	CONDITIONS OF APPROVAL
No.	Standard Conditions
1.	<b>Authorization</b> . This approval of Design Study (DS 23-377, Fradin) authorizes the replacement of a laundry closet with a 74-square-foot bathroom addition located in the rear portion of an interior side yard of the historic Taggart House located at the northwest corner of Torres Street and 1st Avenue in the Single-Family Residential (R-1) District, APN: 009-132-004-000 as depicted in the plans prepared by Alan Lehman, dated June 17, 2024, unless modified by the conditions of approval contained herein.
2.	Codes and Ordinances. The project shall be constructed in conformance with all requirements of the R-1 zoning district. All adopted building and fire codes shall be adhered to in preparing the working drawings. If any codes or ordinances require design elements to be changed, or if any other changes are requested when such plans are submitted, such changes may require additional environmental review and subsequent approval by Planning staff.
3.	Permit Validity. In accordance with CMC Section 17.52.170 (Time Limits on Approvals and Denials), a residential design study approval remains valid for a period of 12 months from the date of action. During this time, the project must be implemented, or the approval becomes void. Implementation is effected by erecting, installing, or beginning the installation of the improvement authorized by the permit, as determined by the Director. Extensions to this approval may be granted consistent with CMC 17.52.170.C.
4.	Water Use. Approval of this application does not permit an increase in water use on the project site without adequate supply. Should the Monterey Peninsula Water Management District determine that adequate water is unavailable for this site, this permit will be scheduled for reconsideration, and appropriate findings will be prepared for review and adoption by the Planning Commission.
5.	<ul> <li>Setback and Height Certifications. A State licensed surveyor shall survey and certify the following in writing: <ul> <li>The footing locations are in conformance with the approved plans prior to footing/foundation inspection;</li> <li>The roof heights and plate heights of each building are in conformance with the approved plans prior to the roof sheathing inspection. Roofs and plates shall not exceed the elevation points as identified in the approved project plans, and the roofs include an appropriate allowance for roofing material thickness.</li> </ul> </li> <li>Written certifications prepared, sealed, and signed by the surveyor shall be provided prior to footing/foundation inspection and roof sheathing inspection. In the event that multiple footing/foundation pours are required, a survey letter shall be submitted for each separate section.</li> </ul>
6.	<b>Service Laterals.</b> Prior to final inspection, all electrical service laterals to any new building or structure, or to any building or structure being remodeled when such remodeling requires the relocation or replacement of the main service equipment, shall be placed underground on the premises upon which the building or structure is located. Undergrounding will not be required when the project valuation is less than \$200,000, or the City Forester determines that undergrounding will damage or destroy significant trees(s) (CMC 15.36.020).

- 7. **Utility Meter Locations.** The placement of all utility meters shall consistent with the locations identified in the approved plans. Changes to the location of any utility meter location shall require written approval of the Community Planning and Building Department prior to the change of the location.
- 8. **Fire Sprinklers Residential.** Additions, alterations, or repairs to existing structures that involve the addition, removal, or replacement of 50 percent or more of the linear length of the walls (interior and exterior) within a 5-year period shall require the installation of an automatic residential fire sprinkler system in accordance with the California Building and Fire Codes (CMC 15.08.135).
- 9. **Modifications.** The Applicant shall submit in writing, with revised plans, to the Community Planning and Building staff any proposed changes to the approved project plans prior to incorporating those changes. If the Applicant changes the project without first obtaining City approval, the Applicant will be required to submit the change in writing, with revised plans, within two weeks of the City being notified. A cease work order may be issued at any time at the discretion of the Director of Community Planning and Building until a) either the Planning Commission or Staff has approved the change, or b) the property owner has eliminated the change and submitted the proposed change in writing, with revised plans, for review. The project will be reviewed for its compliance with the approved plans prior to the final inspection.
- 10. **Exterior Revisions to Planning Approval Form.** All proposed modifications that affect the exterior appearance of the building or site elements shall be submitted on the "Revisions to Planning Approval" form on file in the Community Planning and Building Department. Any modification incorporated into the construction drawings not listed on this form shall not be deemed approved upon issuance of a building permit.
- 11. Conflicts Between Planning Approvals and Construction Plans. It shall be the responsibility of the Owner, Applicant, and Contractor(s) to ensure consistency between the project plans approved by the Planning Staff, the Planning Commission, or the City Council on appeal and the construction plans submitted to the Building Division as part of the Building Permit review. Where inconsistencies between the Planning approval and the construction plans exist, the Planning approval shall govern unless otherwise approved in writing by the Community Planning & Building Director or their designee.

When changes or modifications to the project are proposed, the Applicant shall clearly list and highlight each proposed change and bring each change to the City's attention. Changes to the project incorporated into the construction drawings that were not clearly listed or identified as a proposed change shall not be considered an approved change. Should conflicts exist between the originally approved project plans and the issued construction drawings that were not explicitly identified as a proposed change, the plans approved as part of the Planning Department Review, including any Conditions of Approval, shall prevail.

12. **Exterior Lighting.** Prior to the issuance of a building permit, the Applicant shall include in the construction drawings the manufacturer's specifications, including illumination information, for all exterior light fixtures. All fixtures shall be shielded and down-facing.

Exterior wall-mounted lighting shall be limited to 25 watts or less (incandescent equivalent or 375 lumens) per fixture and shall be installed no higher than 10 feet above the ground or walking surface.

Landscape lighting shall not exceed 18 inches above the ground nor more than 15 watts (incandescent equivalent or 225 lumens) per fixture and shall be spaced no closer than 10 feet apart. Landscape lighting shall not be used as accent lighting, nor shall it be used to illuminate trees, walls, or fences. The purpose of landscape lighting is to safely illuminate walkways and entrances to the subject property and outdoor living spaces.

- 13. **Skylights & Skylight Shades.** Prior to the issuance of a building permit, the Applicant shall include in the construction drawings the manufacturer's specifications for all skylights (new and/or replaced) and skylight shades. Skylights shall be low-profile and use non-reflective glass to minimize light and glare visible from adjoining properties. Skylight flashing shall match the roof color. Manual or automatic shades shall be installed in each skylight to reduce visible light transmission during the hours of darkness.
- 14. Indemnification. The Applicant agrees, at his or her sole expense, to defend, indemnify, and hold harmless the City, its public officials, officers, employees, and assigns from any liability; and shall reimburse the City for any expense incurred, resulting from, or in connection with any project approvals. This includes any appeal, claim, suit, or other legal proceedings to attack, set aside, void, or annul any project approval. The City shall promptly notify the Applicant of any legal proceeding and cooperate fully in the defense. The City may, at its sole discretion, participate in any such legal action, but participation shall not relieve the Applicant of any obligation under this condition. Should any party bring any legal action in connection with this project, the Superior Court of the County of Monterey, California, shall be the situs and have jurisdiction for resolving all such actions by the parties hereto.
- 15. **Driveway.** Prior to the issuance of a building permit, the Applicant shall clearly identify on the construction drawings the driveway material and asphalt connection to the paved street edge. The driveway material shall be extended beyond the property line into the public right-of-way to connect to the paved street edge. A minimal asphalt connection at the street edge may be required by the Superintendent of Streets or the Building Official, depending on site conditions, to accommodate the drainage flow line of the street. If the driveway material is proposed to be sand set, a dimensioned construction detail showing the base material shall be included in the construction drawings.
- 16. **Hazardous Materials Waste Survey.** Prior to the issuance of a demolition permit, the Applicant shall submit a hazardous materials waste survey to the Building Division in conformance with the Monterey Bay Unified Air Pollution Control District.
- 17. **Cultural Resources.** Throughout construction, all activities involving excavation shall immediately cease if cultural resources are discovered on the site, and the Applicant shall notify the Community Planning & Building Department within 24 hours. Work shall not be permitted to recommence until such resources are properly evaluated for significance by a qualified archaeologist. If the resources are determined to be significant, prior to the resumption of work, a mitigation and monitoring plan shall be prepared by a qualified archaeologist and reviewed and approved by the Community Planning and Building Director. In addition, if human remains are unearthed during the excavation, no further

- disturbance shall occur until the County Coroner has made the necessary findings regarding origin and distribution pursuant to California Public Resources Code (PRC) Section 5097.98.
- 18. **Truck Haul Route.** Prior to the issuance of a building permit, the Applicant shall submit for review and approval by the Community Planning & Building Director, in consultation with the Public Works and Public Safety Departments, a truck-haul route and any necessary traffic control measures for the grading activities. The Applicant shall be responsible for ensuring adherence to the truck-haul route and implementation of any required traffic control measures.
- 19. **USA North 811.** Prior to any excavation or digging, the Applicant shall contact the appropriate regional notification center (USA North 811) at least two working days, but not more than 14 calendar days, prior to commencing that excavation or digging. No digging or excavation is authorized to occur on-site until the Applicant has obtained a Ticket Number and all utility members have positively responded to the dig request. (Visit USANorth811.org for more information)
- 20. **Conditions of Approval.** Prior to the issuance of a building permit, the Applicant shall print the signed Conditions of Approval on a full-size sheet within the construction plan set submitted to the Building Safety Division.

#### **Landscape Conditions**

- 21. **Tree Removal Prohibited.** Throughout construction, the Applicant shall protect all trees identified for preservation by methods approved by the City Forester. Trees on or adjacent to the site shall only be removed upon the approval of the City Forester or Forest and Beach Commission.
- 22. **Tree Protection Measures.** Requirements for tree preservation shall adhere to the following tree protection measures on the construction site.
  - Prior to grading, excavation, or construction, the developer shall clearly tag or mark all trees to be preserved.
  - Excavation within 6 feet of a tree trunk is not permitted.
  - No attachments or wires of any kind, other than those of a protective nature, shall be attached to any tree.
  - Per Municipal Code Chapter 17.48.110, no material may be stored within the dripline of a protected tree, including the drip lines of trees on neighboring parcels.
  - Tree Protection Zone. The Tree Protection Zone shall be equal to dripline or 18 inches radially from the tree for every one inch of trunk diameter at 4.5 feet above the soil line, whichever is greater. A minimum of 4-foot-high transparent fencing is required unless otherwise approved by the City Forester. Tree protection shall not be resized, modified, removed, or altered in any manner without written approval. The fencing must be maintained upright and taught for the duration of the project. No more than 4 inches of wood mulch shall be installed within the Tree Protection Zone. When the Tree Protection Zone is at or within the drip line, no less than 6 inches of wood mulch shall be installed 18 inches radially from the tree for every one inch of trunk diameter at 4.5 feet above the soil line outside of the fencing.
  - Structural Root Zone. The Structural Root Zone shall be 6 feet from the trunk or 6

- inches radially from the tree for every one inch of trunk diameter at 4.5' above the soil line, whichever is greater. Any excavation or changes to the grade shall be approved by the City Forester prior to work. Excavation within the Structural Root Zone shall be performed with a pneumatic excavator, hydro-vac at low pressure, or another method that does not sever roots.
- If roots greater than 2 inches in diameter or larger are encountered within the approved Structural Root Zone, the City Forester shall be contacted for approval to make any root cuts or alterations to structures to prevent roots from being damaged.
- If roots larger than 2 inches in diameter are cut without prior City Forester approval or any significant tree is endangered as a result of construction activity, the building permit will be suspended, and all work stopped until an investigation by the City Forester has been completed, and mitigation measures have been put in place.

#### **Environmental Compliance Conditions**

- 23. **Drainage Plan.** Prior to the issuance of a building permit, the Applicant shall submit for review and approval by the Community Planning & Building and Public Works Departments a drainage plan that meets the requirements of the City's drainage guidance, SOG 17-07. At a minimum, new and replaced impervious area drainage must be dispersed around the site rather than focused on one corner of the property; infiltration features must be sized appropriately and located at least 6 feet from neighboring properties. The drainage plan shall include information on drainage from new impervious areas and semi-pervious areas.
- 24. **BMP Tracking Form.** Prior to issuance of a building permit, the Applicant shall submit for review and approval by the Community Planning & Building and Public Works Departments a completed BMP Tracking form.
- 25. **Erosion and Sediment Control Plan.** Prior to issuance of a building permit, the Applicant shall submit for review and approval by the Community Planning & Building and Public Works Departments an erosion and sediment control plan that includes locations and installation details for erosion and sediment control BMPs, material staging areas, and stabilized access.

Acknowledgment and acceptance of conditions of approval:

Property Owner Signature

Property Owner Signature

Property Owner Signature

Printed Name

Date



#### **NOTICE OF APPROVAL**

The Department of Community Planning & Building of the City of Carmel-by-the-Sea has approved a Project pursuant to the City's Municipal Code. Persons interested in the project may review additional materials available at the Department of Community Planning & Building located at City Hall on Monte Verde Street between Ocean and 7<sup>th</sup> Avenues, phone number 831-620-2010.

The decision to approve this project may be appealed within 10 days from the date of this by filing a written appeal with the Department of Community Planning & Building.

Planning Case #: Design Study 23377
Owner Name: FRADIN SCOTT H & ROBIN R
Case Planner: Katherine Wallace, Associate Planner
Date Posted:
<b>Date Approved:</b> 06/21/2024
Project Location: NW Corner of Torres & 1st
<b>APN</b> #: 009132004000 <b>BLOCK/LOT:</b> 7/9
Applicant: Alan Lehman
<b>Project Description:</b> This approval of Design Study (DS 23-377, Fradin) authorizes the replacement of a laundry closet with a 74-square-foot bathroom addition located in the rear portion of an interior side yard of the historic Taggart House located at the northwest corner of Torres Street and 1st Avenue in the Single-Family Residential (R-1) District, APN: 009-132-004-000 as depicted in the plans prepared by Alan Lehman, dated June 17, 2024, unless modified by the conditions of approval
Can this project be appealed to the Coastal Commission? Yes □ No ✓

Upon completion of the 10 calendar-day appeal period, please return this form, along with the Affidavit of Posting, to the case planner noted above.



#### AFFIDAVIT OF POSTING

#### **DECLARATION UNDER PENALTY OF PERJURY**

APPLICATION#:	Design Study	23377 Scott & Ro	bın Fradın					
APPLICANT:	Alan Lehman							
PROJECT LOCATION	ON:	NW Corner of To	orres & 1st					
CASE PLANNER:		Katherine Wallac	ee, Associate Planner					
BLOCK 7	LOT(s)9	Al	PN <u>009132004000</u>					
I,			, declare: I am a resident of the City of					
	, County	of	, State of		I am over	the age	of eighteen	
(18) years. On the	day of		_2024, I posted the atta	ached P	ublic Notice	in a con	ispicuous,	
publicly-accessible l	location at the su	ibject property.						
I DECLARE	UNDER PEN	ALTY OF PERJU	RY THAT THE FOR	REGOI	NG IS TRU	E AND	CORRECT.	
Declarant Print Na	me							
Declarant Signatur	re							
Date								

Upon completion of the 10 - day appeal period, please return this form, along with the Notice of Approval, to the case planner noted above.

## **GENERAL NOTES**

1.DO NOT SCALE DRAWINGS. SERIOUSLY, DON'T DO IT.

2.CONTRACT DOCUMENTS WHICH DESCRIBE EXISTING CONSTRUCTION HAVE BEEN BASED ON FIELD INSPECTION, BUT ARE NOT BASED ON EXTENSIVE FIELD MEASUREMENTS, OPENING OF CONCEALED CONDITIONS OR EXCAVATION OF BURIED ITEMS. NO RELIABLE CONSTRUCTION DOCUMENTS FOR THE EXISTING STRUCTURE WERE AVAILABLE. THESE DRAWINGS ARE INTEDED AS A GUIDE TO THE CONTRACTOR WHO SHALL VERITY DIMENSIONS BEFORE PROCEEDING WITH WORK. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE DESIGNER BEFORE PROCEEDING WITH WORK REGARDING CHANGES, DISCREPANCIES OR ALTERATIONS THAT ARE INCONSISTENT WITH THESE DRAWINGS. NOTIFY THE DESIGNER IMMEDIATELY OF PRE-EXISTING CONDITIONS WHICH PROHIBIT EXECUTION OF WORK AS DESCRIBED HEREIN.

3..NEW CONSTRUCTION TO MATCH EXISTING DETAILS AND FINISHES. WHERE NEW CONSTRUCTION MEETS EXISTING CONSTRUCTION, PATCH AND MATCH SURFACES AND FINISHES TO ALIGN CONSISTENTLY SO NO VISUAL EVIDENCE OF CORRECTED WORK REMAINS UPON COMPLETION.

4.FLOOR ELEVATIONS = TOP OF PLYWOOD SUB-FLOOR OR TOP OF SLAB.

5.ALL WALLS DIMENSIONED TO FACE OF STUD (UNLESS OTHERWISE NOTED).

## PERMIT NOTES

1. PROJECT IS LOCATED IN A VERY HIGH FIRE SEVERITY ZONE. PROJECT WILL COMPLY WITH CHAPTER 7A STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS.

# **REVISION NOTES**

PLAN NOTES FOR CLARIFICATION

WINDOW SCHEDULE CLARIFICATIONS

SIDING CHANGE FOR HISTORICAL COMPLIANCE

BUILDING ADJUSTMENT FOR HISTORICAL BOARD RECCOMENDATION

# **CAL GREEN NOTES**

A. DUCT SYSTEMS ARE SIZED, DESIGNED, AND EQUIPMENT IS SELECTED PER SECTION 4.507.2. HVAC SYSTEM INSTALLERS MUST BE TRAINED AND CERTIFIED AND SPECIAL INSPECTORS EMPLOYED BY THE ENFORCING AGENCY MUST BE QUALIFIED. NOTE THIS REQUIREMENT ON THE PLANS.

B. AUTOMATIC IRRIGATION SYSTEMS CONTROLLERS INSTALLED AT THE TIME OF FINAL INSPECTION SHALL BE WEATHERBASED (4.304.1).

C. PROTECT ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS AT EXTERIOR WALLS AGAINST THE PASSAGE OF RODENTS (4.406.1)

D. COVER DUCT OPENINGS AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS DURING CONSTRUCTION (4.504.1)

E. ADHESIVES, SEALANTS AND CAULKS SHALL BE COMPLIANT WITH VOC AND OTHER TOXIC COMPOUND LIMITS (4.504.2.1)

F. PAINTS, STAINS AND OTHER COATINGS SHALL BE COMPLIANT WITH VOC LIMITS (4.504.2.2)

# **CODE COMPLIANCE NOTES**

1. THIS PROJECT SHALL COMPLY WITH THE 2022 CALIFORNIA RESIDENTIAL CODE, 2022 CALIFORNIA BUILDING CODE, 2022 CALIFORNIA FIRE CODE, 2022 CALIFORNIA ELECTRICAL CODE, 2022 CALIFORNIA PLUMBING CODE, 2022 CALIFORNIA MECHANICAL CODE, 2019 CALIFORNIA ENERGY CODE, 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE AND ANY OTHER APPLICABLE CODES.

2.IF REQUIRED, A STATE LICENSED SURVEYOR SHALL CERTIFY IN WRITING THAT THE FOOTINGS/FOUNDATION ARE LOCATED IN ACCORDANCE WITH THE APPROVED PLANS PRIOR TO THE FOOTING/ FOUNDATION INSPECTION; AND SHALL CERTIFY THE ROOF HEIGHT IS IN ACCORDANCE WITH THE APPROVED PLANS PRIOR TO THE ROOF SHEATHING INSPECTION. CERTIFICATION SHALL BE PROVIDED TO THE INSPECTOR AT THE TIME OF THE REFERENCED INSPECTIONS.

3. CONTRACTOR SHALL OBTAIN AN 8-1-1/DIG ALERT TICKET PRIOR TO PERMIT ISSUANCE AND SHALL MAINTAIN THE TICKET IN ACTIVE STATUS THROUGHOUT THE PROJECT. TICKET SHALL BE KEPT ON SITE FOR INSPECTOR REFERENCE.

4. TO MINIMIZE OFF-SITE VIBRATION AND DAMAGE TO NEARBY PROPERTIES, CONTRACTOR SHALL UTILIZE THE SMALLEST FEASIBLE COMPACTION EQUIPMENT CAPABLE OF ACHIEVING THE DESIRED COMPACTION LEVEL. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL OFF-SITE DAMAGE AND SHALL REPAIR ANY DAMAGE IN A TIMELY MANNER PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE PROJECT.

5. STRUCTURAL WELDING FOR GUARDRAILS OR ANY OTHER WELDED STEEL STRUCTURAL ELEMENTS SHALL BE DONE IN A LISTED APPROVED SHOP OR IF WELDED IN THE FIELD, UNDER SPECIAL INSPECTION.

# **EXISTING PHOTOS**

ADDITION MATERIALS, FINISHES AND COLORS TO MATCH EXISTING

# PROJECT INFORMATION

OWNER	Fradin
SITE ADRESS	NW Corner ofTorres and 1st , Carmel
	CA 93921
APN	009-132-004
LEGAL	Carmel By The Sea LOT 9 BLK 7
LOT/BLOCK	LOT 9 / BLOCK 7
YEAR BUILT	1950
ZONING	R-1
CONST. TYPE	V-B
OCCUPANCY	R-3
FIRE SPRINKLERS	NO
HISTORIC	NO

LOT SIZE	4000 S.F.	
HOUSE -MAIN LEVEL	1043 S.F.	
GARAGE	270 S.F.	
TOTAL EXISTING BUILDING AREA	1313 S.F	~~^^
BATHROOM ADDITION	74 S.F.	4
TOTAL NEW BUILDING AREA	1387 S.F	
<b>EXISTING SITE COVERAGE</b>		
CONCRETE DRIVEWAY	28 S.F.	
CONCRETE WALK , SIDE PATH	290 S.F.	
STONE PATIO	262 S.F.	
CONCRETE STEPS AND LANDING	42 S.F.	
ENTRY STONE PATH	46 S.F.	
EXISTING SITE COVERAGE	668 S.F.	

	SET BACKS	CODE (R-1)	<b>EXISTING/PROPOSED</b>
>	FRONT YARD SET BACK	15'	SFR - 14'-8"
>	REAR YARD 1ST STORY	3'	8'-9" AT GARAGE
>	REAR YARD 2ND STORY	15'	N/A
	SIDE YARD MIN.	3'	3'-9"
	SIDE YARD COMPOSITE	25%= 10'	10'-1"
\ \	PLATE HEIGHT 1ST STORY	12'	11'-3 " MAX
7	PLATE HEIGHT 2ND STORY	18'	N/A
	RIDGE HEIGHT 1ST STORY	18'	14'-3" MAX
	RIDGE HEIGHT 2ND STORY	24'	N/A
>	TREES TO BE REMOVED	NONE ON TH	HIS PERMIT

# CARMEL-BY-THE-SEA PLANNING DIVISION **APPROVED**

Permit #: <u>DS 23-377 (Fradin)</u> Date Approved: <u>6/21/2024</u>

Planner: K. Wallace

PROJECT LOCATION PG&E Substation 2nd Ave **VICINITY MAP** NO SCALE

**SCOPE OF WORK** 

BATHROOM ADDITION (74 S.F.), COSMETIC REMODEL EXISTING BATHROOM AND KITCHEN

# **DRAWING INDEX**

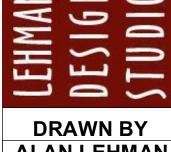
SHEET#	CONTENTS
P-1	Project Overview
A1	BMP'S
A2	BMP'S
SV-1	SURVEY- EXISTING SITE PLAN
A3	EXISTING PLAN, DEMOLITION PLAN, EXISTING
7.0	ELEVATIONS
A4	SITE PLAN
A5	FLOOR PLANS
A6	ELEVATIONS
A7	ROOF PLAN, COLORS AND MATERIALS
A8	ELECTRICAL PLANS
A9	PLUMBING AND HVAC PLANS
A10	DETAILS
A11	DETAILS
A12	FRAMING PLANS
A13	CAL GREEN INFO.
A14	CAL GREEN INFO.
E-1	TITLE 24 INFO
E-2	TITLE 24 INFO

**CONTACT INFORMATION** 

214-213-7273 Owner- Scott Fradin Designer – Alan Lehman 831-747-4718

2/5/2024 4/29/2024 5/13/2024 ∕4\ 6/17/2024

**REVISIONS** 



**ALAN LEHMAN** 

6/17/2024

SHEET

Construction Projects Are Required to Implement the Stormwater Best Management Practices (BMPs) on this Page, as they Apply to Your Project, All Year Long.



& WASTE MANAGEMENT

#### Non-Hazardous Materials ☐ Sweep or vacuum any street ☐ Berm and securely cover stockpiles of sand, dirt, or other construction materials with tarps when rain is forecast or if stockpiles are not actively

being used. For best results, Waste Management this should be done at the end of the work day throughout construction when feasible ☐ Use (but don't overuse)

reclaimed water for dust control.

## **Hazardous Materials**

☐ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.

☐ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them during wet weather or when rain

☐ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain

is forecast within 24 hours. ☐ Arrange for appropriate disposal of all hazardous wastes.

Construction Entrances and

☐ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and

and tracking off site.

sediment discharges from site



MANAGEMENT & SPILL CONTROL

Maintenance and Parking ☐ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and ☐ Perform major maintenance,

☐ The California Green Building Code requires all permitted

residential and non-residential construction, demolition and additions/alterations projects to recycle or salvage a minimum 65% of nonhazardous construction materials from the ☐ Cover waste disposal

containers securely with tarps at the end of every work day

☐ Clean or replace portable toilets, and inspect them frequently for leaks and spills. Incorporate secondary containment and locate them away from storm drain inlets. ☐ Dispose of liquid residues from paints, thinners, solvents,

tracking immediately and

secure sediment source to

prevent further tracking. Never

hose down streets to clean up

glues, and cleaning fluids as hazardous waste (the Monterey Regional Waste Management District offers a Household



# Spill Prevention and Control

(rags, absorbents, etc.) available at the construction

repair jobs, and vehicle and equipment washing off site. ☐ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and

over a drip pan big enough to collect fluids. Recycle or dispose of fluids as hazardous ☐ If vehicle or equipment cleaning must be done onsite,

clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface ☐ Do not clean vehicle or

cleaning equipment, etc. ☐ Inlet protection is the last line of spill defense. Drains/ inlets that receive storm water must be covered or otherwise protected from receiving sediment/dirt/mud, other debris, or illicit discharges, and include gutter controls and

equipment onsite using soaps, solvents, degreasers, steam

filtration where applicable in a manner not impeding traffic



☐ Keep spill cleanup materials excavation work for dry

site at all times. ☐ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are

vegetation is established. ☐ Clean up spills or leaks ☐ Seed or plant vegetation for immediately and dispose of erosion control on slopes or cleanup materials properly where construction is not (see the Monterey Regional immediately planned. Waste Management Districts'

Sediment Control guidelines for accepting hazardous waste materials). Protect storm drain inlets,

☐ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).

 Sweep up spilled dry materials immediately. Do not try to wash them away with water, or

☐ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil (see the Monterey Regional Waste Management District's Contaminated Soil Acceptance

☐ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill:



CONTAMINATED SOILS

**Erosion Control** ☐ Schedule grading and

Stabilize all denuded areas,

erosion controls (such as

erosion control fabric or

install and maintain temporary

in wet weather, or when rain is forecast before fresh pavement ☐ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog

☐ Collect and recycle or bonded fiber matrix) until appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into

pavement.

gutters, ditches, and drainage courses with appropriate BMPs, such as gravel bags, inlet filler, berms, etc. ☐ Prevent sediment from

migrating offsite by installing and maintaining sediment controls, such as fiber rolls, silt fences, or sediment basins. ☐ Keep excavated soil on the site where it will not collect into

☐ Transfer excavated materials to dump trucks on the site, not in ☐ If any of the following conditions are observed,

test for contamination and contact the Monterey County Environmental Health

local municipal inspector: · Unusual soil conditions, discoloration, or odor · Abandoned wells



CONCRETE, GROUT & MORTAR APPLICATION

☐ Avoid paving and seal coating ☐ Store concrete, grout and mortar under cover, on pallets and away from drainage areas. These materials must never reach a

☐ Do not use water to wash down fresh asphalt or concrete

Sawcutting & Asphalt/Concrete

☐ Completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system. ☐ Protect storm drain inlets, gutters, ditches, and drainage

courses with appropriate BMPs, such as gravel bags, inlet filters, berms, etc. ☐ Shovel, abosorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day

(whichever is sooner!). ☐ If sawcut slurry enters a catch basin, clean it up immediately.

Department, Regional Water Quality Control Board, and Abandoned underground tanks



PAINTING & PAINT REMOVAL

Painting cleanup ☐ Never clean brushes or rinse gutter, storm drain, or surface

■ Wash out concrete equipment/ trucks offsite or in a contained area, so there is no discharge into the underlying soil or onto surrounding areas. Let concrete harden and dispose of

☐ Collect the wash water from washing exposed aggregate concrete and remove it for appropriate disposal offsite



LANDSCAPE MATERIALS hazardous waste. ☐ Contain stockpiled landscaping materials by storing them under

tarps when they are not actively being used. ☐ Stack erodible landscape material on pallets. Cover or store these materials when they

☐ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet

are not actively being used or



**DEWATERING** 

☐ Effectively manage all run-on, all runoff within the site, and all runoff that discharges from paint containers into a street,

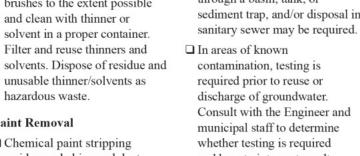
☐ Divert run-on water from offsite away from all disturbed areas or ☐ For water-based paints, paint otherwise ensure protection of out brushes to the extent its water quality for compliance. possible. Rinse to the sanitary ☐ When dewatering, notify and sewer once you have gained

permission from the local obtain approval from the local wastewater treatment authority. municipality before discharging Never pour paint down a drain. water to a street gutter or storm drain. Filtration or diversion ☐ For oil-based paints, paint out through a basin, tank, or brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of residue and

#### hazardous waste **Paint Removal**

☐ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead or tributyltin must be disposed of as

☐ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop



Consult with the Engineer and municipal staff to determine and how to interpret results. Contaminated groundwater

must be treated or hauled off-

site for proper disposal.

# DRAIN INLET PROTECTION & STREET SWEEPING DETAIL

ALL DRAIN INLETS WHICH RECEIVE RUNOFF FROM THE WORK AREA MUST BE PROTECTED. USE TYPE 5 INLET PROTECTION

IF GREATER THAN THE 5-YEAR RECURRENCE STORM (2.4 INCHES IN 24-HOURS) IS ANTICIPATED, DISCUSS WITH THE CITY

INSPECTOR THE POTENTIAL FOR FLOODING PRIVATE PROPERTY OR OTHERWISE CREATING A PUBLIC NUISANCE IF A DEVICE

IS LEFT IN PLACE DURING THE ANTICIPATED STORM, AND REMOVE DEVICES AS DIRECTED BY THE CITY INSPECTOR.

KEEP ADDITIONAL INLET PROTECTION DEVICES ON SITE IN CASE IMMEDIATE REPAIRS, MODIFICATIONS OR REPLACEMENTS

WITHIN THE RIGHT-OF-WAY, UNLESS ANOTHER TYPE IS SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER.

EMPTY INLET PROTECTION BAGS PRIOR TO EACH PREDICTED STORM EVENT IF THEY ARE MORE THAN 1/4 FULL

NOT TO SCALE

REINSTALL ANY REMOVED INLET PROTECTION ON THE FIRST WORKING DAY AFTER THE STORM.

4. INSPECT INLET PROTECTION DEVICES PRIOR TO AND AFTER EACH STORM EVENT.

6. ALL INLET PROTECTION DEVICES MUST BE REMOVED PRIOR TO PERMIT CLOSE-OUT.

STORM DRAIN INLET PROTECTION

(SC-10 PER CALTRANS STORM

WATER QUALITY HANDBOOK)

FACE OF

GEOTEXTILE BLANKET

ENSURE THAT BOTTOM OF FILTER

BAG IS ABOVE TOP OF OUTLET

PIPE (TO AVOID CLOGGING PIPE)

CURB

- CURB INLET HOOD

IF FLOW DIRECTION IS -

**TYPE 5 INLET PROECTION** 

(COMBINATION INLET)

REVERSED, PLACE **GRAVEL BAGS SIMILAR** TO THOSE ON OPPOSITE

SIDE OF INLET

INLET

SPILLWAY, 1-BAG HIGH-

- FLOW

2-BAGS HIGH

CONDITIONS)

**TYPE 5 INLET PROECTION** 

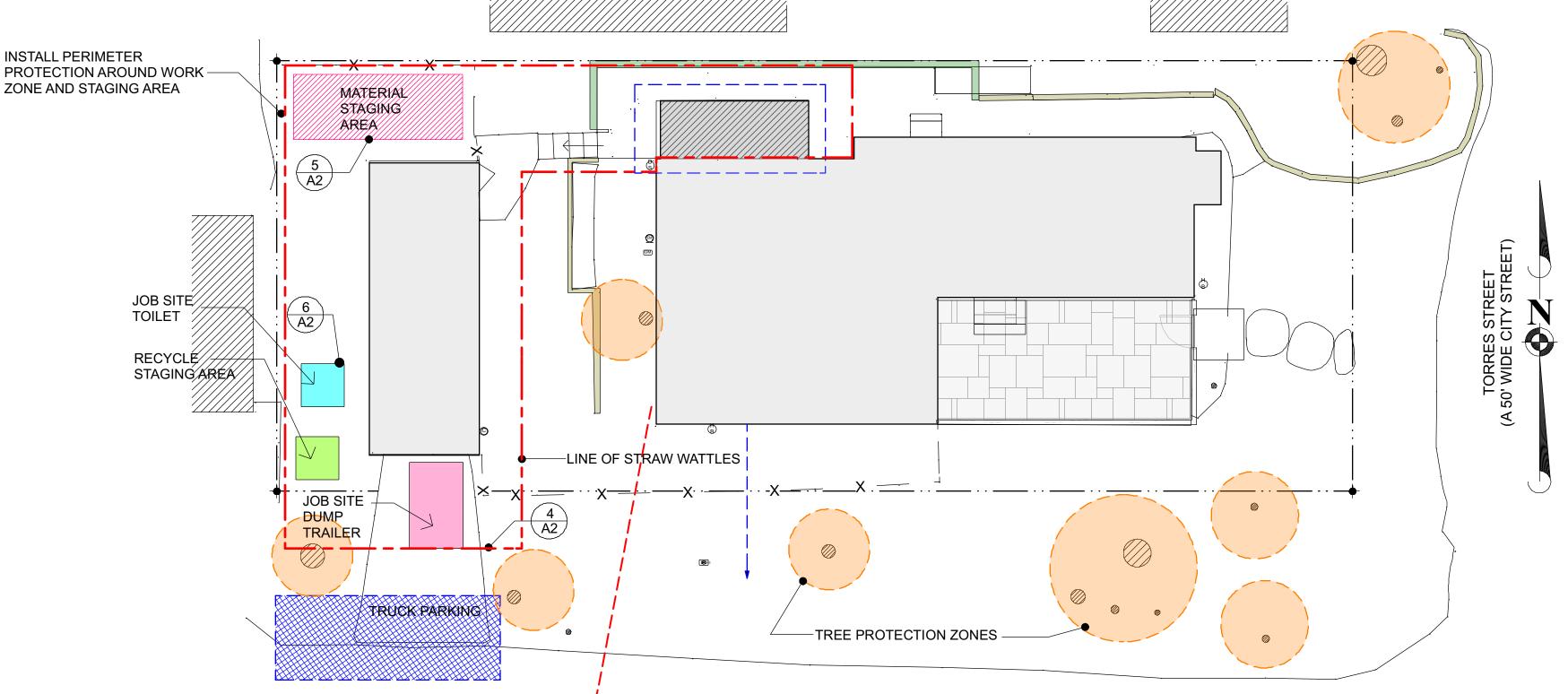
(FLAT GRATE INLET)

(ACTUAL LAYOUT **DEPENDS ON FIELD** 

\* Adapted with permission from the San Mateo Countywide Water Pollution Prevention Program · Buried barrels, debris, or trash. STORM DRAIN POLLUTERS MAY BE LIABLE FOR FINES OF UP TO \$10,000 PER DAY!

STORM WATER MANAGEMENT NOTES

- 1 ALL OR PART OF THE CONSTRUCTION OF THIS PROJECT IS EXPECTED TO OCCUR DUING THE WINTER SEASON
- (OCTOBER 15TH THROUGH APRIL 15TH) 2 DUST FROM GRADING OPERATIONS MUST BE CONTROLLED. THE OWNER OR CONTRACTOR MAY BE REQUIRED TO KEEP ADEQUATE EQUIPMENT ON THE GRADING SITE TO PREVENT DUST PROBLEMS.
- 3 TEMPORARY EROSION CONTROL TO BE INSTALLED BETWEEN OCTOBER 1 AND APRIL 15.
- 4 VEGETATION REMOVAL BETWEEN OCTOBER 15 AND APRIL 15 SHALL NOT PRECEDE SUBSEQUENT GRADING OR CONSTRUCTION ACTIVITIES BY MORE THAN 15 DAYS. DURING THIS PERIOD, EROSION AND SEDIMENT CONTROL MESAURES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY.

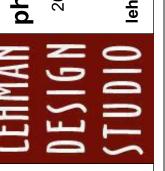


FIRST AVENUE (A 50' WIDE CITY STREET)

**CONSTRUCTION MANAGEMENT PLAN** 

2/5/2024 4/29/2024 5/13/2024 /4\ 6/17/2024

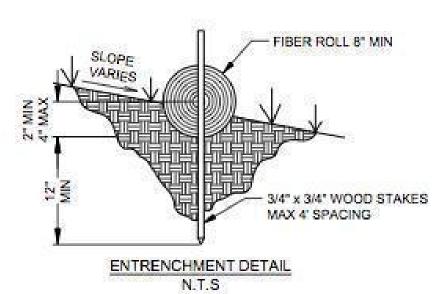
**REVISIONS** 



DRAWN BY **ALAN LEHMAN** 

6/17/2024

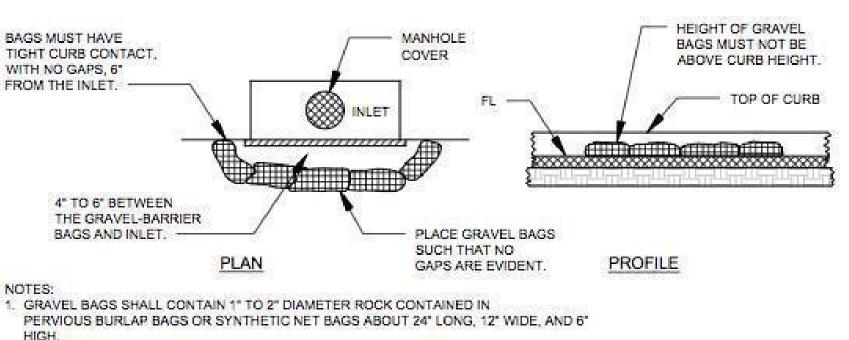
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# FIBER ROLLS

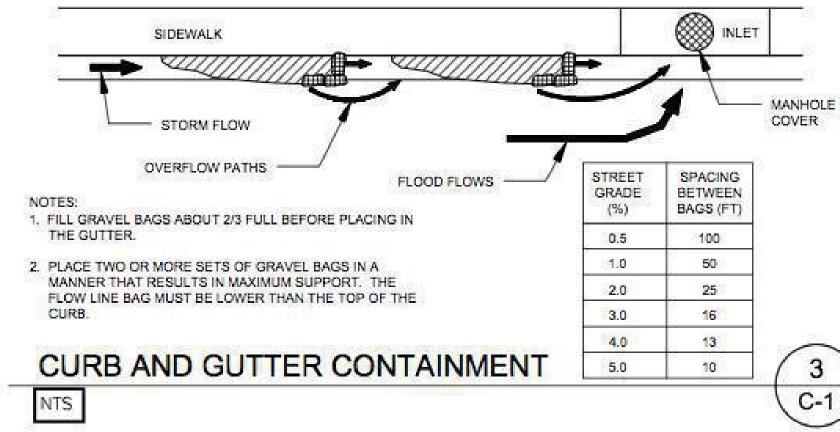
### **EROSION AND SEDIMENT CONTROL NOTES**

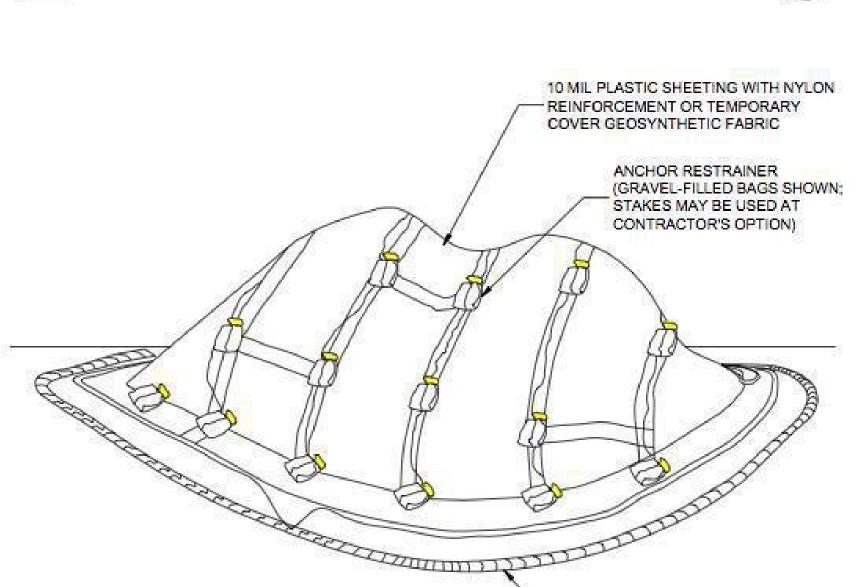
- 1 BEST MANAGEMENT PRACTICES (BMPS) AT A MINIMUM, THE FOLLOWING BMPS ARE REQUIRED REGARDLESS OF WEATHER CONDITIONS, AND AS APPLICABLE TO THE CONSTRUCTION ACTIVITIES PLANNED. VERIFY ALL OF THE BELOW MEASURES ARE ADDRESSED ON THE ESCP SUBMITTAL, AS APPLICABLE.
- 2 WET WEATHER MEASURES IF POSSIBLE. AVOID LAND-DISTURBING ACTIVITIES DURING THE WET WEATHER SEASON, OCTOBER 15 THROUGH APRIL 15. OTHERWISE, EXTRA BMP MATERIALS (FILTERS, FIBER ROLLS, GRAVEL BAGS, MULCH/STRAW, PLASTIC COVERS) SHALL BE KEPT ON-SITE FOR PRE-RAIN INSTALL.
- 3 EXISTING VEGETATION PROTECT EXISTING VEGETATION; AVOID REMOVAL AS REQUIRED AND WHEREVER POSSIBLE: INSTALL APPROPRIATE/PROTECTIVE FENCING. PERIMETER CONTROLS PRIOR TO WORK.
- 4 EROSION AND SEDIMENT CONTROL AS APPLICABLE, SLOPE AND SOIL STABILIZATION BMPS SHALL BE UTILIZED TO PREVENT SLOPE EROSION AND SOIL MOVEMENT ON-SITE AND OFF-SITE. NO SEDIMENT MAY LEAVE THE SITE, BE DEPOSITED OFF-SITE, OR POLLUTE STORM WATER RUNOFF FROM THE CONSTRUCTION SITE.
- 5 STOCKPILE MANAGEMENT ALL STOCKPILES SHALL BE CONTAINED AND COVERED WHEN NOT ACTIVE, AND SECURED AT THE END OF EACH DAY. STOCKPILES SHALL BE SECURELY COVERED OVERNIGHT, AND PRIOR TO, DURING, AND AFTER RAIN EVENTS. NO MATERIAL SHALL LEAVE THE SITE OR MOVE INTO STREET.
- 6 WASTE MANAGEMENT ALL CONSTRUCTION WASTE SHALL BE CONTAINED AND SECURELY COVERED ONSITE, INCLUDING TRASH, PAINT, GROUT, CONCRETE, ETC. ANY WASH OUT FACILITY SHALL BE CONTAINED, MAINTAINED, AND ITS CONTENTS DISPOSED OF PROPERLY; NO MATERIAL SHALL BE WASHED INTO STREET.
- 7 VEHICLES AND EQUIPMENT RESPONSIBLE PARTIES MUST ENSURE ALL VEHICLES AND EQUIPMENT ARE MAINTAINED IN GOOD WORKING ORDER, WILL NOT CAUSE DIRT, MUD, OIL, GREASE, OR FUEL TO BE DISCHARGED OR TRACKED OFF-SITE INTO THE STREET. INACTIVE VEHICLES/EQUIPMENT MUST USE COVER AND/OR DRIP PANS.
- 8 DRAIN/INLET PROTECTION & PERIMETER CONTROLS DRAINS/INLETS THAT RECEIVE STORM WATER MUST BE COVERED OR OTHERWISE PROTECTED FROM RECEIVING SEDIMENT, MUD, DIRT, OR ANY DEBRIS, AND INCLUDE GUTTER CONTROLS AND FILTRATION WHERE APPLICABLE IN A MANNER NOT IMPEDING TRAFFIC OR SAFETY. PROPERLY INSTALLED SILT FENCING OR EQUIVALENT LINEAR CONTROL SHALL BE EVIDENT ALONG SITE PERIMETER TO PREVENT MOVEMENT OF SEDIMENT AND DEBRIS OFF-SITE.
- 9 SWEEPING ALL IMPERVIOUS SURFACES (DRIVEWAYS, STREETS) SHALL BE PHYSICALLY SWEPT (NOT WASHED OR HOSED DOWN), AND MAINTAINED FREE OF DÉBRIS AND ACCUMULATIONS OF DIRT. NO TRACKING OFF-SITE.
- 10 DEWATERING NO DEWATERING IS ALLOWED FROM CONSTRUCTION SITES UNLESS DISCHARGE IS AN EXCEPTION TO THE DISCHARGE PROHIBITIONS PER CITY CODE CH. 31.5-12(C), EXCEPT AS SPECIFIED FOR ASBS DRAINAGES. ANY PROPOSED DEWATERING MUST BE REVIEWED/ CLEARED BY CITY AND APPLICABLE REGULATORY AGENCIES.
- 11 STORMWATER MIXED WITH NON-STORMWATER SHALL BE MANAGED AS NON-STORMWATER



1. GRAVEL BAGS SHALL CONTAIN 1" TO 2" DIAMETER ROCK CONTAINED IN

# DRAIN INLET BARRIER NTS C-1





ALL STOCKPILES SHALL BE CONTAINED AND COVERED WHEN NOT ACTIVE, AND

2. STOCKPILES SHALL BE SECURELY COVERED OVERNIGHT, AND PRIOR TO, DURING, AND

3. NO MATERIAL SHALL LEAVE THE SITE OR MOVE INTO STREET.

4. PLASTIC SHEETING HAS LIMITATIONS DUE TO SUNLIGHT BREAKDOWN, HARD TO MANAGE IN WINDY CONDITIONS, AND CAN INCREASE RUNOFF ISSUE FOR PERIMETER CONTROLS. INSPECT FREQUENTLY OR USE GEOSYNTHETIC FABRIC AS APPLICABLE.

5. DO NOT LOCATE WITHIN 50 FEET OF A STORM DRAIN.

SECURED AT THE END OF EACH DAY.

# TEMPORARY COVER ON STOCKPILE

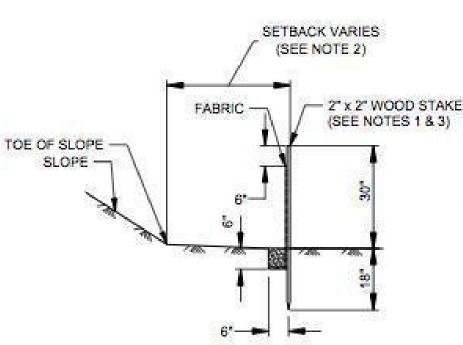
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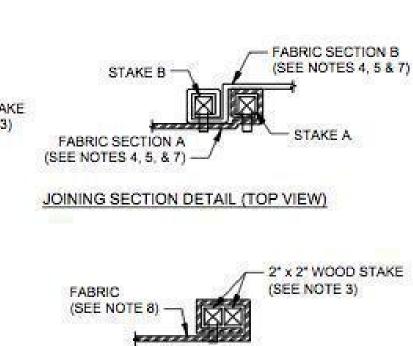
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C-1

LINEAR SEDIMENT BARRIER

(SECURED FIBER ROLL OR SIMILAR)





END STAKE DETAIL (TOP VIEW)

**REVISIONS** 

2/5/2024

4/29/2024

5/13/2024

∕4\ 6/17/2024

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**DRAWN BY** 

**ALAN LEHMAN** 

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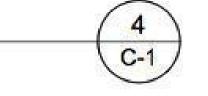
STAKE DIMENSIONS ARE NOMINAL

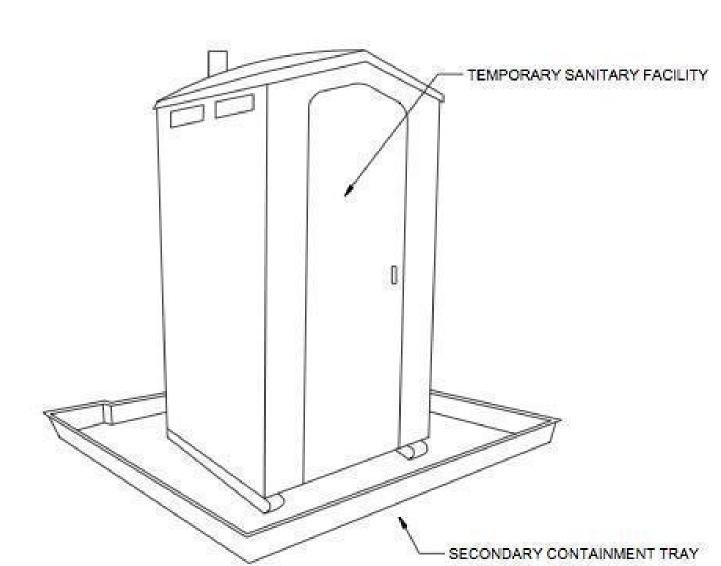
2. DIMENSIONS MAY VARY TO FIT FIELD CONDITIONS.

- 3. STAKES SHALL BE SPACED AT 8'-0" MAXIMUM AND SHALL BE POSITIONED ON DOWNSTREAM SIDE OF
- 4. STAKES TO OVERLAP AND FENCE FABRIC TO FOLD AROUND EACH STAKE AND FULL TURN. SECURE FABRIC TO STAKE WITH 4 STAPLES.
- 5. STAKES SHALL BE DRIVEN TIGHTLY TOGETHER TO PREVENT POTENTIAL FLOW-THROUGH OF SEDIMENT AT JOINT. THE TOPS OF THE STAKES SHALL BE SECURED WITH WIRE.
- FOR END STAKE, FENCE FABRIC SHALL BE FOLDED. AROUND TWO STAKES ONE FULL TURN AND SECURED WITH 4 STAPLES.
- JOINING SECTIONS SHALL NOT BE PLACED AT SUMP LOCATIONS.

# SILT FENCE

NTS





## STORAGE AND DISPOSAL PROCEDURES

- TEMPORARY SANITARY FACILITIES SHOULD BE LOCATED AWAY FROM DRAINAGE FACILITIES, WATERCOURSES, AND FROM TRAFFIC CIRCULATION. IF SITE CONDITIONS ALLOW, PLACE PORTABLE FACILITIES A MINIMUM OF 50 FEET FROM DRAINAGE CONVEYANCES AND TRAFFIC AREAS.
- 2. WHEN SUBJECTED TO HIGH WINDS OR RISK OF HIGH WINDS, TEMPORARY SANITARY FACILITIES SHOULD BE SECURED TO PREVENT OVERTURNING.
- TEMPORARY SANITARY FACILITIES MUST BE EQUIPPED WITH SECONDARY CONTAINMENT TRAYS TO PREVENT DISCHARGE OF POLLUTANTS TO THE STORMWATER DRAINAGE SYSTEM OF THE RECEIVING WATER.
- 4. ARRANGE FOR REGULAR WASTE COLLECTION, DO NOT ALLOW. SANITARY FACILITY TO BECOME OVERFULL.

SANITARY WASTE MANAGEMENT

NTS

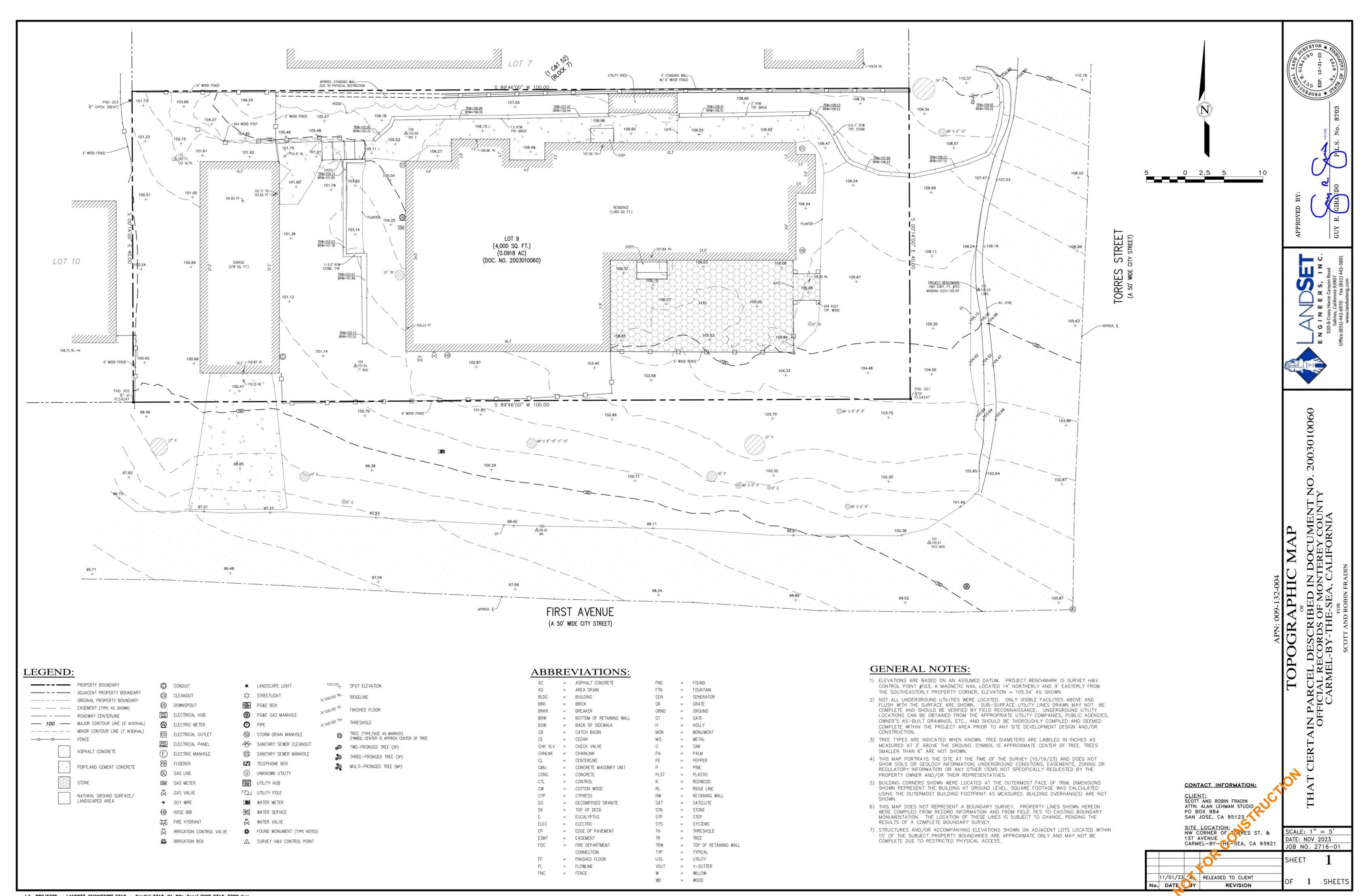


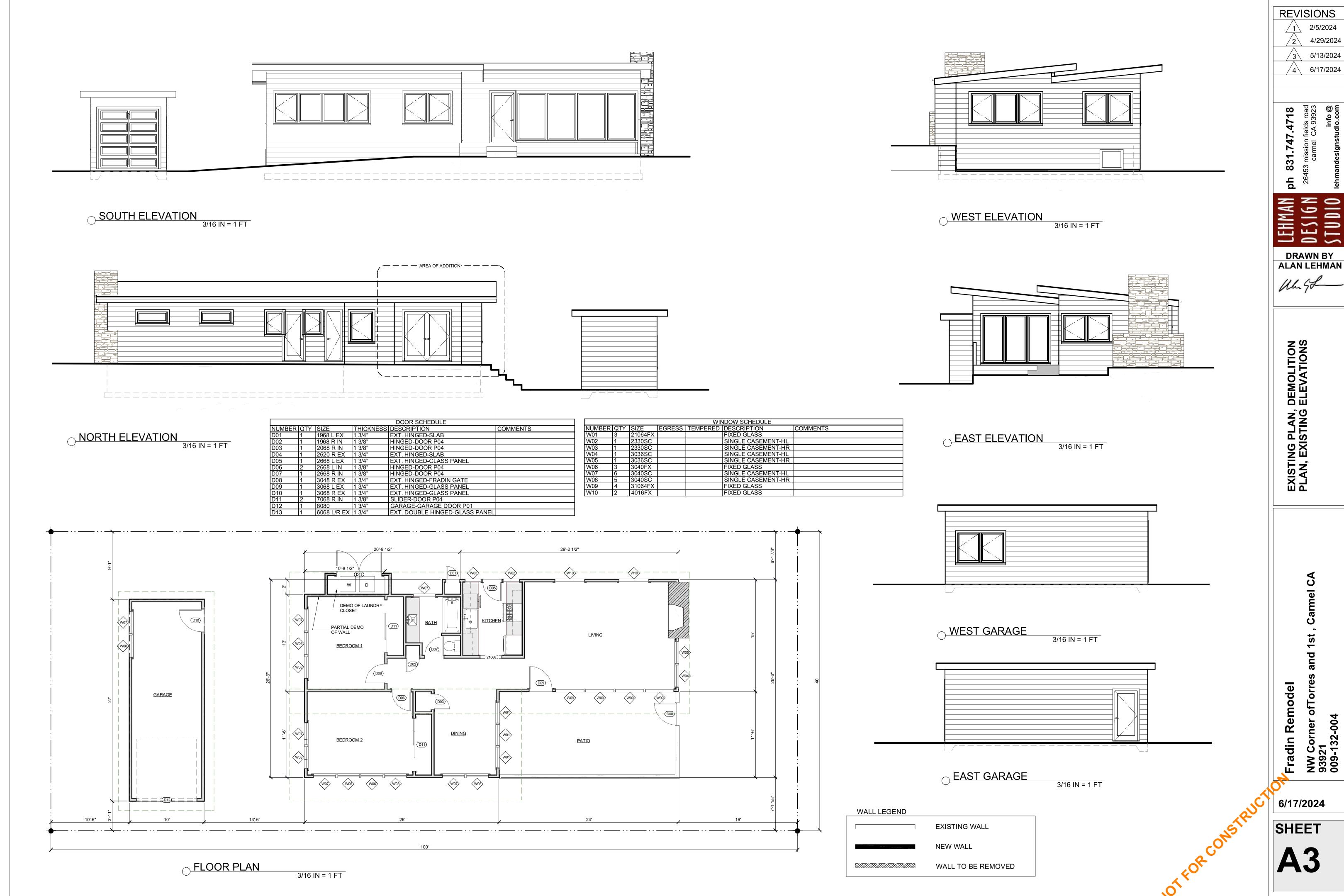
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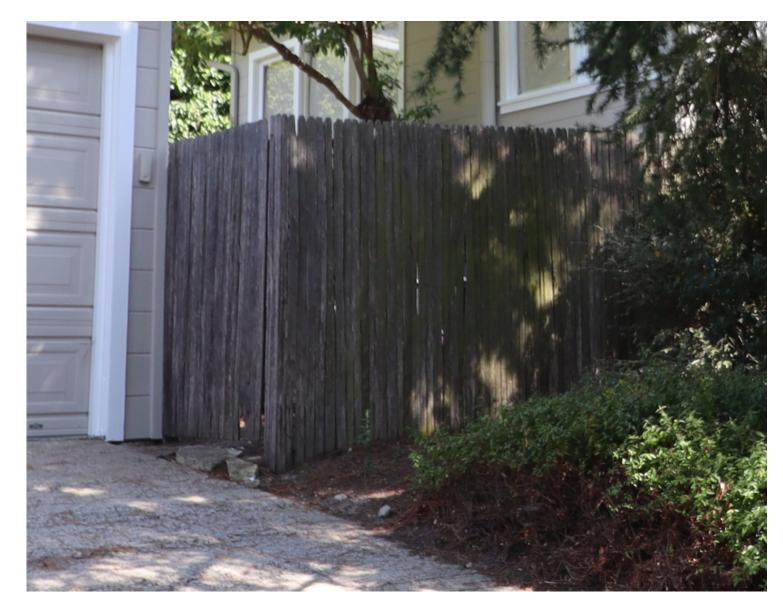
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EXISTING SPLIT PALING WOOD FENCE (72" TALL MAX)



EXISTING FENCE AND WALL AT STONE PATIO



TAIGE AND WALL AT GTONE DATIO

### TABLE R302.1(1)

		EXTERIOR WALLS			
EXTERIOR W	ALL ELEMENT	MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE		
Walls	Fire- 1 hour—tested in accordance resistance with ASTM E119 or UL 263 with rated exposure from both sides		< 5 feet		
walls	Not fire- resistance rated	0 hours	≥ 5 feet		
	Not allowed	N/A	< 2 feet		
Projections	Fire- resistance rated	1 hour on the underside <sup>a, b</sup>	≥ 2 feet to < 5 feet		
	Not fire- resistance rated	0 hours	≥ 5 feet		
	Not allowed	N/A	< 3 feet		
Openings in walls	25% maximum of wall area	0 hours	3 feet		
	Unlimited	0 hours	5 feet		
	411	Comply with Section R302.4	< 3 feet		
Penetrations	All	None required	3 feet		

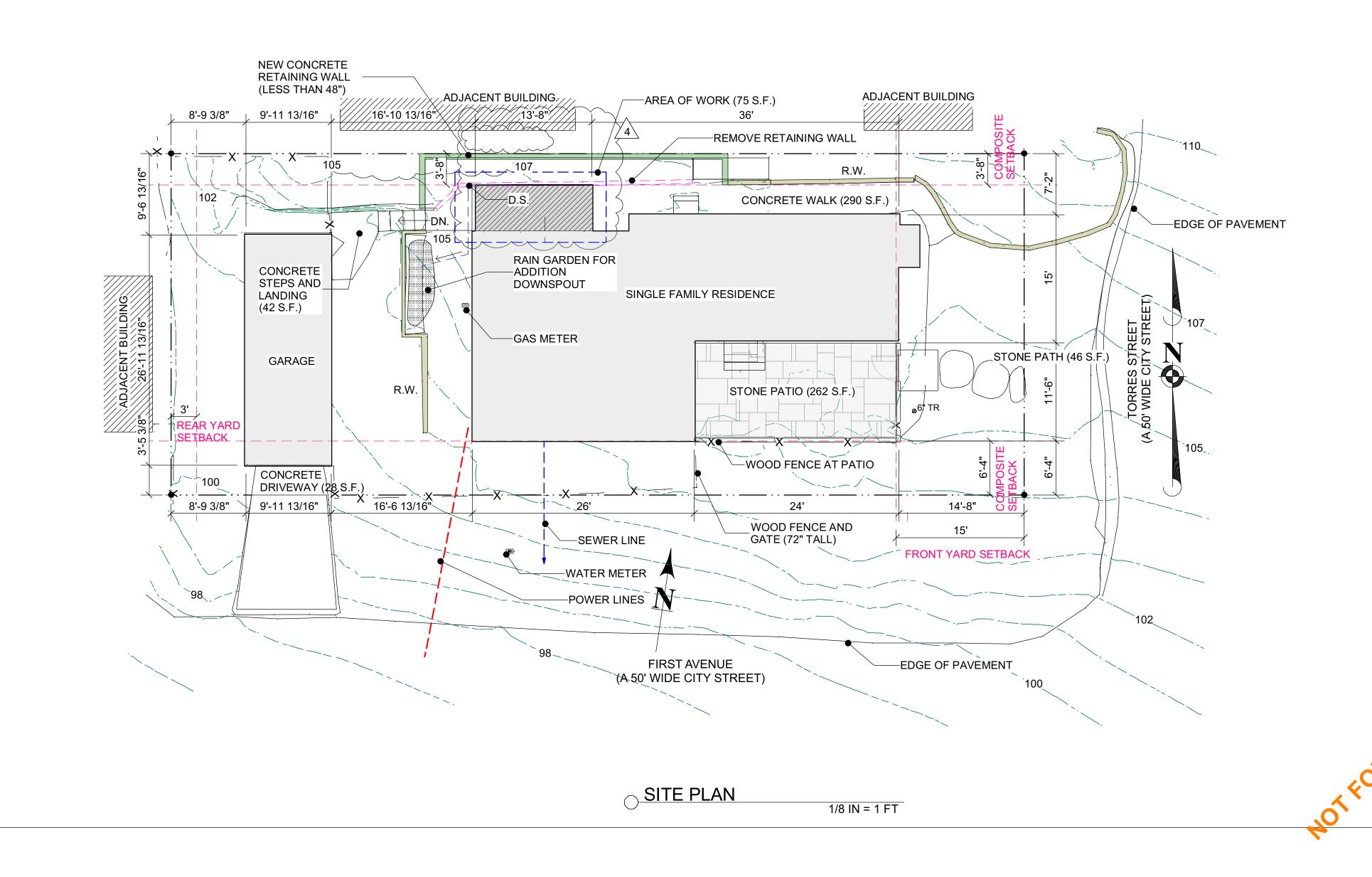
For SI: 1 foot = 304.8 mm.

## N/A = Not Applicable.

- A. ROOF EAVE FIRE-RESISTANCE RATING SHALL BE PERMITTED TO BE REDUCED TO 0 HOURS ON THE UNDERSIDE OF THE EAVE IF FIREBLOCKING IS PROVIDED FROM THE WALL TOP PLATE TO THE UNDERSIDE OF THE ROOF SHEATHING
- B. ROOF EAVE FIRE-RESISTANCE RATING SHALL BE PERMITTED TO BE REDUCED TO 0 HOURS ON TE UNDERSIDE OF THE EAVE PROVIDED THAT GABLE VENT OPENINGS ARE NOT INSTALLED.

# FIRE SEPARATION INFORMATION

NOTE: WALL NEAR NORTH PROPERTY LINE IS LESS THAN 5' FROM THE PROPERTY LINE. REFER TO TABLE R302.1(1) FOR FIRE RESISTANCE RATINGS. BOTH WALL, AND EAVES AND ROOFING AT THESE LOCATIONS SHALL BE ONE HOUR RATED CONSTRUCTION



REVISIONS

1 2/5/2024

2 4/29/2024

3 5/13/2024

4 6/17/2024

h 831,747,4718 26453 mission fields road carmel CA 93923 info @



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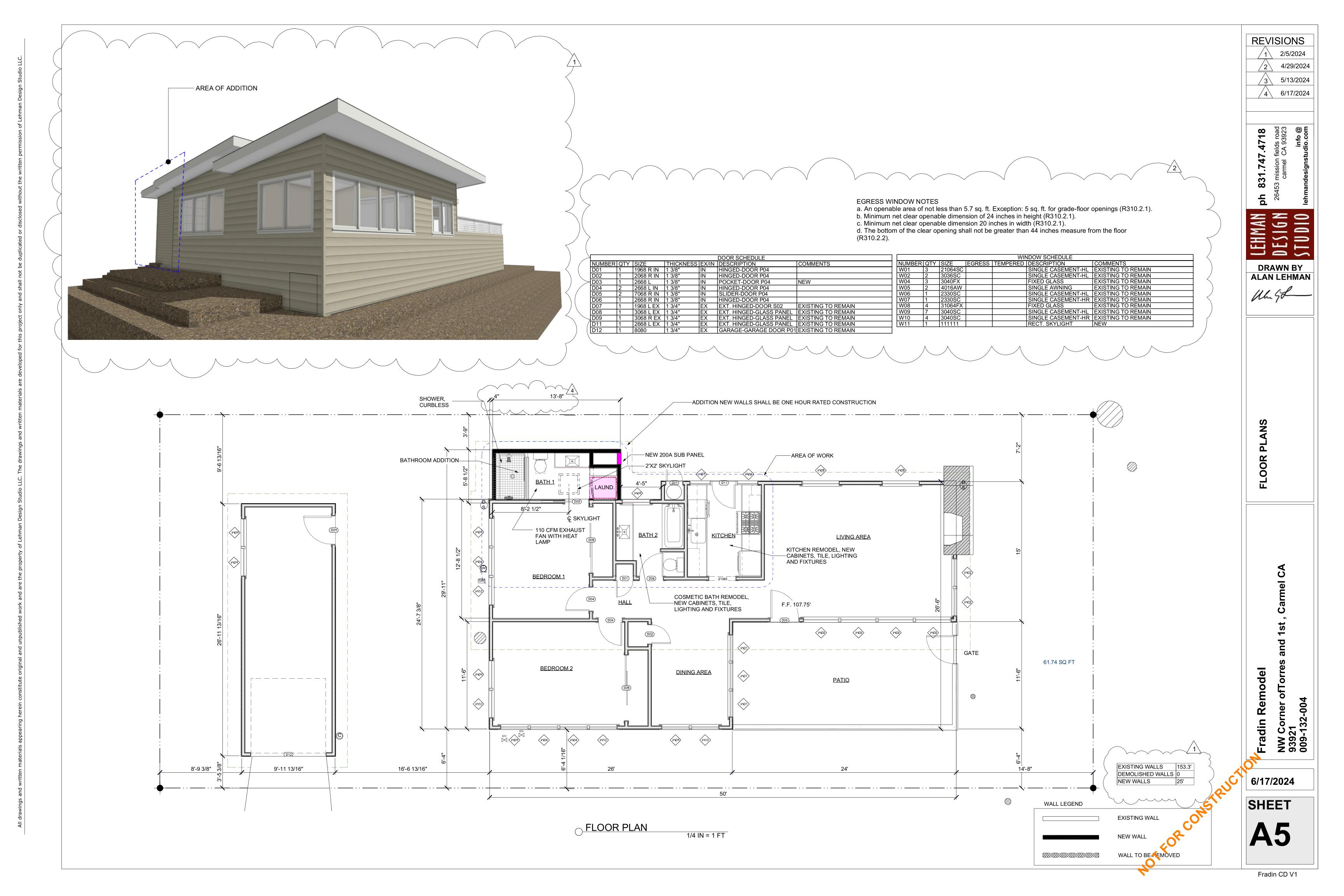
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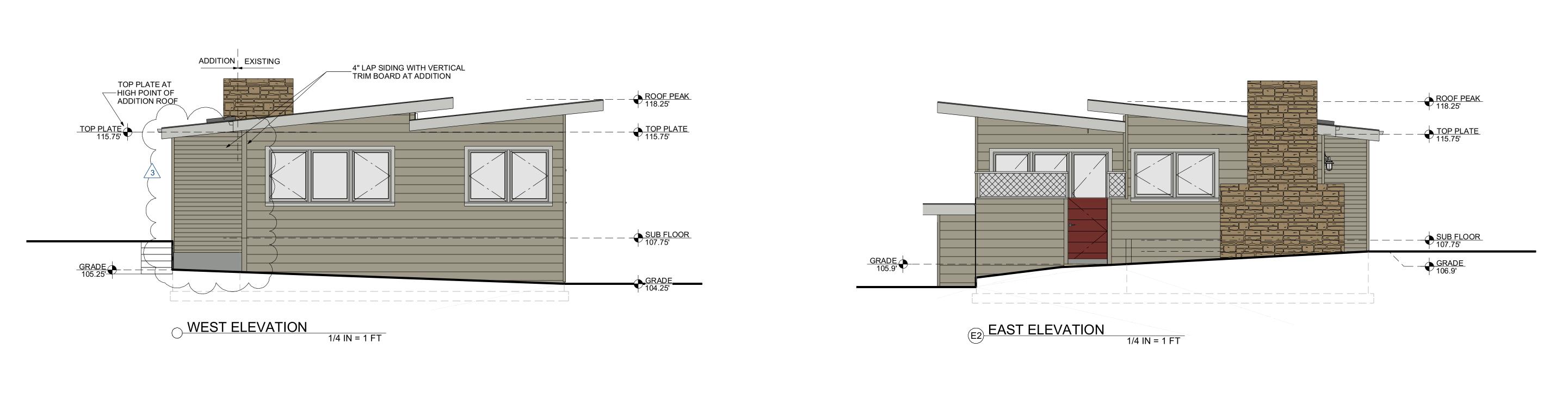
Fradin Remodel

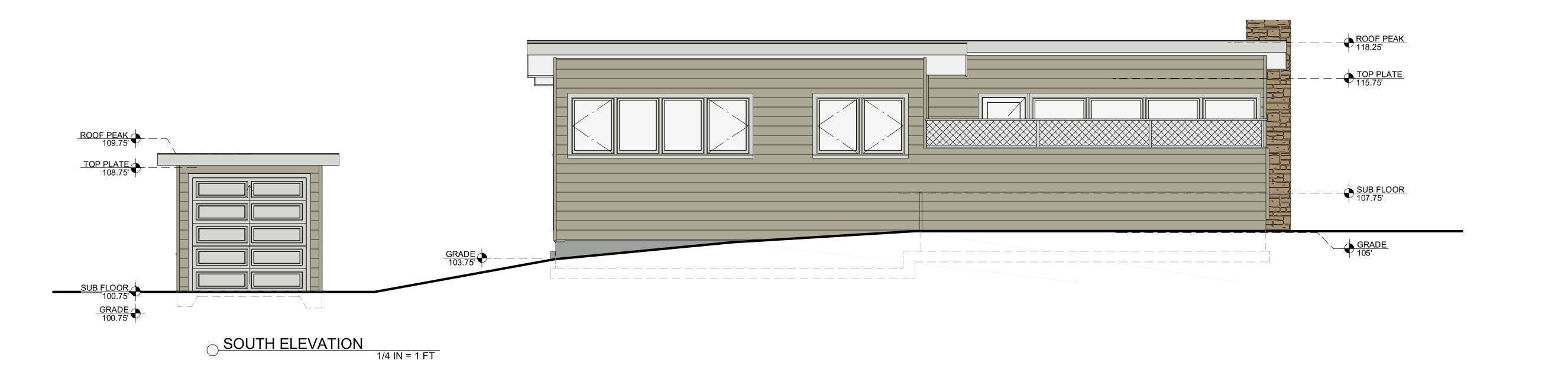
NW Corner ofTorres and 1st , Carmel CA
93921
009-132-004

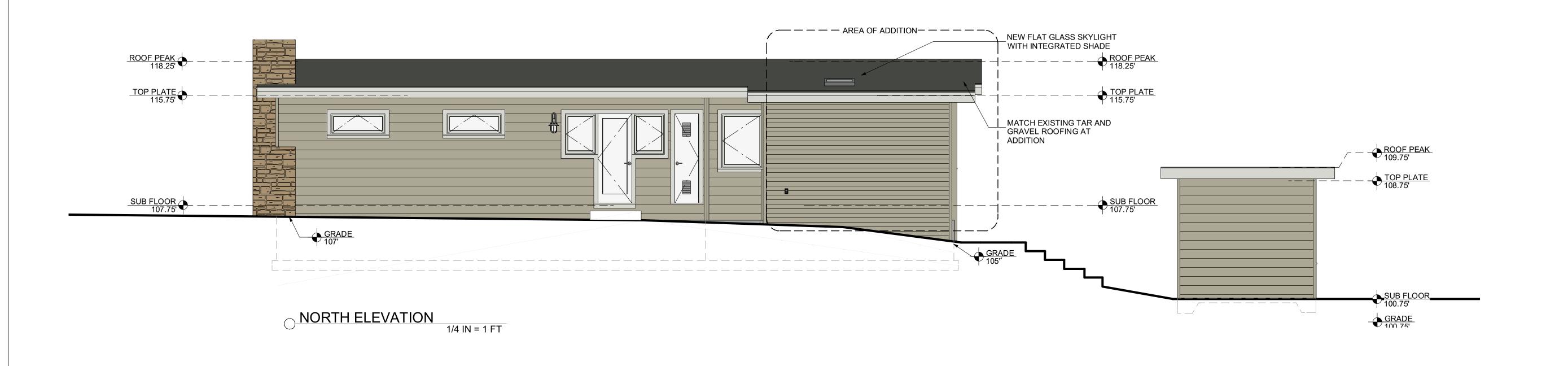
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SHEET A6

#### CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION OFFICE OF THE STATE FIRE MARSHAL FIRE ENGINEERING & INVESTIGATIONS DIVISION **BUILDING MATERIALS LISTING PROGRAM**

#### LISTING SERVICE

LISTING No.:	8160-2134:0101
CATEGORY:	8160 - UNDER EAVE FOR WILDLAND URBAN INTERFACE (W.U.I)
LISTEE:	Boral Composites Inc. 200 Mansell Court East, Suite 305, Roswell, GA, 30076 Contact: Hathorn, Stan (770) 645-2888 Email: shathorn@westlake.com
DESIGN:	Boral TruExterior® Trim 5/8" to 1-1/2 " thick and widths ranging from 1-1/2" to *15 1/2" actual dimensions. Refer to the manufacturer's installation instructions and product dat sheets.
RATING:	SFM 12-7A-3
INSTALLATION:	In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.
MARKING:	Listee name, Model number, rating and SFM label.
APPROVAL:	Listed as under eave materials for use in the Wildland Urban Interface areas. Refer to manufacturer's Installation Manual for details.
NOTES:	
	*Rev 12-15-15
results and/o	s based upon technical data submitted by the applicant. OSFM Fire Engineering staff has reviewed the or other data but does not make an independent verification of any claims. This listing is not an tor recommendation of the item listed. This listing should not be used to verify correct operational

Page 1 of 1

Listing Expires: 06/30/2024

# WUI INFORMATION FOR BORAL TRIM

information sources.

Authorized By: Victor Wong, Program Coordinator Fire Engineering & Investigations Division

Date Issued: 03/17/2023

## TITANIUM° FR In Wildland Urban Interface (WUI) areas or anywhere there may be a high risk of wildfires, a Class A fire resistant roof is WILDFIRE FREQUENCY required to help prevent external structure fires from spreading. Relatively Low Moderate As WUI continues to grow, these fires will Relatively High become an increasing problem for fire departments across the country.

There's an important distinction between a fire rating and a fire classification. Roof coverings are classified, not **fire rated**, nor do they generally contribute to a fire rating.

All roof coverings are required to be classified with respect to fire resistance. Testing in accordance with ASTM E108 or UL790 involves more than the roof covering. The entire roof assembly which includes roof sheathing, underlayment and any insulation (typically for low slope roofing) is tested.

Fire classifications are divided into the following distinct categories:

#### Class A – Effective against severe fire exposure Class B – Effective against moderate fire exposure Class C – Effective against light fire exposure

In a metal roof system, most products cannot meet the requirements for Class A fire resistance without either a special fire-retardant underlayment or installation of gypsum panels (such as DensDeck) over the roof sheathing.

Titanium® FR High Temp and Fire Resistant Self-Adhered Underlayment is specifically designed to meet wildland-urban Class A requirements as a critical component of a roof assembly. Its proprietary technology mitigates fire spread to the roof deck under metal, tile, or asphalt roof coverings.



Plus, it offers industry-leading benefits on the jobsite. A specially

engineered self-adhesive layer allows for easier repositioning and exclusive Sure-Foot® technology provides superior walkability, wet or dry. All from a brand you know and trust, providing protection in thousands of applications. For more information on Titanium® FR Self-adhered underlayment visit titaniumundermetal.com



# **Modern Forms 'Balthus 14"**

### **Features**

- Aluminum construction
- Includes a mouth blown hammered glass shade
- Integrated LED lighting
- Intended for outdoor use
- Dimmable via ELV dimming
- · ETL rated for wet locations Dark Sky compliant
- Meets California Title 24 energy standards Covered under a 5 year functional and 2 year finish manufacturer warranty

	Wattage	Voltage	LED Lumens	Delivered Lumens
13"	10W		800	349
163/8"	12W	120V	1000	403
21"	15W		1200	520
	163/8"	163/8" 12W	163/8" 12W 120V	163/6" 12W 120V 1000

# **EXTERIOR WALL SCONCE**

# **Hinkley Harbor Satin Black Outdoor LED** Path Light - Style # 7F216

- Sleek modern outdoor path light.
- Satin black finish.
- Cast aluminum construction.
- Etched glass diffuser.
- From the Hinkley Lighting collection.
- Includes one 2.3 watt LED module.
- Light output is 110 lumens, comparable to a 15 watt incandescent light.
- Color temperature is 3000K.
- CRI 80.
- Non-dimmable.
- Includes stake and wiring kit.
- Works with existing low-voltage lighting systems.
- Measures 21" high, 7 1/2" wide.

# **EXTERIOR PATH LIGHT**

Titanium® FR Roll Specs

# **EXTERIOR LIGHTING INFORMATION**





Florida Product Approval



INSTALLATION INSTRUCTIONS Scan the QR or visit TitaniumUnderMetal.com



1 See actual warranty for complete details, limitations and requirements 2 See Installation Instructions for specific Class A Fire Resistant roofing assemblies.

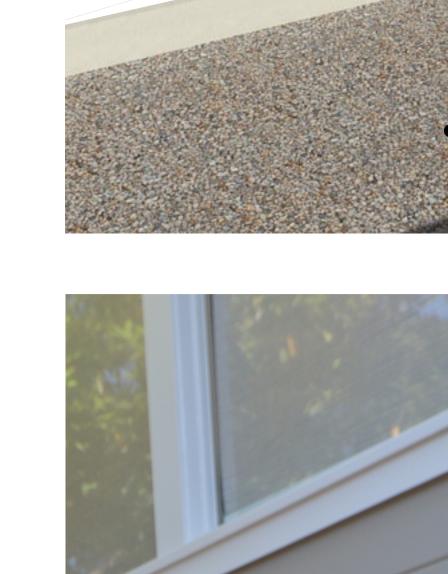
TitaniumUnderMetal.com

**TITANIUM® Self-Adhered Underlayment** 

Email: answers@owenscorning.com Toll Free: 800.567.9727 titaniumundermetal.com

‡ Testing in accordance with ASTM E108

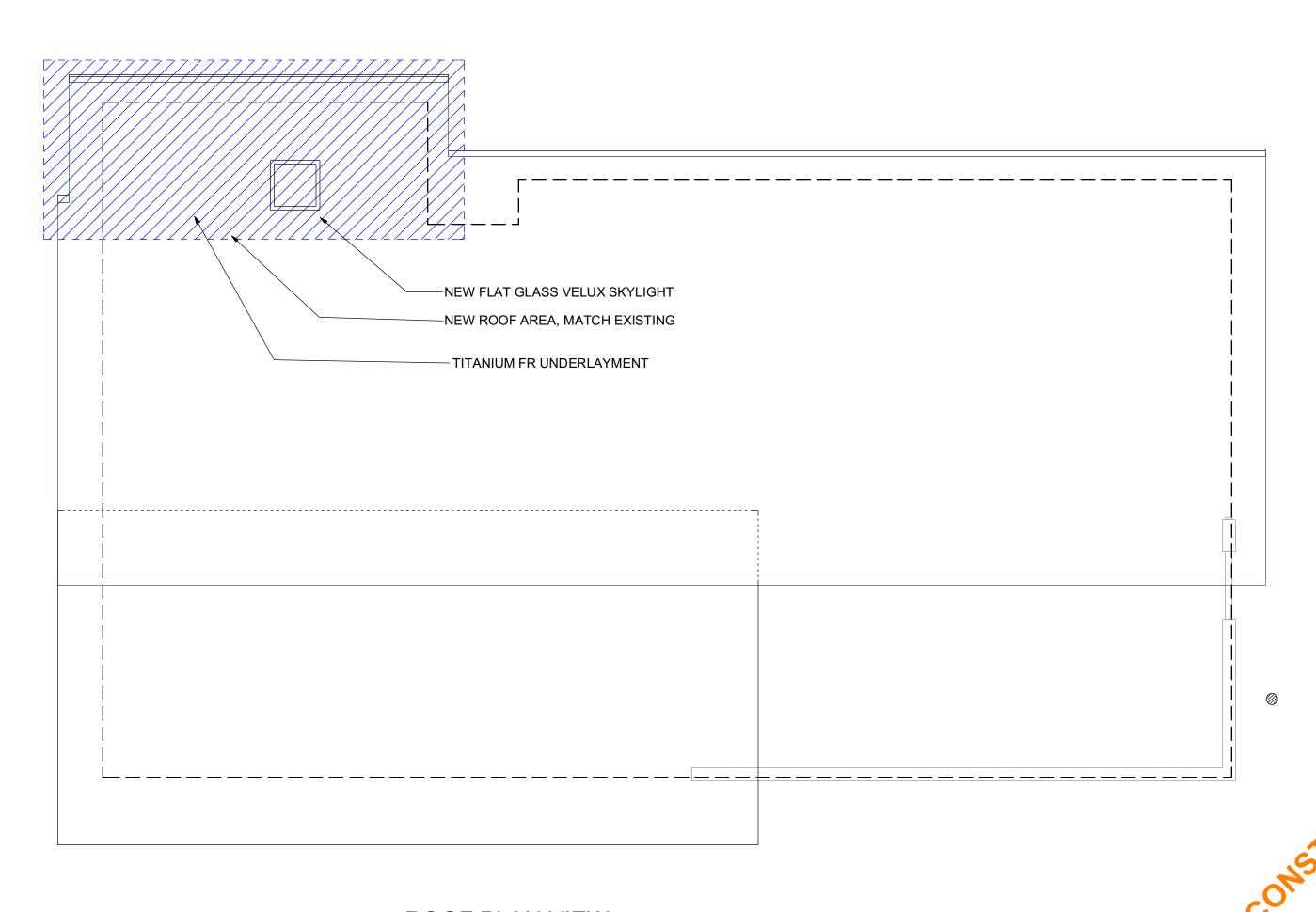
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- WHITE TRIM WITH WHITE WINDOWS LAP SIDING, TAUPE BENJAMIN MOORE- BRANDON BEIGE 977

HOT MOP ROOFING WITH GRAVEL BALLAST

COLORS / MATERIALS



**REVISIONS** 2/5/2024 4/29/2024 /3\ 5/13/2024 4 6/17/2024



/ Corner o 321 3-132-004 Fradin

6/17/2024

SHEET

2 BATHROOM MECHANICAL VENTILATION PROVIDED BY 25 CFM (MIN.) CONTINUOUS VENTILATION FROM HRV SYSTEM

3. ALL INSTALLED LIGHT FIXTURES IN KITCHEN SHALL BE HIGH EFFICACY.

4. SWITCH ADJACENT TO SINK OPERATES ONE RECEPTACLE OF OUTLET BELOW SINK FOR GARBAGE DISPOSAL.

5. HARDWIRED AND INTERCONNECTED SMOKE DETECTORS SHALL BE LOCATED IN HALLWAY AND IN ALL BEDROOMS AS SHOWN. HARDWIRED CO DETECTORS SHALL BE LOCATED AS SHOWN ON PLANS.

6. ALL LIGHTING SHALL BE CONTROLLED BY A VACANCY SENSOR OR DIMMER.

7. OUTDOOR LIGHTING FIXTURES THAT ARE ATTACHED TO THE BUILDINGS SHALL BE HIGH EFFICACY, CONTROLLED BY A MANUAL ON/OFF SWITCH AND CONTROLLED BY A COMBINATION PHOTO-CONTROL/MOTION SENSOR, OR PHOTO SENSOR AND CHRONOLOGICAL TIMER. ALL EXTERIOR FIXTURES SHALL BE DARK SKY COMPLIANT.

8.AFCI PROTECTION IS REQUIRED FOR ALL RECEPTACLES EXCEPT FOR THOSE LOCATED OUTSIDE, IN BATHROOMS, GARAGES, ATTICS AND BASEMENTS OR CRAWL SPACE AREAS.

A. KITCHEN AND LAUNDRY REQUIRE GFCI AND AFCI PROTECTION.

B. BATHROOMS, GARAGES, LAUNDRY, KITCHEN COUNTERTOPS, MECHANICAL AREAS, CRAWL SPACE AND EXTERIOR REQUIRE GROUND FAULT CIRCUIT INTERRUPTERS (GFCI).

9. KITCHEN SHALL HAVE (2) 20 AMP DEDICATED BRANCH CIRCUITS, LAUNDRY AND BATHROOM AREA SHALL EACH HAVE (1) 20 AMP DEDICATED BRANCH CIRCUIT (MIN.)., EACH FORCED AIR HEATING UNIT (FAU) SHALL HAVE (1) 20 AMP DEDICATED BRANCH CIRCUIT.

10. ALL NEW RECEPTACLES SHALL BE TAMPER RESISTANT.

11. DEDICATED CIRCUIT FOR MAIN KITCHEN REFRIGERATOR MOTOR SHALL ALSO POWER THE BELL FOR THE FIRE SPRINKLERS.

12. ELECTRICAL SERVICE LATERAL SUPPLYING THE SITE SHALL BE PLACED UNDERGROUND IN ACCORDANCE WITH CMC 15.36.020

13. ALL RECESSED DOWN-LIGHT FIXTURES SHALL BE INSULATION CONTACT (IC) AND AIR TIGHT (AT) RATED AND SHALL HAVE NON-SCREW BASED SOCKETS

14. ALL FIXTURES LOCATED IN TUB/SHOWER ENCLOSURES SHALL BE LISTED FOR INSTALLATION IN WET LOCATIONS.

15. LIGHTING IN BATHROOMS, GARAGES, LAUNDRY ROOMS AND UTILITY ROOMS SHALL HAVE AT LEAST ONE LUMINAIRE CONTROLLED BY A VACANCY SENSOR

16. RECEPTACLES LOCATED IN DAMP OR WET LOCATIONS SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF AND SHALL BE LISTED WEATHER RESISTANT TYPE.

17. ALL EXTERIOR LIGHT FIXTURES SHALL BE LISTED AS "W.P." (WEATHER PROTECTED).

18.ALL ELECTRICAL EQUIPMENT THAT IS ENTERED INTO FOR NEW CIRCUITS OR RECONFIGURATION OF CIRCUITRY SHALL BE BROUGHT TO MEET CURRENT CODE REQUIREMENTS. "EXISTING" SHALL BE INTERPRETED AS NOT BEING AFFECTED BY THE WORK WITHIN THE SCOPE OF THIS PERMIT, AN ELECTRICAL PLAN APPROVAL DOES NOT WAIVE ANY REQUIREMENTS OF THE 2019 CEC OR CENC

19. FIRE BARRIERS REQUIRED ELECTRICAL BOXES TO BE MAINTAIN A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES IN NONCOMMUNICATING STUD CAVITIES. ELECTRICAL BOXES SHALL NOT EXCEED 100 SQUARE INCHES. CBC714.42 EXCEPTION 1.1.

20. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A FIRE-RESISTANCE RATING, RECESSED FIXTURE SHALL BE INSTALLED SUCH THAT THE REQUIRED, FIRE RESISTANCE WILL NOT BE REDUCED. CBC714.5.2.

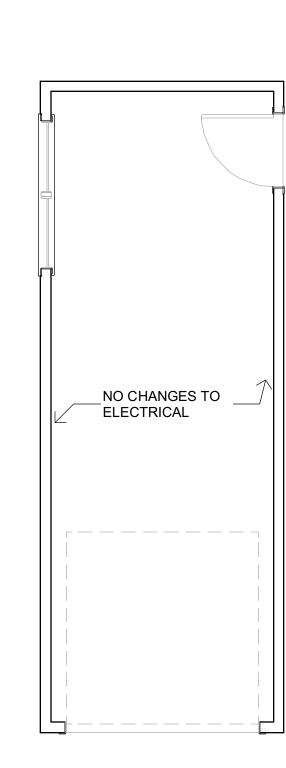
21. KITCHEN RECEPTACLES SHALL MEET ALL OF THE FOLLOWING REQUIREMENTS: CEC 210.8, 210.12, 210.23, 210.52, 406.12 ISLANDS/PENINSULAS SHALL HAVE AT LEAST ONE RECEPTACLE MOUNTED NOT MORE THAN 12 INCHES BELOW THE COUNTERTOP AND WHERE THE COUNTERTOP DOES NOT EXTEND MORE THAN 6 INCHES BEYOND ITS BASE. CEC 210.52

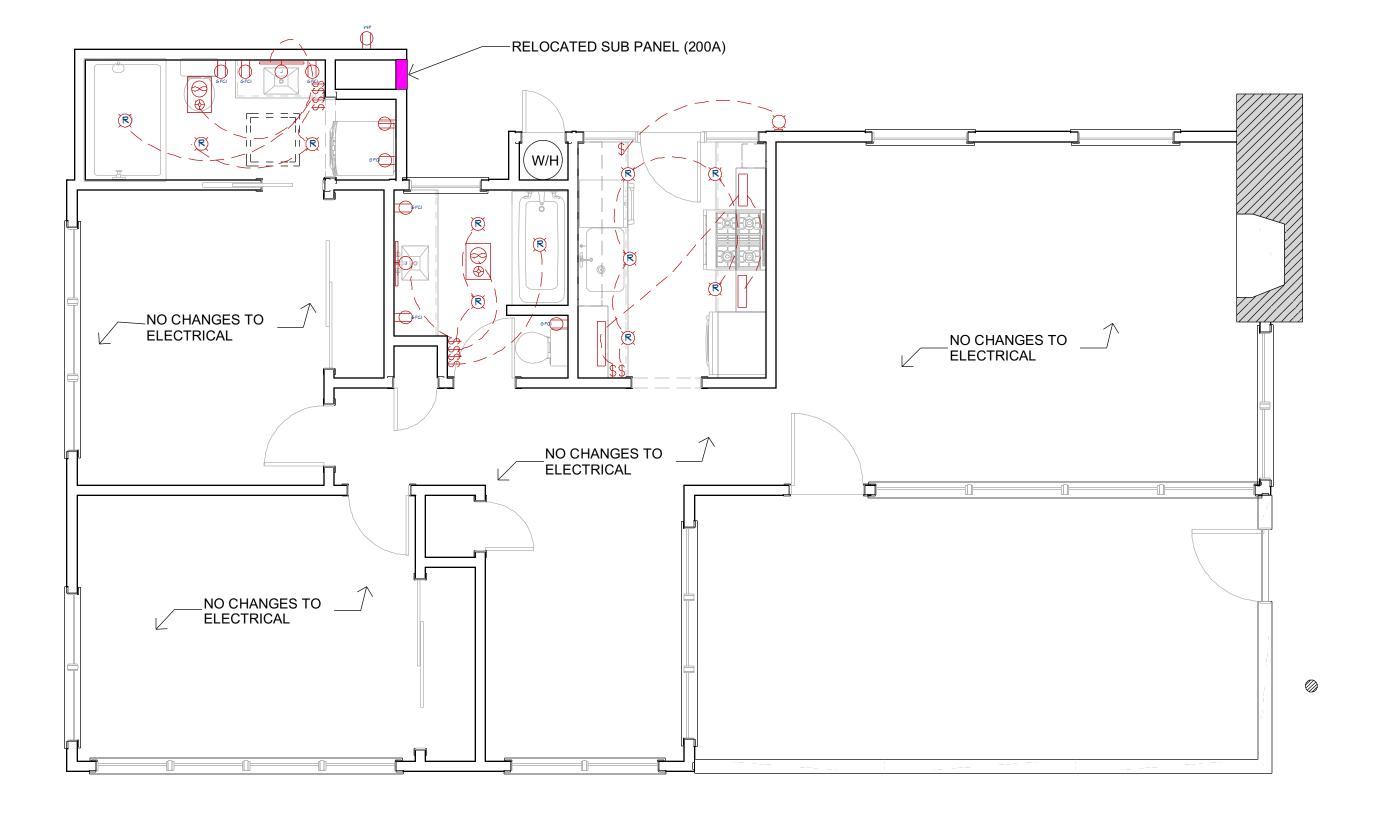
22. ELECTRIC STOVES AND OVENS SHALL BE SUPPLIED WITH A 40- OR 50- AMP BRANCH CIRCUIT. CEC 210.23.

23. ALL LIGHTING FIXTURES SHALL BE CONTROLLED BY EITHER A DIMMER SWITCH OR BY A VACANCY SENSOR SWITCH THAT REQUIRES A MANUAL ON ACTIVATION (DOES NOT AUTOMATICALLY TURN ON) AND AUTOMATICALLY TURNS OFF WITHIN 30 MINUTES AFTER THE ROOM IS VACATED. A. ALL LIGHT FIXTURES SHALL CONTAIN BULBS THAT ARE LABELED AS JA8-2016 (JA8-2016-E FOR SEALED LENS OR RECESSED FIXTURE). SCREW BASE BULBS ARE PERMITTED, EXCEPT IN RECESSED LIGHTING FIXTURES.

B. 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. CA ENERGY CODE 150.0(K)1C

24. LEVEL 2 ELECTRIC VEHICLE SUPPLY EQUIPMENT WILL BE PERMANENTLY CONNECTED AND FASTENED IN PLACE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. (CEC 625.17)





ELECTRICAL PLAN VIEW

1/4 IN = 1 FT

REVISIONS

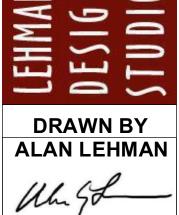
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3 5/13/2024

4 6/17/2024

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26453 mission fields road carmel CA 93923
info @ lehmandesignstudio.com



ELECTRICAL PLANS

r ofTorres and 1st , Carmel CA

NW Corner ofTorre 93921 009-132-004

6/17/2024

SHEET A8

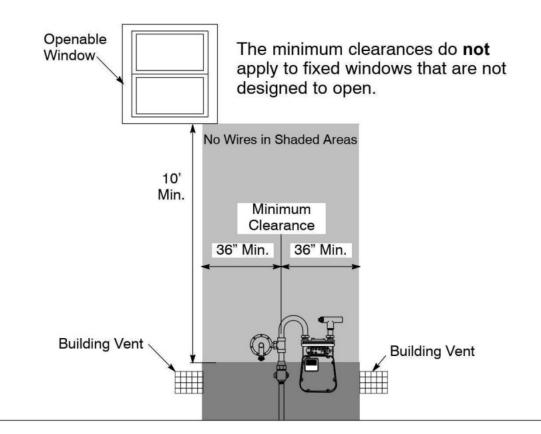


Figure 2-20
Gas Meter Set Clearance From Building Openings

Notes in reference to Figure 2-20.

- 1. Do **not** place gas regulator vents under display platforms or show windows in commercial buildings. This includes any permanent, elevated display floors or platforms associated with the window, where the purpose of the window is to present a display to the public.
- 2. Do **not** place gas regulator vents under building overhangs where the overhang is likely to direct venting gas to a building opening.
- 3. The building vent openings, sources of ignition, and above-ground water sources must be a minimum of 36 inches away from the riser.
- 4. Applicants must not install water spigots, lines, gutter systems, or other above-ground sources within 36 inches of the gas or electric facilities.
- 5. For a large meter or multi-meter manifold, the minimum separation requirement for sources of ignition, opening to buildings or sources of above-ground water, extend 12 inches beyond the farthest connection to the applicant houseline, and 10 feet above the highest regulator vent.

# GAS METER SET LOCATION NOTES

#### TABLE 1215.2(1) SCHEDULE 40 METALLIC PIPE [NFPA 54:TABLE 6.2(b)]<sup>1,2</sup>

										GAS:	NATURA	L		
	INLET PRESSU								ESSURE:	LESS THA	AN 2 psi			
										PRESSUR	E DROP:	0.5 in. w.	.c.	
									SI	PECIFIC G	RAVITY:	0.60		
							PI	PE SIZE (i	inch)					
NOMINAL:	1/2	3/4	1	1 <sup>1</sup> / <sub>4</sub>	11/2	2	21/2	3	4	5	6	8	10	12
ACTUAL ID:	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	4.026	5.047	6.065	7.981	10.020	11.938
LENGTH (feet)						CAPACIT	Y IN CU	BIC FEET	OF GAS I	PER HOU	R			ko
10	172	360	678	1390	2090	4020	6400	11 300	23 100	41 800	67 600	139 000	252 000	399 000
20	118	247	466	957	1430	2760	4400	7780	15 900	28 700	46 500	95 500	173 000	275 000
30	95	199	374	768	1150	2220	3530	6250	12 700	23 000	37 300	76 700	139 000	220 000
40	81	170	320	657	985	1900	3020	5350	10 900	19 700	31 900	65 600	119 000	189 000
50	72	151	284	583	873	1680	2680	4740	9660	17 500	28 300	58 200	106 000	167 000
60	65	137	257	528	791	1520	2430	4290	8760	15 800	25 600	52 700	95 700	152 000
70	60	126	237	486	728	1400	2230	3950	8050	14 600	23 600	48 500	88 100	139 000
80	56	117	220	452	677	1300	2080	3670	7490	13 600	22 000	45 100	81 900	130 000
90	52	110	207	424	635	1220	1950	3450	7030	12 700	20 600	42 300	76 900	122 000
100	50	104	195	400	600	1160	1840	3260	6640	12 000	19 500	40 000	72 600	115 000
125	44	92	173	355	532	1020	1630	2890	5890	10 600	17 200	35 400	64 300	102 000
150	40	83	157	322	482	928	1480	2610	5330	9650	15 600	32 100	58 300	92 300
175	37	77	144	296	443	854	1360	2410	4910	8880	14 400	29 500	53 600	84 900
200	34	71	134	275	412	794	1270	2240	4560	8260	13 400	27 500	49 900	79 000
250	30	63	119	244	366	704	1120	1980	4050	7320	11 900	24 300	44200	70 000

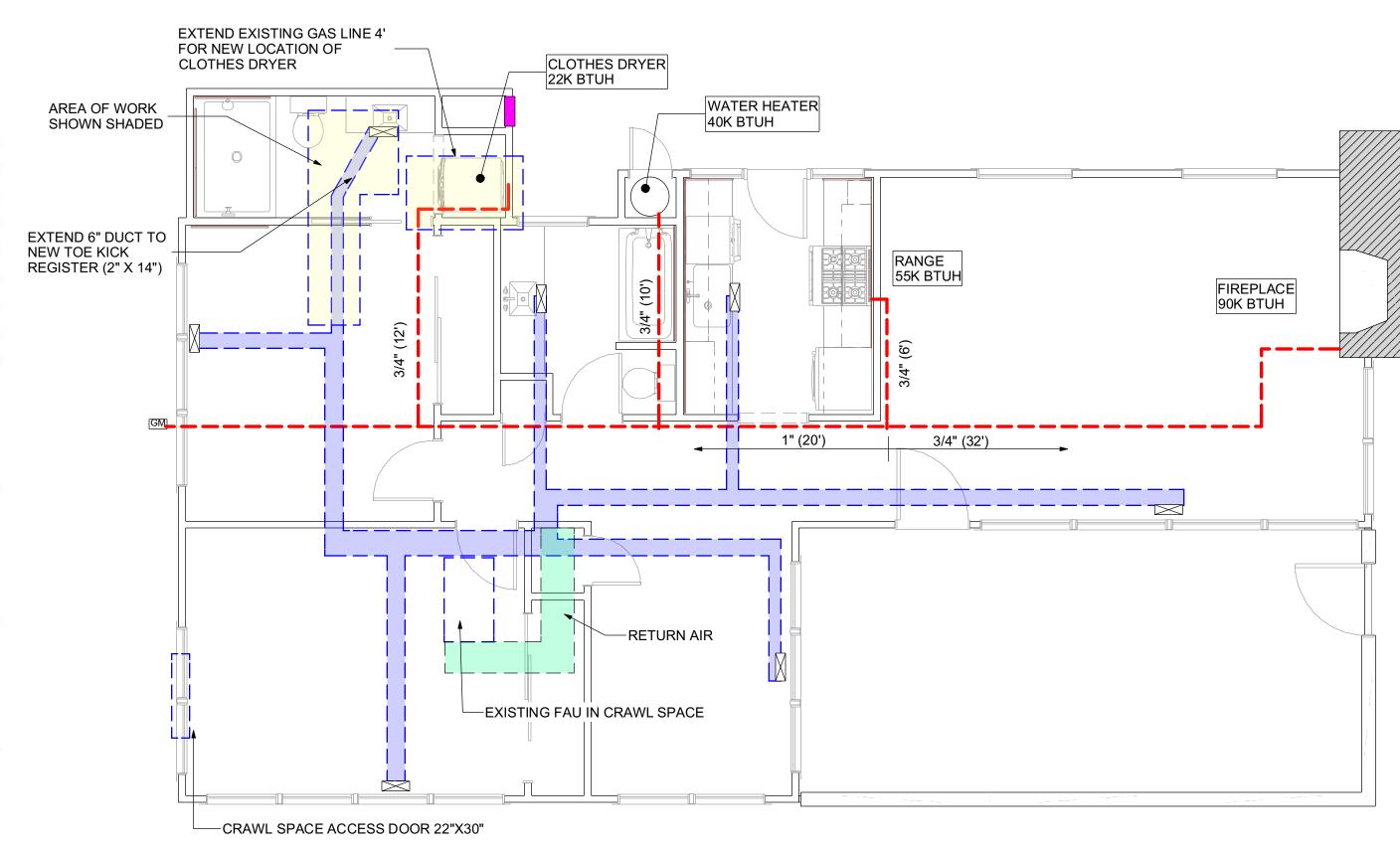
#### GAS LINE CALCULATION BASIS

WATER HEATER	40,000 BTUH
FIREPLACE	90,000 BTUH
COOKING RANGE	55,000 BTUH
CLOTHES DRYER	22,000 BTUH
TOTAL	207,000 BTUH

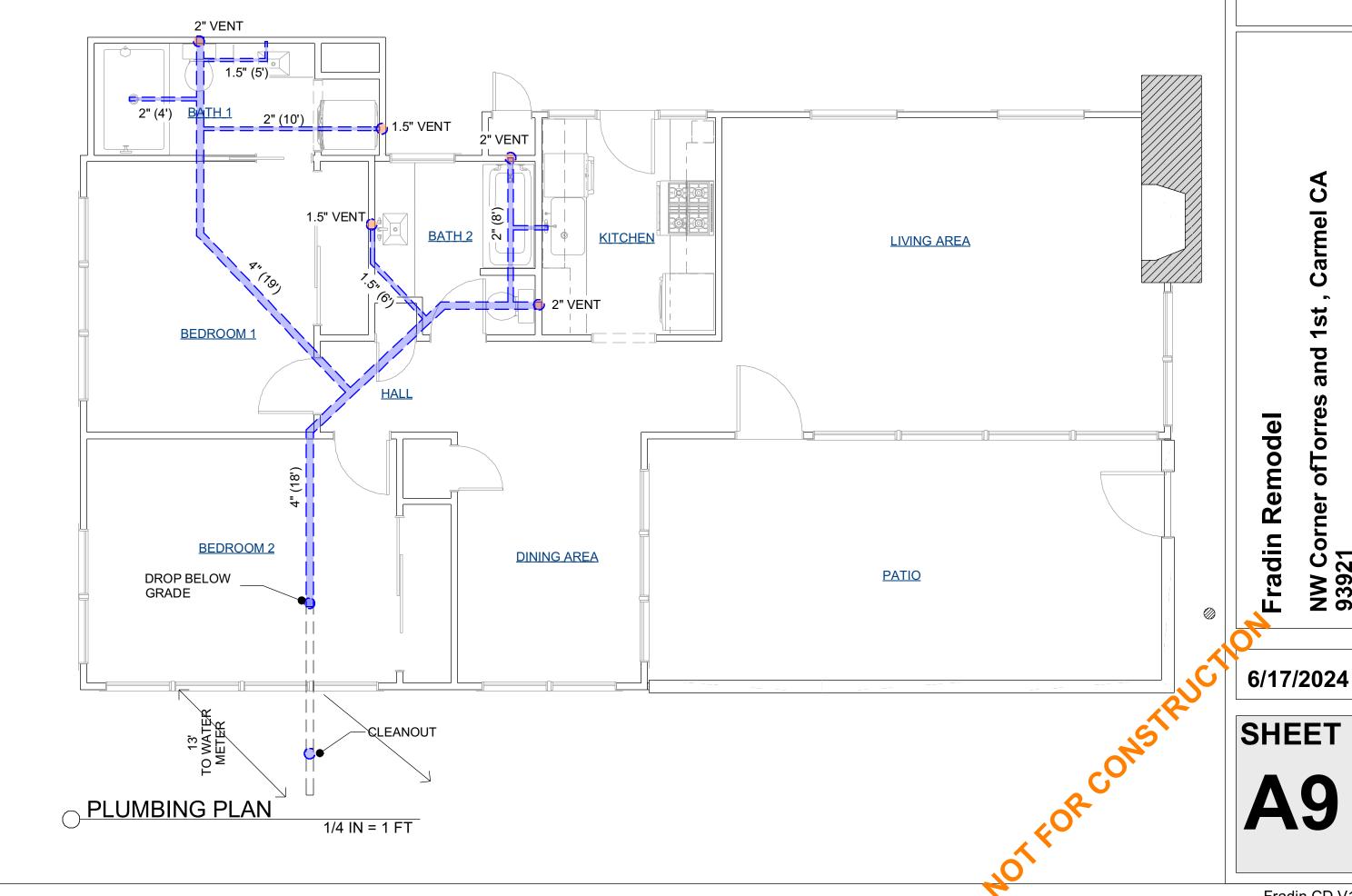
#### **TABLE 610.4** FIXTURE UNIT TABLE FOR DETERMINING WATER PIPE AND METER SIZES

METER AND STREET	BUILDING SUPPLY	PLY (feet)														
SERVICE (inches)	AND BRANCHES (inches)	40	60	80	100	150	200	250	300	400	500	600	700	800	900	1000
					PRE	SSURE	RANGE	- 46 to 6	60 psi <sup>1</sup>							
3/4	1/22	7	7	6	5	4	3	2	2	1	1	1	0	0	0	0
3/4	3/4	20	20	19	17	14	11	9	8	6	5	4	4	3	3	3
3/4	1	39	39	36	33	28	23	21	19	17	14	12	10	9	8	8
1	1	39	39	39	36	30	25	23	20	18	15	12	10	9	8	8
3/4	1¼	39	39	39	39	39	39	34	32	27	25	22	19	19	17	16
1	11/4	78	78	76	67	52	44	39	36	30	27	24	20	19	17	16
1½	1¼	78	78	78	78	66	52	44	39	33	29	24	20	19	17	16

MAIN SUPPLY FROM WATER METER (1")



# MECHANICAL PLAN VIEW



# **PLUMBING NOTES**

- 1. ALL SHOWERHEADS SHALL PROVIDE A MAXIMUM FLOW OF 1.8 GALLONS
- PER MINUTE IN ACCORDANCE WITH 2019 CGBSC.
- 2. ALL TOILETS SHALL USE A MAXIMUM OF 1.28 GALLONS PER FLUSH. 3. PROVIDE FAUCET AERATORS THAT PROVIDE A MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE.
- 4. KITCHEN FAUCETS SHALL USE A MAXIMUM OF 1.8 GALLONS PER MINUTE 5. PERMANENT BACKFLOW PREVENTION DEVICES AT ALL HOSE BIBBS AND
- FAUCETS HAVING HOSE THREADS
- 6. SHOWER STALL SHALL HAVE A MIN. 1024 SQ. IN. FLOOR AREA 7. GLASS SHOWER DOOR SHALL BE TEMPERED GLASS
- 8. SHOWER CONTROLS SHALL BE LOCATED SO THAT THEY CAN BE
- OPERATED WITHOUT ENTERING THE SHOWER STREAM. 9. SHOWERS AND TUB/SHOWER COMBINATIONS SHALL BE PROVIDED WITH
- INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE,
- THERMOSTATIC, OR COMBINATION PRESSURE BALANCE AND THERMOSTATIC TYPES THAT PROVIDE SCALD AND THERMAL SHOCK
- 10. RECEPTORS SHALL BE CAPABLE OF ENCOMPASSING A 30-INCH CIRCLE
- TO A POINT NOT LESS THAN 70 INCHES ABOVE THE DRAIN OUTLET 11. SHOWER DOORS SHALL NOT E LESS THAN 22 INCHES FOR EGRESS 12. FINISHED FLOOR OF SHOWERS SHALL BE NOT LESS THAN 1/4" OR MORE
- THAN 1/2" SLOPE TOWARDS THE DRAIN.
- 13. FINISHED DRAIN ASSEMBLY SHALL NOT BE LESS THAN 2 INCHES OR
- EXCEEDING 9 INCHES IN DEPTH WHERE MEASURED FROM THE TOP OF THE THRESHOLD TO THE TOP OF THE DRAIN.
- 14. WATER HEATER SHALL HAVE INTEGRATED RECIRCULATION PUMP TO
- SATISFY INSTANTANEOUS HOT WATER SUPPLY REQUIREMENTS
- Plumbing Fixture Fixture Units Water Closets (1.28 gal max) (2) x 2.5 F.U. Bath or Combo Bath shower (1) x 4 F.U. Shower, per head (1) x 2 F.U. Lavatory Sink (2) x 1 F.U. Kitchen Sink (1) x 1.5 F.U. Clothes Washer (1) x 4 F.U. Hose Bibs (2) = (2)x 2.5 F.U. + (1) x 1F.U.Sprinkler on drip system (not listed on CPC table) "assumed"

**Total Fixture Units** 

27.5

Fradin CD V1

**REVISIONS** 

2/5/2024

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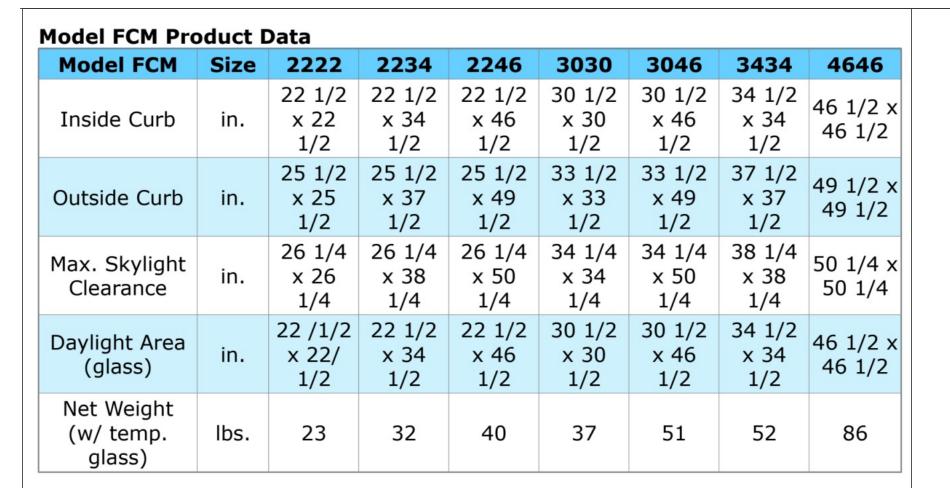
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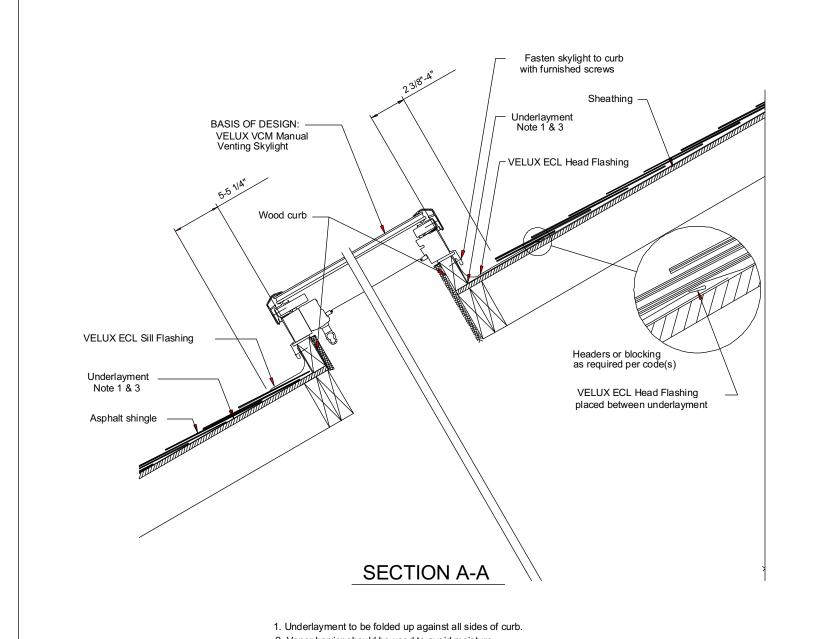
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**DRAWN BY** 

**ALAN LEHMAN** 

747

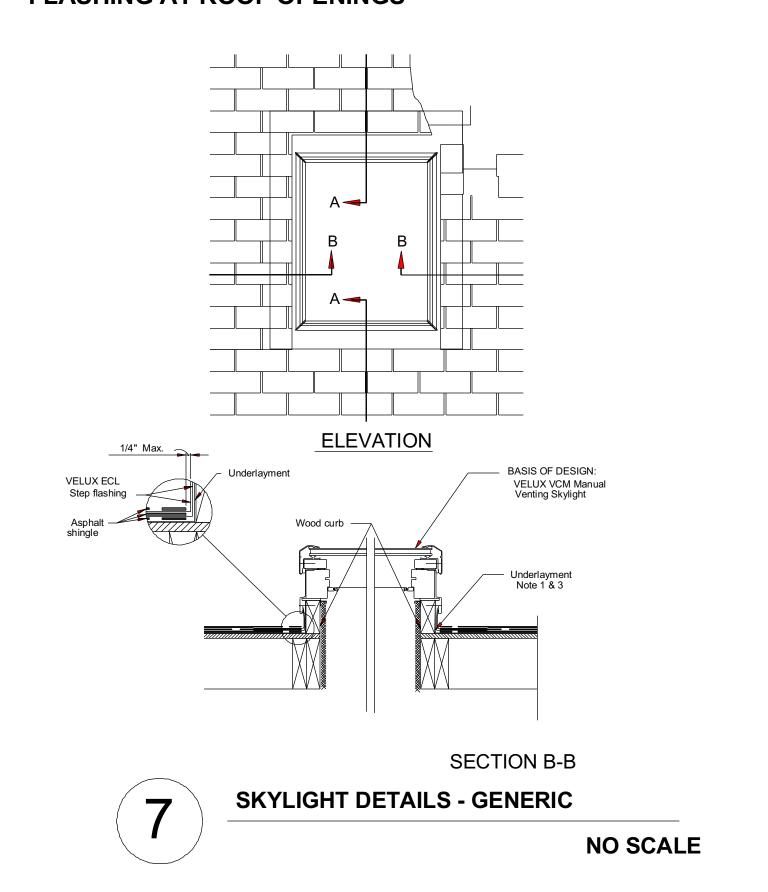


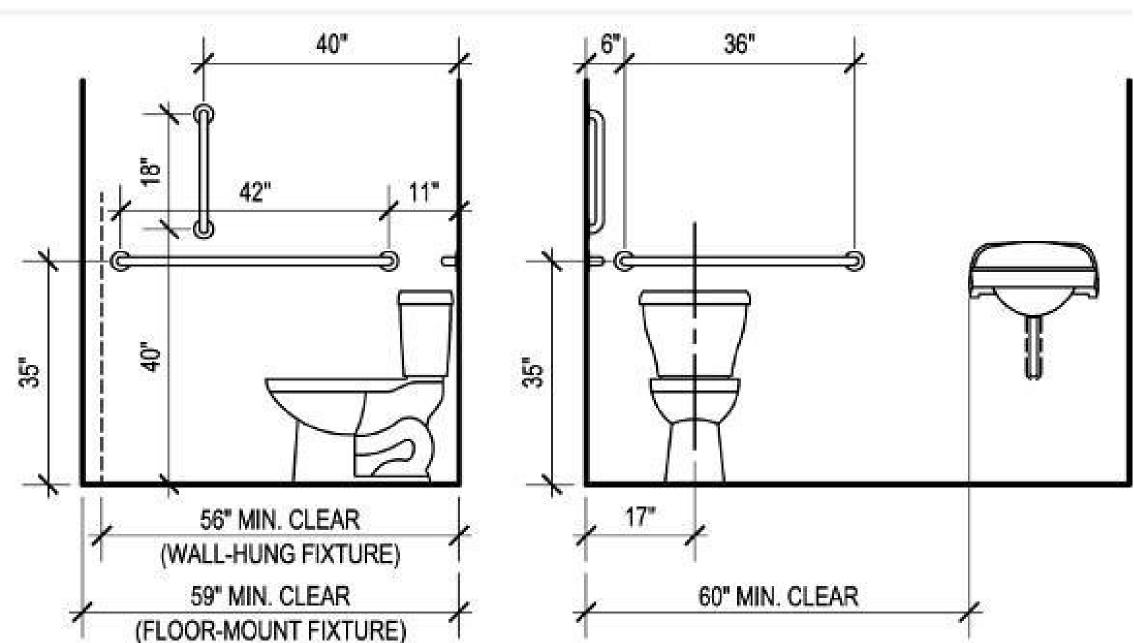


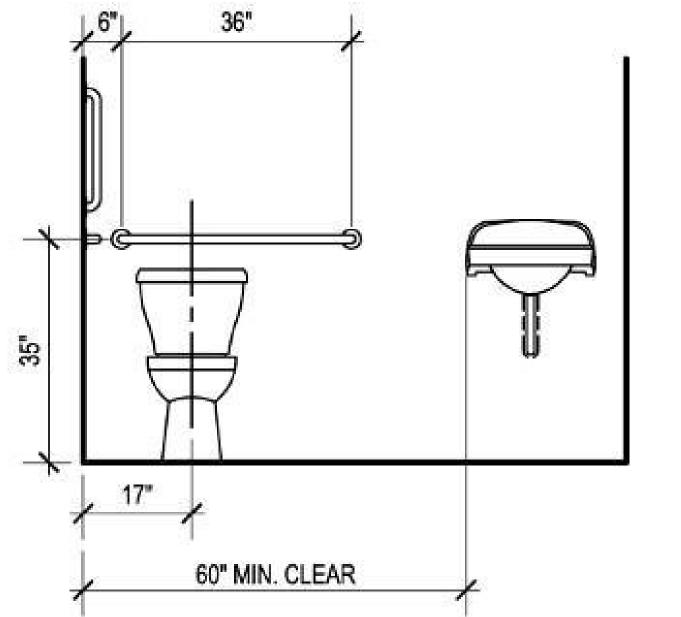
3. Wrap curb in underlayment. VELUX recommends use

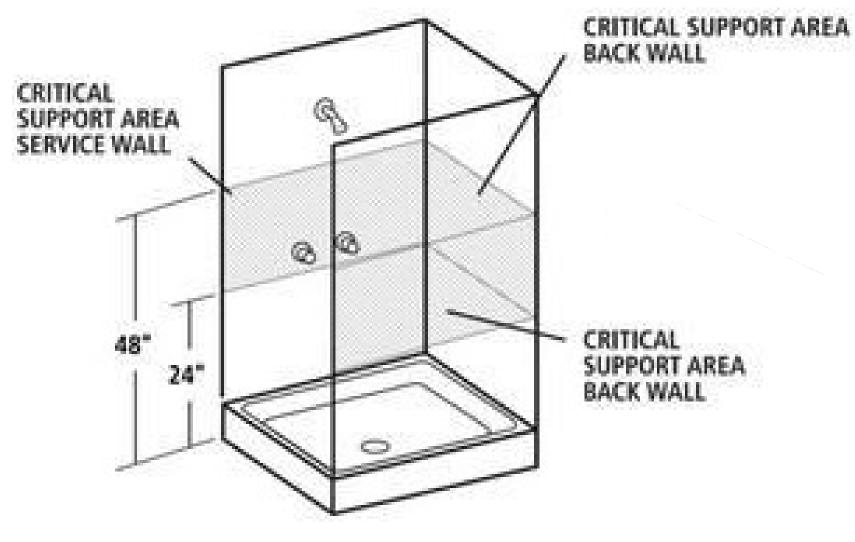
of VELUX type ZOZ underlayment in areas with severe

NOTE: SKYLIGHTS BY VELUX, MODEL VCM2230, **USE 26 GA. CORROSION RESISTANT METAL** FLASHING AT ROOF OPENINGS









**BLOCKING LOCATIONS FOR SHOWERS** 

36" MIN.

24" MIN.

"BORAL" 1X~ TRIM

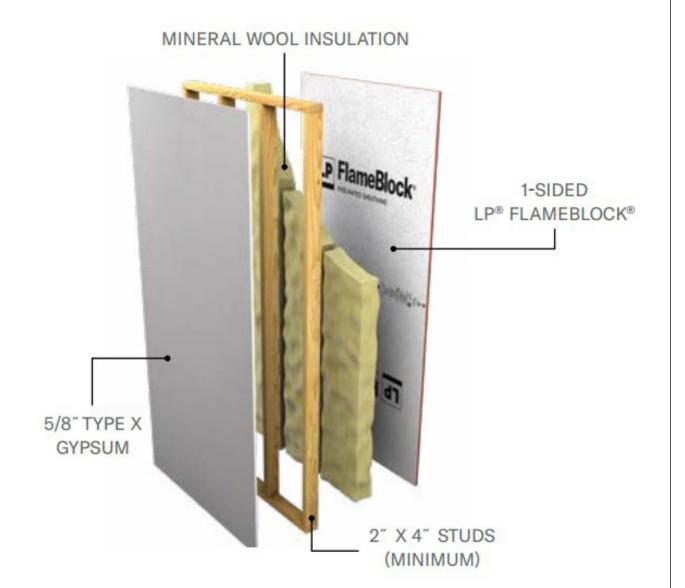
LAP SIDING SEE

2X4 STUDS @ 16" O.C.

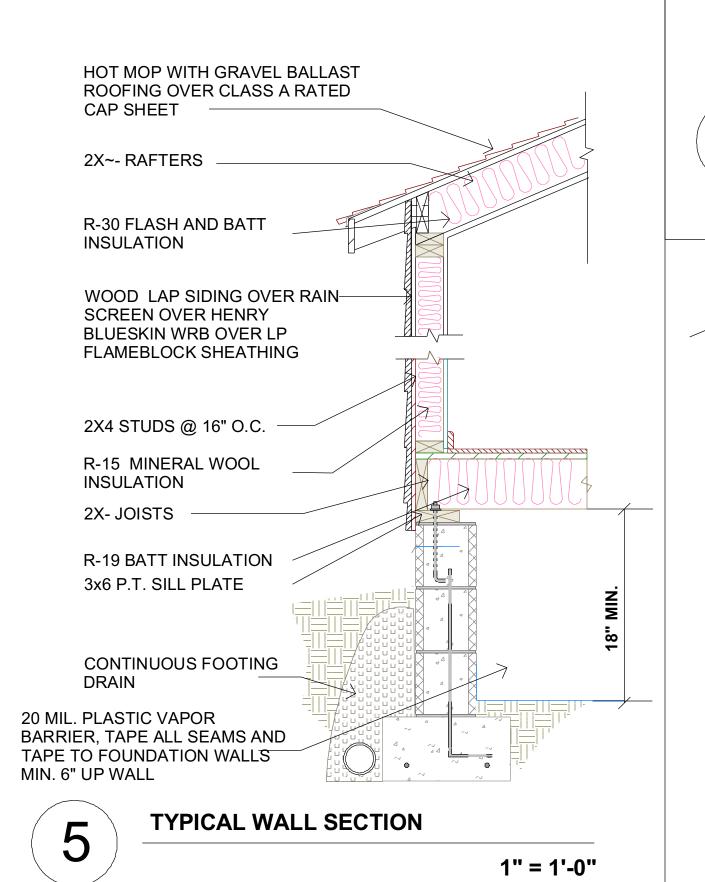
DETAIL 5

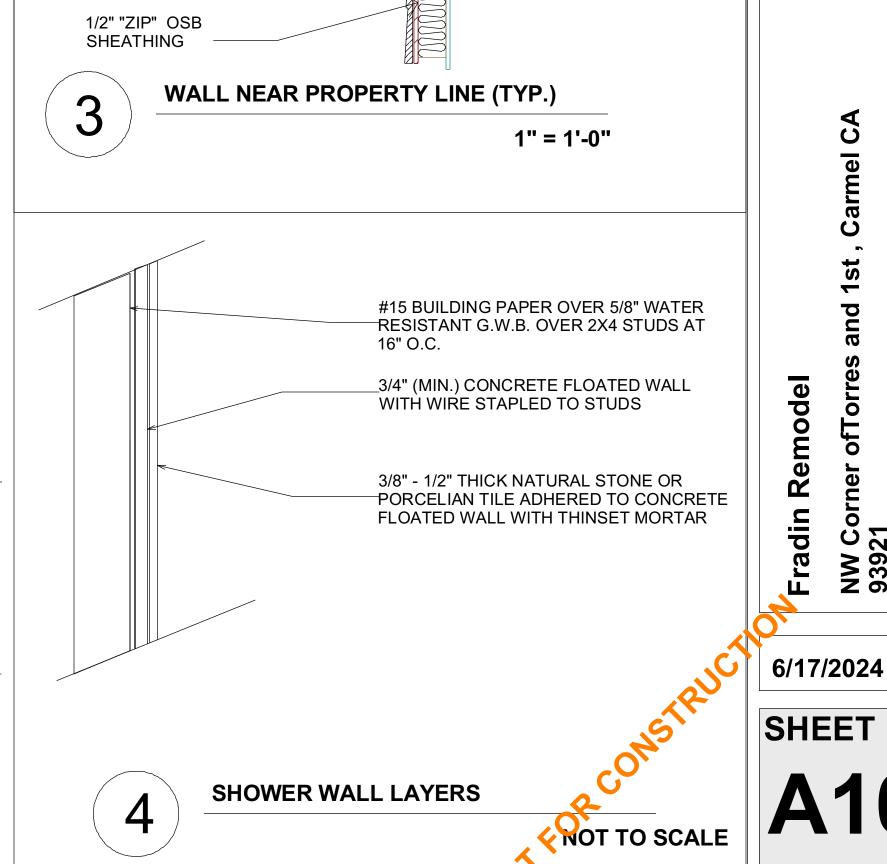


**BLOCKING LOCATIONS FOR TOILETS** 









**DRAWN BY ALAN LEHMAN** SEE DETAIL 1/A5 FOR ONE HOUR

5/8" TYPE X

CONSTRUCTION

INFORMATION

**DRYWALL** 

**REVISIONS** 

2/5/2024

4/29/2024

/3\ 5/13/2024

/4\ 6/17/2024



A.B.S. PLUMBING VENT STACK

"OATEY" ALL FLASH NO CAULK ROOF FLASHING WITH COPPER BASE AND **RUBBER SLEEVE** 

## **FORCED AIR UNIT DETAIL**

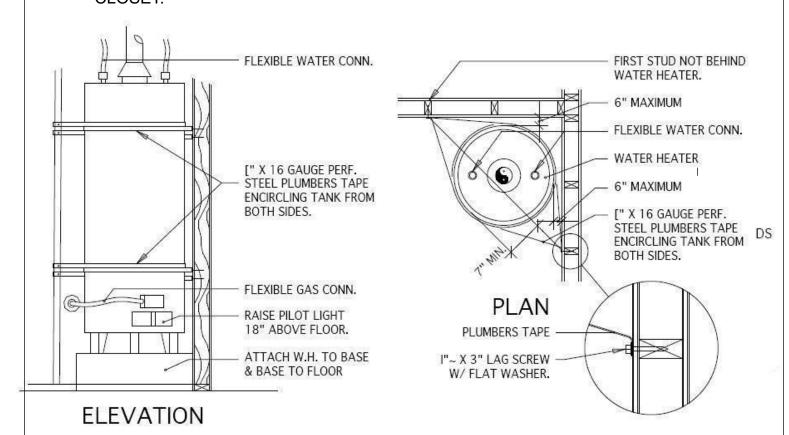
**PLUMBING VENT DETAIL (SIM.)** 

1" = 1'-0"

1" = 1'-0"

#### 1. ALL WATER HEATERS SHALL HAVE A TEMPERATURE And PRESSURE (T& P) VALVE WHICH WILL DISCHARGE TO THE EXTERIOR. END OF PIPE SHALL NOT BE MORE THAN 2' NOR LESS THAN 6" ABOVE GROUND.

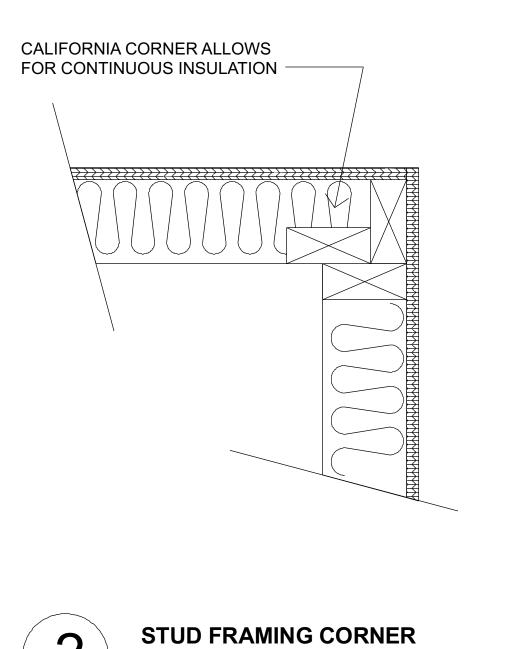
2. WATER HEATERS REQUIRE (2) 100 SQUARE INCHES NET AIR OPENINGS WITHIN TOP AND BOTTOM OF DOOR (2' WIDE MIN.) TO WATER HEATER



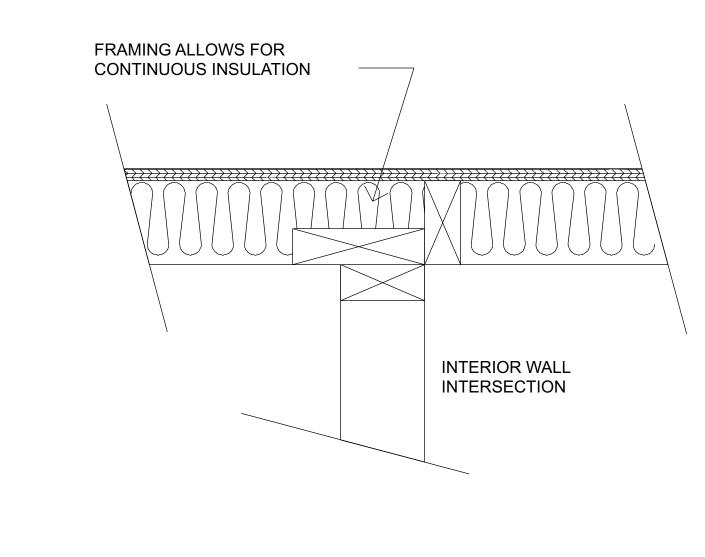


# WATER HEATER STRAPPING

**NO SCALE** 



**PVC SILL PAN DETAILS** 



# STUD FRAMING "T" INTERSECTION

**WINDOW FLASHING PER** 

SIERRA PACIFIC

HEAD FLASHING

Figure 1

inches thereafter.

CONTINUOUS BEAD OF POLYURETHANE SEALANT BY OTHERS (

Figure 11

DPENING

JAMB FLASHING

An overview of the proper flashing

Prior to setting the window into the

opening, place 1/4" non-compressible,

shown. Space the shims 1" to 2" from

each end and then approximately 12

plastic shims onto the sill plate as

sequence is shown in Figure 1.

**DRAWN BY ALAN LEHMAN** 

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**REVISIONS** 

2/5/2024

4/29/2024

5/13/2024

4 6/17/2024

3"=1'-0"

Remodel

NW Corner o 93921 009-132-004 Fradin

6/17/2024

EXTERIOR

DISCONTINUOUS
BEAD OF
POLYURETHANE SEALOUT
BY OTHERS SHEET

# **HEAD FLASHING PROCESS**

WATER HEATER NOTES

Making Folded Down Ends

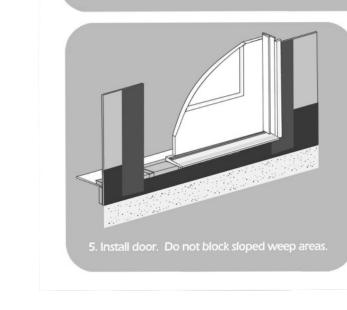


- Clip flashing back to window casing at bends to create flaps for bending.
- Trim hemmed edge so it ends at the edge of the window casing and does not extend with the other tabs.

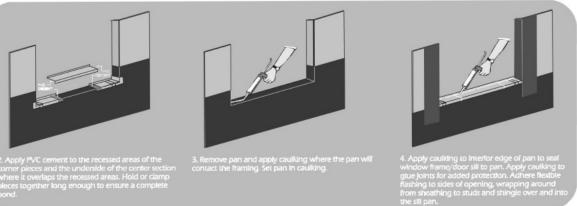


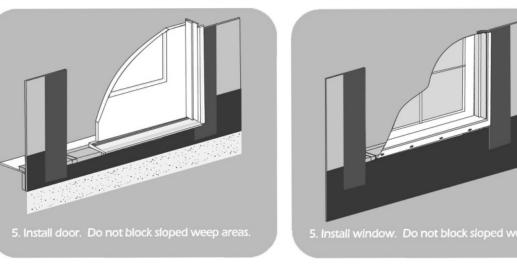


Fold front tab back against side of casing.



3"=1'-0"





Crawl Space Bath/Shower **Plumbing Access** 



P-TRAP PROTECTION

**NOT TO SCALE** 

(Arrow) Back leg of flashing should extend past head casing.

• Fold down the horizontal part of flashing over the side of the window casing. Solder head flashing at the ends to make watertight.

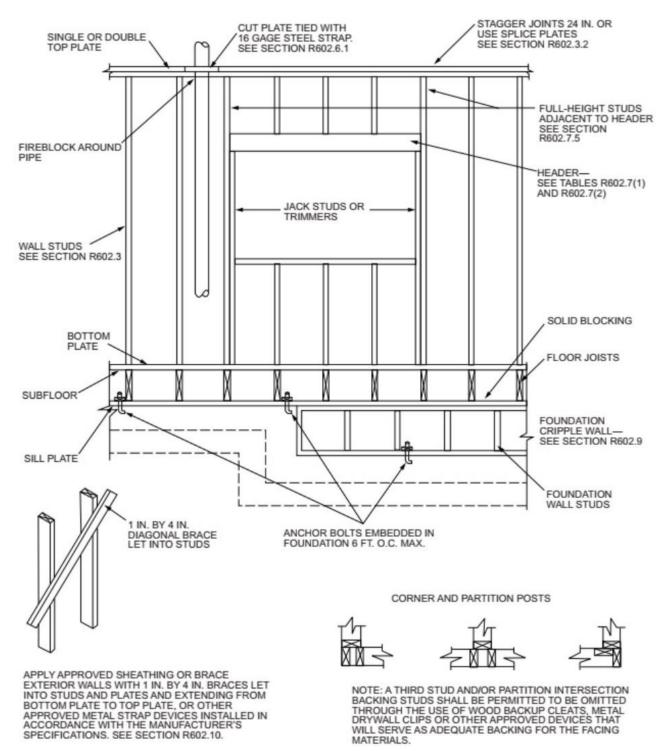
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**INSTALLATION FOR WINDOWS (TYP.)** 

Fradin CD V1

**NO SCALE** 

#### FIGURE R602.3(1) TYPICAL WALL, FLOOR AND ROOF FRAMING



25.4 mm, 1 foot = 304.8 mm.

FIGURE R602.3(2) FRAMING DETAILS



# TYPICAL WALL CONSTRUCTION

NOT TO SCALE

# RESIDENTIAL NAILING SCHEDULE

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER a, b, c	SPACING OF FASTENERS		
Roof					
1	Blocking between joists or rafters to top plate, toe nail	4-8d box (2 ½ x 0.113")or 3-8d (2½" × 0.113"); or 3-10d box (3"x0.128");or 3-3"x0.131" nails	Toe nail		
2	Ceiling joists to plate, toe nail	4-8d box (2 ½ x 0.113")or 3-8d (2½" × 0.113"); or 3-10d box (3"x0.128");or 3-3"x0.131" nails	Per joist, toe nail		
3	Ceiling joists not attached to parallel rafter, laps over partitions, face (see Sections R802.3.2, R802.3.2 and Table R802.5.1(9))	4-10d box (3"x0.128");or 3-16d common (3 ½" x 0.162");or 4-3"x0.131" nails	Face nail		
4	Ceiling joist attached to parallel rafter (heel joint) (see Sections R802.3.1 and R802.3.2 and Table R802.5.1(9))	Table R802.5.1(9)	Face nail		
5	Collar tie to rafter, face nail or 11/4" × 20 gage ridge strap to rafter	4-10d box (3"x0.128"); or 3-10d common (3" × 0.148"); or 4-3"x0.131 nails	Face nail each rafter		
6	Rafter or roof truss to plate	3-16d box nails (3 <sup>1</sup> / <sub>2</sub> " × 0.135") or 3-10d common nails (3" × 0.148"); or 4-10d box (3"x0.128"); or 4-3"x0.131" nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss'		
7	Roof rafters to ridge, valley or hip rafters or roof rafter to minimum 2" ridge beam	4-16d (31/2" × 0.135"); or 3-10d common (3" × 0.148"); or 4-10d box (3"x0.128"); or 4-3" x 0.131 nails	Toe nail		
	minum 2 nage ocum	3-16d box (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or 3-16d common (3 <sup>1</sup> / <sub>2</sub> " × 0.148"); or 3-10d box (3"x0.128"); or 3-3" x 0.131 nails	End nails		
Wall					
8	Stud to stud (not at braced wall panels)I	16d common (3 ½ " × 0.162") 10d box (3" x 0.128"); or 3"x 0.131" nails	24" o. c. face nail 16" o. c. face nail		
9	Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d box (31/2" × 0.135"); or 3" x 0.131" nails	12" o.c.		
		16d common (3 ½" x 0.162")	16" o.c. face nail		
10	Built-up header (2" to 2" header with 1/2" spacer	16d common (3 <sup>1</sup> / <sub>2</sub> " × 0.162") 16d box (3 ½" x 0.135")	16" o.c. each edge face nail 12" o.c. each edge face nail		
11	Continuous header to stud	5-8d box (2½ × 0.113"); or 4-8d common (2½"x 0.131"); or 4-10d box (3" x 0.128")	Toe nail		
12	Top plate to top plate	16d common (3 ½" x 0.162") 10d box (3" × 0.128"); or 3" x 0.131" nails	16" o.c. face nail 12" o.c. face nail		
13	Double top plate splice	8-16d common (31/2" × 0.162"); or 12-16d box (3 ½" x 0.135"); or 12-10d box (3" x 0.128"); or 12-3" x 0.131 nails	Face nail on each side of end joist (minimum 24" la splice length each side of end joint)		
			16" o.c. face nail		
14	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common (3 ½" x 0.162") 16d box (3 ½" x 0.135"); or 3" x 0.131" nails	12 ° o.c. face nail		

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER 8, b, c	SPACING OF FASTENERS
15	Bottom plate to joist, rim joist, band joist or blocking (at braced wall panels)	3-16d box (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or 2-16d common (3 <sup>1</sup> / <sub>2</sub> " × 0.162"); or 4-3" x 0.131 nails	3 each 16" o.c. face nail 2 each 16" o.c. face nail 4 each 16" o.c. face nail
		4-8d box (2 ½" x 0.113"); or 3-16d box (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or	Too noil
16	Top or bottom plate to stud	4-8d common (2 <sup>1</sup> / <sub>2</sub> " × 0.131"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131 nails	Toe nail
		3-16d box (3 ½" x 0.135"); or 2-16d common (3 ½" x 0.162"); or 3-10d box (3"x 0.128"); or 3-3" x 0.131 nails	End nail
17	Top plates, laps at corners and intersections	3-10d box (3" x 0.128"); or 2-16d common (3 ½" x 0.162"): or 3-3" x 0.131 nails	Face nail
18	1" brace to each stud and plate	3-8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113"); or 2-8d common (2 ½"x 0.131"); or 2010d box (3" x 0.128"); or 2 staples 1 <sup>3</sup> / <sub>4</sub> " ×	Face nail
19	1" × 6" sheathing to each bearing	3-8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113"); or 2-8d common (2 ½" x 0.131"); or 2-10d box (3" x 0.128"); or 2 staples, 1" crown, 16 ga., 1 <sup>3</sup> / <sub>4</sub> " long	Face nail
20	1" × 8" and wider sheathing to each bearing	3-8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113"); or 3-8d common (2 ½" x. 0.131"); or 3-10d box (3" x 0.128"); or 3 staples 1" crown, 16 ga., 1 ¾" long Wider than 1" x 8" 4-8d box (2 ½" x 0.113"); or 3-8d common (2 ½" x 0.131"); or 3-10d common (3" x 0.128"); or 4 staples, 1" crown, 16 ga., 1 <sup>3</sup> / <sub>4</sub> " long	Face nail
Floor		1	
21	Joist to sill, top plate or girder	4-8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113"); or 3-8d common (2 ½" x 0.131"); or 3-10d box (3"x 0.128"); or 3-3" x 0131" nails	Toe nail
22	Rim joist, band joist or blocking to sill or top plate (roof application also)	8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113") 8d common (2 ½" x 0.131"); or 10d box (3" x 0.128"); or 3" x 0.131" nails	4" o.c. toe nail 6" o.c. toe nail
23	1" × 6" subfloor or less to each joist	3-8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113"); or 2-8d common (2 ½" x 0.131"); or 3-10d box (3" x 0.128"); or 2 staples, 1" crown, 16 ga., 1 <sup>3</sup> / <sub>4</sub> " long	Face nail
24	2" subfloor to joist or girder	3-16d box (3 ½" x 0.135")	Blind or face nail
	<u> </u>	2-16d common (3 ½ " x 0.162")	
25	2" planks (plank & beam - floor & roof)	3-16d box (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or 2-16d common (3 ½" × 0.162")	At each bearing
200	2" planks (plank & beam - floor & roof)  Band or rim joist to joist	3-16d box (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or	N. 1969
25		3-16d box (3¹/₂" × 0.135"); or 2-16d common (3 ½" x 0.162") 3-16d common (3 ½" x 0.162") 4-10 box (3" x 0.128"), or 4-3" x 0.131" nails, or	At each bearing  End nail
25		3-16d box (31/2" × 0.135"); or 2-16d common (3 ½" x 0.162") 3-16d common (3 ½" x 0.162") 4-10 box (3" x 0.128"), or 4-3" x 0.131" nails, or 4-3" x 14 ga. staples, 7/16" crown 20d common (4" x 0.192"); or 10d box (3" x 0.128"); or 3" x 0.131" nails	At each bearing  End nail  Nail each layer as follows: 32" o.c. at top and
25	Band or rim joist to joist	3-16d box (31/2" × 0.135"); or 2-16d common (3 ½" x 0.162") 3-16d common (3 ½" x 0.162") 4-10 box (3" x 0.128"), or 4-3" x 0.131" nails, or 4-3" x 14 ga. staples, 7/16" crown 20d common (4" x 0.192"); or 10d box (3" x 0.128"); or 3" x 0.131" nails And: 2-20d common (4" x 0.192©; or 3-10d box(3 ½" x 0.128"); or 3-10d box(3 ½" x 0.128"); or 3-3" x 0.131" nails	At each bearing  End nail  Nail each layer as follows: 32" o.c. at top and bottom and staggered.  24" o.c. face nail at top and bottom staggered
25	Band or rim joist to joist	3-16d box (31/2" × 0.135"); or 2-16d common (3 ½" x 0.162") 3-16d common (3 ½" x 0.162") 4-10 box (3" x 0.128"), or 4-3" x 0.131" nails, or 4-3" x 14 ga. staples, 7/16" crown 20d common (4" x 0.192"); or 10d box (3" x 0.128"); or 3" x 0.131" nails And: 2-20d common (4" x 0.192©; or 3-10d box(3 ½" x 0.128"); or	At each bearing  End nail  Nail each layer as follows: 32" o.c. at top and bottom and staggered.  24" o.c. face nail at top and bottom staggered opposite sides.

2X10 D.F. RAFTERS @ 24" O.C.

8'-2 1/2"

EXISTING ROOF FRAMING

(NO CHANGES)

DOOR HEADER,

4X12X6' D.F.#1

	MATERIALS		Edges (inches) <sup>i</sup>	Intermediate supports c, o (inches)
		oor, roof and interior wall sheathing to framing and particleboa 602.3(3) for wood structural panel exterior wall sheathing to		
30	3/8" = 1/2"	6d common (2" × 0.113") nail (subfloor wall) <sup>j</sup> 8d common (2 <sup>1</sup> / <sub>2</sub> " × 0.131") nail (roof); or RSRS-01(2%" x 0.113" nail (roof) <sup>j</sup>	6	12 <sup>r</sup>
31	<sup>19</sup> / <sub>32</sub> " - 1"	8d common nail (2 <sup>1</sup> / <sub>2</sub> " × 0.131"); or RSRS-01; (2%" x 0.113") nail (roof) <sup>i</sup>	6	12 <sup>f</sup>
32	11/8" - 11/4"	10d common (3" × 0.148") nail or 8d (2 <sup>1</sup> / <sub>2</sub> " × 0.131") deformed nail	6	12
		Other wall sheathing h		
33	1/2" structural cellulosic fiberboard sheathing	11/2" galvanized roofing nail, 7/16" head diameter or 11/4" long 16 ga. Staple with 7/16" or 1" crown	3	6
34	25/32" structural cellulosic fiberboard sheathing	13/4" galvanized roofing nail, 7/16" head diameter or 11/2" long 16 ga. Staple with 7/16" or 1" crown	3	6
35	1/2" gypsum sheathing <sup>d</sup>	11/2" galvanized roofing nail; staple galvanized, 11/2" long; 11/4 screws, Type W or S	7	7
36	5/8" gypsum sheathingd	13/4" galvanized roofing nail; staple galvanized, 15/8" long; 1 5/8"screws, Type W or S	7	7
		Wood structural panels, combination subfloor underlayme	ent to framing	
37	3/4" and less	6d deformed (2" × 0.120") nail or 8d common (2 <sup>1</sup> / <sub>2</sub> " × 0.131") nail	6	12
38	<sup>7</sup> /8" - 1"	8d common (2 <sup>1</sup> / <sub>2</sub> " × 0.131") nail or 8d deformed (2 <sup>1</sup> / <sub>2</sub> " × 0.120") nail	6	12
39	11/8" - 11/4"	10d common (3" × 0.148") nail or 8d deformed (2 <sup>1</sup> / <sub>2</sub> " × 0.120") nail	6	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1 Ksi = 6.895 MPa. a. Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.

b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width. c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.

d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically. e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).

f. Where the ultimate design wind speed is 130 mph or less, nails for wood structural panel roof sheathing to gable end wall framing shall be space 6 inches on center. Where the ultimate wind speed is greater than 130 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to

g. Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208. h. Spacing of fasteners on floor sheathing panel edges applies to panel edge supported by framing members and required blocking and at floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof and floor sheathing panel edges perpendicular to the framing members need not be provided except as required by

other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking. j. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.
j. RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.

ROOF FRAMING PLAN (PARTIAL)

LAYOUT RAFTERS BASED

ON LOCATION OF

SKYLIGHT

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The fastener schedule provides minimum nailing requirements (i.e. size, spacing) for connecting building elements used in wood framed construction. For wood structural panels, both edge nailing and intermediate (field) nailing are specified. In addition to the nailing for wood structural panels, fasteners are specified for gypsum wall sheathing, cellulosic fiberboard wall sheathing and combination subfloor underlayment.

2/5/2024 4/29/2024 /3\ 5/13/2024 4 6/17/2024

**REVISIONS** 

31  $\infty$ 

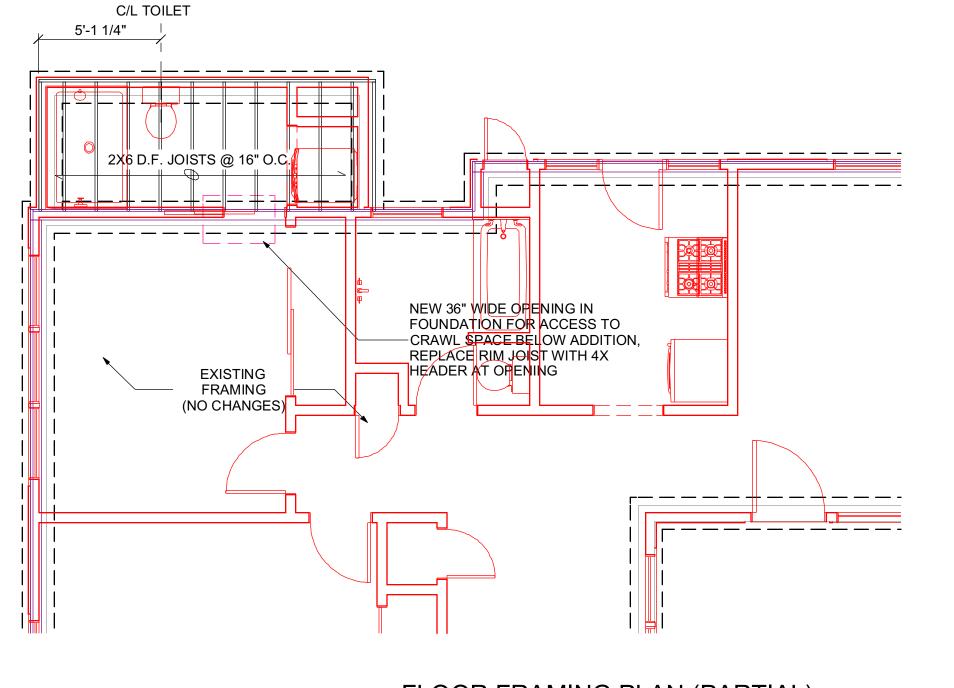


**DRAWN BY ALAN LEHMAN** 

NW Corner o 93921 009-132-004

6/17/2024

SHEET





# California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is

Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the

electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required

raceways and related components that are planned to be installed underground, enclosed, inaccessible or in

location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on amperage of installed or future receptacles or EVSE, raceway method(s), wiring schematics and

installed in close proximity to the location or the proposed location of the EV space, at the time of original

construction in accordance with the California Electrical Code.

concealed areas and spaces shall be installed at the time of original construction.

Cont. = Contractor of record for building permit or Owner if Owner/Builder

1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code Regulations,

sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such

openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing

percent of the non-hazardous construction and demolition waste in accordance with either Section

4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste

2. Alternate waste reduction methods developed by working with local agencies if diversion or

3. The enforcing agency may make exceptions to the requirements of this section when isolated

jobsites are located in areas beyond the haul boundaries of the diversion facility.

necessary and shall be available during construction for examination by the enforcing agency.

recycle facilities capable of compliance with this item do not exist or are not located reasonably

in conformance with Items 1 through 5. The construction waste management plan shall be updated as

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling,

2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or

3. Identify diversion facilities where the construction and demolition waste material collected will be

4. Identify construction methods employed to reduce the amount of construction and demolition waste

enforcing agency, which can provide verifiable documentation that the percentage of construction and

Note: The owner or contractor may make the determination if the construction and demolition waste

lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in

**4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE.** Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds

weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4

per square foot of the building area, shall meet the minimum 65% construction waste reduction

1. Sample forms found in "A Guide to the California Green Building Standards Code

(Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in

disc, web-based reference or other media acceptable to the enforcing agency which includes all of the

1. Directions to the owner or occupant that the manual shall remain with the building throughout the

3. Information from local utility, water and waste recovery providers on methods to further reduce

5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent

and what methods an occupant may use to maintain the relative humidity level in that range.

8. Information on required routine maintenance measures, including, but not limited to, caulking,

10. A copy of all special inspections verifications required by the enforcing agency or this code.

11. Information from the Department of Forestry and Fire Protection on maintenance of defensible

**Exception:** Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section

The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous,

irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of

6. Information about water-conserving landscape and irrigation design and controllers which conserve

7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5

Equipment and appliances, including water-saving devices and systems, HVAC systems,

photovoltaic systems, electric vehicle chargers, water-heating systems and other major

2. Mixed construction and demolition debris (C & D) processors can be located at the California

compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4..

Department of Resources Recycling and Recovery (CalRecycle).

demolition waste material diverted from the landfill complies with Section 4.408.1.

Specify that the amount of construction and demolition waste materials diverted shall be calculated

available at: https://www.water.ca.gov/

Excavated soil and land-clearing debris.

by weight or volume, but not by both.

requirement in Section 4.408.1

following shall be placed in the building:

d. Landscape irrigation systems.

painting, grading around the building, etc.

space around residential structures.

e. Water reuse systems.

feet away from the foundation

SECTION 4.501 GENERAL

**SECTION 4.502 DEFINITIONS** 

life cycle of the structure.

reuse on the project or salvage for future use or sale.

materials will be diverted by a waste management company.

documenting compliance with this section.

2. Operation and maintenance instructions for the following:

b. Roof and yard drainage, including gutters and downspouts.

resource consumption, including recycle programs and locations.

9. Information about state solar energy and incentive programs available.

**DIVISION 4.5 ENVIRONMENTAL QUALITY** 

12. Information and/or drawings identifying the location of grab bar reinforcements.

Public transportation and/or carpool options available in the area.

c. Space conditioning systems, including condensers and air filters.

management ordinance.

Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are

NOT APPLICABLE RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.) 2/5/2024

4/29/2024 5/13/2024 <sup>∕</sup> 4∖ 6/17/2024

**REVISIONS** 

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**DRAWN BY** 

6/17/2024

Fradin CD V1

**CHAPTER 3** 4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities. **GREEN BUILDING** 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 **SECTION 301 GENERAL** 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 301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7. 4.106.4.2.1Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or quest rooms. 301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject 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. 1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 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. Note: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved lighting fixtures are not considered alterations for the purpose of this section. for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate 1.When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1 of EV capable spaces et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates. 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. 301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and a. Construction documents are intended to demonstrate the project's capability and capacity for facilitating high-rise buildings, no banner will be used. future EV charging. b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or **SECTION 302 MIXED OCCUPANCY BUILDINGS** 302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building 2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power shall comply with the specific green building measures applicable to each specific occupancy. Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit. 1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable. Exception: Areas of parking facilities served by parking lifts. 2. [HCD] For purposes of CALGreen, live/work units, complying with Section 419 of the California Building Code, shall not be considered mixed occupancies. Live/Work units shall comply with 4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more Chapter 4 and Appendix A4, as applicable. sleeping units or guest rooms. DIVISION 4.1 PLANNING AND DESIGN The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to **ABBREVIATION DEFINITIONS:** 1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types Department of Housing and Community Development of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 California Building Standards Commission EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical Division of the State Architect, Structural Safety system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all OSHPD Office of Statewide Health Planning and Development EVs at all required EV spaces at a minimum of 40 amperes. Low Rise High Rise The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved Additions and Alterations for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. **CHAPTER 4** Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be RESIDENTIAL MANDATORY MEASURES reduced by a number equal to the number of EV chargers installed over the five (5) percent required. **SECTION 4.102 DEFINITIONS** a. Construction documents shall show locations of future EV spaces. 4.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference) b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use. FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar 2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power pervious material used to collect or channel drainage or runoff water. Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per VATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials dwelling unit when more than one parking space is provided for use by a single dwelling unit. such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also Exception: Areas of parking facilities served by parking lifts. used for perimeter and inlet controls. **3.EV Chargers.** Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking 4.106 SITE DEVELOPMENT 4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation area and shall be available for use by all residents or guests. and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section. When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, 4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less an automatic load management system (ALMS) may be used to reduce the maximum required electrical than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers or more, shall manage storm water drainage during construction. In order to manage storm water drainage shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall property, prevent erosion and retain soil runoff on the site. have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces. Retention basins of sufficient size shall be utilized to retain storm water on the site. 2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar 4.106.4.2.2.1 Electric vehicle charging stations (EVCS). Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1 disposal method, water shall be filtered by use of a barrier system, wattle or other method approved Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable 3. Compliance with a lawfully enacted storm water management ordinance. Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil. (Website: https://www.waterboards.ca.gov/water\_issues/programs/stormwater/construction.html) EVCS shall comply with at least one of the following options: I.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will 1. The charging space shall be located adjacent to an accessible parking space meeting the requirements of manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space. water include, but are not limited to, the following: 2. The charging space shall be located on an accessible route, as defined in the California Building Code, 2. Water collection and disposal systems French drains Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section Water retention gardens 5. Other water measures which keep surface water away from buildings and aid in groundwater 4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions. The charging spaces shall be designed to comply with the following: **Exception**: Additions and alterations not altering the drainage path. **4.106.4 Electric vehicle (EV) charging for new construction.** New construction shall comply with Sections 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply 1. The minimum length of each EV space shall be 18 feet (5486 mm). equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625. 2. The minimum width of each EV space shall be 9 feet (2743 mm). 3. One in every 25 charging spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum 1. On a case-by-case basis, where the local enforcing agency has determined EV charging and aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 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 a.Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional percent slope) in any direction. local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project. 1701.1 of the California Plumbing Code. In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall 2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities. comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway 4.106.4.2.3 EV space requirements shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main 1. Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the location or the proposed location of the EV space. Construction documents shall identify the concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere raceway termination point, receptacle or charger location, as applicable. The service panel and/ or subpanel shall 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit have a 40-ampere minimum dedicated branch circuit, including branch circuit overcurrent protective device installed, or space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in

location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent

protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination

accordance with the California Electrical Code.

installed in close proximity to the location or the proposed location of the EV space at the time of original construction in accordance with the California Electrical Code. 1.304 OUTDOOR WATER USE 4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. Efficient Landscape Ordinance (MWELO), whichever is more stringent. 4.106.4.2.5 Electric Vehicle Ready Space Signage. Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its 4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or **EFFICIENCY** altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. 4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE 4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in 1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future 2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use. 4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING 4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 DIVISION 4.2 ENERGY EFFICIENCY 4.201 GENERAL **4.201.1 SCOPE.** For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards. DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION 4.303 INDOOR WATER USE 4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving **1.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN**. Submit a construction waste management plan plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates. **4.303.1.1 Water Closets.** The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets. Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush. 4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush. **4.408.3 WASTE MANAGEMENT COMPANY.** Utilize a waste management company, approved by the 4.303.1.3 Showerheads. 4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads. **4.303.1.3.2 Multiple showerheads serving one shower**. When a shower is served by more than one .408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time. Note: A hand-held shower shall be considered a showerhead. 4.303.1.4 Faucets. 4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall **4.408.5 DOCUMENTATION**. Documentation shall be provided to the enforcing agency which demonstrates not be less than 0.8 gallons per minute at 20 psi. 4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi. **4.303.1.4.3 Metering Faucets.** Metering faucets when installed in residential buildings shall not deliver 4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not 4.410 BUILDING MAINTENANCE AND OPERATION to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per 4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact **Note**: Where complying faucets are unavailable, aerators or other means may be used to achieve 4.303.1.4.5 Pre-rinse spray valves. When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff. FOR REFERENCE ONLY: The following table and code section have been reprinted from the California Code of Regulations, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A). TABLE H-2 STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALUES MANUFACTURED ON OR AFTER JANUARY 28, 2019 | MAXIMUM FLOW RATE (gpm) [spray force in ounce force (ozf)] Product Class 1 (≤ 5.0 ozf) Product Class 2 (> 5.0 ozf and  $\leq$  8.0 ozf) 1.20 Product Class 3 (> 8.0 ozf) **4.410.2 RECYCLING BY OCCUPANTS.** Where 5 or more multifamily dwelling units are constructed on a Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)] depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling

4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the

California Plumbing Code.

**4.303.3 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

THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE 1.8 GMP @ 80 PSI 0.5 GPM @ 60 PSI

SHOWER HEADS (RESIDENTIAL) MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 LAVATORY FAUCETS (RESIDENTIAL) LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS 1.8 GPM @ 60 PSI KITCHEN FAUCETS METERING FAUCETS 0.2 GAL/CYCLE WATER CLOSET 1.28 GAL/FLUSH

0.125 GAL/FLUSH

The following terms are defined in Chapter 2 (and are included here for reference) AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and doo cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements. COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particle oa'd and medium density fiberboard. "Composite wood products" does not include hardboard, structural olyyood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prerabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCN, title 17, Section **DIRECT-VENT APPLIANCE.** A fuel-burning appliance with a sealed combustion eystem that draws all air for

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING VERTICATION WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BY THOSE INDIVIDUAL PROJECT BY THE END USER TO MEET THOSE INDIVIDUAL PROJECT BY THOSE INDIVIDUAL PROJECT B



product (excluding container and packaging).

4.504 POLLUTANT CONTROL

management district rules apply:

Table 4.504.3 shall apply.

**MAXIMUM INCREMENTAL REACTIVITY (MIR).** The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to

Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this

article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to

hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed

4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING

4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.

CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final

startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to

**VOC.** A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings

with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain

woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as

**4.504.2.1 Adhesives, Sealants and Caulks.** Adhesives, sealant and caulks used on the project shall meet the

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks

Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic

2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in

prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17,

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR

Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation

VOC LIMIT

150

100

60

50

70

250

510

490

325

250

550

250

250

30

50

30

Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic

compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of California Code of Regulations. Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the

compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and

tricloroethylene), except for aerosol products, as specified in Subsection 2 below.

shall comply with local or regional air pollution control or air quality management district rules where

applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable.

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

requirements of the following standards unless more stringent local or regional air pollution or air quality

applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves,

Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

pellet stoves and fireplaces shall also comply with applicable local ordinances.

educe the amount of water, dust or debris which may enter the system.

commencing with section 94507.

Manufacturer's product specification.

ARCHITECTURAL APPLICATIONS

INDOOR CARPET ADHESIVES

**OUTDOOR CARPET ADHESIVES** 

WOOD FLOORING ADHESIVES

RUBBER FLOOR ADHESIVES

SUBFLOOR ADHESIVES

COVE BASE ADHESIVES

CERAMIC TILE ADHESIVES

VCT & ASPHALT TILE ADHESIVES

DRYWALL & PANEL ADHESIVES

STRUCTURAL GLAZING ADHESIVES

OTHER ADHESIVES NOT LISTED

**SPECIALTY APPLICATIONS** 

PLASTIC CEMENT WELDING

CONTACT ADHESIVE

**TOP & TRIM ADHESIVE** 

METAL TO METAL

PLASTIC FOAMS

**FIBERGLASS** 

ADHESIVE PRIMER FOR PLASTIC

SPECIAL PURPOSE CONTACT ADHESIVE

STRUCTURAL WOOD MEMBER ADHESIVE

SUBSTRATE SPECIFIC APPLICATIONS

POROUS MATERIAL (EXCEPT WOOD)

PVC WELDING

CPVC WELDING

ABS WELDING

MULTIPURPOSE CONSTRUCTION ADHESIVE

SINGLE-PLY ROOF MEMBRANE ADHESIVES

CARPET PAD ADHESIVES

Field verification of on-site product containers.

TABLE 4.504.1 - ADHESIVE VOC LIMIT<sub>1,2</sub>

(Less Water and Less Exempt Compounds in Grams per Liter)

# California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

**OTHER** 

Cont. = Contractor of record for building permit or Owner if Owner/Builder

INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper

installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the

considered by the enforcing agency when evaluating the qualifications of a special inspector:

project they are inspecting for compliance with this code.

shall be closely related to the primary job function, as determined by the local agency.

1. Certification by a national or regional green building program or standard publisher.

Successful completion of a third party apprentice training program in the appropriate trade.

homes in California according to the Home Energy Rating System (HERS).

Note: Special inspectors shall be independent entities with no financial interest in the materials or the

methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific

responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or

other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence

certification program. Uncertified persons may perform HVAC installations when under the direct supervision and

responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems Examples of acceptable HVAC training and certification programs include but are not limited to the following:

3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.

CHAPTER 7

702 QUALIFICATIONS

State certified apprenticeship programs.

Programs sponsored by manufacturing organizations.

performance contractors, and home energy auditors.

4. Other programs acceptable to the enforcing agency.

project they are inspecting for compliance with this code.

the appropriate section or identified applicable checklist

**703 VERIFICATIONS** 

Other programs acceptable to the enforcing agency.

= YES
= NOT APPLICABLE
= RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

2/5/2024 4/29/2024

5/13/2024 /4\ 6/17/2024

**REVISIONS** 

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to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be 2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building 1. Special inspectors shall be independent entities with no financial interest in the materials or the DRAWN BY HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate **ALAN LEHMAN** [BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification 703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in

TABLE 4.504.2 - SEALANT VOC LI	MIT	TABLE 4.504.5 - FORMALDEHY
(Less Water and Less Exempt Compounds in G	Grams per Liter)	MAXIMUM FORMALDEHYDE EMISSIONS I
SEALANTS	VOC LIMIT	PRODUCT
ARCHITECTURAL	250	HARDWOOD PLYWOOD VENEER CORE
MARINE DECK	760	HARDWOOD PLYWOOD COMPOSITE COF
NONMEMBRANE ROOF	300	PARTICLE BOARD
ROADWAY	250	MEDIUM DENSITY FIBERBOARD
SINGLE-PLY ROOF MEMBRANE	450	THIN MEDIUM DENSITY FIBERBOARD2
OTHER	420	VALUES IN THIS TABLE ARE DERIVED
SEALANT PRIMERS		BY THE CALIF. AIR RESOURCES BOARD, MEASURE FOR COMPOSITE WOOD AS TE
ARCHITECTURAL		WITH ASTM E 1333. FOR ADDITIONAL INF
NON-POROUS	250	CODE OF REGULATIONS, TITLE 17, SECT 93120.12.
POROUS	775	2. THIN MEDIUM DENSITY FIBERBOARD
MODIFIED BITUMINOUS	500	THICKNESS OF 5/16" (8 MM).
MARINE DECK	760	DIVISION 4.5 ENVIRONMENTAL Q
	750	

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

TABLE 4.504.3 - VOC CONTENT LIM	IITS FOR
GRAMS OF VOC PER LITER OF COATING, LESS COMPOUNDS	S WATER & LESS EXEMPT
COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS1	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340
GRAMS OF VOC PER LITER OF COATING, IN EXEMPT COMPOUNDS     THE SPECIFIED LIMITS REMAIN IN EFFECT	

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS
ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

3. VALUES IN THIS TABLE ARE DERIVED FROM THOS	E SPECIFIED BY
THE CALIFORNIA AIR RESOURCES BOARD, ARCHITEC	CTURAL COATINGS
SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MOF	RE INFORMATION IS
AVAILABLE FROM THE AIR RESOURCES BOARD.	

Y	N/A	PARTY			
			i		
				TABLE 4.504.5 - FORMALDEHYDE L	IMITS₁
				MAXIMUM FORMALDEHYDE EMISSIONS IN PAR	RTS PER MILLION
				PRODUCT	CURRENT LIMIT
				HARDWOOD PLYWOOD VENEER CORE	0.05
				HARDWOOD PLYWOOD COMPOSITE CORE	0.05
				PARTICLE BOARD	0.09
				MEDIUM DENSITY FIBERBOARD	0.11
				THIN MEDIUM DENSITY FIBERBOARD2	0.13
				1. VALUES IN THIS TABLE ARE DERIVED FROM BY THE CALIF. AIR RESOURCES BOARD, AIR T MEASURE FOR COMPOSITE WOOD AS TESTEI WITH ASTM E 1333. FOR ADDITIONAL INFORM CODE OF REGULATIONS, TITLE 17, SECTIONS 93120.12.	OXICS CONTROL D IN ACCORDANCE IATION, SEE CALIF.
				2. THIN MEDIUM DENSITY FIBERBOARD HAS A THICKNESS OF 5/16" (8 MM).	A MAXIMUM
			from Indoor Source California Specific See California De	blic Health, "Standard Method for the Testing and Eves Using Environmental Chambers," Version 1.2, Jacation 01350)  partment of Public Health's website for certification p	nuary 2017 (Emission testing me rograms and testing labs.
	⅓		California I Chemical E (Emission t	Carpet cushion. All carpet cushion installed in the budepartment of Public Health, "Standard Method for the imissions from Indoor Sources Using Environmental esting method for California Specification 01350)	e Testing and Evaluation of Volat Chambers," Version 1.2, January
			8,4924940 (2000) 0.000 (2000)	nia Department of Public Health's website for certific	
_			https://www	/.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IA	⊋/Pages/VOC.aspx.
	X		4.504.3.2	Carpet adhesive. All carpet adhesive shall meet the	equirements of Table 4.504.1.
DXI		Cont.	resilient flooring s Testing and Evalu	NT FLOORING SYSTEMS. Where resilient flooring hall meet the requirements of the California Departm lation of Volatile Organic Chemical Emissions from It ary 2017 (Emission testing method for California Spe	ent of Public Health, "Standard M ndoor Sources Using Environmen
			See California De	partment of Public Health's website for certification p	rograms and testing labs.
			hhtps://www.cdph	.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pag	es/VOC.aspx.
X		Cont.	composite wood programme formaldehyde as	SITE WOOD PRODUCTS. Hardwood plywood, partic products used on the interior or exterior of the building specified in ARB's Air Toxics Control Measure for Co ates specified in those sections, as shown in Table 4	gs shall meet the requirements fo imposite Wood (17 CCR 93120 et

b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in) 1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or 2. Lighting integral to bathroom exhaust fans shall comply with the California Energy Code. 4.507 ENVIRONMENTAL COMFORT 4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods: 1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods. 2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems),

the California mical Emissions uirements of the atile Organic r area receiving Method for the ntal Chambers," et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5 **4.504.5.1 Documentation.** Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following: Product certifications and specifications. Chain of custody certifications. 3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.). 4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards. Other methods acceptable to the enforcing agency. 4.505 INTERIOR MOISTURE CONTROL **4.505.1 General.** Buildings shall meet or exceed the provisions of the *California Building Standards Code*. **4.505.2 CONCRETE SLAB FOUNDATIONS.** Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section. **4.505.2.1 Capillary break.** A capillary break shall be installed in compliance with at least one of the 1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-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 percent moisture content. Moisture content shall be verified in compliance with the following: 1. Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code. of each piece verified.

2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end 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

4.506 INDOOR AIR QUALITY AND EXHAUST **4.506.1 Bathroom exhaust fans.** Each bathroom shall be mechanically ventilated and shall comply with the

Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.

enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying

recommendations prior to enclosure.

2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of

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

QUALITY MANAGEMENT DISTRICT RULE 1168.

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER.

THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE

THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDIVIDUAL NEEDS. THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERTIFICATION WITH THE USE OF THE USE OF THIS DOCUMENT, INCLUDING VERTIFICATION WITH THE USE OF THE USE OF

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANT Project Name: Fradin Addition						LIMITOL			alculation	Date/Time:	2023-12	-26T13:53:32-08	3:00		CF1R-PRF-01 (Page 7 of 13
		T-24 Analysis				ys.		lı	nput File N	ame: Fradir	Addition	.ribd22			
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Туре	Surface	Orientatio n	Azimuth	Width (ft)	Heigh t (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
RT. Ex. Win W01-2	Window	Ex. Right Wall	Left	270			1	17.9	1.28	NFRC	0.8	NFRC	Bug Scree	n Existing	No
RT. Ex. Win W01-3	Window	Ex. Right Wall	Left	270			1	17.9	1.28	NFRC	0.8	NFRC	Bug Scree	en Existing	No
N. Skylight	Skylight	Cathedral Ceiling 2	Left	270			1	4	0.3	NFRC	0.23	NFRC		New	NA
OPAQUE DOOF	RS		А											,	
(	)1		02			03				04		05	T	0	6
Na	ime	Sic	de of Buildin	g	-	Area (f	t <sup>2</sup> )	_	U	-factor	In	Status		Verified Exist	ing Condition
Na	01			-		_	t²)		210		In	10000		Verified Ex	0 kisti
Door D09         Ex. Front Wall         20           Door D01         Ex. Back Wall         11.7						S P	P		RO	0.2	) F	New Existing		n, N	
D 5 D	oor DO2	-	v Back Wall			16.7				0.2		Evicting		No	

PAQUE SURFACE CONSTRUCTIONS											
01	02	03	04	05	06	07	08				
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers				
Ex. R11	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / 11	0.069	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Sheathing / Insulation: R-11 Sheathi Exterior Finish: Wood Siding/sheathing/decking				

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Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
	Ellergy (EDRI) (KBtu/it -yi)	(EDR2) (KIDV/IC -yI)	Ellergy (EDRI) (RBtu/It -yl)	(EDR2) (KIDV/IL -yI)		widigiii (EDILE)
Space Heating	0	22.23	0	18.38	0	3.85
Space Cooling	0	21.98	0	21.46	0	0.52
IAQ Ventilation	0	0	0	0	0	0
Water Heating	0	39.05	0	39.05	0	0
Self Utilization/Flexibility Credit	٨					
Efficiency Compliance Total	0	83.26	0	78.89	0	4.37
Photovoltaics		0	EKI2.	0		
Battery		HERS	PROVII	D E R <sup>o</sup>		
Flexibility						
Indoor Lighting	0	7.98	0	7.98		
Appl. & Cooking	0	24.27	0	24.3		,
Plug Loads	0	34.61	0	34.61		
Outdoor Lighting	0	1.84	0	1.84		
TOTAL COMPLIANCE	0	151.96	0	147.62		

egistration Number:	223-P016632726A-000-000-0000000-0000	Registration Date/Time:	2024-01-02 17:02:17	HERS Provider:	CalCERTS inc.
A Building Energy Effici	ency Standards - 2022 Residential Compliance	Report Version: 2022.0.000 Schema Version: rev 20220		Report Generated	d: 2023-12-26 13:54:15

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD  Project Name: Fradin Addition  Calculation Description: T-24 Analysis  Calculation Description: T-24 Analysis  Calculation Description: T-24 Analysis											CF1R-PRF-0					
	FENESTRATION / GLAZING															
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Туре	Surface	Orientatio n	Azimuth	Width (ft)	Heigh t (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
F. Ex. Win W09	Window	Ex. Front Wall	Front	180			1	19	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
F. Ex. Win W09-2	Window	Ex. Front Wall	Front	180			1	19	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
F. Ex. Win W09-3	Window	Ex. Front Wall	Front	180			1	19	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
F. Ex. Win W09-4	Window	Ex. Front Wall	Front	180		_	1	19	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
F. Ex. Win W08	Window	Ex. Front Wall	Front	180	2		1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
F. Ex. Win W07	Window	Ex. Front Wall	Front	180	H E	R	S	12	R <sub>1.28</sub>	NFRC	0.8	NFRC	Bug Screen	Existing	No
F. Ex. Win W08-2	Window	Ex. Front Wall	Front	180			1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
F. Ex. Win W08-3	Window	Ex. Front Wall	Front	180			1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
F. Ex. Win W08-4	Window	Ex. Front Wall	Front	180			1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
F. Ex. Win W08-5	Window	Ex. Front Wall	Front	180			1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
L. Ex. Win W08	Window	Ex. Left Wall	Left	270			1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No

roject Name: Fradin Ad	ddition		Calcula	ation Date/Tin	ne: 2023-12-26T13	3:53:32-08:	:00 (Page 8 of 1
alculation Description	: T-24 Analysis		Input I	File Name: Fra	din Addition.ribd2	2	
PAQUE SURFACE CONST	RUCTIONS						
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R15 Walls	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-O	15 / None	0.054	Inside Finish: Gypsum Board Sheathing / Insulation: R-15 Sheathing Cavity / Frame: no insul. / 2x4 Sheathing / Insulation: Wood Siding/sheathing/decking Exterior Finish: 3 Coat Stucco
Ex. R-30	Cathedral Ceilings	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-0	30 / None	0.031	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4 Sheathing / Insulation: R-30 Sheathing Inside Finish: Gypsum Board
R-30	Cathedral Ceilings	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-0	30 / None	0.031	Roofing: 5 PSF (Normal Gravel) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4 Sheathing / Insulation: R-30 Sheathing Inside Finish: Gypsum Board
R-15 Wall	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-O	15 / None	0.055	Inside Finish: Gypsum Board Sheathing / Insulation: R-15 Sheathing Cavity / Frame: no insul. / 2x4
	Floors Over						Floor Surface: Carneted

	458				7.6
BUILDING ENVELOPE - HERS V	ERIFICATION				
01		02	03	04	05
Quality Insulation Installation	n (QII) High R-va	lue Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Not Required	8 8	Not Required	N/A	n/a	n/a
				_	

 Wood Framed Floor
 2x12 @ 16 in. O. C.
 R-19
 None / None
 0.046

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	Standard Design (kBtu/ft <sup>2</sup> - yr )	Proposed Design (kBtu/ft <sup>2</sup> - yr )	Compliance Margin (kBtu/ft <sup>2</sup> - yr )	Margin Percentage
Gross EUI <sup>1</sup>	27.69	26.6	1.09	3.94
Net EUI <sup>2</sup>	27.69	26.6	1.09	3.94

REQ	JIRED SPECIAL FEATURES	
The	following are features that must be installe <mark>d a</mark>	condition for meeting the modeled energy performance for this computer analysis.
•	Ducts in crawl space	

Г	UEDC	FEATURE SUMMARY					_	_					_		
Į	пекэ	FEATURE SUIVINIARY													
- 1	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														
		l is provided in the building tables b										_			
- 1			S. S		-	-					-	B. c	-	_	
- 1	•	Kitchen range hood		-		R	<	P	R	0	\/	1 [	$\supset$	F	R
- 1	•	Minimum Airflow				1 1					V				11
	•	Fan Efficacy Watts/CFM													

BUILDING - FEATURES INFORMA	ATION					
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft <sup>2</sup> )	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Fradin Addition	1388	1	2	2	0	1

Duct leakage testing

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft <sup>2</sup> )	Avg. Ceiling Height	Water Heating System 1	Status
Ex. House	Conditioned	Ex. HVAC	1313	9	Ex. WH	Existing Unchange

Registration Number:	223-P016632726A-000-000-0000000-0000	Registration Date/Time:	2024-01-02 17:02:17	HERS Provider:	CalCERTS inc.
CA Building Energy Effici	ency Standards - 2022 Residential Compliance	Report Version: 2022.0.000 Schema Version: rev 20220		Report Generate	d: 2023-12-26 13:54:15

Project Name	: Fradin Ad	dition				Name: Fradin Addition Calculation Date/Time: 2023-12-26T13:53:32-08:00									
Calculation Do	ion Description: T-24 Analysis Input File Name: Fradin Addition.ribd22														
FENESTRATION	/ GLAZING														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Туре	Surface	Orientatio n	Azimuth	Width (ft)	Heigh t (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Conditio
L. Ex. Win W07	Window	Ex. Left Wall	Left	270			1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
L. Ex. Win W08-2	Window	Ex. Left Wall	Left	270			1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Туре	Surface	Orientatio n	Azimuth	Width (ft)	Heigh t (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
L. Ex. Win W07	Window	Ex. Left Wall	Left	270			1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
L. Ex. Win W08-2	Window	Ex. Left Wall	Left	270			1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
L. Ex. Win W06	Window	Ex. Left Wall	Left	270			1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
L. Ex. Win W07-2	Window	Ex. Left Wall	Left	270			1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
B. Ex. Win W07	Window	Ex. Back Wall	Back	0		10	1	12	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
B. Ex. Win W03	Window	Ex. Back Wall	Back	0	HE	R	S	6.15	R <sup>1.28</sup>	NFRC	0.8	NFRC	Bug Screen	Existing	No
B. Ex. Win W02	Window	Ex. Back Wall	Back	0			1	6.15	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
B. Ex. Win W10	Window	Ex. Back Wall	Back	0			1	6	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
B. Ex. Win W10-2	Window	Ex. Back Wall	Back	0			1	6	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
RT. Ex. Win W05	Window	Ex. Right Wall	Left	270			1	10.5	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
RT. Ex. Win W04	Window	Ex. Right Wall	Left	270			1	10.5	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No
RT. Ex. Win W01	Window	Ex. Right Wall	Left	270			1	17.9	1.28	NFRC	0.8	NFRC	Bug Screen	Existing	No

<b>Project Name</b>	: Fradin Addition	n				Calculation [	Date/Time: 202	3-12-26T13:53:	32-08:00		(Page 9 of 13)
Calculation De	escription: T-24	Analysis				Input File Na	ame: Fradin Add	dition.ribd22			
WATER HEATIN	G SYSTEMS	X							6		
01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)	Status	Verified Existing Condition	Existing Water Heating System
	Domostic Hot		Fr. Mater					Fr. Mater			

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD** 

		.,,,		Nume	Oilits	System	Distri	bution	vermeation	rame (#)		Cor	dition	System
Ex. WH	Domes Water	tic Hot (DHW) Stand	ard	Ex. Water Heater	1	n/a	No	one	n/a	Ex. Water Heater (1	I FXIS	ting	No	
WATER HEAT	TERS										*/			
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Heating Efficiency Type	Efficiency	Rated Input Type	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	Tank Location	Status	Verified Existing Condition
Ex. Water Heater	Gas	Small Storage	1	50	EF	0.6	Btu/Hr	75000	0	70	n/a		Existing	No

NATER HEATING - HERS VE	ERIFICATION					
01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Ve Recove
Ex. WH - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Renumed

**REVISIONS** 2/5/2024

4/29/2024 5/13/2024 /4\ 6/17/2024

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**DRAWN BY ALAN LEHMAN** 

NW Corner o 93921 009-132-004

CF1R-PRF-01E

6/17/2024 SHEET

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Calculation Date/Time: 2023-12-26T13:53:32-08:00 Project Name: Fradin Addition Calculation Description: T-24 Analysis Input File Name: Fradin Addition.ribd22

SPACE CONDITI	ONING SYSTEMS	S									
01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Existing HVAC System
Ex. HVAC	Heating and cooling system other	Heating System 1	1	Cooling System 1	1	HVAC Fan System 1	Distribution System 1	n/a	Existing	No	_

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

HVAC - COOLING UN	IT TYPES		Lall	FRI	<b>D.</b> II			
01	02	03	H 64 B 9	P <sup>05</sup> R C	06	07	08	09
Name	System Type	Number of Units	Efficiency Metric	Efficiency EER/EER2/CEER	Efficiency SEER/SEER2	Zonally Controlled	Mulit-speed Compressor	HERS Verification
Cooling System 1	Central split AC	1	EER/SEER	12.2	15	Not Zonal	Single Speed	Cooling System 1-hers-cool

Registration Number: 223-P016632726A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance Registration Date/Time: 2024-01-02 17:02:17 Report Version: 2022.0.000 Schema Version: rev 20220901

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Fradin Addition Calculation Description: T-24 Analysis

Input File Name: Fradin Addition.ribd22

Calculation Date/Time: 2023-12-26T13:53:32-08:00

HVAC - DISTRI	IBUTION SYSTE	MS			100										
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Туре	Design Type		t Ins. alue		uct ation	Surfac	e Area	Bypass Duct	Duct Leakage	HERS	Status	Verified Existing	Existing Distribution	New Ducts
Name	Туре	Design Type	Suppl y	Retur n	Suppl Y	Retur n	Suppl y	Retur n	Буразз Бисс	Duct Leakage	Verification	Status	Condition	system	25 ft
Distribution System 1	Unconditio ned crawl space	Non- Verified	R-6	R-6	Cra wl Spa ce	Cra wl Spa ce	n/a	n/a	No Bypass Duct	Sealed and Tested	Distribution System 1-hers-dist	New	n/a		No

							100	
HVAC DISTRIBUTION	- HERS VERIFICATION							
01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Distribution System 1-hers-dist	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No

HVAC - FAN SYSTEMS			
01	02	03	04
Name	Туре	Fan Power (Watts/CFM)	Name
HVAC Fan System 1	HVAC Fan	0.45	HVAC Fan System 1-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION		
01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan System 1-hers-fan	Required	0.45

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HERS RATER VERIFICATION OF EXISTING CONDITIONS

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Fradin Addition Calculation Date/Time: 2023-12-26T13:53:32-08:00

Input File Name: Fradin Addition.ribd22 Calculation Description: T-24 Analysis DOCUMENTATION AUTHOR'S DECLARATION STATEMENT 1. I certify that this Certificate of Compliance documentation is accurate and complete. ocumentation Author Name: B H Barry Hanes

Signature Date: Hanes Construction 2023-12-26 14:50:48 CEA/ HERS Certification Identification (If applicable): 39314 Sierra La Vida 714-448-4350 Murrieta, CA 92563

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.

is Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulation 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: Alan Lehman Date Signed: 2024-01-02 17:02:17

Lehman Design Studio License: N/A 26453 Mission Fields Rd City/State/Zip: Carmel, CA 93923 Phone: 831-747-4718

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

Report Generated: 2023-12-26 13:54:15

Registration Number: 223-P016632726A-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2024-01-02 17:02:17

Report Version: 2022.0.000 Schema Version: rev 20220901

at CalCERTS.com HERS Provider: CalCERTS inc.

Easy to Verify

Remodel NW Corner o 93921 009-132-004 Fradin

**REVISIONS** 

2/5/2024

4/29/2024

/3\ 5/13/2024

/4\ 6/17/2024

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**DRAWN BY ALAN LEHMAN** 

6/17/2024

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