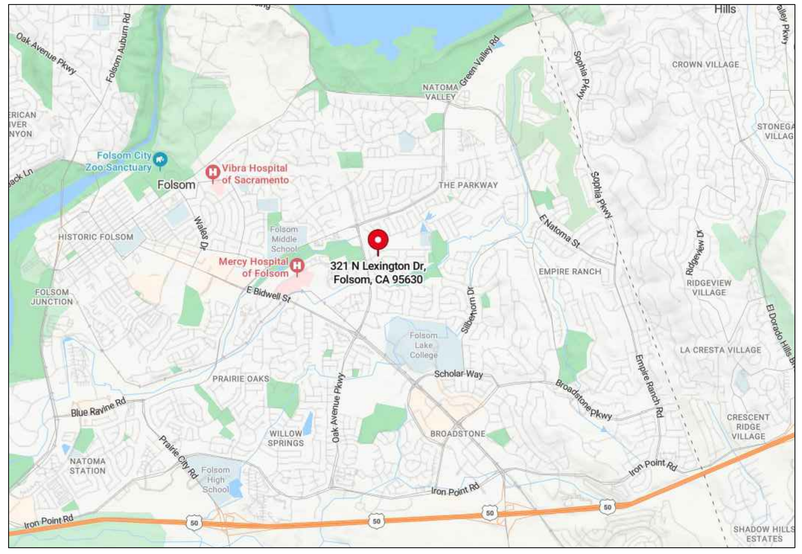
3D VIEW
RIGHT REAR

3D VIEW
LEFT REAR



VICINITY MAP
NOT TO SCALE

SITE PLAN
SCALE: 1/8" = 1'0"
APN: 071-0890-814-0000

PROJECT DATA

OCCUPANCY TYPE:	R-3
CONSTRUCTION TYPE:	VB
SRA FIRE HAZARD SEVERITY ZONE:	LOCAL JURISDICTION
ELEVATION:	368 FT.
CLIMATE ZONE:	12
FIRE SPRINKLERS:	NONE EXISTING

ALL WORK DONE ON THIS PROJECT SHALL COMPLY WITH THE 2022 CRC, CBC, CMC, CPC, CEC, THE 2022 TITLE 24 ENERGY REQUIREMENTS, AND 2022 CA GREEN BUILDING STANDARDS CODE AS AMENDED BY THE LOCAL BUILDING DEPARTMENT.

SPRINKLER PLANS ARE NOT REQ'D.,
AN AUTOMATIC RESIDENTIAL FIRE SPRINKLER SYSTEM SHALL BE INSTALLED IN ONE- AND TWO- FAMILY DWELLINGS. (R313.2)
EXCEPTION: AN AUTOMATIC RESIDENTIAL FIRE SPRINKLER SYSTEM SHALL NOT BE REQUIRED FOR ADDITIONS OR ALTERATIONS TO EXISTING BUILDINGS THAT ARE NOT ALREADY PROVIDED WITH AN AUTOMATIC RESIDENTIAL SPRINKLER SYSTEM.
AUTOMATIC RESIDENTIAL FIRE SPRINKLER SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH SECTION R313.3 OR NFPA 13D. (R313.2.1)

DESIGN CRITERIA

ROOF LIVE LOAD:	20 PSF
ROOF DEAD LOAD:	16 PSF
FLOOR LIVE LOAD:	40 PSF
BASIC WIND SPEED:	94 MPH
EXPOSURE:	C
SEISMIC DESIGN CATEGORY:	D
SITE CLASS:	D
FLOOD DESIGN DATA:	N/A

TITLE 24 REQUIREMENTS

FLOOR:	N/A
WALLS:	R-15
ATTIC:	R-30
CATHEDRAL CEILING:	R-22
DUCTS:	R-8 (WHERE EXTENDED)
FURNACE:	EXISTING
ACSplit:	EXISTING
EXISTING GAS WATER HEATER	

SCOPE OF PROJECT FOR: KRISTIAN FOSS

EXISTING 3 BEDROOM RESIDENCE. PROPOSED 209 SQ. FT. FIRST FLOOR ADDITION OF AN OFFICE. MATCH EXISTING ROOF PITCH, ROOFING MATERIAL & SIDING WITH NEW ADDITION.

TABLE OF CONTENTS

VERIFY ALL DIMENSIONS ON SITE
INFORMATION PROVIDED BY OWNER

Revisions

SITE PLAN, VICINITY MAP, SCOPE OF PROJECT & CODE NOTES

Proposed Addition for:
KRISTIAN FOSS
312 N. LEXINGTON
FOLSOM, CA 95630

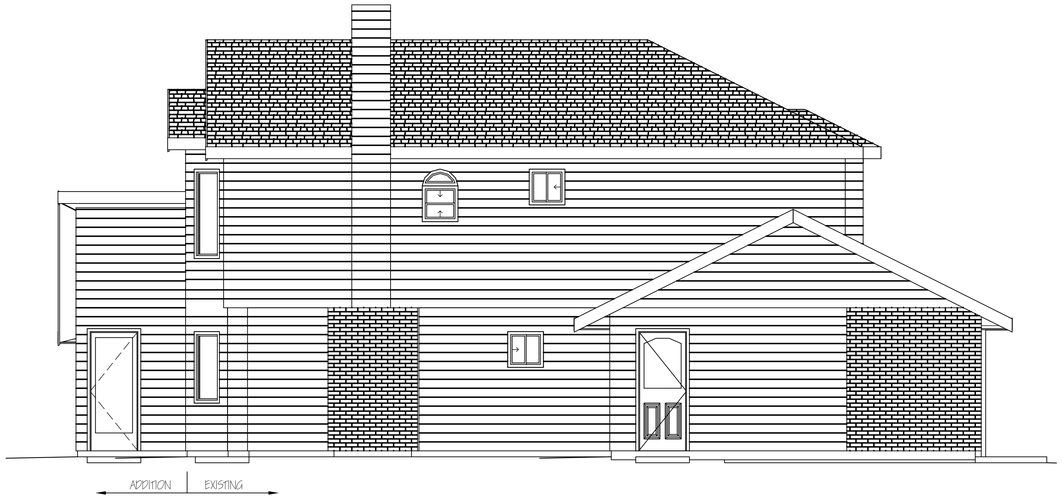
PERFECT PITCHES
Kristin McGregor
(916) 558-7444
info@perfectpitchesdrafting.com
PO Box 214905, Sacramento, CA 95821

Scale: 1/8" = 1'0"

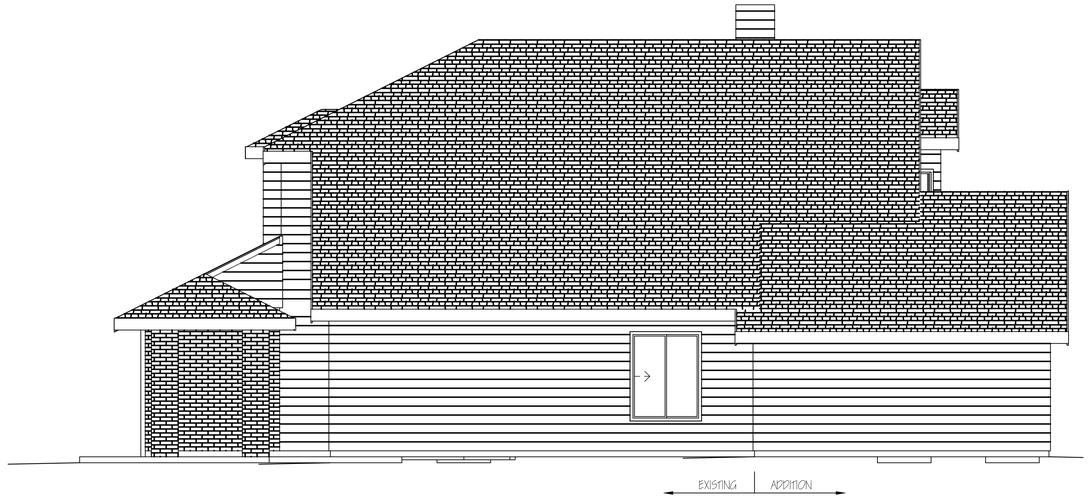
Date: May 15, 2024

Job No. 2217

Sheet # 1 of 11.

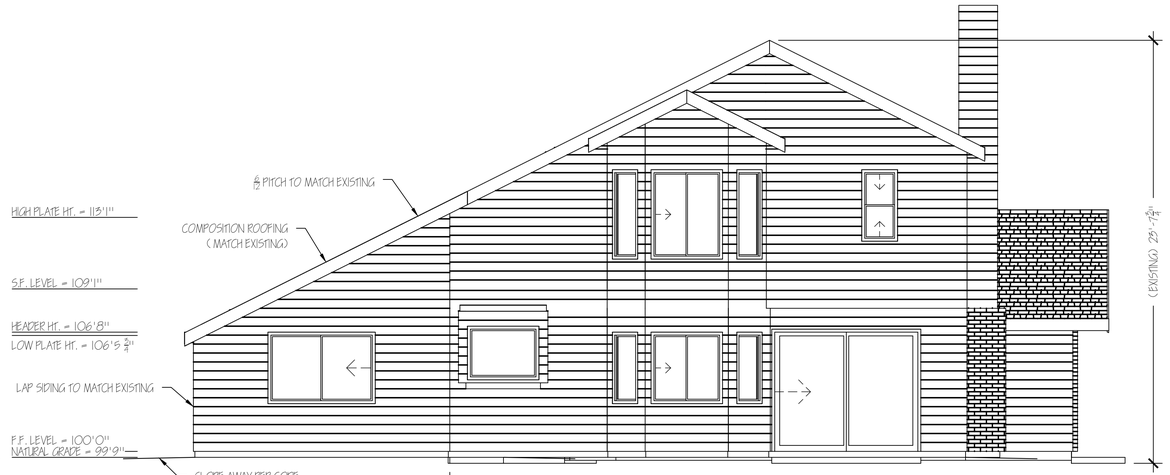


4 LEFT ELEVATION
1/4" = 1'-0"



2 RIGHT ELEVATION
1/4" = 1'-0"

3 FRONT ELEVATION
1/4" = 1'-0"



1 REAR ELEVATION
1/4" = 1'-0"

VERIFY ALL DIMENSIONS ON SITE
INFORMATION PROVIDED BY OWNER

Revisions

ELEVATIONS & NOTES

Proposed Addition for:
KRISTIAN FOSS
312 N. LEXINGTON
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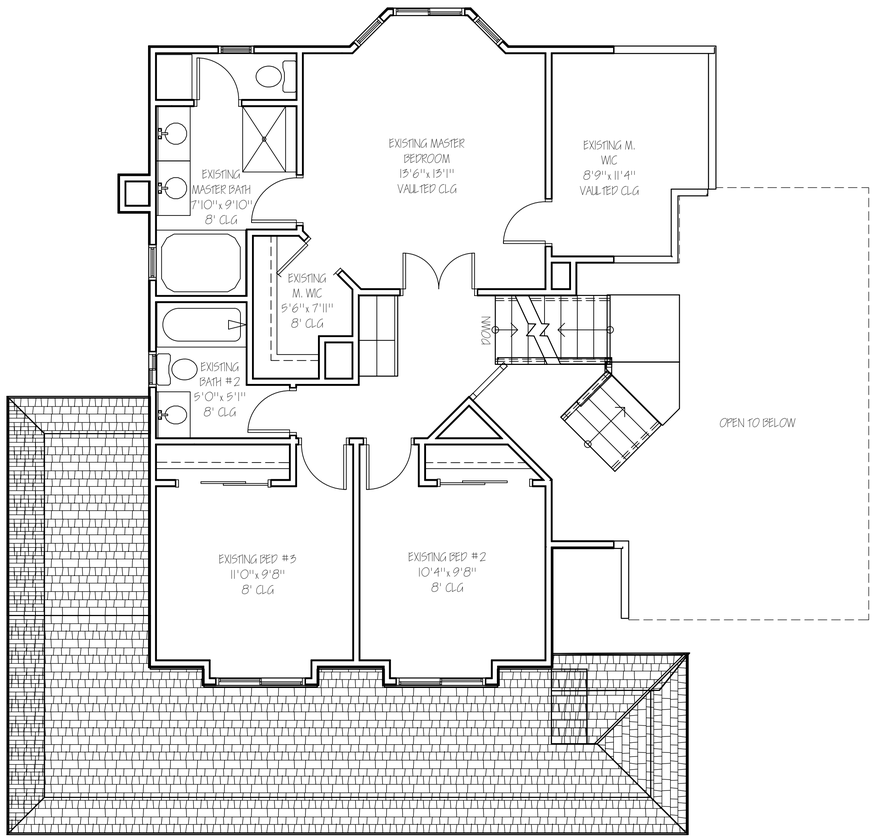
Scale:
1/4" = 1'0"

Date:
May 15, 2024

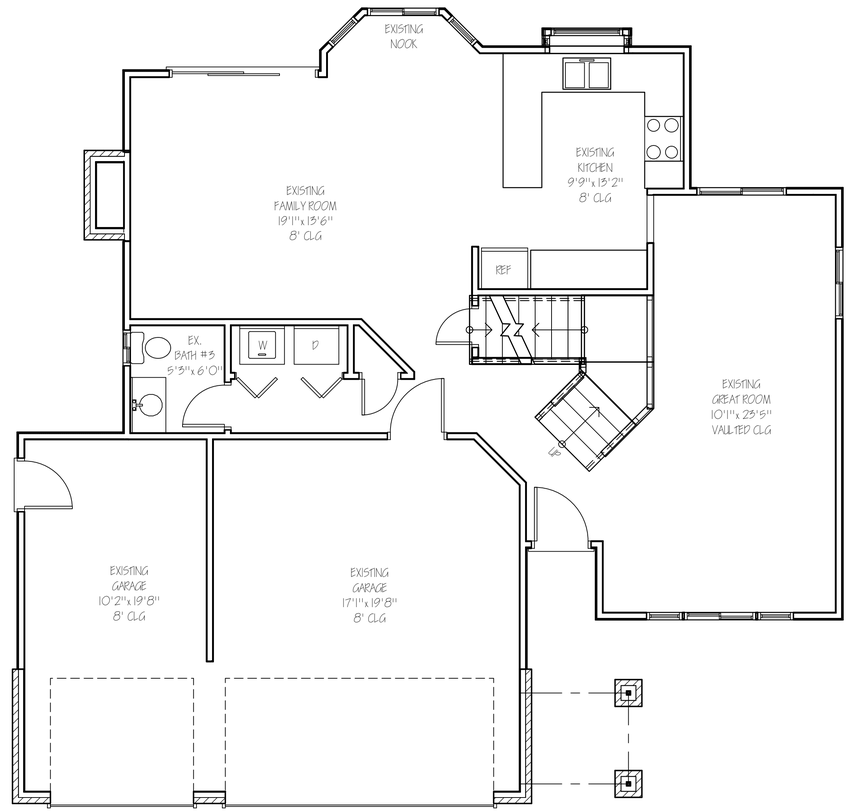
Job No.
2217

Sheet # 2
of 11.



EXISTING SECOND FLOOR PLAN

SCALE: $\frac{1}{4}$" = 1'0"
843 SQ. FT.



EXISTING FIRST FLOOR PLAN

SCALE: $\frac{1}{4}$" = 1'0"
HOUSE: 978 SQ. FT.
GARAGE: 574 SQ. FT.

VERIFY ALL DIMENSIONS ON SITE
INFORMATION PROVIDED BY OWNER

Revisions

EXISTING FIRST FLOOR PLAN &
EXISTING SECOND FLOOR PLAN

Proposed Addition for:
KRISTIAN FOSS
312 N. LEXINGTON
FOLSOM, CA 95630

PERFECT PITCHES
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PO Box 214905, Sacramento, CA 95821

Scale:
$\frac{1}{4}$" = 1'0"

Date:
May 15, 2024

Job No.
2217

Sheet # 3
of 11.

Shear Wall Schedule

2022 CBC, 2018 IBC, & 2021 NDS SDPWS

Shear Wall Type	Seismic Capacity (plf)	Wind Capacity (plf)	Specifications
A	260	365	3/8" APA rated sheathing one face with 8d nails at 6" o.c. edge and 12" o.c. field. 5/8" ø x 12" long Anchor Bolts @ 48" o.c. 2x sill plate
B	380	532	3/8" APA rated sheathing one face with 8d nails at 4" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges or dbl. studs w/ 16d @ 4" o.c. 5/8" ø x 12" long Anchor Bolts @ 32" o.c. 2x sill plate
C	490	685	3/8" APA rated sheathing one face with 8d nails at 3" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges or dbl. studs w/ 16d @ 3" o.c. 5/8" ø x 12" long Anchor Bolts @ 32" o.c. 2x sill plate
D	640	895	3/8" APA rated sheathing one face with 8d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 5/8" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
E	770	1077	15/32" APA rated sheathing one face with 10d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 5/8" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
F	870	1217	19/32" APA rated sheathing one face with 10d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 5/8" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
G	980	1370	3/8" APA rated sheathing both faces with 8d nails at 3" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 5/8" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
H	1280	1790	3/8" APA rated sheathing both faces with 8d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 5/8" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
I	1540	2154	15/32" APA rated sheathing both faces with 10d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 3/4" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
J	1740	2434	19/32" APA rated sheathing both faces with 10d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 3/4" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate

Notes

1) *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 different framing members, or framing shall be 3-inch nominal or thicker at adjoining panel edges and nails on each side shall be staggered.*
2) *Galvanized nails shall be hot dipped or tumbled.*
3) *Framing members or blocking required at all panel edges in shear wall.*
4) *All shear wall values are based on 16" o.c. stud spacing.*
5) *2 anchors minimum per shear wall.*
6) *All Framing members used in the construction of shear walls to be Douglas Fir Larch.*
7) *3"x3"x1/4" steel washers required at all anchor bolts used in shear walls. Washer edge shall be within 1/2" of sheathing slotted washers are permitted.*

Job Number 24060
Project Manager Rob Coon
Date 3/4/2024

Holdown Specifications

2022 CBC 2021 IBC

First Floor Holdown Table

Holdown Type	Holdown Name [1,2]	Minimum Required Post [3]	Bolt [4]	d_s	F	Capacity
A	HDU2-SDS2.5	2-2X4 or 2-2x6	PAB5	5 1/2"	8 1/2"	3075 #
B	HDU4-SDS2.5	2-2X4 or 2-2x6	PAB5	5 1/2"	8 1/2"	4565 #
C	HDU5-SDS2.5	2-2X4 or 2-2x6	PAB5	5 1/2"	8 1/2"	5645 #
D	HDU8-SDS2.5	4X6	PAB7	8 1/2"	13"	7870 #
E	HDU11-SDS2.5	4X6	PAB8	10"	15"	9535 #
F	HDU14-SDS2.5	4x8 or 6x6	PAB8	10"	15"	14445 #

Notes

1) *Holdowns may be raised off the sill with no reduction in load.*
2) *All screws to be Simpson SDS 1/4" x 2 1/2".*
3) *All holdown post and sill plates are designed to be Douglas Fir Larch.*
4) *See detail 53 in plans for anchor and footing requirements at holdowns.*
5) *Connect double holdown studs together with 24-16d sinker nails minimum.*

Second Floor Holdown Table

Holdown Type	Holdown Name	Required Length [1,2]	Required Nails [3]	Min. Required Post [4]	Capacity
G	CS16 Strap	32" Long	26-8d or 22-10d	2x4 or 2x6	1705 #
H	MSTC40 Strap	40" Long	36-16d Sinkers	2-2X4 or 2-2x6	3070 #
I	MSTC52 Strap	52" Long	48-16d Sinkers	4x4	4610 #
J	MSTC66 Strap	66" Long	68-16d Sinkers	4x4	5850 #
K	CMST14 Strap	76" Long	66-16d	4x4	6475 #
L	CMST12 Strap	94" Long	86-16d	4x6	9215 #

Notes

1) *Centerline of strap to be center of rim joist.*
2) *Maximum clear span to be 16".*
3) *All nails to be common wire unless noted otherwise.*
4) *Minimum post required to be installed in upper and lower wall framing.*
5) *Connect double holdown studs together with 24-16d sinker nails minimum.*

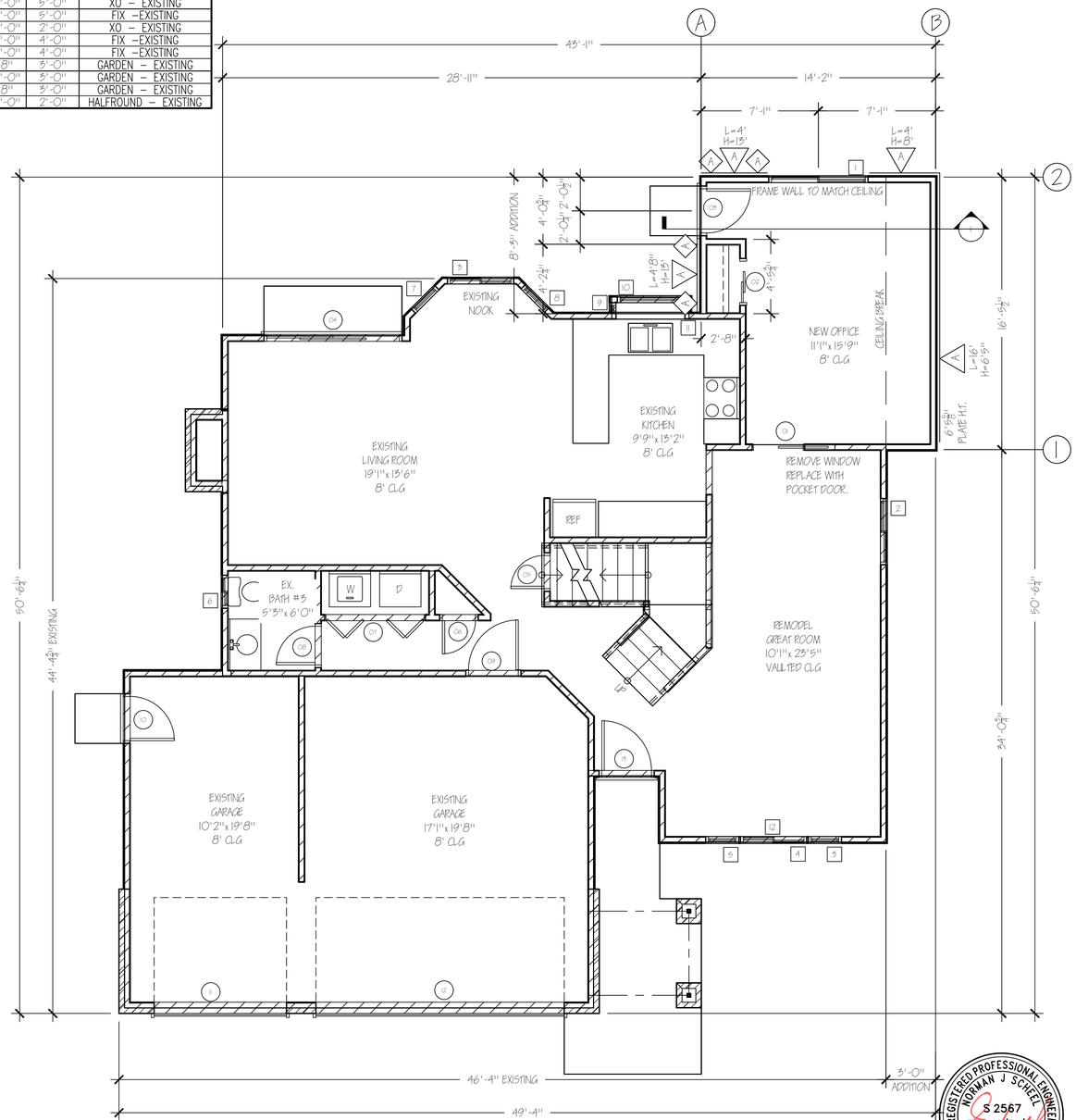
Job Number 24060
Project Manager Rob Coon
Date 3/4/2024

FIRST FLOOR DOOR SCHEDULE

MARK	DOOR SIZE WD	DOOR SIZE HGT	DOOR SIZE THK	GLAZING	FIRE RATING LABEL	NOTES
1	3'-0"	6'-8"	1 3/8"	--	--	NEW - POCKET
2	2'-6"	6'-8"	1 1/4"	--	--	NEW - CLOSET
3	2'-8"	6'-8"	1 3/4"	FULL LITE	--	NEW - EXTERIOR
4	8'-0"	6'-8"	1 1/4"	FULL LITE	--	EXISTING - SGD
5	2'-0"	6'-8"	1 3/4"	--	--	EXISTING
6	2'-0"	6'-8"	1 3/4"	--	--	EXISTING
7	5'-1"	6'-8"	1 3/4"	--	--	EXISTING
8	2'-4"	6'-8"	1 3/4"	--	--	EXISTING
9	3'-0"	6'-8"	1 3/4"	--	--	EXISTING - EXTERIOR
10	2'-8"	6'-8"	1 3/4"	HALF LITE	--	EXISTING - EXTERIOR
11	8'-0"	7'-0"	1"	--	--	EXISTING - GARAGE DR.
12	15'-0"	7'-0"	1"	--	--	EXISTING - GARAGE DR.
13	3'-0"	6'-8"	1 3/4"	--	--	EXISTING - EXTERIOR

FIRST FLOOR WINDOW SCHEDULE

MARK	SIZE Width	SIZE HEIGHT	NOTES
1	6'-0"	4'-0"	XO - NEW
2	4'-0"	5'-0"	XO - EXISTING
3	2'-0"	5'-0"	FIX -EXISTING
3	4'-0"	4'-0"	XO - EXISTING
4	4'-0"	5'-0"	XO - EXISTING
5	2'-0"	5'-0"	FIX -EXISTING
6	2'-0"	2'-0"	XO - EXISTING
7	2'-0"	4'-0"	FIX -EXISTING
8	2'-0"	4'-0"	FIX -EXISTING
9	8"	3'-0"	GARDEN - EXISTING
10	4'-0"	3'-0"	GARDEN - EXISTING
11	8"	3'-0"	GARDEN - EXISTING
12	4'-0"	2'-0"	HALFROUND - EXISTING



NEW FIRST FLOOR PLAN

SCALE: ¼"=1'0"

EXISTING FIRST FLR. TOTAL: 978 SQ. FT.
ADDITION FIRST FLR.: + 209 SQ. FT.
NEW TOTAL FIRST FLR.: 1,187 SQ. FT.
NEW TOTAL BOTH FLOORS: 2,030 SQ. FT.

= EXISTING WALLS
= NEW WALLS

REGISTERED PROFESSIONAL ENGINEER
NORMAN J SCHEEL
S 2567
EXP: 12/31/25
STRUCTURAL
STATE OF CALIFORNIA

This seal has been electronically applied.

VERIFY ALL DIMENSIONS ON SITE
INFORMATION PROVIDED BY OWNER

Revisions

NEW FIRST FLOOR PLAN & NOTES

Proposed Addition for:
KRISTIAN FOSS
312 N. LEXINGTON
FOLSOM, CA 95630

PERFECT PITCHES
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PO Box 214905, Sacramento, CA 95821

Scale: ¼" = 1'0"

Date: May 15, 2024

Job No. 2217

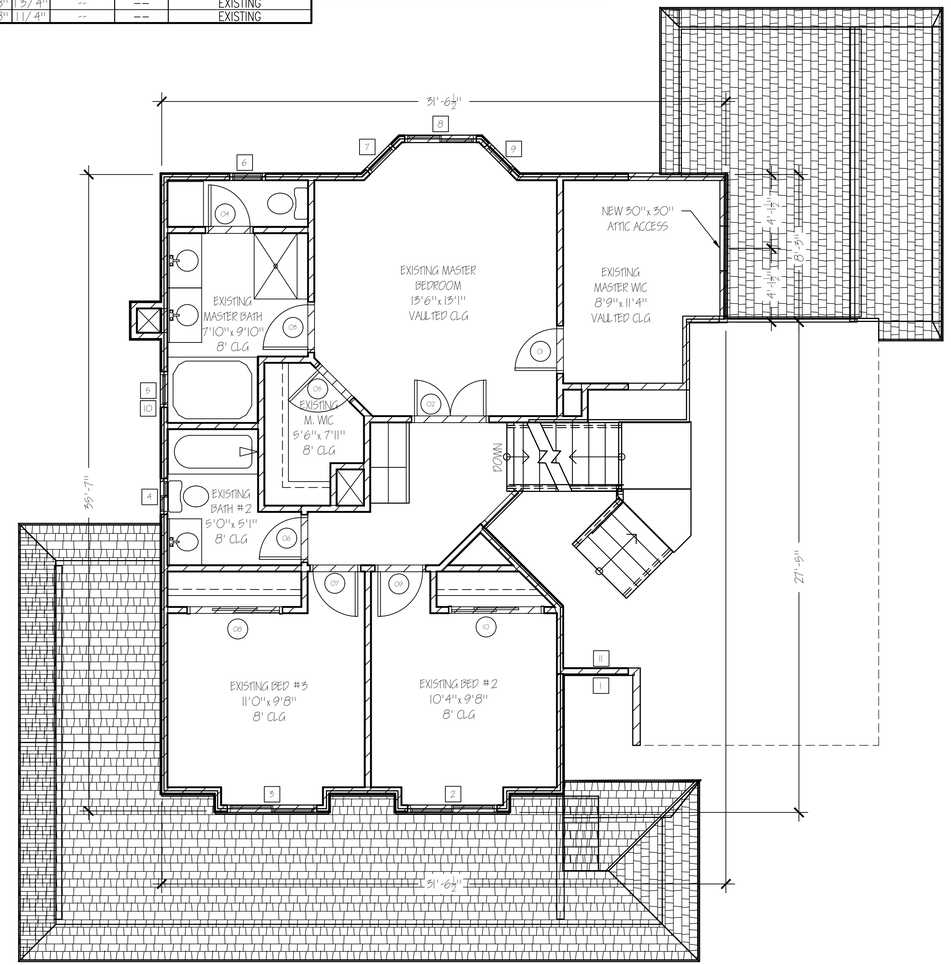
Sheet # 4 of 11.

2ND FLOOR DOOR AND FRAME SCHEDULE

MARK	DOOR SIZE WD	DOOR SIZE HGT	DOOR SIZE THK	GLAZING	FIRE RATING LABEL	NOTES
1	2'-4"	6'-8"	1 3/ 4"	--	--	EXISTING
2	4'-0"	6'-8"	1 3/ 4"	--	--	EXISTING
3	2'-6"	6'-8"	1 3/ 4"	--	--	EXISTING
4	2'-4"	6'-8"	1 3/ 4"	--	--	EXISTING
5	2'-4"	6'-8"	1 3/ 4"	--	--	EXISTING
6	2'-4"	6'-8"	1 3/ 4"	--	--	EXISTING
7	2'-6"	6'-8"	1 3/ 4"	--	--	EXISTING
8	5'-0"	6'-8"	1 1/ 4"	--	--	EXISTING
9	2'-6"	6'-8"	1 3/ 4"	--	--	EXISTING
10	5'-0"	6'-8"	1 1/ 4"	--	--	EXISTING

2ND FLOOR WINDOW SCHEDULE

MARK	SIZE Width	SIZE HEIGHT	NOTES
1	2'-0"	3'-0"	FIX – EXISTING
2	5'-0"	3'-6"	XO – EXISTING
3	5'-0"	3'-6"	XO – EXISTING
4	2'-0"	2'-0"	XO – EXISTING
5	2'-0"	2'-0"	SH – EXISTING
6	2'-0"	4'-0"	SH – EXISTING
7	2'-0"	5'-0"	FIX – EXISTING
8	4'-0"	5'-0"	XO – EXISTING
9	2'-0"	5'-0"	XO – EXISTING
10	2'-0"	1''	HALFROUND – EXISTING
11	2'-0"	1'-0"	HALFROUND – EXISTING



NEW SECOND FLOOR PLAN

SCALE: 1/4" = 1'0"
EXISTING: 843 SQ. FT.
NO ADDED SQUARE FOOTAGE PROPOSED

= EXISTING WALLS
= NEW WALLS

VERIFY ALL DIMENSIONS ON SITE
INFORMATION PROVIDED BY OWNER

Revisions

NEW SECOND FLOOR PLAN & NOTES

Proposed Addition for:
KRISTIAN FOSS
312 N. LEXINGTON
FOLSOM, CA 95630

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PO Box 214905, Sacramento, CA 95821

Scale: 1/4" = 1'0"

Date: May 15, 2024

Job No. 2217

Sheet # 5 of 11.

MECHANICAL, PLUMBING and ELECTRICAL NOTES

Lights in clothes closet need 12" min. from combustibles, such as walls or edge of the shelf, measured horizontally. Six inch horizontal clearance is allowed for recessed incandescent light fixtures in insulated ceilings shall be approved, listed, zero-clearance insulation cover (IC) type.

Efficient Lighting - High efficacy in all permanent lighting or controls is required, including screw-based which must contain JA8 compliant lamps.

Screw Based Luminaires. Must contain JA8 compliant light sources. Must not be contained in recessed downlight luminaries. Incandescent sources are prohibited from having a GU-24 base (per Title 20 Section 1605.3(k)

Recessed lighting shall be listed as IC (zero clearance to insulation) and AT (air tight), be sealed/ caulked between the fixture housing and ceiling, shall not contain a screw base socket, and contain bulbs marked with JA8-2016-E efficiency label.

Bathrooms, Garages, Utility Rooms, and Laundry Rooms: At least one fixture must be controlled by a vacancy sensor switch that requires a manual on activation and automatically turns off within 30 minutes after the room is vacated..

Dimmers or Vacancy Sensors shall control all installed lighting fixtures with JA8-2016 bulbs, except those in a closet that is less than 70 sq. ft. and in hallways.

Closet Lights shall be fluorescent, have sealed lens, or LED listed for storage area.

Kitchens: All lighting fixtures shall be controlled by either a dimmer switch or by a vacancy sensor switch that requires a manual on activation and automatically turns off within 30 minutes after the room is vacated.

Bathrooms: Lighting fixtures located within 3' horizontally and 8' vertically of the bathtub rim or shower stall threshold shall be listed for damp location, or listed for wet locations where subject to shower spray..

Laundry Rooms: Lighting must be high efficacy and controlled by a vacancy sensor.

Other Rooms: This classification applies only to rooms that are not kitchens, bathrooms, garages, laundry rooms, closets, or utility rooms. All installed luminaries shall either be high efficacy or shall be controlled by a vacancy sensor or dimmer.

Under Cabinet Lighting. Any under cabinet lighting (including kitchen) must be switched separately from other lighting systems.

Outdoor Lighting: Must be high efficacy and include a manual on/ off switch that does not override to on and one of the following: photo-control and motion sensor; photo-control and automatic time switch control; astronomical time switch control; energy management control system (EMCS) per 2022 Building Energy Efficiency Standards [§150(k)].

Electrical disconnects for equipment such as well pumps, HVAC units, septic pumps, etc. shall be within sight and 50' or less from the equipment.

Receptacle outlets ◍ shall be spaced such that at any point along the wall at the floor level is not more than 6' from a receptacle without crossing a doorway. Wall spaces greater than 2' in width shall be provided with a receptacle. These receptacles shall be provided in kitchens, family rooms, dens, bedrooms, or similar rooms.

Counter top receptacles in the kitchen or dining room shall be spaced such that at any point along the wall at the counter level is not more than 2' from a receptacle. Any counter space more than 12" wide shall be provided with a receptacle. Peninsular or island counters are to be provided with a receptacle every 4'. These receptacles are to be located within 12" of the counter top and are not to be face up in the counter. Counter tops interrupted by ranges, sinks, or other appliances shall be considered separate counters.

Kitchen counters shall be equipped with two or more 20 amp circuits for small appliances. The total number of receptacles needed shall be equally divided between these circuits.

A ground fault circuit interrupter (GFCI) ◍ is required for all 125 volt through 250 volt receptacles installed in bathrooms, garages (and accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use), outdoors, in unfinished basements, under-floor areas, kitchens where the recepticals are installed to serve the countertop surfaces, sink or bar sink where the recepticals are installed within 6' from the inside edge of the bowl of the sink, bathtubs or shower stalls - where receptacles are installed within 6' of the outside edge of the bathtub or shower stall, and laundry area. Receptacles in these locations which are for a dedicated purposes shall be protected by GFCI. (CEC §210.8(A & D))

Receptacles in all outdoor locations to have extra duty rated in use covers. (CEC §406.9(1))

Receptacles installed outdoors or in other damp locations shall have an enclosure for the receptacle that is weatherproof when the receptacle is covered (attachment pug cap is not inserted and the receptacle cover is closed). (CEC §406.9(A))

Receptacles in a wet location shall have an enclosure for the receptacle that is weatherproof whether or not the attachment pug cap is not inserted. (CEC §406.9(B))

A dedicated 20 amp circuit to serve the required bathroom outlets. This circuit cannot supply any other receptacles, lights, fans, etc.

Provide Arc-Fault Circuit Interrupters (AFCD): All 120-volt, single Phase, 15- and 20- amp branch circuits supplying outlets installed in dwelling unit family rooms, dining rooms, kitchens, laundry rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways or similar rooms or areas shall be protected by a listed arc-fault circuit interrupter, combination-type, installed to provide protection of the branch circuit. (CEC §210.12.)

All nonlocking-type 125-volt, 15- and 20-ampere receptacles shall be listed tamper-resistant receptacles. (CEC §406.12)

EXCEPTION: Receptacles in the following locations shall not be required to be tamper-resistant:

1. Receptacles located more than 5'6" above the floor.
2. Receptacles that are part of a luminaire or appliance.
3. A single receptacle or a duplex receptacle for two appliances located within a dedicated space for each appliance that, in normal use, is not easily moved from one place to another and that is cord-and-plug connected in accordance with CEC §400.7(A)(6), (A)(7), or (A)(8)
4. Nongrounding receptacles used for replacements as permitted in §406.4(D)(2)(a)

Electrical meter panels, sub-panels and disconnects, such as at the air conditioner, require a minimum clear working space of not less than 30" wide by 36" deep and 6'6" high.

In dwelling units a SMOKE DETECTOR (SD) shall be installed in each sleeping room at a point centrally located in the hallway or area giving access to each separate sleeping area. When the dwelling unit has more than one story and in dwelling units with a basement, a smoke detector shall be installed on each story and in the basement. In a dwelling unit where the ceiling height of a room, which is open to the hallway that serves the bedrooms, exceeds the ceiling height of the hallway by 24" or more, smoke detectors shall be installed in the hallway and in the adjacent room. Smoke detectors are to be supplied by the house wiring system, and have a battery backup and emit a signal when the batteries are low; and must be audible in all sleeping areas of the building. All Smoke Detectors shall be interconnected.
NOTE: detectors may be solely battery operated when installed in existing buildings.

Hose bibs and lawn sprinkler systems shall have approved back flow prevention devices.

Shower and tub-shower combinations shall be provided with individual control valves of the pressure balance or the thermostatic mixing valve type.

Water heaters (generating a glow, spark, or flame capable of lighting flammable vapors) shall be installed 18" above the garage floor. Seismic anchorage of the water heater to include anchors of straps at points within the upper and lower one-third of its vertical dimension, the lower anchor/ strap located to maintain a minimum distance of 4 inches above the controls.

A smooth metal duct for the dryer exhaust which extends outside with a back draft damper is required.

Hydro-massage bathtubs and their associated electrical components and all receptacles within 5' of them shall be protected by a ground-fault circuit interrupter as per 2022 CEC article §680.70.
All electrical equipment shall be accessible without damaging the building structure or building finish. Where the hydro-massage bathtub is cord and plug-connected with the supply receptacle accessible only through a service access opening the receptacle shall be installed so that its face is within direct view and not more than 1 ft. of the opening. (CEC §680.73)
All hydro-massage bathtubs shall be grounded per CEC §680.74.

Hot water pipes to the kitchen shall be insulated (prescriptive) [§151(f)8D].

Replacement windows shall be high efficiency (prescriptive) [§152(b)1B].

Duct sealing is required when air conditioner/ furnace is replaced or ducts are replaced (prescriptive) [§152(b)1D,E]

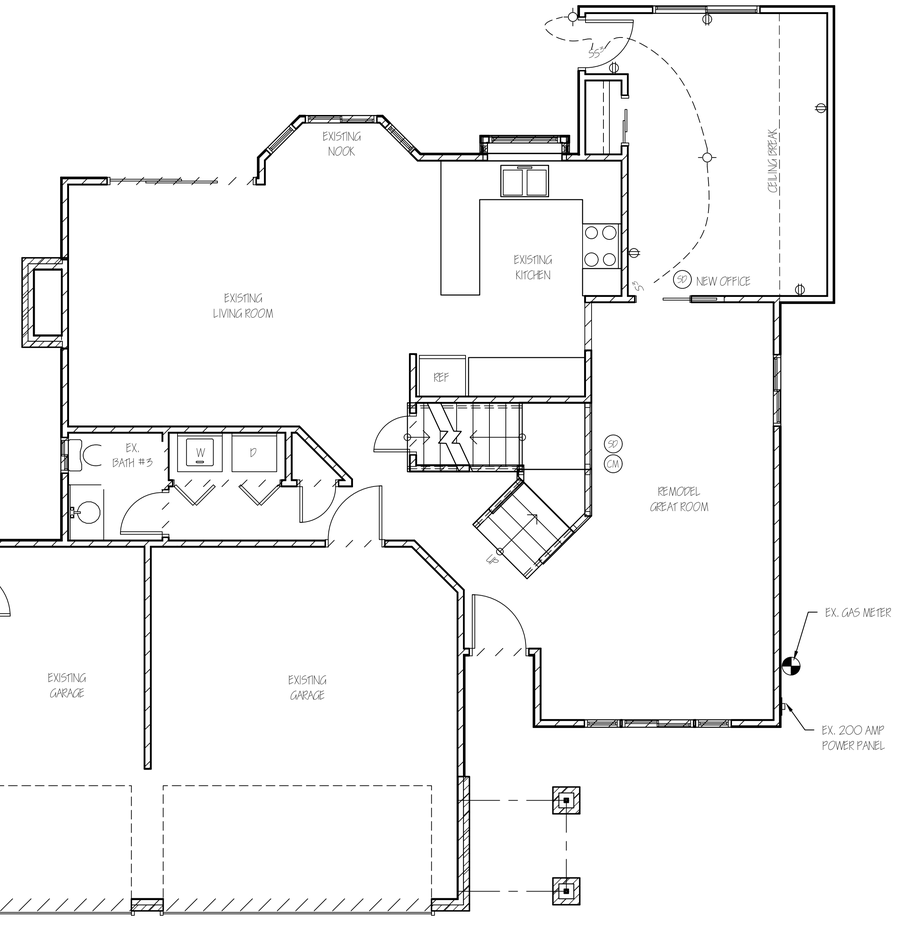
Carbon Monoxide Alarms (CM) are required in dwelling sleeping units that have attached garages or fuel-burning appliances. Carbon Monoxide alarms shall be installed outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s) and on every level of the dwelling unite including basements. All carbon monoxide alarms shall be interconnected. If the heat source is non-electric & open flames are used, a carbon monoxide detector shall be installed in both the kitchen and dinning area per CMC § 512.3.6.

Gas line pressure testing shall be 10 PSI for 15 minutes and welded piping shall be 60 PSI for 30 minutes. (CPC §1213.3)

Domestic Clothes Dryers where a compartment or space for a domestic clothes dryer is provided, not less than a 4" diameter moisture exhaust duct of approved material shall be installed in accordance with CMC § 504.3.1 and § 504.0. Exhaust fans for Type 2 clothes dryers shall operate continuously or be interlocked to exhaust air where a clothes dryer is in operation (CMC § 504.3.1 (6). Where a closet is designed for the installation of a clothes dryer, an opening of not less than 100 square inches for makeup air shall be provided in the door or by other approved means. Domestic clothes dryer moisture exhaust ducts shall be of metal and shall have smooth interior surfaces. Flexible clothes dryer transition ducts shall not be concealed within construction. Unless otherwise permitted or required by the dryer manufacturer's instructions and approved by the authority having jurisdiction, domestic dryer moister exhaust ducts shall not exceed a total combined horizontal and vertical length of 14 feet, including two 90 degree elbows. A length of 2 feet shall be deducted for each 90 degree elbow in excess of two. [CEC § 504.3.1]

LEGEND

- CEILING FAN WITH LIGHT
- FLOURESENT LIGHT FIXTURE
- GAS
- GFCI OUTLET
- LIGHT FIXTURE
- OUTLET
- RECESSED LIGHT FIXTURE
- (SD) SMOKE DETECTOR
- (CM) CARBON MONOXIDE ALARM
- BATH FAN/ LIGHT COMBO UNIT
- (TV) PHONE JACK
- (TV) CABLE TV



FIRST FLOOR ELECTRICAL PLAN

SCALE: ¼" = 1'0"

= EXISTING WALLS

= NEW WALLS

VERIFY ALL DIMENSIONS ON SITE
INFORMATION PROVIDED BY OWNER

Revisions

FIRST FLOOR ELECTRICAL PLAN & NOTES

Proposed Addition for:
KRISTIAN FOSS
312 N. LEXINGTON
FOLSOM, CA 95630

PERFECT PITCHES
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Scale: ¼" = 1'0"

Date: May 15, 2024

Job No. 2217

Sheet # 6 of 11.

LEGEND

- CEILING FAN WITH LIGHT
- FLOURESENT LIGHT FIXTURE
- GAS
- GFCI OUTLET
- LIGHT FIXTURE
- OUTLET
- RECESSED LIGHT FIXTURE
- SMOKE DETECTOR
- CARBON MONOXIDE ALARM
- BATH FAN/ LIGHT COMBO UNIT
- PHONE JACK
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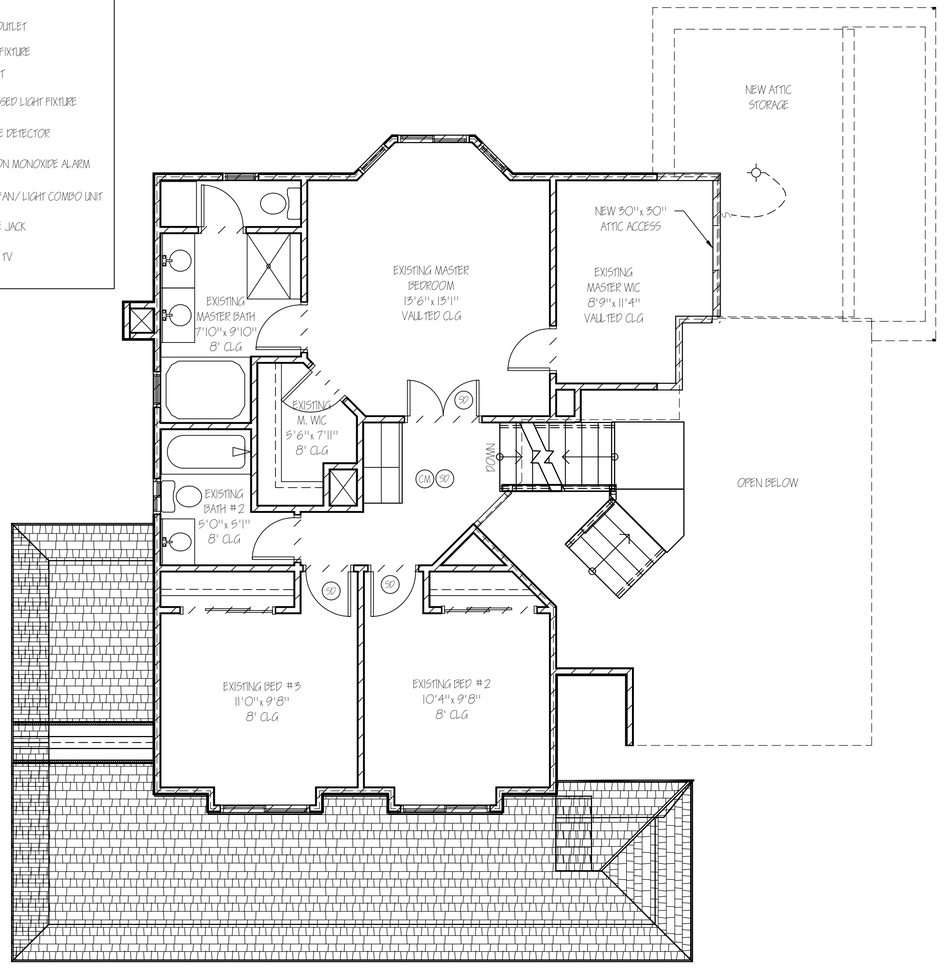

SECOND FLOOR ELECTRICAL PLAN

SCALE: 1/4"=1'0"

= EXISTING WALLS

= NEW WALLS

VERIFY ALL DIMENSIONS ON SITE
INFORMATION PROVIDED BY OWNER

Revisions

SECOND FLOOR ELECTRICAL PLAN & NOTES

Proposed Addition for:
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Date:
May 15, 2024

Job No.
2217

Sheet # 7
of 11.

Shear Wall Schedule

2022 CBC, 2018 IBC, & 2021 NDS SDPWS

Shear Wall Type	Seismic Capacity (plf)	Wind Capacity (plf)	Specifications
A	260	365	3/8" APA rated sheathing one face with 8d nails at 6" o.c. edge and 12" o.c. field. 5/8" ø x 12" long Anchor Bolts @ 48" o.c. 2x sill plate
B	380	532	3/8" APA rated sheathing one face with 8d nails at 4" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges or dbl. studs w/ 16d @ 4" o.c. 5/8" ø x 12" long Anchor Bolts @ 32" o.c. 2x sill plate
C	490	685	3/8" APA rated sheathing one face with 8d nails at 3" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges or dbl. studs w/ 16d @ 3" o.c. 5/8" ø x 12" long Anchor Bolts @ 32" o.c. 2x sill plate
D	640	895	3/8" APA rated sheathing one face with 8d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 5/8" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
E	770	1077	15/32" APA rated sheathing one face with 10d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 5/8" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
F	870	1217	19/32" APA rated sheathing one face with 10d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 5/8" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
G	980	1370	3/8" APA rated sheathing both faces with 8d nails at 3" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 5/8" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
H	1280	1790	3/8" APA rated sheathing both faces with 8d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 5/8" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
I	1540	2154	15/32" APA rated sheathing both faces with 10d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 3/4" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate
J	1740	2434	19/32" APA rated sheathing both faces with 10d nails at 2" o.c. edge and 12" o.c. field. 3x framing members at adjoining panel edges 3/4" ø x 12" long Anchor Bolts @ 16" o.c. 3x sill plate

Notes

1) *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 different framing members, or framing shall be 3-inch nominal or thicker at adjoining panel edges and nails on each side shall be staggered.*
2) *Galvanized nails shall be hot dipped or tumbled.*
3) *Framing members or blocking required at all panel edges in shear wall.*
4) *All shear wall values are based on 16" o.c. stud spacing.*
5) *2 anchors minimum per shear wall.*
6) *All Framing members used in the construction of shear walls to be Douglas Fir Larch.*
7) *3"x3"x1/4" steel washers required at all anchor bolts used in shear walls. Washer edge shall be within 1/2" of sheathing slotted washers are permitted.*

Job Number 24060
Project Manager Rob Coon
Date 3/4/2024

Holdown Specifications

2022 CBC 2021 IBC

First Floor Holdown Table

Holdown Type	Holdown Name [1,2]	Minimum Required Post [3]	Bolt [4]	d_a	F	Capacity
A	HDU2-SDS2.5	2-2X4 or 2-2x6	PAB5	5 1/2"	8 1/2"	3075 #
B	HDU4-SDS2.5	2-2X4 or 2-2x6	PAB5	5 1/2"	8 1/2"	4565 #
C	HDU5-SDS2.5	2-2X4 or 2-2x6	PAB5	5 1/2"	8 1/2"	5645 #
D	HDU8-SDS2.5	4X6	PAB7	8 1/2"	13"	7870 #
E	HDU11-SDS2.5	4X6	PAB8	10"	15"	9535 #
F	HDU14-SDS2.5	4x8 or 6x6	PAB8	10"	15"	14445 #

Notes

1) *Holdowns may be raised off the sill with no reduction in load.*
2) *All screws to be Simpson SDS 1/4" x 2 1/2".*
3) *All holdown post and sill plates are designed to be Douglas Fir Larch.*
4) *See detail S3 in plans for anchor and footing requirements at holdowns.*
5) *Connect double holdown studs together with 24-16d sinker nails minimum.*

Second Floor Holdown Table

Holdown Type	Holdown Name	Required Length [1,2]	Required Nails [3]	Min. Required Post [4]	Capacity
G	CS16 Strap	32" Long	26-8d or 22-10d	2x4 or 2x6	1705 #
H	MSTC40 Strap	40" Long	36-16d Sinkers	2-2X4 or 2-2x6	3070 #
I	MSTC52 Strap	52" Long	48-16d Sinkers	4x4	4610 #
J	MSTC66 Strap	66" Long	68-16d Sinkers	4x4	5850 #
K	CMST14 Strap	76" Long	66-16d	4x4	6475 #
L	CMST12 Strap	94" Long	86-16d	4x6	9215 #

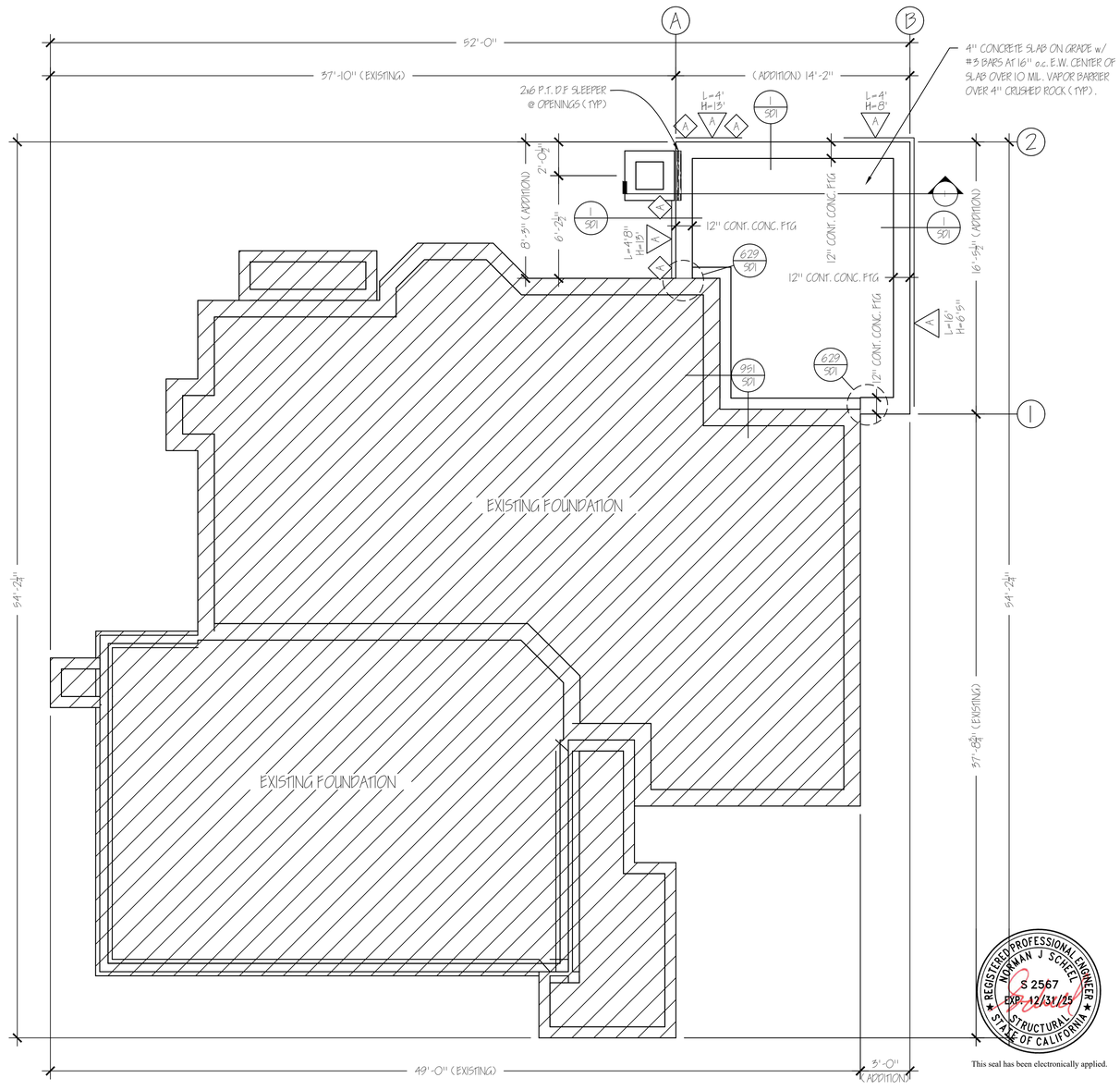
Notes

1) *Centerline of strap to be center of rim joist.*
2) *Maximum clear span to be 16".*
3) *All nails to be common wire unless noted otherwise.*
4) *Minimum post required to be installed in upper and lower wall framing.*
5) *Connect double holdown studs together with 24-16d sinker nails minimum.*

Job Number 24060
Project Manager Rob Coon
Date 3/4/2024

SLAB FOUNDATION NOTES

It is the intent that the property drain properly away from the foundation. A minimum of 6" of fall in the first 10' of the home (per CRC 401.3) All footings shall rest upon un-disturbed soil and all slabs upon thoroughly compacted soil.
Concrete: To attain 2500 P.S.I. @ 28 days. Install UFER ground per NEC 250.81 (install 20' of #4 rebar within 4' of panel) verify location with utility district. The minimum thickness of a concrete slab is 3-1/2", w/ 6x6, 10/10 woven wire mesh at mid-depth (or 1 lb of fiber mesh per yard, in the mix.)
Concrete Slabs which will have a floor covering require a minimum of 4" of gravel. Retrofit: contractor to apply (per manufacturer's recommendations) a spray on water borne penetrating concrete surface sealer with silicone solids (i.e. SikaGard 600, Armor 52000, or equal).
Anchor Bolts: 1/2" Diam. x 10" bolts, set 7" in concrete. Place a max. of 48" apart or as specified on plans. A minimum of two bolts are required in each piece of sill plate, as well as one bolt within 12" of each end.
NOTE: A minimum of 0.229"x 3"x 3" plate washers shall be provided between the foundation sill plate and the nut except where approved anchor straps are used.
Rebar: Unless otherwise noted - Foundation to be 2 - #4 continuous with 24" lap.
Mudsill: Unless otherwise noted - To be pressure-treated douglas fir.
Weather Exposed Posts located on concrete floors need to be mounted on metal pedestals 1" above the ground. These requirements are not necessary if pressure-treated or decay resistant wood is used.



FOUNDATION PLAN
SCALE: ¼" = 1'0"

= EXISTING FOUNDATION
= NEW FOUNDATION

REGISTERED PROFESSIONAL ENGINEER
NORMAN J SCHEEL
S 2567
EXP: 12/31/25
STRUCTURAL
STATE OF CALIFORNIA

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Revisions

FOUNDATION PLAN & NOTES

Proposed Addition for:
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FOLSOM, CA 95630

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Scale: ¼" = 1'0"
Date: May 15, 2024
Job No. 2217
Sheet # 8 of 11.

Beam Specifications

Beam #	Size	Grade and Type	Location
Beam #1	4x8	No. 2 D.F.L.	Window Header

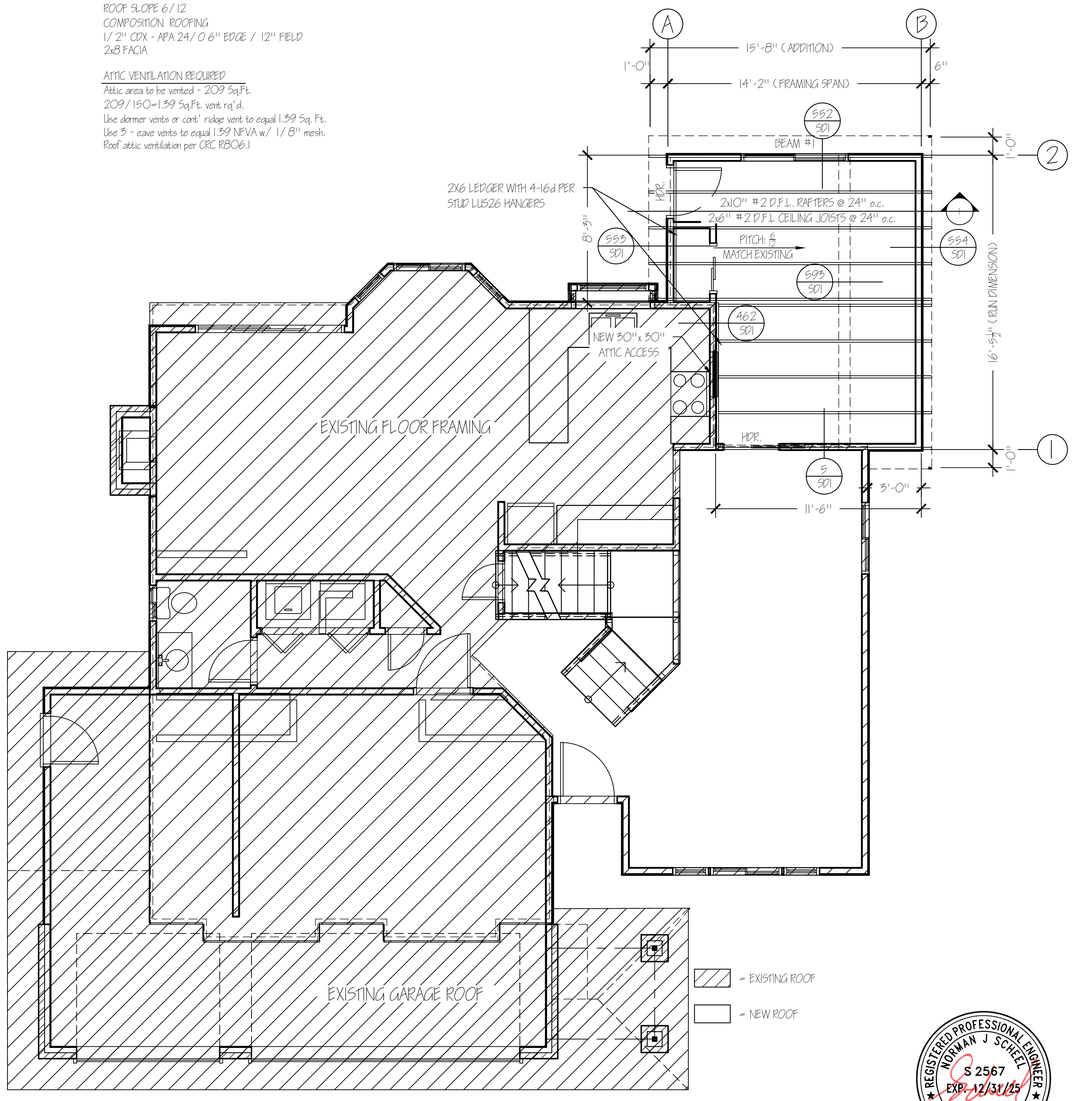
Job Number	24060
Project Manager	Rob Coon
Date	3/4/2024

ROOF AND CEILING FRAMING REQUIREMENTS:

RAFTERS to be framed directly opposite each other at the ridge board. The ridge board depth is not to be less than the cut of the rafter.
RAFTER TIES shall tie all opposing exterior walls by use of ceiling joists or 1x4 ties spaced not more than 48" apart and nailed to the rafter as close to the top plate as possible.
The maximum span of a 2x4 PURLIN is 4' and a 2x6 PURLIN is 6'. PURLINS are not to be smaller than the rafter. STRUTS are not to be less than 2x4 and installed at an angle not less than 45 degrees from the horizontal. The unbraced length of a strut is not to exceed 8'.
RAFTER, CEILING, and TRUSSES are to be laterally supported (blocked) to prevent rotation.
ROOF SHEATHING JOINTS are to occur over supports. Plywood is to be bonded by intermediate or exterior type glue. Sheathing exposed at the eaves is to be bonded with exterior glue. Typical plywood nailing, unless specified otherwise on the plans, is 6" on the edges and 12" in the field. A MIN. CLASS 'B' ROOFING assembly is required. Solid sheathing is required in areas of 30# or greater roof snow load, or when specified by the roofing manufacturer, or when required by engineered design.
A 22"x30" ATTIC ACCESS is required for all attics which are more than 30" in height. The attic access needs to be in an accessible location and is not to be located above a closet shelf or pole. 30" min. headroom is required above the access. Attics with equipment need a 30"x30" access. Exception: The access may be 22"x30" when trusses are used, provided the largest piece of equipment can be removed through the opening.
ATTIC VENTILATION needs to be at least 1/150 of the attic area (Per CRC R806.2).

ROOF SLOPE 6/12
COMPOSITION ROOFING
1/2" CDX - APA 24/0 6" EDGE / 12" FIELD
2x8 FACIA

ATTIC VENTILATION REQUIRED
Attic area to be vented - 209 Sq.Ft.
209/150=1.39 Sq.Ft. vent req'd.
Use dormer vents or cont.' ridge vent to equal 1.39 Sq. Ft.
Use 3 - eave vents to equal 1.39 NFVA w/ 1/8" mesh.
Roof attic ventilation per CRC R806.1



FIRST FLOOR ROOF PLAN
SCALE: ¼"=1'0"

REGISTERED PROFESSIONAL ENGINEER
NORMAN J SCHEEL
S 2567
EXP: 12/31/25
STRUCTURAL
STATE OF CALIFORNIA
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ROOF PLAN & NOTES

Proposed Addition for:
KRISTIAN FOSS
312 N. LEXINGTON
FOLSOM, CA 95630

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Scale:
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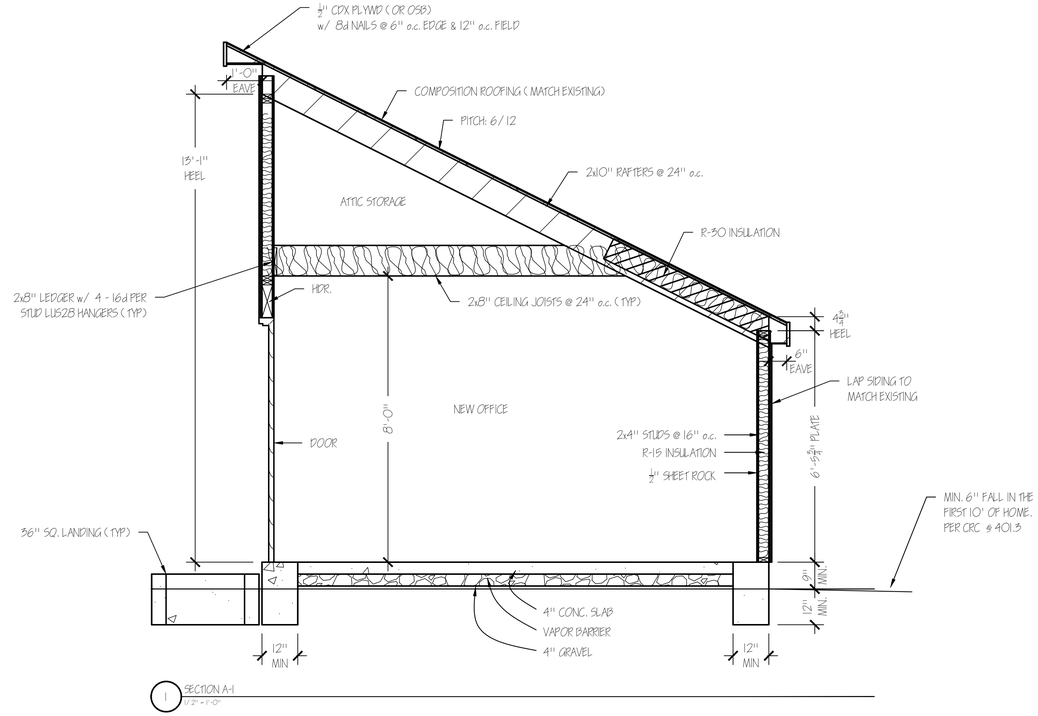
Date:
May 15, 2024

Job No.
2217

Sheet # 9
of 11.



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CROSS-SECTIONS & DETAILS

Proposed Addition for:
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312 N. LEXINGTON
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Scale:
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Date:
May 15, 2024

Job No.
2217

Sheet #10
of 11.

CalGreen RESIDENTIAL MANDATORY MEASURES

SECTION	MEASURES	REQUIREMENTS
101.3.1	State-regulated buildings	Expands the scope of CALGreen to include ALL low-rise, high-rise, and hotel/ motel buildings of Group R occupancy.
301.1.1	Additions and Alterations	Mandatory Measures in Chapter 4 apply to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume or size. The requirements shall apply only to and/ or within the specific area of the addition or alteration. The mandatory provisions of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application. NOTE: Repairs including, but not limited to, resurfacing, restriping, and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section.
4.106.2	Storm Water Drainage and Retention During Construction	Projects which disturb less than one acre of soil and are not part of a larger common plan of development shall manage storm water drainage during construction.
4.106.3	Grading and Paving	Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Exception: For Additions and alterations not altering the drainage path.
4.106.4	Electric Vehicle (EV) Charging for New Construction	New Construction shall comply with Sections 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electrical vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625. Exceptions: On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions: 1.1. Where there is no local utility power supply or the local utility is unable to supply adequate power. 1.2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to teh implementation of Section 4.106.4, may adversely impact the construction cost of the project. 2. Accessory Dwelling Units and Junior Accessory Dwelling Units without additional parking facilities. Note: for definitions of Accessory Dwelling Units and Junior Accessory Units, see CALGreen Chapter 2.
4.106.4.1		-Install a listed raceway to accommodate a dedicated 208/ 240-volt branch circuit for each dwelling unit. -Raceway shall not be less than trade size 1 (nominal 1-inch inside Ø). -Raceway shall originate at the main service or subpanel and terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. -Raceways are required to be continuous at enclosed, inaccessible, or concealed areas and spaces. -Service panel and/ or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.
4.106.4.1.1		Service panel or subpanel circuit directory shall identify the overcurrent protective device(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".
4.106.4.2		New multifamily dwellings, hotels, motels and new residential parking facilities. When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the requirements of Sections 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for future details.
4.106.4.2.1		Multifamily development projects with less than 20 dwelling units: hotels and motels with less than 20 sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section. 1. EV Capable. Ten percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

SECTION	MEASURES	REQUIREMENTS
		EXCEPTIONS: 1. When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces. 2. When EV Chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed. NOTES: Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.
4.201.1	Scope	-Energy efficiency requirements for low-rise residential are now in both residential and non-residential chapters of CALGreen. -Standards for residential buildings do not require compliance with levels of minimum energy efficiency beyond those required by the 2019 California Energy Code.
4.303.1	Water Conserving Plumbing Fixtures and Fittings	Plumbing fixtures and fittings shall comply with the following: 4.303.1.1 Water closets: ≤ 1.28 gal/ flush 4.303.1.2 Urinals (wall mounted): ≤ 0.125 gal/ flush Urinals (all others): ≤ 0.5 gal/ flush 4.303.1.3.1 Single showerheads: ≤ 1.8 gpm @ 80 psi 4.303.1.3.2 Multiple showerheads: combined flow rate of all showerheads and/ or other shower outlets controlled by a single valve shall not exceed 1.8 gpm @ 80 psi or only one shower outlet is to be in operation at a time. 4.303.1.4.1 Residential lavatory faucets: ≤ 1.2 gpm @60 psi ≥ 0.8 gpm @20 psi 4.303.1.4.2 Lavatory faucets in common and public use areas of residential buildings: ≤ 0.5 gpm @ 60 psi 4.303.1.4.3 Metering faucets: ≤ 0.2 gallons per cycle 4.303.1.4.4 Kitchen faucets: ≤ 1.8 gpm @ 60 psi temporary increase to 2.2 gpm allowed but shall default to 1.8 gpm
4.303.2	Standards for Plumbing Fixtures and Fittings	Plumbing Fixtures and Fittings shall be installed in accordance with the California Plumbing Code and shall meet the applicable standards. referenced in Table 1701.1 of the California Plumbing Code.
4.304.1	Outdoor potable water use in Landscape Areas	New residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.
4.406.1	Rodent proofing	Annular spaces around pipes, electric cables, conduits, or other openings in sole/ bottom plates at exterior walls shall be closed with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency to prevent passage of rodents.
4.408.1	Construction Waste Management	Recycle and/ or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4; OR meet a more stringent local construction and demolition waste management ordinance. Documentation is required per Section 4.408.5. Exceptions: 1 - Excavated soil and land-clearing debris. 2 - Alternate waste reduction methods developed by working with local enforcing agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite. 3 - The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.
4.408.2	Construction Waste Management Plan	Submit a construction waste management plan meeting Items 1 through 5 in Section 4.408.2. Plans shall be updated as necessary and shall be available for examination during construction.
4.408.3	Waste Management Company	Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that diverted construction and demolition waste materials meet the requirements in Section 4.408.1.
4.408.4	Waste Stream Reduction Alternative	Projects that generate a total combined weight of construction and demolition waste disposed of in landfills that is equal to or less than 3.4 pounds per square-foot of the building area shall meet the min. 65% construction waste reduction requirement in section 4.408.1. 4.408.4.1 High-rise residential compliance alternative: Generate a total combined weight of construction and demolition waste disposed of in landfills, that is equal to or less than 2 pounds per square-foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1..
4.410.1	Operation and Maintenance Manual	At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which covers 12 specific subject areas shall be placed in the building.
4.503.1	General	Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplace shall also comply with all applicable local ordinances.

SECTION	MEASURES	REQUIREMENTS
4.504.1	Covering of Duct Openings and Protection of Mechanical Equipment During Construction	At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered. Tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of water, dust and debris entering the system may be used.
4.504.2.1	Adhesives, Sealants and Caulks	Adhesives, sealants and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply: 1 - Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 4.504.1 or 4.504.2 as applicable. Such products shall also comply with Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in Subsection 2 below. 2 - Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507.
4.504.2.2	Paints and Coatings	Architectural paints and coatings shall comply with VOC limits in Table 1 of the Air Resources Board Architectural Suggested Control Measure, as shown in Table 4.504.3 unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3, shall be determined by classifying the coating as Flat, Nonflat, or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37, of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat, or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.
4.504.2.3	Aerosol Paints and Coatings	Aerosol paints and coatings shall meet the Product-Weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Section 94522(e)(1) and (f)(1) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.
4.504.2.4	Verification	Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following: 1 - Manufacturer's product specification. 2- Field verification of on-site product containers.
4.504.3	Carpet Systems	All carpet installed in the building interior shall meet the testing and product requirements of one of the following: 1 - Carpet and Rug Institute's Green Label Plus Program 2 - California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers", Version 1.1, February 2010 (also known as Specification 01350.) 3 - NSF/ ANSI 140 at the Gold level 4 - Scientific Certifications Systems Indoor Advantage Gold
4.504.3.1	Carpet Cushion	All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label Program.
4.504.3.2	Carpet Adhesive	All carpet adhesives shall meet the requirements of Table 4.504.1.
4.504.4	Resilient Flooring Systems	Where resilient flooring is installed, at least 80% of floor area receiving resilient flooring shall comply with one or more of the following: 1 - VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) High Performance Products Database. 2 - Products compliant with CHPS criteria certified under the Greenguard Children & Schools program. 3 - Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program. 4 - Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers", Version 1.1, February 2010 (also known as Specification 01350).
4.504.5	Composite Wood Products	Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in Air Resources Board's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et. seq.), by or before the dates specified in those sections shown in Table 4.504.5. Documentation is required per Section 4.504.5.1. Definition of Composite Wood Products: Composite wood products include hardwood plywood, particleboard, and medium density fiberboard. "Composite wood products" do not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists, or finger-jointed lumber, all as specified in CCR, Title 17, Section 93120.1(a).

SECTION	MEASURES	REQUIREMENTS
4.505.2	Concrete Slab Foundations	Concrete slab foundations or concrete slab-on-ground floors required to have a vapor retarder by the California Building Code, Chapter 19, or the California Residential Code, Chapter 5, respectively, shall also comply with this section.
4.505.2.1	Capillary Break	A capillary break shall be installed in compliance with at least one of the following: 1 - A 4-inch (101.6 mm) thick base of 1/ 2-inch (12.7 mm) or larger clean aggregate shall be provided with a vapor retarder in direct contact with concrete and a concrete mix design which will address bleeding, shrinkage and curling shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06. 2 - Other equivalent methods approved by the enforcing agency. 3 - A slab design specified by a licensed design professional.
4.505.3	Moisture Content of Building Materials	Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19% moisture content. Moisture content shall be verified in compliance with the following: 1 - Moisture content shall be determined with either a probe-type or a contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements in Section 101.8. 2 - Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade-stamped end of each piece to be verified. 3 - At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing. Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Manufacturers' drying recommendations shall be followed for wet-applied insulation products prior to enclosure.
4.506.1	Bathroom Exhaust Fans	Each bathroom shall be mechanically ventilated and shall comply with the following: 1 - Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. 2 - Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control. a) Humidity controls shall be capable of manual or automatic adjustment between a relative humidity range of less than 50% to a maximum of 80%. b) A humidity control may be a separate component to the exhaust fan and is not required to be integral or built-in. Note: For the purposes of this section a bathroom is a room which contains a bathtub, shower, or tub/ shower combination. Fans are required in each bathroom.
4.507.2	Heating and Air Conditioning System Design	Heating and air conditioning systems shall be sized, designed, and equipment selected using the following methods: 1 - The heat loss and heat gain is established according to ANSI/ ACCA 2 Manual J - 2016 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods. 2 - Duct systems are sized according to ANSI/ ACCA 1 Manual D - 2016 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods. 3 - Select heating and cooling equipment according to ANSI/ ACCA 3 Manual S - 2014 (Residential Equipment Selection) or other equivalent design software or methods. Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.
702.1	Installer Training	HVAC system installers shall be trained and certified in the proper installation of HVAC systems and equipment by a recognized training or certification program. Examples of acceptable HVAC training and certification programs include but are not limited to the following: 1 - State certified apprenticeship programs. 2 - Public utility training programs. 3 - Training programs sponsored by trade, labor or statewide energy consulting or verification organizations. 4 - Programs sponsored by manufacturing organizations. 5 - Other programs acceptable to the enforcing agency.
702.2	Special Inspection	Special inspectors must be qualified and able to demonstrate competence to the enforcing agency in the discipline in which they are inspecting.
703.1	Documentation	Documentation of compliance shall include, but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the local enforcing agency. Other specific documentation or special inspections necessary to verify compliance are specified in appropriate sections of CALGreen.

VERIFY ALL DIMENSIONS ON SITE
INFORMATION PROVIDED BY OWNER

Revisions

CAL-GREEN NOTES

Proposed Addition for:
KRISTIAN FOSS
312 N. LEXINGTON
FOLSOM, CA 95630

PERFECT PITCHES
Kristin McGregor
(916) 538-7444
info@perfectpitchesdrafting.com
PO Box 214905, Sacramento, CA 95821

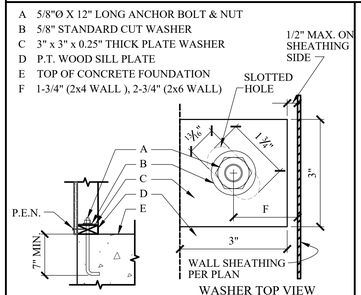
Scale:
N/ A

Date:
May 15, 2024

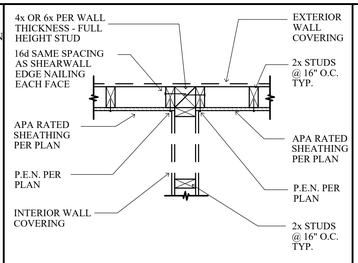
Job No.
2217

Sheet #11
of 11.

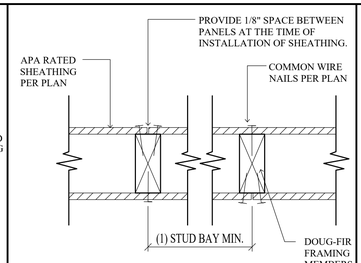
TYPICAL DETAILS



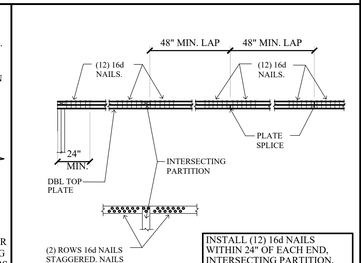
3" x 3" x 1/4" PLATE WASHER *PER 2022 CBC 2308.3.1*



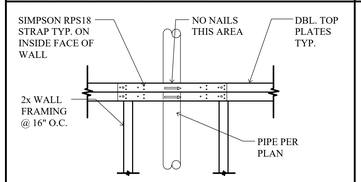
WALL CHANNEL AT SHEAR WALL



DOUBLE SIDED SHEAR WALL OFFSET

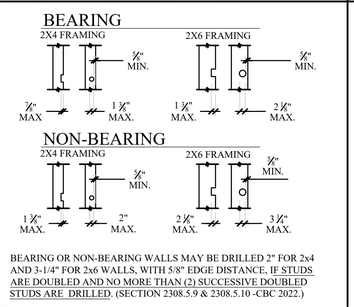


DBL. TOP PLATE SPLICE DETAIL



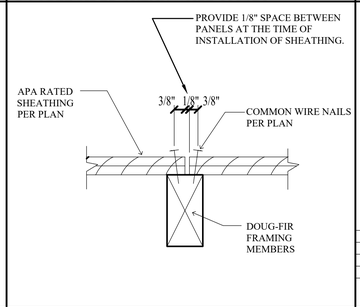
FRAMING	MAX. NOTCH	MAX DRILLED HOLE
2x4 BEARING	1-1/2" x 5-1/2"	1 1/2" Ø @ ℄
2x4 NONBEARING	2-1/2" x 5 1/2"	2 1/2" Ø @ ℄
2x6 BEARING	3-1/2" x 5 1/2"	31/2" Ø @ ℄
2x6 NONBEARING	4" x 5-1/2"	4" Ø @ ℄

NOTCH OR DRILLED TOP PLATES

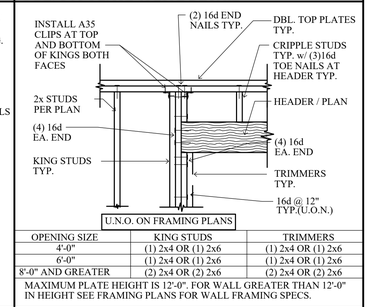


BEARING OR NON-BEARING WALLS MAY BE DRILLED 2" FOR 2x4 AND 3-1/4" FOR 2x6 WALLS, WITH 5/8" EDGE DISTANCE, IF STUDS ARE DOUBLED AND NO MORE THAN (2) SUCCESSIVE DOUBLED STUDS ARE DRILLED. (SECTION 2308.5.9 & 2308.5.10 -CBC 2022.)

NOTCH OR DRILLED STUDS



SHEAR WALL NAILING DETAIL



OPENING SIZE	KING STUDS	TRIMMERS
4'-0"	(1) 2x4 OR (1) 2x6	(1) 2x4 OR (1) 2x6
6'-0"	(1) 2x4 OR (1) 2x6	(1) 2x4 OR (1) 2x6
8'-0" AND GREATER	(2) 2x4 OR (2) 2x6	(2) 2x4 OR (2) 2x6

MAXIMUM PLATE HEIGHT IS 12'-0". FOR WALL GREATER THAN 12'-0" IN HEIGHT SEE FRAMING PLANS FOR WALL FRAMING SPECS.

TYPICAL HEADER FRAMING DETAIL

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION PROGRAM 2022 CBC CHAPTER 17

ENGINEERING AND LOADING DATA

Roof Material Weights (D)

Roofing	=	10.0 psf
Sheathing	=	1.5 psf
Framing	=	2.5 psf
Insulation	=	3.5 psf
Ceiling	=	3.5 psf
PV Panels	=	3.0 psf
Misc.	=	2.0 psf
Wall (Seismic only)	=	5.0 psf

Roof Loading (psf)

Roof Live Load (L_r)	=	20.0 psf
Roof Snow Load (S)	=	0.0 psf
Roof Dead Load (D)	=	16.0 psf
Ceiling Live Load (L)	=	10.0 psf
Ceiling Dead Load (D)	=	10.0 psf

Ceiling live load non-concurent with roof live loads

Snow Loading (psf)

Ground Snow Load	=	0 psf
Flat Roof Snow Load	=	0 psf
Sloped Roof Snow Load	=	0 psf
Exposure Factor	=	1.00
Thermal Factor	=	1.10
Importance Factor	=	1.00
Roof Slope Factor	=	1.00

Floor Material Weights (D)

Sheathing	=	2.5 psf
Framing	=	3.0 psf
Insulation	=	3.5 psf
Ceiling	=	3.5 psf
Decking Material	=	2.0 psf
Deck Soffit	=	0.0 psf
Misc.	=	2.5 psf
Wall (Seismic only)	=	10.0 psf

Floor Loading (psf)

Floor Live Load (L)	=	40.0 psf
Floor Dead Load (D)	=	10.0 psf
Floor Ceiling Dead Load (D	=	5.0 psf

Deck Loading (psf)

Deck Live Load (L)	=	60.0 psf
Deck Dead Load (D)	=	10.0 psf
Deck Soffit Dead Load (D)	=	0.0 psf

Seismic Dead Load Roofs

Roof Level Seismic (D)	=	31.0 psf

Seismic Dead Load Floors

Floor Level Seismic (D)	=	25.0 psf

Wind Loads ASCE 7-16

Basic Wind Speed	=	94 *mph (V ultimate)*
Exposure Category	=	C
Risk Category	=	II
λ	=	1.21
K_{zt}	=	1.00

$$P_S = \lambda K_{zt} P_{S30} \quad (28.5\text{-}1)$$

Soil information

2022 CBC Code Minimum

Report Number

Date

Footing Depth	=	12 in
Footing Width	=	12 in

Soil Bearing Pressure Ftg 1500 psf

Seismic Loads ASCE 7-16

Site Classification		= D	ASCE 7-16 Section 11.4.3
Risk Category		= II	ASCE 7-16 Table 1.5-1
Seismic Design Category		= D	ASCE 7-16 Section 11.6
Importance Factor		= 1	ASCE 7-16 Section 11.5
Response Modification Factor	R	= 6.500	ASCE 7-16 Table 12.2-1 Bearing wall System #15
System Overstrength Factor	Ω_o	= 3.000	ASCE 7-16 Table 12.2-1 Bearing wall System #15
Deflection Amplification Factor	C_d	= 4.000	ASCE 7-16 Table 12.2-1 Bearing wall System #15
Rho Factor (ρ)	ρ	= 1.300	ASCE 7-16 Section 12.3.4 Reliability Redundancy Factor
Spectral Response Short Period	S_s	= 0.410	ASCE 7-16 Chapter 22 ASCE 7 Hazard Report
Spectral Response Long Period	S_1	= 0.210	ASCE 7-16 Chapter 22 ASCE 7 Hazard Report
Approximate Fundamental Period ($T = T_a$)	T_a	= 0.152	ASCE 7-16 Section 11.4.6
Long Period	T_L	= 12.000	ASCE 7-16 Figure 22-14 to 22-17 ASCE 7 Hazard Report
$T_o = 0.20\ (S_{D1} / S_{DS})$	T_o	= 0.152	ASCE 7-16 Section 11.4.6
$T_s = (S_{D1} / S_{DS})$	T_s	= 0.759	ASCE 7-16 Section 11.4.6
Spectral Response Accelerations Short	S_{MS}	= 0.604	ASCE 7-16 Section 11.4.4 Site Coefficients MCE_R
Spectral Response Accelerations Long	S_{M1}	= 0.458	ASCE 7-16 Section 11.4.4 Site Coefficients MCE_R
Spectral Response Short Period	S_{DS}	= 0.402	ASCE 7-16 Section 11.4.5 Design Spectral Acceleration
Spectral Response Long Period	S_{D1}	= 0.305	ASCE 7-16 Section 11.4.5 Design Spectral Acceleration
Seismic Response Coefficient	C_s	= 0.062	ASCE 7-16 Eq. 12.8-2 Seismic Response Coefficient
Maximum Seismic Response Coefficient	$C_{s\,max}$	= 0.308	ASCE 7-16 Eq. 12.8-3 Maximum
Minimum Seismic Response Coefficient	$C_{s\,min}$	= 0.018	ASCE 7-16 Eq. 12.8-5 or 12.8-6 Minimum

V = 0.062 W

Site specific ground motion analysis is not required per ASCE 7-16 Section 11.4.8 Exception 2
Seismic Design Category specified from Table 11.4-2 only

STANDARD NOTES AND SPECIFICATIONS

2022 CBC INCLUDING SECTION C.B.C. 1603.1

GENERAL NOTES

1. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONSTRUCTION.
2. 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.
4. 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.
5. 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.
6. 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.
7. 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

1. UNLESS OTHERWISE NOTED STUDS IN EXTERIOR WALLS AND INTERIOR BEARING WALLS OF BUILDING 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.
2. UNLESS SUPPORTED LATERALLY BY ADEQUATE FRAMING, THE MAXIMUM ALLOWABLE HEIGHT FOR STUDS SHALL BE 10'-0" UNLESS JUSTIFIED WITH AN ANALYSIS.
3. STUDS SUPPORTING FLOORS AND CEILINGS OR RAFTERS SHALL BE SPACED NOT MORE THAN 16" O.C. UNLESS NOTED OTHERWISE.
4. 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.
5. 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

1. 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.
5. MOISTURE CONTENT OF LUMBER NOT TO EXCEED 19% AT TIME OF FABRICATION OR CONSTRUCTION.
6. 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.
7. NOTE THAT HORIZONTAL JOINTS DO NOT REQUIRE BLOCKING FOR BRACED WALL PANEL TYPES A & B PER TABLE 2308.6.3.(1) 2022 CBC.
8. 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

1. 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-318-14.
2. 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)
3. CEMENT SHALL CONFORM TO ASTM C150 TYPE I 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.
6. REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND INSTALLED ACCORDING TO "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION" BY WCRSI.
7. 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.
14. 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.
16. 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.
18. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS OR GROUNDS REQUIRED TO BE CAST IN CONCRETE, AND FOR LOCATIONS OF FLOOR FINISHES AND SLAB DEPRESSIONS.
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.

WOOD

1. ALL STRUCTURAL WOOD SHALL CONFORM WITH THE FOLLOWING SPECIFICATIONS.

DOUGLAS FIR LARCH	WEST COAST LUMBER INSPECTION BUREAU
GRADING RULES #17:	
REDWOOD	CALIFORNIA REDWOOD ASSOCIATION GRADING RULES.
GLUED LAMINATED BEAMS	GLUED LAMINATED FABRICATION SHALL BE PERFORMED IN AN APPROVED FABRICATOR'S 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
MICROLAM LVL BEAMS	NATIONAL EVALUATION REPORT NO. NER-126 BEAM SHALL BE 1 3 /4" STANDARD WIDTH.
PARALLAM PSL BEAMS	NATIONAL EVALUATION REPORT NO. NER-292.

2. MINIMUM GRADES SHALL BE:

HORIZONTAL FRAMING 4X FRAMING : #2 D.F.L. 6X AND LARGER #1 D.F.L.	2x FRAMING : #2 D.F.L.
WALL FRAMING 2x6 AND LARGER FRAMING: #2 D.F.L.	2x4 FRAMING : STANDARD OR BETTER D.F.L.
GLUED LAMINATED MEMBERS	COMBINATION 24F-V4 3000' RADIUS
STRUCTURAL PLYWOOD	APA RATED SHEATHING
MICROLLAM LVL BEAMS	DOUGLAS FIR 1.9E
PARALLAM PSL BEAMS	DOUGLAS FIR 2.0E

3. BEARING AND SHEAR WALLS HAVE DOUBLE TOP PLATES, LAPPED AT WALL AND PARTITION INTERSECTIONS 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.
5. HOLES FOR BOLTS IN WOOD SHALL BE BORED OF THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16".
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	M.I. WASHER	STEEL WASHER
1/2" Ø	2-1/2" Ø x 1/4"	2" x 2" x 1/4"
5/8" Ø	3-3/4" Ø x 5/16"	2-1/2" X 2-1/2" X 1/4"
3/4" Ø	3" Ø x 7/8"	3" x 3" x 5/16"
7/8" Ø	3-1/2" Ø x 7/16"	3-1/2" x 3-1/2" x 3/8"
1" Ø	4" Ø x 1/2"	3-3/4" x 3-3/4" x 3/8"

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.
10. ALL JOIST HANGERS, STRAPS, HOLDOWNS, CLIPS, ANCHORS ... TO BE SIMPSON STRONG-TIE OR EQUAL.
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.

WOOD cont'd

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

1. TRUSS MANUFACTURER TO PROVIDE SHOP DRAWINGS TO THE PROJECT ENGINEER AND BUILDING DEPARTMENT FOR APPROVAL PRIOR TO FABRICATION OF THE TRUSSES.
2. TRUSSES SHALL NOT BE MODIFIED IN THE FIELD WITHOUT A ENGINEERED TRUSS REPAIR DRAWING PROVIDED BY EITHER THE TRUSS MANUFACTURER'S ENGINEER OR ENGINEER OF RECORD.
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:

   2x4 STD. D.F.L. UP TO 78" LONG.
   2x4 NO.2 D.F.L. 78" TO 96" LONG.
   2x4 NO.1 D.F.L. 96" TO 124" LONG.
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 6'-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.

2022 CBC AutoCAD

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ADDITION
312 N LEXINGTON DRIVE
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KRISTIAN & MEGAN FOSS
312 N LEXINGTON DRIVE
FOLSOM, CA 95630

PROJ. MGR.: RC
ENGINEER: NS
DRAWN BY: LT
CHECKED BY: RC

ISSUE DATE: 3/4/2024

REVISIONS:
1
2
3
4
5
6

REGISTERED PROFESSIONAL ENGINEER NORMAN J SCHEEL No. 2567 Exp. 12-31-25 STRUCTURAL STATE OF CALIFORNIA

4/03/2024
SHEET

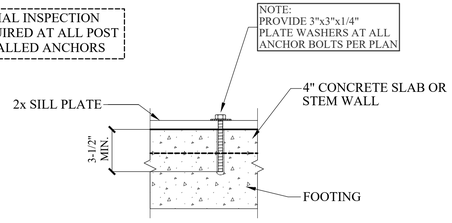
SC-1
COVER SHEET

JOB NO. 24060

TITEN HD AS A DIRECT 1 TO 1 REPLACEMENT FOR SILL BOLTS

SPECIAL INSPECTION REQUIRED AT ALL POST INSTALLED ANCHORS

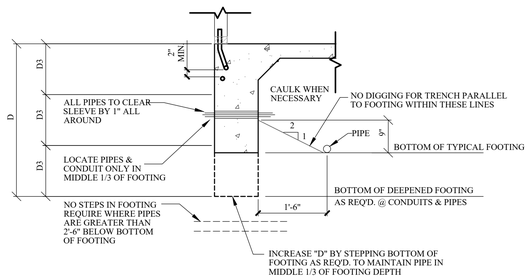
NOTE: PROVIDE 3"x3"x1/4" PLATE WASHERS AT ALL ANCHOR BOLTS PER PLAN



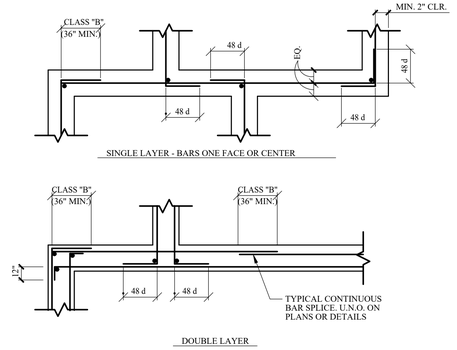
TITEN HD	MODEL	SILL PLATE	MIN. TO EDGE OF CONC.	MIN. TO END OF CONC.
5/8"x6"	THD6200H	2x P.T.D.F.	1-3/4"	10"
5/8"x6 1/2"	THD62612H	3x P.T.D.F.	1-3/4"	10"

SEISMIC D-E-F

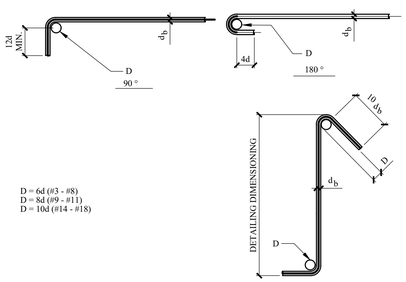
ANCHOR BOLTS TITEN HD



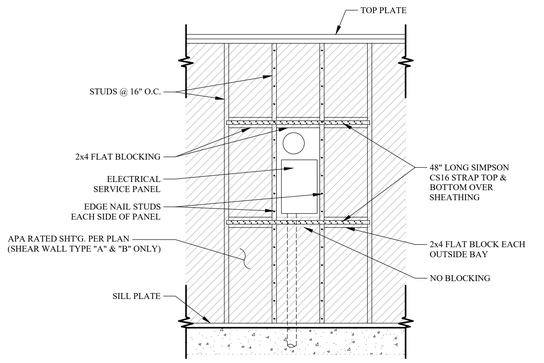
PIPES AND CONDUITS AT FOUNDATION



REINFORCING BAR SPLICES

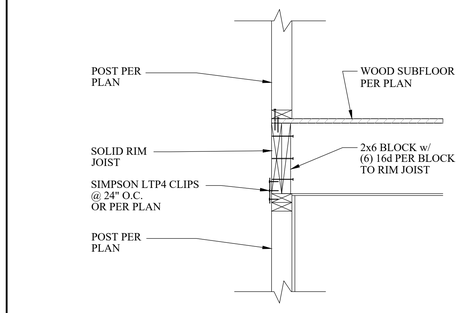


STIRRUP AND TIE HOOKS



SCALE 2X ON DETAIL SHEET

SERVICE PANEL AT SHEAR WALL



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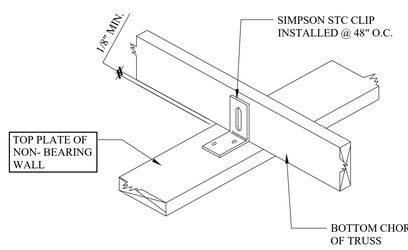
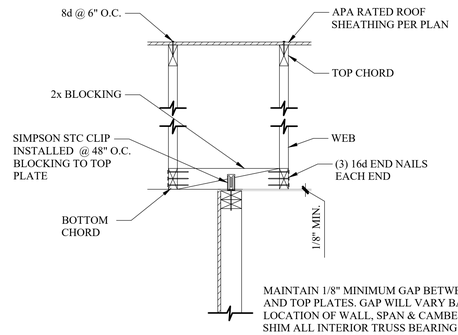
SQUASH BLOCK AT POST ABOVE

MAINTAIN 1/8" MINIMUM GAP BETWEEN TRUSS AND TOP PLATES. GAP WILL VARY BASED ON LOCATION OF WALL, SPAN & CAMBER, OF TRUSS. SHIM ALL INTERIOR TRUSS BEARING LOCATION TIGHT WITH COMPOSITE SHIM MATERIAL, WOOD SHIMS NOT ALLOWED.



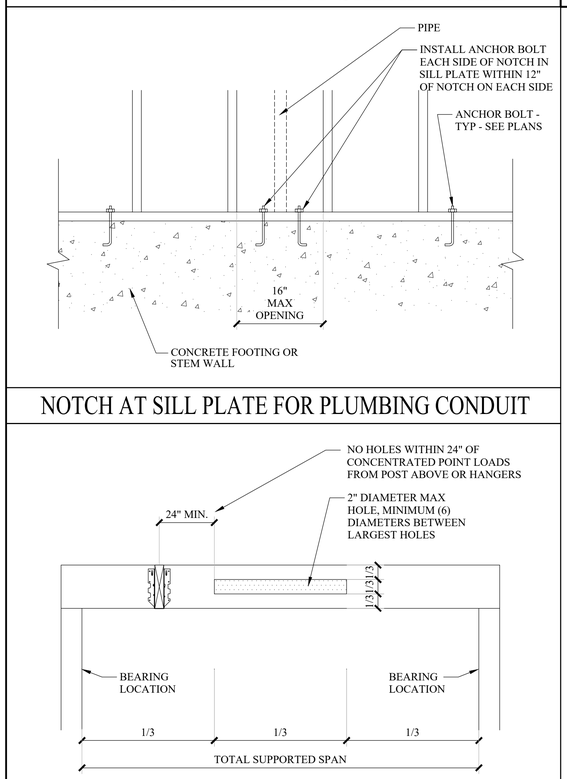
TYPICAL AT ALL PERPENDICULAR INTERIOR WALLS

SIMPSON STC CLIP



MAINTAIN 1/8" MINIMUM GAP BETWEEN TRUSS AND TOP PLATES. GAP WILL VARY BASED ON LOCATION OF WALL, SPAN & CAMBER, OF TRUSS. SHIM ALL INTERIOR TRUSS BEARING LOCATION TIGHT WITH COMPOSITE SHIM MATERIAL, WOOD SHIMS NOT ALLOWED.

NON BEARING WALL PARALLEL TO TRUSSES



NOTCH AT SILL PLATE FOR PLUMBING CONDUIT

DRILLED HOLES IN BEAM OR JOIST

2022 CBC TABLE 2304.10.2 FASTENING SCHEDULE

NOTE: THIS FASTENING SCHEDULE TO BE USED UNLESS NOTED OTHERWISE ON PLAN AND ENGINEERING SHEET(S).

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
ROOF		
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	(3) 8d COMMON (2-1/2" x 0.131"); OR (3) 16d BOX (3" x 0.128"); OR (3) 3" x 0.131" NAILS ; OR (3) 3" 14 GAGE STAPLES, 7/16" CROWN	EACH END, TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSSES NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	(2) 8d COMMON (2-1/2" x 0.131") (2) 3" x 0.131" NAILS ; (2) 3" 14 GAGE STAPLES	EACH END, TOENAIL
	(2) 16d COMMON (3-1/2" x 0.162") (3) 3" x 0.131" NAILS ; (2) 3" 14 GAGE STAPLES	END NAIL
FLAT BLOCKING TO TRUSS AND WEB FILLER	16d COMMON (3-1/2" x 0.162") @ 6" O.C. 3" x 0.131" NAILS @ 6" O.C. 3" 14 GAGE STAPLES @ 6" O.C.	FACE NAIL
2. CEILING JOISTS TO TOP PLATES	(3) 8d COMMON (2-1/2" x 0.131"); OR (3) 16d BOX (3" x 0.128"); OR (3) 3" x 0.131" NAILS ; OR (3) 3" 14 GAGE STAPLES, 7/16" CROWN	EACH JOIST, TOENAIL
3. CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (NO THRUST) SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	(3) 16d COMMON (3-1/2" x 0.162"); OR (4) 16d BOX (3" x 0.128"); OR (4) 3" x 0.131" NAILS ; OR (4) 3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
4. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	PER TABLE 2308.7.3.1	FACE NAIL
5. COLLAR TIE TO RAFTER	(3) 10d COMMON (3" x 0.148"); OR (4) 16d BOX (3" x 0.128"); OR (4) 3" x 0.131" NAILS ; OR (4) 3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
6. RAFTER OR ROOF TRUSS TO TOP PLATE (SEE SECTION 2308.7.3, TABLE 2308.7.3)	(3) 16d COMMON (3" x 0.148"); OR (3) 16d BOX (3-1/2" x 0.135"); OR (4) 16d BOX (3" x 0.128"); OR (4) 3" x 0.131" NAILS ; OR (4) 3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
7. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2-INCH RIDGE BEAM	(2) 16d COMMON (3-1/2" x 0.162"); OR (3) 10D BOX (3" x 0.128"); OR (3) 3" X 0.131" NAILS ; OR (3) 3" 14 GAGE STAPLES, 7/16" CROWN ; OR	END NAIL
	(3) 16D COMMON (3-1/2" x 0.148"); OR (4) 16d BOX (3-1/2" x 0.135"); OR (4) 16d BOX (3" x 0.128"); OR (4) 3" x 0.131" NAILS ; OR (4) 3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
WALL		
8. STUD TO STUD (NOT BRACED WALL PANELS)	16d COMMON (3-1/2" x 0.162");	24" O.C. FACE NAIL
	10d COMMON (2-1/2" x 0.128"); OR 3" x 0.131" NAILS ; OR (3) 3" 14 GAGE STAPLES, 7/16" CROWN	16" O.C. FACE NAIL
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16d COMMON (3-1/2" x 0.162"); OR	16" O.C. FACE NAIL
	16d BOX (3-1/2" x 0.135"); OR	12" O.C. FACE NAIL
	3" x 0.131" NAILS ; OR (3) 3" 14 GAGE STAPLES, 7/16" CROWN	12" O.C. FACE NAIL
10. BUILT-UP HEADER (2" TO 2" HEADER)	16d COMMON (3-1/2" x 0.162"); OR	16" O.C. EACH EDGE, FACE NAIL
	16d BOX (3-1/2" x 0.135")	12" O.C. EACH EDGE, FACE NAIL
11. CONTINUOUS HEADER TO STUD	(4) 8d COMMON (2-1/2" x 0.131"); OR (4) 16d BOX (3" x 0.128")	TOENAIL
12. TOP PLATE TO TOP PLATE	16d COMMON (3-1/2" x 0.162"); OR	16" O.C. FACE NAIL
	10d BOX (2-1/2" x 0.128"); OR 3" x 0.131" NAILS ; OR 3" 14 GAGE STAPLES, 7/16" CROWN	12" O.C. FACE NAIL
13. TOP PLATE TO TOP PLATE, AT END JOINTS	(8) 16d COMMON (3-1/2" x 0.162"); OR (12) 10d BOX (3" x 0.128"); OR (12) 3" x 0.131" NAILS ; OR (12) 3" 14 GAGE STAPLES, 7/16" CROWN	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
14. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d COMMON (3-1/2" x 0.162"); OR	16" O.C. FACE NAIL
	10d BOX (2-1/2" x 0.128"); OR 3" x 0.131" NAILS ; OR 3" 14 GAGE STAPLES, 7/16" CROWN	12" O.C. FACE NAIL
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS	(2) 16d COMMON (3-1/2" x 0.162"); OR (3) 16d BOX (3" x 0.135"); OR (4) 3" x 0.131" NAILS ; OR (4) 3" 14 GAGE STAPLES, 7/16" CROWN	16" O.C. FACE NAIL
16. STUD TO TOP OR BOTTOM PLATE	(4) 8d COMMON (2-1/2" x 0.131"); OR (4) 16d BOX (3" x 0.128"); OR (4) 3" x 0.131" NAILS ; OR (4) 3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
	(2) 16d COMMON (3-1/2" x 0.162"); OR (3) 16d BOX (3" x 0.128"); OR (3) 3" x 0.131" NAILS ; OR (3) 3" 14 GAGE STAPLES, 7/16" CROWN	END NAIL
17. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	(2) 16d COMMON (3-1/2" x 0.162"); OR (3) 16d BOX (3" x 0.128"); OR (3) 3" x 0.131" NAILS ; OR (3) 3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL

2022 CBC TABLE 2304.10.2 FASTENING SCHEDULE

NOTE: THIS FASTENING SCHEDULE TO BE USED UNLESS NOTED OTHERWISE ON PLAN AND ENGINEERING SHEET(S).

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
WALL		
18. 1" BRACE TO EACH STUD AND PLATE	(2) 8d COMMON (2-1/2" x 0.131"); OR (2) 10d BOX (3" x 0.128"); OR (2) 3" x 0.131" NAILS ; OR (2) 3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
19. 1" x 6" SHEATHING TO EACH BEARING	(3) 8d COMMON (2-1/2" x 0.131"); OR (2) 10d BOX (3" x 0.128")	FACE NAIL
20. 1" x 8" AND WIDER SHEATHING TO EACH BEARING	(3) 8d COMMON (2-1/2" x 0.131"); OR (3) 10d BOX (3" x 0.128")	FACE NAIL
FLOOR		
21. JOIST TO SILL, TOP PLATE, OR GIRDER	(3) 8d COMMON (2-1/2" x 0.131"); OR FLOOR (3) 10d BOX (3" x 0.128"); OR, (3) 3" x 0.131" NAILS ; OR (3) 3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
22. RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8d COMMON (2-1/2" x 0.131"); OR 10d BOX (3" x 0.128"); OR 3" x 0.131" NAILS ; OR 3" 14 GAGE STAPLES, 7/16" CROWN	6" O.C., TOENAIL
23. 1" x 6" SUBFLOOR OR LESS TO EACH JOIST	(3) 8d COMMON (2-1/2" x 0.131"); OR (3) 10d BOX (3" x 0.128")	FACE NAIL
24. 2" SUBFLOOR TO JOIST OR GIRDER	(2) 16d COMMON (3-1/2" x 0.162")	FACE NAIL
25. 2" PLANKS (PLANK & BEAM - FLOOR & ROOF)	(2) 16d COMMON (3-1/2" x 0.162")	EACH BEARING, FACE NAIL
26. BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	20d COMMON (4" x 0.192")	32" O.C. FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	10d BOX (3-1/2" x 0.128"); OR 3" x 0.131" NAILS ; OR 3" 14 GAGE STAPLES, 7/16" CROWN	24" O.C. FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	AND (2) 20d COMMON (4" x 0.192"); OR FLOOR (3) 10d BOX (3" x 0.128"); OR (3) 3" x 0.131" NAILS ; OR (3) 3" 14 GAGE STAPLES, 7/16" CROWN	ENDS AND AT EACH SPLICE, FACE NAIL
27. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	(3) 16d COMMON (3-1/2" x 0.162"); OR (4) 10d BOX (3" x 0.128"); OR (4) 3" x 0.131" NAILS ; OR (4) 3" 14 GAGE STAPLES, 7/16" CROWN	EACH JOIST OR RAFTER, FACE NAIL
28. JOIST TO BAND JOIST OR RIM JOIST	(3) 16d COMMON (3-1/2" x 0.162"); OR (4) 10d BOX (3" x 0.128"); OR (4) 3" x 0.131" NAILS ; OR (4) 3" 14 GAGE STAPLES, 7/16" CROWN	END NAIL
29. BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	(2) 8d COMMON (2-1/2" x 0.131"); OR (2) 10d BOX (3" x 0.128"); OR (2) 3" x 0.131" NAILS ; OR (2) 3" 14 GAGE STAPLES, 7/16" CROWN	EACH END, TOENAIL

WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING[2]

			EDGES (INCHES)	INTERMEDIATE SUPPORTS (INCHES)
30. 3/8" - 1/2"		6d COMMON OR DEFORMED (2" x 0.113"); OR 2-3/8" x 0.113" NAIL (SUBFLOOR AND WALL)	6	12
		8d COMMON OR DEFORMED (2-1/2" x 0.131" x 0.281" HEAD) (ROOF) OR RSRS-01 (2-3/8" x 0.113") NAIL (ROOF) [4]	6 [e]	6 [e]
		2-3/8" x 0.113" x 0.266" HEAD NAIL (ROOF)	3 [f]	3 [f]
		1-3/4" 16 GAGE STAPLE, 7/16" CROWN (SUBFLOOR AND WALL)	4	8
		1-3/4" 16 GAGE STAPLE, 7/16" CROWN (ROOF)	3 [f]	3 [f]
31. 19/32" - 3/4"		6d COMMON (2-1/2" x 0.131"; OR DEFORMED (2" x 0.113") (SUBFLOOR & WALL)	6	12
		8d COMMON OR DEFORMED (2-1/2" x 0.131" X 0.281" HEAD) (ROOF) OR RSRS-01 (2-3/8" x 0.113") NAIL (ROOF) [4]	6 [e]	6 [e]
		2-3/8" x 0.113" x 0.266" HEAD NAIL ; OR 2" 16 GAGE STAPLE, 7/16" CROWN	4	8
32. 7/8" - 1-1/4"		10d COMMON (3" x 0.148") ; OR 8d DEFORMED (2-1/2" x 0.131")	6	12

OTHER EXTERIOR WALL SHEATHING

33. 1/2" FIBERBOARD SHEATHING[3]	1-1/2" GALVANIZED ROOFING NAIL (7/16" HEAD DIAMETER) OR 1-1/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN	3	6
34. 25/32" FIBERBOARD SHEATHING[3]	1-3/4" GALVANIZED ROOFING NAIL (7/16" HEAD DIAMETER) OR 1-1/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN	3	6

2022 CBC TABLE 2304.10.2 FASTENING SCHEDULE

NOTE: THIS FASTENING SCHEDULE TO BE USED UNLESS NOTED OTHERWISE ON PLAN AND ENGINEERING SHEET(S).

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING		EDGES (INCHES) / INTERMEDIATE SUPPORTS (INCHES)
35. 3/4" AND LESS	6d COMMON (2-1/2" x 0.113"); OR 6d DEFORMED (2" x 0.113")	6 / 12
36. 7/8" - 1"	8d COMMON (2-1/2" x 0.131"); OR 8d DEFORMED (2-1/2" x 0.131")	6 / 12
37. 1-1/8" - 1-1/4"	10d COMMON (3" x 0.148"); OR 8d DEFORMED (2-1/2" x 0.131")	6 / 12
PANEL SIDING TO FRAMING		
38. 1/2" OR LESS	8d CORROSION-RESISTANT SIDING (1-7/8" x 0.106"); OR 8d CORROSION-RESISTANT CASING (2" x 0.099")	6 / 12
39. 5/8"	8d CORROSION-RESISTANT SIDING (2-1/8" x 0.128"); OR 8d CORROSION-RESISTANT CASING (2-1/2" x 0.113")	6 / 12
INTERIOR PANELING		
40. 1/4"	6d CASING (1-1/2" x 0.080"); OR 6d FINISH (1-1/2" x 0.072")	6 / 12
41. 3/8"	6d CASING (1-1/2" x 0.099"); OR 6d FINISH (PANEL SUPPORTS AT 24 INCHES)	6 / 12

FOR SI: 1 INCH = 25.4 mm

a. NAILS SPACED AT 6 INCHES AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.

b. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NON-STRUCTURAL APPLICATIONS. PANEL SUPPORTS AT 16 INCHES (406 MM) IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED.

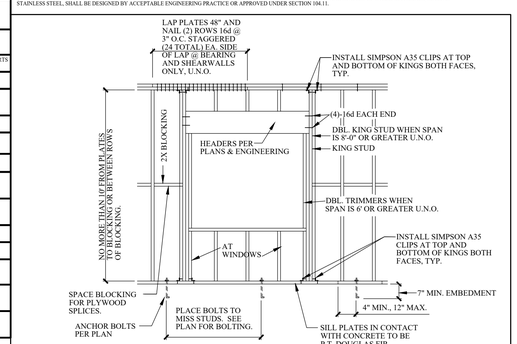
c. WHERE THE RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, THE NUMBER OF TOENAILS IN THE AFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL.

d. RSRS-01 IS ROOF SHEATHING RING SHANK NAIL MEETING THE SPECIFICATIONS IN ASTM F1667.

e. TABULATED FASTENERS REQUIREMENTS APPLY WHERE THE ULTIMATE DESIGN WIND SPEED IS LESS THAN 140 MPH. FOR WOOD STRUCTURAL PANEL ROOF SHEATHING ATTACHED TO GABLE END ROOF FRAMING AND TO INTERMEDIATE SUPPORTS WITHIN 48 INCHES OF ROOF EDGES AND RIDGES, NAILS SHALL BE SPACED AT 4 INCHES ON CENTER WHERE THE ULTIMATE DESIGN WIND SPEED IS GREATER THAN 130 MPH IN EXPOSURE B OR GREATER THAN 110 MPH IN EXPOSURE C. SPACING EXCEEDING 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS SHALL BE PERMITTED WHERE THE FASTENING IS DESIGNED PER THE AWC NDS.

f. FASTENING IS ONLY PERMITTED WHERE THE ULTIMATE DESIGN WIND SPEED IS LESS THAN OR EQUAL TO 110 MPH.

g. NAILS AND STAPLER ARE CARBON STEEL MEETING THE SPECIFICATIONS OF ASTM F1667. CONNECTIONS USING NAILS AND STAPLES OF OTHER MATERIALS, SUCH AS STAINLESS STEEL, SHALL BE DESIGNED BY ACCEPTABLE ENGINEERING PRACTICE OR APPROVED UNDER SECTION 104.11.



TYPICAL WALL FRAMING

Norman Scheel Structural Engineer

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1989 - 2024 35 YEARS OF EXCELLENCE Structural Engineer

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FOLSOM, CA 95630

PROJ. MGR.: RC
ENGINEER: NS
DRAWN BY: LT
CHECKED BY: RC

ISSUE DATE: 3/4/2024

REVISIONS:
1
2
3
4
5
6

REGISTERED PROFESSIONAL ENGINEER NORMAN J SCHEEL No. 2567 Exp. 12-31-25 STRUCTURAL STATE OF CALIFORNIA

4/03/2024

SHEET

SC-1a

FASTENING SCHEDULE

JOB NO. 24060

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

Pad Footing Specifications

Footing #	Size	Thickness	Depth	Rebar	Maximum Load (#)

Wall Framing Specifications

1ST FLOOR WALL FRAMING TO BE 2X4 NO. 2 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.

Header Specifications 1st Floor

Size	Grade and Type	Length	Trimmer	King Stud
4x8	No. 2 D.F.L.	3'-0"	2x	2x
4x8	No. 2 D.F.L.	4'-0"	2x	2x
4x8	No. 2 D.F.L.	5'-0"	2-2x	2x
4x8	No. 2 D.F.L.	6'-0"	2-2x	2-2x

Beam Specifications

Beam #	Size	Grade and Type	Location
Beam #1	4x8	No. 2 D.F.L.	Window Header

FOUNDATION SPECIFICATIONS

FOOTING DEPTH	=	12 "
FOOTING WIDTH	=	12 "
STEM WALL TYPICAL	=	8 "
SOIL BEARING PRESSURE	=	1500 PSF

FOUNDATION DESIGNED PER 2022 CBC MINIMUMS OR SOILS REPORT PROVIDED BY:

2022 CBC Code Minimum

REPORT #

DATE

2500 PSI DESIGN MIX MINIMUM. USE (1) #4 GRADE 40 BARS TOP AND BOTTOM IN ALL CONTINUOUS FOOTINGS AND AS NOTED AT SPECIAL LOADS 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.

OBSERVATION 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) 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. EACH 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.

DENOTES STRUCTURAL DETAILS ON SHEET(S) 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.

FLOOR JOIST SPECIFICATIONS

NAIL FLOOR SHEATHING AT ALL DRAG STRUT LINES WITH 8d @ 6" O.C. TYP. U.N.O.

FOR NAILING NOT SHOWN, SEE NAILING SCHEDULE ON SHEET SC-1a OR TABLE 2304.10.2 2022 CBC.

FLOOR JOIST MANUFACTURER TO SUPPLY LICENSED, ENGINEERED, SEALED DRAWINGS TO THE PROJECT ENGINEER PRIOR TO JOIST PLACEMENT.

DO NOT CUT OR MODIFY ANY FLOOR JOIST WITHOUT WRITTEN CONSENT OF THE TRUSS MANUFACTURER AND PROJECT ENGINEER.

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

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.

INSTALL 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 WITH REF. # MATCHING SIMPSON SPECIFICATIONS.

DENOTES STRUCTURAL DETAILS ON SHEET(S) 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.

TRUSS ROOF SPECIFICATIONS

ROOF LIVE LOAD	(L_r)	=	20 PSF
ROOF SNOW LOAD	(S)	=	0 PSF
ROOF DEAD LOAD	(D)	=	16 PSF
CEILING LIVE LOAD	(L)	=	10 PSF
CEILING DEAD LOAD	(D)	=	10 PSF

CEILING LIVE LOAD NON-CONCURRENT WITH ROOF LIVE LOAD.

DURATION OF LOAD = 1.25

ALL ROOF TRUSSES TO BE 0 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 PERPENDICULAR TO FRAMING UNLESS NOTED OTHERWISE ON PLANS.

FOR NAILING NOT SHOWN, SEE NAILING SCHEDULE SHEET SC-1a OR TABLE 2304.10.2 2022 CBC.

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

TRUSS MANUFACTURER TO SUPPLY TRUSS DRAWINGS AND LAYOUTS TO THE PROJECT ENGINEER AND BUILDING DEPARTMENT PRIOR TO CONSTRUCTION AS PART OF DEFERRED SUBMITTAL PER SECTION 107.3.4.1, 2022 CBC

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

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.

INSTALL 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) 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.

CONVENTIONAL ROOF / CEILING SPECIFICATIONS

FOR NAILING NOT SHOWN, SEE NAILING SCHEDULE SHEET SC-1a OR TABLE 2304.10.2, 2022 CBC.

NAIL ROOF SHEATHING AT ALL DRAG RAFTERS WITH 8d @ 6" O.C. TYP. U.N.O.

AT CEILING JOIST NOT PARALLEL WITH RAFTERS PROVIDE WALL TIES @ 48" O.C. (U.N.O.)

PROVIDE STRONGBACK AT CEILING JOIST MIDSPAN. SEE DETAIL SHEETS.

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

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.

INSTALL 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) 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.

SHEAR WALL SCHEDULE *2022 CBC*

TYPE [6]	SHEATHING [7] APA RATED	NAILING [4]	SILL PLATE [1] AND A.B. [2]	SOLE PLATE [2] CONNECT TO RIM	SEISMIC CAPACITY	WIND CAPACITY
A	3/8" SHEATHING ONE FACE	8d @ 6" O.C. EDGE AND 12" O.C. FIELD	2x P.T.D.F. SILL PLATE, 5/8"Ø x 12" @ 48" O.C.	16d @ 8" O.C. OR LTP4 @ 24" O.C.	260 # P.L.F.	365 # P.L.F.
B	3/8" SHEATHING ONE FACE [4A]	8d @ 4" O.C. EDGE AND 12" O.C. FIELD	2x P.T.D.F. SILL PLATE, 5/8"Ø x 12" @ 32" O.C.	16d @ 6" O.C. OR LTP4 @ 16" O.C.	380 # P.L.F.	532 # P.L.F.
C	3/8" SHEATHING ONE FACE [4]	8d @ 3" O.C. EDGE AND 12" O.C. FIELD	2x P.T.D.F. SILL PLATE, 5/8"Ø x 12" @ 32" O.C.	16d @ 4" O.C. OR LTP4 @ 14" O.C.	490 # P.L.F.	685 # P.L.F.
D	3/8" SHEATHING ONE FACE [4B]	8d @ 2" O.C. EDGE AND 12" O.C. FIELD	3x P.T.D.F. SILL PLATE, 5/8"Ø x 12" @ 16" O.C.	16d @ 4" O.C. (2) ROWS STAG'D. OR LTP4 @ 10" O.C.	640 # P.L.F.	895 # P.L.F.
E	15/32" [4B] SHEATHING ONE FACE	10d @ 2" O.C. EDGE AND 12" O.C. FIELD	3x P.T.D.F. SILL PLATE, 5/8"Ø x 12" @ 16" O.C.	16d @ 2 1/2" O.C. (2) ROWS STAG'D. OR LTP4 @ 8" O.C.	770 # P.L.F.	1,077 # P.L.F.
F	19/32" [4B] SHEATHING ONE FACE	10d @ 2" O.C. EDGE AND 12" O.C. FIELD	3x P.T.D.F. SILL PLATE, 5/8"Ø x 12" @ 16" O.C.	16d @ 4" O.C. (2) ROWS STAG'D. OR LTP4 @ 6" O.C.	870 # P.L.F.	1,217 # P.L.F.
G	3/8" SHEATHING BOTH FACES [4B, 5]	8d @ 3" O.C. EDGE AND 12" O.C. FIELD	3x P.T.D.F. SILL PLATE, 5/8"Ø x 12" @ 16" O.C.	16d @ 4" O.C. (2) ROWS STAG'D. OR LTP4 @ 6" O.C.	980 # P.L.F.	1,370 # P.L.F.
H	3/8" SHEATHING BOTH FACES [4B, 5]	8d @ 2" O.C. EDGE AND 12" O.C. FIELD	3x P.T.D.F. SILL PLATE, 5/8"Ø x 12" @ 16" O.C.	16d @ 4" O.C. (2) ROWS STAG'D. OR LTP4 @ 6" O.C.	1,280 # P.L.F.	1,790 # P.L.F.
I	15/32" [4B, 5] SHEATHING BOTH FACES	10d @ 2" O.C. EDGE AND 12" O.C. FIELD	3x P.T.D.F. SILL PLATE, 5/8"Ø x 12" @ 16" O.C.	16d @ 4" O.C. (2) ROWS STAG'D. OR LTP4 @ 6" O.C.	1,540 # P.L.F.	2,154 # P.L.F.
J	19/32" [4B, 5] SHEATHING BOTH FACES	10d @ 2" O.C. EDGE AND 12" O.C. FIELD	3x P.T.D.F. SILL PLATE, 5/8"Ø x 12" @ 16" O.C.	16d @ 4" O.C. (2) ROWS STAG'D. OR LTP4 @ 6" O.C.	1,740 # P.L.F.	2,434 # P.L.F.

NOTES

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.

3) TYPICAL 2x SOLE PLATE ON TOP OF SUBFLOOR. APPLIES TO RAISED FLOOR FOUNDATION AND UPPER FLOORS ONLY.

4) 3x FRAMING MEMBERS AT ADJOINING PANEL EDGES OR DBL. STUDS w/ 16d @ 3" O.C.

4A) 3x FRAMING MEMBERS AT ADJOINING PANEL EDGES OR DBL. STUDS w/ 16d @ 4" O.C.

4B) 3x FRAMING MEMBERS AT ADJOINING PANEL EDGES.

5) 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 DIFFERENT FRAMING MEMBERS, OR FRAMING SHALL BE 3-INCH NOMINAL OR THICKER AT ADJOINING PANEL EDGES AND NAILS ON EACH SIDE SHALL BE STAGGERED.

6) GALVANIZED NAILS SHALL BE HOT DIPPED OR TUMBLED.

7) FRAMING MEMBERS OR BLOCKING REQUIRED AT ALL PANEL EDGES IN SHEAR WALL.

8) ALL SHEAR WALL VALUES ARE BASED ON 16" O.C. STUD SPACING.

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

HOLDOWN SCHEDULE *2022 CBC*

TYPE	HOLDOWN	MIN. REQ'D POST *9, 12*	REQUIRED BOLT	REQUIRED NAILS *10*	REQUIRED LENGTH	CAPACITY
A	HDU2-SDS2.5	(2) 2x PER WALL THICKNESS *11*	PAB5 *1, 2* d_e = 5 1/2" F = 8 1/2"	N/A	N/A	3,075 #
B	HDU4-SDS2.5	(2) 2x PER WALL THICKNESS *11*	PAB5 *1, 2* d_e = 5 1/2" F = 8 1/2"	N/A	N/A	4,565 #
C	HDU5-SDS2.5	(2) 2x PER WALL THICKNESS *4, 11*	PAB5 *1, 2* d_e = 5 1/2" F = 8 1/2"	N/A	N/A	5,645 #
D	HDU8-SDS2.5	4x6 *5, 11*	PAB7 *1, 2* d_e = 8 1/2" F = 13"	N/A	N/A	7,870 #
E	HDU11-SDS2.5	4x6 *11*	PAB8 *6* d_e = 10" F = 15"	N/A	N/A	9,535 #
F	HDU14-SDS2.5	4x8 OR 6x6 *11*	PAB8 *6* d_e = 10" F = 15"	N/A	N/A	14,445 #
G	CS16 STRAP	(1) 2x PER WALL THICKNESS *7, 8*	N/A	(26) 8d OR (22) 10d	32" LONG PLUS CLEAR SPAN	1,705 #
H	MSTC40 STRAP	(2) 2x PER WALL THICKNESS *7, 8*	N/A	(36) 16d SINKERS	40" LONG	3,080 #
I	MSTC52 STRAP	4x4 *7, 8*	N/A	(48) 16d SINKERS	52" LONG	4,620 #
J	MSTC66 STRAP	4x4 *7, 8*	N/A	(68) 16d SINKERS	66" LONG	5,860 #
K	CMST14 STRAP	4x4 *7, 8*	N/A	(66) 16d	60" LONG PLUS CLEAR SPAN	6,490 #
L	CMST12 STRAP	4x6 *7, 8*	N/A	(86) 16d	78" LONG PLUS CLEAR SPAN	9,215 #

NOTES

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

2) TWO POUR.

3) N/A

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

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

6) DBL. NUT AND STEEL PLATE PER DETAIL S2. PROVIDE (2) #4 TOP AND BOTTOM AT FOOTING UNDER SHEARWALL AND EXTEND 7'-0" PAST EACH END.

7) CENTERLINE OF STRAP TO BE CENTER OF RIM JOIST. MAXIMUM CLEAR SPAN TO BE 16".

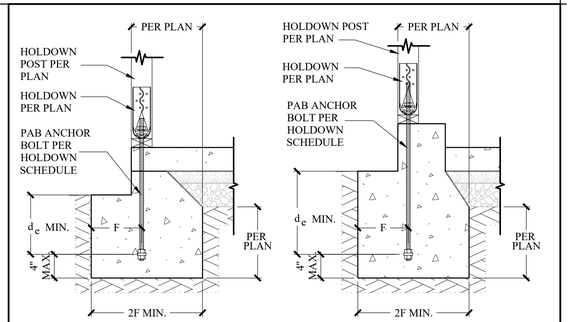
8) MINIMUM POST REQUIRED TO BE INSTALLED IN UPPER AND LOWER WALL FRAMING.

9) CONNECT (2) 2x HOLDOWN STUDS TOGETHER WITH (2A) 16d SINKER NAILS MIN.

10) ALL NAILS TO BE COMMON WIRE UNLESS NOTED OTHERWISE.

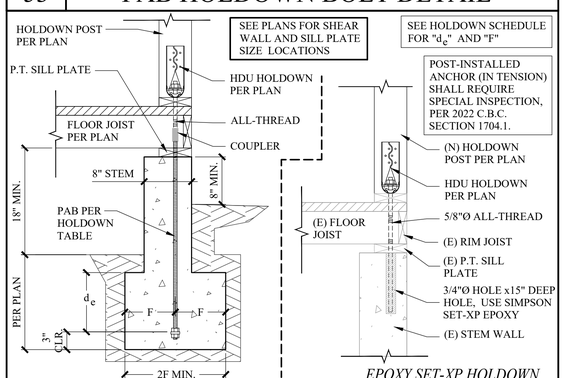
11) ALL SCREWS TO BE SIMPSON SDS 1/4" x 2 1/2". HOLDOWN MAY BE RAISED OFF THE SILL WITH NO REDUCTION IN LOAD.

12) ALL HOLDOWN POST AND SILL PLATES TO BE DOUGLAS FIR LARCH.



SEE HOLDOWN SCHEDULE FOR "d_e" AND "F"

53 PAB HOLDOWN BOLT DETAIL



53A PAB HOLDOWN @ RAISED FLOOR

2022 CBC AutoCAD

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FOLSOM, CA 95630

PROJ. MGR.: RC
ENGINEER: NS
DRAWN BY: LT
CHECKED BY: RC

ISSUE DATE: 3/4/2024

REVISIONS:
1
2
3
4
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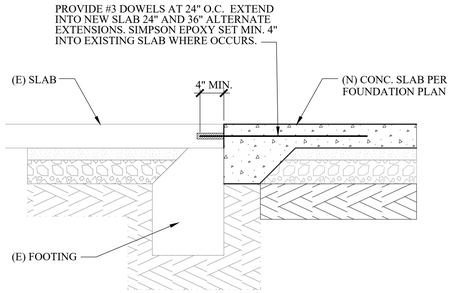
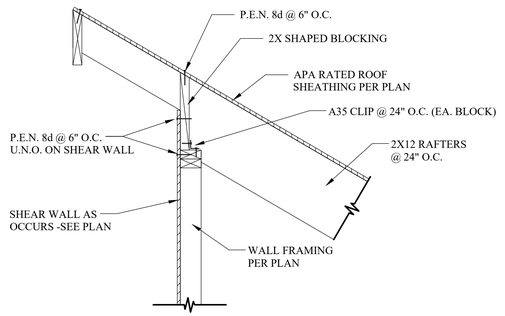
6

REGISTERED PROFESSIONAL ENGINEER NORMAN J SCHEEL No. 2567 Exp. 12-31-25 STRUCTURAL STATE OF CALIFORNIA

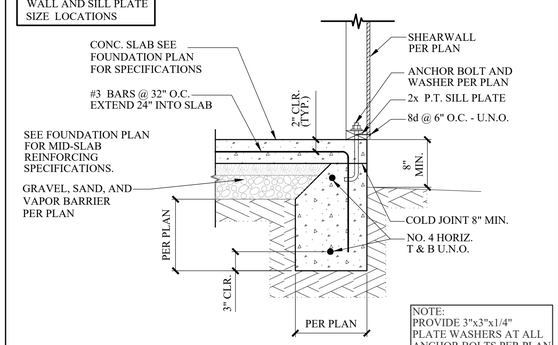
4/03/2024
SHEET
SC-2
GENERAL NOTES
JOB NO. 24060



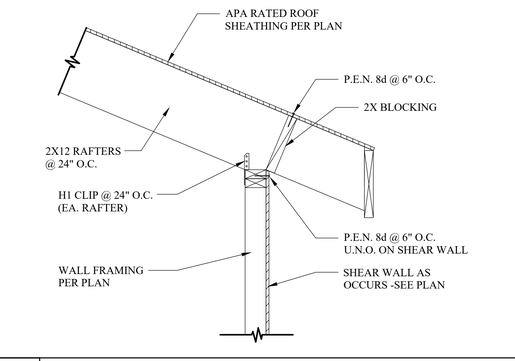
951 FOOTING RETROFIT



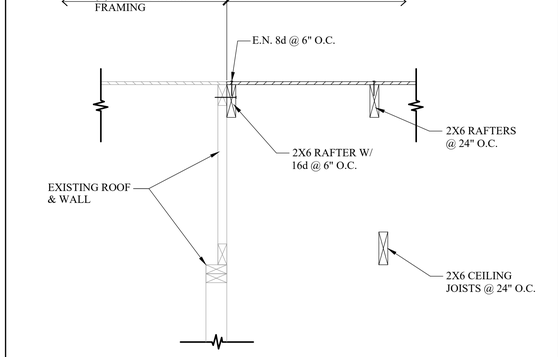
553 ROOF FRAMING DETAIL 13173



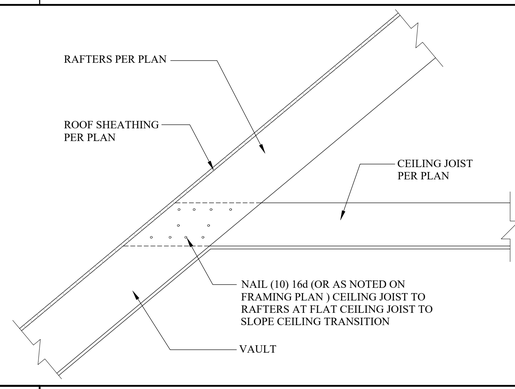
1 EXTERIOR WALL



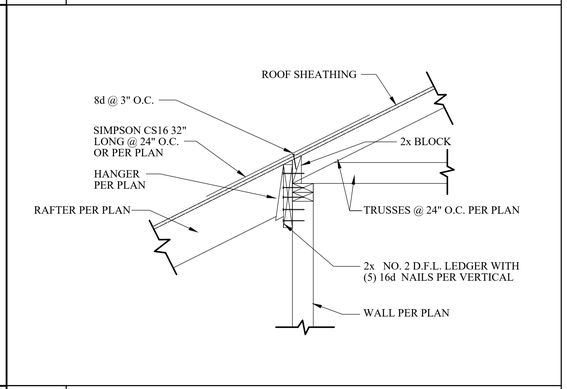
554 ROOF FRAMING DETAIL 13173



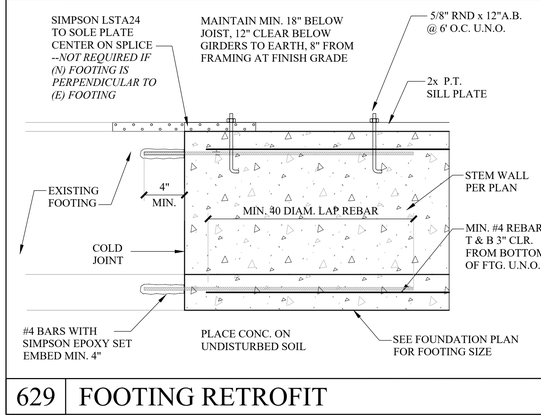
5 ROOF FRAMING 13090



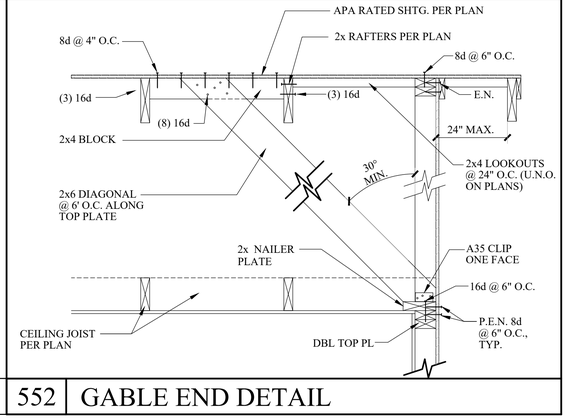
593 CEILING TIE AT RAFTER



462 RAFTER TO TRUSS CONNECTION 24060



629 FOOTING RETROFIT



552 GABLE END DETAIL

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1989 - 2024 35 YEARS OF EXCELLENCE Structural Engineer

ADDITION
312 N LEXINGTON DRIVE
FOLSOM, CA 95630

KRISTIAN & MEGAN FOSS
312 N LEXINGTON DRIVE
FOLSOM, CA 95630

PROJ. MGR.:	RC
ENGINEER:	NS
DRAWN BY:	LT
CHECKED BY:	RC
ISSUE DATE:	3/4/2024

REVISIONS:
1
2
3
4
5
6

REGISTERED PROFESSIONAL ENGINEER NORMAN J SCHEEL No. 2567 Exp. 12-31-25 STRUCTURAL STATE OF CALIFORNIA

4/03/2024
SHEET
SD-1
STRUCTURAL DETAILS
JOB NO. 24060

GENERAL INFORMATION

01	**Project Name**	Foss Ex Plus Add			
02	**Run Title**	Title 24 Analysis			
03	**Project Location**	312 N Lexington Dr			
04	**City**	Folsom	05	**Standards Version**	2022
06	**Zip code**	95630	07	**Software Version**	EnergyPro 9.2
08	**Climate Zone**	12	09	**Front Orientation (deg/ Cardinal)**	140
10	**Building Type**	Single family	11	**Number of Dwelling Units**	1
12	**Project Scope**	Addition and/or Alteration	13	**Number of Bedrooms**	3
14	**Addition Cond. Floor Area (ft^2)**	208	15	**Number of Stories**	3
16	**Existing Cond. Floor Area (ft^2)**	1566	17	**Fenestration Average U-factor**	0.3
18	**Total Cond. Floor Area (ft^2)**	1774	19	**Glazing Percentage (%)**	17.26%
20	**ADU Bedroom Count**	n/a	21	**ADU Conditioned Floor Area**	n/a
22	**Fuel Type**	Natural gas	23	**No Dwelling Unit:**	No

COMPLIANCE RESULTS

01	**Building Complies with Computer Performance**
02	**Building does not require field testing or HERS verification**
03	**This building incorporates one or more Special Features shown below**

ENERGY USE SUMMARY

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0	137.35	0	137.66	0	-0.31
Space Cooling	0	116.38	0	115.86	0	0.52
IAQ Ventilation	0	0	0	0	0	0
Water Heating	0	31.96	0	31.96	0	0
Self Utilization/Flexibility Credit						
Efficiency Compliance Total	**0**	**285.69**	**0**	**285.48**	**0**	**0.21**
Photovoltaics		0		0		
Battery				0		
Flexibility						
Indoor Lighting	0	7.76	0	7.76		
Appl. & Cooking	0	17.3	0	17.3		
Plug Loads	0	32.04	0	32.04		
Outdoor Lighting	0	1.74	0	1.74		
TOTAL COMPLIANCE	**0**	**344.53**	**0**	**344.32**		

ENERGY USE INTENSITY

	Standard Design (kBtu/ft^2 - yr)	Proposed Design (kBtu/ft^2 - yr)	Compliance Margin (kBtu/ft^2 - yr)	Margin Percentage
Gross EUI[1]	57.42	57.43	-0.01	-0.02
Net EUI[2]	57.42	57.43	-0.01	-0.02

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

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- New ductwork added is less than 25 ft. in length

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	**Conditioned Floor Area (ft^2)**	**Number of Dwelling Units**	**Number of Bedrooms**	**Number of Zones**	**Number of Ventilation Cooling Systems**	**Number of Water Heating Systems**
Foss Ex Plus Add	1774	1	3	3	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	**Zone Type**	**HVAC System Name**	**Zone Floor Area (ft^2)**	**Avg. Ceiling Height**	**Water Heating System 1**	**Status**
Existing 1st	Conditioned	Res HVAC1	723	8.5	DHW Sys 1	Existing Unchanged
Existing 2nd	Conditioned	Res HVAC1	843	9	DHW Sys 1	Existing Unchanged
Addition	Conditioned	Res HVAC1	208	7.25	DHW Sys 1	New

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	**Zone**	**Construction**	**Azimuth**	**Orientation**	**Gross Area (ft^2)**	**Window and Door Area (ft2)**	**Tilt (deg)**	**Wall Exceptions**	**Status**	**Verified Existing Condition**
Front Wall	Existing 1st	Existing Wall	140	Front	190	64	90	none	Existing	No
Back Wall	Existing 1st	Existing Wall	320	Back	194	81.4	90	none	Existing	No
5 Wall	Existing 1st	Existing Wall	5	n/a	194	8	90	none	Existing	No
275 Wall	Existing 1st	Existing Wall	275	n/a	194	8	90	none	Existing	No
Right Wall	Existing 1st	Existing Wall	50	Right	200	20	90	none	Existing	No
Left Wall	Existing 1st	Existing Wall	230	Left	240	4	90	none	Existing	No
Front Wall 2	Existing 2nd	Existing Wall	140	Front	178	42	90	none	Existing	No
Back Wall 2	Existing 2nd	Existing Wall	320	Back	280	28	90	none	Existing	No
5 Wall 2	Existing 2nd	Existing Wall	5	n/a	194	10	90	none	Existing	No
275 Wall 2	Existing 2nd	Existing Wall	275	n/a	194	10	90	none	Existing	No
Right Wall 2	Existing 2nd	Existing Wall	50	Right	57	0	90	none	Existing	No
Left Wall 2	Existing 2nd	Existing Wall	230	Left	285	9	90	none	Existing	No
Front Wall 3	Addition	Addition Wall	270	n/a	15	0	90	Extension	New	n/a
Back Wall 3	Addition	Addition Wall	320	Back	109	24	90	none	New	n/a
Right Wall 3	Addition	Addition Wall	50	Right	107	0	90	none	New	n/a
Left Wall 3	Addition	Addition Wall	230	Left	66	17.81	90	none	New	n/a
Walls To Addition	Existing 1st>>Addition	Interior Wall to Gar or A	n/a	n/a	8	0	n/a		Existing	No
Walls To Garage	Existing 1st>>__Garage__	Interior Wall to Gar or A	n/a	n/a	239	20	n/a		Existing	No
Ex Roof	Existing 2nd	Existing Attic	n/a	n/a	568	n/a	n/a		Existing	No
Addition Attic	Addition	R-30 Roof Attic	n/a	n/a	163	n/a	n/a		New	n/a
GarageAttic	__Garage__	Garage Roof	n/a	n/a	245	n/a	n/a		Existing	No
Floor o Ex 1st	Existing 2nd	Interior Flr o lwr	n/a	n/a	554	n/a	n/a		Existing	No
Floor o Gar	Existing 2nd	Interior Flr o lwr	n/a	n/a	289	n/a	n/a		Existing	No

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	**Zone**	**Construction**	**Azimuth**	**Orientation**	**Gross Area (ft^2)**	**Window and Door Area (ft2)**	**Tilt (deg)**	**Wall Exceptions**	**Status**	**Verified Existing Condition**
GarageFront	__Garage__	Garage Exterior Wall	90	n/a	232	161	90	none	Existing	No
GarageBack	__Garage__	Garage Exterior Wall	320	Back	48	0	90	none	Existing	No
GarageRight	__Garage__	Garage Exterior Wall	50	Right	115	0	90	none	Existing	No
GarageLeft	__Garage__	Garage Exterior Wall	230	Left	165	0	90	none	Existing	No

OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	**Zone**	**Construction**	**Azimuth**	**Orientation**	**Area (ft^2)**	**Skylight Area (ft^2)**	**Roof Rise (x in 12)**	**Roof Reflectance**	**Roof Emittance**	**Cool Roof**	**Status**	**Verified Existing Condition**	**Existing Construction**
Ex Cath (3)	Existing 1st	Existing Cath	50	Right	196	0	7	0.1	0.85	No	Existing	No	
Ex Cath (3) 2	Existing 2nd	Existing Cath	50	Right	217	0	7	0.1	0.85	No	Existing	No	
Ex Cath (4)	Existing 2nd	Existing Cath	230	Left	217	0	7	0.1	0.85	No	Existing	No	
Addition Cath (3)	Addition	R-22 Roof Cathedral	50	Right	52	0	4	0.1	0.85	No	New	n/a	

ATTIC

01	02	03	04	05	06	07	08	09	10
Name	**Construction**	**Type**	**Roof Rise (x in 12)**	**Roof Reflectance**	**Roof Emittance**	**Radiant Barrier**	**Cool Roof**	**Status**	**Verified Existing Condition**
Attic __Garage__	Attic Garage Roof Cons	Ventilated	7	0.1	0.85	No	No	Existing	No
Attic Existing 2nd	Attic RoofExisting 2nd	Ventilated	7	0.1	0.85	No	No	Existing	No
Attic Addition	Attic RoofAddition	Ventilated	7	0.1	0.85	No	No	New	n/a

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	**Type**	**Surface**	**Orientation**	**Azimuth**	**Width (ft)**	**Height (ft)**	**Mult.**	**Area (ft^2)**	**U-factor**	**U-factor Source**	**SHGC**	**SHGC Source**	**Exterior Shading**	**Status**	**Verified Existing Condition**
F1 W5,W4,W3	Window	Front Wall	Front	140			1	40	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
F2 F1b Abv W17	Window	Front Wall	Front	140			1	4	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
B1 8068	Window	Back Wall	Back	320			1	53.4	0.53	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
B2 W3	Window	Back Wall	Back	320			1	16	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
B3 W10	Window	Back Wall	Back	320			1	12	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
5-1 W8	Window	5 Wall		5			1	8	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
275-1 W7	Window	275 Wall		275			1	8	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
R1 W2	Window	Right Wall	Right	50			1	20	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
L1 W6	Window	Left Wall	Left	230			1	4	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
F1 W3	Window	Front Wall 2	Front	140			1	17.5	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
F2 W3	Window	Front Wall 2	Front	140			1	17.5	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No

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Title 24 Compliance
Jeff Travis
Certified Energy Analyst
R19-22-30127

2022 Title 24 Part 6
Energy Code

Sheet:
T24-1

FENESTRATION / GLAZING

01 Name	02 Type	03 Surface	04 Orientation	05 Azimuth	06 Width (ft)	07 Height (ft)	08 Mult.	09 Area (ft^2)	10 U-factor	11 U-factor Source	12 SHGC	13 SHGC Source	14 Exterior Shading	15 Status	16 Verified Existing Condition
F3 W11	Window	Front Wall 2	Front	140			1	1	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
F4 W1	Window	Front Wall 2	Front	140			1	6	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
B2 W6	Window	Back Wall 2	Back	320			1	8	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
B3 W8	Window	Back Wall 2	Back	320			1	20	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
5-1 W9	Window	5 Wall 2		5			1	10	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
275-1 W7 2	Window	275 Wall 2		275			1	10	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
L1 W4	Window	Left Wall 2	Left	230			1	4	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
L2 W10	Window	Left Wall 2	Left	230			1	1	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
L3 W5	Window	Left Wall 2	Left	230			1	4	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
B1 W1	Window	Back Wall 3	Back	320			1	24	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
L1 D3	Window	Left Wall 3	Left	230			1	17.81	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA

OPAQUE DOORS

01 Name	02 Side of Building	03 Area (ft^2)	04 U-factor	05 Status	06 Verified Existing Condition
Door	Front Wall	20	0.5	Existing	No
Door 2	Walls To Garage	20	0.5	Existing	No
Car Door D11	GarageFront	56	1	Existing	No
Car Door D12	GarageFront	105	1	Existing	No

SLAB FLOORS

01 Name	02 Zone	03 Area (ft^2)	04 Perimeter (ft)	05 Edge Insul. R-value and Depth	06 Edge Insul. R-value and Depth	07 Carpeted Fraction	08 Heated	09 Status	10 Verified Existing Condition
Slab-on-Grade	Existing 1st	723	104	none	0	80%	No	Existing	No
Slab-on-Grade 2	Addition	208	42	none	0	80%	No	New	n/a
Slab-on-Grade 3	__Garage__	534	41	none	0	0%	No	Existing	No

OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 Assembly Layers
Garage Exterior Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.357	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: All Other Siding
Existing Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.357	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: All Other Siding

OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 Assembly Layers
Addition Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Exterior Finish: All Other Siding
Existing Cath	Cathedral Ceilings	Wood Framed Ceiling	2x8 @ 16 in. O. C.	R-19	None / None	0.054	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x8 Inside Finish: Gypsum Board
R-22 Roof Cathedral	Cathedral Ceilings	Wood Framed Ceiling	2x10 @ 16 in. O. C.	R-22	None / None	0.046	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-22 / 2x10 Inside Finish: Gypsum Board
Interior Wall to Gar or A	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board
Attic Garage Roof Cons	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
Attic RoofExisting 2nd	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
Attic RoofAddition	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4

OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 Assembly Layers
Garage Roof	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / None	0.481	Cavity / Frame: no insul. / 2x4 Inside Finish: Gypsum Board
Existing Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-19	None / None	0.049	Over Ceiling Joists: R-9.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board
R-30 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-30	None / None	0.032	Over Ceiling Joists: R-20.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board
Interior Flr o Iwr	Interior Floors	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.196	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

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

WATER HEATING SYSTEMS

01 Name	02 System Type	03 Distribution Type	04 Water Heater Name	05 Number of Units	06 Solar Heating System	07 Compact Distribution	08 HERS Verification	09 Water Heater Name (#)	10 Status	11 Verified Existing Condition	12 Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)	Existing	No	

WATER HEATERS

01 Name	02 Heating Element Type	03 Tank Type	04 # of Units	05 Tank Vol. (gal)	06 Heating Efficiency Type	07 Efficiency	08 Rated Input Type	09 Input Rating or Pilot	10 Tank Insulation R-value (Int/Ext)	11 Standby Loss or Recovery Eff	12 1st Hr. Rating or Flow Rate	13 Tank Location	14 Status	15 Verified Existing Condition
DHW Heater 1	Gas	Small Storage	1	50	EF	0.6	Btu/Hr	75000	0	76	n/a		Existing	No

WATER HEATING - HERS VERIFICATION

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

SPACE CONDITIONING SYSTEMS

01 Name	02 System Type	03 Heating Unit Name	04 Heating Equipment Count	05 Cooling Unit Name	06 Cooling Equipment Count	07 Fan Name	08 Distribution Name	09 Required Thermostat Type	10 Status	11 Verified Existing Condition	12 Existing HVAC System
Res HVAC1	Heating and cooling system other	Heating Component 1	1	Cooling Component 1	1	HVAC Fan 1	Air Distribution System 1	n/a	Existing	No	

HVAC - HEATING UNIT TYPES

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

HVAC - COOLING UNIT TYPES

01 Name	02 System Type	03 Number of Units	04 Efficiency Metric	05 Efficiency EER/EER2/CEER	06 Efficiency SEER/SEER2	07 Zonally Controlled	08 Mulit-speed Compressor	09 HERS Verification
Cooling Component 1	Central split AC	1	EER/SEER	12.2	14	Not Zonal	Single Speed	Cooling Component 1-hers-cool

HVAC - DISTRIBUTION SYSTEMS

01 Name	02 Type	03 Design Type	04 Duct Ins. R-value Supply	05 Duct Ins. R-value Return	06 Duct Location Supply	07 Duct Location Return	08 Surface Area Supply	09 Surface Area Return	10 Bypass Duct	11 Duct Leakage	12 HERS Verification	13 Status	14 Verified Existing Condition	15 Existing Distribution system	16 New Ducts >= 25 ft
Air Distribution System 1	Unconditioned attic	Non-Verified	R-8	R-8	Attic	Attic	n/a	n/a	No Bypass Duct	Existing (not specified)	Air Distribution System 1-hers-dist	Existing + New	No		No

HVAC - FAN SYSTEMS

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

HVAC FAN SYSTEMS - HERS VERIFICATION

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

HERS RATER VERIFICATION OF EXISTING CONDITIONS

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2022 Title 24 Part 6
Energy Code

Sheet:
T24-2

2022 Single-Family Residential Mandatory Requirements Summary

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

Building Envelope:

§ 110.6(a)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.
§ 110.6(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 R-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(i):	**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, Decorative 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, 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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2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas, fan-type central furnaces, household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour), and pool and spa heaters.*
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads 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.

Ducts and Fans:

§ 110.8(j)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 these spaces must not be compressed.*
§ 150.0(m)2:	**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 filter.*

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** 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:

§ 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 andcontrolled 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)1C-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)1Gii,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) 1Giv, and rated for sound per §150.0(o)1Gv.*
§ 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.

Pool and Spa Systems and Equipment:

§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and 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, or 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.*

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 linen 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).*

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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 all 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 sleep-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.
§ 110.10(e)2:	**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."

Electric and Energy Storage Ready:

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2022 Single-Family Residential Mandatory Requirements Summary

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

*Exceptions may apply.

5/6/22

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2022 Title 24 Part 6
Energy Code

Sheet:
T24-3

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — **CF1R-PRF-01-E**

Project Name: Foss Ex Plus Add — **Calculation Date/Time:** 2024-05-15T14:49:46-07:00 — **(Page 13 of 14)**

Calculation Description: Title 24 Analysis — **Input File Name:** Foss Ex Plus Add 312 N Lexington Dr Folsom.ribd22x

PROJECT NOTES

If it is determined by a licensed HVAC contractor that the existing system is not sized to allow for this additional living space, a new HVAC system will be required. The installing HVAC contractor will prepare a CF-1R for the HVAC change-out and follow Title 24 Part 6 Prescriptive Measures.

This compliance report models the existing HVAC and/or Hot Water Heater system using 2022 mandatory energy efficiency ratings per Appendix B Energy Standards Table 150.1-A Component Package A so as not to take a penalty for the HVAC and/or Hot Water Heater equipment in the compliance calculation. See Energy Use Summary Area of CF-1R that shows no credit or detriment to the energy budget. This is also supported by the Residential ACM Manual on pages 75 & 76. Call the CEC at 916-654-5106 for more information.

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — **CF1R-PRF-01-E**

Project Name: Foss Ex Plus Add — **Calculation Date/Time:** 2024-05-15T14:49:46-07:00 — **(Page 14 of 14)**

Calculation Description: Title 24 Analysis — **Input File Name:** Foss Ex Plus Add 312 N Lexington Dr Folsom.ribd22x

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Jeff Travis	Documentation Author Signature:
Company: CompuCalc	Signature Date: 5/15/2024
Address: 5201 Coventry Dr	CEA/ HERS Certification Identification (If applicable): R19-22-30127
City/State/Zip: Riverside, Ca 92506	Phone: 530-268-8722

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

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

Responsible Designer Name: Kristin McGregor	Responsible Designer Signature:
Company: Perfect Pitches	Date Signed: 5/15/24
Address: PO Box 214905	License: N/A
City/State/Zip: Sacramento, CA 95821	Phone: (916) 538-7444

Registration Number:

CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time:

Report Version: 2022.0.000
Schema Version: rev 20220901

HERS Provider:

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