is used for landscape irrigation.					
1. Locate project within a ¼ mile true walking distance of at least 4 basic services. 2. Locate project within ½ mile true walking distance of at least 7 basic services.						2.Backlight, Uplight and Glare (BUG) ratings as defined in IES TM-15-11; and 3.Allowable BUG ratings not exceeding those shown in Table A4.106.10; or Comply with a lawfully enacted local ordinance, whichever is more stringent.							Innovative Concepts and Local Environmental Conditions.					
3. Other methods increasing access to additional resources.						Innovative Concepts and Local Environmental Conditions							${\bf A4.306.1}$ Items in this section are necessary to address inmovative concepts or local environmental conditions.					
Site. Preservation						A4.108.1 Items in this section are necessary to ase: innovative concepts or local							Item 1					
A4. 104.1 An individual with oversight authority and has responsibility on the project and has participated in an educational program promoting environmentally friendly design or development and has provided training or instruction to appropriate entities.						environmental conditions. Item 1							Item 2	_				
Deconstruction and Reuse of Existing Materials						Item 3							MATERIAL CONSERVATION AND RESOURE EFFICIENCY					
A4.105.2 Existing buildings are disassembled for reuse or recycling of building						Energy Efficiency												
materials. The proposed structure utilizes at least one of the following materials which can be easily reused:						General							Foundation Systems					
1. Light fixtures 2. Plumbing fixtures 3. Doors and trim						4201.1 Building meets or exceeds the requirements of the Callfornia Building Energy Efficiency Standards.	⊠						A4.403.1 A Frost-protected Shallow Foundation (FPSF) is designed and constructed.					
4. Masonry 5. Electrical devices						Performance Approach for Newly Constructed Buildings							A4.403.2 Cement use in foundation mix design is reduced. Tier 1. Not less than a 20 percent reduction in cement use.					
6. Appliances 7. Foundations or portions of foundations						A4.203.1.1.1Tier 1. and Tier 2. Total Bnery 'Desien Rating (Total EDR) and Energy Efficiency Design Rating (Efficiency EDR) for the Proposed Design Building is included in the Certificate of Compliance documentation.							Tier 2. Not less than a 25 percent reduction in cement use.					
Site Development													Efficient Framing Techniques					<u> </u>
4.106.2 A plan is SEE and implemented to manage storm water drainage						A4.203.1.1.2 Tier 1. and Tier 2. Quality Insulation Installation procedures specified in the Building Energy Efficiency Standards Reference Appendices RA3.5 are completed							${f A4.404.1}$ Beams and headers and trimmers are the minimum size to adequately					
during construction.	⊠					A4.203.1.2 Tier 1. and Tier 2. prerequisite options. One of the following							support the load.					
4.106.3 Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings.	⊠					options is required.Roof deck insulation or ducts in conditioned space.High-performance walls.							A4.404.1 Building dimensions and layouts are designed to minimize waste.					
4.106.4 Provide capability for electric vehicle charging for one- and two-family						HERS-verified compact hot water distribution system. HERS-verified drain water heat recovery.							A4.404,3 Use premanufactured building systems to eliminate solid go sawn lumber					
dwellings; townhouses with attached private garages; multifamily dwellings; and hotels/motels in accordance with Section 4.106.4.1, 4.106.4.2, or 4.106.4.3, as applicable.						A4.203,.1.3.1 Tier 1: Buildings complying with the first level of advanced energy efficiency shall have additional integrated efficiency and engite renewable							whenever possible. $ {\bf A4.404.4} \ \hbox{Material lists are included in the plans which specify material quantity and } $					
A4.106.1 Reserved						energy efficiency shall have additional integrated efficiency and onsite renewable energy generation to achieve a Total EDR for Tier 1 as specified in Table A4.203.1.1.1 or lower as calculated by Title 24, Part 6 Compliance Software							provide direction for on-site cuts.					
A4.106.2.1 Soil analysis is performed by a licensed design professional and the						approved by the Energy Commission. This Total EDR is in addition to meeting the Efficiency EDR.							Material Sources					
findings utilized in the structural design of the building.						A4.203.1.3.2 Tier 2: Buildings complying with the second level of advanced energy efficiency shall have additional integrated efficiency and onsite renewable							A4.405.1 One or more e of the following building materials, that do not require additional resources for finishing are used:					
A4.106.2.2 Soil disturbance and erosion are minimized by at least one of the following:						energy generation to achieve a Total EDR for Tier 2 as specified in Table A4.203.1.1.1 or lower as calculated by Title 24, Part 6 Compliance Software							Exterior trim not requiring paint or stain					
1. Natural drainage patterns are evaluated and erosion controls are implemented to minimize erosion during construction and after occupancy. 2. Site access is accomplished by minimizing the amount of cut and fill needed to install						approved by the Energy Commission. This Total EDR is in addition to meeting the Efficiency EDR.							2. Windows not requiring paint or stain					
access roads and driveways. 3. Underground construction activities are coordinated to utilize the same trench.						A4.203.1.4 Local jurisdictions adopting Tier or Tier 2, or considering							3. Siding or exterior wall coverings which do not require paint or stain					
minimize the amount of time the disturbed soil is exposed and the soil is replaced using accepted compaction methods.						community shared solar or storage options as specified, shall consult with the local electric service for acceptance.							A4.405.2 Floors that do not require additional coverings are used including but not limited to stained, natural or stamped concrete floors.					
A4.106.2.3 Topsoil shall be protected or saved for reuse as specified in this section. Tier 1. Displaced topsoil shall be stockpiled for reuse in a designated area and covered						WATER EFFICIENCY AND CONSERVATION							A4.405.3 Postconsumer or preconsumer recycled content value (RCV) materials are					
or protected from erosion. Tier 2. The construction area shall be identified and delineated by fencing or flagging to limit construction activity to the construction area.						Indoor Water Uses							used on the project.					
A4.106.3 Postconstruction landscape designs accomplish one or more of the						4.303.1 Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) installed in residential buildings shall comply with the prescriptive	\boxtimes						Tier 1. Not less than a 10 percent recycled content value. Tier 2. Not less than a 15 percent recycled content value.					
following: 1.Areas disrupted during construction are restored to be consistent with native vegetation species and patterns.						requirements of Sections 4.303.1.1 through 4.303.1.4.4.							A4.405.4 Renewable source building products are used.					
2.Utilize at least 75 percent native California or drought tolerant plant and tree species appropriate for the climate zone region.						4.303.2 Plumbing fixtures and fittings required in Section 4.303.1 shall be installed in accordance with the California Plumbing Code, and shall meet the	\boxtimes											
A4.106.4 Permeable paving is utilized for the parking, walking or patio surfaces in compliance with the following:						applicable referenced standards.	1						Enhanced Durability and Reduced Maintenance					
Tier 1. Not less than 20 percent of the total parking, walking or patio surfaces shall be permeable.						A4.303.1 The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum							4.406.1 Annular spaces around pipes, electric cables, condi or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such	M				
Tier 2. Not less than 30 percent of the total parking, walking or patio surfaces shall be permeable.						flow rate of 1.5 gallons per minute at 60 psi.							openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.					
A4.106.5 Roofing materials shall have a minimum 3-year aged solar reflectance and thermal emittance or a minimum Solar Reflectance Index (SRI) equal to or						Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.												
greater than the values specified in the applicable tables. Low-rise Residential						4.303.1.4.3 Metering faucets in residential buildings shall not deliver more	\boxtimes						Water Resistance and Moisture Management					
Tier 1. roof covering shall meet or exceed the values contained in Table A4.106.5.1(1). Tier 2. roof covering shall meet or exceed the values contained in						than 0.2 gallons per cycle. A4.303.2 Alternate water source for nonpotable applications. Alternate							A4.407.1 Install foundation and landscape drains.					
Table A4.106.5.1(2). High-rise Residential, Hotels and Motels						nonpotable water sources are used for indoor potable water reduction. Alternate nonpotable water sources shall be installed in accordance with the California							A4.467.2 Install gutter and downspout systems to route water at least 5 feet away					
Fier 1. roof covering shall meet or exceed the values contained in Γable A4.106.5.1(3).						Plumbing Code.			_				from the foundation or connect to landscape drains which discharge to a dry well, sump, bioswale, rainwater capture system or other approved on-site location.					
Tier 2. roof covering shall meet or exceed the values contained in Table A4.106.5.1(4).						A4.303.3 Install at least one qualified ENERGY STAR dishwasher or clothes washer.							${f A4.407.3}$ Provide flashing details on the building plans and comply with accepted					
A4.106.6 Install a vegetated roof for at least 50 percent of the roof area. Vegetated						A4.303,4 Non water urinals or waterless toilets are installed. A4.303.5 One- and two-family dwellings shall be equipped with a demand hot water							industry standards or manufacturer's instructions.					
roofs shall comply with requirements for roof gardens and landscaped roofs in the California Building Code, Chapters 15 and 16.						recirculation system.					Ц		${f A4.407.3}$ Provide flashing details on the building plans and comply with accepted					
A4.106.7 Reduce nonroof heat islands for 50 percent of sidewalks, patios, driveways or other paved areas by using one or more of the methods listed.						Outdoor Water Uses			ı		,		industry standards or manufacturer's instructions.					
A4.106.8.1Tier 1 and Tier 2 for one- and two-family dwellings and townhouses with attached private garages.						f 4.304.1 Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water							${\bf A4.407.4}$ Protect building materials delivered to the construction site from rain and other sources of moisture.					
Install a dedicated 208/240-volt branch circuit, including an overcurrent protective device rated at 40 amperes minimum per dwelling unit.						Efficient Landscape Ordinance (MWELO), whichever is more stringent.	-						A4 407 F 1 20 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
A4.106.8.2 Provide capability for future electric vehicle charging in new multifamily dwellings, as specified,						A4.304.1 A rainwater capture, storage and re-use system is designed and installed. A4.304.2 A landscape design is installed, which does not utilize potable water.							${\bf A4.407.5}$ In Climate Zone 16 an ice/water barrier is installed at roof valleys, eaves and wall to roof intersections.					
Tier 1. In 15 percent of total parking spaces. Tier 2. In 20 percent of total parking spaces.						A4.304.3 For new water service connections, landscaped irrigated areas less than	1						A4 407 6 B					
A4.106.8.3 Provide electric vehicle spaces for new hotels and motels.				_		5,000 square feet shall be provided with separate submeters or metering devices for outdoor potable water use.							A4.407.6 Exterior doors to the dwelling are protected to prevent water intrusion.					
Tier 1. Install EV spaces per Table A4.106.8.3.1.		I				Outdoor polable mater about												



2022 CALIFORNIA GREEN BUILDING STANDARDS CODE **RESIDENTIAL MANDATORY MEASURES, SHEET 1**

DIVISION A4.6-TIER 1 AND TIER 2-CONTINUED SECTION A4.602

RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST

FEATURE OR MEASURE	LEVELS APPLION SELECT ELECT	CANT TO TIVE MEASURES Prerequisites and electives Tier 2 Tier 1	TIONS ENFOR TO SPECIFY V Installer designer	ERIFICATION Third party All	FEATU
					4.505.3 Moisture content of buil checked before enclosure.
Construction Waste Reduction, Disposal and Recycling					Indoor Air Quality and Exhaust
4.408.1 Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with one of the	\boxtimes				4.506.1 Each bathroom shall be
following:					 ENERGY STAR fans ducted to ter Fans must be controlled by a hun
 Comply with a more stringent local construction and demolition waste management ordinance; or 					as a component of a whole-hous 3. Humidity controls with manual of
2. A construction waste management plan, per Section 4.408.2; or					adjustment between a relative h percent.
3. A waste management company, per Section 4.408.3; or4. The waste stream reduction alternative, per Section 4.408.4.					A4.506.1 Reserved.
${f A4.408.1}$ Construction waste generated at the site is diverted to recycle or salvage in					A4.506.2 [HR] Provide filters or construction when it is necessary to
compliance with one of the following: 1. Tier 1 at least a 65 percent reduction with a third-party verification.					A4.506.3 Direct-vent appliances conditioned space; or the equipment
 Tier 2 at least a'75 percent reduction with a third-party verification. 					Environmental Comfort
Exception: Equivalent waste reduction methods are developed by working with local agencies.					4.507.2 Duct systems are sized, of following methods:
Building Maintenance and Operation					 Establish heat loss and heat gai equivalent.
4.410.1 An operation and maintenance manual shall be provided to the building	\boxtimes				 Size duct systems according to Select heating and cooling equi equivalent.
occupant or owner. 4.410.2 Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible areas that serve the entire building and are identified for	oxdot				Outdoor Air Quality Reserved
the depositing, storage and collection of non-hazardous materials for recycling, including (ata minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or					Innovative Concepts and Local E
meet a lawfully enacted local recycling ordinance, if more restrictive. Exception: Rural jurisdictions that meet and apply for the exemption in Public					A4.509.1 Items in this section a
Resources Code Section 42649.82 (a)(2)(A) et seq. will also be exempt from the organic waste portion of this section.					environmental conditions. Item 1
Innovative Concepts and Local Environmental Conditions		<u> </u>	-1		Item 2
${\bf A4.411.1}$ Items in this section are necessary to address innovative concepts or local environmental conditions					Item 3
Item 1					Installer and Special Inspector Q
Item 2					Qualifications
Item 3					702.1 HVAC system installers sha
ENVIRONMENTAL QUALITY Fireplaces					702.2 Special inspectors employed to demonstrate competence in the competence in t
4.503.1 Any installed gas eer shall be a direct-vent sealed- combustion type. Any					Verifications
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.	⊠				703.1 Verification of compliance with plans, specifications builder or instanted methods acceptable to the enforcing 1. Green building measures listed in
Pollutant Control					county, or city and county as spe 2. Required prerequisite for this Ti
4.504.1 Duct openings and otter related air distribution component openings shall be covered during construction.	\bowtie				3. These measures are currently re
${f 4.504.2.1}$ Adhesives, sealants and caulks shall be compliant with VOC and other toxic	⊠				1
compound limits. 4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits.					1
4.504.2.3 Aerosol paints and coatings shall be compliant with product weighted MIR	⊠				
limits for ROC and other toxic compounds. 4.504.2.4 Documentation shall be provided to verify that compliant VOC limit finish	\boxtimes				-
materials have been used. 4.504.3 Carpet and carpet systems shall be compliant with VOC limits.					-
4.504.4 80 percent of floor area receiving resilient flooring shall comply with	 ⊠				
specified VOC criteria. 4.504.5 Particleboard, medium density fiberboard (MDF) and hardwood plywood					
used in interior finish systems shal! comply with low formaldehyde emission standards.					
A4.504.1 Use composite wood products made with either California Air Resources Board approved no-added formaldehyde (NAB) resins or ultra-low emitting formaldehyde (ULEF) resins.					
A4.504.2 Install VOC compliant resilient flooring systems.					
Tier 1. At least 90 percent of the resilient flooring installed shall comply. Tier 2. At least 100 percent of the resilient flooring installed shall comply.					
${f A4.504.3}$ Thermal insulation installed in the building shall meet the following					
requirements: Tier 1. Install thermal insulation in compliance with VOC limits.					
Tier 2. Install insulation which contains No-Added Formaldehyde					
					Ī
Interior Moisture Control					

IEET 1						
FEATURE OR MEASURE	LEVELS APPL SELECT ELEC	CCTIVE MEASU	SURES A		Installer designer	CING ERIFICATION Third party
4.505.3 Moisture content of building materials used in wall and floor framing is hecked before enclosure.	⊠	Tier 2	Tier 1	All	All	AĬI
ndoor Air Quality and Exhaust						
 4.506.1 Each bathroom shall be provided with the following: ENERGY STAR fans ducted to terminate outside the building. Fans must be controlled by a humidity control (separate or built- in); OR functioning as a component of a whole-house ventilation system. Humidity controls with manual or automatic means of adjustment, capable of adjustment between a relative humidity range of < 50 percent to a maximum of 80 percent. 						
14.506.1 Reserved.						
A4.506.2 [HR] Provide filters on return air openings rated MERV 8 or higher during onstruction when it is necessary to use HVAC equipment.						
14.506.3 Direct-vent appliances shall be used when equipment is located in onditioned space; or the equipment must be installed in an isolated mechanical room.	<u> </u>					
 Environmental Comfort F.507.2 Duct systems are sized, designed, and equipment is selected using the ollowing methods: Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J-2016 o equivalent. Size duct systems according to ANSYACCA 1 Manual D-2016 or equivalent. Select heating and cooling equipment according to ANSVACCA 3 Manual \$-2014 or 	\boxtimes					
equivalent. Outdoor Air Quality Reserved	 					
nnovative Concepts and Local Environmental Conditions						
4.509.1 Items in this section are necessary to address innovative concepts or local avironmental conditions.						
tem 1						
tem 3						
nstaller and Special Inspector Qualifications						
Qualifications	1					
$oldsymbol{02.1}$ HVAC system installers shall be trained and certified in the proper installation over VAC systems.	4					
02.2 Special inspectors employed by the enforcing agency must bequalified and able demonstrate competence in the discipline they are inspecting.						
'erifications	 					
O3.1 Verification of compliance with this code may includeconstruction documents, ans, specifications builder or installer certification, inspection reports, or other ethods acceptable to the enforcing agency which show substantial conformance.	⊠					
Green building measures listed in this table may be mandatory if adopted by a city, county, or city and county as specified in Section 101.7. Required prerequisite for this Tier. These measures are surrently required elsewhere in statute or in regulation.						
These measures are currently required elsewhere in statute or in regulation.						

9/10/2024 SHEET

GREEN BUILDING STANDARDS

ЈОВ NO. 24131



2022 Single-Family Residential Mandatory Requirements Summary

<u>NOTE:</u> 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)1:	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011.*
§ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.*
§ 110.7:	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 stripped.
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	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(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	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 attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling. *
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	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)2:	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 all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45.
Fireplaces, Decora	ative Gas Appliances, and Gas Log:
§ 110.5(e)	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(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *
Space Conditioning	ng, Water Heating, and Plumbing System:
§ 110.0-§ 110.3:	Certification . Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission. *
§ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(b):	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 in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.*
§ 110.3(c)3:	Insulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	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.



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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 are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
150.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
150.0(j)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 § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment' maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
; 150.0(n)1:	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 distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater
150.0(n)3:	Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.
cts 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 a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
; 150.0(m)1:	CMC Compliance. All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼", If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in
150.0(m)2:	these spaces must not be compressed. * Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
150.0(m)3:	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(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
150.0(m)8:	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(m)9:	Protection of Insulation. Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
150.0(m)10:	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(m)11:	Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the



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Space Conditioning System Airflow Rate and Fan Efficacy. Space conditioning systems that use ducts to supply cooling must have § 150.0(m)13:

§ 150.0(m)13:

§ 150.0(m)13:

§ 150.0(m)13:

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

Ventilation and Indoor Air Quality:

Pool and Spa Systems and Equipment:

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

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

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



2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	Multiple Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	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 § 150.0(k)2A.
§ 150.0(k)2E:	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.
§ 150.0(k)2F:	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 SSL 7A.
§ 150.0(k)2K:	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.
§ 150.0(k)3A:	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets al applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	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 §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
Solar Readiness	
§ 110.10(a)1:	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 § 110.10(b)-(e).
§110.10(b)1A:	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet.
§ 110.10(b)2:	Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.*
§ 110.10(b)3B:	Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.*
§ 110.10(b)4:	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.
§ 110.10(c):	Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.

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."



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§ 150.0(s)	Energy Storage System (ESS) Ready. All single-family residences must meet all of the following: Either ESS-ready interconnection
8 100.0(3)	equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the
	main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their
	source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit
	near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of
	225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the mai
	panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
0.450.0(4)	Heat Pump Space Heater Ready. Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated
§ 150.0(t)	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."
0.450.0()	Electric Cooktop Ready. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructe
§ 150.0(u)	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."
0.450.0(.)	Electric Clothes Dryer Ready. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A
§ 150.0(v)	dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps wit
	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.

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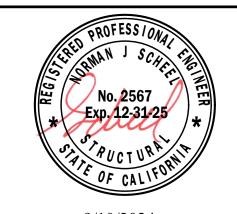
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ISSUE DATE: 9/10/2024

CHECKED BY: BK

REVISIONS:



9/10/2024 MANDATORY MEASURES SUMMARY

ame: Shaffer Addition n Description: Title 24 Analysis OORS	PERFORMANCE COMI	Calcu	lation Date/Time: 2024-07-1 File Name: 2024094Final.rib		7:00 (Page 7 of 12)	Project Name: Shaffer A Calculation Description		RFORMANCE COMPLIANC	Calculation [Date/Time: 2024-07-15 ame: 2024094Final.ribd		CF1R-PRF-01-E (Page 4 of 12)	Project Name: Shaffe Calculation Description	on: Title 24 Analysis			ne: 2024-07-15T07:37:33-07 24094Final.ribd22	00	CF1R-PRF-
01 02 Name Side of B		03 Area (ft ²)	04 U-factor	05 Status	06 Verified Existing Condition	ZONE INFORMATION 01	02	03	04	05	06	07	GENERAL INFORMATIO 01	N Project Name Shaf	er Addition				
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Grade Existing 197	2 178	none	0 80%	No	Existing No		ition R-21 + R-5 CI Foa Wall Siding R-21 + R-5 CI Foa	zio Leit	94.5	0 90	none Nev	w n/a	02 This b	ng Complies with Computer Perfounding incorporates features that	require field testing and/or ve	rification by a certified HERS ra	er under the supervision of a C	EC-approved HERS pro	rovider.
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URFACE CONSTRUCTIONS 01 02	03	04	05 06	07	08	Demising	n>>Existi ng R-0 Interior Wal	II n/a n/a	1	0 n/a	Nev	w n/a							
action Name Surface Type	Construction Type	Framing	Total Cavity R-value Interior / External Continuou R-value		Assembly Layers		eting EX Attic Roof	n/a n/a	1972	n/a n/a	Exist	ing No							
Substitution Malla	NA/a and France and NA/a II	2v6 @ 16 in 0 6		- 0.247	Inside Finish: Gypsum Board		ition HP Attic R-49 (+R1 rage EX Garage Attic	- 		n/a n/a n/a n/a	Nev Exist								
arage Wall Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-0 None / Nor	e 0.347	Cavity / Frame: no insul. / 2x6 Exterior Finish: 3 Coat Stucco	Front 3Gai	rage EX Garage Wall	I 120 Front	112.1	112 90	none Exist	ing No							
on Number: 224-P010088850A-000-00		Registration Da			RS Provider: CalCERTS inc.		224-P010088850A-000-000-0000		Registration Date/Time			alCERTS inc.		224-P010088850A-000-000-000000		Registration Date/Time: 20.		S Provider: CalCER	
g Energy Efficiency Standards - 2022 Re	sidential Compliance	Report Version Schema Versio		Rep	oort Generated: 2024-07-15 08:04:29	CA Building Energy Efficie	ncy Standards - 2022 Resider	ntial Compliance	Report Version: 2022.0 Schema Version: rev 20		Report Generated: 20	024-07-15 08:04:29	CA Building Energy Effi	ciency Standards - 2022 Residentia		Report Version: 2022.0.000 Schema Version: rev 20220901	Rep	ort Generated: 2024-0)7-15 08:04:29
TE OF COMPLIANCE - RESIDENTIAL	PERFORMANCE COMI		lation Date/Time: 2024-07-1	5T07:37:33-07	CF1R-PRF-01-E 7:00 (Page 8 of 12)	CERTIFICATE OF COMPL Project Name: Shaffer A	IANCE - RESIDENTIAL PER	RFORMANCE COMPLIANC		Date/Time: 2024-07-15	T07:37:33-07:00	CF1R-PRF-01-E (Page 5 of 12)	CERTIFICATE OF COM Project Name: Shaffe	PLIANCE - RESIDENTIAL PERFO	RMANCE COMPLIANCE MET		ne: 2024-07-15T07:37:33-07	00	CF1R-PRI (Page 2
n Description: Title 24 Analysis URFACE CONSTRUCTIONS		Input	File Name: 2024094Final.rib	d22		Calculation Description OPAQUE SURFACES	: Title 24 Analysis		Input File Na	ame: 2024094Final.ribd	22		Calculation Description			Input File Name: 20	24094Final.ribd22		
01 02	03	04	05 06 Tatal Cavity Interior / Exte	07	08	01 (04 05	Wind	07 08	09 10	Verified Existing	ENERGY USE SUMMARY Energy Use	Standard Design Source	Standard Design TDV Energy				
ction Name Surface Type	Construction Type	Framing	Total Cavity R-value R-value R-value	s U-factor	Assembly Layers		rage EX Garage Wall		Door /	Area (ft2) Tilt (deg) 0 90	Mall Exceptions Stat none Exist	Condition	Space Heating	Energy (EDR1) (kBtu/ft ² -yr)	(EDR2) (kTDV/ft ² -yr) 38.96	Energy (EDR1) (kBtu/ft ² -yı	(EDR2) (kTDV/ft ² -yr)	Margin (EDR1)) Margin (EI
Wall Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-19 None / Nor	e 0.074	Inside Finish: Gypsum Board Cavity / Frame: R-19 in 5-1/2 in. (R-18) /	Left 3Ga	rage EX Garage Wall	l 210 Left	198 198	0 90 17.8 90	none Exist		Space Cooling	0	38.61	0	40.03	0	-1.42
					Exterior Finish: All Other Siding	ATTIC		. 00 11					IAQ Ventilation	0	0	0	0	0	0
CI Foam Wall ding Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21 None / 5	0.048	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Sheathing / Insulation: R-5 Sheathing	01	02		03		07 08 09	9 10 Verified Existing	Water Heating Self	0	21.47	0	18.41	0	3.06
Name (Exterior Finish: All Other Siding	Name Attic Existing	Constructi EX Roof Exis		(x in 12) Reflec		Cool Roof State No No Exist	Condition	Utilization/Flexibility Credit				О		0
mising Wall Interior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-19 None / Nor	e 0.069	Inside Finish: Gypsum Board Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6	Attic Addition	HP Attic Roof Addit	tion (+R19) Ver	itilated 5 0.	0.2 0.85	No Yes Ne	ew n/a	Efficiency Compliance Total	0	99.04	0	98.98	0	0.06
		NCER	IFS. I no		Other Side Finish: Gypsum Board Inside Finish: Gypsum Board	AtticGarage FENESTRATION / GLAZING	EX Attic Garag		tilated 5 0		No No Exist	ting No	Photovoltaics		Calc	TERTS.	0		+
terior Wall Interior Walls	Wood Framed Wall	2x4 € 16 in. 0 C.	None / Nor	0.277	Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board	01 02	03 04		38 69 R 10		13 14	15 16	Battery		HERS	PROVI	DERO		
Garage Roof Attic Roofs	Wood Framed	2x4 @ 24 in. O. C.	R-0 None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood	Name Type	Surface Orientatio	Azimuth Width Heigh	Mult. Area (ft²) U-factor	U-factor Source SHGC	SHGC Source Exterior Shading	Verified Status Existing Condition	Flexibility Indoor Lighting	0	7.42	0	7.42		
Garage Noor Attit Noors	Ceiling	2x4 @ 24 III. O. C.	R-0 None / 0	0.044	Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	EX 5050 OP Window	Front Front	120	1 25 0.58	Table 0.65	Table Bug Screen	Existing No	Appl. & Cooking	0	26.33	0	26.32		
of Existing Attic Roofs	Wood Framed	2x4 @ 24 in. O. C.	R-0 None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood	EX 2020 OP Window	Front Front	120	1 4 0.58	110.6-A 0.65	Table Bug Screen	Existing No	Plug Loads	0	31.34	0	31.34		
	Ceiling				Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	FX 2020 OP				Table	Table		Outdoor Lighting TOTAL COMPLIANCE	0	1.72 165.85	0	1.72 165.78		
Roof Addition Attic Roofs	Wood Framed Ceiling	2x6 @ 24 in. O. C.	R-19 None / 0	0.055	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking	2 Window	Front Front	120	1 4 0.58	110.6-A 0.65	110.6-B Bug Screen	Existing No	L	. L	<u> </u>				
ints)	Cennig				Cavity / Frame: R-19 / 2x6	EX 3040 OP Window	Left Left	210	1 12 0.58	Table 0.65	Table 110.6-B Bug Screen	Existing No							
on Number: 224-P010088850A-000-00		Registration Da	ate/Time: 2024-07-16 08:56:11		RS Provider: CalCERTS inc.		224-P010088850A-000-000-0000		Registration Date/Time Report Version: 2022.0	e: 2024-07-16 08:56:11	HERS Provider: Ca			224-P010088850A-000-000-000000		Registration Date/Time: 20 Report Version: 2022.0.000		S Provider: CalCERT	
5 Lifetgy Liftchency Standards - 2022 No	sidential compliance	•	n: rev 20220901	пер	Join Generated. 2024-07-13 06:04:23	CA building Lifetgy Liftcle	incy Standards - 2022 Resider	псагсоприапсе	Schema Version: rev 20		Report Generated. 20	024-07-13 00:04:23	CA Dullding Energy Entire	cency Standards - 2022 Residentic		Schema Version: rev 20220901	кер	ort Generateu. 2024-0	
TE OF COMPLIANCE - RESIDENTIAL	PERFORMANCE COMI		lation Date/Time: 2024-07-1	.5T07:37:33-07	CF1R-PRF-01-E 7:00 (Page 9 of 12)	CERTIFICATE OF COMPL Project Name: Shaffer A	IANCE - RESIDENTIAL PER	RFORMANCE COMPLIANC		Date/Time: 2024-07-15	T07:37:33-07:00	CF1R-PRF-01-E (Page 6 of 12)	CERTIFICATE OF COM Project Name: Shaffe	PLIANCE - RESIDENTIAL PERFO	RMANCE COMPLIANCE MET		ne: 2024-07-15T07:37:33-07	00	CF1R-PRF (Page 3 c
n Description: Title 24 Analysis URFACE CONSTRUCTIONS			File Name: 2024094Final.rib		· 	Calculation Description FENESTRATION / GLAZING	: Title 24 Analysis			ame: 2024094Final.ribd			Calculation Description			Input File Name: 20			
02	03	04	05 06 Total Cavity Interior / Exte	07	08	01 02	03 04	05 06 07		11 12	13 14	15 16	ENERGY USE INTENSITY	Standard Desig	n (kBtu/ft ² - yr) Propos	ed Design (kBtu/ft ² - yr)	ompliance Margin (kBtu/ft ² - y) Margin	n Percentage
on Name Surface Type	Construction Type	Framing	Total Cavity R-value R-value R-value		Assembly Layers	Name Type	Surface Orientatio	Azimuth Width Heigh	Mult. Area (ft²) U-factor	U-factor Source SHGC	SHGC Source Exterior Shading	Verified Status Existing Condition	Gross EUI		.32	25.8	0.52	+	1.98
ge Attic Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0 None / Nor	e 0.481	Cavity / Frame: no insul. / 2x4 Inside Finish: Gypsum Board	EX 3040 OP Window	Left Left	210	1 12 0.58	Table 0.65	Table 110.6-B Bug Screen	Existing No	Net EUI ²	26	.32	25.8	0.52	1	1.98
: Roof Ceilings (below	Wood Framed	2x4 @ 24 in. O. C.	R-30 None / Nor	e 0.032	Over Ceiling Joists: R-20.9 insul. Cavity / Frame: R-9.1 / 2x4	EX 6050 OP Window	Left Left	210	1 30 0.58	Table 0.65	Table Bug Screen	Existing No		y Use Total (not including PV) / Tot Jse Total (including PV) / Total Bui					
attic)	Ceiling				Inside Finish: Gypsum Board Over Ceiling Joists: R-34.7 insul.	EX 4020 1/2 Window	д	210	1 8 0.58	Table O.C.	Table Bus Sauce		2. Net EUI is Energy (anig Aled.				
-49 (+R19) Ceilings (below attic)	Wood Framed Ceiling	2x6 @ 16 in. O. C.	R-49 None / Nor	e 0.02	Cavity / Frame: R-14.3 / 2x6 Inside Finish: Gypsum Board	Round				110.6-A 0.03	110.6-B Bug Screen		The following are featur	es that must be installed as condi	ion for meeting the modeled er	nergy performance for this comp	uter analysis.		
IVELOPE - HERS VERIFICATION				1		EX 4030 OP Window	Back Back	300	1 12 0.58	110.6-A	110.6-B Bug Screen	Existing No	 Cool roof Ceiling has high leman Insulation below 	arei er meana					
01 ulation Installation (QII) High R-ya	02 lue Spray Foam Insulatio			7 -	05 CFM50	EX 4030 OP Window	Back Back	300	1 12 0.58		Table Bug Screen	Existing No	Window overhan	4		ERIS	Inc		
Required	Not Required	RS PAR	OVIDE		n/a	EX 5036 OP Window	Right Right	30 H E R	\$ 15 R ^{0.5} 6	Table 0.65	Table Bug Screen	Existing No	HERS FEATURE SUMMA	<u> </u>	HERS	PROVI	DER		
TING SYSTEMS						EX 3040 OP Window	Right Right	30	1 12 0.58	Table 0.65	Table 110.6-B Bug Screen	Existing No	detail is provided in the	ary of the features that must be f building tables below. Registered				ce for this computer a	analysis. Additi
02 03	04 05	06 0		09	10 11 12 Verified Existing Water	EX 3040 OP Window	Right Right	30	1 12 0.58	Table 0.65	Table	Existing No	 Quality insulation Refrigerant Charge Duct Sealing requ 	installation (QII) se verification required if a refriger ired if a duct system component,	ant containing component is alt plenum, or air handling unit is a	ered Itered			
System Type Distribution Type	Water Heater Number Units	· · · · · · · · · · · · · · · · · · ·	'	r Heater me (#)	Verified Existing Water Status Existing Heating Condition System	New 12080 Window	 	300 12 8	1 96 0.3	NFRC 0.2	NFRC Bug Screen	New NA	BUILDING - FEATURES II						
/ Domestic Hot Water (DHW) Standard	New Instant 1	n/a No	ne i n/a i	Instant (1) Al	ltered No	SGD	Back 2 Back	300 12 8	1 30 0.3	.vi.nc U.2	c bug screen	IVA	01	02	03 Number of Dwelling	04	05 Number	06 of Ventilation	07 Number of W
Water (Driver)		1		. ,		OPAQUE DOORS 01	02	03		04	05	06	Project Name Shaffer Addition	Conditioned Floor Area	(ft ²) Number of Dwelling Units	Number of Bedrooms No.	mher of Zones I		Number of W Heating Syste
water (bnw)							1	1					Snamer Addition	L 2122	1 1	4	. 1	• I	1
Water (DRW)						Name EX 3068 Entry Door	Side of Buildir	ng Area (-factor 0.102	Status Ver Existing	rified Existing Condition No		· ·		<u>'</u>			

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Sacramento Office 5022 Sunrise Blvd. Fair Oaks, CA 95628 (916) 536-9585 info@nsse.com

SHAFFER ADDITION
102 HERRILL CT
FOLSOM, CA 95630 SY CONSTRUCT 652 ORENO CT FOLSOM, CA 95630

PROJ. MGR.: BK DRAWN BY: LT CHECKED BY: BK ISSUE DATE: 9/10/2024

REVISIONS:



9/10/2024 **SHEET**

	me: Shaffer	PLIANCE - RESI Addition						Calcu	lation Date	e /Time: 202	4-07-15T0	7:37:33-07:0	0		F1R-PRF-01 Page 10 of 1
-		n: Title 24 Ana	lysis							: 2024094Fi				•	· ·
WATER HEA	TERS														
01	02	03	04	05	06	0)7	08	09	10	11	12	13	14	15
Name	Heating Element Type	Tank Type	# of Units	Tank Vol.	Heating Efficiency Type	Effic	ioncy l	ated ut Type	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	Tank Location	on Status	Verified Existing Condition
New Instant	Gas	Consumer Instantaneou	s 1	0	UEF	0.	96 B	tu/Hr	200000	0	n/a	n/a		Altered	d No
WATER HEA	TING - HERS	VERIFICATION	Л												
	01		02		03			04		05		06	5		07
N	ame	Pipe II	nsulation	Pa	rallel Piping		Compact	Distribu	ition	Compact Distr Type	ibution	Recirculation	on Control		ain Water He covery
ALT DHW	System - 1/1	Not F	equired		ot Required		Not I	Required		None		Not Re	quired	Not I	Required
SPACE CONI	DITIONING S	YSTEMS	7		Ca										
01	02	2 0	3	04	05		06		07	08	09	1	10	11	12
Name	System	ivne i	ng Unit me	Heating Equipment Count	Cooling Uni Name	t E	Cooling Equipment Count	Fan	Name	Distribution Name	Requir Thermo Type	stat Sta	atus	Verified Existing Condition	Existing HV/ System
HVAC1	Heating cool system	ing Comp	ting onent I	1	Cooling Component 1	t	1	HVA	C Fan 1	Air Distribution System 1	n/a	Exi	sting	No	
HVAC - HFA	TING UNIT T	/PES			•						•	'	'		
- IIIA	01			02				03			04		1	05	
	Name			System Type			Numbe	er of Uni	ite	<u> </u>	eating Effic	ionav	+	leating Unit	Drand

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

Registration Date/Time: 2024-07-16 08:56:11

Calculation Date/Time: 2024-07-15T07:37:33-07:00

Input File Name: 2024094Final.ribd22

Report Version: 2022.0.000 CA Building Energy Efficiency Standards - 2022 Residential Compliance Schema Version: rev 20220901

Registration Number: 224-P010088850A-000-000-0000000-0000

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HERS Provider: CalCERTS inc.

Report Generated: 2024-07-15 08:04:29

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Shaffer Addition Calculation Description: Title 24 Analysis

HVAC - COOLING UNIT TYPES 06 Efficiency EER/EER2/CEER Efficiency SEER/SEER2 System Type Number of Units Efficiency Metric Zonally Controlled HERS Verification Central split AC EER2/SEER2 11.7 14.3 Not Zonal Single Speed Component Component 1 1-hers-cool

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name Type	Type Design Type	Duct R-v	Ins. alue		ıct ition	Surfac	e Area	Bypass Duet	Duct Leakage	HERS	Status	Verified Existing	Existing Distribution	New Ducts	
		Suppl y	Retur	Suppl	Retur	Suppl Y	Retur	bypass Duct	Duct Leakage	Verification	Status	Condition	system	>= 25 ft	
Air Distribution System 1	Unconditio ned attic	Non- Verified	R-8	R-8	Atti c	H° E	n/a (%)		No Bypass Duct	Existing (not specified)	Distribution System	Exiting + New	No		No

HVAC - FAN SYSTEMS			
01	02	03	04
Name	Туре	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.58	HVAC Fan 1-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION		
01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Not Required	0

Registration Number: 224-P010088850A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Schema Version: rev 20220901

Registration Date/Time: 2024-07-16 08:56:11

HERS Provider: CalCERTS inc. Report Generated: 2024-07-15 08:04:29

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Shaffer Addition

Calculation Date/Time: 2024-07-15T07:37:33-07:00

CF1R-PRF-01-E (Page 12 of 12)

Calculation Description: Title 24 Analysis	Input File Name: 2024094Final.ribd22
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name:	Documentation Author Signature:
Jennifer Ferris	Gennifer Ferris
Company:	Signature Date:
Accurate Energy	2024-07-15 08:11:16
Address:	CEA/ HERS Certification Identification (If applicable):
701 33rd Avenue S	n/a
City/State/Zip:	Phone:
Great Falls, MT 59405	916-783-7313
RESPONSIBLE PERSON'S DECLARATION STATEMENT	<u>'</u>
	of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulation ance are consistent with the information provided on other applicable compliance documents, worksheets,
Responsible Designer Name: Robert Coon	Robert Coon
Company: Norman Scheel Structural Engineer	Date \$ig(ed: 2024-07-16 08:56:11
Address: 5022 Sunrise Boulevard	License: TBD

Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.



Registration Number: 224-P010088850A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

City/State/Zip: Fair Oaks, CA 95628

Registration Date/Time: 2024-07-16 08:56:11 Report Version: 2022.0.000 Schema Version: rev 20220901

Phone: 916-536-9585

HERS Provider: CalCERTS inc. Report Generated: 2024-07-15 08:04:29

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Sacramento Office

5022 Sunrise Blvd. Fair Oaks, CA 95628 (916) 536-9585 info@nsse.com

AFFER ADDITION
102 HERRILL CT
FOLSOM, CA 95630

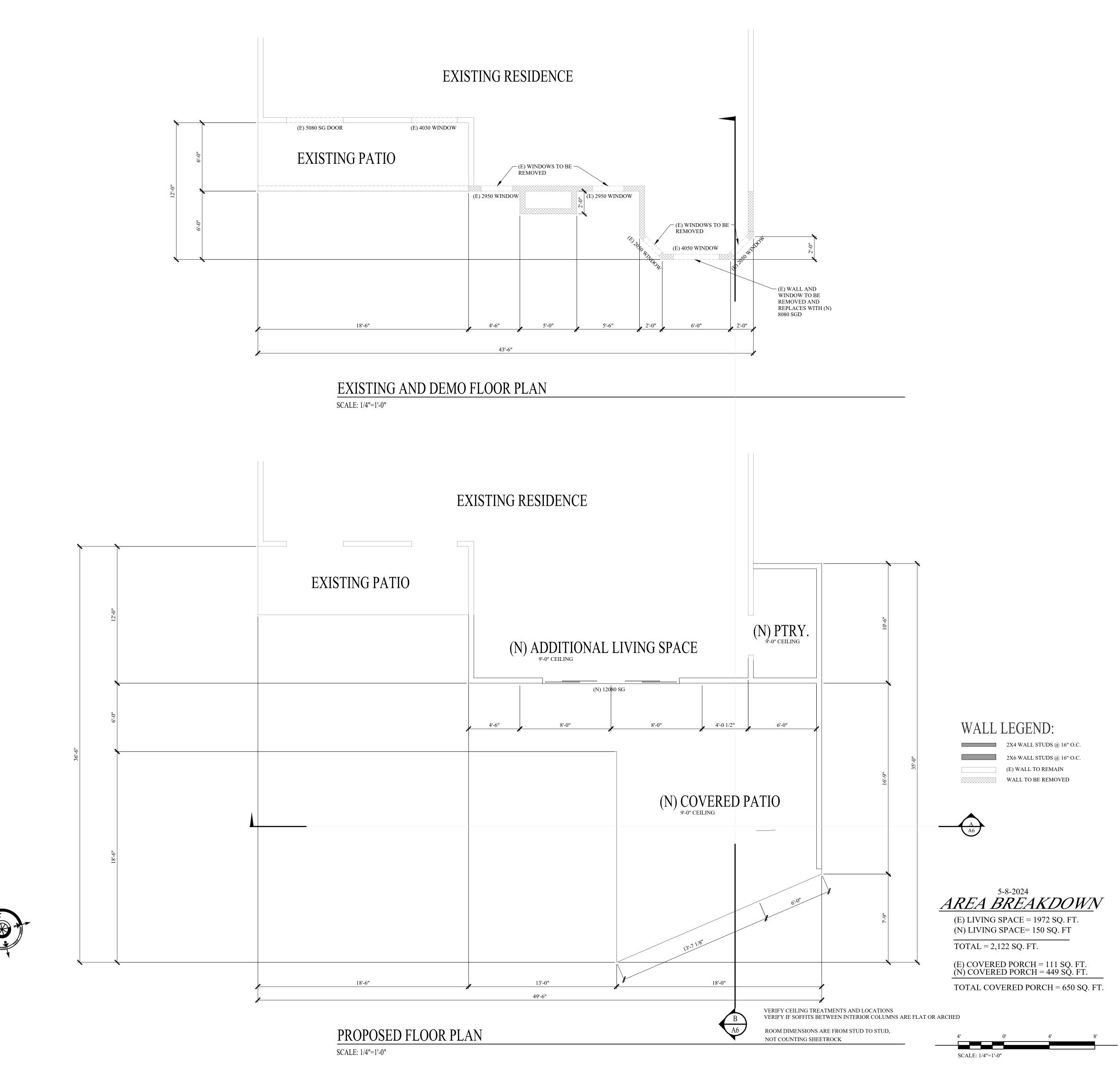
STR NO CT

PROJ. MGR.: BK ENGINEER: DRAWN BY: LT CHECKED BY: BK ISSUE DATE: 9/10/2024

SH

REVISIONS:





GENERAL NOTES: 2022 CBC, CMC, CPC, CEC

0.0. EGRESS. SLEEPING ROOMS TO HAVE MIN. (1) OPERABLE WINDOW OR DOOR APPROVED FOR EMERGENCY ESCAPE OR RESCUE THAT SHALL OPEN DIRECTLY INTO A PUBLIC STREET, WAY, YARD, OR EXIT COURT AND SHALL HAVE A MIN. NET CLEAR OPENABLE AREA OF 5.7 SQ. FT. MIN. NET CLEAR OPEN HEIGHT OF 24". MIN. NET CLEAR WIDTH OF 20". THE BOTTOM OF CLEAR OPENING NO MORE THAN 44" ABOVE FLOOR, PER 2022 CBC 1031.3

1.0 LIGHT & VENTILATION.

- WINDOW(S) IN BEDROOM MUST MEET EGRESS AND HAVE DOUBLE GLAZING IN EXT. DOORS, WINDOWS & SKYLIGHTS. GUEST ROOMS / HABITABLE ROOMS WITHIN THE DWELLING TO HAVE NATURAL LIGHT WITH GLAZED OPENINGS WITH AN AREA NO LESS THAN 8% OF THE FLOOR AREA OF ROOM SERVED, 2022 CBC 1204.2. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4% OF THE FLOOR AREA BEING VENTILATED, 2022 CBC 1204.5.1. KITCHENS MAY HAVE ARTIFICIAL LIGHT. BATHROOMS SHALL BE MECHANICALLY VENTILATED PER 2022 CMC 403.7, TABLE 403.7; 2022 CBC 1202.5.2.1
- 2.0 SAFETY GLASS REQUIRED IN EXIT AND ENTRANCE DOORS AND FIXED GLAZED PANELS, GLAZING IN STORM DOORS, GLAZING IN SLIDING DOORS (BOTH FIXED AND SLIDING), GLASS IN ALL SWINGING DOORS, GLAZING IN SHOWER AND TUB ENCLOSURES, GLAZING ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WITHIN 36" HORIZ. OF WALKING SURFACE. GLAZING WHERE EXPOSED BOTTOM EDGE LESS THAN 18 INCHES ABOVE FLOOR. GLAZING IN PANELS ADJACENT TO DOOR VERTICAL EDGE WITHIN 24 INCHES. 2022 CBC 2406.4, HAZARDOUS LOCATIONS.
- 3.0 GARAGE DOOR(S) TO BE PROVIDED WITH METAL SLIDE BAR BOLT OR MECHANICAL CLOSING DEVICE. PROVIDE SPRING RETENTION DEVICE.
- 4.0 SHOWER COMPARTMENTS AND WALLS ABOVE BATHTUBS WITH SHOWER HEADS SHALL BE FINISHED WITH A SMOOTH, NONABSORBENT SURFACE TO A HEIGHT NO LESS THAT 72" ABOVE THE DRAIN INLET 2022 CBC 1210.2.3 SUCH AS CONCRETE, CERAMIC TILE OR OTHER APPROVED MATERIAL OF A TYPE NOT ADVERSELY AFFECTED BY MOISTURE. INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THERMOSTATIC MIX VALVE TYPE AT SHOWERS / TUB SHOWERS MAX. SETTING 120°F (49° C). 2022 CPC 408.3.2
- 5.0 WATERCLOSETS SHALL HAVE A MAX. FLUSHING CAPACITY OF 1.28 GALLONS. 2022 CPC 411.2
- 6.0 AN ATTIC ACCESS TO BE PROVIDED AT ANY ATTIC AREA HAVING A CLEAR HEIGHT OF OVER 30". A 30" MIN. CLEAR HEADROOM IN ATTIC ABOVE ACCESS SHALL BE PROVIDED AT OR ABOVE ACCESS OPENING. PASSAGEWAY ACCESS TO APPLIANCE NOT TO EXCEED 20 FT. A 24" CATWALK OF SOLID FLOORING UNOBSTRUCTED FROM ENTRANCE TO APPLIANCE. A LEVEL PLATFORM MIN. 30" BY 30" IN FRONT OF SERVICE SIDE OF THE EQUIPMENT. A PERMANENT 120-VOLT RECEPTACLE OUTLET AND LIGHT FIXTURE TO BE INSTALLED NEAR APPLIANCE. SWITCH LOCATED AT ENTRANCE OF PASSAGEWAY. 2022 CPC 508.4, 2022 CBC 1209.2. SEE ELECTRICAL SHEET FOR LOCATION.
- 7.0 A REMOVABLE PANEL (MIN. 12"X12") SHALL BE PROVIDED TO ACCESS AND REMOVE THE PUMP. WHIRLPOOL PUMP ACCESS IN THE CRAWL SPACE LOCATED MAX. 20 FT. FROM AN ACCESS DOOR. 2022 CPC 409.6
- 8.0 STAIRWAYS SHALL HAVE MIN. HEADROOM CLEARANCE OF NOT LESS THAN 80" MEASURED VERTICALLY FROM LINE CONNECTING THE EDGE OF NOSING AND FULL WIDTH OF STAIRWAY AND LANDING NOT LESS THAN WIDTH OF STAIRWAY. STAIRWAYS SHALL HAVE A WIDTH OF NO LESS THAN 36", 2022 CBC 1011.2 -EXCEPTION 1. 7.75" MAX. RISÉ, 10" MIN. RUN & 1" NOSING, 2022 CBC 1011.5.2 -EXCEPTION 3. HANDRAILS PER 2022 CBC 1014 REQUIRED WHERE THERE ARE 4 OR MORE RISERS. HANDRAIL HEIGHT NOT LESS THAN 34" NOR MORE THAN 38" ABOVE LANDING AND NOSING. 2022 CBC 1014.2
- 9.0 WHERE NOT REQUIRED TO BE ADAPTABLE OR ACCESSIBLE, THE LANDING AT EXTERIOR DOOR SHALL BE NO MORE THAN 7.75" BELOW TOP OF THRESHOLD, PROVIDED THE DOOR OTHER THAN A SCREEN OR STORM 1010.1.6 -EXCEPTION 1.
- 10. GUARD RAILS REQUIRED ALONG OPEN SIDE OF WALKING SURFACE AT RAMPS AND LANDINGS MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW, MIN. 42" HIGH. 2022 CBC 1015.2 & 1015.3
- 11. OPEN GUARDS SHALL HAVE BALLUSTERS OR ORNAMENTAL PATTERNS SUCH THAT A 4" DIAMETER SPHERE CANNOT PASS THROUGH ANY OPENING. EXCEPT FOR THE TRIANGULAR OPENINGS FORMED BY RISER, TREAD, BOTTOM RAIL AT OPEN SIDE SHALL HAVE A MAXIMUM SIZE SUCH THAT A 6" DIAMETER SPHERE CANNOT PASS. 2022 CBC 1015.4
- 12. SMOKE DETECTORS SHALL BE INSTALLED IN ALL SLEEPING AREAS AND OTHER COMMON SPACES NORMALLY ACCESSIBLE TO RESIDENTS. ALSO ON THE CEILING OR WALL OUTSIDE EACH SEPARATE SLEEPING AREA IN VICINITY OF BEDROOMS, IN EACH STORY WITHIN DWELLING INCLUDING BASEMENTS, SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN LEVELS, THE SMOKE ALARM INSTALLED ON UPPER LEVEL WILL SUFFICE FOR ADJACENT LOWER LEVEL PROVIDED LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW UPPER LEVEL. NOT REQUIRED IN KITCHENS. A PHOTOELECTRIC SMOKE ALARM IS REQUIRED WHEN INSTALLED WITHIN 20 FEET OF THE COOKING APPLIANCE. 2022 CBC 907.2.11.1, 907.2.11.2, 907.2.11.5, 907.2.11.8
- 13. SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHERE SERVED FROM A COMMERCIAL SOURCE AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. ALARMS TO EMIT SIGNAL WHEN BATTERIES ARE LOW. WIRING SHALL BE PERMANENT WITHOUT MEANS OF DISCONNECTION. 2022 CBC 907.2.11.6
- 14. IN SEISMIC DESIGN CATEGORIES C, D, E, AND F STRAP WATER HEATERS TO FRAMING MEMBERS WITHIN THE UPPER 1/3 AND LOWER 1/3 OF WATER-HEATER'S VERTICAL DIMENSIONS. AT THE LOWER POINT, A MIN. DISTANCE OF 4 IN. SHALL BE MAINTAINED ABOVE CONTROLS WITH THE STRAPPING. 2022 CPC 507.2. INSTALL FUEL-BURNING WATER HEATERS PER 2022 CPC 505.1, FOR COMBUSTION AIR. PROVIDE SIZED COMBO. PRESSURE AND TEMP. RELIEF VALVE. FOR APPLIANCES IN ATTIC, SEE 2022 CPC 608.3, 608.4
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- 16. HOSE BIBS AND LAWN SPRINKLER SYSTEMS SHALL HAVE APPROVED BACK-FLOW PREVENTION DEVICES. 2022 CPC 603.5.6, 603.5.7
- 17. PROVIDE 2x6 STUD WALLS WHERE PIPING WITHIN
- THE WALL IS GREATER THAN 2 INCHES OUTSIDE DIAMETER. 18. PROVIDE APPROVED DISHWASHER AIR GAP FITTING. 2022 CPC 807.3
- 19. APPLIANCES AND RECEPTACLES INSTALLED IN GARAGE GENERATING A GLOW, SPARK, OR FLAME SHALL BE LOCATED 18" ABOVE FLOOR.

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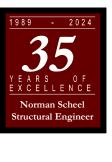
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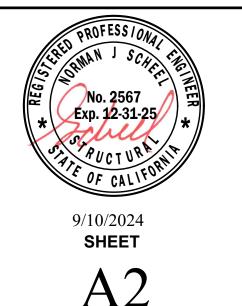
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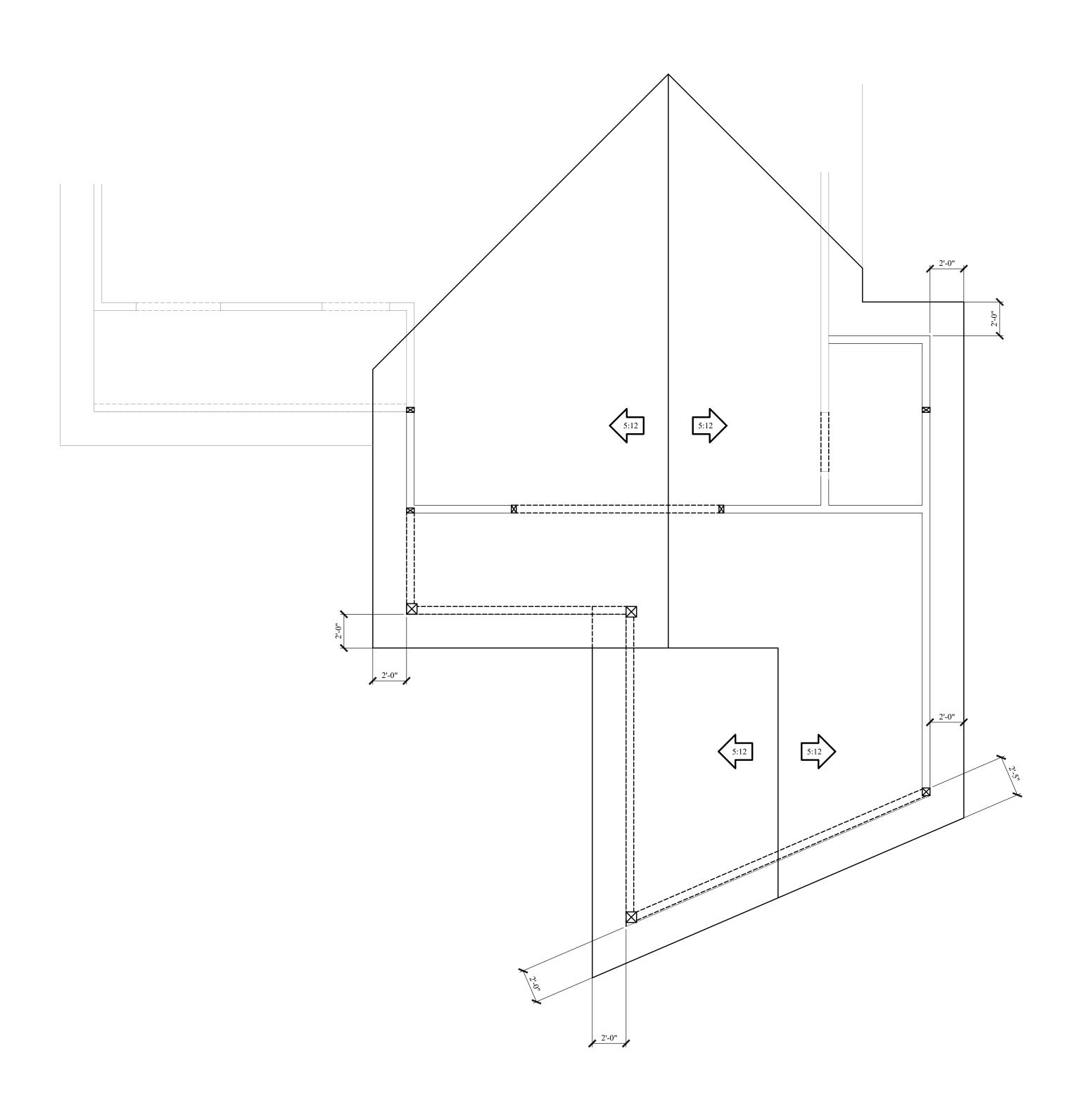


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REVISIONS:



EXISTING VENTILATION SATISFIES MIN. REQUIREMENTS FOR (N) ADDITION. NO ADDITIONAL VENTILATION REQUIRED.



WALL LEGEND:

2X4 WALL STUDS @ 16" O.C. 2X6 WALL STUDS @ 16" O.C.

STAIR RAILING, -----

AREA BREAKDOWN

(E) LIVING SPACE = 1972 SQ. FT.(N) LIVING SPACE= 150 SQ. FT

TOTAL = 2,122 SQ. FT.

(E) COVERED PORCH = 111 SQ. FT. (N) COVERED PORCH = 449 SQ. FT.

TOTAL COVERED PORCH = 650 SQ. FT

2X (4 OR 6) WALL UNDER STEP LEVEL

0.0. EGRESS. SLEEPING ROOMS TO HAVE MIN. (1) OPERABLE WINDOW OR DOOR APPROVED FOR EMERGENCY ESCAPE OR RESCUE THAT SHALL OPEN DIRECTLY INTO A PUBLIC STREET, WAY, YARD, OR EXIT COURT AND SHALL HAVE A MIN. NET CLEAR OPENABLE AREA OF 5.7 SQ. FT. MIN. NET CLEAR OPEN HEIGHT OF 24". MIN. NET CLEAR WIDTH OF 20". THE BOTTOM OF CLEAR OPENING NO MORE THAN 44" ABOVE FLOOR, PER 2022 CBC 1031.3

1.0 LIGHT & VENTILATION.

WINDOW(S) IN BEDROOM MUST MEET EGRESS AND HAVE DOUBLE GLAZING IN EXT. DOORS, WINDOWS & SKYLIGHTS. GUEST ROOMS / HABITABLE ROOMS WITHIN THE DWELLING TO HAVE NATURAL LIGHT WITH GLAZED OPENINGS WITH AN AREA NO LESS THAN 8% OF THE FLOOR AREA OF ROOM SERVED, 2022 CBC 1204.2. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4% OF THE FLOOR AREA BEING VENTILATED, 2022 CBC 1204.5.1. KITCHENS MAY HAVE ARTIFICIAL LIGHT. BATHROOMS SHALL BE MECHANICALLY VENTILATED PER 2022 CMC 403.7, TABLE 403.7; 2022 CBC 1202.5.2.1

2.0 SAFETY GLASS REQUIRED IN EXIT AND ENTRANCE DOORS AND FIXED GLAZED PANELS, GLAZING IN STORM DOORS, GLAZING IN SLIDING DOORS (BOTH FIXED AND SLIDING), GLASS IN ALL SWINGING DOORS, GLAZING IN SHOWER AND TUB ENCLOSURES, GLAZING ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WITHIN 36" HORIZ. OF WALKING SURFACE. GLAZING WHERE EXPOSED BOTTOM EDGE LESS THAN 18 INCHES ABOVE FLOOR. GLAZING IN PANELS ADJACENT TO DOOR VERTICAL EDGE WITHIN 24 INCHES. 2022 CBC 2406.4, HAZARDOUS LOCATIONS.

- 3.0 GARAGE DOOR(S) TO BE PROVIDED WITH METAL SLIDE BAR BOLT OR MECHANICAL CLOSING DEVICE. PROVIDE SPRING RETENTION DEVICE.
- 4.0 SHOWER COMPARTMENTS AND WALLS ABOVE BATHTUBS WITH SHOWER HEADS SHALL BE FINISHED WITH A SMOOTH, NONABSORBENT SURFACE TO A HEIGHT NO LESS THAT 72" ABOVE THE DRAIN INLET 2022 CBC 1210.2.3 SUCH AS CONCRETE, CERAMIC TILE OR OTHER APPROVED MATERIAL OF A TYPE NOT ADVERSELY AFFECTED BY MOISTURE. INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THERMOSTATIC MIX VALVE TYPE AT SHOWERS / TUB SHOWERS MAX. SETTING 120°F (49° C). 2022 CPC 408.3.2
- 5.0 WATERCLOSETS SHALL HAVE A MAX. FLUSHING CAPACITY OF 1.28 GALLONS. 2022 CPC 411.2
- 6.0 AN ATTIC ACCESS TO BE PROVIDED AT ANY ATTIC AREA HAVING A CLEAR HEIGHT OF OVER 30". A 30" MIN. CLEAR HEADROOM IN ATTIC ABOVE ACCESS SHALL BE PROVIDED AT OR ABOVE ACCESS OPENING. PASSAGEWAY ACCESS TO APPLIANCE NOT TO EXCEED 20 FT. A 24" CATWALK OF SOLID FLOORING UNOBSTRUCTED FROM ENTRANCE TO APPLIANCE. A LEVEL PLATFORM MIN. 30" BY 30" IN FRONT OF SERVICE SIDE OF THE EQUIPMENT. A PERMANENT 120-VOLT RECEPTACLE OUTLET AND LIGHT FIXTURE TO BE INSTALLED NEAR APPLIANCE. SWITCH LOCATED AT ENTRANCE OF PASSAGEWAY. 2022 CPC 508.4, 2022 CBC 1209.2. SEE ELECTRICAL SHEET FOR LOCATION.
- 7.0 A REMOVABLE PANEL (MIN. 12"X12") SHALL BE PROVIDED TO ACCESS AND REMOVE THE PUMP. WHIRLPOOL PUMP ACCESS IN THE CRAWL SPACE LOCATED MAX. 20 FT. FROM AN ACCESS DOOR. 2022 CPC 409.6
- 8.0 STAIRWAYS SHALL HAVE MIN. HEADROOM CLEARANCE OF NOT LESS THAN 80" MEASURED VERTICALLY FROM LINE CONNECTING THE EDGE OF NOSING AND FULL WIDTH OF STAIRWAY AND LANDING NOT LESS THAN WIDTH OF STAIRWAY. STAIRWAYS SHALL HAVE A WIDTH OF NO LESS THAN 36", 2022 CBC 1011.2 -EXCEPTION 1. 7.75" MAX. RISE, 10" MIN. RUN & 1" NOSING, 2022 CBC 1011.5.2 -EXCEPTION 3. HANDRAILS PER 2022 CBC 1014 REQUIRED WHERE THERE ARE 4 OR MORE RISERS. HANDRAIL HEIGHT NOT LESS THAN 34" NOR MORE THAN 38" ABOVE LANDING AND NOSING. 2022 CBC 1014.2
- 9.0 WHERE NOT REQUIRED TO BE ADAPTABLE OR ACCESSIBLE, THE LANDING AT EXTERIOR DOOR SHALL BE NO MORE THAN 7.75" BELOW TOP OF THRESHOLD, PROVIDED THE DOOR OTHER THAN A SCREEN OR STORM 1010.1.6 -EXCEPTION 1.
- 10. GUARD RAILS REQUIRED ALONG OPEN SIDE OF WALKING SURFACE AT RAMPS AND LANDINGS MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW, MIN. 42" HIGH. 2022 CBC 1015.2 & 1015.3
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- 18. PROVIDE APPROVED DISHWASHER AIR GAP FITTING. 2022 CPC 807.3
- 19. APPLIANCES AND RECEPTACLES INSTALLED IN GARAGE GENERATING A GLOW, SPARK, OR FLAME SHALL BE LOCATED 18" ABOVE FLOOR.

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

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FOLS

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

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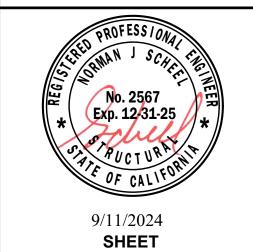
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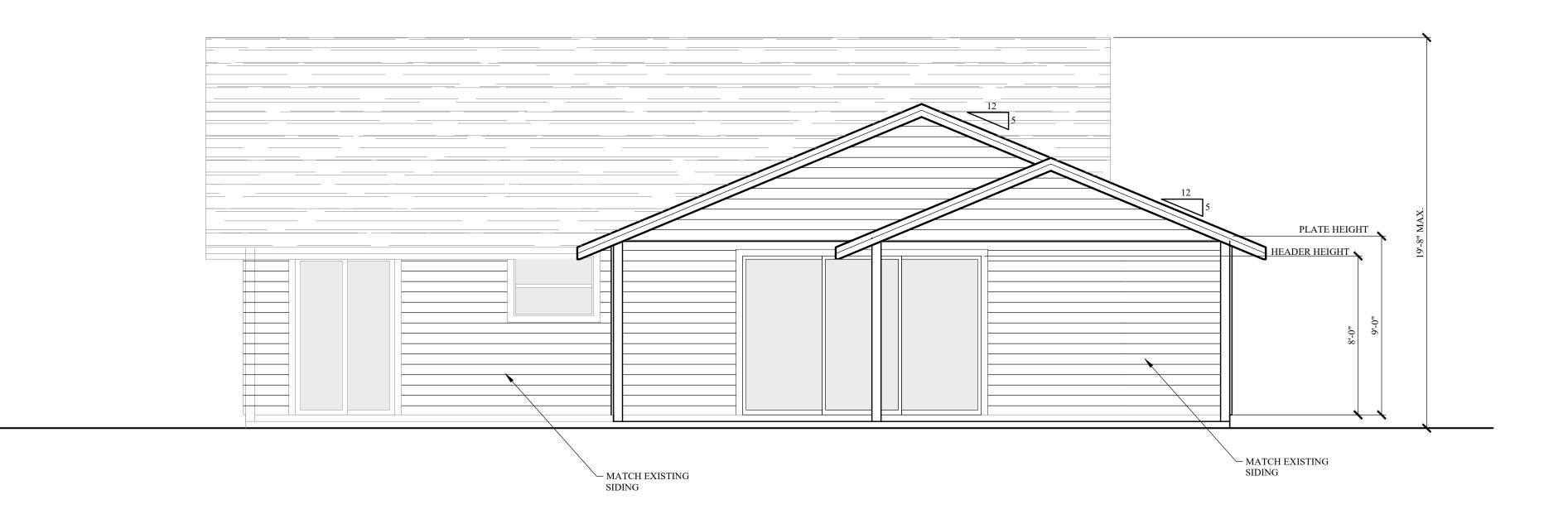
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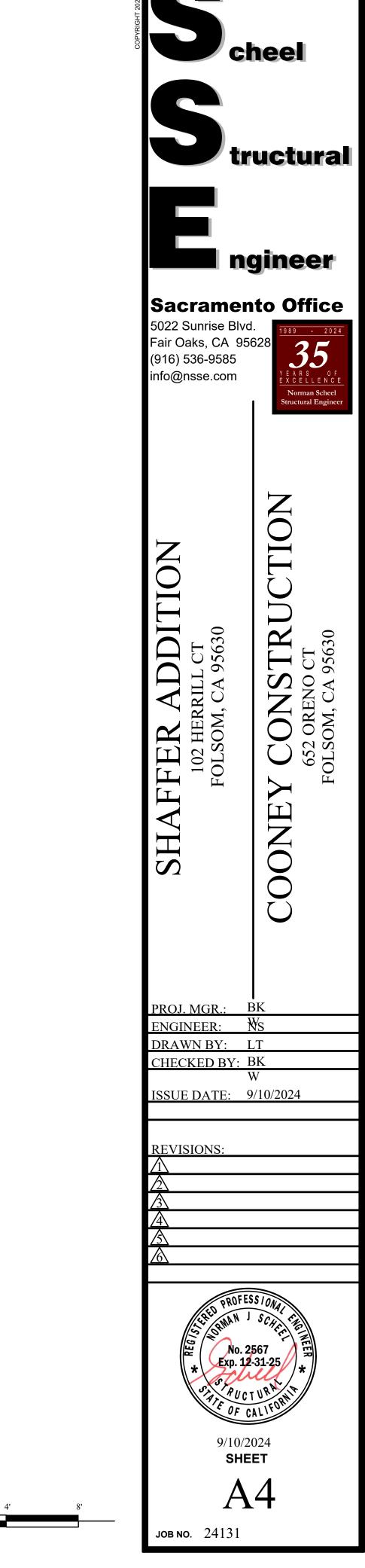




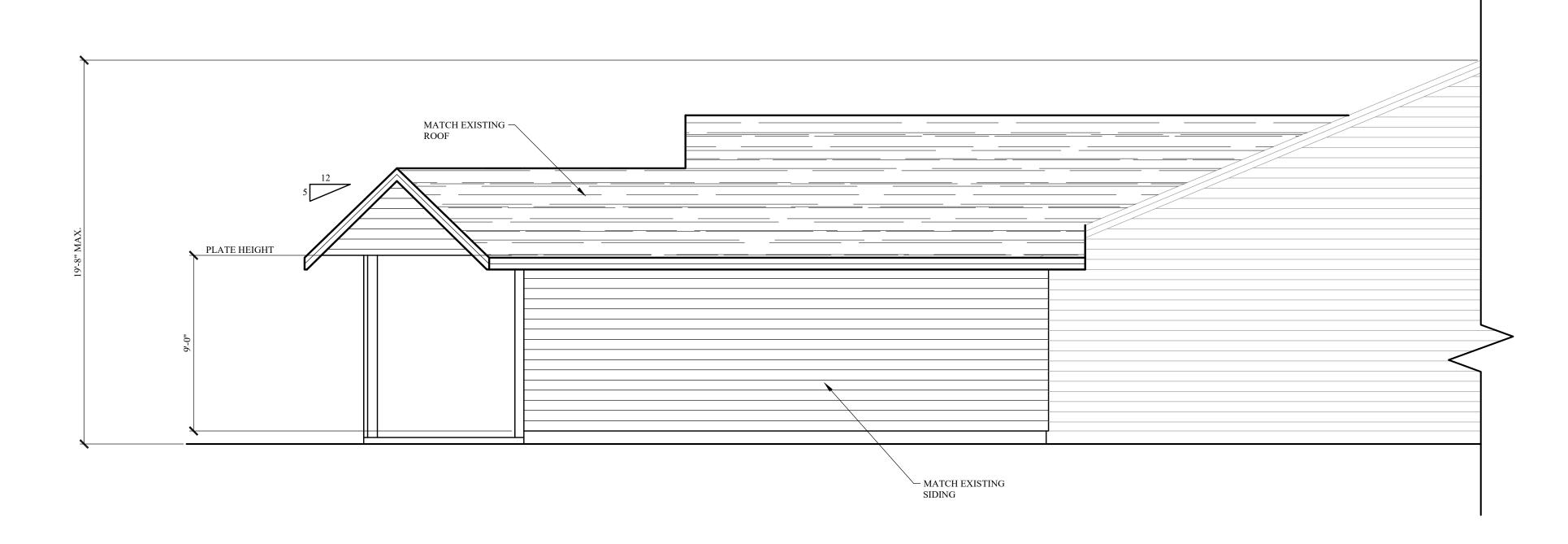
NEW REAR ELEVATION
SCALE: 1/4"=1'-0"

(E) PLATE HEIGHT (E) HEADER HEIGHT (E) HEIGHT (E)

EXISTING REAR ELEVATION
SCALE: 1/4"=1'-0"

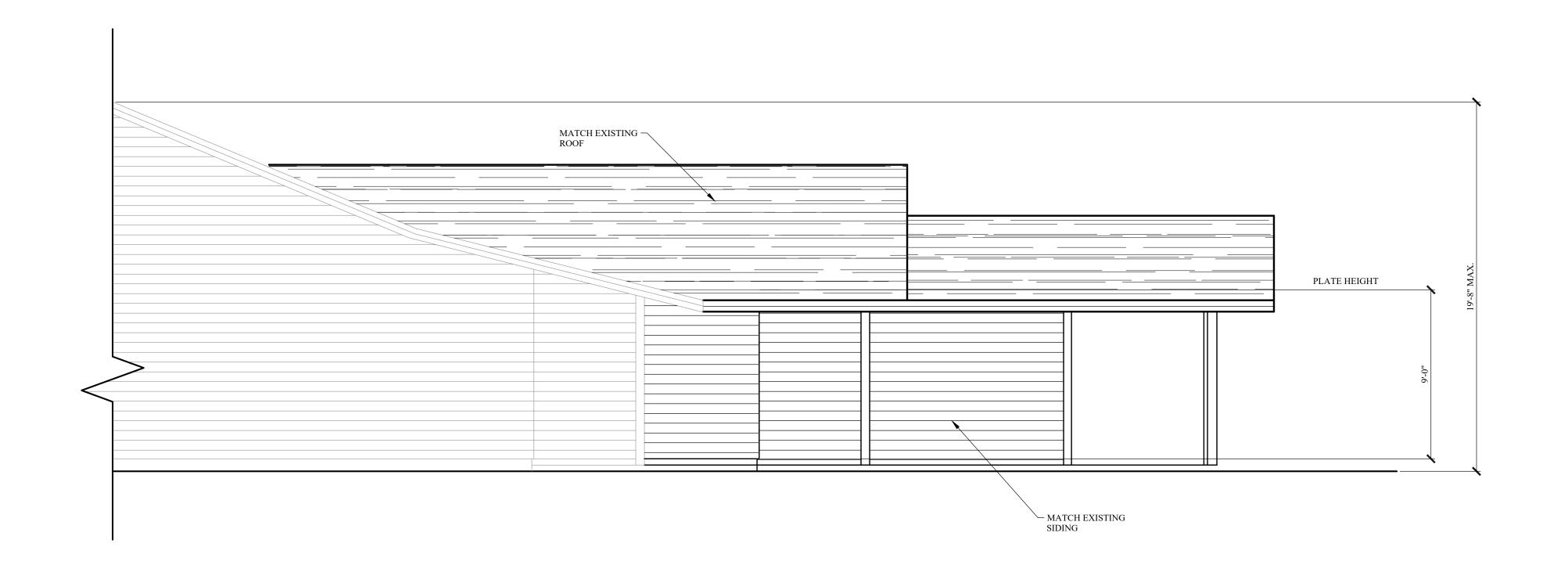


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LEFT ELEVATION
SCALE: 1/4"=1'-0"

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



4' 0' 4' 8'

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

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

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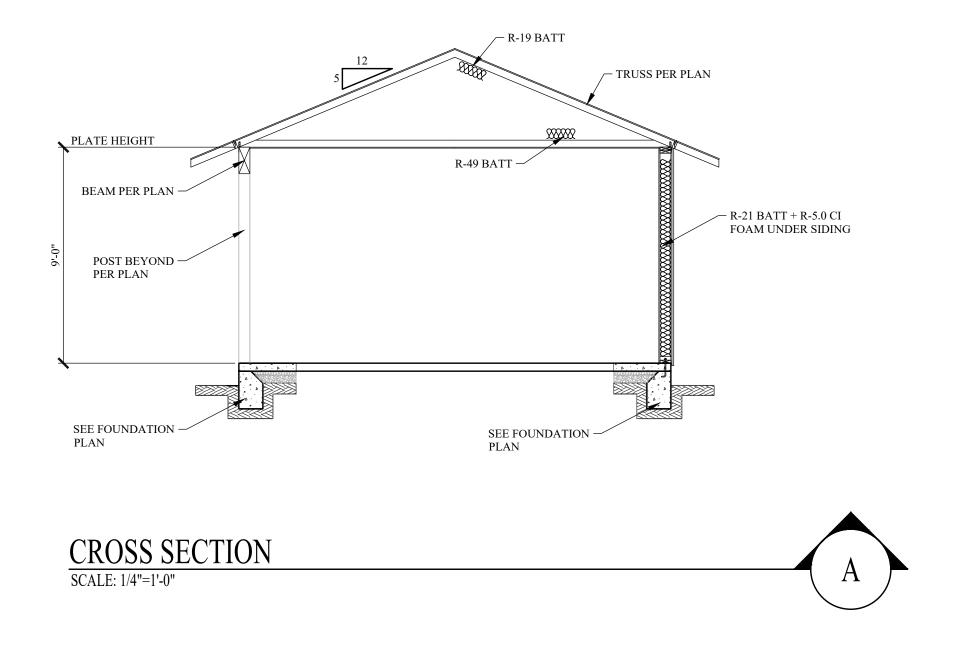
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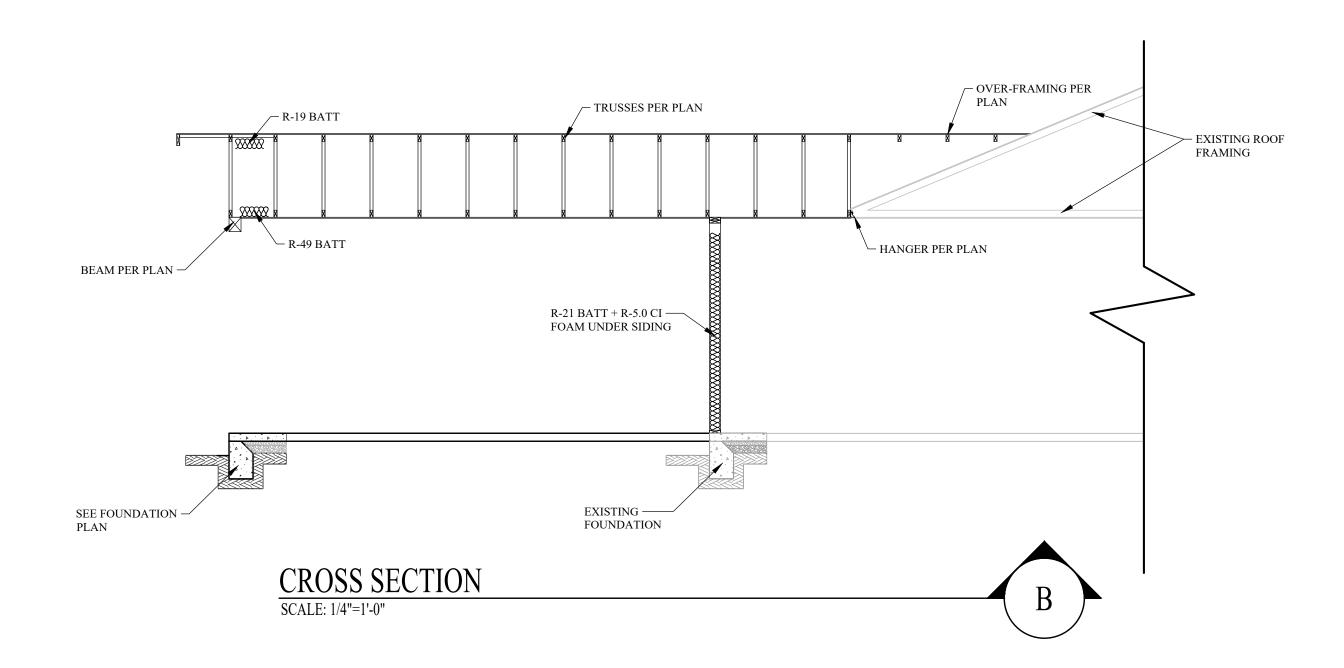
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FOLSOM, CA 95630

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ISSUE DATE: 9/10/2024

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4' 0' 4' 8' SCALE: 1/4"=1'-0"

NOTES:

PROVIDE WEATHER PROTECTION PER 2022 CBC, SEC. 1403. ALL WEATHER EXPOSED SURFACES SHALL HAVE A WEATHER-RESISTIVE BARRIER TO PROTECT THE INTERIOR WALL COVERING. SUCH BARRIER SHALL BE EQUAL TO THAT PROVIDED FOR IN UBC STANDARD 14-1 FOR KRAFT WATERPROOF BUILDING PAPER OR ASPHALT-SATURATED RAG FELT. PROVIDE "MOISTOP" OR EQUAL W.P. WINDOW AND DOOR FLASHING TYPICAL. CAULK BACK OF WINDOW / DOOR FRAMES BEFORE SETTING. USE WINDOWS THAT ARE WATERTIGHT. 26 GA. G.I. FLASHING IN OTHER WINDOW APPLICATIONS TO BE INSTALLED BY SHEET METAL CONTRACTOR. (SEE TYPICAL ARCHITECTURAL FLASH DETAILS IN PLAN)

cheel tructural ngineer Sacramento Office 5022 Sunrise Blvd. Fair Oaks, CA 95628 (916) 536-9585 info@nsse.com SHAFFER ADDITION
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SHEET

2022 CALIFORNIA ENERGY EFFICIENCY STANDARDS

KITCHENS

KITCHEN LIGHTING TO BE HIGH EFFICACY IN ACCORDANCE WITH TABLE 150.0-A

BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS, AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES SHALL BE CONTROLLED BY A VACANCY SENSOR. 150.0(k) 2J

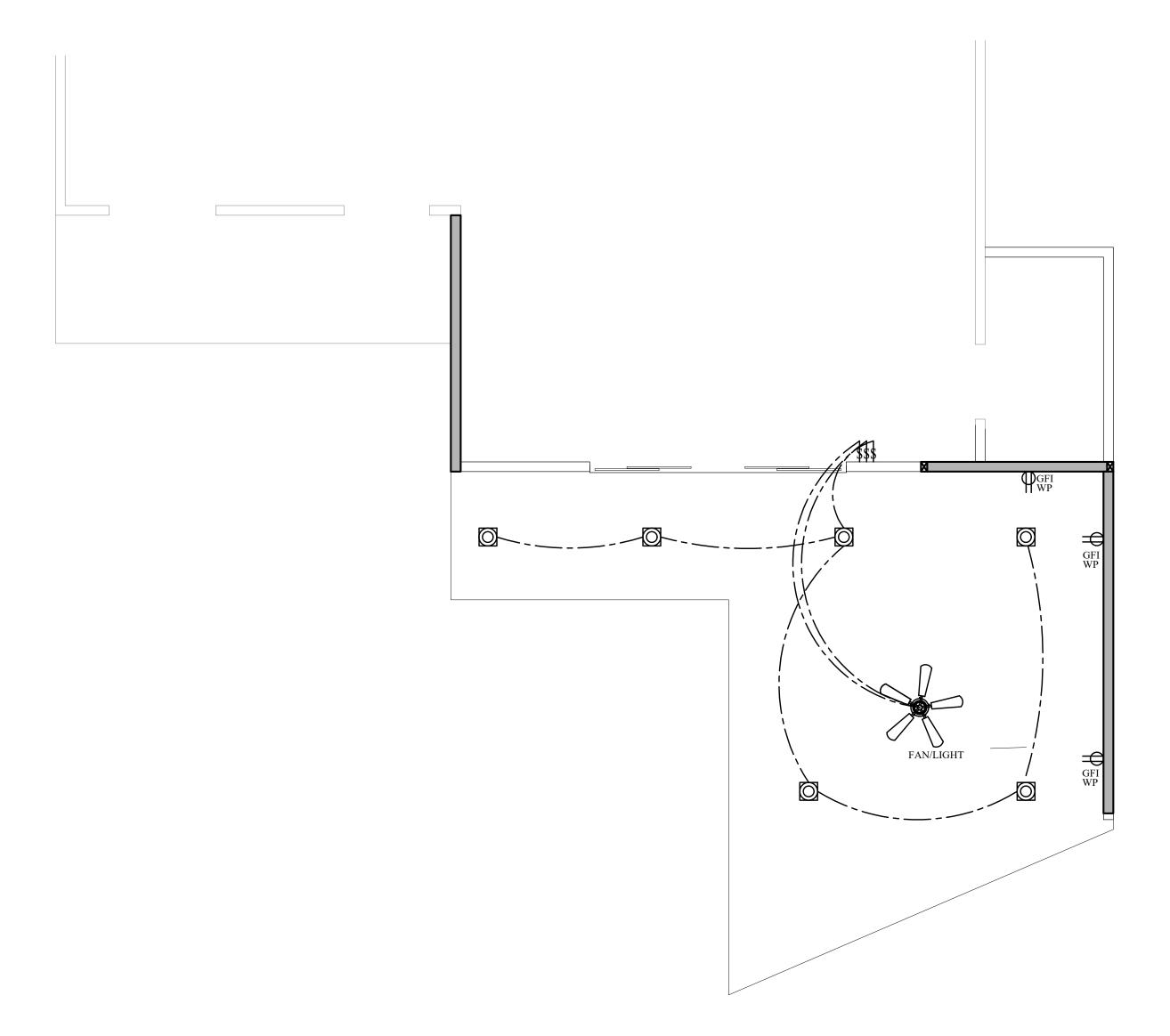
ALL OTHER INTERIOR ROOMS (EXCEPT CLOSETS LESS THAN 70 SQ-FT) ALL LUMINAIRES REQUIRED TO HAVE LIGHT SOURCES COMPLIANT WITH REFERENCE JOINT APPENDIX JA8, EXCEPT HALLWAYS AND CLOSETS OVER 70 SF., SHALL BE CONTROLLED BY DIMMERS OR VACANCY SENSORS. (THIS APPLIES TO ALL GU-24 LEDs AND RECESSED LUMINAIRES,) CBEES 150.0(k) 2J

OUTDOOR LIGHTING ATTACHED TO STRUCTURE

OUTDOOR LIGHTING: ALL OUTDOOR LIGHTING SHALL BE CONTROLLED BY A MANUAL "ON" AND "OFF" SWITCH THAT DOES NOT OVERRIDE TO "ON" AND ONE OF THE FOLLOWING: CONTROLLED BY PHOTOCELL AND MOTION SENSOR, PHOTO CONTROL AND AUTOMATIC SWITCH CONTROL ASTRONOMICAL TIME CLOCK, OR ENERGY MANAGEMENT CONTROL SYSTEM. 150.0(k) 3

RECESSED FIXTURES

LUMINAIRES RECESSED INTO CEILINGS SHALL MEET ALL OF THE FOLLOWING PER 150.0(k) 1C: LISTED FOR ZERO CLEARANCE INSULATION, LABELED THAT CERTIFIED THE LUMINAIRE IS AIRTIGHT WITH A LEAKAGE LESS THAN 2.0CFM AT 75 PASCALS, SEALED WITH A GASKET OR CAULK, ALLOW REPLACEMENT AND MAINTENANCE TO BE READILY ACCESSIBLE FROM BELOW THE CEILING WITHOUT CUTTING HOLES IN THE CEILING, SHALL NOT CONTAIN SCREW BASE SOCKETS; AND SHALL CONTAIN LIGHT SOURCES THAT COMPLY WITH JA8.



ELECTRICAL LAYOUT, MAIN LEVEL

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

ELECTRICAL LEGEND 2022 CEC

110 V. QUAD OUTLET 110 OUTLET

OUTLETS AFCI UNLESS NOTED OTHERWISE AT GFCI REOUIRED AREAS. 110 HALF HOT OUTLET 210.8(A) 1-8

220 OUTLET

WALL LIGHT

CEILING LIGHT RECESSED CANISTER LIGHT

ADJ. RECESSED EYEBALL LIGHT ADJ. TRACK LIGHTING

SCONCE LIGHT

FAN & LIGHT COMBO.

EXHAUST FAN CEILING FAN

CHANDELIER

LIGHT BOX

(2) TUBED FLUORESCENT

FLUORESCENT LIGHT

FLOODLIGHT, 1 & 2 HEAD SMOKE DETECTOR CARBON MONOXIDE ALARM.

MORE THAN ONE TO BE INTERCONNECTED. CRC R315.1.2 COMBO SMOKE DETECTOR CARBON MONOXIDE ALARM.—
MUST BE REPLACED EVERY 5 YEARS. MIN. 36" FROM

SUPPLY /RETURN AIR

GRILL. CRC R314.3.1

THERMOSTAT DB DOOR BELL

110V

DOOR BELL CHIMES

T.V. OUTLET PHONE JACK

SWITCH 3 WAY SWITCH

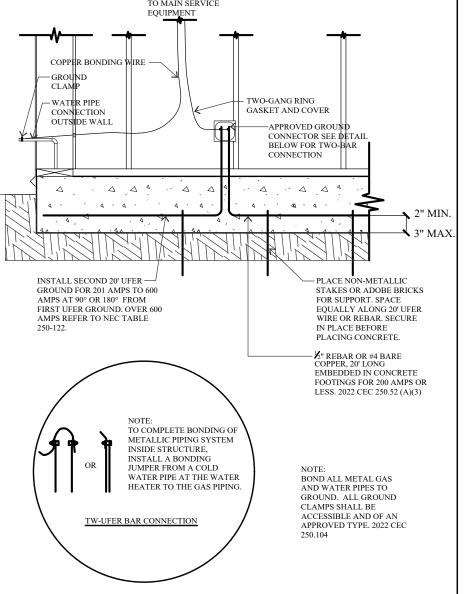
4 WAY SWITCH GROUND FAULT

CIRCUIT INTERRUPTER WATER PROOF W/ ENCLOSURE 2022 CEC 406.8 (B) (1)

36" ABOVE FLOOR 42" ABOVE FLOOR

GAS STUB

WATER FAUCET



GROUNDING ELECTRODE (UFER)

UPDATED ELECTRICAL NOTES:

SPACING. RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN (6 FT.) FROM A RECEPTACLE OUTLET. ANY WALL SPACE GREATER THAN 2' IN WIDTH SHALL BE PROVIDED WITH A RECEPTACLE. 2022 CEC 210.52 (A:1). RECEPTACLES INSTALLED IN KITCHEN TO SERVE COUNTERTOPS

SHALL BE SUPPLIED BY MIN. TWO SMALL APPLIANCE BRANCH CIRCUITS FITHER/ROTH MAY SUPPLY RECEPTACLE QUITLETS IN KITCHEN AND OTHER ROOMS SPECIFIED IN 2022 CEC 210.52(B)(1) SMALL BRANCH CIRCUITS SERVE NO MORE THAN ONE KITCHÈN 2022 CEC 210.52(B)(3).

3. DWELLINGS W/ DIRECT GRADE LEVEL ACCESS SHALL HAVE MIN. (1) RECEPTACLE AT GRADE LEVEL (NO MORE THAN 6 1/2 FT) ABOVE GRADE LEVEL AT FRONT AND BACK OF DWELLING AND BE GFI PROTECTED IN WEATHERPROOF ENCLOSURE. 2022 CEC 210.52(E:1).

4. FEEDERS SUPPLYING 15- AND 20-AMPERE RECEPTACLE BRANCH CIRCUITS SHALL BE PERMITED TO BE PROTECTED BY A GROUND-FAULT CIRCUIT INTERRUPTER IN LIEU OF THE PROVISIONS FOR SUCH INTERRUPTERS AS SPECIFIED IN 210.8(A) AND 590.6(A).

RECESSED LIGHTING FIXTURES INSTALLED IN INSULATED CEILINGS TO BE TYPE I.C. RATED AND THERMALLY PROTECTED. SINGLE WALL FIXTURES TO BE BOXED IN. 2022 CEC 410.115(C) & 410.116 (2). 6. CLOSET LIGHT FIXTURES WITH OPEN OR PARTIALLY ENCLOSED

LAMPS NOT PERMITTED. COMPLETELY ENCLOSED SURFACE MOUNTED INCANDESCENT OR LED ON WALL ABOVE DOOR OR CEILING 12" CLEAR TO STORAGE. SURFACE MOUNTED FLUORESCENT OR LED, 6" CLEAR TO STORAGE. RECESSED INCANDESCENT OR LED WITH COMPLETELY ENCLOSED LAMP, 6" CLEAR TO STORAGE. 2022 CEC 410.16.

7. A "MADE" GROUND ELECTRODE IS REOUIRED ALONG WITH BONDING OF THE WATER PIPING SYSTEM. 20' OF BARE #4 COPPER WIRE, IN FOOTING, MIN. 3" OF CONCRETE ENCASEMENT 20 FEET LONG. VERIFY WITH LOCAL BUILDING CODE. SEE UFFER GROUND DETAIL ON PLANS.

8. PROVIDE AT A/C UNIT A POSITIVE MEANS OF DISCONNECT ADJACENT TO AND IN SIGHT FROM EQUIPMENT SERVED. A 125-VOLT RECEPTACLE TO BE LOCATED WITHIN 25' OF UNIT FOR SERVICE AND MAINTENANCE PURPOSES. 2022 CEC 210.63.

9. SMOKE DETECTORS SHALL BE INSTALLED IN ALL SLEEPING AREAS AND OTHER COMMON SPACES NORMALLY ACCESSIBLE TO RESIDENTS. ALSO ON THE CEILING OR WALL OUTSIDE EACH SEPARATE SLEEPING AREA IN VICINITY OF BEDROOMS, IN EACH STORY WITHIN DWELLING INCLUDING BASEMENTS, SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN LEVELS. THE SMOKE ALARM INSTALLED ON UPPER LEVEL WILL SUFFICE FOR ADJACENT LOWER LEVEL PROVIDED LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW UPPER LEVEL. DETECTORS SHALL RECEIVE POWER FROM A COMMERCIAL SOURCE AND HAVE A BATTERY BACKUP NOT REQUIRED IN KITCHENS. A PHOTOELECTRIC SMOKE ALARM IS REQUIRED WHEN INSTALLED WITHIN 20 FEET OF THE COOKING APPLIANCE. 2022 CBC 907.2.11.1, 907.2.11.2, 907.2.11.4, 907.2.11.5.

10. CARBON MONOXIDE (CO) ALARMS WHEN GAS BURNING APPLIANCE OR ATTACHED GARAGE PRESENT, (CO) ALARMS SHALL BE INSTALLED OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF BEDROOM(S), AND ON EACH ADDITIONAL STORY, INCLUDING BASEMENTS AND HABITABLE ATTICS. 2022 CRC R315 11. NM CABLE (ROMEX) WITHIN 6 FEET OF ATTIC ACCESS SHALL

BE PROTECTED. 12. PROTECT NM CABLE (ROMEX) FROM DAMAGE WHEN EXPOSED

WITHIN 7 FEET OF FLOOR. 13. KITCHEN HOODS, BATHROOM FANS AND OTHER EXHAUST FANS SHALL HAVE A BACK DRAFT DAMPER.

14. 2022 CA. ENERGY CODE LOW RISE RESIDENTIAL BUILDINGS- SEC. 150(k) a. ALL INSTALLED LUMINAIRES SHALL BE HIGH-EFFICACY IN

ACCORDANCE WITH TABLE 150.0-A. b. ALL LUMINAIRES REQUIRED TO HAVE LIGHT SOURCES COMPLIANT WITH REFERENCE JOINT APPENDIX JA8, EXCEPT HALLWAYS AND CLOSETS OVER 70 SF., SHALL BE CONTROLLED BY DIMMERS OR

VACANCY SENSORS. (THIS APPLIES TO ALL GU-24 LEDs AND RECESSED LUMINAIRES.) CBEES 150.0(k) 2K c. IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY

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ENERGY MANAGEMENT CONTROL SYSTEM. 150.0(k) 3 e. LUMINAIRES RECESSED INTO CEILINGS SHALL MEET ALL OF THE FOLLOWING PER 150.0(k) 1C: LISTED FOR ZERO CLEARANCE INSULATION, LABELED THAT CERTIFIED THE LUMINAIRE IS AIRTIGHT WITH A LEAKAGE LESS THAN 2.0CFM AT 75 PASCALS, SEALED WITH A GASKET OR CAULK, ALLOW REPLACEMENT AND MAINTENANCE TO BE READILY ACCESSIBLE FROM BELOW THE CEILING WITHOUT CUTTING HOLES IN THE CEILING, SHALL NOT CONTAIN SCREW BASE SOCKETS; AND SHALL CONTAIN LIGHT

AUTOMATIC SWITCH CONTROL, ASTRONOMICAL TIME CLOCK, OR

f. UNDER CABINET LIGHTING SHALL BE SWITCHED SEPARATELY THAN FROM OTHER LIGHTING SYSTEMS. 150.0(k) 2L

g. ROPE LIGHTING MUST ALSO BE HIGH EFFICACY.

SOURCES THAT COMPLY WITH JA8.

15. SPACE FOR COVE LIGHTING SHALL HAVE ADEQUATE SPACE AND BE LOCATED THAT LAMPS AND EQUIPMENT CAN BE PROPERLY INSTALLED AND MAINTAINED. 2022 CEC 410.18. 16. SEE MANDATORY NOTES FOR TITLE-24 COMPLIANCE ON SHEET A1

AND OR T-24 SHEET, OF PLANS. 17. FIXTURES ABOVE TUB OR SHOWERS SHALL BE LISTED AS SUITABLE FOR WET LOCATIONS. 2022 CEC 410.10(A)(D)

18. NOTE: ALL BRANCH CIRCUITS THAT SUPPLY 15- AND 20-AMP OUTLETS INSTALLED IN BEDROOMS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, SUNROOMS. RECREATION ROOMS, CLOSETS, AND HALLWAYS WILL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER(s) LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT, INCLUDING LIGHTING OUTLETS AND SMOKE DETECTORS. 2022 CEC 210.12(A&B).

19. ACCESS OPENING MIN. 22" x 30". PASSAGEWAY ACCESS TO APPLIANCE NOT TO EXCEED 20 FT. A 24" CATWALK OF SOLID FLOORING UNOBSTRUCTED FROM ENTRANCE TO APPLIANCE. A LEVEL PLATFORM MIN. 30" x 30" IN FRONT OF SERVICE SIDE OF THE EOUIPMENT. A PERMANENT 120-VOLT RECEPTACLE OUTLET AND LIGHT FIXTURE TO BE INSTALLED NEAR APPLIANCE. SWITCH LOCATED AT ENTRANCE OF PASSAGEWAY. 2022 CPC 508.4

20. WATER HEATERS LOCATED IN THE ATTIC NEED ACCESS WITHIN 20 FEET OF THE WATER HEATER. PROVIDE RECEPTACLE OUTLET,

LIGHT FIXTURE WITH A SWITCH PER 2022 CPC 508.4 21. CEILING FAN BOXES. ELECTRICAL BOXES TO BE APPROVED FOR SUPPORTING CEILING FANS. 2022 CEC 314.27 (C) & 314.27(D). 22. CLOTHES DRYER AND ELECTRIC RANGES SHALL HAVE A 4-WIRE

BATHROOM RECEPTACLES SHALL BE SUPPLIED BY A SEPARATE 20-AMP BRANCH CIRCUIT AND SHALL HAVE NO OTHER OUTLETS OTHER THAN AS PROVIDED FOR IN 550.13(E)(2). 2022 CEC 550.12 (E). 24. THE REQUIRED SMALL APPLIANCE CIRCUITS SHALL NOT SUPPLY

GROUNDED ELECTRICAL OUTLET. 2022 CEC 250.140(1).

DISPOSAL, DISHWASHER, OR OTHER LARGE APPLIANCES. 25. OUTLET BOXES ON OPPOSITE SIDES OF AN EXTERIOR OR MEMBRANE WALL SHALL BE SEPARATED BY A HORIZONTAL

DISTANCE OF 24" MIN. 2022 CBC 714.3.2 (EXCEPT: 1.1) 26. ALL ASSOCIATED ELECTRICAL COMPONENTS FOR THER APEUTIC/HYDRO-MASSAGE BATHTUBS SHALL BE BONDED TOGETHER (GROUNDED) AND ALL OUTLETS (NOT EXCEEDING 30 AMPS) WITHIN 6 FEET OF THE INSIDE WALL OF SUCH TUBS SHALL BE "GFCI PROTECTED". 2022 CEC 680.71.

27. AT ELECTRICAL AND OTHER UTILITY BOXES INSTALLED PENETRATING THE EXTERIOR WALL, PROVIDE THE FOLLOWING: SHALL BE FLASHED IN SIMILAR FASHION AS THE WINDOWS. ALL ITEMS THAT REQUIRE EXTERIOR PENETRATIONS SHOULD INCORPORATE INTEGRATED FLASHING ASSEMBLIES SUCH AS CONTINUOUS ATTACHMENT FINS TO ALLOW FOR PROPER

PANEL BOXES NEED TO BE SPACED A MINIMUM OF 6 INCHES APART TO ALLOW FOR PROPER FLASHING. UTILITY BOXES SHOULD NOT BE LOCATED IN SHEAR WALLS. CUTTING OPENINGS IN SHEAR WALLS IS NOT RECOMMENDED UNLESS APPROVED BY THE STRUCTURAL

28. ELECTRICAL METER PANELS, SUB-PANELS AND DISCONNECTS, SUCH AS AT AIR CONDITIONER, REQUIRE A MINIMUM CLEAR WORKING SPACE OF NOT LESS THAN 30" WIDE X 36" DEEP AND 6'-6" HIGH.

ALL 15 & 20 AMPERE RECEPTACLES IN WET LOCATIONS SHALL HAVE WEATHERPROOF ENCLOSURES/COVERS. 2022 CEC 406.9(B)(1).

30. ALL RECEPTACLES SHALL BE TAMPER-RESISTANT, 2022 CEC 406.12 31. VERIFY SERVICES & LOCATION REQUIREMENTS FOR ALL APPLIANCES & MECHANICAL EQUIPMENT PRIOR TO INSTALLATION.

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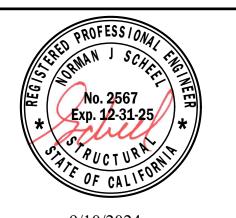
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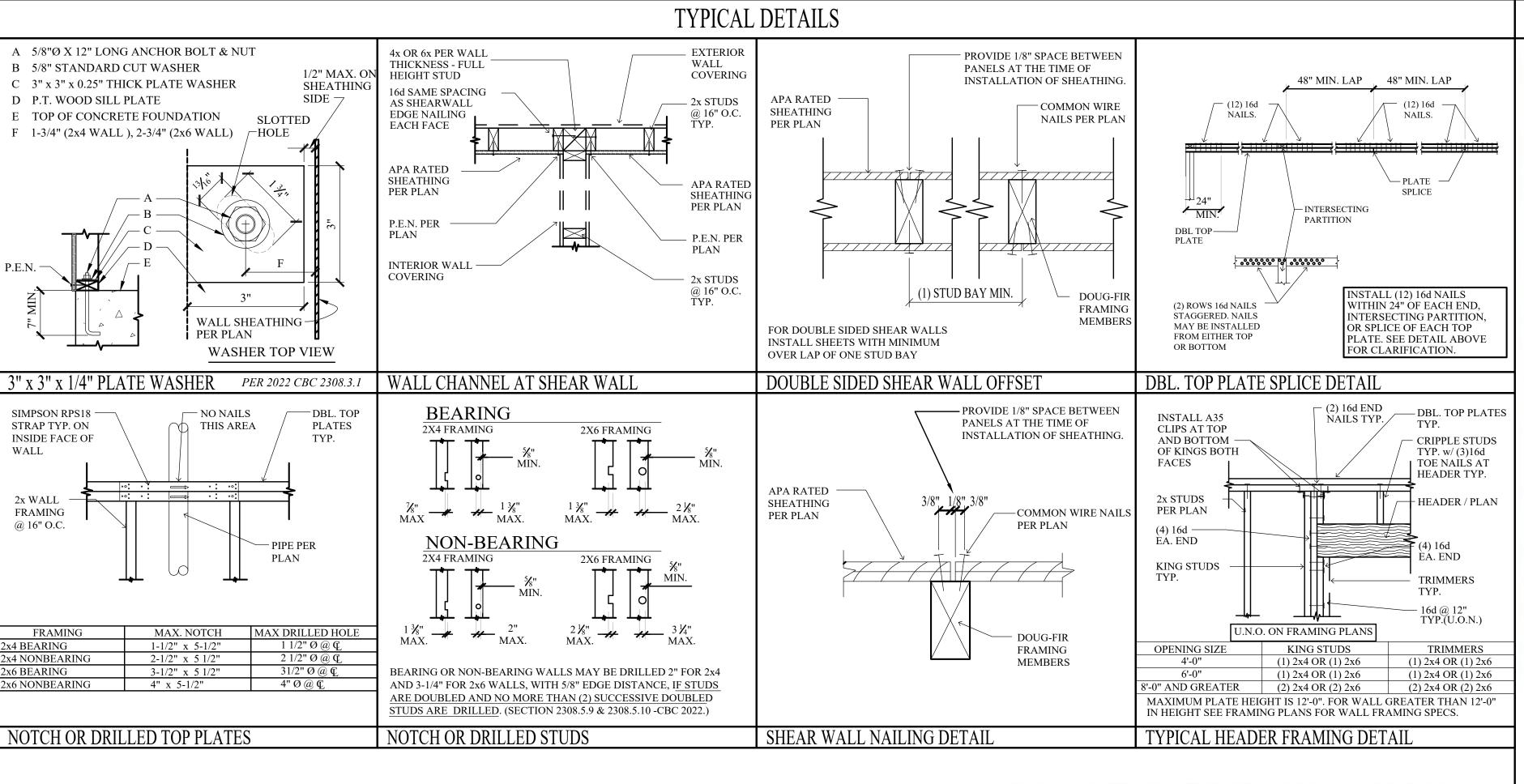
REVISIONS:

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9/10/2024 SHEET

JOB NO. 24131



SPECIAL INSPECTION AND STRUCTURAL OBSERVATION PROGRAM 2022 CBC CHAPTER 17

ENGINEERING AND LOADING DATA

Roof Material Weights (D)		Floor Material Weights (D)					Wind Loads ASCE 7-16			
Roofing	=	4.0 psf	Sheathi	ng		=	2.5 psf	Basic Wind Speed	= 94	mph (V ultima
Sheathing	=	1.5 psf	Framin	g		=	3.0 psf	Exposure Category	= C	
Framing	=	2.5 psf	Insulati			=	3.5 psf	Risk Category	= II	
Insulation	=	3.5 psf	Ceiling			=	3.5 psf	λ	= 1.21	
Ceiling	=	3.5 psf	Deckin	g Ma	terial	=	2.0 psf	K_{zt}	= 1.00)
PV Panels	=	3.0 psf	Deck S	offit		=	0.0 psf	$P_S = \lambda K_{zt} P$	620	(28.5-1
Misc.	=	2.0 psf	Misc.			=	2.5 psf			
Wall (Seismic only)	=	5.0 psf	Wall (Seisi	nic only)	=	10.0 psf		oil informa	ıtion
								2022 CBC Code Min	imum	
Roof Load	-	PARTY NAMED IN COLUMN	T1 T		Floor Loadin					
Roof Live Load (L _r)	=	20.0 psf			Load (L)	=	40.0 psf			
Roof Snow Load (S)	=	0.0 psf			Load (D)	=	10.0 psf	D		
Roof Dead Load (D)	=	10.0 psf	Floor C	eilii	ng Dead Load (D))=	5.0 psf	Report Number		
Ceiling Live Load (L)	=	10.0 psf			D 1.1 P	- (- 0		Date		
Ceiling Dead Load (D)	=	10.0 psf	D 1.1		Deck Loadin			r c r d		10.
Ceiling live load non-co	ncurent	with roof			oad (L)	=	60.0 psf	Footing Depth	=	12 in
live loads					Load (D)	=	10.0 psf	Footing Width	=	12 in
Snow Load	-		Deck S	offit	Dead Load (D)	=	0.0 psf			
Ground Snow Load	=	0 psf			Salanda Davidi.	I D .	. C.	C ID . D	T.	1500 - 6
Flat Roof Snow Load	=	0 psf	D CI		Seismic Dead Lo			Soil Bearing Pressure	: Ftg	1500 psf
Sloped Roof Snow Load		0 psf	Roof L	evel	Seismic (D)	=	25.0 psf			
Exposure Factor	=	1.00			otania Danii I	771 .				
Thermal Factor	=	1.10	TI T		eismic Dead Lo					
Importance Factor	=	1.00	Floor L	evel	Seismic (D)	=	25.0 psf			
Roof Slope Factor	=	1.00			Seismic Load	de 150	T 7 16			
Site Classification				=	D		E 7-16 Section	n 11 / 3		
Risk Category				=	II		E 7-16 Table			
Seismic Design Category	,			=	D		E 7-16 Section			
Importance Factor				=	1		E 7-16 Section			
Response Modification I	eactor		R	=	6.500			12.2-1 Bearing wall Sy	stem #15	
System Overstrength Fac			$\Omega_{\rm o}$	=	3.000			12.2-1 Bearing wall Sy		
Deflection Amplification			C _d	=	4.000			12.2-1 Bearing wall Sy		
Rho Factor (ρ)	i i detoi		ρ	=	1.300			n 12.3.4 Reliability Red		Factor
Spectral Response Short	Period		Ss	=	0.412			er 22 ASCE 7 Hazard R		uctor
Spectral Response Long			S_1	=	0.212			er 22 ASCE 7 Hazard R		
Approximate Fundament		d T = T	T _a	=	0.152		E 7-16 Section		cport	
Long Period	ai i ciio	u (1 1a)	T _L	=	12.000			22-14 to 22-17 ASCE	7 Hazard	Report
$T_o = 0.20 (S_{D1} / S_{DS})$			To	=	0.152		E 7-16 Section		, Tuesday	report
$T_s = (S_{D1} / S_{DS})$			Ts	=	0.762		E 7-16 Section			
Spectral Response Accel	lerations	Short	S _{MS}	=	0.606			n 11.4.4 Site Coefficier	nts MCE _D	
Spectral Response Accel			S _{M1}	=	0.461			n 11.4.4 Site Coefficier		
Spectral Response Short		Living	S _{DS}	=	0.404			n 11.4.5 Design Spectra		ation
Spectral Response Long			S _{D1}	=	0.308			n 11.4.5 Design Spectra		
Seismic Response Coeff			Cs	=	0.062			.8-2 Seismic Response		
Maximum Seismic Respo		efficient	C _{s max}	=	0.310			.8-3 Maximum		
Minimum Seismic Respo			C _{s min}	=	0.018			.8-5 or 12.8-6 Minimur	n	
r			- S Hall			200	1			
W - 0.000	XXI		Site spe	ecific	ground motion	analys	sis is not requ	ired per ASCE 7-16 Se	ection 11.	4.8 Exception 2
V = 0.062	W		-		sign Category sp					•
			19-11-11-11				The state of the s	DE CALL STREET		

STANDARD NOTES AND SPECIFICATIONS

GENERAL NOTES

- DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONSTRUCTION.
- CONSTRUCTION SHALL CONFORM TO THE 2022 CBC AND ALL APPLICABLE CODES AND REGULATIONS. 3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
- CONTRACTOR SHALL NOTIFY THE ENGINEER AND ARCHITECT WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DRAWINGS OR DOCUMENTS. CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE BUILDING THAT IS IN CONFLICT, UNTIL CONFLICT IS RESOLVED WITH THE AFFECTED PARTIES.
- ALL PRE-MANUFACTURED ROOF TRUSSES, PRE-MANUFACTURED "I" FLOOR JOISTS, PRE-MANUFACTURED LAMINATED VENEER & PARALLEL STRESS LUMBER BEAMS, AND GLUED LAMINATED BEAMS TO BE SUBMITTED TO THE PROJECT ARCHITECT AND/OR THE ENGINEER FOR REVIEW AND COORDINATION. A SUBMITTAL MAY THEN BE MADE TO THE BUILDING DEPARTMENT FOR REVIEW AND APPROVAL. INCLUDE A LETTER STATING THIS REVIEW AND COORDINATION HAS BEEN PERFORMED AND COMPLETED AND PLANS AND CALCULATIONS ARE FOUND TO BE ACCEPTABLE. TRUSS DRAWINGS AND LAYOUTS TO BE SUBMITTED PRIOR TO CONSTRUCTION AS PART OF DEFERRED SUBMITTAL PER 2022 CBC 107.3.4.1.
- THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HAS NOT BEEN CONSIDERED BY THE STRUCTURAL ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR STABILITY OF THE STRUCTURE PRIOR TO THE APPLICATION OF ALL SHEAR WALLS AND ROOF DIAPHRAGMS, AND FINISH MATERIALS. PRIOR TO THE APPLICATION OF THE AFOREMENTIONED MATERIALS. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
- IN NO CASE SHOULD DRAWINGS, DETAILS, OR ANY PART OF THESE PLANS BE SCALED FOR ANY PURPOSE. IF ANY DIMENSIONS NOT SHOWN ARE REQUIRED IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE ENGINEER OR ARCHITECT FOR ADDITIONAL INFORMATION.

WALL FRAMING

- UNLESS OTHERWISE NOTED STUDS IN EXTERIOR WALLS AND INTERIOR BEARING WALLS OF BUILDING NO MORE THAN TWO STORIES IN HEIGHT SHALL BE NOT LESS THAN 2x4 IN SIZE. FIRST FLOOR WALLS OF A THREE STORY BUILDING OR CRIPPLE WALL AT A TWO STORY BUILDING SHALL BE NOT LESS THAN 2x6 IN SIZE.
- UNLESS SUPPORTED LATERALLY BY ADEQUATE FRAMING, THE MAXIMUM ALLOWABLE HEIGHT FOR STUDS SHALL BE 10'-0" UNLESS JUSTIFIED WITH AN ANALYSIS.
- STUDS SUPPORTING FLOORS AND CEILINGS OR RAFTERS SHALL BE SPACED NOT MORE THAN 16" O.C. UNLESS NOTED OTHERWISE. CRIPPLE WALLS SHALL BE FRAMED OF STUDS NOT LESS IN SIZE THAN THE STUDDING ABOVE WITH A MIN. LENGTH OF 14", OR SHALL BE FRAMED OF SOLID BLOCKING.
- IF FINGER JOINTED STUDS ARE USED, THEY MUST BE DOUGLAS FIR STRESS RATED, UNLESS NOTED OTHERWISE.
- 6. PROVIDE FIRE BLOCKING AT 10'-0" INTERVALS AND AT ALL FLOOR AND CEILING LEVELS.
- 7. PROVIDE DOUBLE TRIMMERS AT ALL OPENINGS 8'-0" OR GREATER TYP. U.N.O.
- HARDWARE AND FASTENERS IN PRESERVATIVE-TREATED WOOD ARE TO BE APPROVED SILICON BRONZE OR COPPER, STAINLESS STEEL OR HOT-DIPPED ZINC-COATED GALVANIZED STEEL PER 2022 CRC R317.3.1

SHEAR AND BRACED WALL PANEL NOTES

- SHEATHING USED IN THE CONSTRUCTION OF SHEAR WALLS TO BE 4' x 8' MINIMUM EXCEPT AT BOUNDARIES OR AT CHANGES IN FRAMING.
- 2. FRAMING MEMBERS OR BLOCKING REQUIRED AT ALL PANEL EDGES IN SHEAR WALLS.
- 3. DO NOT BREAK FACE PLY WHEN NAILING ANY SHEAR WALLS.
- 4. NAILS SPECIFIED FOR SHEAR WALLS:
 - 8d 2-1/2" LONG, 0.131 SHANK DIAMETER, 9/32" HEAD DIAMETER 10d 3" LONG, 0.1483" SHANK DIAMETER, 5/16" HEAD DIAMETER. GUN NAILS TO MATCH ABOVE SPECIFICATIONS. LENGTH OF GUN NAILS FOR USE IN SHEAR WALLS MAY BE AS FOLLOWS:
- 8d TO PROVIDE 1-1/2" PENETRATION INTO FRAMING. 10d TO PROVIDE 1-5/8" PENETRATION INTO FRAMING MOISTURE CONTENT OF LUMBER NOT TO EXCEED 19% AT TIME OF FABRICATION OR CONSTRUCTION.
- ALL FRAMING MEMBERS USED IN THE CONSTRUCTION OF THE SHEAR WALLS MUST BE DOUGLAS FIR. NO HEM FIR OR SPF FRAMING IS TO BE USED UNLESS NOTED ON FRAMING PLANS.

- BRACED WALL PANEL SOLE PLATES TO BE NAILED TO THE FLOOR FRAMING AND TOP PLATES, SHALL BE CONNECTED TO THE FRAMING ABOVE PER TABLE 2304.10.1. SILLS SHALL BE BOLTED TO THE FOUNDATION OR SLAB PER 2022 CBC 2308.6.7.3, 2308.3.1. WHERE JOIST ARE PERPENDICULAR TO BRACED WALL LINES ABOVE, BLOCKING SHALL BE PROVIDED UNDER AND IN LINE WITH THE BRACED WALL PANELS. PROVIDE (3)16d NAILS @ 16" O.C. (TYP.)

FOUNDATIONS

- BEARING SOIL CONDITION IS CLASSIFIED BY MINIMUMS ALLOWED BY CODE OR SOILS REPORT IF AVAILABLE FOR PROJECT NOTED AT THE UPPER RIGHT CORNER OF THIS SHEET.
- 2. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED NATURAL SOILS OR APPROVED ENGINEERED FILL.
- 3. EXCAVATIONS SHALL BE CLEANED OF ALL DEBRIS. STANDING WATER SHALL BE REMOVED.
- 4. FOUNDATIONS SHALL BE PLACED IN NEATLY CUT EXCAVATIONS. 5. SILL BOLTS SHALL EXTEND 7" MINIMUM INTO CONCRETE. (SECTION 2308.3.1, 2308.6.7.3 -CBC 2022)
- 6. HOLDOWN ANCHOR BOLTS SHALL EXTEND INTO CONCRETE THE DISTANCE SPECIFIED BY THE HARDWARE MANUFACTURER.

CONCRETE AND REINFORCING STEEL

- 1. CONCRETE CONSTRUCTION SHALL CONFORM TO CBC 2022 AND ACI-318-19(22). THE WEIGHT AND MINIMUM 28 DAY STRENGTH OF CONCRETE SHALL BE AS FOLLOWS: SLAB ON GRADE AND FOOTINGS....... 150 PCF $\,$ F'C $\,$ = 2500 PSI (U.N.O. ON FOUNDATION PLANS)
- CEMENT SHALL CONFORM TO ASTM C150 TYPE 1 OR 2. PROVIDE TYPE 5 CEMENT FOR SOILS CONTAINING SULFATE CONCENTRATIONS OF MORE THAN 0.2%.
- 4. CONCRETE AGGREGATES: NATURAL SANDS AND ROCK AGGREGATES SHALL CONFORM TO ASTM C33. 5. REINFORCING SHALL CONFORM TO ASTM A615 GRADE 40.
- REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND INSTALLED ACCORDING TO "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION" BY WCRSI.
- DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF MAIN AND DENOTE CLEAR COVERAGE. UNLESS OTHERWISE NOTED, CONCRETE SHALL BE AS FOLLOWS. CONCRETE DEPOSITED DIRECTLY AGAINST GROUND (EXCEPT SLABS)3"
 CONCRETE EXPOSED TO GROUND BUT PLACED IN FORMS.......2"
 SLABS ON GRADE.......POSITION IN CENTER OF SLAB.
- 8. LAP SPLICE FOR CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI318-14 SECTION 12.14. REBAR LAP SPLICES FOR PLANE CONCRETE FOOTING SHALL BE 48 BAR DIAMETERS MINIMUM. 9. REMOVE ALL DEBRIS FROM THE FORMS BEFORE PLACING ANY CONCRETE.
- 10. REINFORCING DOWELS, BOLTS, ANCHORS, SLEEVES, ETC., TO BE EMBEDDED IN CONCRETE SHALL BE SECURELY POSITIONED BEFORE PLACING CONCRETE. 11. MAXIMUM FREE FALL OF CONCRETE SHALL BE 4'-0".
- 12. NO WOOD SPREADERS ARE ALLOWED. 13. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS AND FLOOR PLANS FOR LOCATION OF ALL PIPES, CONDUITS, ETC.
- PIPE OR DUCTS EXCEEDING ONE-THIRD THE SLAB OR WALL THICKNESS SHALL NOT BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED.
- 15. PIPE MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES, BUT NOT BE EMBEDDED THEREIN.
- THE STRENGTH LEVEL OF THE CONCRETE WILL BE CONSIDERED SATISFACTORY IF THE AVERAGE OF THE STRENGTH TESTS OF A GIVEN AREA OR PANEL EQUALS OR EXCEEDS THE SPECIFIED STRENGTH AT 28 DAYS, WITH NO INDIVIDUAL STRENGTH TEST OF SUCH AREA OR PANEL LESS THAN 5% BELOW THAT SPECIFIED. CONCRETE THAT DOES NOT MEET OR EXCEED THESE CRITERIA WILL BE REMOVED BY THE CONTRACTOR AND REPLACED WITH CONCRETE WHICH CONFORMS TO THESE CRITERIA.
- 17. PROVIDE 3/4" CHAMFERS AT ALL EXPOSED CORNERS.
- REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS OR GROUNDS REQUIRED TO BE CAST IN CONCRETE, AND FOR LOCATIONS OF FLOOR FINISHES
- 19. CONCRETE SHALL NOT BE ALLOWED TO CURE IN TEMPERATURES LESS THAN 40 DEGREES FAHRENHEIT FOR THE FIRST THREE DAYS. 20. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR COLD WEATHER CONCRETING WHERE REQUIRED.
- 21. NO. 5 OR LARGER REINFORCING BARS SHALL NOT BE RE-BENT WITHOUT APPROVAL BY THE STRUCTURAL ENGINEER. DOWELS SHALL HAVE A MINIMUM PROJECTION EQUAL TO STANDARD LAP SPLICE UNLESS OTHERWISE SHOWN.
- 22. ALL CONTINUOUS BARS OR DOWELS SHALL LAP 48 DIAMETERS. 23. WELDING OF REBAR IS NOT PERMITTED UNLESS PROCEDURE APPROVED BY THE STRUCTURAL ENGINEER.

2022 CBC INCLUDING SECTION C.B.C. 1603.1

1. ALL STRUCTURAL WOOD SHALL CONFORM WITH THE FOLLOWING SPECIFICATIONS. WEST COAST LUMBER INSPECTION BUREAU REDWOOD CALIFORNIA REDWOOD ASSOCIATION GRADING RULES. GLUED LAMINATED BEAMS GLUED LAMINATE PERFORMED IN AN APPROVED FABRICATOR'S SHOP GLUED LAMINATED FABRICATION SHALL BE PERFORMED IN AN APPROVED FABRICATIONS SHOP IN ACCORDANCE WITH 2022 CBC 1704.2 STANDARD SPECIFICATIONS FOR STRUCTURAL GLUED LAMINATED TIMBER, ANSI/AITC A190.1-02. GLUE-LAM BEAMS SHALL BE INSPECTED AND A CERTIFICATE PROVIDED TO FIELD INSPECTOR AT THE TIME OF FRAMING INSPECTION.

OSB PLYWOOD STRUCTURAL USE PANELS. U.S. PRODUCT STANDARDS P.S. 2-92 FOR WOOD BASED MICROLLAM LVL BEAMS NA SHALL BE 1 3 /4" STANDARD WIDTH. NATIONAL EVALUATION REPORT NO. NER-126 BEAM

PARALLAM PSL BEAMS NATIONAL EVALUATION REPORT NO. NER-292. 2. MINIMUM GRADES SHALL BE: HORIZONTAL FRAMING 2x FRAMING: #2 D.F.L. 4X FRAMING : #2 D.F.L. 6X AND LARGER #1 D.F.L.

2x4 FRAMING : STANDARD OR BETTER D.F.L. 2x6 AND LARGER FRAMING: #2 D.F.L. GLUED LAMINATED MEMBERS COMBINATION 24F-V4 3000' RADIUS STRUCTURAL PLYWOOD APA RATED SHEATHING

MICROLLAM LVL BEAMS

PARALLAM PSL BEAMS DOUGLAS FIR 2.0E 3. BEARING AND SHEAR WALLS HAVE DOUBLE TOP PLATES, LAPPED AT WALL AND PARTITION INTERSECTIONS $\rm w/$ (3)16d NAILS. SPLICE UPPER AND LOWER PLATES BY LAPPING 48" MINIMUM WITH (24) 16d NAILS IN LAP. 4. PROVIDE SOLID BLOCKING BETWEEN RAFTERS OR JOISTS AT ALL SUPPORTS.

DOUGLAS FIR 1.9E

HOLES FOR BOLTS IN WOOD SHALL BE BORED OF THE SAME NOMINAL DIAMETER $\,$ 6. LAG SCREWS AND WOOD SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE. 7. ALL BOLTS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD. APPLIES ALSO TO INSERTED EXPANDING FASTENERS, RED HEADS, ETC. WASHERS FOR WOOD TO WOOD CONNECTIONS TO BE AS FOLLOWS: BOLT DIAMETER

2" x 2" x 1/4" 2-1/2" X 2-1/2" X 1/4" 3" x 3" x 5/16" 3-1/2" x 3-1/2" x 3/8" 3-3/4" x 3-3/4" x 3/8" 2-1/2" Ø x 1/4" 2-3/4" Ø x 5/16" 3" Ø x 7/8" 3-1/2" Ø x 7/16" 4" Ø x 1/2"

8.~ ALL BOLT AND LAG SCREWS SHALL BE TIGHTENED AT THE TIME OF INSTALLATION AND RE-TIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB. 9. INSTALL ALL STRUCTURAL PLYWOOD ON ROOF AND FLOORS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS. ALL JOIST HANGERS, STRAPS, HOLDOWNS, CLIPS, ANCHORS ... TO BE SIMPSON STRONG-TIE 11. ALL WOOD STRUCTURAL MEMBERS, WHEN DESIGNED TO BE EXPOSED IN OUTDOOR APPLICATIONS, SHALL BE WOOD OF NATURAL RESISTANCE TO DECAY OR TREATED WOOD. 2022 CBC 2304.12.2.3.

- 12. WOOD IN PERMANENT CONTACT WITH CONCRETE TO BE PRESSURE TREATED LUMBER PER CBC 2304.12.1.
- 13. MOISTURE CONTENT OF LUMBER NOT TO EXCEED 19% AT TIME OF FABRICATION OR CONSTRUCTION.
- 14. FIELD CUT ENDS, NOTCHES, AND DRILLED HOLES OF PRESERVATIVE-TREATED WOOD SHALL BE TREATED IN THE FIELD IN ACCORDANCE WITH AWPA M4. [R317.1.1]

MANUFACTURED TRUSS DESIGN NOTES

2. TRUSSES SHALL NOT BE MODIFIED IN THE FIELD WITHOUT A ENGINEERED TRUSS REPAIR DRAWING PROVIDED BY EITHER THE TRUSS MANUFACTURER'S ENGINEER

3. TRUSS SHOP DRAWINGS SHALL MEET THE REQUIREMENTS OF SECTION 2303.4 OF THE 2022 CBC.

4. TRUSS SPACING AND LOADING TO BE AS SPECIFIED ON THE ROOF FRAMING PLAN, SECTION 1607, AND TABLE 1607.1 OF THE 2022 CBC. 5. GABLE END TRUSSES SHALL BE DESIGNED FOR THE EFFECTS OF OUT-OF-PLANE LOADS DUE TO WIND. AT A MINIMUM, NON-STRUCTURAL GABLE END TRUSSES SHALL HAVE 2X4 GABLE STUDS @ 16" O.C. AS NOTED BELOW.

6. STRUCTURAL GABLE END TRUSSES SHAL BE DESIGNED AS NOTED ABOVE WITH THE DIAGONAL WEBS BRACED FOR OUT-OF-PLANE WIND LOADING.

7. SHOP DRAWING, PLACEMENT PLANS, BRACING, AND ERECTION DETAIL TO BE PROVIDED TO THE CONTRACTOR BY THE TRUSS MANUFACTURER. 8. ALL TRUSS MEMBERS TO BE 2x4 MINIMUM. ALL LUMBER TO BE DOUGLAS FIR LARCH, GRADE TO BE DETERMINED BY THE TRUSS MANUFACTURER. HEM FIR IS NOT TO BE USED IN THE FABRICATION OF THE TRUSSES UNLESS APPROVED BY THE PROJECT ENGINEER PRIOR TO FABRICATION.

9. ALL HIP TRUSS SYSTEMS TO HAVE A MINIMUM 8'-0" SET BACK FROM EXTERIOR END WALLS FOR SLOPES 4/12 AND LESS. SLOPES GREATER THAN 4/12 MAY HAVE A 6'-0" SETBACK.

10. ALL TRUS JOIST TJI FLOOR AND ROOF FRAMING MEMBERS TO COMPLY WITH ICC ESR-1153.

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Sacramento Office 5022 Sunrise Blvd. Fair Oaks, CA 95628 (916) 536-9585 info@nsse.com

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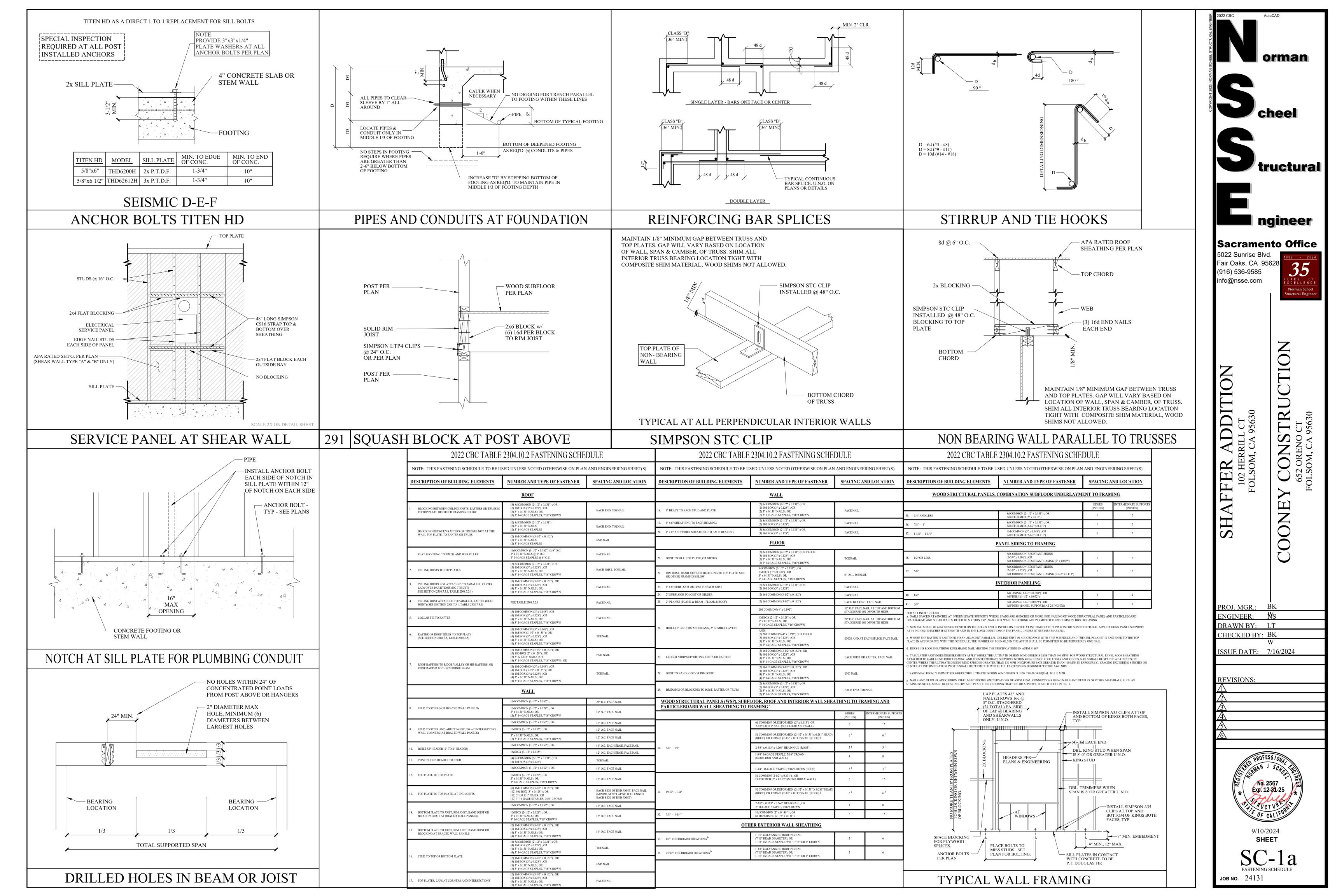
ROJ. MGR.:

ENGINEER: DRAWN BY: LT HECKED BY: BK SSUE DATE: 7/16/2024

EVISIONS:



COVER SHEET

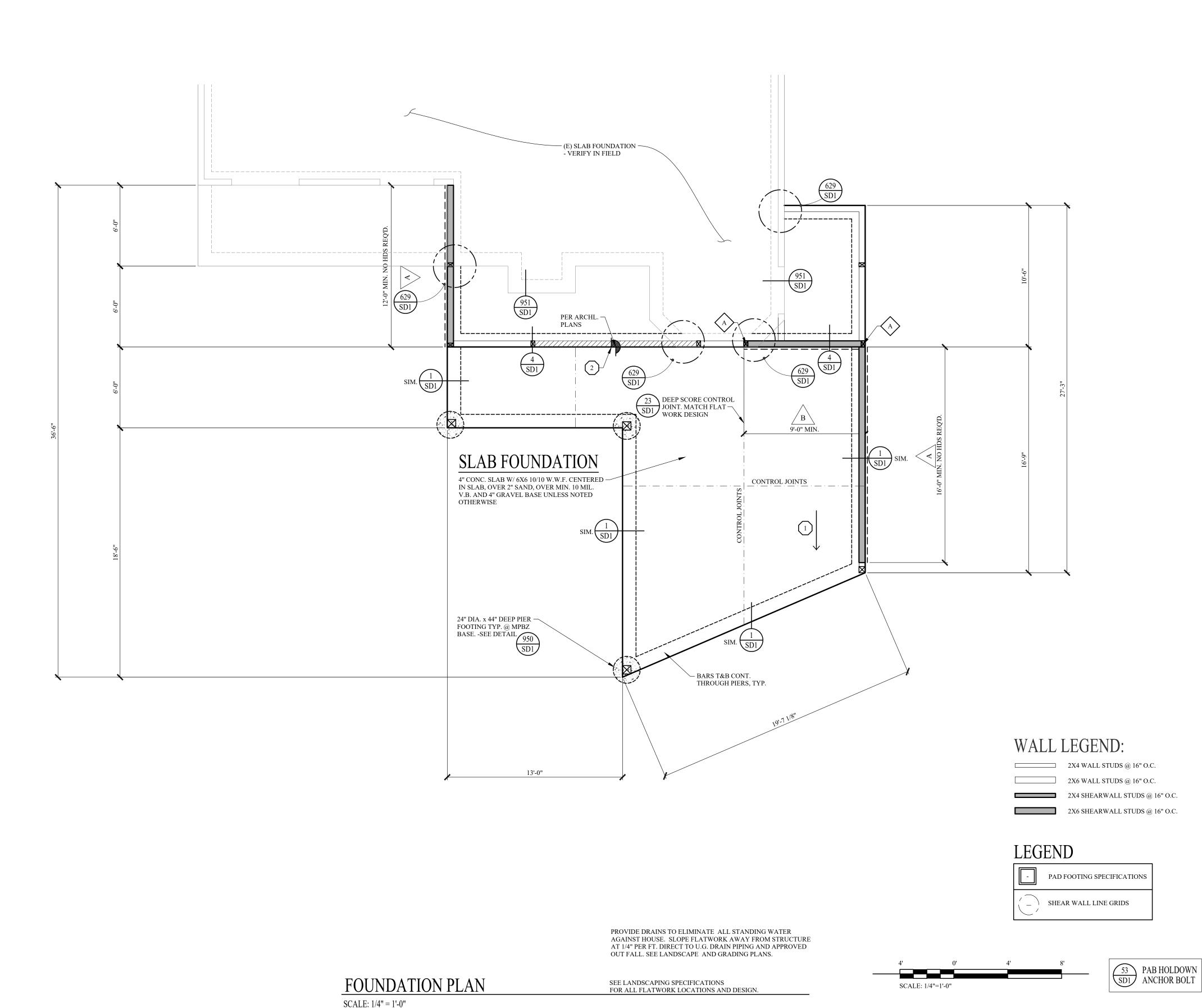


Footing Specifications

Footing Width	-	12 in	Allowable Soil Bearing Pressure	-	1500 psf
Footing Depth	-	12 in	Maximum allowable load on footing	-	1500 plf
Minimum#Bars	=	1 Top and Bottom	Maximum point load on continuous footing	=	5242 #
Size of Bars	-	4	Area of steel used for calculations	-	0.20 in2
Size of Bars	-	4	Area of steel used for calculations	-	0.20 in2

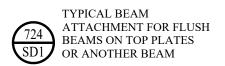
Pad Footing Specifications

ooting# Size Thickness Depth Rebar Loa



GENERAL SPECIFICATIONS FOOTING DEPTH FOOTING WIDTH STEM WALL TYPICAL SOIL BEARING PRESSURE = 1500 PSF FOUNDATION DESIGNED PER 2022 CBC MINIMUMS OR SOILS REPORT PROVIDED BY: 2022 CBC Code Minimum REPORT # 500 PSI DESIGN MIX MINIMUM. USE (1) #4 GRADE 40 BARS TOP AND BOTTOM IN ALL CONTINUOUS FOOTINGS AND AS NOTED AT SPECIAL cheel OADS ON FOUNDATION PLAN. ALL DEPTH DIMENSIONS ARE INTO UNDISTURBED SOIL BELOW ADJACENT GRADE AND / OR ANY FILL. MAINTAIN MIN. 8" BETWEEN WOOD AND EARTH AROUND BUILDING. DBSERVATION OF SITE PREPARATION, GRADING, PLACEMENT AND COMPACTION OF FILL OPERATIONS BY THE GEOTECHNICAL ENGINEER. PROVIDE 5/8" DIA. x 12" ANCHOR BOLTS AND 3"x3"x1/4" PLATE WASHERS AT PRESSURE TREATED SILL PLATE. MIN. (2) BOLTS PER SILL AND (1) tructural BOLT WITHIN 4" MIN., 12" MAX. OF END OF SILL, MIN. (7) BOLT DIA. END DISTANCE. MAX. 6' O.C. BOLT SPACING. MIN 7" INTO CONC. AND PER SHEAR WALL SPECIFICATIONS. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 40. PAD FOOTINGS GREATER THAN 24" SQ. REQUIRE #4 BARS @ 8" O.C. EACI WAY 3" CLEAR FROM THE BOTTOM OF THE FOOTING. INSTALL 2x / 4x HOLDOWN POST AT ENDS OF ALL SHEAR WALLS, PER PLAN. SEE TABLE AND CALCULATIONS FOR H.D. STUD SIZE REQUIRED. ngineer DENOTES STRUCTURAL DETAILS ON SHEET(S) SD-1 ETC. Sacramento Office FOR ADDITIONAL SPECIFICATIONS AND TYPICAL DETAILS SEE SHEET 022 Sunrise Blvd. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL OF THE NOTES AND TYPICAL DETAILS ON SHEET SC-1 SO THAT THEY MAY BE Fair Oaks, CA 95628 (916) 536-9585 INCORPORATED INTO THE CONSTRUCTION OF THIS STRUCTURE. info@nsse.com **SPECIFICATIONS** 4" CONC. SLAB ON GRAVEL FILL. SLOPE SLAB 1/4" PER FOOT AWAY FROM HOUSE. PROVIDE 2x (4 OR 6) P.T.D.F.L. SLEEPER EMBEDDED INTO CONCRETE w/ (2) 20d @ 24" O.C. & AT EA. END. (TYP.) AT ALL EXTERIOR DOORS W/ THRESHOLDS. PROVIDE 3"x3"x1/4" STEEL PLATE WASHERS AT ALL ANCHOR BOLTS -SEE DETAIL ON SHEET SC-1 SHEAR WALL SCHEDULE 2022 CBC TYPE \$\frac{8}{9}\$ SHEATHING \$\frac{7}{APA RATED}\$ NAILING \$\frac{6}{AND A.B.}\$ 2 CONNECT TO RIM CAPACITY CAPAC 1) (2) ANCHORS MINIMUM PER SHEAR WALL. 3" x 3" x 1/4" STEEL WASHERS REQUIRED AT ALL ANCHOR BOLTS USED IN SHEAR WALLS. WASHER EDGE SHALL BE WITHIN 1/2" OF SHEATHING, SLOTTED WASHERS ARE PERMITTED. 2) SILL PLATE ANCHORED TO CONCRETE. TYPICAL 2x SOLE PLATE ON TOP OF SUBFLOOR. APPLIES TO RAISED FLOOR FOUNDATION AND UPPER FLOORS ONLY.) 3x FRAMING MEMBERS AT ADJOINING PANEL EDGES OR DBL. STUDS w/ 16d @ 3" O.C. 1) 3x FRAMING MEMBERS AT ADJOINING PANEL EDGES OR DBL. STUDS w/ 16d @ 4" O.C. 3x FRAMING MEMBERS AT ADJOINING PANEL EDGES. WHERE PANELS APPLIED ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6-INCHES O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFEREN FRAMING MEMBERS, OR FRAMING SHALL BE 3-INCH NOMINAL OR THICKER AT ADJOINING PANEL EDGES AND NAILS ON EACH SIDE SHALL BE STAGGERED. ROJ. MGR.: GALVANIZED NAILS SHALL BE HOT DIPPED OR TUMBLED. NGINEER: FRAMING MEMBERS OR BLOCKING REQUIRED AT ALL PANEL EDGES IN SHEAR WALL.) ALL SHEAR WALL VALUES ARE BASED ON 16" O.C. STUD SPACING. DRAWN BY: LT ALL FRAMING MEMBERS USED IN THE CONSTRUCTION OF SHEAR WALL TO BE DOUGLAS FIR LARCH. HECKED BY: BK SSUE DATE: 9/10/2024 REVISIONS: HOLDOWN SCHEDULE 2022 CBC TYPE HOLDOWN MIN. REQ'D. REQUIRED REQUIRED REQUIRED CAPACITY BOLT NAILS 10 LENGTH N/A THICKNESS F 1) SINGLE POUR. — DEEPEN / WIDEN FOOTING AROUND PAB ANCHOR AS SPECIFIED ON HOLDOWN SCHEDULE (de & F) PROVIDE (2) #4 TOP AND BOTTOM AT FOOTING UNDER SHEARWALL AND EXTEND 4'-6" PAST EACH END PROVIDE (2) #4 TOP AND BOTTOM AT FOOTING UNDER SHEARWALL 6) DBL. NUT AND STEEL PLATE PER DETAIL 52. PROVIDE (2) #4 TOP AND BOTTOM AT Exp. 12/31-25 FOOTING UNDER SHEARWALL AND EXTEND 7'-0" PAST EACH END. CENTERLINE OF STRAP TO BE CENTER OF RIM JOIST. MAXIMUM CLEAR SPAN TO BE 16' 8) MINIMUM POST REQUIRED TO BE INSTALLED IN UPPER AND LOWER WALL FRAMING. CONNECT (2) 2x HOLDOWN STUDS TOGETHER WITH (24) 16d SINKER NAILS MIN. (0) ALL NAILS TO BE COMMON WIRE UNLESS NOTED OTHERWISE. 11) ALL SCREWS TO BE SIMPSON SDS 1/4" x 2 1/2". HOLDOWN MAY BE RAISED OFF THE SILL WITH NO REDUCTION IN LOAD. 2) ALL HOLDOWN POST AND SILL PLATES TO BE DOUGLAS FIR LARCH. 9/11/2024 SHEET JOB NO. 24131





Header Specifications 1st Floor

3'-0"

4"-0"

5'-0"

6'-0"

2-2x

2-2x

2-2x

Grade and Type

No. 1 D.F.L.

No. 1 D.F.L.

No. 1 D.F.L.

No. 1 D.F.L.

6x8

6x8

6x8

256 POSITIVE CONNECTION

Beam Specifications

Size	Grade and Type	Location
6x14	No. 1 D.F.L.	PATIO COVER SUPPORT
6x14	No. 1 D.F.L.	PATIO COVER SUPPORT
6x14	No. 1 D.F.L.	PATIO COVER SUPPORT
6x14	No. 1 D.F.L.	PATIO COVER SUPPORT
6x14	No. 1 D.F.L.	PATIO COVER SLIDER HEADER
	6x14 6x14 6x14 6x14	6x14 No. 1 D.F.L. 6x14 No. 1 D.F.L. 6x14 No. 1 D.F.L. 6x14 No. 1 D.F.L.

Wall Framing Specifications

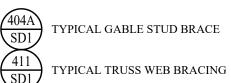
1ST FLOOR WALL FRAMING TO BE 2X6 STUD D.F.L. 16 O.C. UNLESS NOTED OTHERWISE ON PLANS. TRIMMER AND KING STUD SPECIFICATIONS AS NOTED ON HEADER TABLES. POST AT BEAMS AS SPECIFIED ON PLANS.

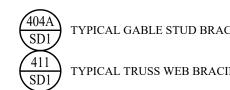
NOTE:

STRAP ALL DOUBLE PLATE BREAKS WHERE FLUSH BEAMS



PLATES TO DROP BEAMS





EXISTING ROOF FRAMIING -VERIFY IN FIELD				
STRAP (N) TO (E) TOP PLATE O (D (E) TOP PLATE	398 SD2 14 I4 GIRDER TRUSS 906	7 D-0		11) 402 SD2
$\frac{2}{1000}$ $\frac{402}{1000}$ NEEDED	LAP	11) TRIMMER	400 SD2	DRAG TRUSS = 1700#
W/ PC CAP & 6 MPBZ BASE 6 B-3	3 \(\delta \) (6)	13 714 D2 SD2 / I	B I I I I I I I I I I I I I I I I I I I	DRAG TRUSS = 1700# Or DRAG TRUSS = 1700#
	B-2 SD2 SD2 SKEWED	B-1 D HUC		CS14 STRAP OUND CORNER 402 SD2
32" CS14 S CORNER		D HUC R 403 SD2 SD2 DRAG TRUSS = 1000#	2X4 FLAT LOOKOUTS AT GABLES @ 24" O.C., TYP.	

PRIOR TO FABRICATION OF TRUSSES, TWO COPIES OF THE FOLLOWING MATERIALS BEARING THE APPROVAL OF THE DESIGNER (IN THE FORM OF "SHOP DRAWING APPROVAL" OR SEPARATE LETTER) MUST BE SUBMITTED TO THE BUILDING OFFICIAL FOR REVIEW AT LEAST TWO WEEKS PRIOR TO FRAME INSPECTION: (1) TRUSS LAYOUT DRAWINGS; (2) TRUSS CALCULATIONS AND DETAILS SHOWING AXIAL AND BENDING STRESSES AND JOINT DESIGNS CLEARLY INDICATING THAT DESIGNS CONFORM TO THE 2022 CBC 2303.4

PV PANEL NOTES:

1. PV PANELS SHALL BE PARALLEL TO THE ROOF SURFACE, WITH A TOLERANCE OF 2" AND THE MAXIMUM HEIGHT ABOVE THE ROOF SURFACE, NOT EXCEEDING 10 INCHES. A MINIMUM GAP OF 0.25 INCHES SHALL BE PROVIDED BETWEEN ALL PANELS, WITH THE SPACING OF GAPS BETWEEN THE PANELS NOT EXCEEDING 6.7 FEET.

2. THE ARRAY SHALL BE LOCATED AT LEAST 20" FROM THE ROOF EDGE, A GABLE RIDGE, OR A HIP RIDGE.

3. RAIL STANDOFF CONNECTIONS SHALL BE STAGGERED AND CONNECTED TO THE ROOF FRAMING MEMBERS. RAIL STANDOFF CONNECTIONS SHALL BE NO GREATER THAN 6'-0" O.C.

4. DESIGN OF SOLAR INSTALLATION SHALL BE PROVIDED BY THE SOLAR INSTALLER IN ACCORDANCE WITH ASCE7-16, SECTION 29.4.4.

ROOF FRAMING PLAN

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

B-100 BEAM MARKS

SHEAR WALL LINE GRIDS

WALL LEGEND:

LEGEND

2X4 WALL STUDS @ 16" O.C.

2X6 WALL STUDS @ 16" O.C.

2X4 SHEARWALL STUDS @ 16" O.C.

2X6 SHEARWALL STUDS @ 16" O.C.

GENERAL SPECIFICATIONS 20 PSF 0 PSF ROOF LIVE LOAD ROOF SNOW LOAD ROOF DEAD LOAD 10 PSF 10 PSF CEILING LIVE LOAD CEILING DEAD LOAD (D) 10 PSF -YEILING LIVE LOAD NON-CONCURENT WITH ROOF LIVE LOAD. DURATION OF LOAD = 1.25 ALL ROOF TRUSSES TO BE 24" O.C. UNLESS NOTED OTHERWISE ON FRAMING PLAN ROOF SHEATHING TO BE 15/32" APA RATED SHEATHING PANEL ID 32/16 WITH 8D NAILS @ 6" O.C. EDGE AND 12"O.C. FIELD. FACE GRAIN ERPENDICULAR TO FRAMING UNLESS NOTED OTHERWISE ON PLANS. FOR NAILING NOT SHOWN, SEE NAILING SCHEDULE SHEET SC-1a OR TABLE 2304.10.2 2022 CBC.

tructural

DOUBLE TOP PLATE, MIN. 48" SPLICES. NAIL WITH (12) 16d NAILS EACH SIDE OF LAP.

NAIL ROOF SHEATHING AT ALL DRAG TRUSSES WITH 8d @ 6" O.C.

TRUSS MANUFACTURER TO SUPPLY TRUSS DRAWINGS AND LAYOUTS TO THE PROJECT ENGINEER AND BUILDING DEPARTMENT PRIOR TO CONSTRUCTION AS PART OF DEFERRED SUBMITTAL PER

TYP. U.N.O.

SECTION 107.3.4.1, 2022 CBC

ALL HEADERS AND BEAMS TO BE AS SPECIFIED ON THIS SHEET,

INTERIOR NON BEARING HEADERS TO BE 4x4 OR DBL. 2x4 NO.2 D.F.L.

ALL NAILS TO BE COMMON WIRE NAILS UNLESS NOTED OTHERWISE. NSTALL 2X / 4X HOLDOWN POST AT ENDS OF ALL SHEAR WALLS

PER PLAN. SEE TABLE AND CALCULATIONS FOR HOLDOWN STUD SIZE REQUIRED. ALL HANGERS, HOLDOWNS, CLIPS, AND STRAPS TO BE SIMPSON

STRONG-TIE OR SILVER / KANT-SAG SILVER WITH REF. # MATCHING

SIMPSON SPECIFICATIONS. DENOTES STRUCTURAL DETAILS ON SHEET(S) $oxedsymbol{fL}$

SD-1 ETC. FOR ADDITIONAL SPECIFICATIONS AND TYPICAL DETAILS SEE SHEET SC-1.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL OF THE NOTES AND TYPICAL DETAILS ON SHEET SC-1 SO THAT THEY MAY BE INCORPORATED INTO THE CONSTRUCTION OF THIS STRUCTURE.

ALL GABLE STUDS LONGER THAN 6'-0" TO BE 2x4 #1 & BTR. D.F.L. IF STUDS ARE LONGER THAN 10'-0" USE 2x6 #2 D.F.L. STRUCTURAL GABLE END TRUSSES WITH MORE THAN 6'-0" ON THE VERTICAL PROJECTION REQUIRE BRACES PER STRUCTURAL GABLE END DETAIL 404A ON SD SHEET.

2x BLOCKING AT RIDGE BETWEEN EACH TRUSS.

SPECIFICATIONS (3) 4x4 DF #2 POST 4 4x6 DF #2 POST

5 6x6 DF #1 POST (6) 8x8 DF #1 POST

DBL. 2x (4 OR 6) DF STUD POST.
CONNECT TOGETHER w/ (24) 16d SINKER. 2x4 NO. 2 D.F.L. OVER FRAMING, TO 2x6 NAILER. BRACE TO ROOF BELOW WHEN SPANS EXCEED 7'-0". CONTINUOUS ROOF SHEATHING UNDER FILL. (TYP.) U.N.O. PROVIDE 2x

FLAT NAILER FOR ENDS OF RAFTERS BEARING ON TOP OF

ROOF SHEATHING. 17) SIMPSON LUS24 HANGERS.

(51) SIMPSON CS16 STRAP MIN. 26" LONG

SHEAR WALL SCHEDULE 2022 CBC TYPE 8 SHEATHING 7 NAILING 6 SILL PLATE 1 SOLE PLATE 3 SEISMIC WIND AND A.B. 2 CONNECT TO RIM CAPACITY CAPACITY A 3/8" SHEATHING ONE FACE | 8d @ 6" O.C. | 2X P.T.D.F. SILL | 16d @ 8" O.C. OR | 260 # | 365 # | LTP4 @ 24" O.C. | P.L.F. | P.L.F.

(2) ANCHORS MINIMUM PER SHEAR WALL. 3" x 3" x 1/4" STEEL WASHERS REQUIRED AT (2) ANCHORS MINIMINED AND EASILY WASHER STEEL WASHERS RECORDED AND ALL ANCHOR BOLTS USED IN SHEAR WALLS. WASHER EDGE SHALL BE WITHIN 1/2" OF SHEATHING, SLOTTED WASHERS ARE PERMITTED.

SILL PLATE ANCHORED TO CONCRETE. TYPICAL 2x SOLE PLATE ON TOP OF SUBFLOOR. APPLIES TO RAISED FLOOR

FOUNDATION AND UPPER FLOORS ONLY. 3x FRAMING MEMBERS AT ADJOINING PANEL EDGES OR DBL. STUDS w/ 16d @ 3" O.C. 1) 3x FRAMING MEMBERS AT ADJOINING PANEL EDGES OR DBL. STUDS w/ 16d @ 4" O.C.

3x FRAMING MEMBERS AT ADJOINING PANEL EDGES.) WHERE PANELS APPLIED ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6-INCHES O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERE FRAMING MEMBERS, OR FRAMING SHALL BE 3-INCH NOMINAL OR THICKER AT ADJOINING PANEL EDGES AND NAILS ON EACH SIDE SHALL BE STAGGERED.

GALVANIZED NAILS SHALL BE HOT DIPPED OR TUMBLED. FRAMING MEMBERS OR BLOCKING REQUIRED AT ALL PANEL EDGES IN SHEAR WALL.) ALL SHEAR WALL VALUES ARE BASED ON 16" O.C. STUD SPACING.

) ALL FRAMING MEMBERS USED IN THE CONSTRUCTION OF SHEAR WALL TO BE DOUGLAS FIR LARCH.

HOLDOWN SCHEDULE 2022 CBC TYPE HOLDOWN MIN. REQ'D. REQUIRED REQUIRED REQUIRED REPORT 9, 12 BOLT NAILS 10 LENGTH CAPACITY HDU2-SDS2.5 PER WALL $d_e = 51/2$ " N/A N/A THICKNESS F = 81/2"

1) SINGLE POUR. DEEPEN / WIDEN FOOTING AROUND PAB ANCHOR
2) TWO POUR. AS SPECIFIED ON HOLDOWN SCHEDULE (de & F)

PROVIDE (2) #4 TOP AND BOTTOM AT FOOTING UNDER SHEARWALL

AND EXTEND 4'-6" PAST EACH END. F) PROVIDE (2) #4 TOP AND BOTTOM AT FOOTING UNDER SHEARWALL AND EXTEND 5'-6" PAST EACH END.

FOOTING UNDER SHEARWALL AND EXTEND 7'-0" PAST EACH END.) CENTERLINE OF STRAP TO BE CENTER OF RIM JOIST. MAXIMUM CLEAR SPAN TO BE 16 MINIMUM POST REQUIRED TO BE INSTALLED IN UPPER AND LOWER WALL FRAMING 2) CONNECT (2) 2x HOLDOWN STUDS TOGETHER WITH (24) 16d SINKER NAILS MIN. (0) ALL NAILS TO BE COMMON WIRE UNLESS NOTED OTHERWISE. 1) ALL SCREWS TO BE SIMPSON SDS 1/4" x 2 1/2". HOLDOWN MAY BE RAISED OFF

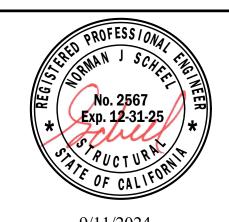
6) DBL. NUT AND STEEL PLATE PER DETAIL 52. PROVIDE (2) #4 TOP AND BOTTOM AT

THE SILL WITH NO REDUCTION IN LOAD. 2) ALL HOLDOWN POST AND SILL PLATES TO BE DOUGLAS FIR LARCH.

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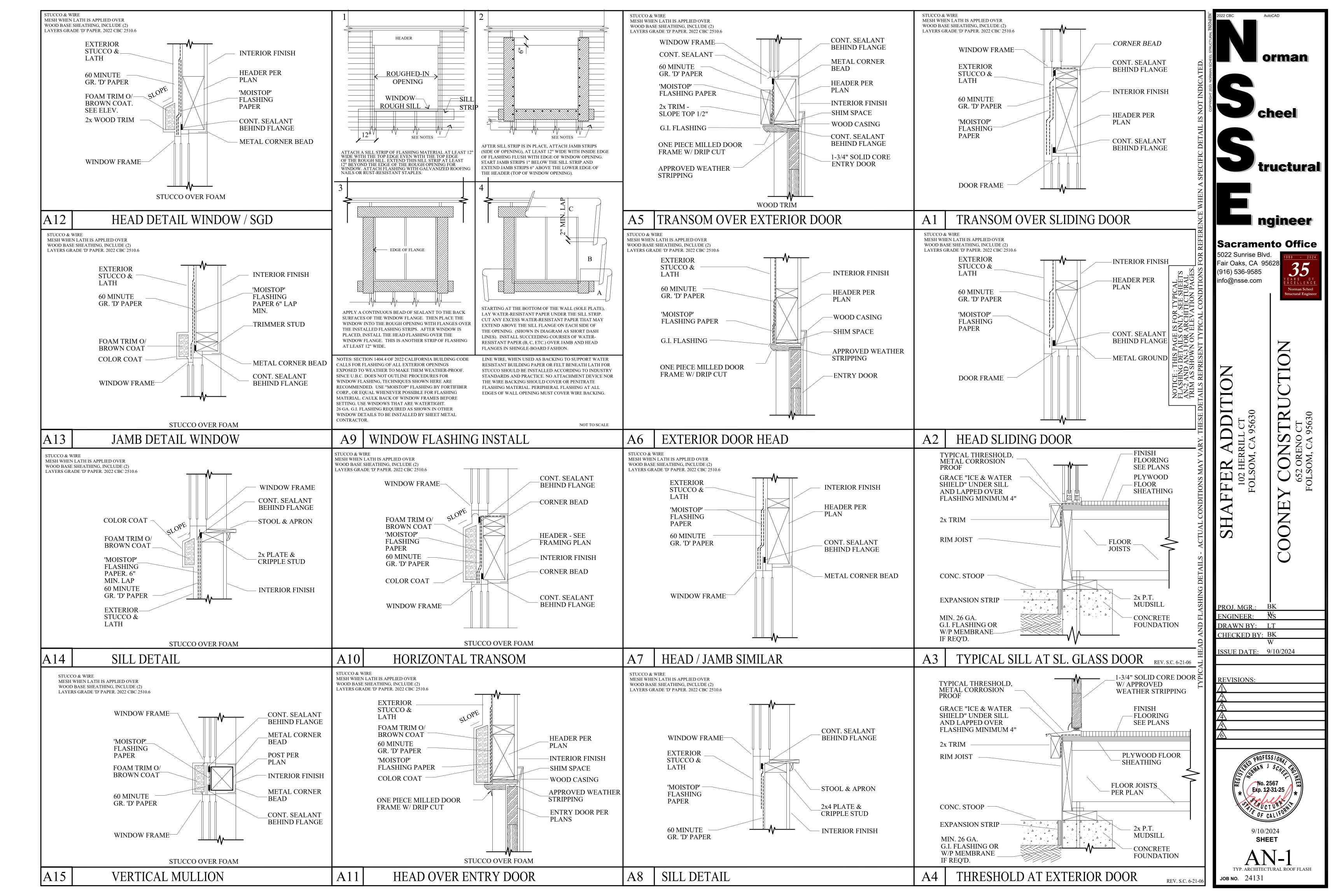
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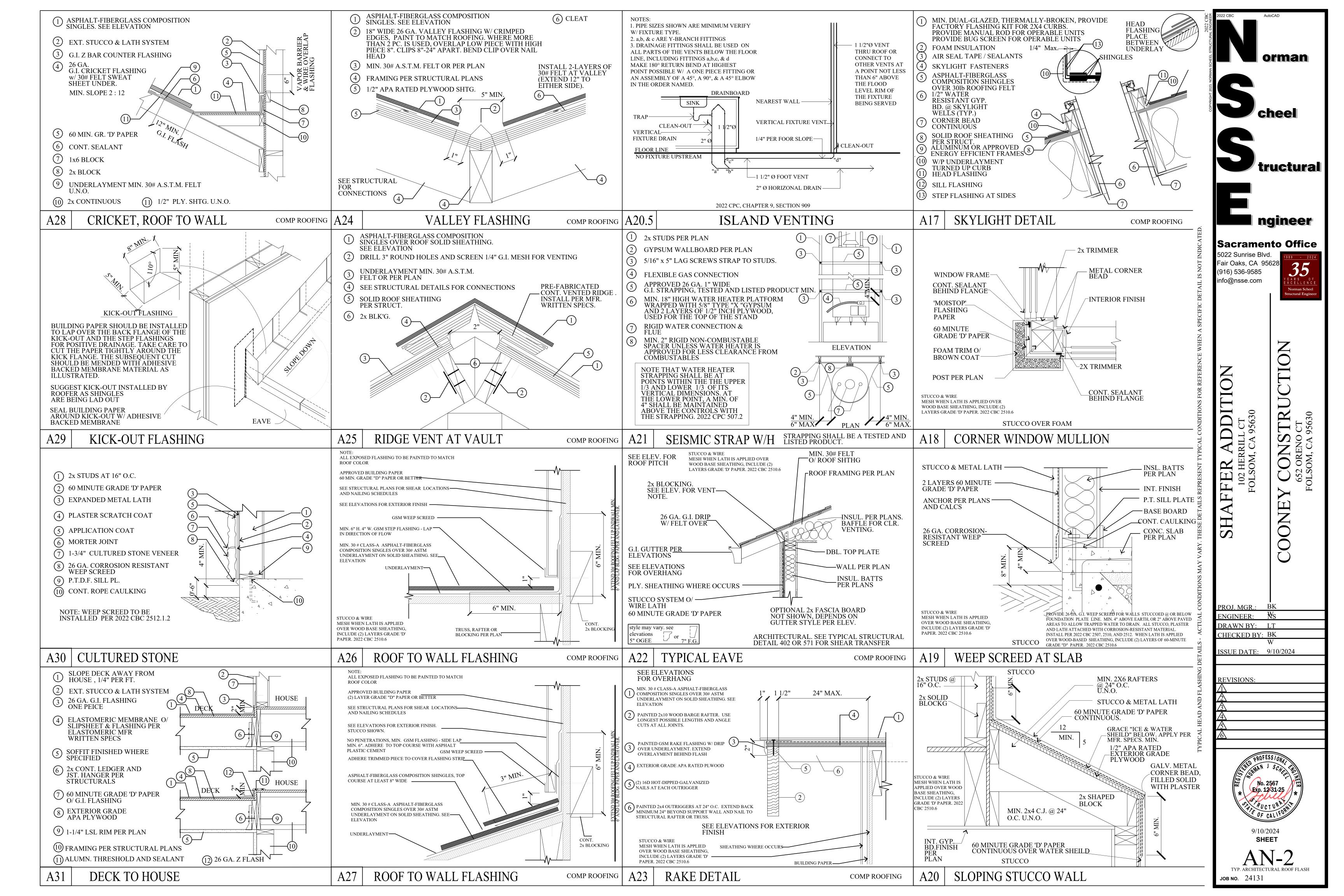
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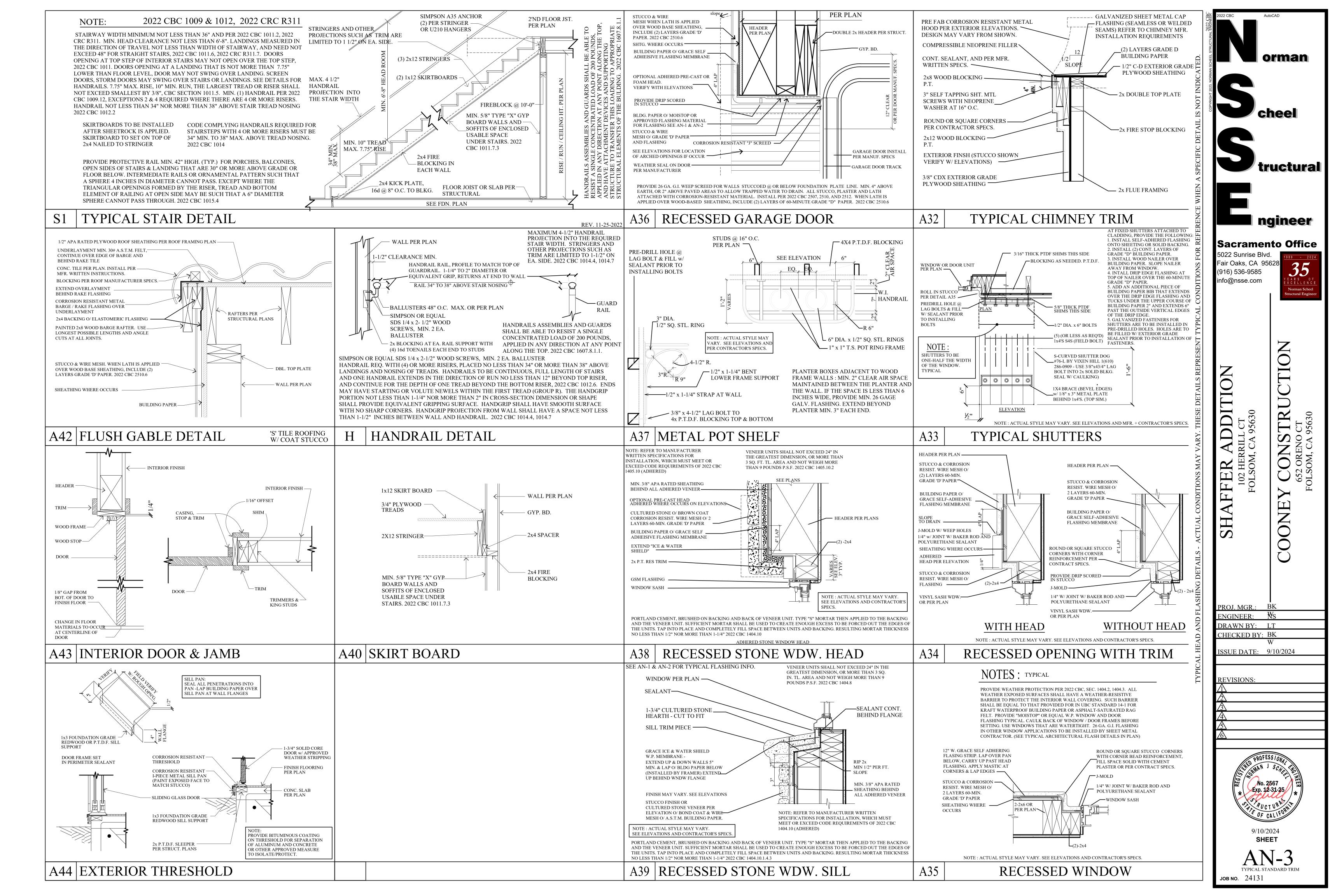


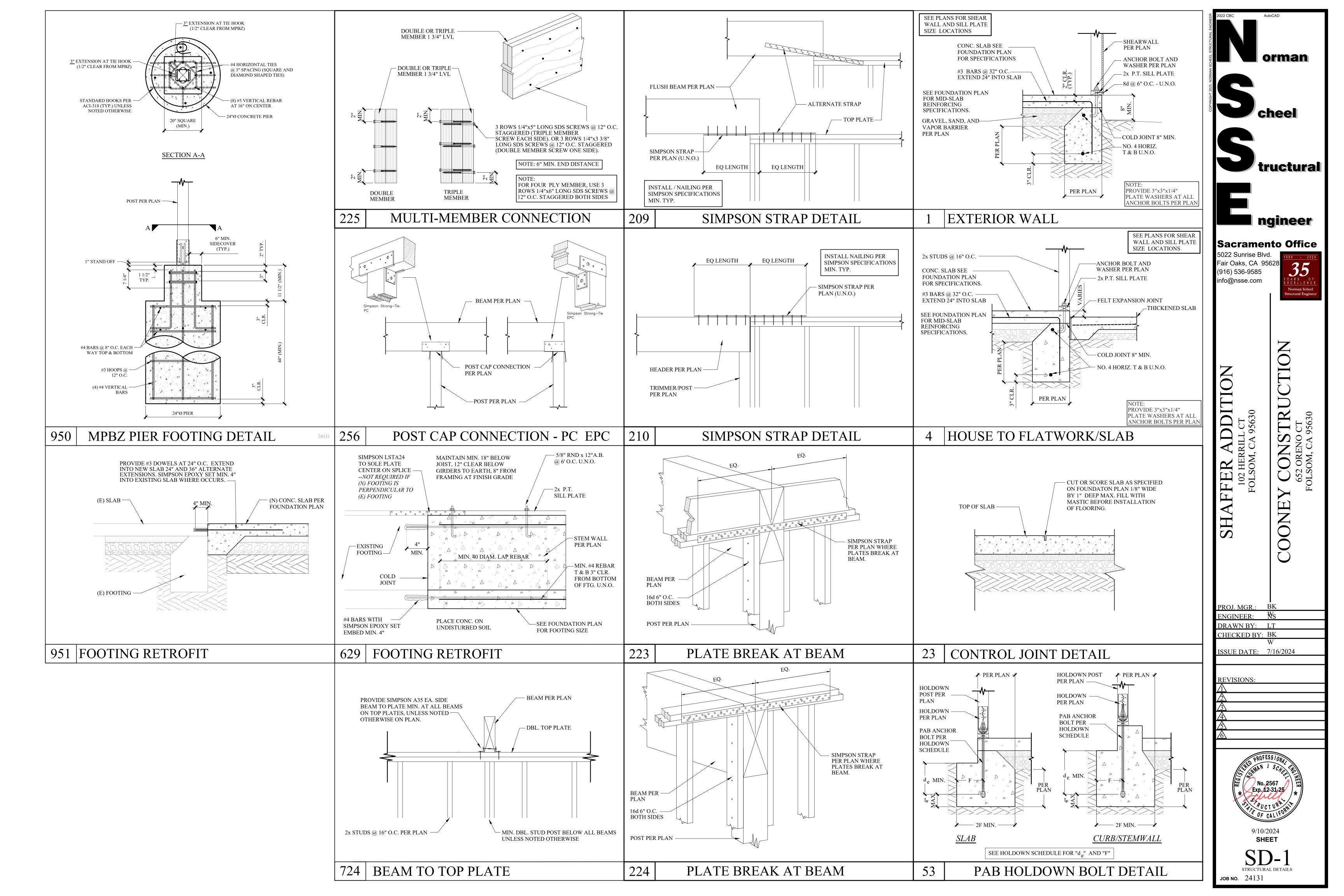
9/11/2024 SHEET

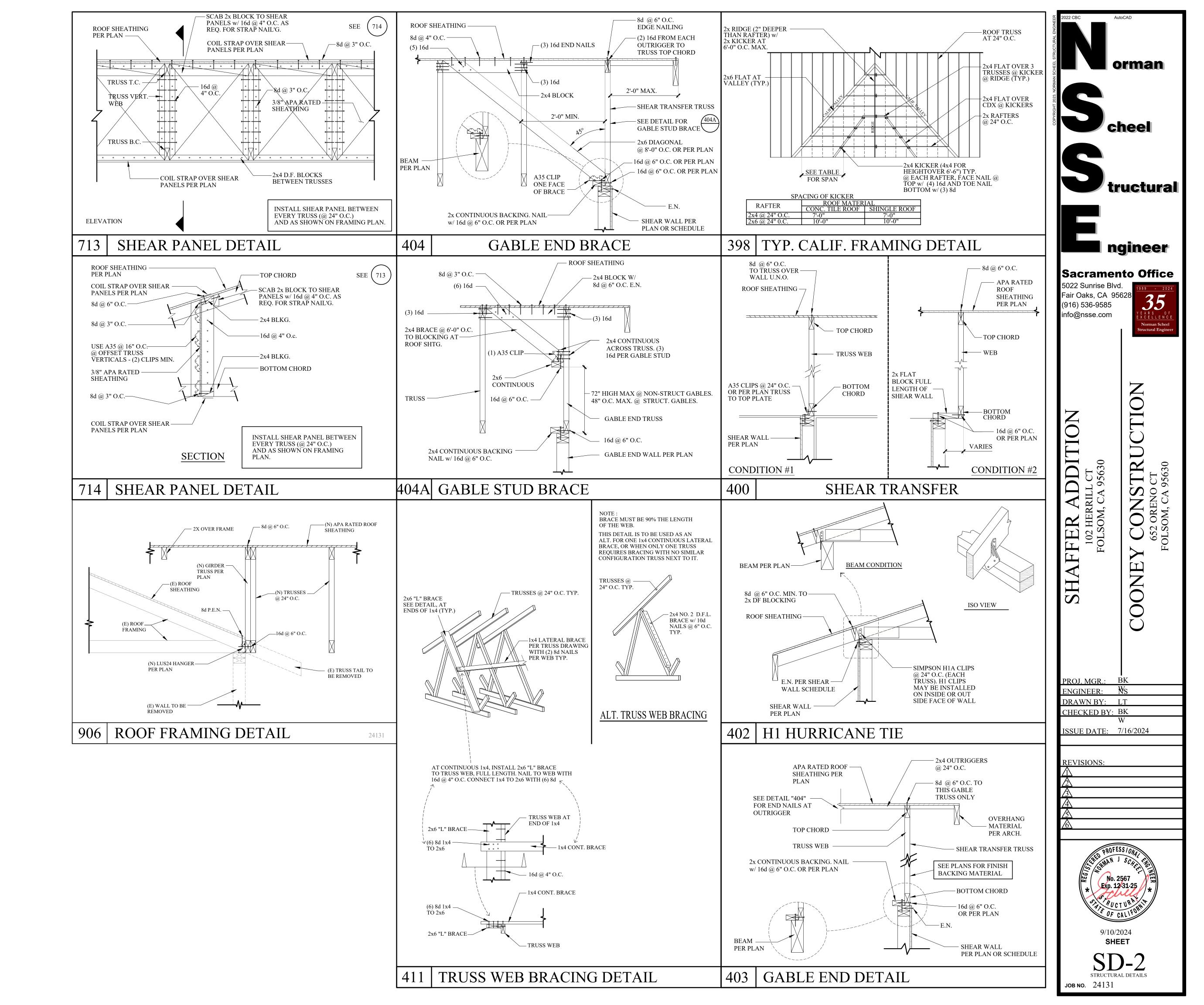
ЈОВ NO. 24131











Materials for 102 Herrill Ct Addition

Paint Color-Sandpiper Cove



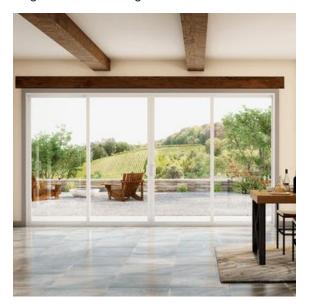
Roof-Timberline Natural Shadow, Color-Slate



James Hardie HZ10 Lap Siding



Milgard double sliding door



Google Earth

