TOWN OF LOS GATOS
HISTORIC PRESERVATION COMMITTEE
NOVEMBER 19, 2025
110 EAST MAIN STREET
TOWN COUNCIL CHAMBERS
4:00 PM

Lee Quintana, Chair
Martha Queiroz, Vice Chair
Susan Burnett, Planning Commissioner
Emily Thomas, Planning Commissioner
Alan Feinberg, Committee Member

HOW TO PARTICIPATE

The Town of Los Gatos strongly encourages your active participation in the public process. If you are interested in providing oral comments during the meeting, you must attend in-person, complete a speaker's card, and return it to the staff. If you wish to speak to an item on the agenda, please list the item number on the speaker card. The time allocated to speakers may change to better facilitate the meeting. If you are unable to attend the meeting in-person, you are welcome to submit written comments via email to planning@losgatosca.gov..

Public Comment During the Meeting:

When called to speak, please limit your comments to three (3) minutes, or such other time as the Chair may decide, consistent with the time limit for speakers at a Town meeting.

Speakers at public meetings may be asked to provide their name and to state whether they are a resident of the Town of Los Gatos. Providing this information is not required.

Deadlines to Submit Written Comments:

If you are unable to participate in person, you may email planning@losgatosca.gov with the subject line "Public Comment Item #_" (insert the item number relevant to your comment). Persons wishing to submit written comments to be included in the materials provided to the Commission must provide the comments as follows:

- For inclusion in the agenda packet: by 11:00 a.m. the Friday before the Committee meeting.
- For inclusion in the agenda packet supplemental materials: by 11:00 a.m. on the day of the Committee meeting.
- For inclusion in a desk item: by 11:00 a.m. the day of the Committee meeting.

CALL MEETING TO ORDER

ROLL CALL

CONSENT ITEMS *(Items appearing on the Consent Items are considered routine Town business and may be approved by one motion. Any member of the Committee may request to have an item removed from the Consent Items for comment and action. Members of the public may provide input on any or multiple Consent Item(s) when the Chair asks for public comments on the Consent Items. If you wish to comment, please follow the Participation Instructions contained on Page 1 of this agenda. If an item is removed, the Chair has the sole discretion to determine when the item will be heard.)*

1. Draft Minutes of the October 22, 2025, Historic Preservation Committee Meeting
2. Draft Minutes of the October 29, 2025, Historic Preservation Committee SPECIAL Meeting
3. Adopt a Letter to the Town Council Regarding Future Historic Preservation Committee Workplan Items.

VERBAL COMMUNICATIONS *(Members of the public are welcome to address the Historic Preservation Committee on any matter that is not listed on the agenda and is within the subject matter jurisdiction of the Committee. To ensure all agenda items are heard, this portion of the agenda is limited to 30 minutes. In the event additional speakers were not able to be heard during the initial Verbal Communications portion of the agenda, an additional Verbal Communications will be opened prior to adjournment. Each speaker is limited to three minutes or such time as authorized by the Chair.)*

PUBLIC HEARINGS *(Applicants and their representatives may be allotted up to a total of five minutes maximum for opening statements. Members of the public may be allotted up to three minutes to comment on any public hearing item. Applicants and their representatives may be allotted up to a total of three minutes maximum for closing statements. Items requested/recommended for continuance are subject to the Committee's consent at the meeting.)*

4. Consider a Request to Remove a Pre-1941 Property from the Historic Resources Inventory for Property Zoned C-1. **Located at 647 N. Santa Cruz Avenue.** APN 410-14-015. Exempt Pursuant to CEQA Section 15061(b)(3). Request for Review PHST-25-022. Property Owner: 647 N. Santa Cruz Ave, LLC. Applicant: Lance Tate. Project Planner: Ryan Safty.

5. Consider a Request for Approval to Construct an Addition and Exterior Alterations to an Existing Pre-1941 Single-Family Residence on Property Zoned R-1D. **Located at 245 Los Gatos Boulevard**. APN 529-24-024. Request for Review Application PHST-25-023. Exempt Pursuant to CEQA Guidelines, Section 15301: Existing Facilities. Property Owner: Michael Phung. Applicant: Andres Johnson. Project Planner: Samina Merchant.

6. Consider a Request for Approval to Construct an Addition with Reduced Setbacks to an Existing Noncontributing Single-Family Residence Located in the Almond Grove Historic District on Nonconforming Property Zoned R-1D: LHP. **Located at 321 Bachman Avenue**. APN 510-17-100. Exempt Pursuant to CEQA Section 15301: Existing Facilities. Architecture and Site Application S-25-049. Property Owner: Stanley and Jean Melax. Applicant:

Jennifer Kretschmer, AIA. Project Planner: Suray Nathan.

7. Consider a Request for Approval to Construct an Addition and Exterior Alterations to an Existing Pre-1941 Single-Family Residence on Property Zoned R-1D. **Located at 446 San Benito Avenue**. APN 410-16-051. Request for Review Application PHST-25-021. Exempt Pursuant to CEQA Guidelines, Section 15301: Existing Facilities. Property Owner/Applicant: Devendra Deshwal. Project Planner: Maria Chavarin.

8. Consider a Request for Approval to Construct Exterior Alterations to an Existing Pre1941 Single-Family Residence on Property Zoned R-1:8. **Located at 310 Johnson Avenue**. APN 529-39-006. Exempt Pursuant to CEQA Section 15301: Existing Facilities. Request for Review Application PHST-25-024. Property Owner/Applicant: Sumit Ahluwalia. Project Planner: Sean Mullin.

9. Consider a Request for Approval to Modify a Previously Approved Project to Construct a Second-Story Addition Exceeding 100 Square Feet and Exterior Alterations to an Existing Contributing Single-Family Residence in the Almond Grove Historic District on Property Zoned R-1D:LHP. **Located at 328 Bachman Avenue**. APN 510-14-037. Request for Review Application PHST-25-025. Exempt Pursuant to CEQA Guidelines, Section 15301: Existing Facilities. Property Owner: Snighdha Uday Dharmavaram. Applicant: Bess Wiersema. Project Planner: Sean Mullin.

OTHER BUSINESS *(Up to three minutes may be allotted to each speaker on any of the following items.)*

10. 2026 Meeting Calendar for the Historic Preservation Committee

REPORT FROM THE DIRECTOR OF THE COMMUNITY DEVELOPMENT

COMMITTEE MATTERS

ADJOURNMENT

ADA NOTICE In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Clerk's Office at (408) 354-6834. Notification at least two (2) business days prior to the meeting date will enable the Town to make reasonable arrangements to ensure accessibility to this meeting [28 CFR §35.102-35.104].

DRAFT
MINUTES OF THE HISTORIC PRESERVATION COMMITTEE MEETING
OCTOBER 22, 2025

The Historic Preservation Committee of the Town of Los Gatos conducted a regular meeting on October 22, 2025 at 4:00 p.m.

MEETING CALLED TO ORDER AT 4:00 PM

ROLL CALL

Present: Chair Lee Quintana, Vice Chair Martha Queiroz, Planning Commissioner Emily Thomas and Committee Member Alan Feinberg.

Absent: Planning Commissioner Susan Burnett.

VERBAL COMMUNICATIONS

Jacob Korvel with Frank Delgado

The project that did not make the agenda deadline. They requested a demolition permit for 313 University Avenue. They are requesting Planning and Building permits for full restoration. They will work with staff to complete their submission.

CONSENT ITEMS (TO BE ACTED UPON BY A SINGLE MOTION)

1. Approval of Minutes – September 24, 2025

MOTION: **Motion** by **Vice Chair Queiroz** to approve the Consent Calendar. **Seconded** by **Committee Member Feinberg.**

VOTE: **Motion passed unanimously, (4-0)**

PUBLIC HEARINGS

2. 155 Hernandez Avenue

   Consider a Request for Approval to Construct Exterior Modifications (Siding Replacement) on an Existing Pre-1941 Single-Family Residence on Property Zoned R1:8. APN 510-40-152. Exempt Pursuant to CEQA Section 15301: Existing Facilities. Request for Review Application PHST-25-020. Property Owner: Catherine Nadeau. Applicant: Marcie Macdonough. Project Planner: Ryan Safty.

Ryan Safty, Project Planner, presented the staff report.

Opened Public Comment.

Committee members asked questions of staff.

Applicant presented the project.

Marcie Macdonough, Architect and Lea (?), Designer

They need to remove the old siding boards to add water vapor barrier material. The new proposed Hardie board material is noncombustible. The prior addition to the house already has Hardie board. The profile will be identical.

Committee members asked questions of the applicant.

Committee members discussed the matter.

MOTION: **Motion** by **Vice Chair Queiroz** to recommend approval to the Community Development Director to Construct Exterior Modifications (Siding Replacement) on an Existing Pre-1941 Single-Family Residence on Property Zoned R-1:8. APN 510-40-152. Based on the Following Findings and Conditions:

- Findings:
  - The existing wood siding, although not substantially deteriorated and could be replaced in kind, an exception is being made because Preservation standards allow well-matched substitute materials when there are Public Safety and Wildfire Concerns that make the substitute material clearly preferable. The proposed substitute material balances the Town's Historic Preservation goals with life

safety and wildfire resilience objectives applicable in this designated high fire hazard severity zone.

- Conditions:
  - The approved fibrous cement siding shall match the existing wood siding in width, exposure, reveal, lap profile, and corner treatment.
  - The installation shall follow the manufacturer specifications and California Building Code, Chapter 7 AU, WUI Requirements.
  - Corner boards, corner returns, trim, and joint spacing shall replicate the Historic detailing.
  - Prior to final inspection, staff shall verify that the installation conforms with these conditions.
  - Recommendation to comply with local fire authority's defensible space recommendations.

Seconded by **Commissioner Quintana.**

VOTE: **Motion passed unanimously, (4-0)**

3. 69 Hernandez Avenue

   Consider a Request for Approval to Construct Exterior Alterations (Window Replacement) to an Existing Pre-1941 Single-Family Residence on Property Zoned R-1:8. APN 510-41-015. Request for Review Application PHST-25-019. Categorically Exempt Pursuant to CEQA Guidelines, Section 15061 (b)(3). Property Owner: Phil Rolla. Applicant: Mike Tinsley. Project Planner: Suray Nathan.

Suray Nathan, Project Planner, presented the staff report.

Committee members asked questions of Staff.

Opened Public Comment.

Applicant presented the project.

Mike Tinsley, Architect

Owners purchased the property in April 2025 and loves the character of the house. The goal is to keep the siding and roof as is. Modifications have been made over the years. A photograph showed the porch unenclosed in the 1970's. The second story addition was added later. After the 1989 earthquake, a new chimney was installed. There are ten original windows. The rest of the windows were installed during the 1970's and later in 1989. The homeowner proposes to use aluminum clad wood windows to get the style of the wood frame but with the

durability of aluminum. They want to keep the windows as located but the existing floor plan inside was odd. They want to make all the windows look like they belong and use WUI materials. They are not sure if the three bay windows are original and proposereplacing the center bay with three windows.

Committee members asked questions of the applicant.

Mike Tinsley, Architect

The 1981 windows are all casement. The owner's preference is for vertical casement windows. They can add a horizontal bar to make it look like a double hung window. The owner is open to installing a transom window.

Closed Public Comment.

Committee members discussed the matter.

Aluminum cladding is too modern. Marvin integrity is the fiberglass cladding that looks more like wood. Okay with removing the bay window and adding a transom. Use double hung on the East and West on the first floor.

Open Public Hearing

Committee members asked questions of the applicant.

Mike Tinsley, Architect

Okay with installing glass above the back door. Marvin fiberglass double hung windows style looks great. One question: When a house has been modified but is not a historic structure, what is the process? For bedroom egress, they can use a horizontal line to make it look double hung.

Closed Public Hearing

Committee members discussed the matter.

MOTION: **Motion** by **Commissioner Thomas** to recommend approval to the Director to replace existing windows 2, 3, 4, 5, and 6 on the north (front) elevation, to approve removal of window 1, and to add a transom. Eliminate the three transom windows above the windows and keep them as casements. On the east elevation, all the window replacements are approved. Replace window 10 with a double-hung, and make 14, 15, 18, and 19 simulated double-hung. Windows 6, 7, 8, and 9 are okay as proposed. The south (rear) elevation windows are okay but make them

all double hung. On the west elevation, the three windows will be double hung and the door should have wood on the bottom and glass on top of the door. Make the side window of the bay double hung. **Seconded** by **Vice Chair Queiroz**.

VOTE: **Motion passed unanimously.**

OTHER BUSINESS *(Up to three minutes may be allotted to each speaker on any of the following items.)*

4. Consider Providing Staff with Direction on Window Materials. Project Location: Town Wide. Project Planner: Sean Mullin

Sean Mullen, Project Planner, presented the staff report.

Committee members discussed the matter.

Fiberglass clad windows weren't contemplated when the guidelines were written. It is paintable and can have the look of wood but also offers weather protection.

If the Committee is supportive of the use of fiberglass cladding, the Design Guidelines do not have to be amended at this time.

Staff heard the direction that the Committee is supportive of staff not bringing the fiberglass clad windows back to the Historic Preservation Committee as long as it is in line with the current evaluation guidelines.

REPORT FROM THE DIRECTOR OF THE COMMUNITY DEVELOPMENT
Reminder that there is a Special Meeting next week.

COMMITTEE MATTERS
None.

ADJOURNMENT

The meeting adjourned at 6:00 p.m.

This is to certify that the foregoing is a true
and correct copy of the minutes of the
October 22, 2025 meeting as approved by the
Historic Preservation Committee.

_____

Sean Mullin, AICP, Planning Manager

DRAFT
MINUTES OF THE HISTORIC PRESERVATION COMMITTEE SPECIAL MEETING
OCTOBER 29, 2025

The Historic Preservation Committee of the Town of Los Gatos conducted a Special meeting on October 29, 2025 at 4:00 p.m.

MEETING CALLED TO ORDER AT 4:00 PM

ROLL CALL

Present: Chair Lee Quintana, Vice Chair Martha Queiroz, Planning Commissioner Emily Thomas, Planning Commissioner Susan Burnett, and Committee Member Alan Feinberg.

Absent: None.

OTHER BUSINESS *(Up to three minutes may be allotted to each speaker on any of the following items.)*

1. Discussion of Potential Historic Preservation Topics to be included in a Letter to the Town Council Regarding Future Historic Preservation Committee Workplan Items.

Sean Mullin, Planning Manager, presented the staff report.

Public Hearing Opened.

Committee members discussed the proposed topics and provided direction for amendments to be included in their letter to the Town Council. The final draft of the letter will return to the Committee for adoption. If adopted, the letter will proceed to the Town Manager's Office.

Public Hearing Closed.

ADJOURNMENT

The meeting adjourned at 5:49 p.m.

This is to certify that the foregoing is a true and correct copy of the minutes of the October 29, 2025 meeting as approved by the Historic Preservation Committee.

_____

Sean Mullin, AICP, Planning Manager

TOWN OF LOS GATOS
HISTORIC PRESERVATION
COMMITTEE REPORT

MEETING DATE: 11/19/2024

ITEM NO: 3

DATE: November 14, 2025

TO: Historic Preservation Committee

FROM: Joel Paulson, Community Development Director

SUBJECT: Adopt a Letter to the Town Council Regarding Future Historic Preservation Committee Workplan Items.

REMARKS:

On October 29, 2025, at the Chair's request the Committee discussed a draft letter to the Town Council regarding future workplan items. Attachment 1 includes the final letter to the Council for adoption by the Committee. If adopted, the letter would be provided to the Town Manager who would forward it to the Mayor.

ATTACHMENTS:

1. Letter to the Town Council Regarding Future Historic Preservation Committee Workplan Items

PREPARED BY: Sean Mullin, AICP
Planning Manager

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To: Mayor Hudes and Members of the Town Council
From: Historic Preservation Committee
Re: Proposed Historic Preservation Committee Work Program
Date: November 13, 2025

The Historic Preservation Committee is pleased to submit the proposed Work Program for your review and consideration. The attached document outlines the Committee's overarching goal, key objectives, and a series of recommended action items designed to support the Town's historic preservation priorities.

For clarity and ease of reference, the recommended action items are organized into five categories. During the Committee's Special Meeting on October 29, 2025, members acknowledged areas of overlap among these categories; however, the Committee unanimously agreed to retain them, as each reflects important intersections and gaps within existing guiding documents and policies.

While mindful of the Town's current budget and staffing constraints, the Committee believes this Work Program is well aligned with the Town's strategic objectives and will strengthen the preservation, understanding, and stewardship of Los Gatos' historic resources. We respectfully request the Council's consideration of the proposed action items.

Respectfully submitted,
Lee Quintana, Chair
Martha Queiroz, Vice Chair
Susan Burnett, Committee Member
Alan Feinberg, Committee Member
Emily Thomas, Committee Member

Goal of the Work Program

Enhance efficiency, transparency, and understanding of the entire historic resources review and approval process for the community members, committee members/commissioners, Town Council members, and staff.

Objectives of the Work Program

- **Objective A:** Update and clarify the definitions and required findings for determining historic resource status in Town code

- **Objective B:** Streamline and clarify the Historic Preservation review and approval process, including Historic Preservation Committee meetings, to improve efficiency

- **Objective C:** Improve the consistency and predictability of decisions by clarifying the criteria and standards used in evaluating historic resources

- **Objective D:** Improve shared understanding of the purpose and value of historic resources through clearer documentation, communication, and education

- **Objective E:** Provide consistency and alignment across Town documents, procedures, and code sections related to historic preservation and resources

- **Objective F:** Implement historic preservation policies and procedures that support Housing Element goals

- **Objective G:** Evaluate and update existing and potential historic districts, heritage areas, and special recognition areas, including boundaries, eligibility, and documentation

Suggested Action Items

Area	Action Item	Justification	Objective
Chapter 29 Article I Division 1. - Miscellaneous **Sec. 29.10.09030. - Demolitions**	1. Clarify demolition of historic structures (c)	Article I Division 1 Sec. 29.10.09030. Demolitions and Article VIII Division 3 Sec. 29.80.310 are not consistent with each other or the Residential Design Guidelines. Sec. 29.10.09030. (c) cites criteria for permit approval for demolition of a historic structure although the requirements are not identified as findings. It is not clear how these requirements differ or relate to findings listed in Sec. 29.10.09030.(e)(2).	☐ A ☑ B ☑ C ☑ D ☑ E ☐ F ☐ G
	2 . Clarify definition of "contributor to a potential historic district"	Sec. 29.10.09030. (c) term “contributor to a potential historic district” is not defined and only a term used in the Bloomfield Survey.	
	3. Clarify the reason for and criteria of the “report”	In Sec. 29.10.09030.(c) the required “report” is vague and its intent is not clear; it doesn’t state if/when the report is used to determine historic resource status or other decision making.	
	4. Clarify preservation of historically or architecturally significant buildings or structures (e)(2)	Sec. 29.10.09030.(e) is not clear with regards to the difference between findings for historic and non-historic structures and its relevance to granting architecture and site applications.	
Chapter 29 Article VIII **Division 3 - Historic Preservation and LHP Landmark and Historic Preservation Overlay Zone**	5. Add definitions of the Town’s historic resources	The code does not currently include definitions of historic resources or findings in Chapter 29 Article VIII Division 3. The difference between “pre-1941”, “Historic Status Code”, and “contributor” are not defined but used to make decisions.	☑ A ☑ B ☑ C ☑ D ☑ E ☐ F ☐ G
	6. Add findings for different types of historic resources 7. Clarify the differences between the Federal/State findings and the Town’s findings for integrity	Findings are only required with regards to status in the historic inventory. Considerations for all other situations are not clear.	

	8. Clarify the difference between findings and considerations and when they are applied		
	9. Change title of Sec. 29.80.290 Standards for Review from “Standards” to “Considerations” 10. Move Sec. 29.80.290 Standards for Review to follow definitions	Considerations are currently described in the code as standards. Sec. 29.80.290 outlines the review process but is currently “hidden” after less used code.	
1991 Historical Resources Survey Project **(Bloomfield Survey and Historic Inventory)**	11. Update, conduct a new survey, or use the current survey for reference only	The Bloomfield Survey was a “windshield” survey conducted 30 years ago, therefore, not all pre-1941 structures in Town were evaluated and some structures included in the survey do not meet criteria for a historic resource.	☐ A ☑ B ☑ C ☑ D ☑ E ☑ F ☑ G
	12. Add a description of the Bloomfield Survey including its purpose, study area, methodology, and final recommendations to the Residential Design Guidelines	The Bloomfield Survey is central to the review, analysis, and decision making process and its intended use is currently absent from the Residential Design Guidelines. A description of the survey will increase the understanding of the Town’s historic preservation review process.	
	13. Consider revising the 1941 construction date for historic resources	This date was chosen because it was the first year the County has comprehensive tax records for the Town. The Bloomfield Survey recommended changing the 1941 date.	
	14. Protect historic resources not currently covered under the LHP Overlay by: a. Designating additional historic districts as recommended by the Bloomfield Survey, starting with Glenridge b. Establishing a Heritage Area based on the Bloomfield Survey area c. Establishing special recognition areas or sites to acknowledge architectural,	There are districts in Town with a high concentration of pre-1941 structures that have been identified in the Bloomfield Survey as “potential contributors to historic districts”. The Survey suggested the addition of Historic Districts, specifically Glenridge. A Heritage Area could protect structures identified as “potential contributors to a historic district” by the Bloomfield Survey. There are areas of Town outside of current Historic Districts that have architectural, cultural, and aesthetic significance that do not qualify as a historic resource under the current 1941 standard. For example, the mosaics depicting early California	

	cultural, or aesthetic resources that are newer than 1941	life at Riviera Drive.	
	15. Separate the Town's Inventory of Historic Resources from the Bloomfield Survey and publish the Inventory	Not all pre-1941 structures listed in the Survey meet the criteria for a Los Gatos Historic Resource. Publishing the Historic Inventory and list of the Survey addresses would allow better public access and transparency.	
Residential Design Guidelines **Chapter 4 Historic Resources**	16. Revise and update acceptable substitute materials including window replacements and siding materials	There are many new materials available that are of high quality, integrity, and indistinguishable from traditional materials. In addition, these materials may be required by fire code and/or insurance companies for fire safety.	☐ A ☑ B ☑ C ☑ D ☑ E ☑ F ☐ G
	17. Add specific guidelines for additions and accessory structures for historic resources and historic districts	The Guidelines currently focus on the immediate neighborhood for compatibility, which is appropriate for new construction, but not for additions or accessory structures for historic resources or districts. Specific guidance for additions and accessory structures for historic resources and districts with consideration of the architecture and character defining features of the existing structure rather than immediate neighborhood would be more appropriate.	
	18. Clarify Section 4.5 Demolitions and the definitions in sidebar on page 42 and cite findings required to demolish a historic resource	The process is unclear and does not align with Sec. 29.10.09030 Demolition Code.	
Other	19. Add a Flow Chart or Table of the various types referrals to the HPC	It is not clear how projects move through historic review in Town. Adding a flow chart, a table, and/or graphics would demystify the process for the various types of applications and projects that are referred to the HPC.	☐ A ☑ B ☑ C ☑ D ☐ E ☑ F ☐ G
	20. Sec. 29.40.075. - Floor area ratio Only exclude up to 400 square feet from FAR calculations for historic properties and historic districts zoned R-1D and R-D	Historic properties and lots in historic districts typically have smaller detached garages located at the rear of the property. Garages that are detached from historic structures minimizes the mass of additions to existing structures.	

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DATE: November 14, 2025

TO: Historic Preservation Committee

FROM: Joel Paulson, Community Development Director

SUBJECT: Consider a Request to Remove a Pre-1941 Property from the Historic Resources Inventory for Property Zoned C-1. **Located at 647 N. Santa Cruz Avenue.** APN 410-14-015. Exempt Pursuant to CEQA Section 15061(b)(3). Request for Review PHST-25-022. Property Owner: 647 N. Santa Cruz Ave, LLC. Applicant: Lance Tate. Project Planner: Ryan Safty.

RECOMMENDATION:

Consider a request to remove a pre-1941 property from the Historic Resources Inventory for property zoned C-1 located at 647 N. Santa Cruz Avenue.

PROPERTY DETAILS:

1. Date primary structure was built: 1978 per County Assessor
2. Bloomfield Preliminary Rating: N/A
3. Does property have an LHP Overlay? No
4. Is structure in a historic district? No
5. If yes, is it a contributor? N/A
6. Findings required? Yes
7. Considerations required? No

BACKGROUND:

The subject property is located on North Santa Cruz Avenue and is developed with a two-story office building at the front and a pre-1941 residence at the rear, which is not visible from the street. The applicant is requesting approval to remove the pre-1941 residence from the Historic Resources Inventory.

PREPARED BY: Ryan Safty
Associate Planner

Town records show that previously there were two residences on this site, and both were used as rentals (Attachment 1). In 1949, Town records show that an attached garage was added to one of the residences on the site, however no plans are available and it is unclear if the subject residence was modified with this garage. Records also show that one of the residences was required to disconnect electric and gas utilities due to hazardous conditions in 1974, but again it is unclear to which residence this applied. A staff report and plans from 1976 show the approval of the existing two-story office building, and notes that the front residence would be demolished and the residence at the rear of the site (subject residence) would remain.

The Santa Clara County Assessor's Database lists a construction date of 1978; however, that date appears to reflect the date of the construction of the office building at the front of the site. The property was not included in the 1990 Anne Bloomfield Survey, likely due to the office building at the front of the property obstructing view of the residence at the rear.

The Sanborn Fire Insurance Maps in Attachment 2 show the subject residence on the property as early as 1928, with a rear addition occurring sometime between 1928 and 1944.

DISCUSSION:

The applicant provided a detailed historic report for this property, prepared by Bonnie Bamburg of Urban Programmers (Attachment 3). The report contains pictures and a detailed written description of the existing residence; historic uses and occupancy of the property; history of the Town; and an explanation of whether the residence meets any of the State or Federal historic findings of significance. The report notes that the residence is of modest Craftsman-style and was built in around 1924 but notes that the building is not an example of a fine or exemplary Craftsman-style residence.

In summary, the report concludes that the residence is not listed in a historic district in the Town. The property is associated with the broad patten of residential development in the Town but is not a significant example of that pattern. There is no association with a person of historical significance, and the architecture is not a significant example of the Craftsman style. It is also unlikely that important information from pre-history or the history of construction would be found. Compared to federal and state registers, the property does not meet the criteria to be considered a historic resource and is not a historic resource under the definition of the California Environmental Quality Act.

CONCLUSION:

Should the Committee find that the findings for removal can be made, a recommendation of approval of the request to remove the property from the Historic Resources Inventory would be forwarded to the Community Development Director. Once approved by the Director, any proposed alterations or redevelopment of the property would not return to the Committee.

FINDINGS:

A. Findings - related to a request for a determination that a pre-1941 primary structure has no historic significance or architectural merit.

____ In evaluating a request for a determination of historic significance or architectural merit, the Historic Preservation Committee shall consider the following:

1. The structure is not associated with events that have made a significant contribution to the Town;
2. No Significant persons are associated with the site;
3. There are no distinctive characteristics of type, period or method of construction or representation of work of a master;
4. The structure does not yield information to Town history; or
5. The integrity has been compromised such that the structure no longer has the potential to convey significance.

ATTACHMENTS:

1. Town Records
2. Sanborn Fire Insurance Maps
3. Historic Report
4. Existing Conditions Plan

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DATE Jan 27 1949

The undersigned herewith makes application for the

Construction of 1 Story
wood garage attached Building, of
Type Construction, no basement, to be used and

occupied as Dwelling
Foundation to be Concrete
With a footing of 16 in. 8 in. top and 18 in. high
Outside walls to be Plaster

Interior to be Sheetrock

The roof will be Comp. Asphalt
supported 2x4 rafts. 24" C.
Will be heated by Gas with Trenwith flue
Estimated value, $ 750.

.....hereby agree to save, indemnify and keep harmless the Town of Los Gatos against all liabilities, judgments, costs and expenses which may in any wise accrue against said city in consequence of the granting of this permit or from the use or occupancy of any sidewalk, street, or sub-sidewalk place by virtue thereof, and will in all things strictly comply with the conditions of this permit.

Owner Angelo Colunga Address 647 Santa Cruz Ave
Architect "
Contractor Dick Taylor

Inspector's File No. 833

Department of Building & Inspection

BUILDING PERMIT
TOWN OF LOS GATOS

PERMIT is herewith granted to

on

for in accordance with plans and specifications approved, and now on file in this office.

Receipt for Dollar as fee, is hereby acknowledged.

Dated 19

Inspector.

Town of Los Gatos
PO Box 949
Los Gatos, California 95030

July 24, 1974

Building Regulations

P.G.&E.
325 Saratoga Avenue
Los Gatos, California 95030

Attention: Mr. William Stephens

Subject: Disconnection of Utilities
647 N. Santa Cruz Avenue

Gentlemen:

Please consider this letter as a request to disconnect electric and gas utilities to the residence at the above location. Recent inspection by this office has revealed that the electric and gas systems in their present condition to be unsafe.

The building is presently occupied by Mr. W. Kazarian and it is my understanding that this building will be vacated August 1, 1974.

The building's owner is:

Mr. George Mitchell, et al
23485 Sunset Drive, Los Gatos, AS 95030

Yours truly,

ARCH WATSON
BUILDING OFFICIAL

AW:ls

ATTACHMENT 1

4

Town of Los Gatos
PO Box 949
Los Gatos, California 95030

July 24, 1974

Building Official

Mr. George Mitchell, et al
23485 Sunset Drive
Los Gatos, California 95030

Subject: Correction Notice - 647 North Santa Cruz Avenue, Los Gatos, CA

Dear Mr. Mitchell:

Recent inspection of buildings at the above location revealed certain hazardous conditions as listed below that require corrections:

1. Existing electric service is of inadequate size to serve dwelling unit.

2. Existing electric circuit over current protection does not provide adequate safety protection.

3. Portions of existing electrical wiring system(material used and method of installation) expose building and occupants to fire and shock hazard.

4. Lack of foundation and deterioration to ground supports have caused structural settlement.

5. Deterioration and lack of maintenance to wall and roof structural members(rear portion) have caused structural failure to the extent that framing members are incapable of supporting imposed loads.

6. Detached garage structure is in state of partial collapse and a structural hazard due to: lack of proper foundation supports; lack of and inadequate vertical framing members; lack of bracing to resist lateral forces.

-continued-

Please note that the above items reflect only major items of concern with relation to minimum safety requirements of Housing Code.

If repair or rehabilitation of building is to be done, consideration should be given to other existing deficiencies such as foundation, damaged siding, roof covering, etc.

As a result of this inspection and hazardous conditions found, P.G.&E. has been requested to disconnect utilities to the building.

If additional information is desired or to obtain permits for repair work, please feel free to contact the undersigned.

Yours truly,

Arch Watson

ARCH WATSON
BUILDING OFFICIAL

AW:ls

September 10, 1976

Agenda Item #4

REPORT TO: The Architecture and Site Committee

FROM: Donald R. Ross, Associate Planner

SUBJECT: Architecture and Site Application S-76-47

APPLICANT: G. Edward Mitchell

LOCATION: 647 North Santa Cruz Avenue

ZONING: Parcel has C-2 zoning in front and R-M:5-12 zoning in the rear

REQUEST: Approval of plans pursuant to Section 4.56.020 of the Zoning Ordinance for the construction of a one-story office building.

PROPERTY SIZE AND SHAPE:

The property is rectangular shaped with 86.6 feet of frontage on North Santa Cruz Avenue and an area of 24,000 feet. The proposed plans call for development of the front portion of the parcel which has commercial zoning, a site of 9,990 square feet. No additional development is proposed for the rear 14,010 square feet.

ENVIRONMENTAL ASSESSMENT:

It has been determined that this project is Categorically Exempt pursuant to Section 15103(c).

EXHIBITS: A - Revised development plans (3 sheets), stamped Received August 25, 1976
B - Landscape lighting and building sign exhibit, stamped Received June 17, 1976.

BACKGROUND: On July 21, 1976, the Committee considered this application, and continued the matter to permit the submission of revised plans demonstrating compliance with a number of deficiencies noted in the staff report. This has now been done.

DETAILS OF THE PORJECT:

1. The property presently contains two rental dwellings and a large vacant area. The applicant has submitted plans proposing the demolition of the front dwelling and the construction of an office building with parking and office space on the ground level and additional offices above. The first floor will contain 710 square feet while the second floor will contain 3,520 square feet, for a total area of 4,230 square feet.

2. Factual data concerning this project includes:

	Proposed	Permitted
a. Number of stories	2	No Limit
b. Height (feet)	22	40
c. Site area coverage (%)	36.4	100

d. Building setbacks	Proposed	Required
Front	10*	0
Side	5	0
Rear	2	0**

*Back of Plan Line
**The rear zoning line is not a property line, and no setback is required.

e. Parking spaces (4,262/235 = 17.98 spaces)	18	18
f. Parking specifications (feet)		
Space width	9.5 - 12	9
Space length	20	20
Aisle width	26	26
g. Perimeter planter width (feet)	5	7*
h. Landscaping within parking areas	8%	5%

i. Trash enclosure: located on the ground floor of the building.
j. Exterior materials:
Walls: adobe color concrete masonry on first level (parking garage) Cedar shakes, and grooved redwood plywood stained charcoal brown on office floor level.
k. Signing: Number plates for each office are proposed, as shown on the attached exhibit.
l. Lighting: Low level redwood garden laterns are proposed. The details are described in the attached exhibit.
m. Access to undeveloped section: An ingress/egress right-of-way is proposed providing access to the multiple family zoned section of the parcel to the rear.

3. The ordinance now requires that the curbs around planter areas function as wheelstops.

4. The previous report noted that two large trees, a 12-inch Oak and a 6-inch Acacia, were to be removed to permit additional parking. It was noted further that while the Acacia was not in good health, the Oak was worth preserving. This revised plan proposes removal of the Acacia and preservation of the Oak within a 16.5-foot-wide planter.

5. Parking and building access for the handicapped is now provided.

6. The only signing is illustrated in Exhibit B. Proposed sign area will not exceed 1.5 square feet while a maximum of 84 square feet is permitted.

PUBLIC WORKS COMMENTS:

This application proposes to develop a vacant parcel of land at 647 North Santa Cruz Avenue. The ultimate plans for Santa Cruz Avenue include widening between the existing trees to provide parking bays. The existing curb-to-curb width will

provide two moving lanes and a two-way left-turn lane. Since this property is extremely close to the Blossom Hill intersection, we do not recommend parking bays along this frontage. The only street improvements needed on the frontage of this property are the removal of the existing driveway approach, installation of a new driveway approach, and the installation of one electrolier.

The traffic circulation pattern is acceptable with the two-way aisle and perpendicular parking. An easement is proposed to be retained over the aisle to provide access to the existing residence behind the property. There is no lighting proposed from the parking lot other than low level decorative lighting. If lighting is added to the parking lot, the final plans must show these details for review and approval.

RECOMMENDATION:

Approval, subject to the following conditions:

1. The applicant shall install a new driveway approach, replace the existing driveway approach with standard curb, gutter and sidewalk, and install one electrolier as approved by the Town Engineer.

2. The applicant shall submit final grading, drainage, and traffic circulation plans for review and approval by the Town Engineer.

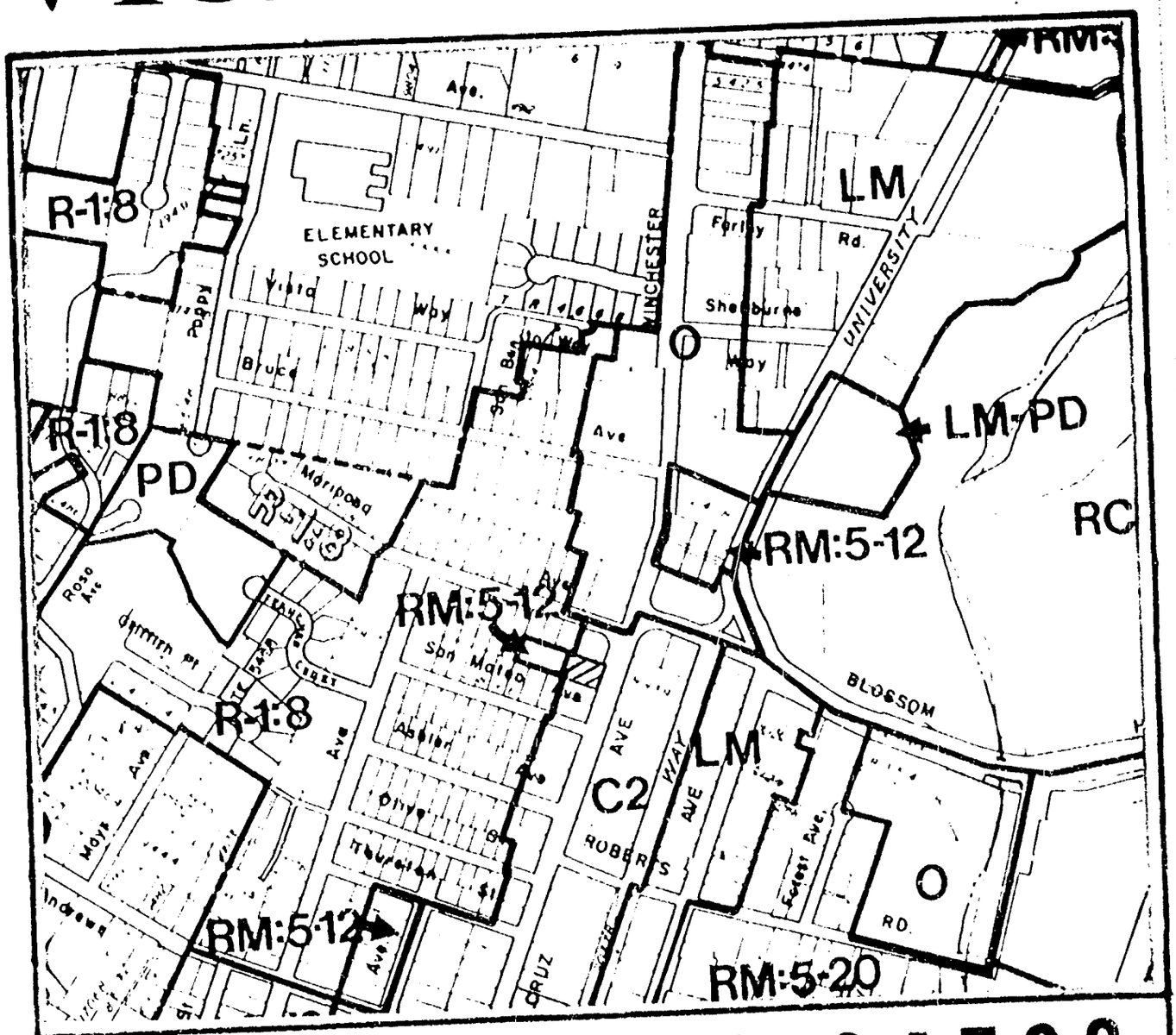
3. The landscaped planter along the north property line shall be increased in width by two feet, and the parking spaces be reduced in length by a corresponding two feet to 18 feet.

LEE E. BOWMAN, PLANNING DIRECTOR for

DONALD R. ROSS, ASSOCIATE PLANNER

LEB:DRR:oh
Attachments

VICINITY MAP



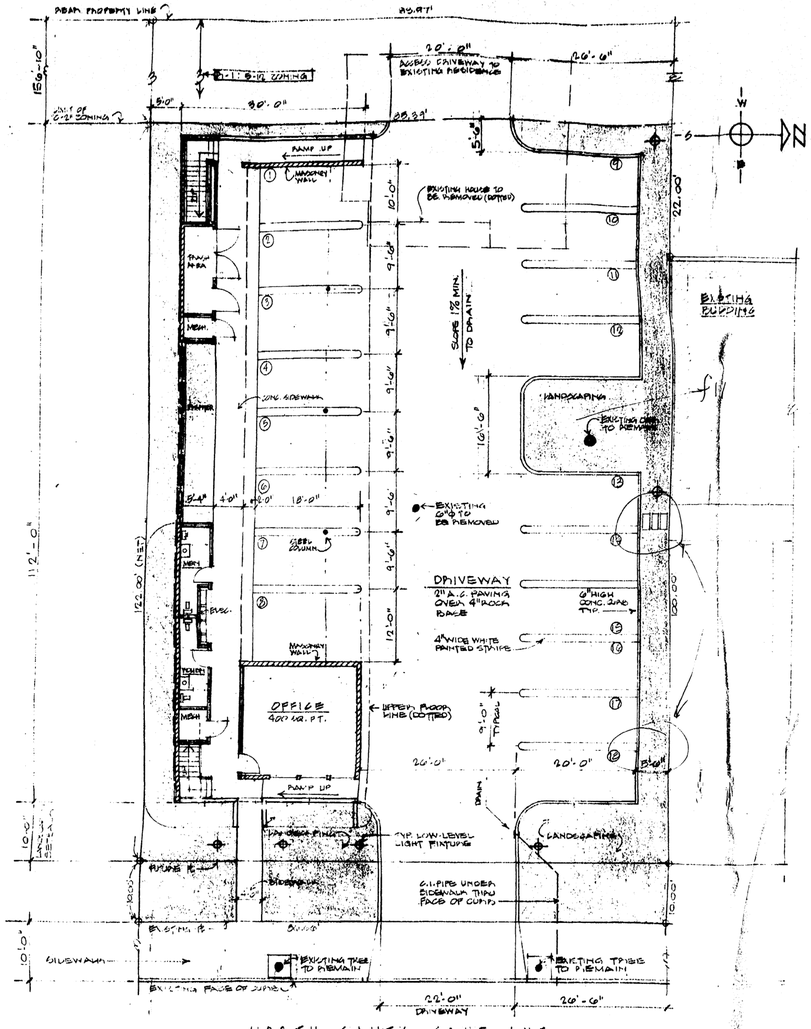
TOWN of LOS GATOS
Planning Commission

Date of meeting- 9/15/76

Agenda item no.- 4

Applicant- MITCHELL

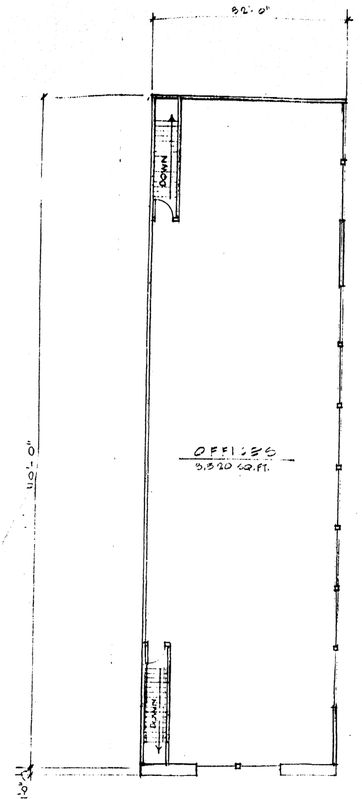
North



NORTH SANTA CRUZ AVE.

SITE PLAN

SCALE: 1" = 10'-0"



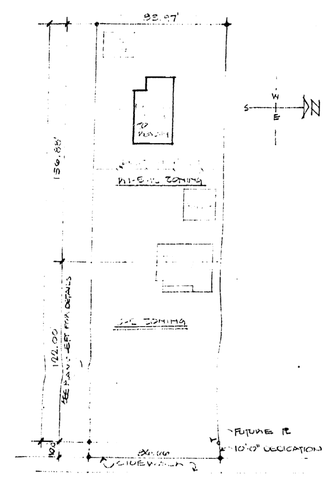
UPPER FLOOR PLAN (OFFICES)

SCALE: 1" = 10'-0"

GENERAL NOTES

1. OWNER:
   G. EDWARD MITCHELL
   [redacted]
2. ZONED: "C-2"
3. ACCESS: DRIVE WAY - NO.:
4. AREA: 9,900.50 SQ FT (GROSS)
5. BUILDING FOOTPRINT AREA: 4,160 SQ. FT.
6. PARKING: REQUIRED - 4,160/385 = 17.98 CARS
   ACTUAL = 18 CARS
7. LANDSCAPING RATIO (PARKING AREA):
   AREA OF LANDSCAPING = 867.5 SQ FT / PARKING AREA = 8,654 SQ FT = 8.67 %

SITE PLAN: SCALE: 1" = 40'



DRAWING INDEX

SHEET	DESCRIPTION
1	SITE PLAN, FLOOR PLANS
2	EXTERIOR ELEVATIONS
3	LANDSCAPING PLAN, IRRIGATION PLAN

APPROVED
By the Committee of Architectural Review subject to the conditions of approval as set forth in the attached minutes
Secretary
Planning Commission of the Town of Los Gatos.

RECEIVED
AUG 25 1976
TOWN OF LOS GATOS
PLANNING DEPARTMENT
By
5-76-47
Revised

EXHIBIT A
Sheet 1 of 3

JOB NO.	7614
DATE	AUG. 24, 1976

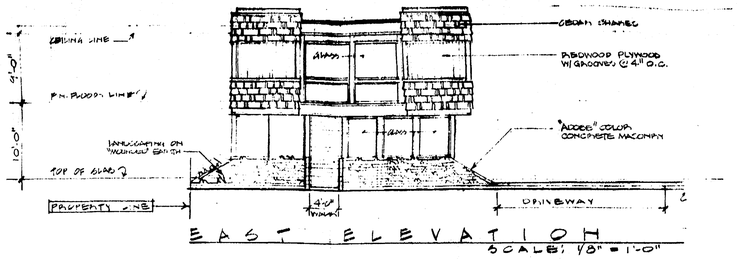
NO.	DATE	REVISION

SITE PLAN

DENNIS BURROW AIA
ARCHITECT - PLANNER
444 UNIVERSITY AVENUE - 354 8726
LOS GATOS - CALIFORNIA - 95030

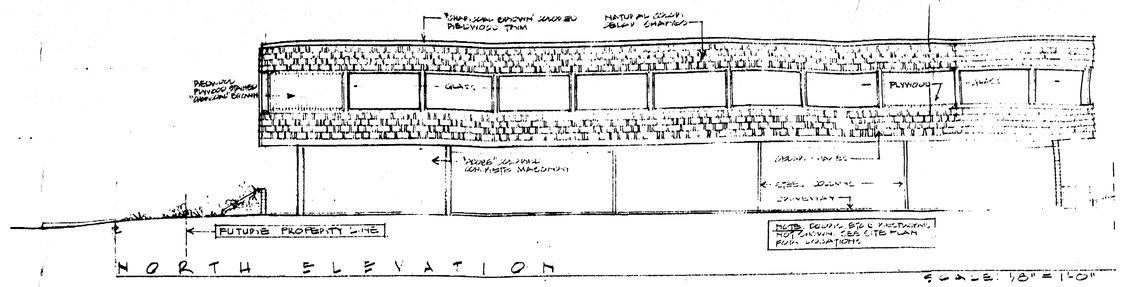
PROPOSED COMMERCIAL BUILDING
647 N. SANTA CRUZ AVE.
LOS GATOS, CALIFORNIA

SHEET 1



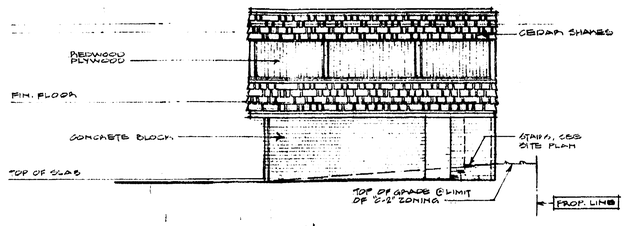
EAST ELEVATION

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



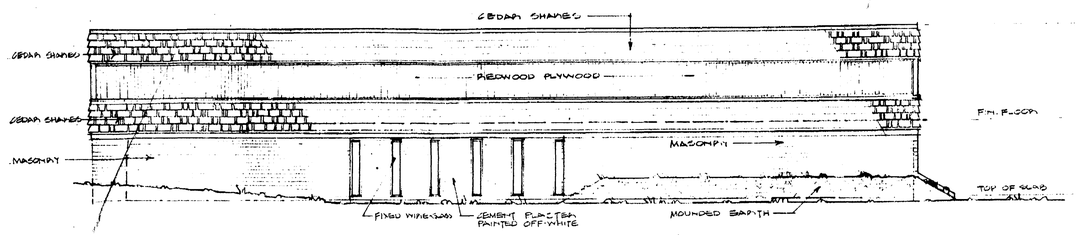
NORTH ELEVATION

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



WEST ELEVATION

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



SOUTH ELEVATION

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

EXHIBIT A
Page 2 of 2

JOB NO.	7614	NO.	DATE	REVISION
DATE	Aug. 24, 1976			

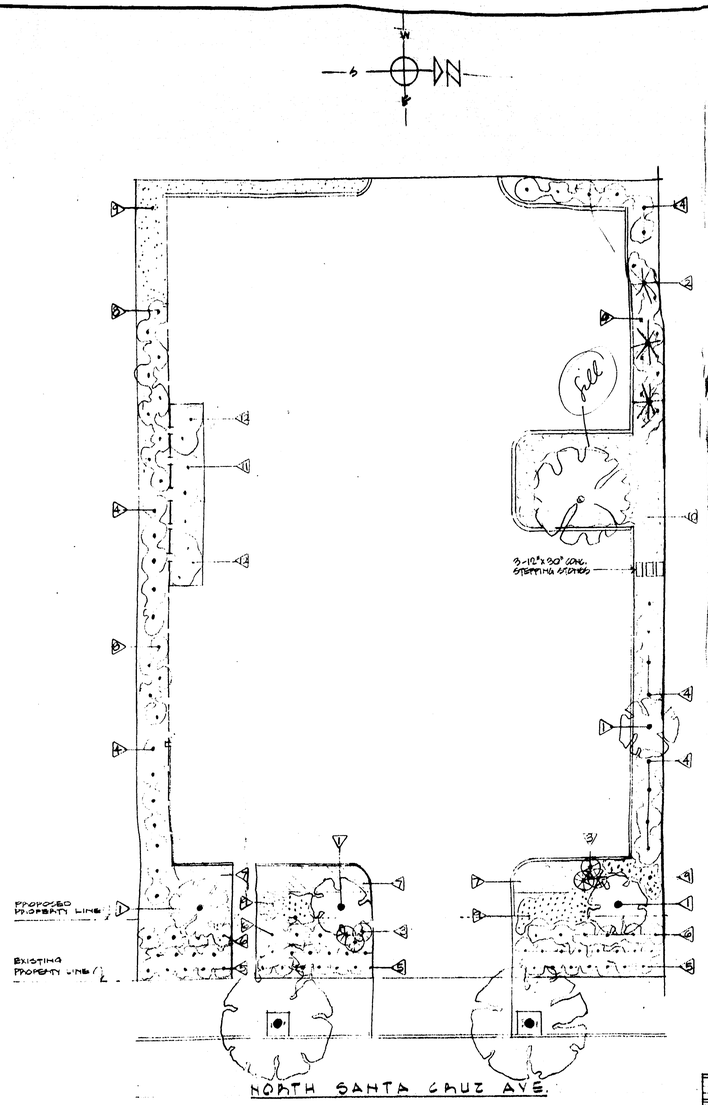
EXTERIOR ELEVATIONS

DENNIS BURROW AIA
ARCHITECT · PLANNER
848 UNIVERSITY AVENUE · 354 8736
LOS GATOS · CALIFORNIA · 95030

PROPOSED COMMERCIAL BUILDING
647 N. SANTA CRUZ AVE.
LOS GATOS, CALIFORNIA

SHEET 2

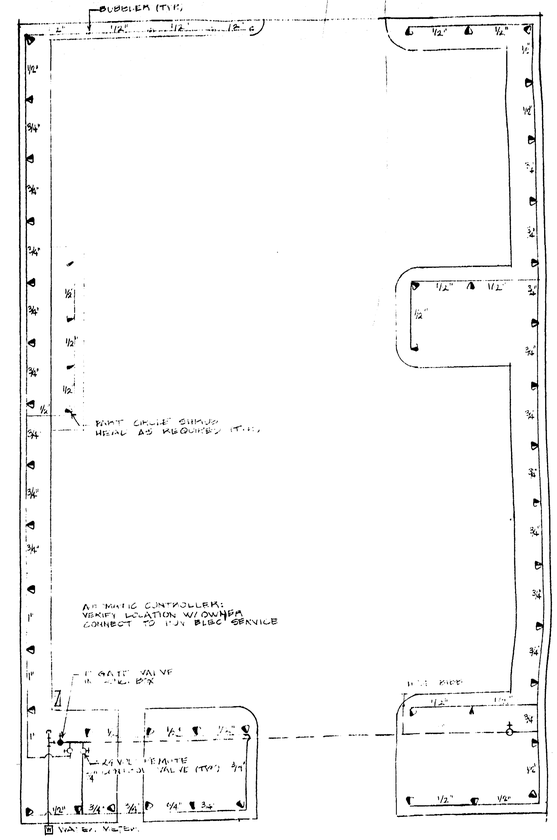
PRINTED ON DATAPRINT 181 N1315



PLANTING PLAN

SCALE: 1"=10'-0"

KEY	QUANTITY	DESCRIPTION	SIZE
A	1	FRAXINUS RAYWOODII (CLARET ASH)	15 GAL.
B	3	JUNIPERUS TORULOSA (TWISTED JUNIPER)	15 GAL.
C	6	MORAEA IRIDIOIDES (PITHIGHT LILY)	5 GAL.
D	20	CISTUS HYBRIDUS (WHITE ROCKROSE)	1 GAL.
E	37	COPPROSMA KIRKII (CREEPING FIG)	1 GAL.
F	22	LIGUSTRUM TEXANUM (LUSTERLEAF)	1 GAL.
G	360	GAZANIA UNIFLORA-YELLOW (TRAILING GAZANIA)	FLAT
H	14	RAPHIOLEPIS I."ENCHANTRESS"	1 GAL.
I	265	ROSMARINUS OFFICINALIS (ROSEMARY)	FLAT
J	220	VINCA MAJOR	FLAT
K	3	CAMELLIA JAPONICA "ALBA PLENA"	5 GAL.
L	5	VIBURNUM "DAVIDII"	1 GAL.



IRRIGATION PLAN

SCALE: 1"=10'-0"

EXHIBIT A

Page 3 of 3

JOB NO.	7614	NO.	DATE	REVISION
DATE	AUG. 24, 1976			

PRINTED ON DIAZOMAT 101 NITES

LANDSCAPING PLAN

DENNIS BURROW AIA
ARCHITECT · PLANNER
844 UNIVERSITY AVENUE · 354 8236
LOS GATOS · CALIFORNIA · 95030

PROPOSED COMMERCIAL BUILDING
247 N. SANTA CRUZ AVE.
LOS GATOS, CALIFORNIA

SHEET 3

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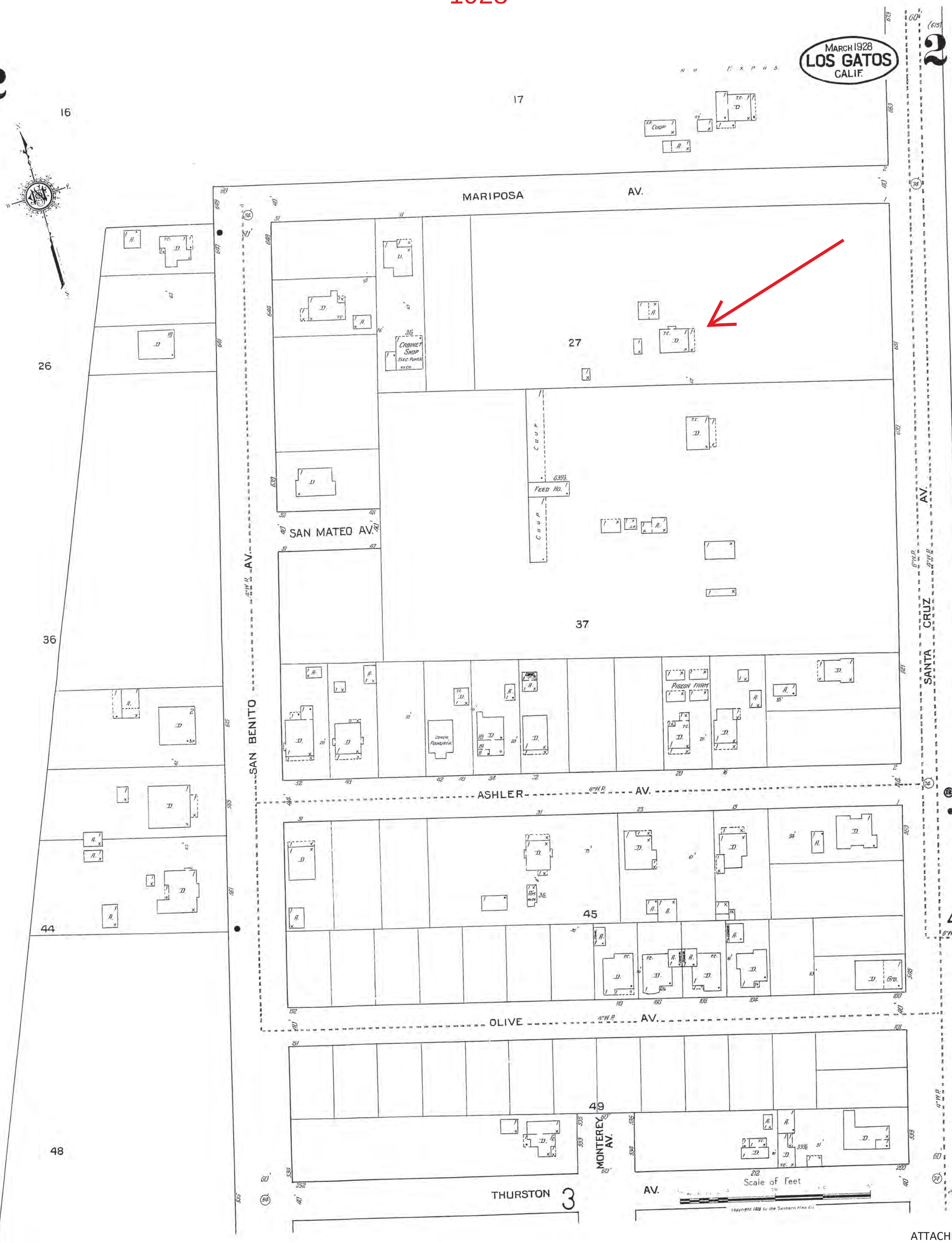
1928



ATTACHMENT 2

1944

MARCH 1928
LOS GATOS
CALIF.

MARIPOSA AV.

SAN MATEO AV.

ASHLER AV.

OLIVE AV.

THURSTON AV.

MONTEREY AV.

SAN BENITO AV.

SANTA CRUZ AV.

CYPRESS AV.

Santa Clara County
Los Gatos

Scale of Feet

Copyright 1928 by the Sanborn Map Co.

1956

MARCH 1928
LOS GATOS
CALIF.
MARIPOSA AV.
SAN MATEO AV.
ASHLER AV.
OLIVE AV.
THURSTON AV.
SAN BENITO AV.
MONTEREY AV.
SANTA CRUZ AV.
Santa Clara County
Los Gatos
17
26
27
36
37
44
45
48
49
3
Scale of Feet

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State of California ♦ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial

NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date 8-12-2025

Page 1 **of** 2 3 ***Resource Name or #:** (Assigned by recorder) 647 & 651 N Santa Cruz Avenue, Los Gatos

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☒**Unrestricted**

***a. County** Santa Clara **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** _____ **Date** _____ **T** __; **R** __; __ ☐ **of** __ ☐ **of Sec** __; _____ **B.M.**

c. Address 647 & 651 N. Santa Cruz Avenue City Los Gatos ip 95070

d. UTM: (Give more than one for large and/or linear resources) Zone 10S, 590703.02 mE/ 4121470.70 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)
APN 410-14-015

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The property is a long parcel that rises in elevation from N. Santa Cruz Avenue. It is 88.6 feet wide by 288.8 feet deep. Fronting on N. Santa Cruz Avenue is an office building that is one-story over car parking, addressed as 647 N. Santa Cruz Avenue. This office building was developed in 1978 and is perpendicular to the street with a parking lot along the north side running the full length of the building to a solid wood fence with a gate of the same material giving the appearance of a wall separating the rear portion of the site. Behind the fence, the property rises and contains a garage and a modest Craftsman-style house c.1924. The house is on the sloping site with a front porch that is elevated to match the rear elevation. Contemporary lattice fencing covers the front void under the porch and concrete steps reach the entry.

***P3b. Resource Attributes:** (List attributes and codes) HP 2 single-family

P
o

***P4. Resources Present:**☒Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) Front façade
651 N.Santa Cruz Ave. 0 7/25

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1978 aand 1924 Assessor's Filles

***P7. Owner and Address:**
North Side Plaza LLC
647 N. Santa Cruz Ave
:Los Gatos, CA 95030

***P8. Recorded by:** (Name, affiliation, and address) Bonnie Bamburg
Urban Programmers
10710 Ridgeview Ave
San Jose, CA 95127

***P9. Date Recorded:** 08/12/2025

***P10. Survey Type:** (Describe) intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") None found

***Attachments:** ☐NONE ☐Location Map ☒ontinuation Sheet ☒uilding, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

P3 continued

The front porch extends across the front façade and has been enclosed with sliding windows. The porch is covered by the extended roof with exposed rafter tails. The east side has two tall wood-frame windows on each side of an alteration pop-out that is sheathed in wider horizontal boards.

The pop-out has a shed roof with a wood-framed window beneath. A similar framed window is in the center of the wall. Other similar windows are close to the corners of the side facade. The east side has one paired-window toward the front and a single window close to the rear entry corner. The rear has also been altered by constructing an addition and extending the roof to cover it. A second entry is on the northwest corner. The house has beveled siding (clapboard) that appears to be redwood. The roof is a medium pitch with composition shingles and small vents close to the ridge line. It appears that the house has not been occupied for quite a while, and there is observable deterioration from a lack of maintenance.

The landscaping consists of stones randomly spaced creating a walkway from the parking lot of the office building up to the house. There is no evidence of a formal landscape plan.

The garage appears to have been constructed after the house but likely within the same decade as the house, however it is in a deteriorated condition. The basic pitched roof box-style 2-car garage has a double lift door and siding that is similar to the clapboard siding found on the house.

The buildings are not a fine or exemplary example of the Craftsman style.

OFFICE BUILDING

SE CORNER

FRONT FACADE

NE CORNER

HOUSE

EAST FACADE

NE CORNER

NORTH SIDE

NW CORNER

SW CORNER

SOUTH SIDE

CONTINUATION SHEET

Property Name: _____

***Recorded by:** _____ ***Date** _____ ☐ Continuation ☐ Update

B10 continued

AERIAL VIEW OF 651 AND 647 N. SANTA CRUZ BLVD, LOS GATOS **N**

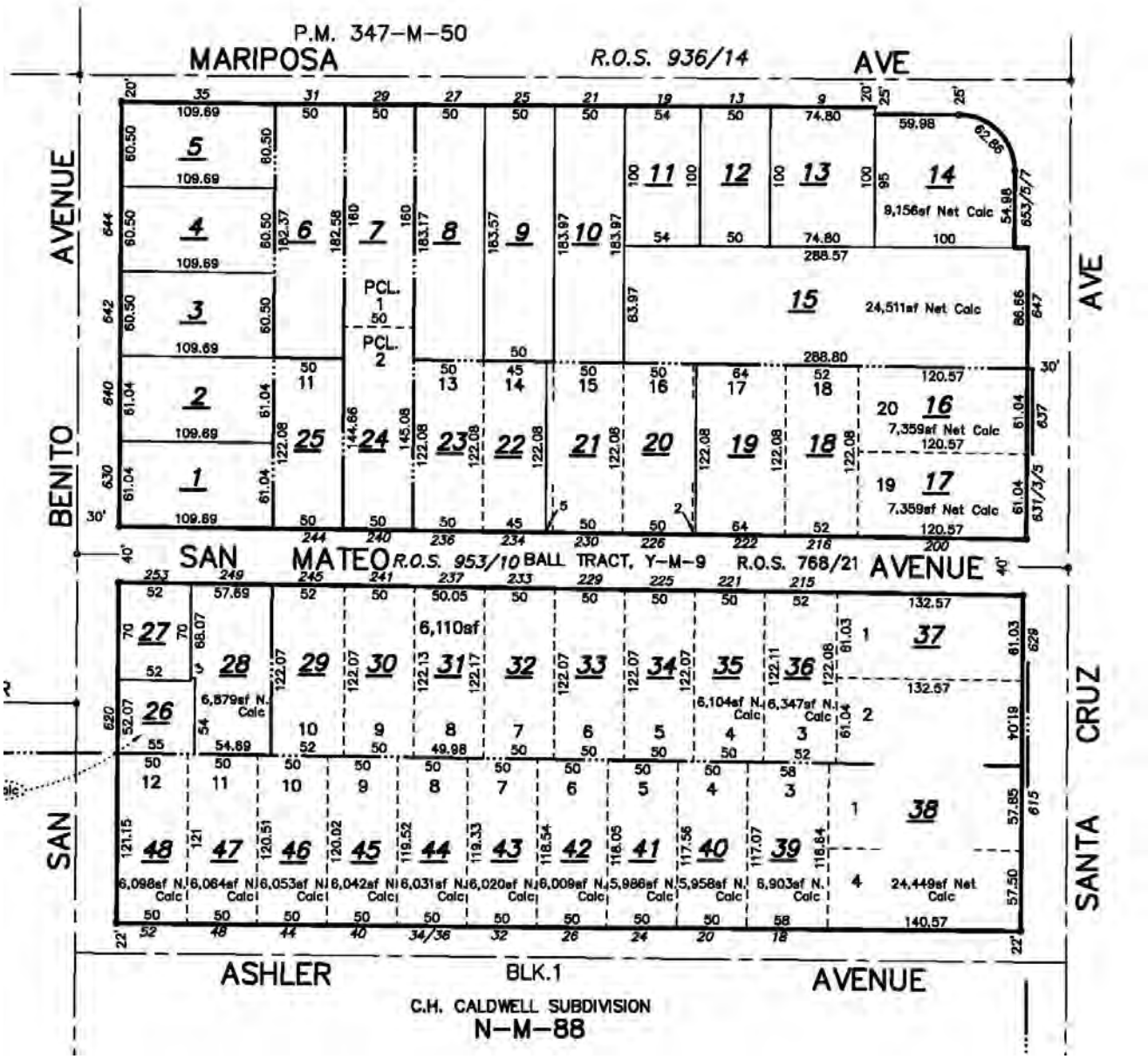
CONTINUATION SHEET

Property Name: _____

Page _7____ of __23___ ***Resource Name or #** (Assigned by recorder)

***Recorded by:** _____ ***Date** _____ ☙ Continuation ☙ Update

B10 continued



BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (647 & 651 N. Santa Cruz Ave. Los Gatos ***NRHP Status** 6Z
Code Page 8 **of** 23

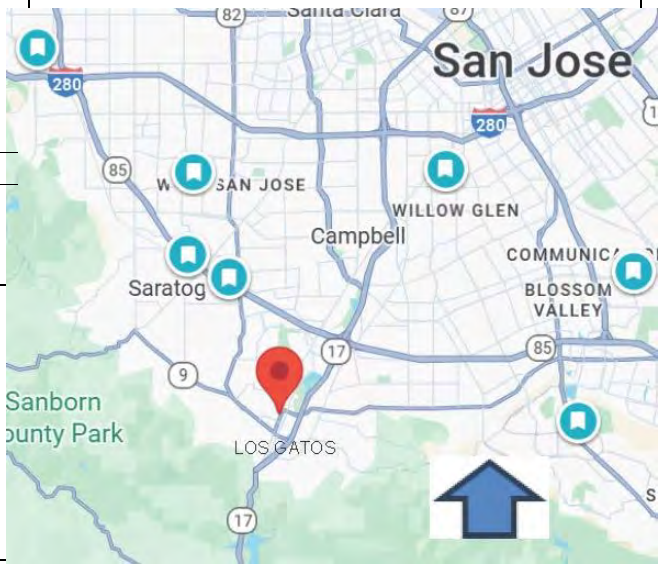
B1. Historic Name: None
B2. Common Name: Plaza Office Building
B3. Original Use: Residential B4. Present Use: 651 Vacant; - 647 Office
***B5. Architectural Style:** 651 Craftsman; 647 Contemporary Commercial
***B6. Construction History:** (Construction date, alterations, and date of alterations)
647 N. Sant Cruz Ave. Office Bld. Constructed 1978
651 N. Santa Cruz Ave Residential. Constructed 1924 per Assessor Records; Alterations not documented
***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** **Original Location:**
***B8. Related Features:** Mature trees on the site
B9a. Architect: Unknown (house) b. Builder: Unknown (house)
***B10. Significance: Theme** NA **Area** Los Gatos **N>ANA**
Period of Significance NA **Property Type** NA **Applicable Criteria** NA
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)
The property, including a 1924 house and a 1978 office building does not meet the criteria of the California Registers of Historical Resources and is not listed in a historic district in Los Gatos. The property is associated with the broad pattern of residential development in Los Gatos, but is not a significant example of the pattern. There is no association with a person of historical significance in Los Gatos and the architecture of the house is not a significant example of the Craftsman style. Due to the previous agriculture and construction on site, it is unlikely that important information from pre-history or the history of construction would be found.

Background/context.
The area that became the Town of Los Gatos was inhabited by a group of the Ohlone, Coastal Native Americans. The abundance of animals and native plants provided for year-round habitation that was enhanced by the temperate climate. Described as hunters and gathers, the population remained relatively constant for hundreds of years prior to
(cont.)

B11. Additional Resource Attributes: (List attributes and codes) none
***B12. References:**

B13. Remarks:

(Sketch Map with north arrow required.)



***B14. Evaluator:** Bonnie Bamburg
***Date of Evaluation:** 15 AUG 2025

(This space reserved for official comments.)

***Recorded by:** Irban Programmers ***Date** 8/12/2025 x Continuation Update

B 10 Significance continued

the European explorers and Mission settlements.[1]

The Spanish Period

The Portola Expedition of 1769 was when Captain Juan Gaspar de Portolá led a contingent of Spaniards on an exploration of the San Francisco Peninsula seeking the seaward entrance to the Bay. By 1777 a city was established at San Jose de Guadalupe to provide provisions for the presidio at San Francisco. Mission Santa Clara, established that same year, brought Europeans and western customs to the area. Although not located in the Los Gatos area, the mission drew from the native population, exposing them to disease and deprivation of the native lifestyle. Within a few years the native population had expired.

The Mexican Era

In 1821, the governance of California changed from the Spanish to the Mexican authority. During this period (1821-1848) the bestowing of large acreages for service to the governors was popular, and California was extensively divided by these "Ranchos". In 1840, **El Rancho Rinconada de Los Gatos[2]** was 6,631-acres granted by Governor Juan Alvarado to Jose Maria Hernandez and Sebastian Fabian Peralta. It appears that the only structure constructed thereon was an adobe house where Vasona Park is today.[3] After California became a state in 1850, the land grant was patented to Sebastian Peralta and José Hernandez in 1860. The owners began selling portions of the land as settlers came to the area. An early entrepreneur was James Alexander Forbes (1805–1881), who purchased about 200 acres in 1853, whereupon he built Forbes Mill. The mill began operating in 1855, but Forbes went bankrupt in 1857. This misfortune was overshadowed by the many who found success in orchards or services for the growing Town of Los Gatos.[4] During this era adobe buildings were popular with wood frame emerging as lumber was milled.

Early Settlement

Los Gatos was located along the corridors between San Jose (Santa Clara Valley) and Santa Cruz. Connecting railroads began as a service to logging and agriculture and grew to be important for travelers going between the cities of the Santa Clara Valley and both Santa Cruz and San Francisco. The town became a natural location for hotels to accommodate those traveling for business, and, because of its

[1] Bruntz, George, History of Los Gatos, Pacific Group 1971 page 1
[2] It appears the name was in recognition of the mountain lions that inhabited the area.
[3] Bruntz, George, History of Los Gatos, Pacific Group 1971 page 3
[4] Bruntz, George, History of Los Gatos, Pacific Group 1971 page 5

natural beauty and climate, visitors who came for holiday as well. Some found the area offered opportunity for agriculture and as the lumber industry waned ,the cleared land was planted with fruit trees. Word spread of the pleasant living attracting new residents. During this era, buildings were constructed of stone, wood and brick. The styles were Victorian for commercial and residential buildings.

Above is the Beckwith Building on Maun Street, 1893

Above and left are

examples of Queen Anne Style Residences

***Recorded by:** Irban Programmers ***Date** 8/12/2025 x Continuation Update

The new century was one of dramatic change in Los Gatos. At the turn of the century when the population was 1,952, the economy was primarily agriculture, orchards and vineyards, packing houses and wineries.[5] Transportation remained essential as agriculture expanded and both new residents and visitors increased. The Southern Pacific train and interurban system of street cars and the private automobile were the primary modes of transportation. The private automobile allowed residential development to expand often filling the vacant parcels in subdivisions plated in the late 1800s or claiming orchard or small farms close to the center of town. By 1920 the population stood at 2,317 and ten years later the population had grown to 3,168. [6] Los Gatos developed with subdivisions of small cottages and a reputation as an arts colony. Musicians, artists and writers occupied many of the cottages well into the 1970s.While some became famous such as violinist Yehudi Menuhin and author John Steinbeck, many were symphony musicians, commercial artists and supporting actors.[7] During this era, commercial buildings adopted the Spanish Colonial Revival style promoted by the Southern Pacific and "this became the California Style". The Beckwith Building 1893, constructed in brick, was given a new sheathing of stucco with small eyebrows of red tile. After the 1989 Earthquake, the building was repaired removing the stucco and rehabilitating the original appearance. Residential architecture entered the era with late Victorian and Craftsman styles, with front facing gables and double gable, cross-gable, and side gable roofs. Elements of the styles include truncated porch supports, full height and with a base. Low or half porch walls, either solid or open, exposed framing with rafter tails showing, and brackets, decorative or structural. The exterior walls were a mix of materials, often rock lower walls and wood or shingles siding. The style was made more economical with stucco siding in the 1920s. These bungalows developed in a variety of styles from the Mediterranean area, with red tile roofs, and a more Indigenous Craftsman Style in many variations. The Bayview Historic District exhibits this residential pattern

[5] Bruntz, George, History of Los Gatos, Pacific Group 1971 page25

[6] Bay Area Census Data - *https://census.bayareametro.gov/historical-data/1860-1940/los_gatos*. Retrived 7/24/2025

[7] Authors personal experience as a child visiting family friends.

***Recorded by:** Irban Programmers ***Date** 8/12/2025 x Continuation Update

Examples of Craftsman Style homes from this era.

Mid to Late Twentieth Century-1941-1999

The era opens with WWII and the opportunity for the fruit growers and packers to receive federal grants to be sure there would be supplies to feed the military as well as the civilian population. This arrived as the growers and packers were facing a declining market and prices that did not support the industry. This cycle was due to several factors but the loss of European Axis countries as customers played heavily on the industry. By mid-century, the private automobile had replaced all but the Southern Pacific train. Los Gatos had changed from agriculture to a suburban residential community with small subdivisions accessed by hastily constructed roads. Access to the Town was from State Route 17 and State Route 9 (Los Gatos-Saratoga Road). Both were improved in the early 1950s, and State Route 17 continued to be widened after connecting the East Bay with Santa Cruz and the coast. Commercial development extended along Main Street and North Santa Cruz Avenue extending Bascom Avenue south into Los Gatos. An entrance from State Route 17provided access to more area of residential development and encouraged commercial development to also expand. By the 1960s housing prices in Los Gatos were rising and although it retained some of the artist environment the culture was moving toward employees of the technology industries. By the 1980s Los Gatos had become one of the wealthiest residential areas in Santa Clara County. Architectural styles for commercial buildings included tilt-up concrete panel buildings but the predominate was frame construction, wood or metal, with stucco or manufactured siding, Residential styles began with International but was after WWII Stylized Ranch and Millenium Mansions . Most residential buildings were wood-frame construction.

The history of Los Gatos began with the lumbering industry followed by agriculture with orchards and processing. However, from the early years, aside from the economic drivers, Los Gatos experienced growth in residential development due to the climate and natural beauty of the area. Transportation improvements over the years encouraged part times residents into the 1960s when permanent

residents were the growth..

647- 651 North Santa Cruz Avenue

The parcel is part of the tract of Land deeded to W. A. Kerlin, by Deed dated August 31, 1924 and recorded in Book 171 of Official Records, Page 550. William Albert Kerlin was born in 1866 in Pennsylvania. Shortly after his birth the family moved west living in Illinois and Nebraska where he was educated in surveying, and in Illinois where he met and married Grace Belle Haws before settling in Los

Angeles about 1915. The 1920 US census shows [8]William was a surveyor, and they have one son William Albert Jr., with the family living in Long Beach. In 1924 the family purchased land in Los Gatos and constructed a house and a garage that was on the property tax role in 1925. The 1926 Voter rolls for Santa Clara County show that William was a rancher(fruit) living at 651 N. Santa Cruz Ave in Los Gatos. This refers to the existing house on the subject property. The family owned fruit orchards in San Jose and elsewhere in the county. [9]SanJose City directory foe 1932,[10] lists William Sr., as the chairman of the County Survey, residence at 269 San Jose Avenue, in Redwood Township. William A. Kerlin passed away in 1935 and is buried in Forest Law, Glendale, California. The Kerlins are listed in the City Directories with several addresses over the years. The N. Santa Cruz property was a part-time residence, and it does not appear to have been rented. After her husband's death Grace is listed as his widow living at 1264 Pine, San Jose.[11] Grace Kerlin passed away in 1944. William Albert Kerlin, Jr. married and lived in San Jose when he and his wife registered to vote in 1938. After his father passed away, William Kerlin Jr. appears to have managed the property with his mother. After 1941 the house was rented outside the family.

In 1942, the first year the address 467 is listed in the City Directory, the property was rented to Mrs. L.P. Felice. During the 1940s Louis Felice operated a shoe store on N. Santa Cruz Road. It appears they rented for one year. Although not recorded, it appears there were short time rentals for five years.

The N. Santa Cruz property was sold by William A. Kerlin Jr. in 1946 to Lloyd Stryker Jr. and Minnie M., his wife. [12]The Strykers were neighbors at 639 N. Santa Cruz Avenue where they raised poultry.[13] The Strykers constructed a second and larger garage in the lare 1940s. This appears the time alterations were made to the house. In 1978, the garage was demolished, and a two-story office building was constructed on the property and addressed 647 N. Santa Cruz Avenue. The house was cut off with the only access through a solid wood fence at the end of the office building's parking lot. A resident who did not wish to be identified stated the house was rented but thought it empty for years. The house has been vacant for quite a while.

[8] IS Census 1920 Los Angeles CA
[9] Santa Clara Assessor's Records- William A. Kelin Santa Clara County Arvives.
[10] R.L. Polk, San Jose City Directory, 1932 page 285
[11] R.L.Polk City Directory for San Jose 1938-1942
[12] Deed Stryker Jr. and Minnie M. November 20, 1946
[13] Los Gatos City Directory,1922 R.L. Polk Publisher.

The owners and tenants of the property did not have a significant role in in the history of Los Gatos. The families had fruit trees on the property, and it appears most of the time the houses were rented outside the ownersfamilies. Owners and tenants after 1975 are not included because the threshold age for evaluating resources for the California Register of Historical Resources is 50 years unless there is extraordinary circumstances, which is not the case with this property.i

Historical Evaluation Framework.

The regulatory background outlined below offers criteria used to assess the historic significance and eligibility of a building, structure, object, site or district for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR) the criterias for both are very similar with the NRHP the more restrictive. Therefore, when a property is not eligible for listing in the CRHR, it would not be eligible for listing in the NRHP. .

National Register of Historic Places

The National Historic Preservation Act (NHPA) authorizes the Secretary of the Interior to expand and maintain the National Register of Historic Places.

The National Register Criteria for Evaluation is composed of two factors. First, the property must be "associated with an important historic context."[14] Secondly, the resource must retain sufficient integrity to convey the reason for its significance. The National Register identifies four possible context types, of which at least one must be applicable at the national, state, or local level. As listed under Section 8, "Statement of Significance," of the National Register of Historic Places Registration Form, these are:

A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
B. Property is associated with the lives of persons significant in our past.
C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

[14] U. S. Department of the Interior, National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, National Register Bulletin 15 (Washington, DC: Government Printing Office, 1997), 3.

D. Property has yielded, or is likely to yield, information important to prehistory or history.

While a property's significance relates to its role within a specific historic context, its integrity refers to "a property's physical features and how they relate to its significance."[15] To determine if a property retains the physical characteristics corresponding to its historic context, the National Register has identified seven aspects of integrity: Since integrity is based on a property's significance within a specific historic context, an evaluation of a property's integrity can only occur after historic significance has been established. The seven aspects re as follows;

Location is the place where the historic property was constructed or the place where the historic event occurred.

Design is the combination of elements that create the form, plan, space, structure, and style of a property.

Setting is the physical environment of a historic property.

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.

Association is the direct link between an important historic event or person and a historic property.[16]

California Register of Historical Resources

The California Office of Historic Preservation's Technical Assistance Series #6, *California Register and National Register: A Comparison*, outlines the differences between the federal and state processes. The context types to be used when establishing the significance of a property for listing on the California Register of Historical Resources are very similar, with emphasis on local and state significance. They are:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California

[15] National Park Service, *How to Apply the National Register Criteria for Evaluation*, 44.
[16] National Park Service, *How to Apply the National Register Criteria for Evaluation*, 44-45.

or the United States; or

2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or is likely to yield, information important to prehistory or history of the local area, California, or the nation.[17]

Like the NRHP, evaluation for eligibility to the CRHR requires an establishment of historic significance before integrity is considered. California's integrity threshold is slightly lower than the federal level. As a result, some resources that are historically significant but do not meet NRHP integrity standards may be eligible for listing on the CRHR.[17]

For the purposes of CEQA (Guidelines Section 15064.5), the term "historical resources" shall include the following:

1. A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (Public Resources Code §5024.1, Title 14 CCR, Section 4850 et seq.).
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the CRHR (Public Resources Code Section 5024.1, Title 14 CCR, Section 4852) as follows:

[17] State of California, Department of Parks and Recreation, Office of Historic Preservation, *California Register and National Register: A Comparison*, Technical Assistance Series 6 (Sacramento: California Department of Parks and Recreation, 2001), 1.

a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

b) Is associated with the lives of persons important in our past;

c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

d) Has yielded, or may be likely to yield, information important in prehistory or history. (Guidelines for the California Environmental Quality Act) Under CEQA §15064.5, "generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation with Guidelines for Rehabilitating Historic Buildings shall be considered as mitigated to a level of less than a significant impact on the historical resource."

Historical Resource Evaluation of 647 & 651 N. Santa Cruz Abenue, Los Gatos

To evaluate a property for historical significance, it is necessary to place it in context to define the period of significance and identify the important items for the property.

The primary context in which to evaluate the 651 N. Santa Cruz Avenue, is Residential Development and the Craftsman style of Architecture. In Los Gatos 1924-1940.

Context Summary. The house at 651 N. Santa Cruz Avenue was constructed in 1924 for ther William A. Kerlin family who had moved d to Los Gatos from Los Angeles. Willia was a surveyor who also purchased orchard land in Santa Clara County. The house and a garage remained in the family until about 1940, although it appears to have been a vacation home. After a brief period of renting the property, it was sold to Lloyd Stryker Jr. and his wife Minnie. This family raised poultry, although it was not listed in the County Assessors' records for this property. .

The historical context is as a single-family residence . The architecture is a modest Craftsman style, that was likely constructed by a local carpenter/ builder with direction for the owner .

***Recorded by:** Irban Programmers ***Date** 8/12/2025 x Continuation Update

National Register of Historic Places Criteria Evaluation

a. Property is associated with events that have made a significant contribution to the broad patterns of our history.

The single-family house and garage. Are a very small part of a very large pattern of residential development in Los Gatos during the 1920s, . However, this property is not a significant example of this large pattern. Thus, the buildings are not significant under National Register Criterion A.

B. Property is associated with the lives of persons significant in our past.

The property at 651 N. Santa Cruz Avenue, does not have an association with individuals who are significant in the history of Los Gatos, The owners of the property who had the house and garage constructed , lived in the house a short time before moving, although they retained the property for part-time use. The second owners were residents until it was developed with an office building in 1978. Research did not find an important association with the owners and the history of L:os Gatos,. Therefore, the property it is not significant under National Register Criterion B. .

C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

The modest Craftsman style house is onstrycted with a wood frame and siding. Elements of the style are the natural material and exposed rafter tails of the eaves. The side-facing building has been altered to enclose the front porch and create additions and a modified entrance in the rear. Compared to the very fine examples of Craftsman style homes found in Los Gatos, this house is not an important example of the style.

D. Property has yielded, or is likely to yield, information important to prehistory or history.

It is unlikely that important information about building construction, materials or methods would be found in the wood frame house since it is considered common construction. It is also unlikely information important in pre-history would be found on the site due to the disturbance of native spils, however an archaeological survey was not part of this stdy.

Conclusion. The property is not significant under National Register Criteria A, B, C or D thus it is not

eligible for the National Register.

California Register of Historical Resources Criteria for Evaluation

1. *It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United State'*

   The single-family house and garage. Are a very small part of a very large pattern of residential development in Los Gatos during the 1920s, . However, this property is not a significant example of this large pattern. Thus, the Thus, the buildings are not significant under California Register Criterion 1.

2. ***It is associated with the lives of persons important to local, California, or national history.***

   The property at 651 N. Santa Cruz Avenue, does not have an association with individuals who are significant in the history of Los Gatos, The owners of the property who had the house and garage constructed , lived in the house a short time before moving, although they retained the property for part-time use. The second owners were residents until it was developed with an office building in 1978. Research did not find an important association with the owners and the history of Los Gatos,. Therefore, the property it is not significant under The California Register of Gistorical Resources ccriterion 2Criterion B. .

3. ***It embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master or possesses high artistic values.***

   The modest Craftsman style house is onstrycted with a wood frame and siding. Elements of the style are the natural material and exposed rafter tails of the eaves. The side-facing building has been altered to enclose the front porch and create additions and a modified entrance in the rear. Compared to the very fine examples of Craftsman style homes found in Los Gatos,.this house is not an important example of the this style.

   The house and garage at 651 N. Santa Cruz Avenue are modest vernacular versions of the Craftsman style. the house is a rectangular form with the front facing N. Santa Cruz Avenue. This facade has been altered by enclosing it with sliding windows above a half wall. The main entrance appears to have been relocated to the modified rear façade where the roof was extended and columns of a Colonial Revival style were added as porch supports. The housed is not a r artistic rendition of the style. The property does not meet the Caalifiornia Register of Historical Resources criterion 3.

4. ***It has yielded, or is likely to yield, information important to prehistory or history of the***

local area, California, or the nation.

5.

The property has been disturbed by trees and construction of three building's foundation and driveways, It is unlikely that important information about construction of the buildings or pre-history would be found on this parcel. However, an archaeological survey was not conducted as part of this study.

Conclusion: When compared to the criteria of the California Register of Historical Resources it is determined that the property at 651 N. Santa Cruz Avenue does not meet the criteria and is not eligible for listing. The office building at 46 N. Santa Cruz Avenue is not 50 years old and does not meet the threshold age to be considered a historical resource.

Local Register

The Town of Los Gatos does not maintain a historical register or list of designated properties, therefore there are no regulations, guidelines or criteria for evaluating the significance of properties on a local level.

SIMMARY FINSINGS.

The property at 647 &651 N. Santa Cruz Avenue is not within a historic district in Los Gatos. Compared to federal and state registers, the property does not meet the criteria of the National Register of Historic Places nor the California Register of Historical Resources and is not an historic resource under the definition in the California Environmental Quality Act.

Sourced Consulted or referenced.

Repositories searchd

Los Gatos Library, City Directories, newspapers

Santa Clara County Assessor's records

Santa Clara county Rcorders; Records, Deeds shown in the text and footnotes

Ancestrt-.com US Census, City Directories and maps.

Bruntz, George, History of Los Gatos, Western Tanager Press, 1983 page 89

McCaleb, Charles S, Tracks, Tiers and Wires, Interurban Press 1981

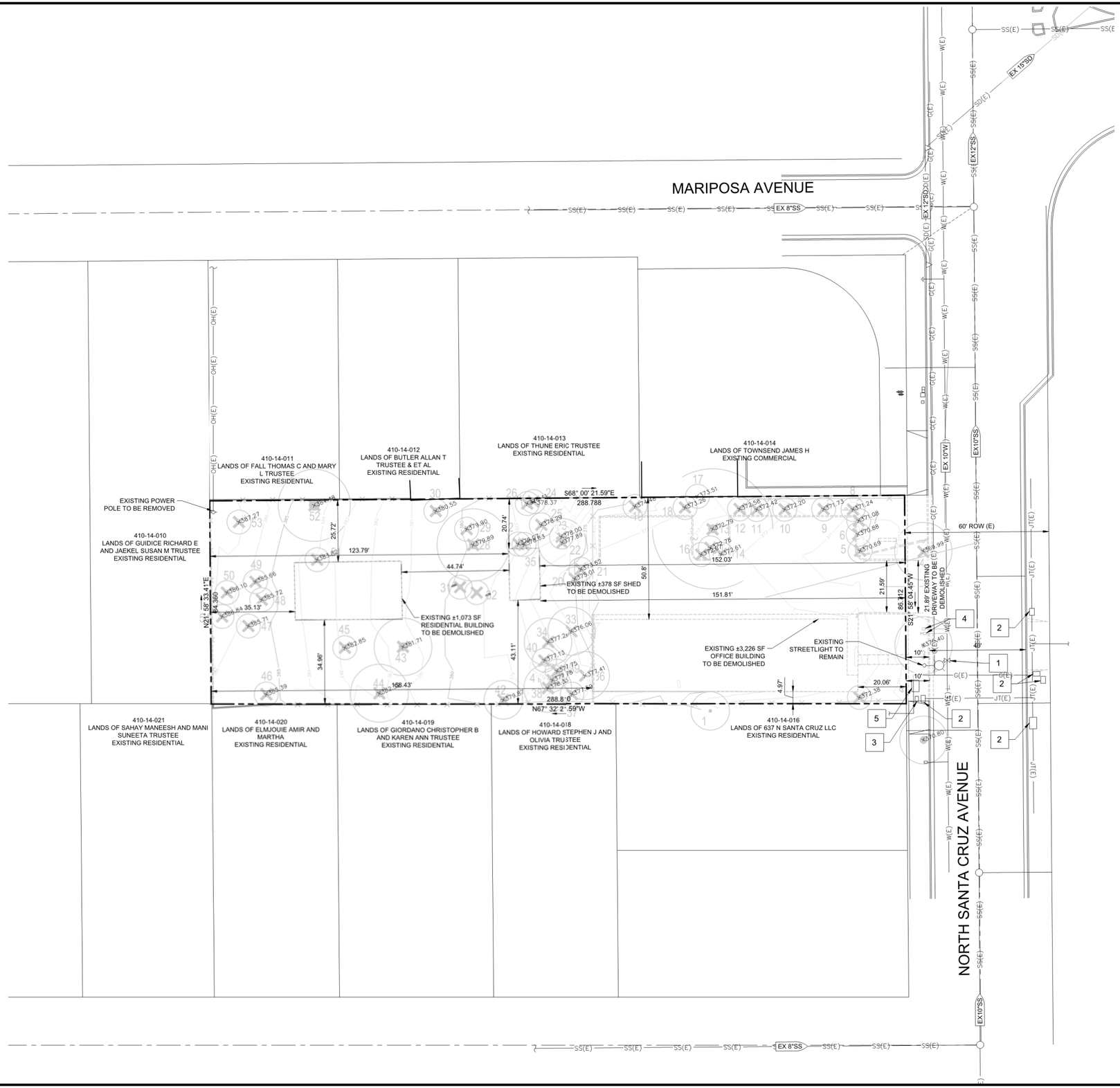
McAllister Virginia Savage, A Feld Guide to American Hoses, Te definitive Guide to Ientifying and Understanding America's Domestic Architecture, A.A. Knoff, NNew York r,NY,2018,

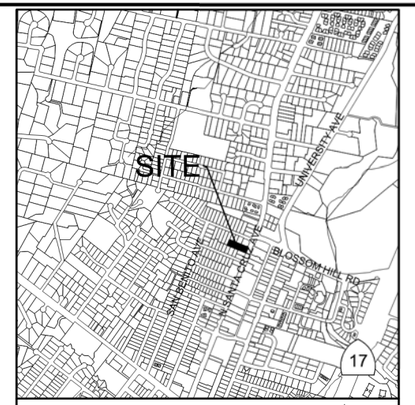
***Recorded by:** Irban Programmers ***Date** 8/12/2025 x Continuation Update

Deeds

Deed Kirlin-dated August 31, 1924 and recorded in Book 171 of Official Records, Page 550.

Deed Stryker Jr. and Minnie M. November 20, 1946 (retrieved from the internet July 20, 2025)





VICINITY MAP
SCALE: 1" = 1000'

LEGEND

PROJECT BOUNDARY	
STORM DRAIN PIPE	SD(E) SD(E)
SANITARY SEWER PIPE	SS(E) SS(E)
JOINT TRENCH	JT(E) JT(E)
WATER PIPE	W(E) W(E) W(E)
TREE TO BE REMOVED (SEE LANDSCAPE PLANS)	⊗
OVERHEAD ELECTRICAL LINE	OH(E) OH(E)
GAS LINE	G(E) G(E) G(E)

NOTES

1. ALL EXISTING BUILDINGS AND SURFACE IMPROVEMENTS TO BE DEMOLISHED UNLESS OTHERWISE NOTED.
2. TREE NUMBERS SHOWN ON TENTATIVE MAP MATCH THE PROVIDED ARBORIST REPORT PREPARED BY HMH ON JUNE 21, 2024. ARBORIST REPORT LISTS TREE COMMON NAME, BOTANICAL NAME, DIAMETER AT BREAST HEIGHT, ETC. SHOWN CANOPY OUTLINES MATCHES THAT LISTED IN THE ARBORIST REPORT. EXISTING GRADES AT BASE ARE SHOWN.

EXISTING UTILITIES LEGEND

1. EXISTING WATER VALVE
2. EXISTING ELECTRICAL BOX
3. EXISTING TELEVISION BOX
4. EXISTING WATER METER
5. EXISTING GAS BOX

HMH
Land Use Entitlements
Land Planning
Landscape Architecture
Civil Engineering
Utility Design
Land Surveying
Stormwater Compliance
1570 Oakland Road (408) 487-2200
San Jose, CA 95131 HMHca.com

647 N SANTA CRUZ AVE

DESIGN REVIEW & TENTATIVE MAP

S-24-060, U-24-018, M-24-020

NO	DATE	DESCRIPTION
2	8/18/2025	PER TOWN COMMENTS
1	2/17/2025	PER TOWN COMMENTS

PROJECT NO:	6862.00
CAD DWG FILE:	686200EX.DWG
DESIGNED BY:	XXX
DRAWN BY:	XXX
CHECKED BY:	
DATE:	OCTOBER 22, 2024
SCALE:	AS SHOWN

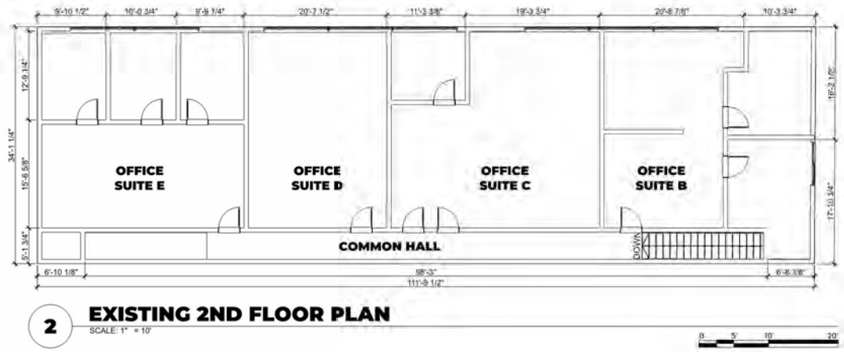
© HMH

EXISTING CONDITIONS/ DEMOLITION PLAN

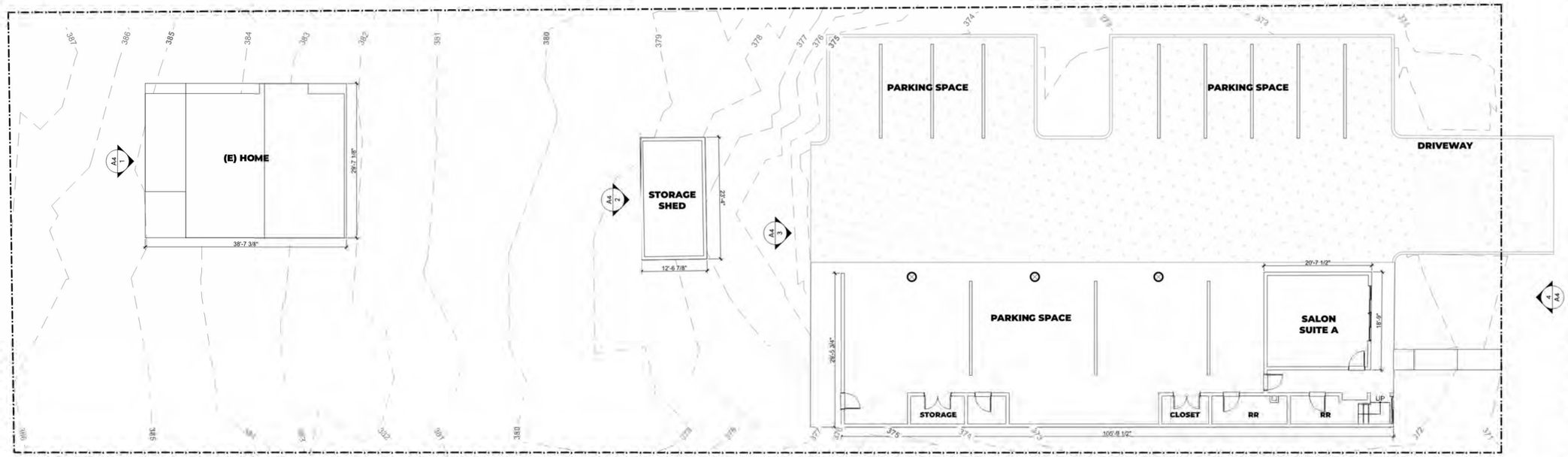
2.0

P:\6862000\PLPERMIT\686200EX.DWG
PLOTTED: 8/18/2025 9:00 AM

Friday, August 15, 2025 4:44 PM 25072 SANTA CRUZ BB.pln



2 **EXISTING 2ND FLOOR PLAN**
SCALE: 1" = 10'



1 **EXISTING 1ST FLOOR PLAN**
SCALE: 1" = 10'

MAYBERRY WORKSHOP ARCHITECTURE

Project:
Villa Santa Cruz

647 N Santa Cruz Ave
Los Gatos, CA 95030

Friday, August 15, 2025

Existing Floor Plan

A3

TOWN OF LOS GATOS
HISTORIC PRESERVATION
COMMITTEE REPORT

MEETING DATE: 11/19/2025

ITEM NO: 5

DATE: November 14, 2025

TO: Historic Preservation Committee

FROM: Joel Paulson, Community Development Director

SUBJECT: Consider a Request for Approval to Construct an Addition and Exterior Alterations to an Existing Pre-1941 Single-Family Residence on Property Zoned R-1D. **Located at 245 Los Gatos Boulevard**. APN 529-24-024. Request for Review Application PHST-25-023. Exempt Pursuant to CEQA Guidelines, Section 15301: Existing Facilities. Property Owner: Michael Phung. Applicant: Andres Johnson. Project Planner: Samina Merchant.

RECOMMENDATION:

Consider a request for approval to construct an addition and exterior alterations to an existing pre-1941 single-family residence on property zoned R-1D, located at 245 Los Gatos Boulevard.

PROPERTY DETAILS:

1. Date primary structure was built: 1924 per County Assessor's Database; 1920s per Anne Bloomfield Survey
2. Bloomfield Preliminary Rating: "+" Historic and intact or worthy of special note
3. Does the property have an LHP Overlay? No
4. Is the structure in a historic district? No
5. If yes, is it a contributor? N/A
6. Findings required? No
7. Considerations required? Yes

BACKGROUND:

The subject property is located on the west side of Los Gatos Boulevard, north of the intersection at Simons Way. The County Assessor reports that the residence was constructed in 1924. The 1990 Anne Bloomfield Survey describes the residence as being built in a Bungalow style with an estimated construction date of the 1920s (Attachment 1). The Bloomfield Survey rates the residence as historic and intact or worthy of special note.

The Sanborn Fire Insurance Maps do not provide coverage for the property until 1928. The footprint of the residence remains consistent between the 1928 and the 1956 maps

PREPARED BY: Samina Merchant
Associate Planner

(Attachment 2). Town records include a 2022 Building Permit for the demolition of unpermitted and permitted areas, construction of a new addition, and exterior remodel (Attachment 3).

DISCUSSION:

The applicant provided a Letter of Justification for the proposed project and photos of the existing residence (Attachments 4 and 5). The applicant requests review and a recommendation of approval by the Committee for the proposed single-story additions and exterior alterations to the existing home (Attachment 7).

The project proposes a 135-square-foot addition to the existing one-story residence. The addition is positioned along the side elevation, set back from the front façade, and screened by existing landscaping and fencing to minimize visibility from the street.

Exterior materials will match the current home's white stucco finish. The proposed windows are double-hung, prairie-style to match the proportions, muntin patterns, and trim details of the existing windows.

CONSIDERATIONS:

A. Considerations

Sec. 29.80.290. Standards for review.
In evaluating applications, the deciding body shall consider the architectural style, design, arrangement, texture, materials and color, and any other pertinent factors. Applications shall not be granted unless:

__X__ For pre-1941 structures, the proposed work will neither adversely affect the exterior architectural characteristics or other features of the property which is the subject of the application.

B. Residential Design Guidelines

Sections 3.9, 4.8.3, and 4.8.4 of the Town's Residential Design Guidelines provide recommendations for additions to existing residences, as well as for the design and placement of windows and doors located in Historic Districts and/or on historic properties (Attachment 6).

CONCLUSION:

The applicant is requesting approval to construct an addition and exterior alterations to an existing pre-1941 single-family residence on property zoned R-1D. Should the Committee find

merit in the request, a recommendation of approval would be forwarded to the Community Development Director. The application would continue through the Building Permit process and would not return to the Committee.

ATTACHMENTS:

1. 1990 Anne Bloomfield Survey
2. Sanborn Fire Maps
3. Town Building Permit Record
4. Letter of Justification
5. Photographs
6. Section 3.9, 4.8.3, and 4.8.4 Residential Design Guidelines
7. Development Plans

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JL

Anne Bloomfield
ARCHITECTURAL HISTORY
(415) 922-1063
2229 WEBSTER STREET
SAN FRANCISCO, CA 94115

479 C

ARCHITECTURAL/CULTURAL SURVEY
LOS GATOS RESEARCH

File address 245 Los Gatos Bl

PARCEL MAP INFORMATION

Parcel # 529-24-024 Lot size: 50 front ft. x 140 ft. deep

Lot shape: Rectangle / L___ Rectangle with small rear jog___ Other___

Location: N__ S__ E__ W/ side of LG St___ Ave___ Other Blvd

distance to cross st: c.35 ft. N___ S/ E___ W___ from Charles

at NE___ NW___ SE___ SW___ corner of___

HISTORIC INFORMATION ON PARCEL MAP

Old tract or subdivision name Bartlett Sub Amer Old Block #___ Old lot # 4

FIELD SURVEY INFORMATION (handwritten in red)

Preliminary rating + Estimated age 1920s Style Bungalow # stories___

Alterations ?

Other unpainted pebbley & stucco

COUNTY ASSESSOR--PROPERTY CHARACTERISTICS (paste on copy) 95056 EFFective date 12-87

APN 529-24-024	ADDRESS	245 LOS GATOS		BL LG 95030									
SINGLE FAMILY	TRA	3-001	WIDTH	50	SQ. FEET	1,232	TOT ROOMS	5	DINING ROOM	1	POOL		
	USE CODE	01	DEPTH	140	ADDN S/F		BEDROOMS	2	FAMILY ROOM		GARAGE S/F	252	
	YR BUILT	24	ACRES	.16	NO. FLOORS	1	BATHS	1.5	UTILITY RM		FIN BSMT		

OWNERSHIP SHOWN ON MAPS

Source Name	Source Date	Source Page	Location of property, or Old tract/block/lot	Lot Size	Owner Name
	1891				
Blk Book	1908				
Survey	1944				

MISCELLANEOUS

National Register listed date___

County Inventory 1979___

Town of Los Gatos: Designation___ Recognition___

District Name___

Previous Survey ∅

Gebhard: page # /illustration page #

PHOTOS: Roll/frame #021/22 Date 4 Jan 90

245 LG BSD

EVALUATION Date 1920-27 (Tax, San) Contributor X

District Non-contrib___

Owner Known Resident X: Joseph & Eliz Worsley 1936

Context:

Alterations: E Moved___ Raised___ Porch encl___ Addition___ Siding___ Windows___ Condition___

Designer: a___ b___ d___

POSTED

ATTACHMENT 1

Anne Bloomfield
ARCHITECTURAL HISTORY
(415) 922-1063
2229 [illegible]STER STREET
SAN FRANCISCO, CA 94115

File address 248 LGB

ARCHITECTURAL SURVEY
BUILDING RESEARCH

PUBLISHED ANNOUNCEMENTS

Source: ___A&E ___Bulletin ___CA&BN ___Call ___Chron ___DPB ___Ed AB ___EX ___News ___PCA _____ Other
Volume_____ Date _____ Page____

Nature of announcement: ___Contract notice ___Notice of completion ___BP issued ___Photo ___Elev/sketch/rend'g ___Floor plan ___Arch't/cont'r pub ___Real est.

Copy exactly:

Owner	Builder/Contractor	Architect/Engineer	Location	Nature of work	Cost

Initials Date

BUILDING PERMITS Address requested_____

Source: Permit Register, Press-Dem., or . . .	Application Number	Date	Location	Cost	Use/ No. of Units	Owner & address	Builder/ contr. & address	Arch't/ engin'r & address	Description of work	Bldg's width/ depth/ height	Exterior Materials

Initials date

OTHER SOURCE (specify thoroughly)

Initials Date

SANBORN MAPS

Date	Vol/ page	Vac. or dif. bldg	Address	Color: yel, pnk, orange blu,gry green	Use	Patches Yes/ No	No. of stories	Height (ft.)	No. of bay windows	PORCH	Differences from today in: Use	Stories	Footprint	Date of constr.	Describe or sketch plan
1904	14	no	exposure												
1908	15	"	"		D	N	1		0	Z					
1928	20	this	245 SJ												
1944	"	"	"		"	N	same								

Initials Date

Anne Bloomfield

ARCHITECTURAL/CULTURAL SURVEY
NAME RESEARCH

ARCHITECTURAL HISTORY
(415) 922-1063
2229 WEBSTER STREET
SAN FRANCISCO, CA 94115

Name (person, building, organization, etc)_____

Addresses associated with Name 245 LGB

Relevant dates: construction_____. birth_____. death_____. other_____

I. DIRECTORY SEARCH (City Directories, County Directories, Telephone Books, society directories, etc.)

Year	Book	Name/Classified Heading	Listing (copy entire, exactly as shown; use * for boldface)
~~1924~~	LGD	San Jose, 245	not listed
1936	SJD	" " "	Worsley, Jos H (Eliz) [no occ] h 245 San J

/initials date

BIOGRAPHICAL SEARCH, indexes & other alphabetical listings.
Mark 'X' (info) or 'Ø' (nothing found) at each source you try. List findings below.

Los Gatos Library:
___City directories (name & street index)
Ø Historic Collection Index (green boxes)
___Thompson & West, 1876 (bio index)
___Pen Pictures, 1888 (bio index)
___Sunshine Fruit & Flowers, 1895 (bio index)
___Guinn, 1904 (bio index)
___Sawyer, 1922 (bio index)

Ø Extended index to Bruntz
Ø Bio index of Munroe Frazer, 1881 (Survey box)
___Photo collection (2 boxes)

Los Gatos Museum (Forbes Mill):
___Death records by year
___Funeral records (index cards to big books)
___Photo collection

California History Center, De Anza College:
___Biographical file
___Photo collection

San Jose Historical Museum:
___Great Registers (of voters)
___Indexes
___Photo collection

Other sources:
___Indexes, California Historical Quarterly
___State Library Information Index (fiche)
___State Library-S.F. Newspaper Index (")

III. LIST ALL REFERENCES FROM ABOVE. Find them. Copy good material & attach. Or copy below if only a few words. Or explain why not relevant (as, wrong person).

Continued on Reverse

ARCHITEC. .RAL HISTORY
(415) 922-1063
2229 WEBSTER STREET
SAN FRANCISCO. CA 94115

Anne Bloomfield

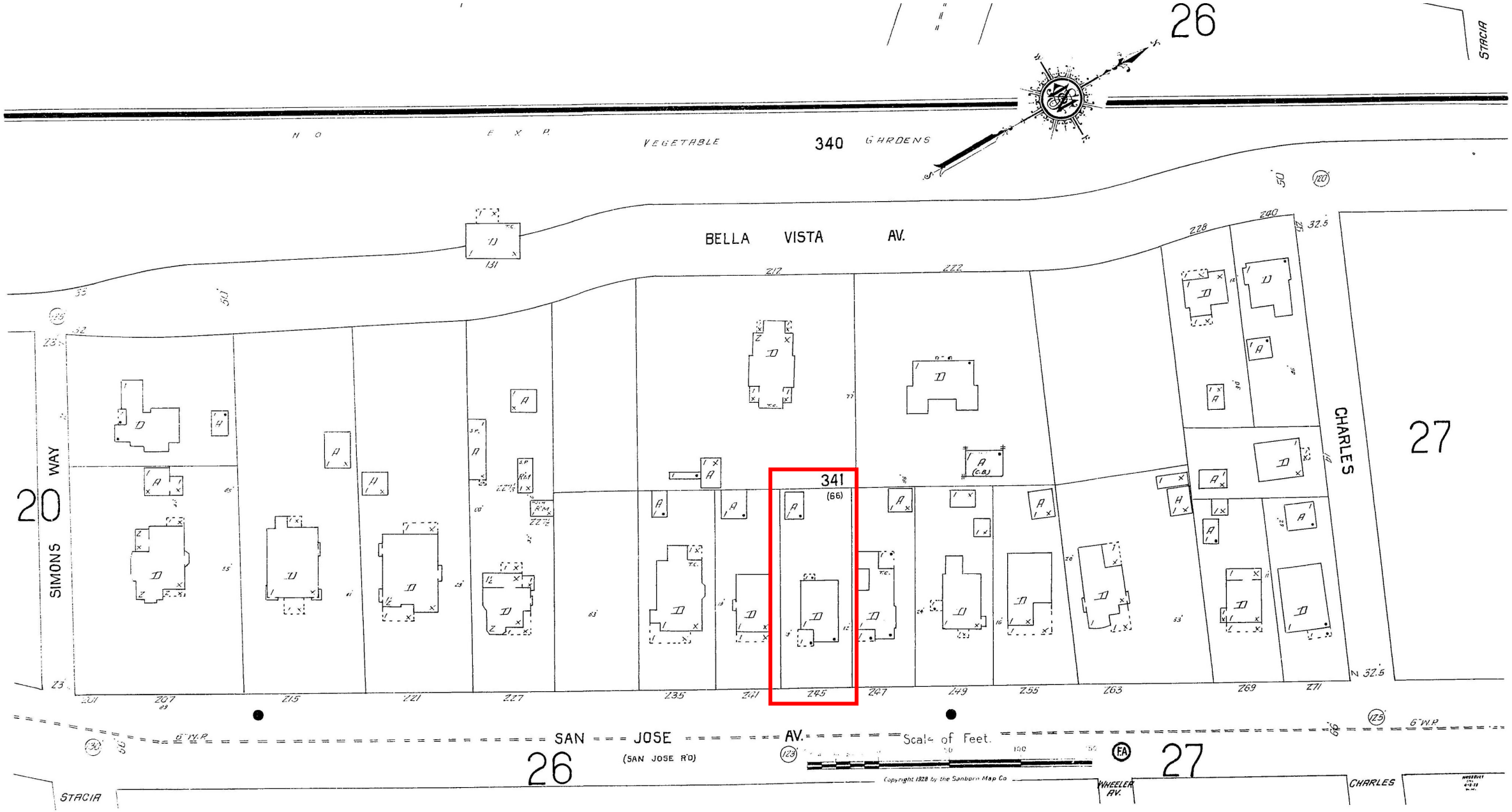
ARCHITECTURAL SURVEY
ASSESSMENT ROLL RESEARCH

File Address 245 LGB Tract/Block/Lot Bartlett/-/4 pre-1928

Assessments are filed by last name of property owner, but not necessarily in alphabetical order. Some years there is an index inside the volume or in a separate book. The goal of a search is to find the years when the assessed value of "improvements" (buildings) changed from 0 to over $500, or when that figure rose by $500 or mroe. Write down every year and name you try, including the years when you find nothing. Ditto marks are fine.

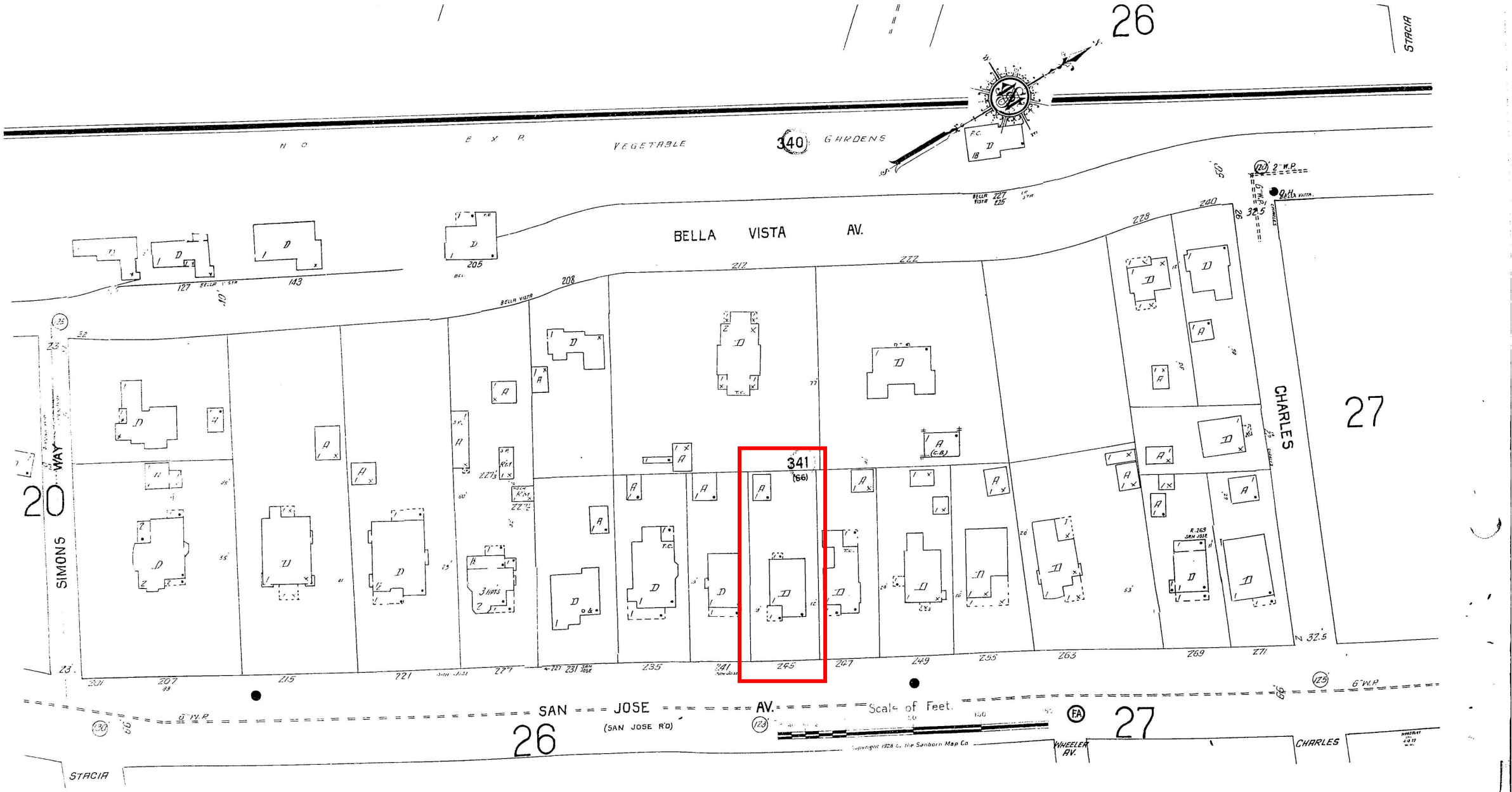
Date	Page	Name	Lot Identification or Boundaries: Tract or Acres	N Bdy	Block or E Bdy	Lot # or S Bdy	W Bdy	Assessment for: Land	Improvements	Other Info.
1916	104	JE Teed	Bartlett			4		$225	$ —	
1920	119	"	"			4		595	—	

/initials date

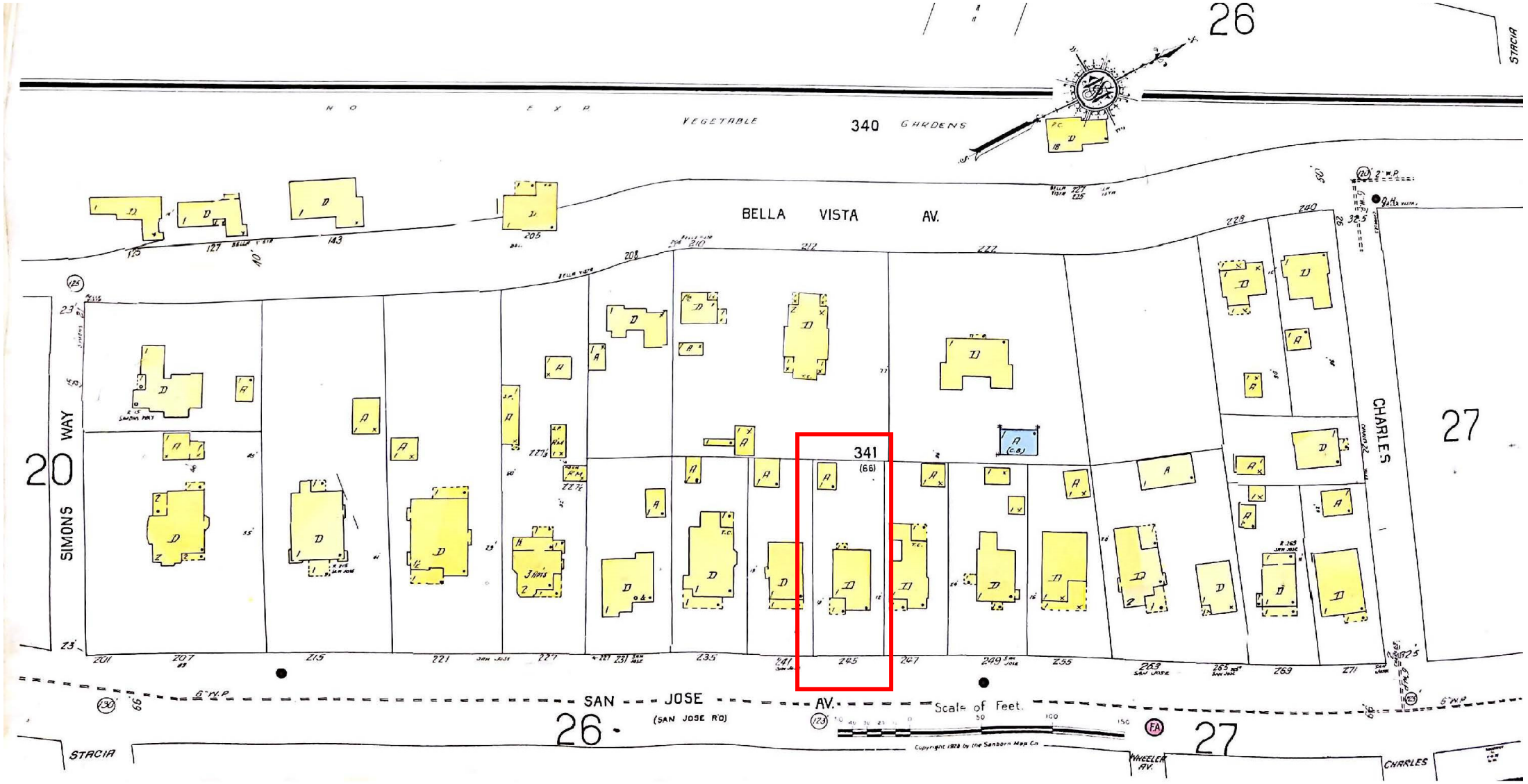


1928

ATTACHMENT 2


26
STACIA
N O E X P VEGETABLE 340 GARDENS
BELLA VISTA AV.
BELLA VISTA
208
212
222
228
230
26
32.5
CHARLES
27
341
(66)
20
SIMONS WAY
SAN JOSE AV.
(SAN JOSE RD)
26
27
WHEELER AV.
CHARLES
STACIA
Scale of Feet.
Copyright 1928 by the Sanborn Map Co.

1944


26
STACIA
N O E X P
VEGETABLE
340 GARDENS
BELLA VISTA AV.
341
(66)
20
SIMONS WAY
CHARLES
27
SAN JOSE AV.
(SAN JOSE R'D)
26
27
STACIA
WHEELER AV.
CHARLES
Scale of Feet.
Copyright 1928 by the Sanborn Map Co.

1956

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TOWN OF LOS GATOS
BUILDING PERMIT APPLICATION

Email Completed Application to: Building@LosGatosCA.gov

Town Project Planner's Name: _____

***PROJECT ADDRESS** 245 LOS GATOS BLVD, LOS GATOS, CA 95030		***APN#** 529-24-024
***PROPERTY OWNER NAME** MICHAEL PHUNG	***PHONE - REQUIRED** [redacted]	**E-MAIL** [redacted]
***STREET ADDRESS** 1756 CASTRO DR	***CITY, STATE, ZIP** SAN JOSE, CA, 95130	FAX N/A
APPLICANT NAME MICHAEL PHUNG	PHONE [redacted]	E-MAIL [redacted]
STREET ADDRESS 1756 CASTRO DR	CITY, STATE, ZIP SAN JOSE, CA, 95130	FAX N/A
TENANT CONTACT NAME N/A	PHONE	E-MAIL
**BUSINESS NAME		CONTACT FAX
BUSINESS ADDRESS, CITY, STATE, ZIP		

***CONTACT:** ☑ OWNER ☐ H.O.A. ☐ TENANT ☐ CONTRACTOR ☐ PERMIT SERVICE ☐ ARCHITECT ☐ DESIGNER ☐ ENGINEER

***CONTRACTOR NAME**	PHONE	LICENSE TYPE
***STATE LICENSE #**	**STATE LICENSE EXPIRES**	TOWN BUSINESS LICENSE #

***DESCRIPTION OF WORK**

1. DEMO BLDG AREAS OF EX. HOUSE, 296 SF TOTAL TO MAKE ROOM FOR NEW ADDITION 2. 1-STORY ADDITION 765 SF 3. INTERIOR REMODEL 212 SF 4. UPGRADE ELECT MAIN TO 320 AMPS 5. NEW LIGHT FIXTURES THROUGHTOUT

***CONSTRUCTION VALUATION (Per Structure):** 140,000

*AREA OF REMODEL SPACE: 212 S.F.	*NEW OR RELOCATED PLUMBING FIXTURES: ☑ Y ☐ N
**EXISTING USE(S) SINGLE FAMILY	**PROPOSED USE(S) SINGLE FAMILY

**OCCUPANCY(S): R3 / U	**CONSTRUCTION TYPE: VB	HISTORIC DISTRICT OR PRE-1941? ☑ Y ☐ N
FIRE SPRINKLERS: ☐ Y ☑ N	FIRE HAZARD AREA: ☐ Y ☐ N	**HAZARDOUS MATERIALS? ☐ Y ☐ N ☐ *SEPTIC or ☑ SEWER

***REQUIRED INFORMATION FOR ALL APPLICATIONS**
****REQUIRED FOR COMMERCIAL APPLICATIONS**

	EXISTING		PROPOSED	
First Floor	983	S.F.	1748	S.F.
Second Floor	N/A	S.F.		S.F.
Third Floor/Attic – Habitable? ☐ Y ☑ N		S.F		S.F
Basement/Cellar – Habitable? ☐ Y ☑ N	296	S.F.	296	S.F.
Garage – ☐ Attached ☑ Detached	418	S.F.	418	S.F.
☐ Pool House/Cabana ☐ Pool/Spa	N/A	S.F.		S.F.
☑ Porch ☐ Deck ☐ Retaining Wall	126	S.F./L.F.	126	S.F.

REROOF - RESIDENTIAL AND COMMERCIAL

TEAR-OFF: ☐ SHAKE ☐ COMP ☐ WOOD SHINGLES ☐ TILE ☐ B.U.R.	# of SQUARES PER STRUCTURE /	COOL ROOF ☐ Y ☐ N
NEW: ☐ SHAKE ☐ COMP ☐ WOOD SHINGLES ☐ TILE ☐ B.U.R.		ICC ES/ESR #
CONSTRUCTION VALUATION (PER STRUCTURE): /		CLASS ☐ A ☐ C

Please complete Electrical, Mechanical, and Plumbing details on reverse side

GENERAL:
G1. ERRORS AND OMISSIONS:
In the event that any errors, discrepancies, or omissions may occur in the construction documents, the property owner shall notify the designer immediately prior to proceeding with the work in question. The owner or contractor shall bring them to the attention of the designer for proper clarification before continuing the project.

G2. INTERPRETATION OF DRAWINGS:
For verification of floor plan layout, dimensioning, and general finish, reference must be made to the construction documents. If any discrepancies appear between the scale measurements and/or any plan notes and specifications, the owner or contractor shall bring them to the attention of the designer for proper clarification before continuing the project.

Note: In no event shall the contractor or owner scale the construction drawings!

G3. PRODUCT SUBSTITUTIONS:
All products and/or materials shall be provided as specified in the construction documents, with the singular exception of products and/or materials labeled as "or approved equal" or "O.A.E." Requests for product and/or material substitutions will not be allowed otherwise. The owner and/or contractor shall assume full responsibility for all non-project specified products provided and/or installed without the designers' consent. The owner or contractor must supply the designer with product literature and/or samples for requested substitutions. If applicable, owner/contractor will be notified upon acceptance of any product substitution.

G4. SUBMITTALS AND SHOP DRAWINGS:
General contractor shall provide the designer (for designer's review) with copies of all shop drawings, specifications, and/or calculations which may be requested for approval by the local governing agency due to products scope of work.

G5. REQUIRED PERMITS:
General contractor shall be responsible for securing all building and trade permits necessary to complete the project scope of work, as required by the local governing jurisdiction.

G6. GENERAL CONTRACTOR:
Contractor shall perform all labor and install all materials in a timely and professional workmanlike manner through completion of the project.

G7. TEMPORARY TOILET:
Contractor shall supply one (1) temporary sanitary field toilet for use by all construction personnel, and must provide for regular cleaning and maintenance of this facility at all times during the length of construction.

G8. JOB SITE CLEANING:
Contractor shall at all times maintain the area of work. So as to be clean and free of all trash, debris and other hazards, and shall protect all adjacent property damage, soiling, paint overspray, etc. Work area shall be left broom clean everyday upon inspection.

G9. All work shall comply with the most current California Building Code and the latest adopted local ordinances.

G10. All plumbing work shall comply with the most current California Plumbing Code and all local codes and ordinances.

G11. All electrical work shall comply with the most current California Electrical Code and all other applicable codes and requirements.

G12. All heating and ventilating work shall be in conformance with the most current applicable codes, and the recommended practices of ASHARE and SMACNA.

G13. Provide fabricator's certificate for Glu-Lam beams to building department for review and approval at time of delivery and prior to installation.

G14. All hardwood flooring shall be installed in accordance with the most current NOFMA specifications and recommendations.

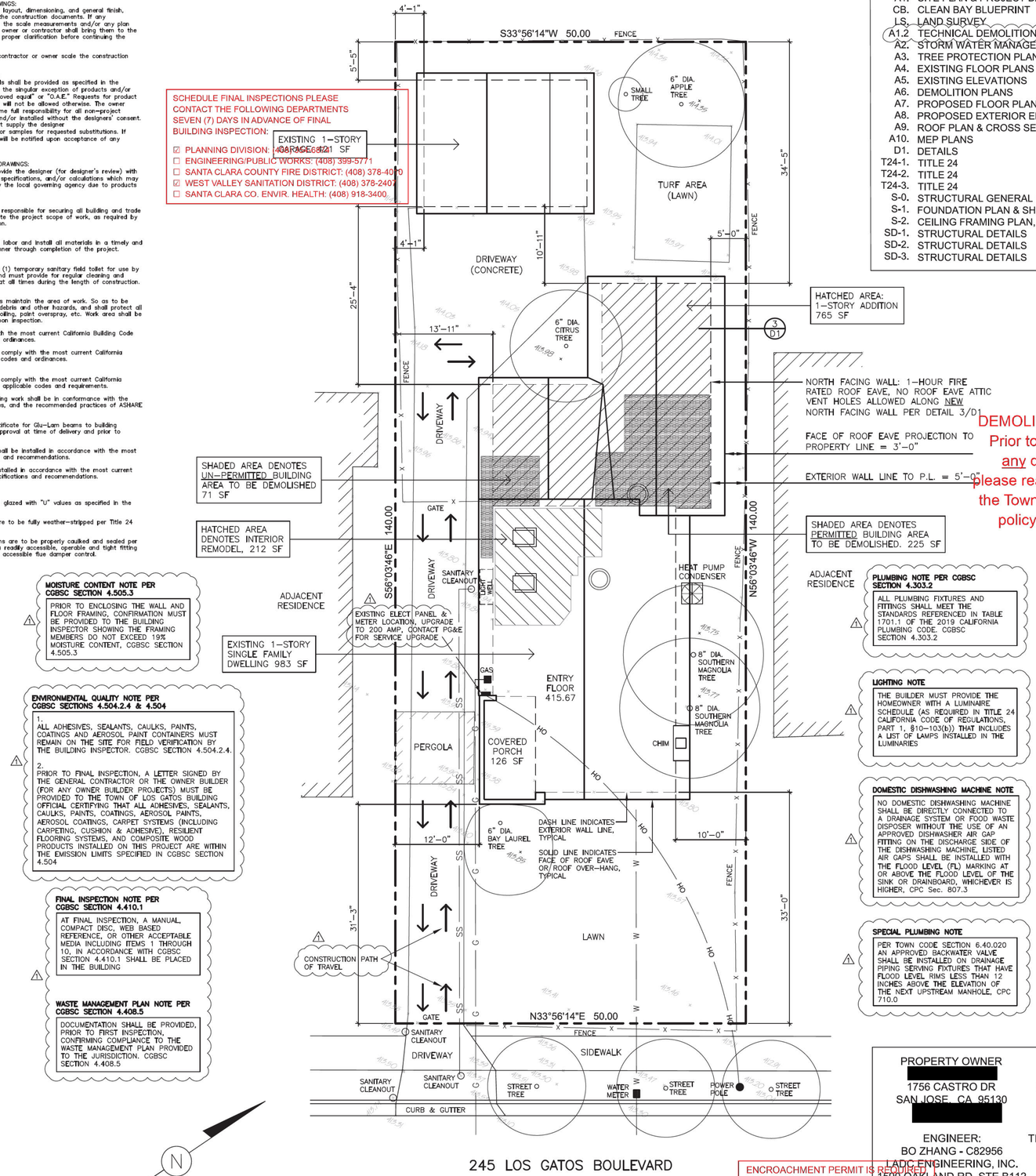
G15. All tile work shall be installed in accordance with the most current Tile Council of America specifications and recommendations.

TITLE 24 NOTES:

T1. All windows shall be dual glazed with "U" values as specified in the title 24 documents.

T2. All doors and windows are to be fully weather-stripped per Title 24 requirements.

T3. All joints and penetrations are to be properly caulked and sealed per Title 24 requirements. with a readily accessible, operable and tight fitting damper, as well as a readily accessible flue damper control.



245 LOS GATOS BOULEVARD

SITE PLAN

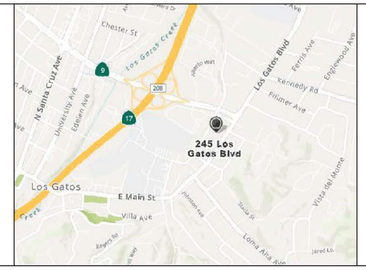
SCALE: 1" = 10'-0"

ENCROACHMENT PERMIT IS REQUIRED WHEN WORKING IN THE PUBLIC RIGHT-OF-WAY
ENGINEERING DEPARTMENT
41 MILES AVENUE, LOS GATOS
(408) 399-5771

SHEET INDEX

A1. SITE PLAN & PROJECT DATA
CB. CLEAN BAY BLUEPRINT
LS. LAND SURVEY
A1.2 TECHNICAL DEMOLITION DIAGRAM
A2. STORM WATER MANAGEMENT 1
A3. TREE PROTECTION PLAN
A4. EXISTING FLOOR PLANS
A5. EXISTING ELEVATIONS
A6. DEMOLITION PLANS
A7. PROPOSED FLOOR PLANS
A8. PROPOSED EXTERIOR ELEVATIONS
A9. ROOF PLAN & CROSS SECTION
A10. MEP PLANS
D1. DETAILS
T24-1. TITLE 24
T24-2. TITLE 24
T24-3. TITLE 24
S-0. STRUCTURAL GENERAL NOTES
S-1. FOUNDATION PLAN & SHEAR WALL SCHEDULE
S-2. CEILING FRAMING PLAN, ROOF FRAMING PLAN
SD-1. STRUCTURAL DETAILS
SD-2. STRUCTURAL DETAILS
SD-3. STRUCTURAL DETAILS

SITE LOCATION MAP



SITE DATA AND ZONING

APN: 529-24-024
LOT SIZE: 7000.0 SF
ZONE: R-1D
LOT COVERAGE: .33
AVERAGE SLOPE: FLAT LOT

SQUARE FOOTAGE

DESCRIPTION	EXISTING SF	REMOVE SF	ADD SF	TOTAL SF
1ST FLR	1208.0	225.0	765.0	1748.0
2ND FLR	N/A			
TOTAL	1208.0	225.0	765.0	1748.0
DETACHED GARAGE	421.0	0	0	421.0
COVERED PORCH	126.0	0	0	126.0
BASEMENT	296.0	0	0	296.0

GOVERNING CODES

2019 CALIFORNIA BUILDING CODE
2019 CALIFORNIA RESIDENTIAL CODE
2019 CALIFORNIA ELECTRICAL CODE
2019 CALIFORNIA MECHANICAL CODE
2019 CALIFORNIA PLUMBING CODE
2019 CALIFORNIA FIRE CODE
2019 CALIFORNIA ENERGY CODE
2019 CALIFORNIA GREEN BUILDING CODE

CONSTRUCTION DATA

CONSTRUCTION TYPE: VB
NUMBER OF STORIES: 1 + BASEMENT
OCCUPANCY GROUP: R3 / U
FIRE SPRINKLER: NO 1

SCOPE OF WORK

1. DEMOLISH UN-PERMITTED BUILDING AREA, 71 SF, AT REAR OF EXISTING HOUSE TO MAKE ROOM FOR AN ADDITION
2. DEMOLISH PERMITTED BUILDING AREA, 225 SF, AT REAR OF EXISTING HOUSE TO MAKE ROOM FOR AN ADDITION
3. CONSTRUCT A 1-STORY REAR ADDITION TO INCLUDE A NEW FAMILY ROOM, A NEW BEDROOM, TWO FULL BATHS AND A LAUNDRY CLOSET.
4. INTERIOR REMODEL, 212 SF TO INCLUDE THE KITCHEN
5. NEW ELECTRICAL & LIGHTING THROUGHOUT
6. UPGRADE ELECT MAIN TO 200 AMPS 1
7. NEW SKYLIGHTS AND SUN-TUBES AT EXISTING & NEW AREAS 1
8. REPLACE EXISTING HVAC AND WATER HEATER WITH NEW HEAT PUMP UNITS

TITLE 24 ENERGY REPORT RQMTS

TO: CONTRACTOR, BUILDER OR HOMEOWNER

PRIOR TO CONSTRUCTION PLANNING, BE SURE TO READ THE ENTIRE CF-1R (SHEETS T24 1&2) FOR BUILDING ENERGY REQUIREMENTS AND REQUIRED VALUES FOR INSULATION, WINDOWS AND EFFICIENCY OF WATER HEATING OR SPACE CONDITIONING EQUIPMENT IF APPLICABLE, ETC. NOTE ON PAGE 1 & 2 OF THE CF-1R ANY REQUIRED SPECIAL FEATURES OR REQUIRED HERS VERIFICATIONS.

FEATURES THAT MUST BE FIELD-VERIFIED BY A CERTIFIED HERS RATER (pg. 2 of CF-1R):

APPROVALS

This project will require a pad certificate prepared by a licensed civil engineer or land surveyor to be submitted to the project Building Inspector at foundation inspection. Horizontal and vertical controls shall be set and certified by a licensed surveyor or registered Civil Engineer for the following items:
☑ Building Pad Elevation
☑ Finish Floor Elevation
☑ Foundation corner locations
☐ Retaining wall(s) locations and elevations

Town of Los Gatos
BUILDING DIVISION
PLAN APPROVED
BY Richard Gray DATE 05.20.2022
Plan check approval of documents does not authorize construction to proceed in violation of any federal, state, nor local regulations.

APPROVED
BY LOS GATOS COMMUNITY DEVELOPMENT PLANNING DIVISION
B22-0177 - 05/20/2022
M.C.

PROPERTY OWNER
[redacted]
1756 CASTRO DR
SAN JOSE, CA 95130
[redacted]

ENGINEER:
BO ZHANG - C82956
LADC ENGINEERING, INC.
1590 OAKLAND RD, STE B112
SAN JOSE, CA 95131
(408) 752-2777

DESIGNER:
NOBLE B. ASSOCIATES
3033 MOORPARK AVE #1
SAN JOSE, CA 95128
(408) 646-1206

TITLE 24 ENERGY ANALYSIS
NRG COMPLIANCE, LP
PO BOX 3777
SANTA ROSA, CA 95402
(707) 237-6957

REVISIONS
1 PER PLAN REVIEW & DESIGNER 04-25-2022
2
3

NOBLE BENJAMIN ASSOCIATES
3033 MOORPARK AVE, SUITE 1
SAN JOSE, CA 95128
(408) 646-1206
04-25-2022
noblebassociates@gmail.com

RESIDENCE
245 LOS GATOS BLVD
LOS GATOS, CA 95030

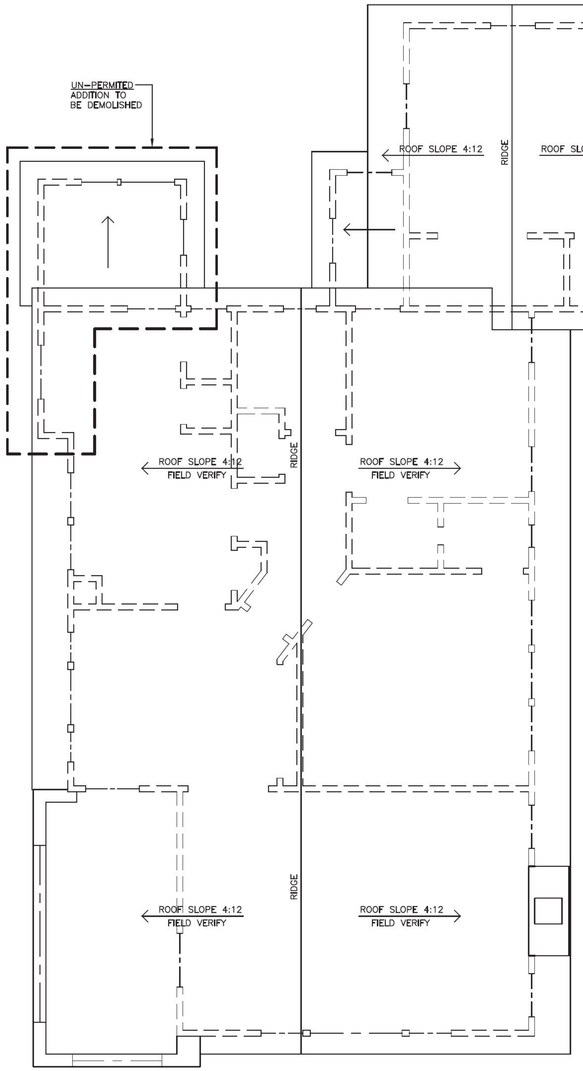
ADDITION & INTERIOR REMODEL

DATE: 02-10-2022
SCALE: AS SHOWN
DRAWN: NBH
JOB: PHUNG

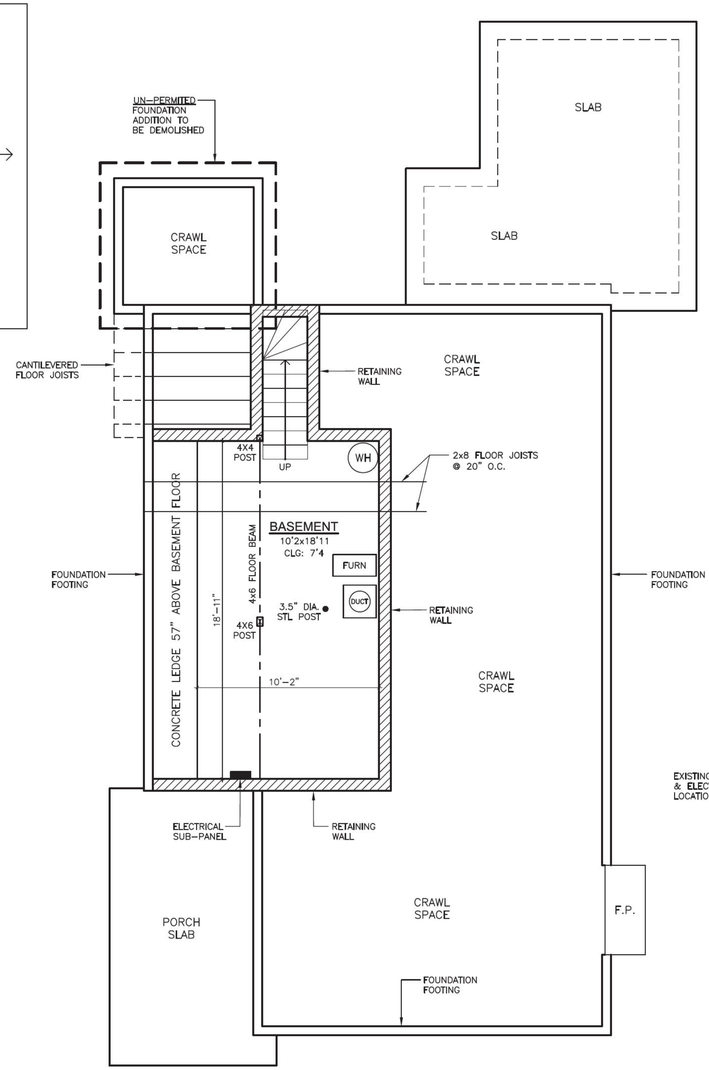
A1
OF SHEETS

LEGEND

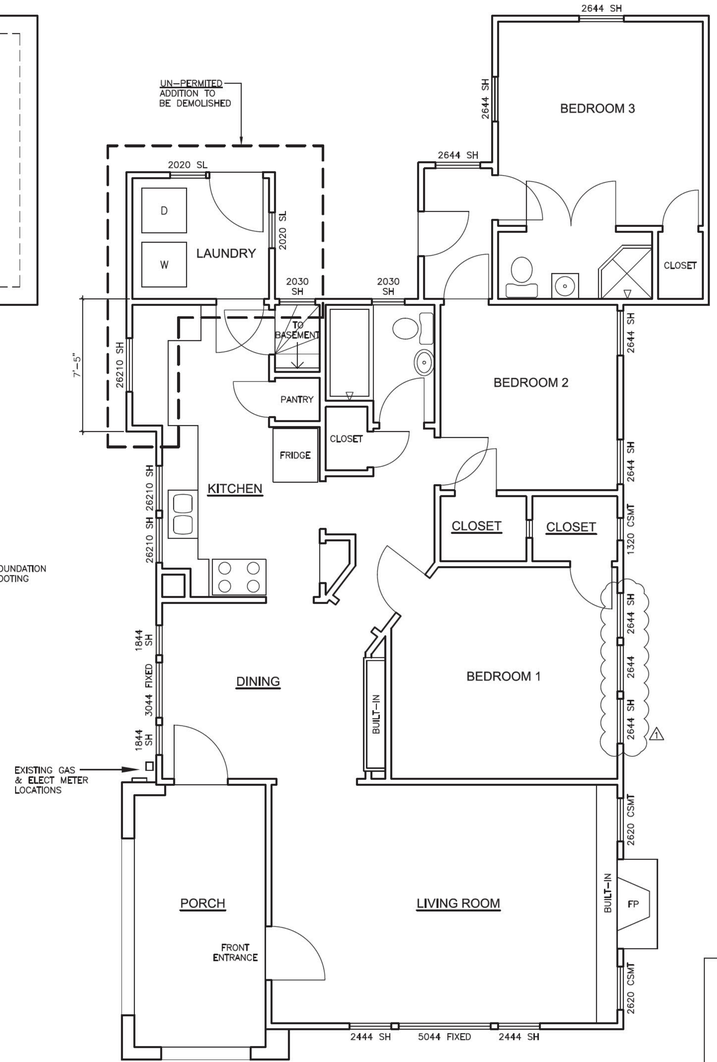
	NEW 2x4 WALLS	O.H.	OVERHANG
	EXISTING 2x4 WALL RAISED TO NEW PLATE HEIGHT	DR	DOOR
		DIR	DIRECTION
	NEW 2x6 WALLS	U.N.O.	UNLESS NOTED OTHERWISE
	EXISTING WALLS	A.F.F.	ABOVE FINISHED FLOOR
	WALLS TO BE REMOVED	M.S.	MOTION SENSOR
	LOW WALL	V.I.F.	VERIFY IN FIELD
(E)	EXISTING	XXXX FR	GLASS PANELED DOOR
(N)	NEW	2630	WINDOW/DOOR (VERTICAL DIM. 3'-0", HORIZONTAL DIM. 2'-6")
TEMP GL	TEMPERED GLASS		
C.L.	CENTERLINE		
S.D.	SMOKE DETECTOR	C	CARBON MONOXIDE DETECTOR



EXISTING ROOF PLAN
SCALE: 3/16" = 1'-0"



EXISTING FOUNDATION & BASEMENT PLAN
SCALE: 1/4" = 1'-0"



EXISTING FLOOR PLAN
SCALE: 1/4" = 1'-0"

EXISTING

REVISIONS
1 PER PLAN REVIEW & DESIGNER 04-25-2022
2
3

3033 MOORPARK AVE, SUITE 1
SAN JOSE, CA 95128
NOBLE BENJAMIN ASSOCIATES
04-25-2022
(408) 646-1206
noblebassociates@gmail.com

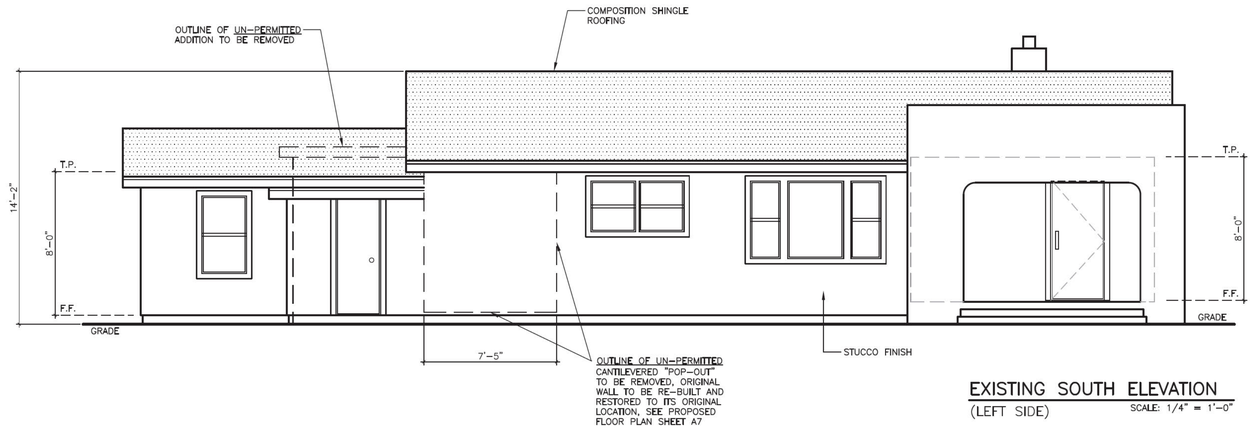
RESIDENCE
245 LOS GATOS BLVD
LOS GATOS, CA 95030

ADDITION & INTERIOR REMODEL

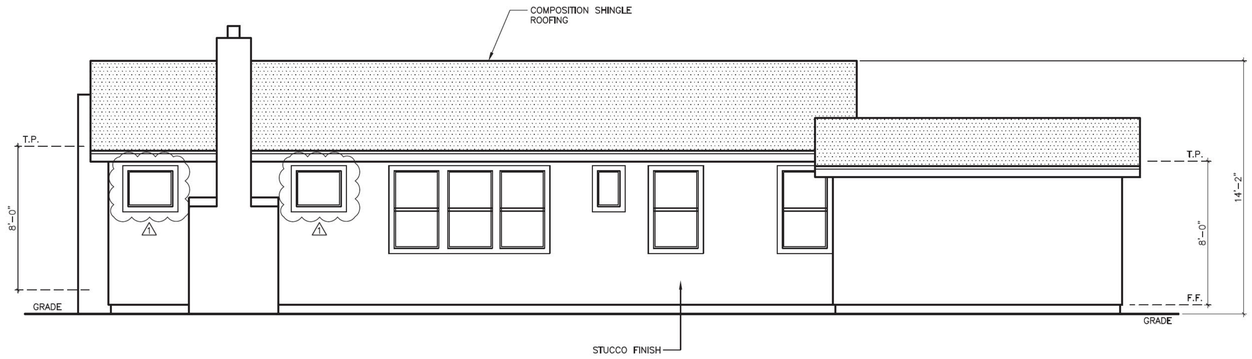
DATE: 02-10-2022
SCALE: AS SHOWN
DRAWN: NBH
CHK: PHUNG

PLAN REVIEW APPROVAL
05.20.2022
TOWN OF LOS GATOS
BUILDING DIVISION

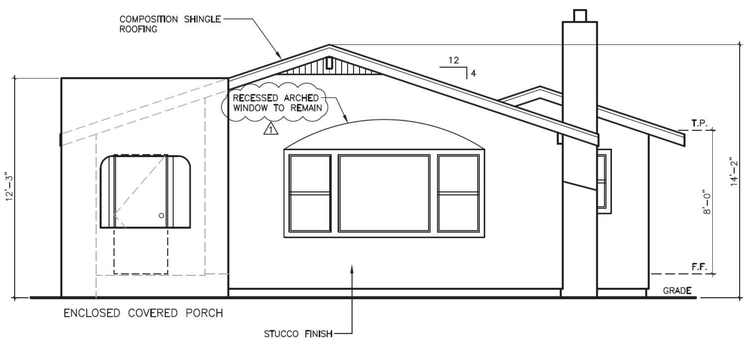
A4
OF SHEETS



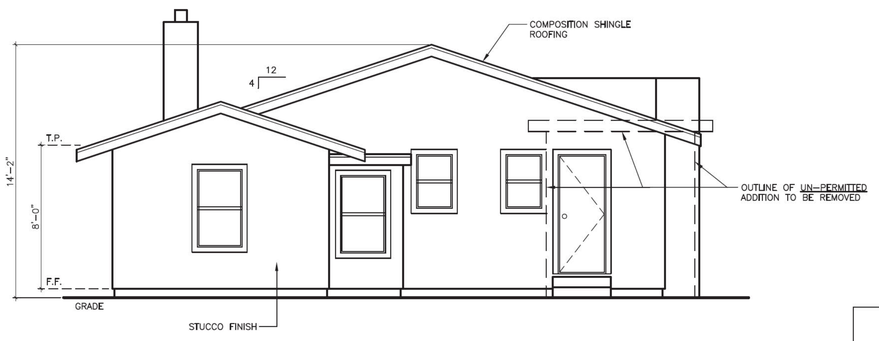
EXISTING SOUTH ELEVATION
(LEFT SIDE) SCALE: 1/4" = 1'-0"



EXISTING NORTH ELEVATION
(RIGHT SIDE) SCALE: 1/4" = 1'-0"



EXISTING EAST ELEVATION
(FRONT) SCALE: 1/4" = 1'-0"



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

EXISTING

REVISIONS
1 PER PLAN REVIEW & DESIGNER 04-25-2022
2
3

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NOBLE BENJAMIN ASSOCIATES
(408) 646-1206
04-25-2022
noblebassociates@gmail.com

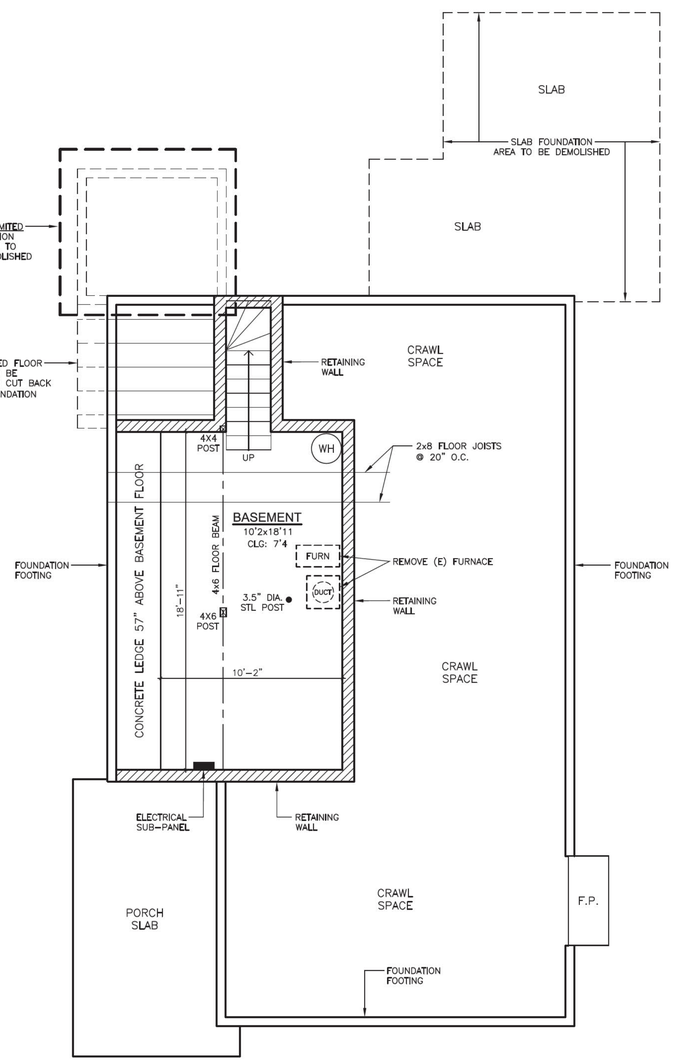
RESIDENCE
245 LOS GATOS BLVD
LOS GATOS, CA 95030

ADDITION & INTERIOR REMODEL

DATE: 02-10-2022
SCALE: AS SHOWN
DRAWN: NBH
CHECKED: PHUNG

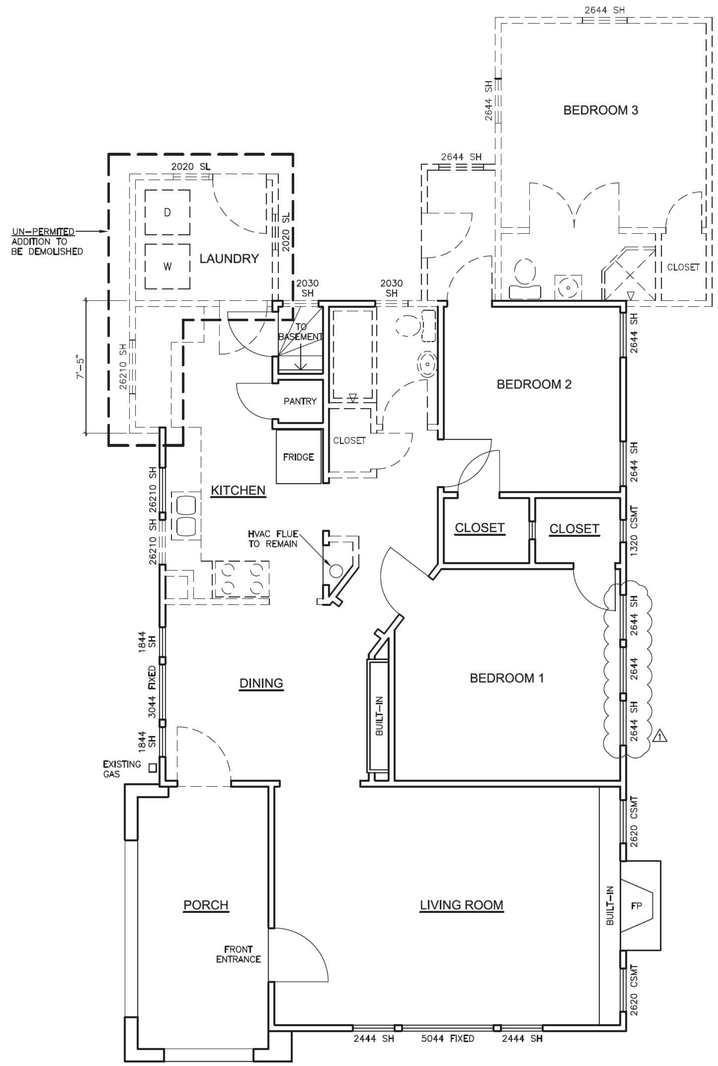
PLAN REVIEW APPROVAL
05.20.2022
TOWN OF LOS GATOS
BUILDING DIVISION

A5
OF SHEETS



FOUNDATION DEMOLITION PLAN

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



DEMOLITION PLAN

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

LEGEND

	NEW 2x4 WALLS	O.H.	OVERHANG
	EXISTING 2x4 WALL RAISED TO NEW PLATE HEIGHT	DR	DOOR
		DIR	DIRECTION
	NEW 2x6 WALLS	U.N.O.	UNLESS NOTED OTHERWISE
	EXISTING WALLS	A.F.F.	ABOVE FINISHED FLOOR
	WALLS TO BE REMOVED	M.S.	MOTION SENSOR
	LOW WALL	V.I.F.	VERIFY IN FIELD
(E)	EXISTING	XXXX FR	GLASS PANELED DOOR
(N)	NEW	2630	WINDOW/DOOR
TEMP GL	TEMPERED GLASS		VERTICAL DIM. 3'-0"
C.L.	CENTERLINE		HORIZONTAL DIM. 2'-6"
S.D.	SMOKE DETECTOR	C	CARBON MONOXIDE DETECTOR

DEMOLTION

PLAN REVIEW APPROVAL
05.20.2022
TOWN OF LOS GATOS
BUILDING DIVISION

REVISIONS
1 PER PLAN REVIEW & DESIGNER 04-25-2022
2
3

NOBLE BENJAMIN ASSOCIATES
3033 MOORPARK AVE, SUITE 1
SAN JOSE, CA 95128
(408) 646-1206
noblebassociates@gmail.com

RESIDENCE
245 LOS GATOS BLVD
LOS GATOS, CA 95030

ADDITION & INTERIOR REMODEL

DATE: 02-10-2022
SCALE: AS SHOWN
DRAWN: NBH
CHECKED: PHUNG

A6
OF SHEETS

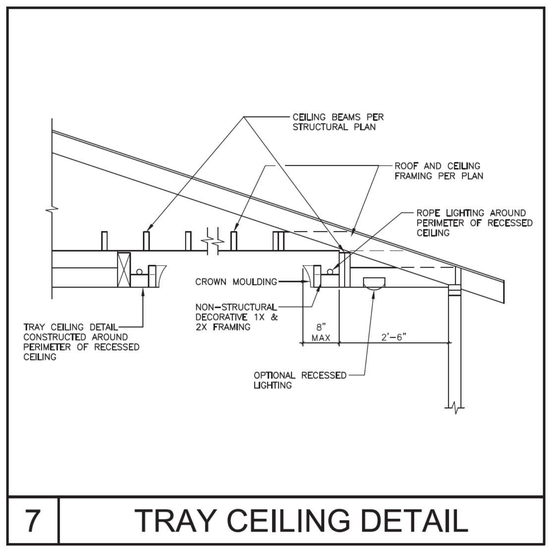
WINDOW SCHEDULE

WINDOW DESIG.	EXISTING/NEW	SIZE	LOCATION	WINDOW MFR	WINDOW FRAME MAT.	WINDOW TYPE	EXIT EGRESS	TEMPERED GLASS
A	EXISTING	2'-6"x2'-10"	KITCHEN	UNKNOWN	WOOD	SINGLE HUNG		
B	EXISTING	1'-8"x4'-4"	DINING	UNKNOWN	WOOD	SINGLE HUNG		
C	EXISTING	3'-0"x4'-4"	DINING	UNKNOWN	WOOD	FIXED		
D	EXISTING	2'-4"x4'-4"	LIVING RM	UNKNOWN	WOOD	SINGLE HUNG		
E	EXISTING	5'-0"x4'-4"	LIVING RM	UNKNOWN	WOOD	FIXED		
F	EXISTING	2'-6"x2'-0"	LIVING RM	UNKNOWN	WOOD	CASEMENT		
G	EXISTING	2'-6"x4'-4"	BEDROOM #1	UNKNOWN	WOOD	SINGLE HUNG		
H	EXISTING	1'-3"x2'-0"	BEDROOM #1 CLOSET	UNKNOWN	WOOD	CASEMENT		
I	EXISTING	2'-6"x4'-4"	BEDROOM #2	UNKNOWN	WOOD	SINGLE HUNG		
J	NEW	2'-0"x3'-0"	BATH #1	*T.B.D.	WOOD*	SINGLE HUNG		YES
K	NEW	3'-0"x3'-0"	M. BATH	*T.B.D.	WOOD*	SINGLE HUNG		YES
L	NEW	5'-0"x4'-0"	M. BEDROOM	*T.B.D.	WOOD*	SLIDER	YES	
M	NEW	3'-0"x5'-0"	FAMILY RM	*T.B.D.	WOOD*	SINGLE HUNG		

* ANDERSON 400 SERIES – REAL WOOD CLAD TO VINYL

GLASS PANELED DOOR SCHEDULE

DOOR NUMBER	EXISTING/NEW	DOOR FRAME MAT.	QTY	THICKNESS	WIDTH	HEIGHT	LOCATION	DOOR MFR
1	NEW	WOOD*	2	1 3/4"	3'-0"	6'-8"	FAMILY RM	*T.B.D.



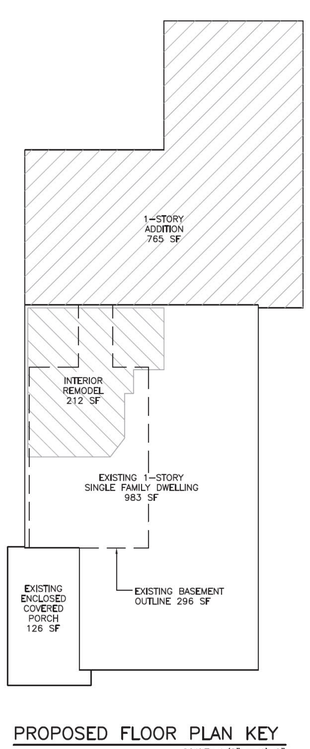
7 TRAY CEILING DETAIL

LEGEND

	NEW 2x4 WALLS	O.H.	OVERHANG
	EXISTING 2x4 WALL RAISED TO NEW PLATE HEIGHT	DR	DOOR
		DIR	DIRECTION
	NEW 2x6 WALLS	U.N.O.	UNLESS NOTED OTHERWISE
	EXISTING WALLS	A.F.F.	ABOVE FINISHED FLOOR
	WALLS TO BE REMOVED	M.S.	MOTION SENSOR
	LOW WALL	V.I.F.	VERIFY IN FIELD
(E)	EXISTING	XXXX FR	GLASS PANELED DOOR
(N)	NEW	2630	WINDOW/DOOR
TEMP GL	TEMPERED GLASS		VERTICAL DIM. 3'-0"
C.L.	CENTERLINE		HORIZONTAL DIM. 2'-6"
S.D.	SMOKE DETECTOR	C	CARBON MONOXIDE DETECTOR

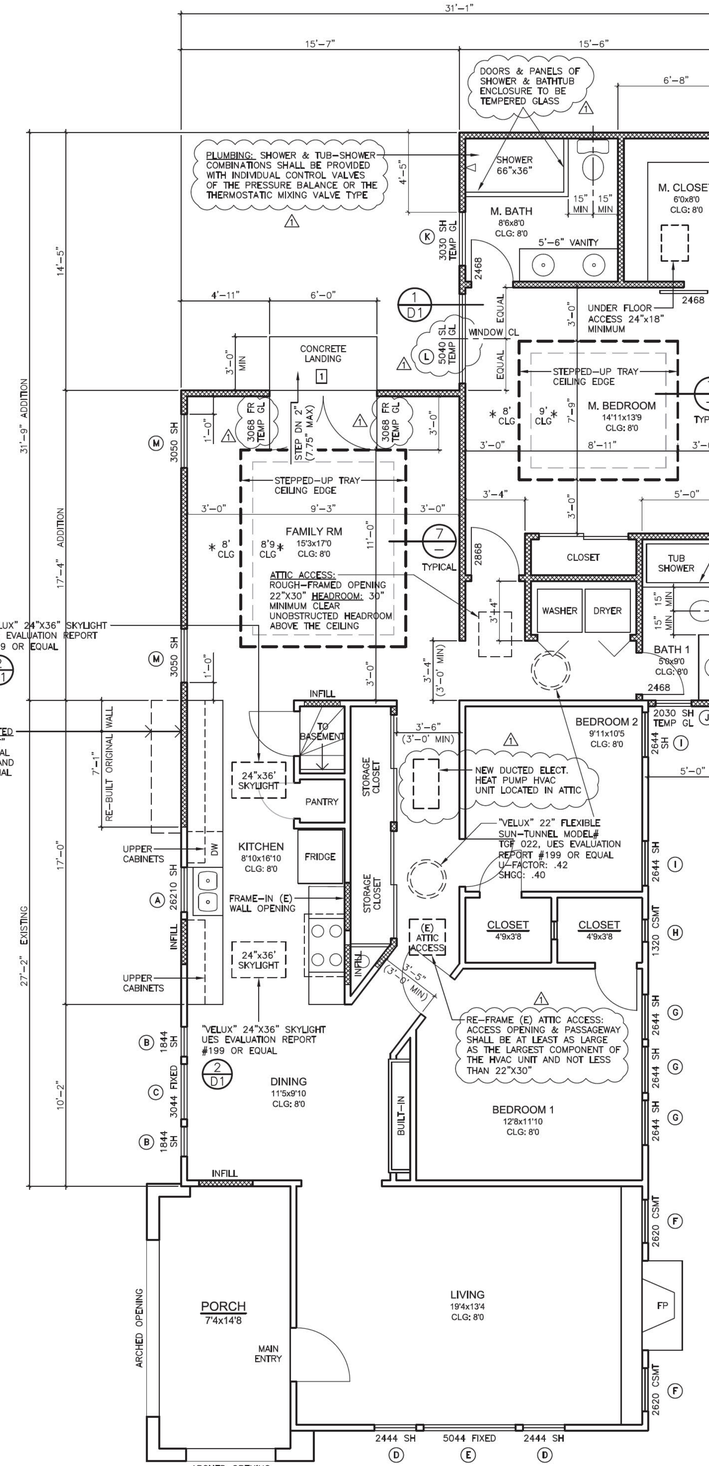
RODENT PROTECTION PER CGBSC SECTION 4.406.1

ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN SOLE/BOTTOM PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY, OR SIMILAR ACCEPTABLE METHODS. CGBSC SECTION 4.406.1



PROPOSED FLOOR PLAN KEY

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



PROPOSED FLOOR PLAN

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

REVISIONS

1 PER PLAN REVIEW & DESIGNER 04-25-2022

2 PER PLAN REVIEW 05-18-2022

3

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04-25-2022
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RESIDENCE
245 LOS GATOS BLVD
LOS GATOS, CA 95030

ADDITION & INTERIOR REMODEL

DATE: 02-10-2022

SCALE: AS SHOWN

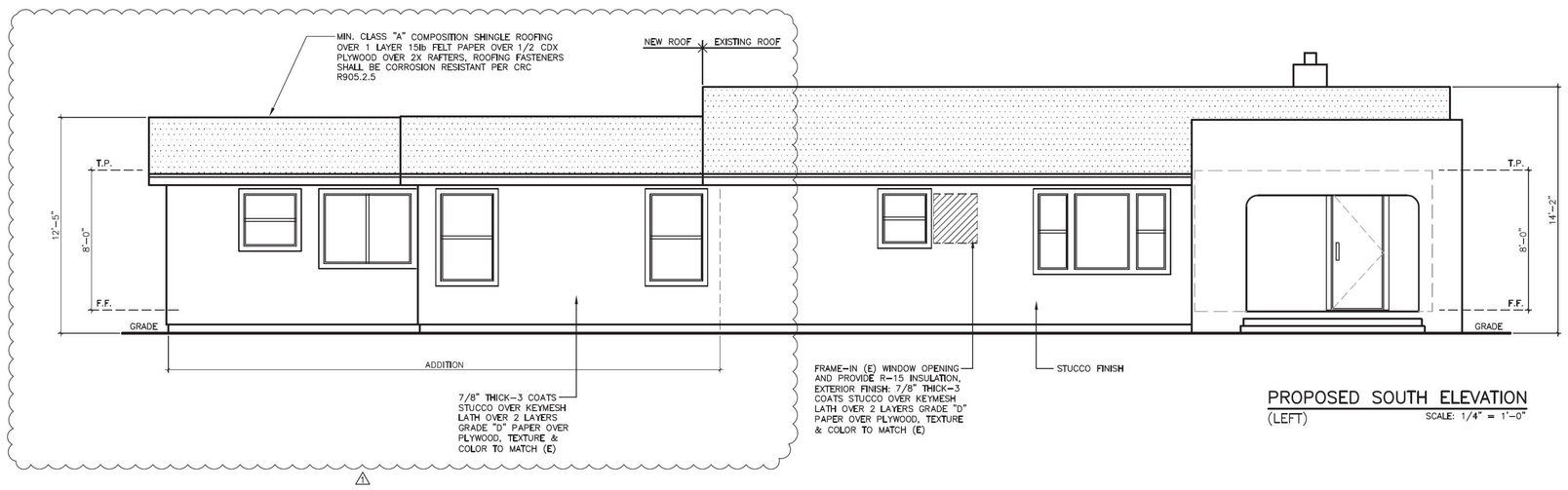
DRAWN: NBH

CHECKED: PHUNG

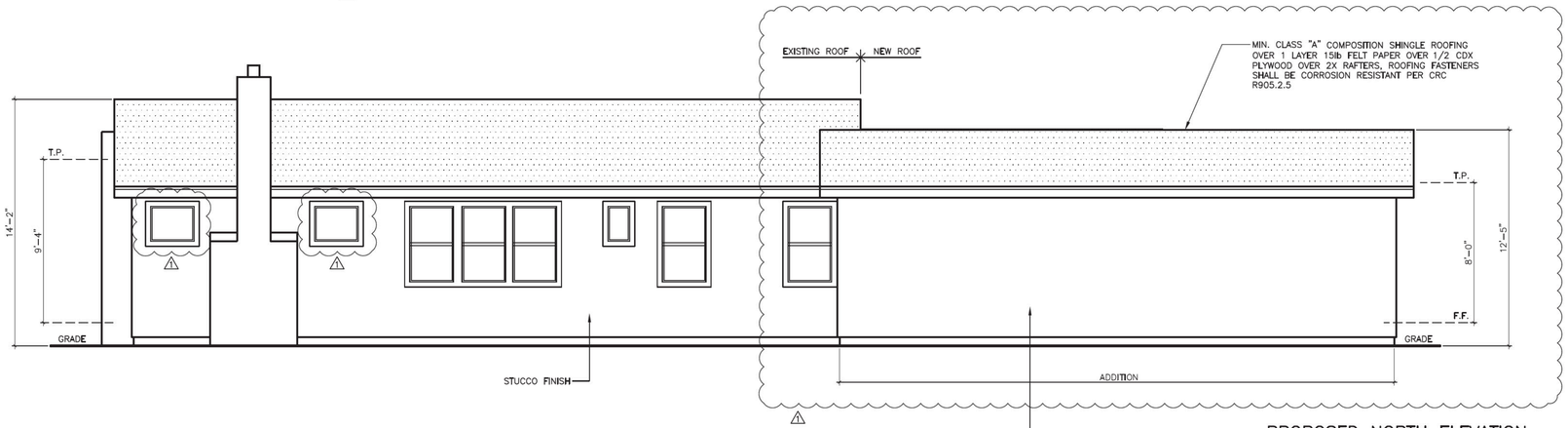
PLAN REVIEW APPROVAL
05.20.2022
TOWN OF LOS GATOS
BUILDING DIVISION

A7

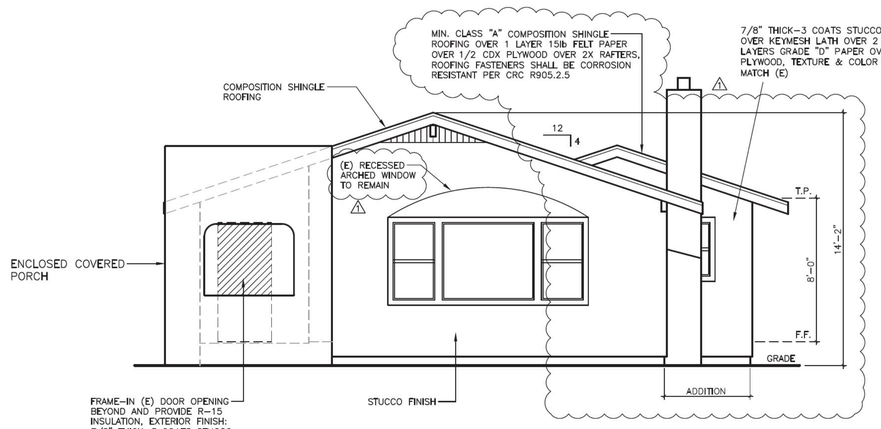
OF SHEETS



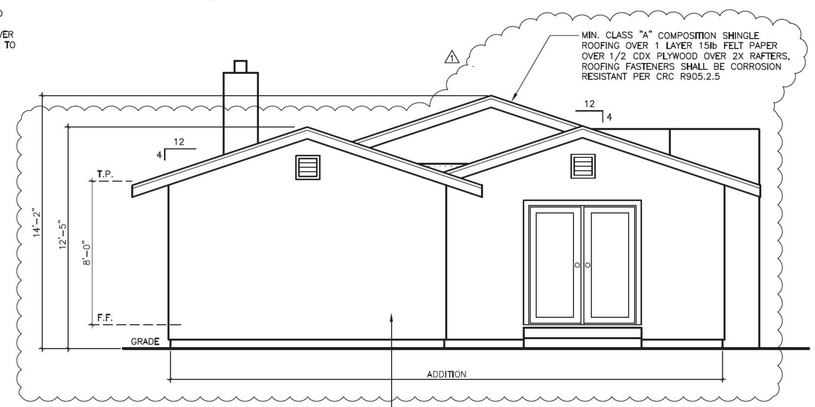
PROPOSED SOUTH ELEVATION
(LEFT) SCALE: 1/4" = 1'-0"



PROPOSED NORTH ELEVATION
(RIGHT) SCALE: 1/4" = 1'-0"



PROPOSED EAST ELEVATION
(FRONT) SCALE: 1/4" = 1'-0"



PROPOSED WEST ELEVATION
(REAR) SCALE: 1/4" = 1'-0"

REVISIONS
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PLAN REVIEW APPROVAL
05.20.2022 PHUNG
TOWN OF LOS GATOS
BUILDING DIVISION

A8
OF SHEETS

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dwelling lab
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November 3, 2025

To:
Town of Los Gatos
Historical Preservation Committee
110 E. Main Street
Los Gatos, CA 95030

Subject: **Justification Letter for Proposed Side Addition – 245 Los Gatos**

Dear Members of the Historical Preservation Committee,

I am writing to request review and approval for a proposed side addition to the existing residential dwelling located at 245 Los Gatos. The intent of this addition is to provide functional interior space while maintaining full respect for the architectural integrity and historic character of the property and surrounding neighborhood.

The proposed side addition has been carefully designed to be unobtrusive and minimally visible from the street. The addition is positioned along the side elevation, set back from the front façade and screened by existing landscaping and site features, ensuring that the historic streetscape view remains unchanged.

Architecturally, the design of the addition is fully compatible with the existing residence. The exterior materials will match the current home's white stucco finish, maintaining a seamless visual transition between the original structure and the new construction. The windows will be double-hung, prairie-style units, selected to replicate the proportions, muntin patterns, and trim details of the existing windows. These measures ensure the addition remains consistent with the historic aesthetic of the home and the broader character of the neighborhood.

In summary, this proposed side addition:

- Preserves the historic street-facing appearance of the property;

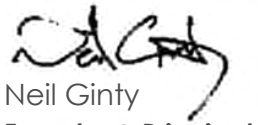
- Uses materials and design features that harmonize with the existing structure;

- Provides a modest and respectful enhancement that supports modern residential needs while maintaining architectural continuity.

We respectfully request the Committee's consideration and approval of this proposed design. We are committed to preserving the architectural heritage of Los Gatos and ensuring that this project contributes positively to the historic fabric of the historic fabric of the community.

Thank you for your time and consideration. Please let me know if additional documentation, renderings, or material samples would be helpful in your review.

Sincerely,



Neil Ginty
Founder & Principal Architect
M.A., B.Arch, NCARB, Registered Architect

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Existing Residence Photographs

Front (East)

Existing Residence Photographs

Side (South)

Existing Residence Photographs

Rear

Existing Residence Photographs

Side (North side looking towards east)

Existing Residence Photographs

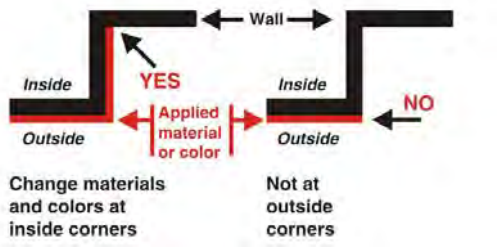
Side (North side looking towards east)

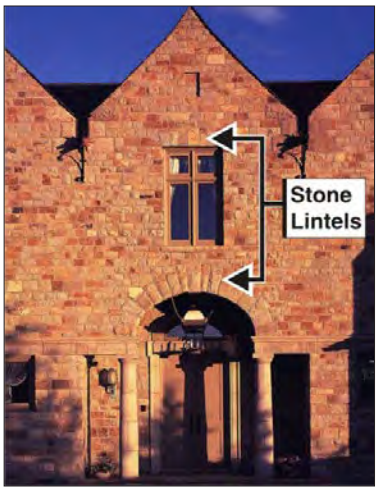
3.8.3 Use traditional detailing

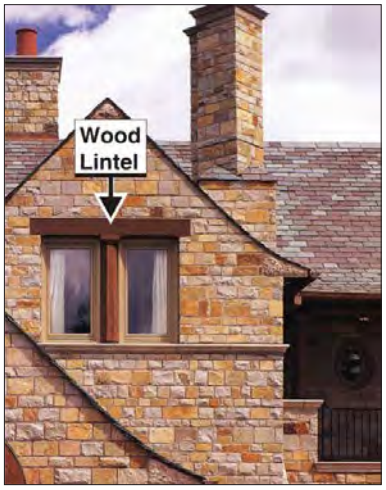
- Treat openings in walls as though they were constructed of the traditional material for the style. For example, be sure to provide substantial wall space above arches in stucco and stone walls. Traditionally, wall space above the arch would have been necessary to structurally span the opening, and to make the space too small is inconsistent with the architectural style.
- Openings in walls faced with stone, real or synthetic, should have defined lintels above the opening except in Mission or Spanish Eclectic styles. Lintels may be stone, brick or wood as suits the style of the house.
- Treat synthetic materials as though they were authentic. For example, select synthetic stone patterns that place the individual stones in a horizontal plane as they would have been in a load bearing masonry wall.
- Select roof materials that are consistent with the traditional architectural style (e.g., avoid concrete roof tiles on a Craftsman Style house.)

3.8.4 Materials changes

- Make materials and color changes at inside corners rather than outside corners to avoid a pasted on look.







Use stone or wood lintels over openings in stone walls

3.9 ADDITIONS/ACCESSORY BUILDINGS/SECONDARY UNITS

- Site additions in the least conspicuous place. In many cases this is a rear or side elevation - only rarely is it a rooftop.
- The existing built forms, components and materials should be reinforced. Heights and proportions of additions and alterations should be consistent with and continue the original architectural style and design.
- Additions should be subordinate, and compatible in scale and proportion to the historically significant portions of the existing structure.
- When an addition or remodel requires the use of newly constructed exterior elements, they should be identical in size, dimension, shape and location as the original, and

Additions, accessory buildings and secondary units should match the form, architectural style, and details of the original house

Original structure

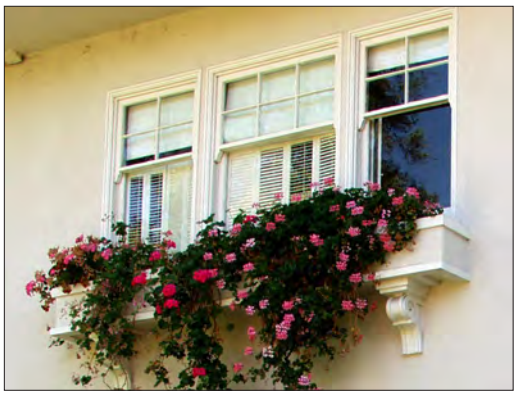
Addition incorporated into the roof successfully adds space while respecting the integrity of the existing house and the scale of the neighborhood

Placing a two story addition to the rear can minimize its impact on the historic resource and the scale of the neighborhood

should utilize the same materials as the existing protected exterior elements.

- When an addition necessitates the removal of architectural materials, such as siding, windows, doors, and decorative elements, they should be carefully removed and reused in the addition where possible.
- The introduction of window and door openings not characteristic in proportion, scale, or style with the original architecture is strongly discouraged (e.g., sliding windows or doors in a structure characterized by double hung windows and swinging doors).
- The character of any addition or alteration should be in keeping with and subordinate to the integrity of the original structure.
- The amount of foundation exposed on the addition should match that of the original building.
- Do not add roof top additions where the roof is of historic significance.
- Second floor additions are discouraged in neighborhoods with largely one story homes. If horizontal expansion of the house is not possible, consider incorporating a second floor addition within the roof form as shown in the example to the left.
- Second floor additions which are not embedded within the roof form should be located to the rear of the structure.
- The height and proportion of an addition or a second story should not dominate the original structure.
- Deck additions should be placed to the rear of the structure only, and should be subordinate in terms of scale and detailing.
- New outbuildings, such as garages, should be clearly subordinate to the main structure in massing, and should utilize forms, materials and details which are similar to the main structure.
- Garages should generally be located to the rear of the lot behind the rear wall of the residence. One car wide access driveways should be utilized.

Original doors and windows should be retained and repaired



True divided lite windows are encouraged when appropriate to the original structure

Simulated divided lite windows may be considered on a case-by-case basis

- New materials should identically match original materials in shape, size, dimension, texture and pattern. Metal used as flashing, screening, gutters, and utility services and other traditional elements are acceptable.
- Composite, synthetic, metal, vinyl, plastic or fabricated/ imitation wood products, painted brick or imitation used brick will generally not be approved. However, some exceptions may be made on a case-by-case basis when the decision making body determines that the replacement is consistent with the appearance of the original material, and that a lay person would be unlikely to discern the difference. The burden of proof will reside with the applicant. Material samples, photographs and specific locations where the material may be seen in use will all assist in the evaluation of alternative materials.
- The decision making body may approve an acceptable alternative to the original building material if use of the original material is not feasible due to unreasonable cost and commercial availability, or health and safety considerations.

4.8.3 Doors

- Original doors should be retained and restored.
- New replacement doors for Victorians should not be flush, but of raised or flat panel design.
- Front doors generally should be painted, not stained. *Not applicable to Mission Revival/Mediterranean style structures.*
- Screened doors should be real wood framed of simple design unless patterns can be shown to fit the existing style.

4.8.4 Windows and Glass in doors

- Original windows, glass and window decorations should be retained and restored.
- Replacement of only the deteriorated portions of the windows is recommended rather than the replacement of the entire window.
- New or replacement windows should be wood-sashed and muntined if applicable.
- Sills, lintels, frames, sashes, muntins, and all decorations should be identically replaced.
- All elements of new windows should be identical in size, shape, proportion, and dimensions as the original windows of the building, or consistent with traditional sizes, proportions and dimensions of buildings of the same architectural style, design and era.
- Windows should be constructed of real glass, and window

frames should be constructed of real wood - not vinyl, metal or plastic. Wood sashes may be vinyl or metal clad if the window frame and dressing is designed consistent with the historic context of the building.

- All lites (panes of glass) should be true divided lite, not artificial or snap-in grids. Simulated Divided Lite windows are permitted when the details of the window provide projecting muntin elements on the exterior and interior of the window along with a spacer muntin between the panes of glass (See example to the left).
- New arched, angled, and/or octagonal windows are discouraged.
- Large expanses of blank exterior walls without windows are discouraged.

4.8.5 Bay Windows

- Size, shape, proportion, dimension, type of foundation, and, roof material and style of bay windows, whether restored or of new construction, should be identical to the original or existing bay windows of the structure.
- New bay windows may be added to the building in locations where no bay windows previously existed. These new bay windows should be identical to and replicate the style, design, size, shape and proportion, type of foundation and roof of other bay windows existing on structure. If there are no existing bay windows on the structure, new bay windows should be built in the same size, shape, dimension, proportions, material and type of foundation and roof typical of the architectural style. Metal frame kitchen garden windows are prohibited.
- Generally, traditional architectural styles will require either a foundation to the ground or substantial supporting brackets below a bay window. Floating windows without support, as shown for the bow bay window example to the right, are rarely appropriate.
- New bay windows are permitted only when the applicant proves to the Deciding Body that they are consistent with existing style, design and character of the structure.

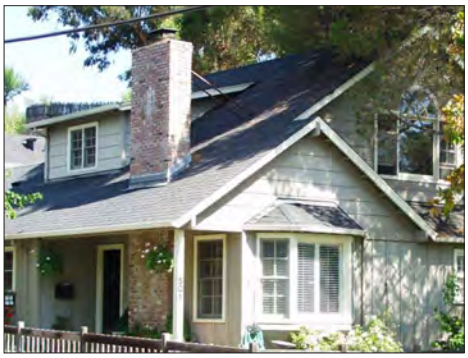
4.8.6 Chimneys

- Wood-framed chimneys are prohibited unless their exteriors are covered with brick or river rock veneers. Masonry veneers may be used. However, they should be detailed exactly as the solid construction that they are emulating.
- Stucco Mission Revival or Mediterranean style houses may have stucco covered chimneys.

Match bay windows to the architectural style of the house

Some window styles, such as this bow bay window, would have very limited applicability for use on a historic resource structure

Wood clad chimneys are prohibited



Masonry and stucco chimneys are preferred

SYMBOLS

ROOM NAME — ROOM NAME & NUMBER

999 — WINDOW NUMBER

101 — ROOM NUMBER; DOOR NUMBER (SEQUENTIAL) — DOOR NUMBER

Name / Elevation — ELEV. HT. REFERENCE

PROJECT NORTH; TRUE NORTH — NORTH ARROW

XX-00 — MATERIAL TAG

1 — REVISION

A / A 1 A101 A / A — INTERIOR ELEVATION

1 A101 — DETAIL REFERENCE

1 A1.01 — ELEVATION REFERENCE

1 A1.01 — SECTION REFERENCE

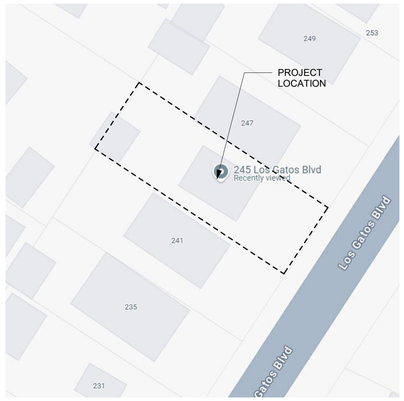
88 — SIM — 1 A101 — ASSEMBLY TYPE REFERENCE

DETAIL CALLOUT

ABBREVIATIONS

&	AND	MACH.	MACHINE
@	AT	MANUF.	MANUFACTURER
A.B.	ANCHOR BOLT	MAX.	MAXIMUM
A.C.	AIR CONDITIONING	M.B.	MACHINE BOLT
ACOUST.	ACOUSTICAL	MDF	MEDIUM DENSITY FIBERBOARD
A.C.T.	ACOUSTICAL CEILING TILE	M.E.P.	MECHANICAL/ELECTRICAL/PLUMBING
A.D.	AREA DRAIN	MEMB.	MEMBRANE
A.F.F.	ABOVE FINISHED FLOOR	MIN.	MINIMUM
ALUM.	ALUMINUM	MIR.	MIRROR
ARCH.	ARCHITECT OR ARCHITECTURAL	MISC.	MISCELLANEOUS
BLKG.	BLOCKING	MTL.	METAL
B.P.	BUILDING PAPER	MW.	MICROWAVE
B.O.	BOTTOM OF	(N)	NEW
CAB.	CABINET	N/A	NOT APPLICABLE
CATV	CABLE TELEVISION	O/	OVER
C.C.	CENTER TO CENTER	O.C.	ON CENTER
C.I.P.	CAST-IN-PLACE	PLYWD.	PLYWOOD
C.J.	CONTROL JOINT	PLUMB.	PLUMBING
C.L.	CENTER LINE	P.S.F.	POUNDS PER SQUARE FOOT
CLG.	CEILING	P.S.I.	POUNDS PER SQUARE INCH
CLR.	CLEAR	P.T.	PRESSURE TREATED
C.O.	CLEAN OUT	P.V.C.	POLY VINYL CHLORIDE PIPE
CONC.	CONCRETE	R.C.P.	REFLECTED CEILING PLAN
DEMO.	DEMOLITION OR DEMOLISH	REQ'D	REQUIRED
DEPT.	DEPARTMENT	RET.	RETAIN / RETAINING
DIA.	DIAMETER	REV.	REVISION
DIM.	DIMENSION	S.C.	SOLID CORE
D.W.	DISHWASHER	SIM.	SIMILAR
DWG(S).	DRAWING(S)		
(E)	EXISTING	SPEC.	SPECIFICATION (S)
EA.	EACH	SQ.	SQUARE
E.B.	EXPANSION BOLT	S.T.C.	SOUND TRANSMISSION COEFFICIENT
ELEC.	ELECTRICAL	STD.	STANDARD(S)
ELEV.	ELEVATION	STL.	STEEL
E.O.S.	EDGE OF SLAB	TB.	TOWEL BAR
EQ.	EQUAL	T.B.D.	TO BE DETERMINED
F.A.U.	FORCED AIR UNIT	T & G	TONGUE AND GROOVE
F.C.U.	FAN COIL UNIT	THR.	THRESHOLD
F.D.	FLOOR DRAIN	T.O.	TOP OF
F.F.	FINISH FLOOR	T.O.B.	TOP OF BEAM
FIN.	FINISH OR FINISHED	T.O.P.	TOP OF PAVING
FLR.	FLOOR	T.O.S.	TOP OF SLAB
FT.	FOOT / FEET	T.O.STL.	TOP OF STEEL
FTG.	FOOTING	T.V.	TELEVISION
G.	GAS	TYP.	TYPICAL
GA.	GAUGE	V.B.	VAPOR BARRIER
G.C.	GENERAL CONTRATOR	VERT.	VERTICAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	V.I.F.	VERIFY IN FIELD
G.L.	GRIDLINE	W/	WITH
G.W.B.	GYPSUM WALL BOARD	W.C.	WATER CLOSET
GYP.	GYPSUM	WD.	WOOD
H.B.	HOSE BIB	W/D	WASHER/DRYER
H.D.	HOLD DOWN	WH.	WATER HEATER
HT.	HEIGHT	W/O	WITHOUT
HTG.	HEATING	WP.	WATERPROOF / WEATHERPROOF
HVAC	HEATING, VENTILATION & AIR CONDITIONING	WT.	WEIGHT
H.W.	HOT WATER	YD.	YARD
IN.	INCH(ES)		
LAV.	LAVATORY		
LBS.	POUNDS		
L.F.	LINEAR FOOT		
L.V.T.	LUXURY VINYL TILE		

VICINITY MAP



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ARCHITECT:

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NEIL GINTY
21 EL CAMINITO
WALNUT CREEK, CA 94598

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PHONE: (312) 952-9680
EMAIL: design@dwelling-lab.com
WEBSITE dwelling-lab.com

OWNERS:

MONIQUE PHAM

CONTACT:
PHONE:

PROJECT DATA

SITE INFORMATION

ADDRESS:	245 LOS GATOS BLVD, LOS GATOS, CA 95030
APN:	529 24 024
CLIMATE ZONE:	3
SEISMIC DESIGN CATEGORY:	(D0, D1, D2)
MINOR RESIDENTIAL APPLICATION:	MR-25-011

SCOPE OF WORK:

1ST FLOOR
REMODEL AND SIDE ADDITION OF AN EXISTING SINGLE FAMILY DWELLING INCLUDING BATHROOM, KITCHEN, AND ASSOCIATE PLUMBING AND ELECTRICAL WORKS.

ZONING DATA

YEAR BUILT:	1924
ASSESSOR'S PARCEL NUMBER (BLOCK/LOT):	24
PLANNING DISTRICT:	
NEIGHBORHOOD (PLANNING):	
ZONE:	R1-D
HEIGHT & BULK:	

BUILDING DATA

OCCUPANCY:	R-3 (SINGLE FAMILY DWELLING)
CONSTRUCTION TYPE:	V-B
FIRE SPRINKLERS:	NO
(E) SQ. FT.:	1,748 SF
PROPOSED SQ. FT.:	1,883 SF
(E) DETACHED GARAGE	421 SF

PARCEL AREA CALCULATIONS

PARCEL AREA:	7,000 SQ.FT	(0.16 ACRES)
GROSS FLOOR AREA:		
TOTAL 1ST FLOOR AREA	1,883 SF	
ALLOWABLE F.A.R.	.35 - (7,000-5/25 X.20) = .33	
PROPOSED F.A.R.	.33 X 7,000 = 2,310	
MAX ROOF HEIGHT	30'-0"	
EXISTING HEIGHT	24'-7"	
MAX ALLOWABLE AREA	2,338 SF	
MAX ALLOWABLE AREA GARAGE	661 SF	

APPLICABLE CODES:
2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA RESIDENTIAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA FIRE CODE
NATIONAL FIRE PROTECTION ASSOCIATION (BOOKLET 101)
CALIFORNIA ENERGY COMMISSION TITLE 24
2022 CALIFORNIA GREEN BUILDINGS STANDARDS CODE
ALL OTHER APPLICABLE CITY AND COUNTY LAWS AND ORDINANCES

DRAWING INDEX

GENERAL
A0.01 PROJECT DATA_RESIDENTIAL

ARCHITECTURAL
A1.02 PROPOSED SITE PLAN
A2.01 DEMOLITION & PROPOSED PLANS
A3.00 ELEVATIONS
A3.01 STREET ELEVATIONS

CONSTRUCTION STANDARDS

1. CONTRACTOR TO ENSURE THAT SURFACE TO RECEIVE FINISHES ARE CLEAN, TRUE AND FREE OF IRREGULARITIES. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. COMMENCEMENT OF WORK SHALL INDICATE INSTALLER'S ACCEPTANCE OF SUBSTRATE.
2. CONTRACTOR TO REPAIR AND PREPARE EXISTING SURFACES SCHEDULED TO REMAIN AS NECESSARY FOR APPLICATION OF NEW FINISHES.
3. CONTRACTOR SHALL PATCH SURFACES TO MATCH ADJACENT IN A MANNER SUITABLE TO RECEIVE FINISHES.
4. GYPSUM BOARD CONSTRUCTION SHALL ALIGN WITH EXISTING, ADJACENT, OR ADJOINING SURFACES. JOINTS SHALL BE TAPED AND SANDED SMOOTH WITH NO VISIBLE JOINTS, UNLESS OTHERWISE NOTED.
5. CONTRACTOR TO INSURE DELIVERY AND INSTALLATION OF CASEWORK AND FINISH CARPENTRY WILL NOT BE DAMAGED BY OTHER CONSTRUCTION WORK.
6. ALL CODE-REQUIRED LABELS SUCH AS "UL", FACTORY MUTUAL OR ANY EQUIPMENT IDENTIFICATION, PERFORMANCE RATING, NAME OR NOMENCLATURE PLATES SHALL REMAIN READABLE AND NOT PAINTED.
7. COORDINATE WITH OWNER FOR DELIVERY AND PLACEMENT OF ALL FURNITURE AND WALL-HUNG EQUIPMENT.
8. REFER TO FINISH SCHEDULE FOR SPECIFIED FINISHES. REFER TO INTERIOR ELEVATIONS FOR MOUNTING HEIGHT REQUIREMENTS.
9. FOR BUILT-IN WORK SURROUNDED BY PARTITIONS, INCLUDING BUT NOT LIMITED TO APPLIANCES AND MILLWORK, CONTRACTOR SHALL CONFIRM THAT FINISHED FLOOR, WALL AND/OR SOFFIT SURFACES DO NOT VARY BY MORE THAN 1/4" IN 20'-0" (NON-CUMULATIVE). NOTIFY ARCHITECT IF THIS TOLERANCE IS EXCEEDED.
10. CONTRACTOR SHALL, IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, APPLY, INSTALL, CONNECT, ERECT, CLEAN, AND/OR CONDITION MANUFACTURED ARTICLES, MATERIALS AND/OR EQUIPMENT.
11. UNLESS OTHERWISE NOTED, IT IS THE INTENTION OF THE DRAWINGS AND SPECIFICATIONS FOR ALL WORK, EQUIPMENT, CASEWORK, MECHANICAL, ELECTRICAL AND SIMILAR DEVICES OF WHATEVER NATURE, BE COMPLETELY INSTALLED, CONNECTED, MADE OPERATIONAL AND FUNCTIONAL FOR THE PURPOSE INTENDED, AND THAT ALL COSTS FOR THIS BE INCLUDED IN THE CONTRACTOR'S PROPOSAL.
12. COORDINATE LOCATION AND PROVIDE BLOCKING, BACKING, AND/OR REINFORCEMENTS IN PARTITIONS FOR ALL CABINETS, COUNTERTOPS AND ANY WALL-MOUNTED ITEMS. REFER TO ELEVATIONS AND DETAILS FOR LOCATIONS OF WALL STANDARDS AND OTHER SUPPORTS.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY FRAMING, BRACING, AND STRUCTURING ALL WALL, BULKHEAD, AND OTHER DRYWALL CONSTRUCTION IN ACCORDANCE WITH APPLICABLE TYPICAL DETAILS CONTAINED IN THE DRAWINGS WHETHER OR NOT SPECIFICALLY REFERENCED IN THE PLANS OR DETAILS. PROVIDE BLOCKING / BACKING AND REINFORCEMENT ABOVE AS REQUIRED FOR SUPPORT OF LIGHT FIXTURES, EQUIPMENT, OR ANY OTHER CEILING-MOUNTED ITEMS.
14. REPAIR AND PATCH ANY/ALL PENETRATIONS THROUGH RATED ASSEMBLIES TO MAINTAIN REQUIRED RATING.
15. UNLESS OTHERWISE NOTED IN DRAWINGS, FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, AND BEST PRACTICES FOR INSTALLING EQUIPMENT, FURNISHINGS, FITTINGS, ETC. BRING CONFLICTS BETWEEN DRAWINGS AND MANUFACTURER'S RECOMMENDATIONS TO THE ATTENTION OF THE ARCHITECT.

STANDARDS AND CODES

1. REFER TO TITLE SHEET FOR APPLICABLE CODES
2. GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, CODES, RULES AND REGULATIONS BEARING ON THE CONDUCT OF THE WORK. IF THE CONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT VARIANCE THEREWITH, PROMPTLY NOTIFY THE PROJECT MANAGER AND/OR ARCHITECT. NECESSARY CHANGES SHALL BE MADE IN ACCORDANCE WITH THE GENERAL CONDITIONS.
3. IF CONTRACTOR KNOWINGLY PERFORMS ANY WORK WHICH IS CONTRARY TO SUCH LAWS, ORDINANCES, CODES, RULES AND REGULATIONS, HE/SHE SHALL PROMPTLY MAKE ALL CHANGES AS REQUIRED TO COMPLY THEREWITH AND BEAR ALL COSTS ARISING THEREFROM.
4. CONFLICTS: IN CASE OF CONFLICTS IN THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, THE MOST RESTRICTIVE REQUIREMENTS SHALL GOVERN.
5. WHERE CODES OR REGULATIONS, OTHER THAN THOSE LISTED IN THIS SECTION, ARE REFERRED TO IN VARIOUS SECTIONS OF THE SPECIFICATIONS. IT SHALL BE UNDERSTOOD THAT THEY APPLY TO THIS WORK AS FULLY AS IF CITED HEREIN.
6. ALL COMBUSTIBLE MATERIALS SHALL MEET APPLICABLE CODES. WOOD SHALL BE FIRE RETARDANT TREATED WHERE REQUIRED BY LOCAL BUILDING CODES AND BUILDING OWNER'S REQUIREMENT'S.
7. FOR MAXIMUM FLOW RATES FOR PLUMBING FIXTURES, REFER TO STANDARDS FOR PLUMBING FIXTURES AND FITTINGS OF 2022 CALIFORNIA GREEN BUILDING STANDARD'S CODE SEE SHEET CG-1.

GENERAL NOTES

1. CONTRACTOR IS HEREBY SPECIFICALLY DIRECTED AS A CONDITION OF THE CONTRACT TO ACQUAINT HIMSELF/HERSELF WITH THE ARTICLES CONTAINED IN THE GENERAL NOTES AND TO NOTIFY AND APPRISE ALL SUBCONTRACTORS AND ALL OTHER PARTIES OF THE CONTRACT OF, AND BIND THEM TO, ITS CONDITIONS.
2. DRAWINGS OF BASE BUILDING CONDITIONS ARE GENERATED FROM AS-BUILT DRAWINGS AND LIMITED FIELD OBSERVATION BY THE ARCHITECT. ACTUAL CONDITIONS MAY DIFFER FROM THOSE SHOWN.
3. CONTRACTOR SHALL FILE, OBTAIN AND PAY FEES FOR BUILDING DEPARTMENT AND ALL OTHER AGENCY APPROVALS AND PERMITS, CONTROLLED INSPECTIONS, AND FINAL SIGN-OFFS FOR PROJECT COMPLETION. COPIES OF TRANSACTIONS SHALL BE FORWARDED TO THE OWNER PRIOR TO COMMENCING WORK.
4. CONTRACTOR SHALL VERIFY THAT DRAWINGS ARE THE LATEST ISSUANCE PRIOR TO BEGINNING OF CONSTRUCTION.
5. CONTRACTOR SHALL COORDINATE AND SCHEDULE WORK BY OUTSIDE VENDORS INCLUDING, BUT NOT LIMITED TO, TELEPHONE, DATA AND "OWNER'S FORCES". CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND SHALL DO THE CUTTING, FITTING AND PATCHING REQUIRED TO RECEIVE THE WORK OF OTHERS AS SHOWN OR REASONABLY IMPLIED BY THE DRAWINGS AND SPECIFICATIONS.
6. ALL IDENTIFIED SCOPE OF WORK SHALL BE PROVIDED NEW, UNLESS OTHERWISE NOTED.
7. WORK NOT SPECIFICALLY DETAILED, NOTED OR SPECIFIED, SHALL BE THE SAME AS SIMILAR PARTS THAT ARE DETAILED, NOTED OR SPECIFIED.
8. IN THE EVENT OF INCONSISTENCIES AMONG THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL INTERPRET THEM WHEN ASKED TO DO SO BY THE OWNER OR CONTRACTOR. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE RESULTS OF SUCH INTERPRETATIONS MADE BY OTHERS.
9. THE GENERAL CHARACTER OF DETAIL WORK IS SHOWN ON THE CONTRACT DOCUMENTS. SUBSEQUENT CLARIFICATIONS MAY BE MADE BY ADDITIONAL LAYOUTS OR LARGE SCALE OR FULL SIZE DETAILS.
10. VERIFY ALL EQUIPMENT SIZES BEFORE BEGINNING WORK
11. "TYPICAL" OR "TYP." SHALL MEAN THAT THE CONDITION IS REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT, UNLESS OTHERWISE NOTED. DETAILS OR DIMENSIONS ARE USUALLY KEYED, AND NOTED "TYP" ONLY WHEN THEY FIRST OCCUR.
12. "SIMILAR" OR "SIM." MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS, ORIENTATION, AND CONDITIONS ON PLANS AND ELEVATIONS
13. ARCHITECT SHALL HAVE THE AUTHORITY TO REJECT ANY WORK THAT IS NOT IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS

EXISTING PHOTOGRAPH

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LICENSED ARCHITECT
NEIL JOHN GINTY
C-37904
RENEWAL DATE 08/31/2027
MAY 31 2027
STATE OF CALIFORNIA

Agency Approvals

Revision No. **Date**

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245 LOS GATOS BLVD

Job Address
245 LOS GATOS BLVD, LOS GATOS, CA 95030

Date: 10/28/2025

Issued For
Project Status

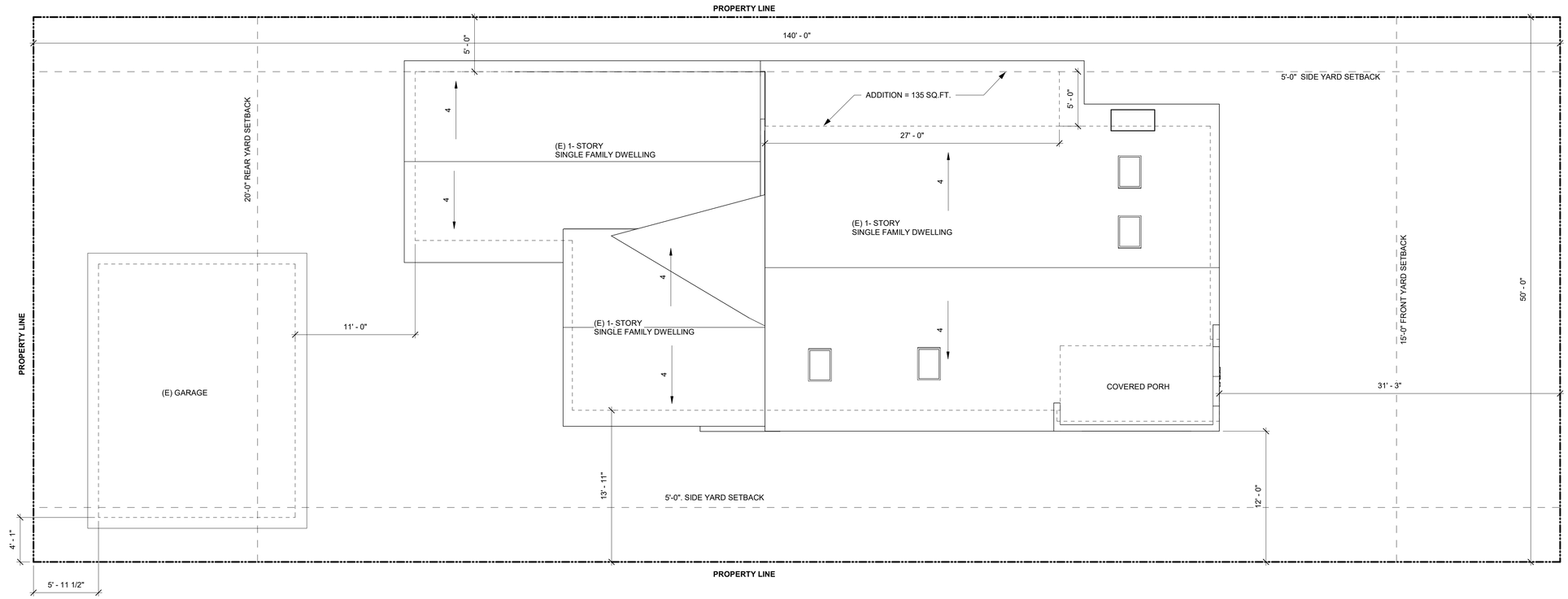
Job Number: 25011

Drawn By: Author Checked By: Checker

Scale
As indicated
0 2' 4' 8' 16'

Sheet Title
PROJECT DATA_RESIDENTIAL

Sheet No.
A0.01



SITE PLAN 1
3/16" = 1'-0"

SITE PLAN GENERAL NOTES

LOCATION AND DIMENSIONS OF PROPERTY LINES, (E) BUILDING OUTLINE, (E) LOCATIONS OF SIDEWALK, DRIVEWAY AND UTILITIES ARE PER TOPOGRAPHIC SURVEY

DIMENSION NOTES

1. DIMENSIONS ARE AS FOLLOWS, UNLESS OTHERWISE NOTED :

   A) TO FACE OF FINISH
   B) TO CENTER OF DOORS AND OTHER OPENINGS
   C) TO TOP OF FINISHED FLOORS
   D) TO BOTTOM OF FINISH AT CEILINGS
   E) TO OUTSIDE FACE OF FINISHED MILLWORK
   F) TO FINISHED WINDOW FRAME. SEE WINDOW DETAILS.

2. DIMENSIONS SHOWN AS V.I.F. SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES IN DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK IN THAT AREA.

3. DIMENSIONS MARKED "CLEAR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF FINISHES INCLUDING CERAMIC TILE, VCT, ETC. DIMENSIONS MARKED "CLEAR" ARE TO BE WITHIN 1/8" OF GIVEN DIMENSION ALONG FULL HEIGHT/WIDTH/LENGTH OF SURFACES.

4. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN PARTITION LOCATIONS, DIMENSIONS AND TYPES. DOOR AND WINDOW LOCATIONS SHALL BE AS SHOWN ON CONSTRUCTION PLAN. IN CASE OF CONFLICT, NOTIFY ARCHITECT FOR WRITTEN CLARIFICATION PRIOR TO PROCEEDING WITH CONSTRUCTION. CONSTRUCTION PLAN BY ARCHITECT SUPERSEDES OTHER PLANS.

5. ANY GRAPHICAL ERRORS, APPARENT OR ASSUMED, SHOULD BE CLARIFIED WITH AN RFI PRIOR TO CONSTRUCTION

LOCATION OF STRUCTURES WITHIN 50 FEET OF THE SUBJECT PROPERTY

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LICENSED ARCHITECT
NEIL JOHN GINTY
C-37904
RENEWAL DATE MAY 31 2027
STATE OF CALIFORNIA

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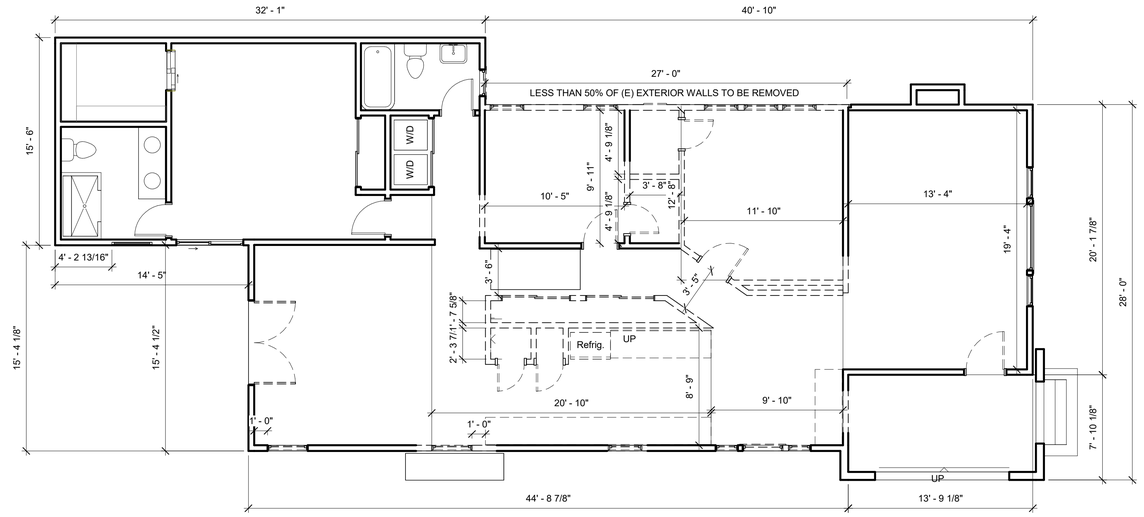
Sheet Title
PROPOSED SITE PLAN

Sheet No.
A1.02

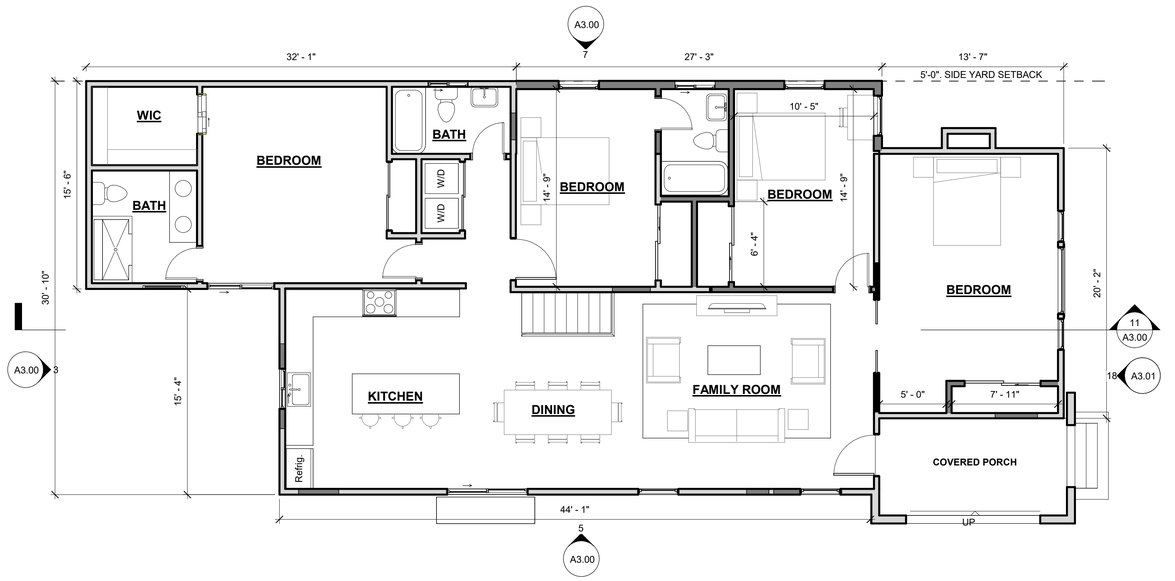
DEMOLITION OF HISTORIC STRUCTURES CALCULATIONS

1 - NO REMOVAL OF WALLS FACING THE PUBLIC STREET



DEMOLITION FLOOR PLAN - FIRST FLOOR (4)

3/16" = 1'-0"



FLOOR PLAN - FIRST FLOOR (1)

3/16" = 1'-0"

DEMOLITION NOTES

1. GENERAL CONTRACTOR TO NOTIFY ARCHITECT OF ANY DISCOVERY OF UNFORSEEN CONDITIONS IN THE PROCESS OF DEMOLITION
2. (E) STRUCTURAL BEARING ELEMENTS TO REMAIN U.O.N. GENERAL CONTRACTOR TO NOTIFY ARCHITECT IF ANY BEARING COLUMNS ARE FOUND IN PARTITIONS TO BE REMOVED THAT DO NOT APPEAR IN PLANS.
3. DAMAGES WHICH OCCUR DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY AND EXPENSE TO RESTORE/REPAIR TO ORIGINAL CONDITION.
4. IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS OR ANY OTHER HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURB THE MATERIALS. IMMEDIATELY NOTIFY THE OWNER, OWNER'S REP/LANDLORD/TENANT/CLIENT AND ARCHITECT.

LEGEND - DEMOLITION

- (E) AREA TO BE REMOVED
- (E) WALL TO BE REMOVED
- (E) WALL TO REMAIN
- (E) ITEM TO BE REMOVED
- (E) WINDOW TO BE REMOVED
- (E) WINDOW TO REMAIN
- (E) DOOR TO BE REMOVED
- (E) DOOR TO REMAIN

DIMENSION NOTES

1. DIMENSIONS ARE AS FOLLOWS, UNLESS OTHERWISE NOTED :

   A) TO FACE OF FINISH
   B) TO CENTER OF DOORS AND OTHER OPENINGS
   C) TO TOP OF FINISHED FLOORS
   D) TO BOTTOM OF FINISH AT CEILINGS
   E) TO OUTSIDE FACE OF FINISHED MILLWORK
   F) TO FINISHED WINDOW FRAME. SEE WINDOW DETAILS.
2. DIMENSIONS SHOWN AS V.I.F. SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES IN DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK IN THAT AREA.
3. DIMENSIONS MARKED "CLEAR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF FINISHES INCLUDING CERAMIC TILE, VCT, ETC. DIMENSIONS MARKED "CLEAR" ARE TO BE WITHIN 1/8" OF GIVEN DIMENSION ALONG FULL HEIGHT/WIDTH/LENGTH OF SURFACES.
4. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN PARTITION LOCATIONS, DIMENSIONS AND TYPES. DOOR AND WINDOW LOCATIONS SHALL BE AS SHOWN ON CONSTRUCTION PLAN. IN CASE OF CONFLICT, NOTIFY ARCHITECT FOR WRITTEN CLARIFICATION PRIOR TO PROCEEDING WITH CONSTRUCTION. CONSTRUCTION PLAN BY ARCHITECT SUPERSEDES OTHER PLANS.
5. ANY GRAPHICAL ERRORS, APPARENT OR ASSUMED, SHOULD BE CLARIFIED WITH AN RFI PRIOR TO CONSTRUCTION

PROPOSED PLAN GENERAL NOTES

1. REPLACEMENT OF GYPBOARD MUST BE 5/8" TYPE X WITH 5D COOLER NAILS AT 4 INCHES ON CENTER OR EQUIVALENT SCREWS FOR ALL INTERIOR NON-STRUCTURAL ALTERATIONS.
2. REFER TO BUILDING CODE ANALYSIS FOR LOCATIONS OF FIRE RESISTANCE RATED WALLS.
3. THERMAL INSULATION TO BE PROVIDED BETWEEN CONDITIONED AND NONCONDITIONED SPACES TYP. REFER TO ASSEMBLY TYPES.
4. ACOUSTIC INSULATION TO BE PROVIDED IN ALL WALLS SURROUNDING BATHROOM AND LAUNDRY AREAS (INCLUDES MUDROOM AND BASEMENT STORAGE). REFER TO ASSEMBLY TYPES.
5. PROVIDE (N) LEVELING SUBSTRATE o/ EXISTING/NEW SUBFLOOR ASSEMBLY THROUGHOUT AS REQUIRED TO ACHIEVE SMOOTH CONTIGUOUS, LEVEL (N) FINISH FLOORING; TYP.
6. ALL GUARDRAIL & HANDRAIL CONSTRUCTION SHALL WITHSTAND A 200 LB. CONCENTRATED LOAD AND 50 LB./ FT. UNIFORM LOAD APPLIED LATERALLY AND VERTICALLY AT THE HIGHEST POINT OF THE RAIL--WHICHEVER IS GREATER. (TYP. ALL GUARDRAILS) AS SPECIFIED IN CBC SECTION 1607.8., S.S.D.

LEGEND - NEW CONSTRUCTION

- ABOVE OR BELOW
- (E) WALL TO REMAIN
- (N) WALL
- 1 HR. FIRE RESISTANCE RATED WALL
- XXX (N) DOOR
- (E) WINDOW TO REMAIN
- (N) WINDOW
- [N.I.C.] NOT IN CONTRACT
- (N) BEARING WALL
- (N) BRACE WALL PANEL
- (N) FOOTING
- HEADER OR BEAM

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LICENSED ARCHITECT
NEIL JOHN GINTY
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REGISTERED
RENEWAL DATE MAY 31 2027
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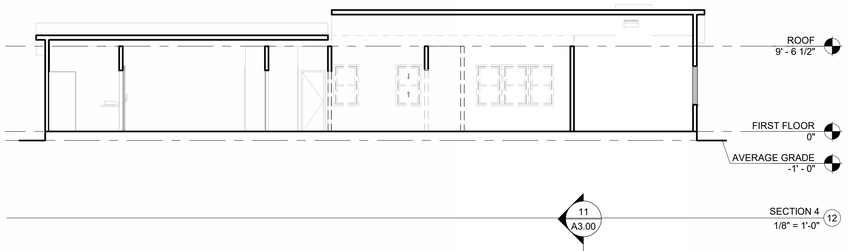
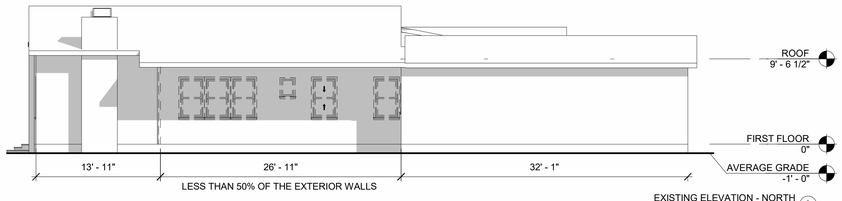
Sheet Title
DEMOLITION & PROPOSED PLANS

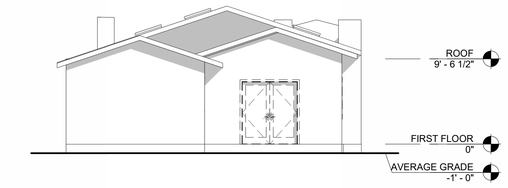
Sheet No.
A2.01



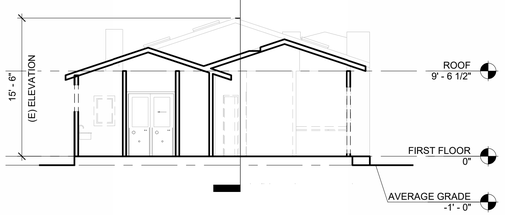
SECTION 4 (12) 1/8" = 1'-0"



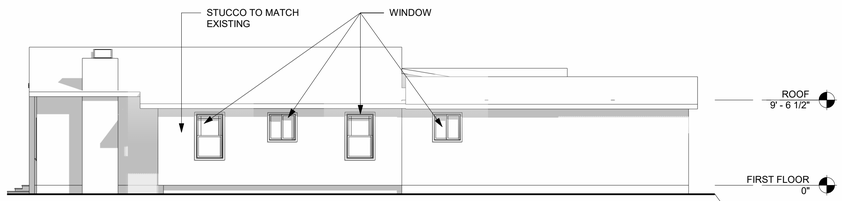
EXISTING ELEVATION - NORTH (8) 1/8" = 1'-0"



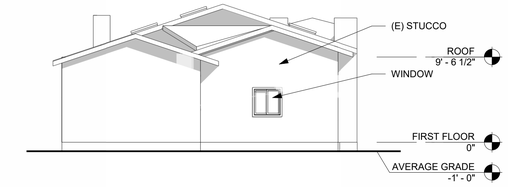
EXISTING ELEVATION - WEST (4) 1/8" = 1'-0"



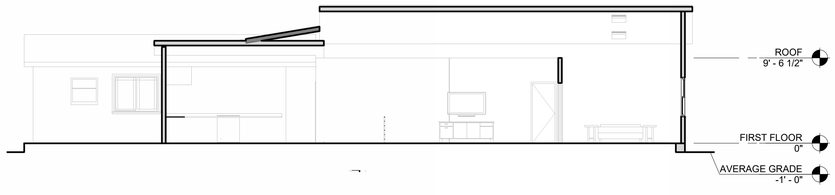
SECTION 2 (10) 1/8" = 1'-0"



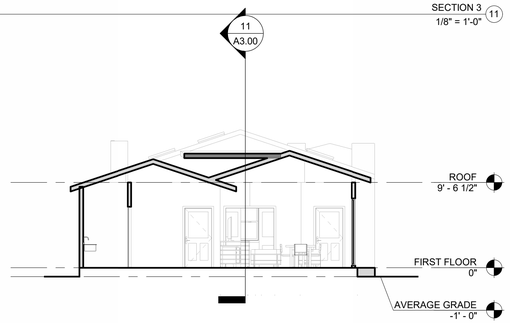
PROPOSED ELEVATION - NORTH (7) 1/8" = 1'-0"



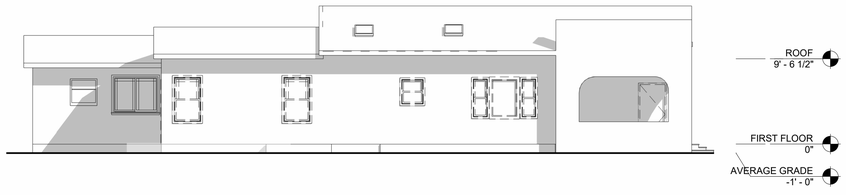
PROPOSED ELEVATION - WEST (3) 1/8" = 1'-0"



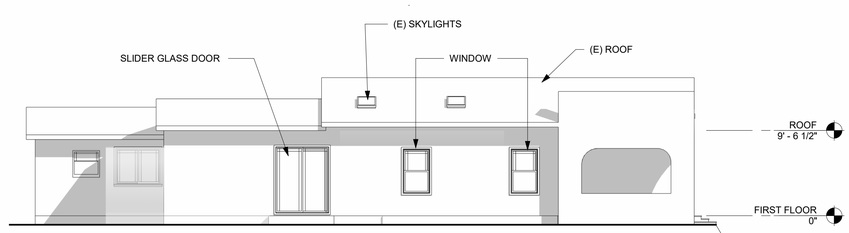
SECTION 3 (11) 1/8" = 1'-0"



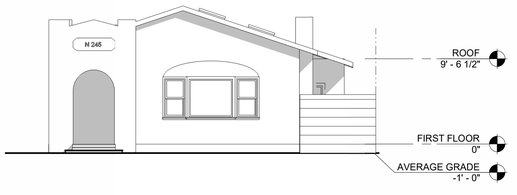
SECTION 1 (9) 1/8" = 1'-0"



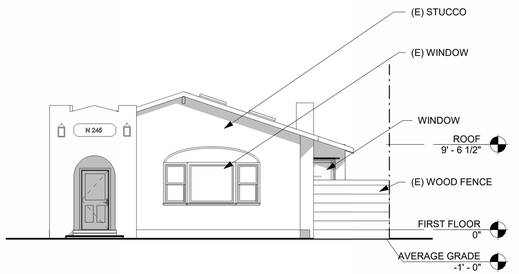
EXISTING ELEVATION - SOUTH (6) 1/8" = 1'-0"



PROPOSED ELEVATION - SOUTH (5) 1/8" = 1'-0"



EXISTING ELEVATION - EAST (2) 1/8" = 1'-0"



PROPOSED ELEVATION - EAST (1) 1/8" = 1'-0"

DIMENSION NOTES

1. DIMENSIONS ARE AS FOLLOWS, UNLESS OTHERWISE NOTED :

   A) TO FACE OF FINISH
   B) TO CENTER OF DOORS AND OTHER OPENINGS
   C) TO TOP OF FINISHED FLOORS
   D) TO BOTTOM OF FINISH AT CEILINGS
   E) TO OUTSIDE FACE OF FINISHED MILLWORK
   F) TO FINISHED WINDOW FRAME. SEE WINDOW DETAILS.

2. DIMENSIONS SHOWN AS V.I.F. SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES IN DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK IN THAT AREA.

3. DIMENSIONS MARKED "CLEAR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF FINISHES INCLUDING CERAMIC TILE, VCT, ETC. DIMENSIONS MARKED "CLEAR" ARE TO BE WITHIN 1/8" OF GIVEN DIMENSION ALONG FULL HEIGHT/WIDTH/LENGTH OF SURFACES.

4. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN PARTITION LOCATIONS, DIMENSIONS AND TYPES. DOOR AND WINDOW LOCATIONS SHALL BE AS SHOWN ON CONSTRUCTION PLAN. IN CASE OF CONFLICT, NOTIFY ARCHITECT FOR WRITTEN CLARIFICATION PRIOR TO PROCEEDING WITH CONSTRUCTION. CONSTRUCTION PLAN BY ARCHITECT SUPERSEDES OTHER PLANS.

5. ANY GRAPHICAL ERRORS, APPARENT OR ASSUMED, SHOULD BE CLARIFIED WITH AN RFI PRIOR TO CONSTRUCTION

PROPOSED ELEVATIONS GENERAL NOTES

1. 0'-0" (E) FINISH FLOOR LEVEL AT 1ST FLOOR IS DETERMINED BY ELEVATION MARK.
2. ALL EXTERIOR LIGHT FIXTURES SHALL MEET TOWN REQUIREMENTS TO BE DOWNWARD DIRECTED AND SHIELDED SUCH THAT THE LIGHT SOURCE (bULB) IS NOT VISIBLE.

BUILDING SECTIONS GENERAL NOTES

1. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL INFO.
2. 0'-0" (E) FINISH FLOOR LEVEL AT 1ST FLOOR IS DETERMINED BY ELEVATION MARK
3. ACOUSTIC INSULATION TO BE PROVIDED IN ALL WALL, FLOOR, AND CEILING ASSEMBLIES SURROUNDING BATHROOM AND LAUNDRY AREAS.

LEGEND - DEMOLITION

- (E) AREA TO BE REMOVED
- (E) WALL TO REMAIN
- (E) WALL TO REMAIN
- (E) ITEM TO BE REMOVED

LEGEND - NEW CONSTRUCTION

- ABOVE OR BELOW
- (E) WALL TO REMAIN
- (N) WALL
- 1 HR. FIRE RESISTANCE RATED WALL
- [N.I.C.] NOT IN CONTRACT

dwelling lab
t. 312.952.9680 | e. design@dwelling-lab.com | w. dwelling-lab.com
o. 21 El Corrinito, Walnut Creek, CA 94598

LICENSED ARCHITECT
NEIL JOHN GINTY
C-37904
REG.
MAY 31 2027
RENEWAL DATE
STATE OF CALIFORNIA

Agency Approvals

Revision No. **Date**

Written dimensions on these drawings shall have precedence over scaled dimensions. Drawings shall not be scaled. Contractors shall verify, and be responsible for, all dimensions and conditions shown by these drawings. Shop details must be submitted to this office for approval before proceeding with fabrications. The drawings and their design content are the sole property of Dwelling Lab, Inc. and may not be reused or reproduced in any manner without our express written consent.

Job Title
245 LOS GATOS BLVD

Job Address
245 LOS GATOS BLVD, LOS GATOS, CA 95030

Date: 10/28/2025

Issued For
Project Status

Job Number: 25011

Drawn By: Author Checked By: Checker

Scale
As indicated

0 2' 4' 8' 16'

Sheet Title
ELEVATIONS

Sheet No.
A3.00

TOWN OF LOS GATOS
HISTORIC PRESERVATION
COMMITTEE REPORT

MEETING DATE: 11/19/2025

ITEM NO: 6

DATE: November 14, 2025

TO: Historic Preservation Committee

FROM: Joel Paulson, Community Development Director

SUBJECT: Consider a Request for Approval to Construct an Addition with Reduced Setbacks to an Existing Noncontributing Single-Family Residence Located in the Almond Grove Historic District on Nonconforming Property Zoned R-1D: LHP. **Located at 321 Bachman Avenue**. APN 510-17-100. Exempt Pursuant to CEQA Section 15301: Existing Facilities. Architecture and Site Application S-25-049. Property Owner: Stanley and Jean Melax. Applicant: Jennifer Kretschmer, AIA. Project Planner: Suray Nathan.

RECOMMENDATION:

Consider a request for approval to construct an addition with reduced setbacks to an existing noncontributing single-family residence located in the Almond Grove Historic District on nonconforming property zoned R-1D: LHP, located at 321 Bachman Avenue.

PROPERTY DETAILS:

1. Date primary structure was built: 1949 per County Assessor's Database
2. Bloomfield Preliminary Rating: New, probably built since 1950
3. Does property have an LHP Overlay? Yes
4. Is structure in a historic district? Almond Grove Historic District
5. If yes, is it a contributor? No
6. Findings required? No
7. Considerations required? Yes

BACKGROUND:

The subject property is located on the south side of Bachman Avenue between Massol and Tait Avenues, just west of the alley. The County Assessor reports that the residence was constructed in 1949. The Anne Bloomfield survey notes the structure as new, probably built since 1950. (Attachment 1).

PREPARED BY: Suray Nathan
Assistant Planner

The residence is present on the 1944 and 1956 Sanborn Fire Insurance Maps (Attachment 2). The footprint of the residence remains consistent between the two dates. Additions and other modifications have been constructed since 1956, as noted below.

As provided in Attachment 3, Town records include the following permitted work:

- 1974: Replacement of windows with a sliding door leading to a new patio deck at the rear of the residence;
- 1981: Reconstruction of the garage roof to accommodate solar collectors;
- 1987: Reroof;
- 1991: Add skylights;
- 1995: Demolish portions of the residence (467 sf) and garage (198 sf) and construct a new bedroom addition (300 sf) at the left rear of the residence; and
- 2017: Reroof.

On August 27, 2025, the Historic Preservation Committee deliberated on a preliminary review for a new garage addition at the rear of the residence, a new bay window, a new entry porch with columns facing Bachman Avenue, and a new patio with columns facing the alley and provided the following feedback:

- Provide greater articulation to the porch design and ensure the design is integrated and consistent with the Victorian-style architecture; and
- Provide details of proposed materials, columns, porch, and trim, and ensure consistency with the architectural style.

DISCUSSION:

Architecture and Site application S-25-049 was submitted on November 6, 2025, proposing exterior modifications and a new garage addition to the existing single-family residence with reduced setbacks (Attachment 8). The applicant provided a Letter of Justification for the proposed project (Attachment 4). The applicant requests approval to construct an attached single-car garage at the rear of the property, opening to the alley (Attachment 8). A new covered porch, supported with square columns, would be added to the front elevation, along with a new bay extension featuring a fiberglass window with wood trim. Another new porch with square columns would be constructed on the left elevation. Both new porches include support posts that encroach into the required setbacks. The applicant has modified the porch columns, added a horizontal trellis band along the roofline, and wood brackets under the bay window to accentuate the intended look of the residence by introducing more details consistent with the Victorian style and other nearby homes (Attachments 4 and 6).

The Letter of Justification (Attachment 4) outlines future plans to incorporate an accessory dwelling unit (ADU) above the new attached garage, as shown in the light-line in the development plans (Attachment 8). Any future ADU would be processed ministerially,

consistent with State law. Staff notes that the ADU is not the subject of this application and shall not be used as the basis for any recommendation to the Community Development Director.

CONSIDERATIONS:

A. Considerations

Sec. 29.80.290. Standards for review.
In evaluating applications, the deciding body shall consider the architectural style, design, arrangement, texture, materials and color, and any other pertinent factors. Applications shall not be granted unless:

___ In historic districts, the proposed work will neither adversely affect the exterior architectural characteristics or other features of the property which is the subject of the application, nor adversely affect its relationship, in terms of harmony and appropriateness, with its surroundings, including neighboring structures, nor adversely affect the character, or the historical, architectural or aesthetic interest or value of the district.

B. Residential Design Guidelines

Section 3.9 of the Town's Residential Design Guidelines offers recommendations for construction of additions to existing residences (Attachment 6).

CONCLUSION:

The applicant requests a recommendation of approval from the Committee to construct an addition with reduced setbacks to an existing noncontributing single-family residence located in the Almond Grove Historic District on nonconforming property zoned R-1D:LHP, located at 321 Bachman Avenue. Due to the proposed reduced setbacks on the nonconforming property, the project requires Architecture and Site approval. If the Committee finds merit in the request, a recommendation of approval would be forwarded to the Community Development Director. The application would continue through the Architecture and Site process and would not return to the Committee.

ATTACHMENTS:

1. Anne Bloomfield Survey
2. Sanborn Fire Insurance Maps Exhibit
3. Town Permit Records
4. Letter of Justification
5. Photos of Existing Residence
6. Rendering of Proposed Residence
7. Section 3.9, Residential Design Guidelines
8. Development Plans

AG

Anne Bloomfield
ARCHITECTURAL HISTORY
(415) 922-1063
2229 WEBSTER STREET
SAN FRANCISCO, CA 94115

ARCHITECTURAL/CULTURAL SURVEY
LOS GATOS RESEARCH

2327

File address 321 Bachman

PARCEL MAP INFORMATION

Parcel # 510-17-085 Lot size: 48 front ft. x 49-46 ft. deep

Lot shape: Rectangle pt L___ Rectangle with small rear jog___ Other_____

Location: N__ S✓ E__ W__ side of B St___ Ave✓ Other_____

distance to cross st: 100 ft. N___ S___ E✓ W___ from Massol

at NE___ NW___ SE___ SW___ corner of_____

HISTORIC INFORMATION ON PARCEL MAP

Old tract or subdivision name Almond Grove Addn Old Block # 5 Old lot # 19 (ptn)

FIELD SURVEY INFORMATION (handwritten in red)

Preliminary rating New Estimated age New Style_____ # stories__

Alterations New addn rear on alley

Other_____

COUNTY ASSESSOR--PROPERTY CHARACTERISTICS (paste on copy) EFFective date_____

OWNERSHIP SHOWN ON MAPS

Source Name	Source Date	Source Page	Location of property, or Old tract/block/lot	Lot Size	Owner Name
	1891				
Blk Book	1908				
Survey	1944				

MISCELLANEOUS

National Register listed date_____

County Inventory 1979_____

Town of Los Gatos: Designation____ Recognition___

District Name_____

Previous Survey _____

Gebhard: page #_____ illustration page #_____

Butler/Junior League_____

PHOTOS: Roll/frame #012/4 Date 22-11-89

ATTACHMENT 1

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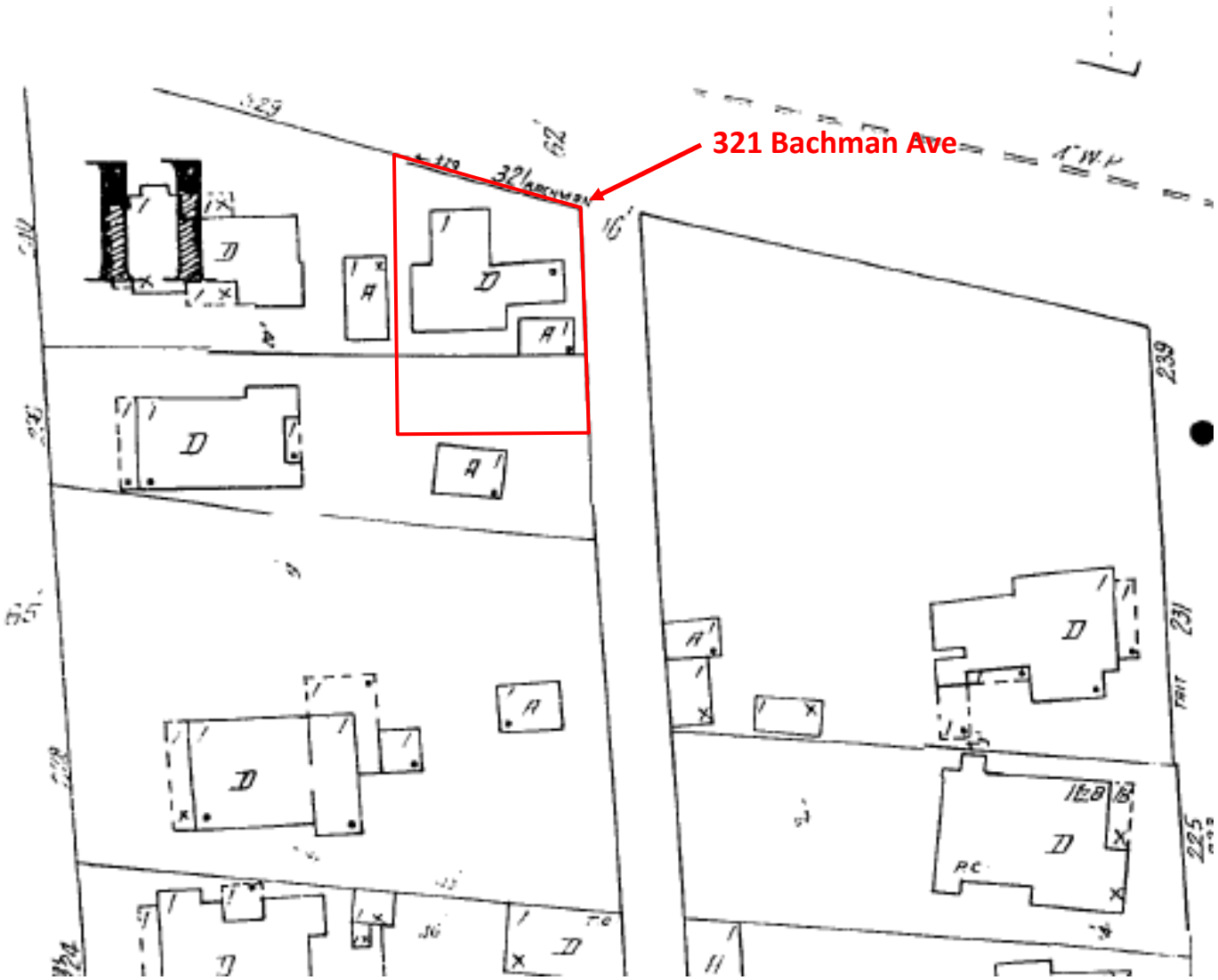
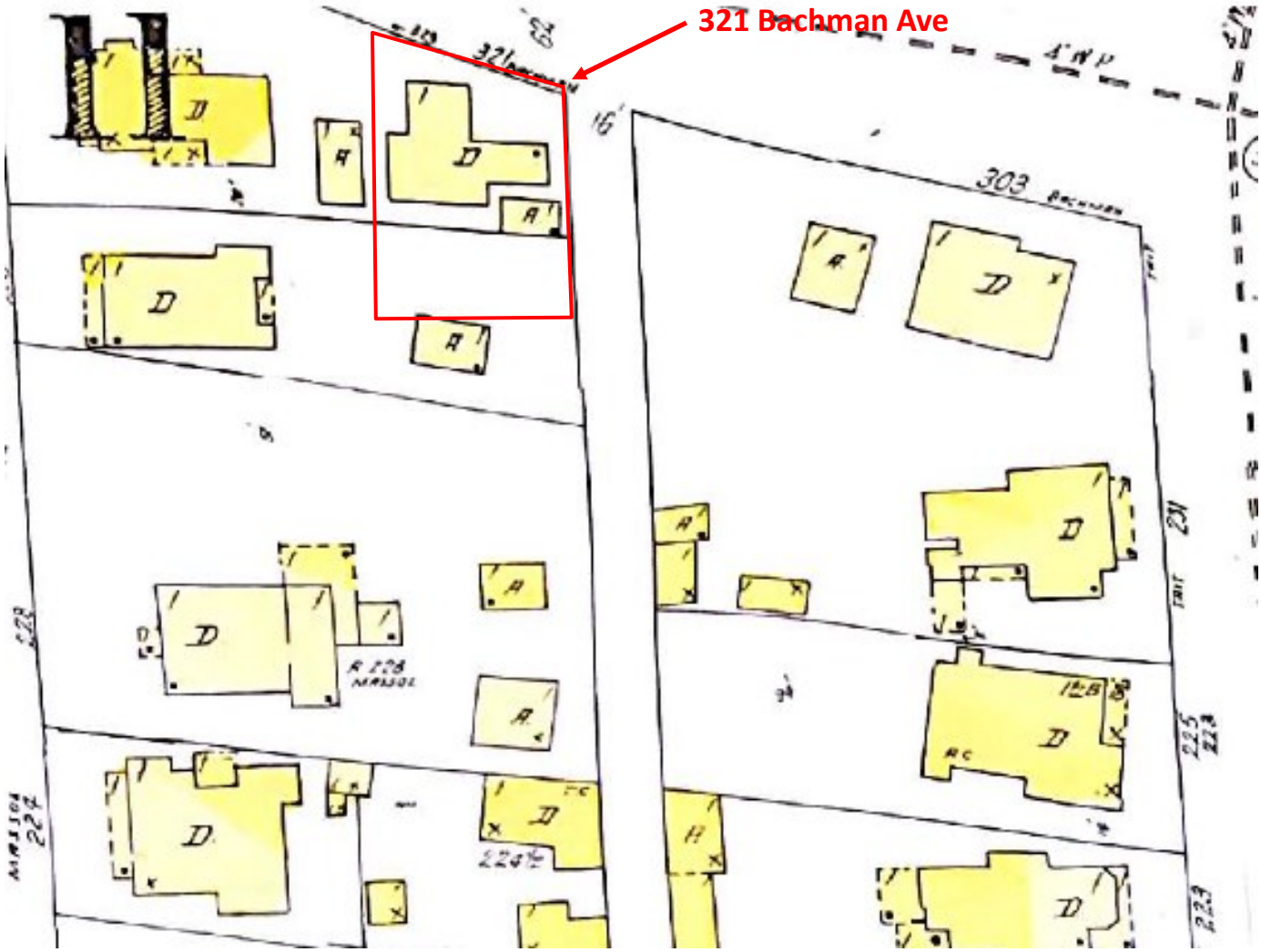


1944



1956

[redacted]

BACHMAN AVENUE - 321

[redacted]

Permit Number: E98-000425

Work Description: ELEC FOR NEW A/C UNIT

Building Address: 321 BACHMAN AV
Owner.....: GALLAGHER KATHLEEN
  Address.....: 321 BACHMAN AVE
  City.....: LOS GATOS CA
  Zip.....: 95030
Contractor.....: RESIDENTIAL HEATING
  License.....: 705554
  Address.....: 65 CRISTICH LANE
  City.....: CAMPBELL, CA
  Zip.....: 95008
  Business Lic..: 97050005

Status..: ISSUED
Applied.: 08/11/1998
Approved:
Issued..: 08/11/1998
Expires.: 02/07/1999

	--Square Footage--	
New Residence:	Remodel:	Commercial:

********** PERMIT FEES **********

Permit Issuance.....:	25.00
Plan Check Fee.....:	.00
New Resident.....:	.00
Remodel.....:	.00
Commercial.....:	.00
Detail Electrical Fee:	5.00
Total Calculated Fees:	30.00
Total Additional Fees:	.00
Total Fees Due.....:	30.00
Total Payments.....:	.00
BALANCE DUE.....:	30.00

CONTRACTORS DECLARATION
I certify that I am properly licensed by the State of California Contractors License Law
Signature X Donald Gallagher

COMPLETE A or B
WORKER'S COMPENSATION DECLARATION
A I hereby affirm that I have a policy of Worker's Compensation Insurance. A certified copy of a certificate of that insurance is herewith furnished, and on file with the Town. I further affirm that I shall keep the insurance in effect thro[illegible] out the job.
Signature X Donald Gallagher

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE
B I certify that in the performance of the work for [illegible] this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of the State of California.
Signature X_____

CERTIFICATION OF PERMIT ISSUANCE
I certify that I have read this application and state that the above information is correct. I agree to comply with all Town ordinances and State laws relating to building construction, and hereby authorize representatives of this Town to enter upon the above mentioned property for inspection purposes.
Signature X Donald Gallagher

NOTICE:

1. Signs are regulated, See Planning Dept. for requirements

2. Outdoor lights are regulated against shining on other properties, shoestring lighting is not permitted.

Permit Number: M98-000285

Work Description: MECH FOR NEW A/C UNIT

Building Address: 321 BACHMAN AV
Owner.....: GALLAGHER KATHLEEN
  Address.....: 321 BACHMAN AVE
  City.....: LOS GATOS CA
  Zip.....: 95030
Contractor.....: RESIDENTIAL HEATING
  License.....: 705554
  Address.....: 65 CRISTICH LANE
  City.....: CAMPBELL, CA
  Zip.....: 95008
  Business Lic..: 97050005

Status..: ISSUED
Applied.: 08/11/1998
Approved: 08/11/1998
Issued..: 08/11/1998
Expires.: 02/07/1999

--Square Footage--

New Residence:	Remodel:	Commercial:

PERMIT FEES

Permit Issuance.....:	25.00
Plan Check Fee.....:	.00
New Residential.....:	.00
Remodel.....:	.00
Commercial.....:	.00
Detail Mechanical Fee:	20.00
Total Calculated Fees:	45.00
Total Additional Fees:	.00
Total Fees Due.....:	45.00
Total Payments.....:	.00
BALANCE DUE.....:	45.00

CONTRACTORS DECLARATION
I certify that I am properly licensed by the State of California Contractors License Law.
Signature X _____

COMPLETE A or B

WORKER'S COMPENSATION DECLARATION
A I hereby affirm that I have a policy of Worker's Compensation Insurance. A certified copy of a certificate of that insurance is herewith furnished, and on file with the Town. I further affirm that I shall keep the insurance in effect throughout the job.
Signature X _____

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE
B I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation laws of the State of California.
Signature X _____

CERTIFICATION OF PERMIT ISSUANCE
I certify that I have read this application and state that the above information is correct. I agree to comply with all Town ordinances and State laws relating to building construction, and hereby authorize representatives of this Town to enter upon the above mentioned property for inspection purposes.
Signature X _____

NOTICE: All new mechanical equipment shall be screened and the screening shall match the building in terms of material and color. Noise levels from the equipment shall not exceed what is permitted by Section 16.20.025 of the Town of Los Gatos Code.

[redacted]

MAX hose 20 MIN AMP 15 S

TOWN OF LOS GATOS
110 E. Main Street
Los Gatos, CA 95030

CORRECTION NOTICE

B.P. No. M78-00255

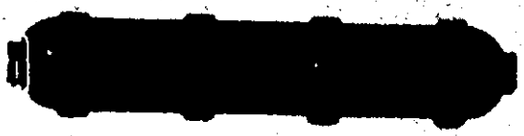
Work Location: 321 BRAHMAN AV.
Type of Inspection: U/F FINAL & AC **Date:** 8/28/78
UNIT

This work has been inspected and the following items do not meet the Town and or State laws governing the construction of same

(1) Need to maintain 1" CLEAR FROM TYPE-B EXHAUST PIPE to COMBUSTIBLE CONSTRUCTION SUCH AS FLOOR JOISTS of WOOD
(2) Need to cover the "J" Box @ U/F FINAL LOCATION
(3) Recheck when Ready

You are hereby notified that no more work shall be done (unless specifically authorized) upon this structure until the above items are corrected. When corrections are completed, call Building Inspection for a reinspection. Phone: 354-6877

John Muñoz Inspector



OFFICE OF THE TOWN CLERK

July 9, 2004

BY HAND

Scott Garret
321 Bachman
Los Gatos, CA 95030
[redacted]

RE: CERTIFICATE OF LOT LINE ADJUSTMENT
321 BACHMAN AVENUE. REC:04.021

Dear Sirs:

In order to fully complete the process, it is necessary for **YOU** to see that the following procedures are followed regarding the enclosed documents.

***SIGN & HAVE YOUR SIGNATURE NOTARIZED** if applicable.

1. Take the attached document(s) (2 copies) to the Santa Clara County Recorders Office located at 70 W. Hedding Street in San Jose.
2. Pay the necessary fee(s) to record the document(s).
3. Return the **conformed copies (our REC:04.021 - highlighted in yellow)** to the Town Clerk, Town of Los Gatos, 110 E. Main Street, Los Gatos, CA. 95032 **immediately following.**
4. Request that the County Recorder return the **original document** to the Town Clerk, Town of Los Gatos, 110 E. Main Street, Los Gatos, Ca. 95032.

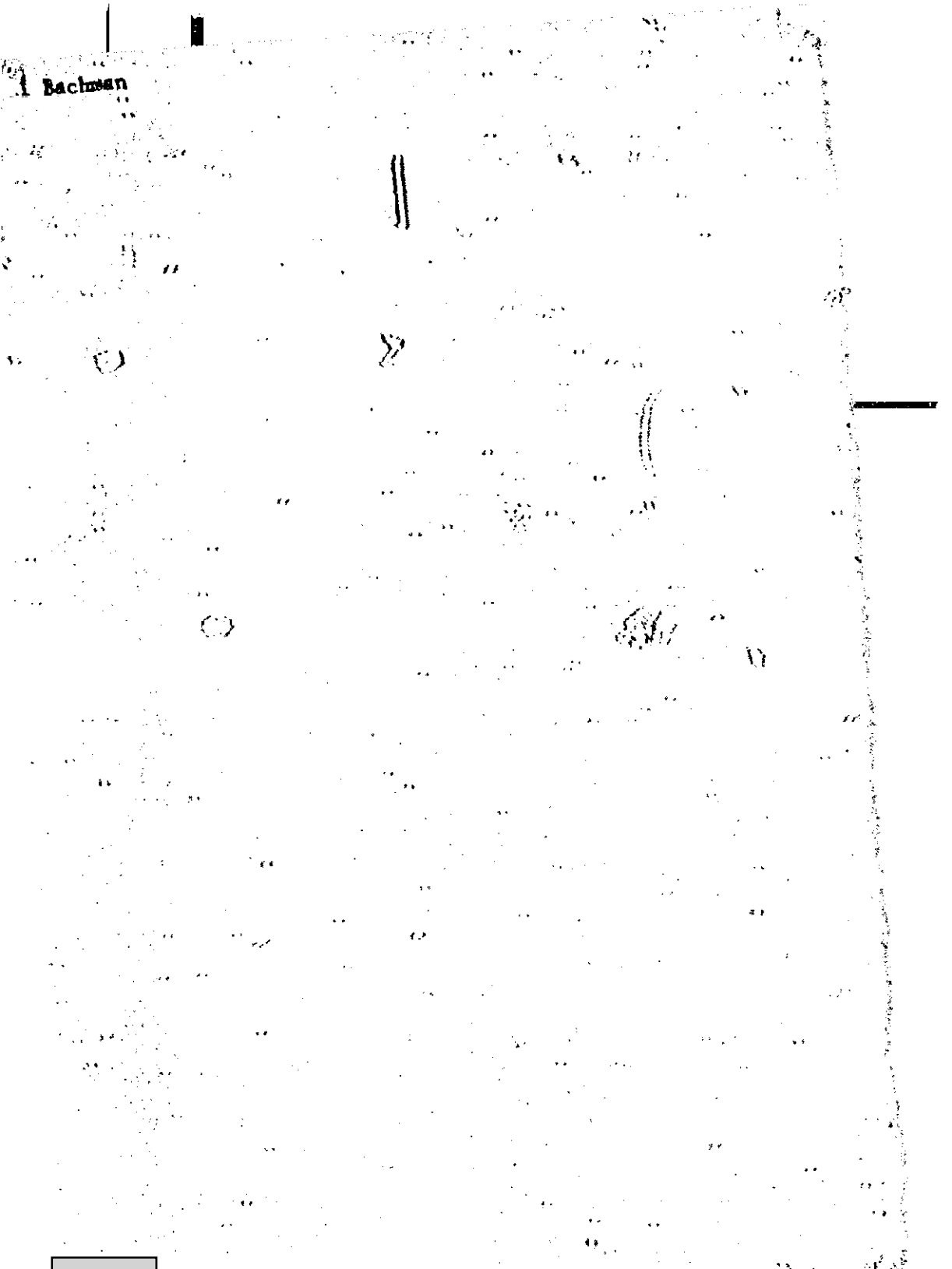
Upon receipt of the **original document with the Recording number and bar code** the Town Clerk will notify our Planning\Engineering Department regarding the receipt of the documents and this portion of **YOUR FINAL DOCUMENTS** will have been completed. At this point we will return the conformed copy to you for your records.

The recording of the document usually takes six to eight weeks for processing by the County. Please be advised that the Town **will not consider your project COMPLETED or issue permits** until we have **RECEIVED THE RECORDED DOCUMENT.** I hope the above information is helpful, however, if you have any questions regarding this procedure, please do not hesitate to contact me at (408)354-6834.

Sincerely

MarLyn J. Rasmussen, CMC
Executive Assistant

MJR:slc
Encl.
cc: **Planning Department/P.P.W/Building Department/Engineering/Community Services**
COUNTER TECHS



TOWN OF LOS GATOS

110 E. MAIN ST., LOS GATOS, CA. 95030
BUILDING INSPECTION DEPARTMENT • PHONE 354-6876

APPLICATION FOR BUILDING PERMIT

B 8572

1

FOR APPLICANT TO FILL IN

BUILDING ADDRESS: 321 BACHMAN AVE
LOT NO.: | TRACT: | SIZE OF LOT:
USE OF EXISTING BUILDING: | NO. OF BUILDINGS NOW ON LOT:
OWNER: J. BAHNSEN | PH: [redacted]
ADDRESS: 321 BACHMAN AVE
ARCHITECT OR ENGINEER: SELF | PH:
ADDRESS:
CONTRACTOR: SELF | PH:
ADDRESS:
STATE LICENSE: N/A | TOWN LICENSE: N/A

DESCRIPTION OF WORK

NEW | ADD | ALTER | REPAIR | DEMOLISH
1st FL | 2nd FL | GAR | AREA 3 | BSMT | OTHER
TOTAL FLOOR AREA | NO OF STORIES | NO OF UNITS

USE OF STRUCTURE: DESCRIPTION OF WORK:
REBUILD OF GARAGE ROOF TO SUPPORT SOLAR COLLECTORS
ESTIMATED VALUATION: 500

CONSTRUCTION LENDING AGENCY
NAME: N/A
ADDRESS:
☐ NOT APPLICABLE

CONTRACTORS DECLARATION

I CERTIFY THAT I AM PROPERLY LICENSED BY THE STATE OF CALIFORNIA CONTRACTOR'S LICENSE LAW.
SIGNATURE X N/A

COMPLETE A OR B

WORKER'S COMPENSATION DECLARATION

A. I HEREBY AFFIRM THAT I HAVE A POLICY OF WORKER'S COMPENSATION INSURANCE. A CERTIFIED COPY OF A CERTIFICATE OF THAT INSURANCE IS HEREWITH FURNISHED, AND ON FILE WITH THE TOWN. I FURTHER AFFIRM THAT I SHALL KEEP THE INSURANCE IN EFFECT THROUGHOUT THE JOB.

SIGNATURE X

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

B. I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED, I SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S COMPENSATION LAWS OF CALIFORNIA

SIGNATURE X E B Bahnsen

I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE INFORMATION IS CORRECT. I AGREE TO COMPLY WITH ALL TOWN ORDINANCES AND STATE LAWS RELATING TO BUILDING CONSTRUCTION, AND HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY TO ENTER UPON THE ABOVE MENTIONED PROPERTY FOR INSPECTION PURPOSES.

X E B Bahnsen

BUILDING PERMIT APPROVAL | DATE

PLAN DEPT. | / /
PUBLIC WORKS | / /
FIRE DEPT. | / /
BUILDING DEPT. A. W. 3/18/81
SEWER CONNECT

FR SB | FIRE CONST
REAR SB | OCC. GROUP
LEFT SB | USE ZONE
RIGHT SB | FIRE SEP.

VALUATION $ 500

FEES & TAXES

BUILDING PERMIT $	10
SEISMIC TAX	50
CONSTRUCTION TAX	
UTILITY TAX	
PLAN CHECK FEE	
TOTAL $	10 50

INSPECTION RECORD

3/18/81 NO - Could not locate
Dept w/Res Drawings typ-
-ing up to Re: Rotate SC
1,0 Notes.

VALIDATION MAR 1981 4475 # 0010.501

APPROVALS

	CAT.	APPLICANT'S INI.
FINAL	17-16-81	

Page 115

TOWN OF LOS GATOS

BUILDING INSPECTION DEPARTMENT · PHONE 354-6876

APPLICATION FOR MECHANICAL PERMIT

M. 6276

FOR APPLICANT TO FILL

ITEM	NO.	AMT.	$ FEE
FOR ISSUANCE OF PERMIT			10 00
EA. FURNACE TO 100,000 BTU		6 00	
EA. FURNACE OVER 100,000 BTU		10 00	
REPAIR OR ALTERATION EA. HEATING UNIT		6 00	
VENT OR FLUE NOT INCLUDED IN PERMIT		3 00	
BOILER OR COMPRESSOR TO 3 HP ABSORPTION UNIT TO 100,000 BTU		5 00	
BOILER OR COMPRESSOR 3 HP TO 15 HP ABSORPTION UNIT 100,000 TO 500,000 BTU		12 50	
BOILER OR COMPRESSOR 15 HP TO 30 HP ABSORPTION UNIT 500,000 TO 1,000,000 BTU		20 00	
BOILER OR COMPRESSOR 30 HP TO 50 HP ABSORPTION UNIT 1,000,000 TO 1,750,000 BTU		30 00	
BOILER OR COMPRESSOR OVER 50 HP ABSORPTION UNIT OVER 1,750,000 BTU		50 00	
AIR HANDLING SYSTEM TO 10,000 CFM		5 00	
AIR HANDLING SYSTEM OVER 10,000 CFM		10 00	
EVAPORATIVE COOLER		5 00	
VENT FAN SINGLE DUCT		3 00	
HOOD MECHANICAL EXHAUST - DOMESTIC		5 00	
HOOD MECHANICAL EXHAUST - COMMERCIAL		10 00	
VENTILATION SYSTEM FOR PART OF A AIR CONDITIONING SYSTEM		3 00	
APPLIANCE NOT LISTED		5 00	
SOLAR SYSTEM		15 00	10 00
GAS SYSTEM		5 00	
TOTAL FEES		$	20 00

BUILDING ADDRESS: 321 BACHMAN AVE

USE OF BUILDING: S.F.R.

OWNER: J. BAHNSEN

MAIL ADDRESS: SAME

CITY: LOS GATOS PH: [redacted]

CONTRACTOR: SELF

ADDRESS:

CITY: PH:

STATE LICENSE: TOWN LICENSE:

GROUP: USE ZONE: PROCESSED BY: 2-2-81 JG

INSPECTION RECORD

CONTRACTORS DECLARATION

I CERTIFY THAT I AM PROPERLY LICENSED BY THE STATE OF CALIFORNIA CONTRACTOR'S LICENSE LAW.

SIGNATURE X

COMPLETE A OR B

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SIGNATURE X

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

B I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED, I SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S COMPENSATION LAWS OF CALIFORNIA.

SIGNATURE X

I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE INFORMATION IS CORRECT. I AGREE TO COMPLY WITH ALL TOWN ORDINANCES AND STATE LAWS RELATING TO MECHANICAL CONSTRUCTION, AND HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY TO ENTER UPON THE ABOVE MENTIONED PROPERTY FOR INSPECTION PURPOSES.

X E Bahnsen

VALIDATION

FEB-6 3510 * 0020.00

APPROVALS

	DATE	INSPECTOR'S SIG
UNDERFLOOR WORK		
DUCT WORK		
GAS VENTS		
COMBUSTION AIR		
COMPARTMENT AREA		
CIRCULATION AIR		
FIRE DAMPERS		✓
ACCESS		
FINAL	12-16-82	

WHITE 1, INSPECTION RECORD 2, BUFF RECORD 3, PERMIT TO TOWN OF

TOWN OF LOS GATOS
110 E. MAIN ST., LOS GATOS, CA. 95030
BUILDING INSPECTION DEPARTMENT - PHONE [redacted]

E 15554

FOR APPLICANT TO FILL IN

ITEM		EA.	$ FEES	
FOR ISSUANCE OF PERMIT	X	X	10	00
FIXTURES, SOCKETS OR OTHER LAMP HOLDING DEVICES		.30 EA.		
OUTLETS, RECEPTACLES, SWITCHES AT WHICH CURRENT IS CONTROLLED	1**	.30 EA.		30
RANGE / OVEN / COOK TOP / DRYER (EA.)	1	2 00	2	--
WATER HEATER		2 00		
ELECTRICAL SIGN		10 00		
FOR HEATING & MISC. APPLIANCES & EQUIPMENT, GENERATOR, WELDER, TRANSFORMER, MOTORS PER H.P., K.W., K.V.A. RATING				
NOT OVER 1		2 00		
OVER 1 BUT NOT OVER 10		5 00		
OVER 10 BUT NOT OVER 50		10 00		
OVER 50		20 00		
SERVICE EQUIPMENT				
NOT OVER 200 AMP		12 00	12	--
OVER 200 AMP		25 00		
TEMPORARY POLE		10 00		
MERCURY VAPOR LAMP		2 00		
SWIM POOL (INCLUDING EQUIPMENT AND GROUND)		20 00		
			24	30

BUILDING ADDRESS: 321 BACHMAN AVE
USE OF BUILDING: residence
OWNER: Joyce Bihnson
MAIL ADDRESS: 321 Bachman Ave
CITY: Los Gatos PH: [redacted]
CONTRACTOR: Luescke Electric, Inc
ADDRESS: 20700 Almaden Rd
CITY: San Jose PH: 997-1382
STATE LICENSE: 396723 TOWN LICENSE:

GROUP: 4 USE ZONE: PROPERTY ID:

INSPECTION RECORD

VALIDATION

4532A111 12/30/87 TOTAL 24.30
14:47

APPROVALS

	DATE	INSPECTOR'S SIG.
CONDUIT		
ROUGH WIRING		
SERVICE EQUIP.		
FIXTURES		
GROUNDING		
UTILITY CO. NOTIFIED		
FINAL		

CONTRACTORS DECLARATION

I CERTIFY THAT I AM PROPERLY LICENSED BY THE STATE OF CALIFORNIA CONTRACTOR'S LICENSE LAW.

SIGNATURE X Patricia Luescke

COMPLETE A OR B

WORKER'S COMPENSATION DECLARATION

A I HEREBY AFFIRM THAT I HAVE A POLICY OF WORKER'S COMPENSATION INSURANCE. A CERTIFIED COPY OF A CERTIFICATE OF THAT INSURANCE IS HEREWITH FURNISHED, AND ON FILE WITH THE TOWN. I FURTHER AFFIRM THAT I SHALL KEEP THE INSURANCE IN EFFECT THROUGHOUT THE JOB.

SIGNATURE X Patricia Luescke

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

B I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED, I SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S COMPENSATION LAWS OF CALIFORNIA.

SIGNATURE X

I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE INFORMATION IS CORRECT. I AGREE TO COMPLY WITH ALL TOWN ORDINANCES AND STATE LAWS RELATING TO ELECTRICAL WIRING, AND HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY TO ENTER UPON THE ABOVE MENTIONED PROPERTY FOR INSPECTION PURPOSES.

SIGNATURE X Patricia Luescke

DISTRIBUTION: 1. INSPECTION RECORD 2. ASTERISK RECORD 3. PERMITTEE 4. TOWN CLERK

TOWN OF LOS GATOS

BUILDING INSPECTION DEPARTMENT • PHONE 354-6876

APPLICATION FOR BUILDING PERMIT

B 1411

FOR APPLICANT TO FILL IN

BUILDING ADDRESS 321 BACHMAN

LOT NO — R OF S TRACT

SIZE OF LOT ~50X50 — NO OF BLDGS NOW ON LOT 1

USE OF EXISTING BLDG HOUSE

OWNER R. BISCHOFF

ADDRESS 15255 KARL AVE

CITY MONTE SERENO TEL NO

ARCHITECT OR ENGINEER NONE TEL NO

ADDRESS

CONTRACTOR NONE TEL NO

ADDRESS

STATE LIC NO — CITY

DESCRIPTION OF WORK

NEW — ADD — (ALTER) — REPAIR — DEMOLISH

SQ FT OF AREA — NO OF STORIES — NO OF FAMILIES

USE OF STRUCTURE

DESCRIPTION OF WORK REPLACE WINDOW WITH SLIDING DOOR, ADD PATIO DECK

VALUATION 600.00

BLDG 6.00

OCC

$ .50

TOTAL 6.50

I hereby acknowledge that I have read this application and state that the above information is correct. I agree to comply with all City ordinances and State laws relating to building construction. I hereby authorize representatives of this City to enter upon the above mentioned property for inspection purposes. I am the owner of the property involved, (or) my employees with WORKER'S COMPENSATION INSURANCE COVERAGE. I have my Contractor's License provisions. I certify that I am properly licensed or that I am exempt from the Contractor's License Law for the following reason: I am licensed by the State of California Contractor's License Law

SIGNATURE OF APPLICANT/AGENT Mr. R.O. Bischoff

ADDRESS

CITY — BY

PHONE NO — PC FEE

USE AND OCCUPANCY APPROVAL

BUILDING INSPECTOR (6978) — DATE 6/18/75

FIRE MARSHAL (8821) — DATE / /

PUBLIC WORKS (8963) — DATE / /

APPROVED BY (3524 ONLY) BUILDING INSPECTOR — DATE / /

321 Bachman

FIRE ZONE 3 — CONST TYPE V — GROUP R — OCCUPANCY R-3

USE ZONE R-1 (9) — SPECIAL CONDITIONS — VARIANCE NO — USE PERMIT

BUILDING SETBACKS	FRONT	REAR	R SIDE	L SIDE

BUILDING PERMIT APPROVAL

		DATE
PLANNING DEPT.		1/31/75
FIRE MARSHAL		1/31/75
PUBLIC WORKS		1/31/75
ISSUED BY BUILDING INSPECTOR		1/31/75

INSPECTION RECORD

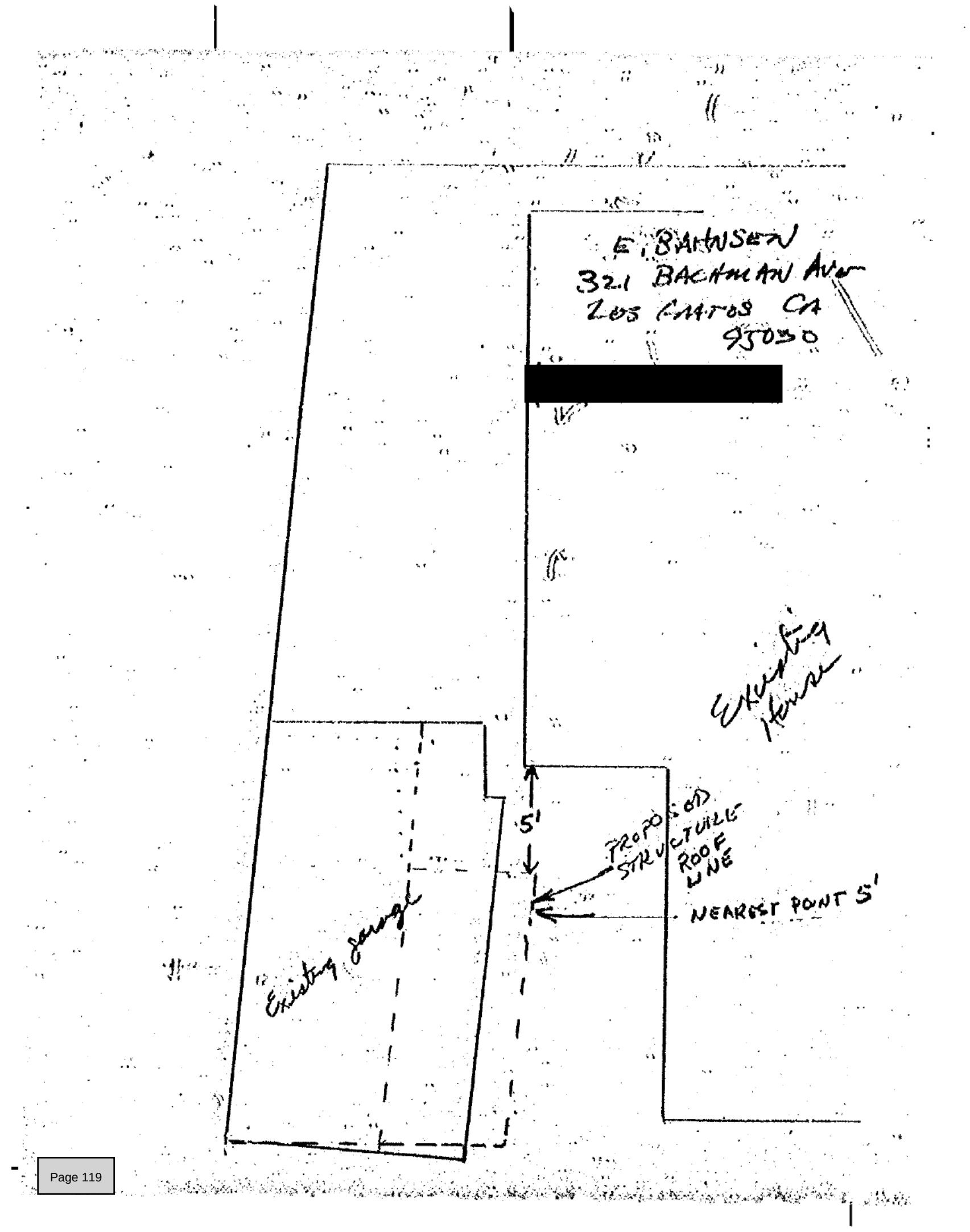
VALIDATION

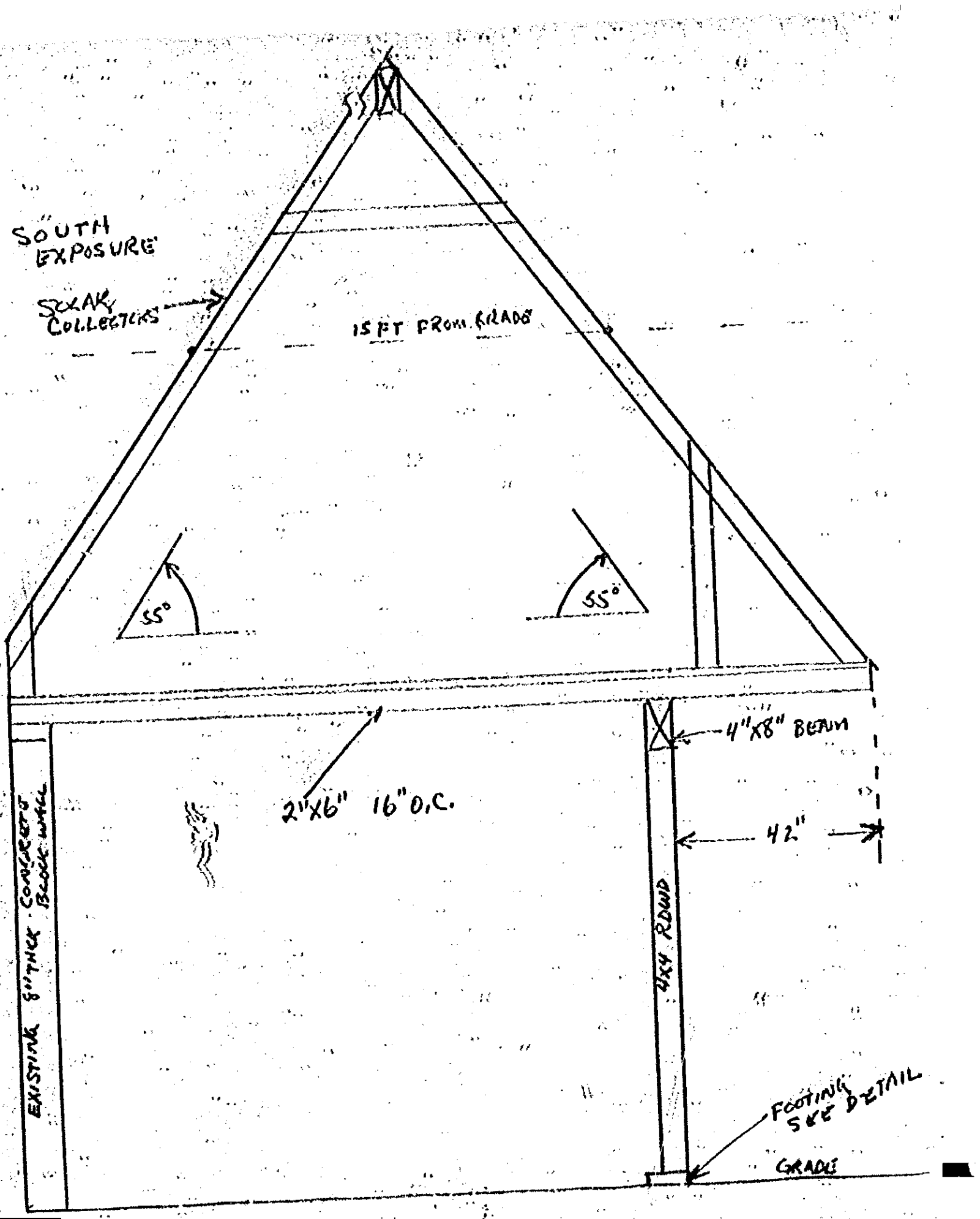
PLB 176 0115 VK 000650

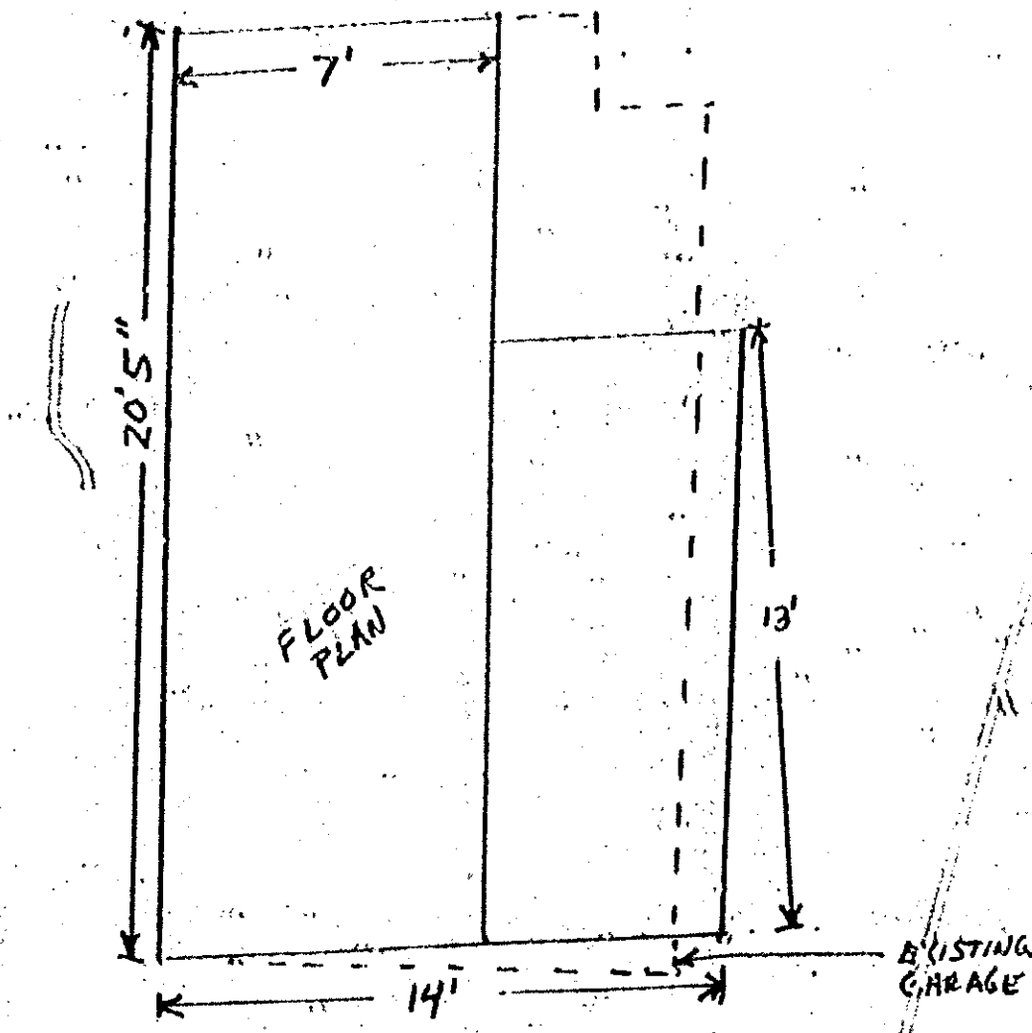
APPROVALS

	DATE	INSPECTOR'S SIG
FOUNDATION LOCATION FORMS, WATER JTS		
FRAME: FIRE STOPS BRACING BOLTS		
FURNACE: LOCATION GAS VENT, DUCTS		
LATH INT		
LATH EXT		
LANDSCAPING PARKING AND GRADING		
IMPROVEMENTS COMPLETED		
FINAL	1/8/75	

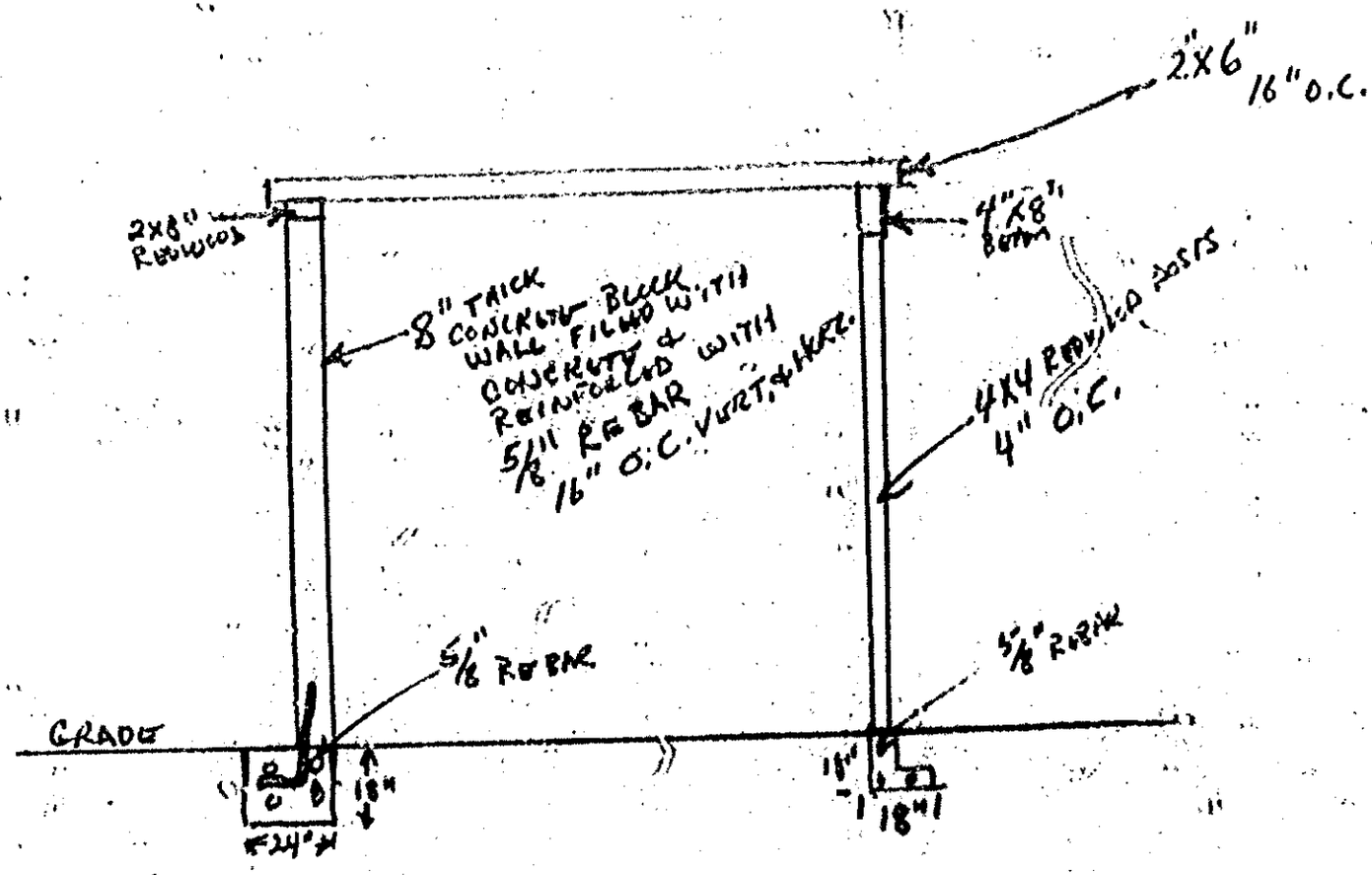
DISTRIBUTION 1. INSPECTION RECORD 2. INTERIM RECORD 3. PERMITTEE 4. TOWN CLERK

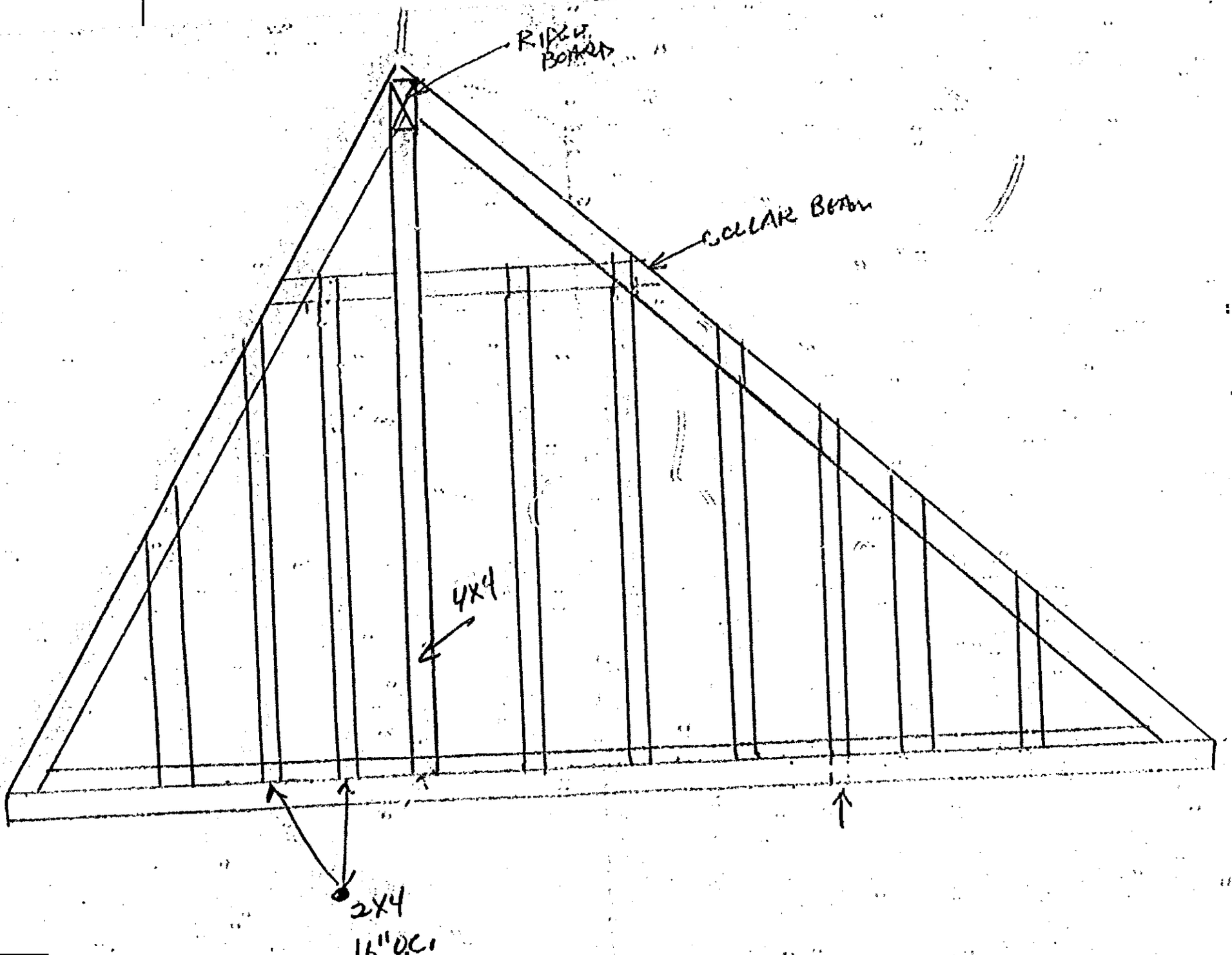

E. BARNSETT
321 BACHMAN Ave
Los GATOS CA
95030
[redacted]
Existing house
5'
PROPOSED STRUCTURE ROOF LINE
NEAREST POINT 5'
Existing garage

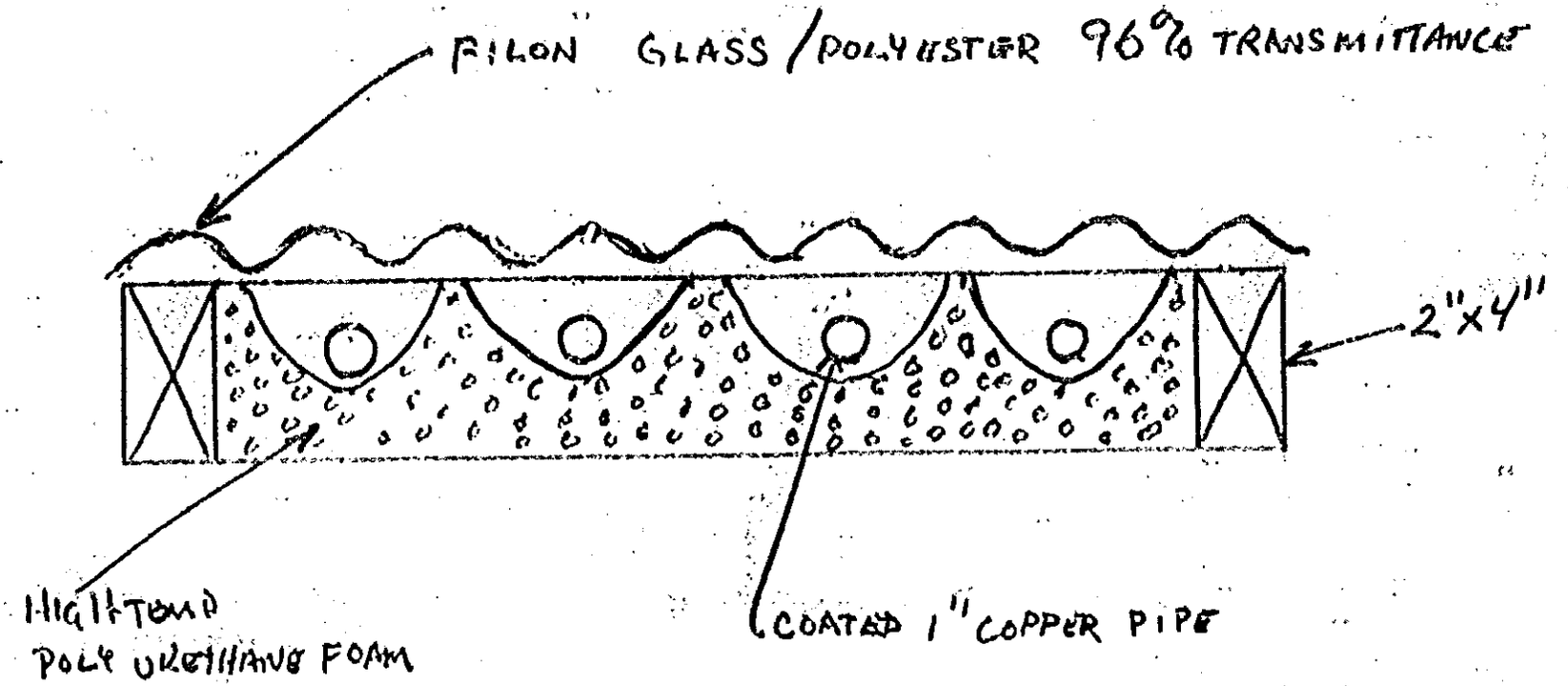

SOUTH EXPOSURE
SOLAR COLLECTORS
15 FT FROM GRADE
55°
55°
4"X8" BEAM
2"X6" 16" O.C.
42"
EXISTING 8" THICK CONCRETE BLOCK WALL
4X4 RDWD
FOOTING SEE DETAIL
GRADE

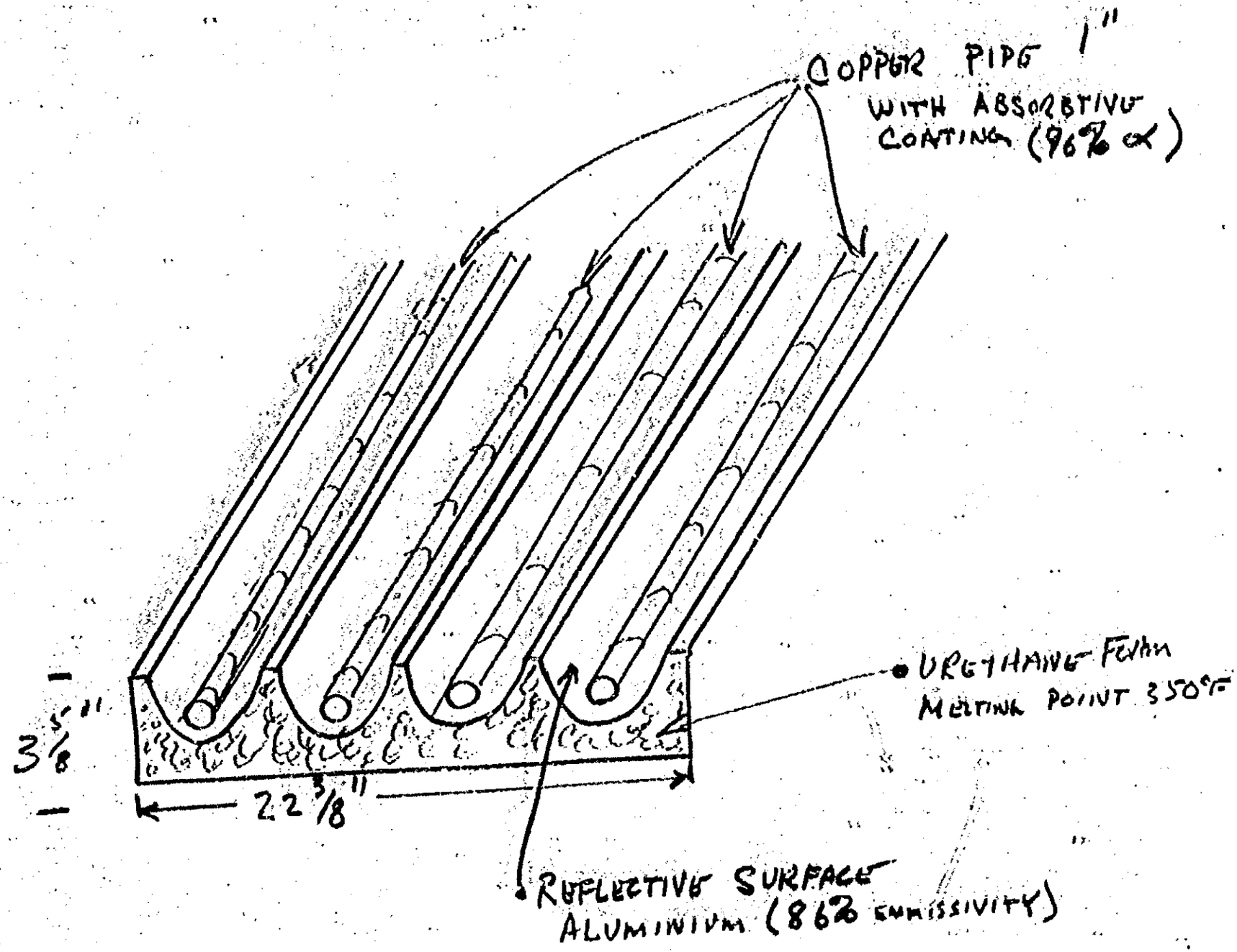

7'
20'5"
FLOOR PLAN
13'
EXISTING GARAGE
14'

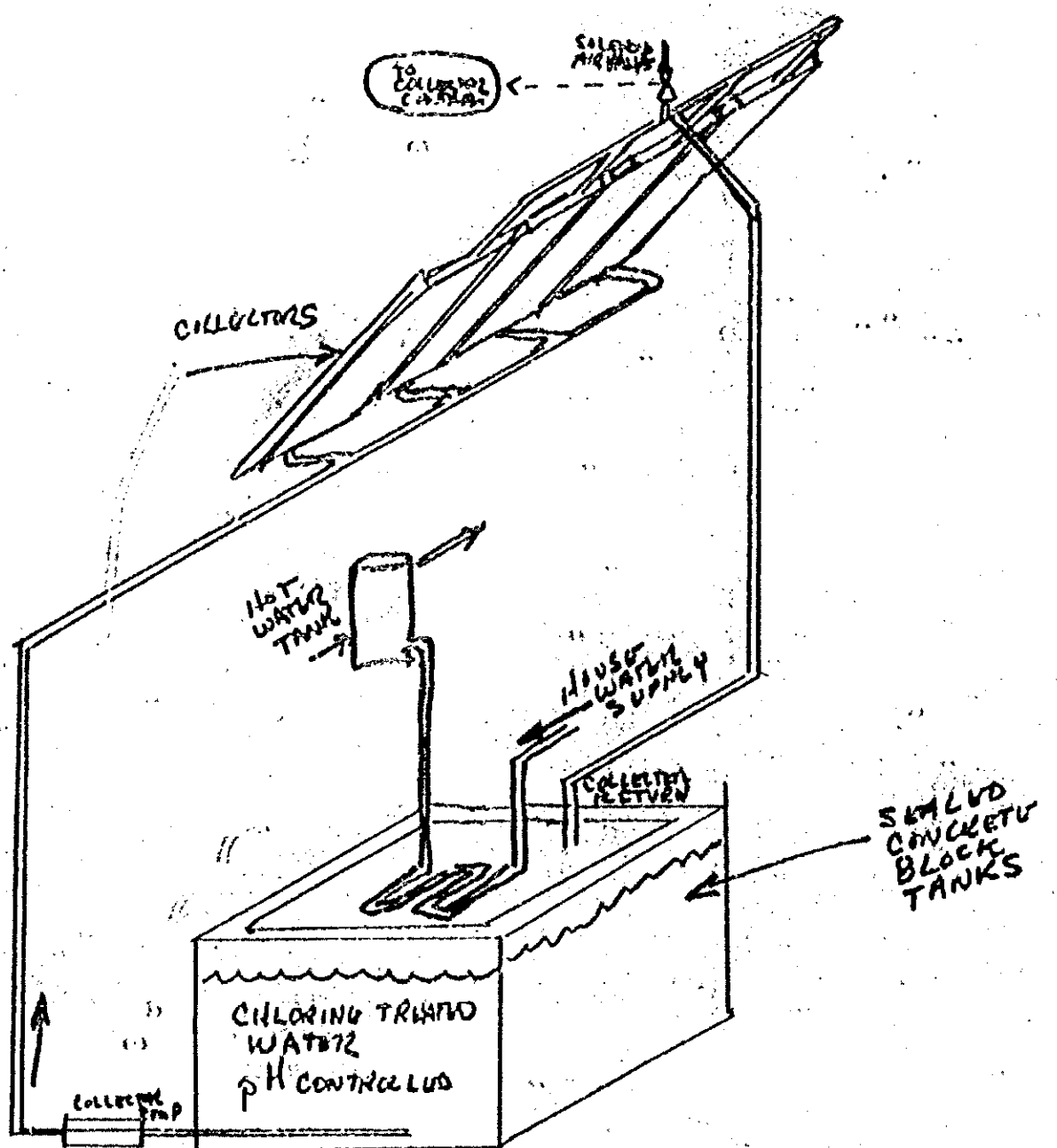
SUPPORTING STRUCTURE




RIDGE BOARD
COLLAR BEAM
4X4
2X4
16" O.C.


FILON GLASS / POLYESTER 96% TRANSMITTANCE
2"x4"
HIGH TEMP
POLY URETHANE FOAM
COATED 1" COPPER PIPE


COPPER PIPE 1"
WITH ABSORBTIVE
COATING (96% ∝)
URETHANE FOAM
MELTING POINT 350°F
3 5/8"
22 3/8"
REFLECTIVE SURFACE
ALUMINIUM (8% EMMISSIVITY)



PUMP OPERATION CLOSES AIR VALVE

TOWN OF LOS GATOS

110 E. MAIN ST., LOS GATOS, CA 95030
BUILDING INSPECTION DEPARTMENT • PHONE 354-6876

APPLICATION FOR BUILDING PERMIT
INSPECTION REQUESTS PHONE 354-6877

B93-00122
B 26672 1

FOR APPLICANT TO FILL IN

BUILDING ADDRESS: 321 BACHMAN Ave. — STREET, AVE., BLVD., ETC. — SUITE OR APT. NO.
USE OF EXISTING BUILDING: Patio Pc — DATE: 12-2-93
OWNER: Joyce (Newcomb) Dallmer — PH: [redacted]
ADDRESS: 321 BACHMAN Ave — SUITE OR APT NO.
CITY: Los Gatos CA — ZIP: 95030
ARCHITECT ☐ ENGINEER ☐ DESIGNER ☐ — PH
ADDRESS — SUITE OR APT NO.
CITY — ZIP
CONTRACTOR — PH
ADDRESS — SUITE OR APT NO.
CITY — ZIP
STATE LICENSE — TOWN LICENSE

SQUARE FOOTAGE

	EXISTING	ADDITION
1st FL.		
2nd FL.		
(BASE 3rd FL.)		
SUBTOTAL		TOTAL
GARAGE		
OTHERS		

NO. OF STORIES | SIZE OF LOT | NO. OF LIVING UNITS
APN 510-17-085 | ESTIMATE VALUATION 4,000
DESCRIPTION OF WORK: Reroof Three Comp over 2 Comp in 1987 w/o permit, reroofed patio comp + added 3 skylights in 1991
CALCULATED VALUE
LENDING AGENCY — ADDRESS

HAZARDOUS MATERIALS DECLARATION: If this application is for commercial use and/or if the intended occupancy will use hazardous materials ☐ Yes ☐ No

CONTRACTORS DECLARATION

I CERTIFY THAT I AM PROPERLY LICENSED BY THE STATE OF CALIFORNIA CONTRACTOR'S LICENSE LAW
SIGNATURE X

COMPLETE A OR B

WORKER'S COMPENSATION DECLARATION

A — I HEREBY AFFIRM THAT I HAVE A POLICY OF WORKER'S COMPENSATION INSURANCE A CERTIFIED COPY OF A CERTIFICATE OF THAT INSURANCE IS HEREWITH FURNISHED, AND ON FILE WITH THE TOWN. I FURTHER AFFIRM THAT I SHALL KEEP THE INSURANCE IN EFFECT THROUGHOUT THE JOB.
SIGNATURE X

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

B — I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED, I SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S COMPENSATION LAWS OF CALIFORNIA.
SIGNATURE X Joyce Dallmer

I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE INFORMATION IS CORRECT. I AGREE TO COMPLY WITH ALL TOWN ORDINANCES AND STATE LAWS RELATING TO BUILDING CONSTRUCTION, AND HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY TO ENTER UPON THE ABOVE MENTIONED PROPERTY FOR INSPECTION PURPOSES.
SIGNATURE X Joyce Dallmer

REQ FINAL INSP. ☐	PW DEPT.	PERMIT APPROVALS	DATE
REQ FINAL INSP. ☐	PLAN DEPT	Kerkorian	12/2/93
REQ FINAL INSP. ☐	ENGINEERING DEPT		/ /
REQ FINAL INSP. ☐	FIRE DEPT.		/ /
	BUILDING DEPT	Patty Hazaleo	12/2/93

FRONT S.B. | REAR S.B. | LEFT S.B. | RIGHT S.B. | USE ZONE | SEWER NO | TYPE GROUP | TYPE CONST. | FIRE SPRINKLER ☐

FEES AND TAXES

PERMIT ISSUANCE	BldgPrmt	$ 20 00
BUILDING PERMIT	BldgPrmt	80 00
TITLE - 24	Title24F	
SEISMIC TAX	SMIP 5%	03
	SMIP 95%	18
PLAN CHECK	PChkBldg	
MICRO BUILDING	MicroBldg	9 20
CONSTRUCTION TAX	ConstCap	
UTILITY TAX	ConstUnd	
PARK TAX	ConstPrk	
PLANNING PLAN CHECK	PchkPlan	
MICRO PLANNING	MicroPln	
STORM DRAIN ENG	Basin	
	Drodbll	1 00
	TOTAL $	112 01

INSPECTION RECORD

As-Built see attached papers
Smoke Detectors Required

TOWN OF LOS GATOS
VALIDATION PAID
Per #3 221 No Dr

APPROVALS

	DATE	INSPECTOR'S SIG
FOUNDATION LOCATION FORMS, MATERIALS		
UNDERFLOOR GIRDERS JOISTS U.F. INTERIOR SHEAR		
EXTERIOR SHEAR WALL & ROOF SHEAR		
ROUGH FRAME		
EXTERIOR LATH		
INSULATION		
SHEETROCK		
BUILDING CODE FINAL	12-7-93	
BUILDING PERMIT FINAL	12-9-93	

DISTRIBUTION: 1. INSPECTION RECORD 2. INTERIM RECORD 3. PERMITTEE 4. TOWN CLERK

TOWN OF LOS GATOS
110 E. Main Street
Los Gatos, CA 95030

CORRECTION NOTICE

Work Location: 321 BACHMAN AVE. B.P. No. _____
Type of Inspection: R.O. PLB Date: 12/9/93

This work has been inspected and the following items do not meet the Town and/or State laws governing the construction of same.

(1) NEED A PLUMBING PERMIT FOR WATER HEATER INSTALLATION (FOR REPLACEMENT OF OLD W/H)
(2) NEED TO COMPLETE P.R. VALVE DRAIN LINE TO DRAIN OUTSIDE OF BUILDING FOUNDATION — AS INSTALLED P.R. DRAIN IS UNDER HOUSE AND IS NOT PERMITED BY U.P.C.
(3) PLEASE CALL FOR RE-INSPECTION WHEN CORRECTIONS HAVE BEEN MADE AND A PLB PERMIT ACQUIRED.

You are hereby notified that no more work shall be done (unless specifically authorized) upon this structure until the above items are corrected. When corrections are completed, call Building Inspection for a reinspection. Phone: 354-6877 or 354-6876.

John Munoz
354-6861 Inspector

TOWN OF LOS GATOS
110 E. Main Street
Los Gatos, CA 95030

CORRECTION NOTICE

Work Location: 321 BACHMAN AVE B.P. No. 93000122
Type of Inspection: ASBUILT ROOF ELEC. Date: 12-3-93

This work has been inspected and the following items do not meet the Town and/or State laws governing the construction of same.

NO ONE HOME CALL FOR Reinspection

354-6870 OR 354-6877
NO one Home For second Reinspection 12-8-93 BR

You are hereby notified that no more work shall be done (unless specifically authorized) upon this structure until the above items are corrected. When corrections are completed, call Building Inspection for a reinspection. Phone: 354-6877 or 354-6876.

Inspector

P93-000035

P 18630 1

TOWN OF LOS GATOS

BUILDING INSPECTION DEPARTMENT • PHONE 354-6876
INSPECTION REQUESTS PHONE 354-6877

PLEASE PRINT IN INK OR TYPE

UNIT FEE	NO. OF ITEMS	AMOUNT	$ FEE
WATER CLOSET		7.00 EA.	
BATH TUB		7.00 EA.	
SHOWER		7.00 EA.	
LAVATORY		7.00 EA.	
SINK		7.00 EA.	
DISHWASHER		7.00 EA.	
DISPOSER		7.00 EA.	
CLOTHES WASHER		7.00 EA.	
FLOOR DRAIN		7.00 EA.	
DRINKING FTN.		7.00 EA.	
RAINWATER SYSTEM		6.00 PER DRAIN	
HOUSE SEWER		15.00 EA.	
WATER HEATER		10.00 EA.	10 00
GREASE TRAP		12.00 EA.	
GAS SYSTEM		10.00 SYSTEM	
LAWN SPRINKLER		9.00 SYSTEM	
WATER SYSTEM		10.00 SYSTEM	
VACUUM BREAKER		2.00 EA.	
BACKFLOW DEVICE		8.00 EA.	
PRIVATE SWIMMING POOL		30.00	
NEW FIS. CONST. ____ SQ. FT. X $0.06 =			
		SUBTOTAL	
PLUMBING PLAN CHECK FEE 25%			
ISSUANCE OF PERMIT			20 00
TOTAL FEES $			30.00

BUILDING ADDRESS 321 Bachman Ave
USE OF BUILDING Res.
OWNER J Bachman PHONE [redacted]
MAIL ADDRESS 321 Bachman Ave
CITY Los Gatos ZIP 95030
CONTRACTOR PHONE
MAIL ADDRESS
CITY ZIP
STATE LICENSE TOWN LICENSE

GROUP USE ZONE PROCESSED BY Razos 12/6/93

INSPECTION RECORD

As-Built 4/92

CONTRACTORS DECLARATION

I CERTIFY THAT I AM PROPERLY LICENSED BY THE STATE OF CALIFORNIA CONTRACTOR'S LICENSE LAW.

SIGNATURE X _____

COMPLETE A OR B

WORKER'S COMPENSATION DECLARATION

A I HEREBY AFFIRM THAT I HAVE A POLICY OF WORKER'S COMPENSATION INSURANCE. A CERTIFIED COPY OF A CERTIFICATE OF THAT INSURANCE IS HEREWITH FURNISHED, AND ON FILE WITH THE TOWN. I FURTHER AFFIRM THAT I SHALL KEEP THE INSURANCE IN EFFECT THROUGHOUT THE JOB.

SIGNATURE X _____

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

B I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED, I SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S COMPENSATION LAWS OF CALIFORNIA.

SIGNATURE X J Bachman

I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE INFORMATION IS CORRECT. I AGREE TO COMPLY WITH ALL TOWN ORDINANCES AND STATE LAWS RELATING TO PLUMBING CONSTRUCTION, AND HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY TO ENTER UPON THE ABOVE MENTIONED PROPERTY FOR INSPECTION PURPOSES.

SIGNATURE X J Bachman

VALIDATION

TOWN OF LOS GATOS
PAID DEC - 6 1993
Per 42530

	APPROVAL $	DATE	INSPECTOR'S SIG.
UNDERFLOOR WORK			
ROUGH PLUMBING			
GAS PIPING			
GAS VENTS	✓	12/6/93	
HOT WATER HEATER			
HOUSE SEWER			
PLUMBING FIXTURES			
GAS TEST			
UTILITY CO. NOTIFIED	✓	12/6/93	
FINAL			

TOWN OF LOS GATOS
110 E. Main Street
Los Gatos, CA 95030

CORRECTION NOTICE

Work Location: 321 BACKMAN B.P. No. B95-00131
Type of Inspection: R20 ALL @ HALL BATH Date: 2/7/96

This work has been inspected and the following items do not meet the Town and/or State laws governing the construction of same.

(1) Need to install a W/C flange by Sheet Rock Nail Ends.
(2) Need 2" Clear in front of end of the Line C/O
(3) Need to Complete Drain & Tub shower (trap arm)

You are hereby notified that no more work shall be done (unless specifically authorized) upon this structure until the above items are corrected. When corrections are completed, call Building Inspection for a reinspection. Phone: 354-6877.

John Mendez
Inspector

TOWN OF LOS GATOS
BUILDING INSPECTION DEPARTMENT

Permit Number: B95-001132

Work Description: REMOVE (DEMO) 467 SF PART OF RES. & 198 SF GARAGE

Building Address: 321 BACHMAN AV
Owner.....: SAMMETA RADHI
  Address...: 321 BACHMAN AV
  City.....: LOS GATOS CA
Contractor.....: SAMMETA RADHI
  License.....:
  Address.....: 321 BACHMAN AV
  City.....: LOS GATOS CA
  Business Lic.:
Arch\Eng\Design.:
  License.....:
  Address.....:
  City.....:
Valuation.....: .00
Total Sq.Ft.....: Livable Sq.Ft.:
Class Code.....: 645 Bldg Count: 001 Unit Count: 000

Status..: ISSUED
Applied.: 12/27/1995
Approved: 02/06/1996
Issued..: 02/06/1996
Expires.: 08/04/1996

PERMIT FEES

Permit Issuance.:	22.00	Park Tax.....:	.00
Building Permit.:	.00	Planning Plan Ck:	.00
Title-24.....:	.00	Micro Planning...:	.00
Seismic Tax.....:	.50	Storm Drain Eng..:	.00
Plan Check.....:	.00	Hauling Fee.....:	19.95
Micro Building..:	5.50	Computer Services:	1.00
Construction Tax:	.00	Electrical Fee...:	
Utility Tax.....:	.00	Plumbing Fee.....:	
Gen Pln Updt....:	.00	Mechanical Fee...:	

Total Calculated Fees:	83.95
Total Additional Fees:	.00
Total Fees Due.....:	83.95
Total Payments.....:	.00
BALANCE DUE.....:	83.95

CONTRACTORS DECLARATION
I certify that I am properly licensed by the State of California Contractors License Law.
Signature X_____

COMPLETE A or B
WORKER'S COMPENSATION DECLARATION
A I hereby affirm that I have a policy of Worker's Compensation Insurance. A certified copy of a certificate of that insurance is herewith furnished, and on file with the Town. I further affirm that I shall keep the insurance in effect throughout the job.
Signature X_____

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE
B I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of the State of California.
Signature X R Sammeta

CERTIFICATION OF PERMIT ISSUANCE
I certify that I have read this application and state that the above information is correct. I agree to comply with all Town ordinances and State laws relating to building construction, and hereby authorize representatives of this Town to enter upon the above mentioned property for inspection purposes.
Signature X R Sammeta

TOWN OF LOS GATOS
BUILDING INSPECTION DEPARTMENT

Permit Number: B95-001131

Work Description: BEDROOM ADDITION OF 300 S.F. (SEE DEMO PERMIT)

Building Address:	321 BACHMAN AV	Status..:	ISSUED
Owner.....:	SAMMETA RADHI	Applied.:	12/27/1995
Address.....:	321 BACHMAN AV	Approved:	02/06/1996
City.....:	LOS GATOS CA	Issued..:	02/06/1996
Contractor.....:	SAMMETA RADHI	Expires.:	08/04/1996
License.....:			
Address.....:	321 BACHMAN AV		
City.....:	LOS GATOS CA		
Business Lic..:			
Arch\Eng\Design.:			
License.....:			
Address.....:			
City.....:			
Valuation.....:	33,809.00		
Total Sq.Ft.....:	500	Livable Sq.Ft.: 300	
Class Code.....:	434	Bldg Count: 001	Unit Count: 000

PERMIT FEES

Permit Issuance.:	22.00	Park Tax.....:	.00
Building Permit.:	433.00	Planning Plan Ck:	86.60
Title-24.....:	216.50	Micro Planning...:	25.30
Seismic Tax.....:	3.38	Storm Drain Eng..:	.00
Plan Check.....:	281.45	Hauling Fee.....:	33.00
Micro Building..:	18.70	Computer Services:	17.32
Construction Tax:	.00	Electrical Fee...:	
Utility Tax.....:	.00	Plumbing Fee.....:	
Gen Pln Updt....:	132.05	Mechanical Fee...:	

Total Calculated Fees:	1,269.30
Total Additional Fees:	.00
Total Fees Due.....:	1,269.30
Total Payments.....:	240.50
BALANCE DUE.....:	1,028.80

CONTRACTORS DECLARATION

I certify that I am properly licensed by the State of California Contractors License Law.

Signature X_____

COMPLETE A or B

WORKER'S COMPENSATION DECLARATION

A I hereby affirm that I have a policy of Worker's Compensation Insurance. A certified copy of a certificate of that insurance is herewith furnished, and on file with the Town. I further affirm that I shall keep the insurance in effect throughout the job.

Signature X_____

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

B I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of the State of California.

Signature X R Sammeta

CERTIFICATION OF PERMIT ISSUANCE

I certify that I have read this application and state that the above information is correct. I agree to comply with all Town ordinances and State Laws relating to building construction, and hereby authorize representatives of this Town to enter upon the above mentioned property for inspection purposes.

Signature X R Sammeta

Permit Number: M96-000057

Work Description: MECHANICAL PERMIT FOR ADDITION

Building Address: 321 BACHMAN AV
Owner.....: SAMMETA RADHI
  Address.....: 321 BACHMAN AV
  City.....: LOS GATOS CA
  Zip.....: 95030-7255
Contractor.....: SAMMETA RADHI
  License.....:
  Address.....: 321 BACHMAN AV
  City.....: LOS GATOS CA
  Zip.....: 95030-7255
  Business Lic..:

Status..: ISSUED
Applied.: 02/06/1996
Approved: 02/06/1996
Issued..: 02/06/1996
Expires.: 08/04/1996

New Residence:	--Square Footage-- Remodel:	Commercial:

PERMIT FEES

Permit Issuance.....	22.00
Plan Check Fee.....	6.75
New Residential.....	.00
Remodel.....	.00
Commercial.....	.00
Detail Mechanical Fee:	27.00
Total Calculated Fees:	55.75
Total Additional Fees:	.00
Total Fees Due.....	55.75
Total Payments.....	.00
BALANCE DUE.....	55.75

CONTRACTORS DECLARATION

I certify that I am properly licensed by the State of California Contractors License Law.

Signature X_____

COMPLETE A or B

WORKER'S COMPENSATION DECLARATION

A I hereby affirm that I have a policy of Worker's Compensation Insurance. A certified copy of a certificate of that insurance is herewith furnished, and on file with the Town. I further affirm that I shall keep the insurance in effect throughout the job.

Signature X_____

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

B I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of the State of California.

Signature X R Sammeta

CERTIFICATION OF PERMIT ISSUANCE

I certify that I have read this application and state that the above information is correct. I agree to comply with all Town ordinances and State Laws relating to building construction, and hereby authorize representatives of this Town to enter upon the above mentioned property for inspection purposes.

Signature X R Sammeta

Permit Number: B96-000093

Work Description: ELEC PERMIT FOR ADDITION & RELOCATE SERVICE PANEL

Building Address:	321 BACHMAN AV	Status..:	ISSUED
Owner.....:	SAMMETA RADHI	Applied.:	02/06/1996
Address.....:	321 BACHMAN AV	Approved:	
City.....:	LOS GATOS CA	Issued..:	02/06/1996
Zip.....:	95030-7255	Expires.:	08/04/1996
Contractor.....:	SAMMETA RADHI		
License.....:			
Address.....:	321 BACHMAN AV		
City.....:	LOS GATOS CA		
Zip.....:	95030-7255		
Business Lic..:			

--Square Footage--		
New Residence:	Remodel:	Commercial:

PERMIT FEES	
Permit Issuance.....:	22.00
Plan Check Fee.....:	18.13
New Resident.....:	.00
Remodel.....:	.00
Commercial.....:	.00
Detail Electrical Fee:	72.50
Total Calculated Fees:	112.63
Total Additional Fees:	.00
Total Fees Due.....:	112.63
Total Payments.....:	.00
BALANCE DUE.....:	112.63

CONTRACTORS DECLARATION

I certify that I am properly licensed by the State of California Contractors License Law.

Signature X_____

COMPLETE A or B

WORKER'S COMPENSATION DECLARATION

A I hereby affirm that I have a policy of Worker's Compensation insurance. A certified copy of a certificate of that insurance is herewith furnished, and on file with the Town. I further affirm that I shall keep the insurance in effect throughout the job.

Signature X_____

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

B I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of the State of California.

Signature X R Sammeta

CERTIFICATION OF PERMIT ISSUANCE

I certify that I have read this application and state that the above information is correct. I agree to comply with all Town ordinances and State laws relating to building construction, and hereby authorize representatives of this Town to enter upon the above mentioned property for inspection purposes.

Signature X R Sammeta

Permit Number: P96-000074

Work Description: PLUMBING PERMIT FOR ADDITION

Building Address: 321 BACHMAN AV
Owner.....: SAMMETA RADHI
  Address.....: 321 BACHMAN AV
  City.....: LOS GATOS CA
  Zip.....: 95030-7255
Contractor.....: SAMMETA RADHI
  License.....:
  Address.....: 321 BACHMAN AV
  City.....: LOS GATOS CA
  Zip.....: 95030-7255
  Business Lic..:

Status...: ISSUED
Applied.: 02/06/1996
Approved: 02/06/1996
Issued..: 02/06/1996
Expires.: 08/04/1996

--Square Footage--		
New Residence:	Remodel:	Commercial:

PERMIT FEES	
Permit Issuance.....:	22.00
Plan Check Fee.....:	16.75
New Residential.....:	.00
Remodel.....:	.00
Commercial.....:	.00
Detail Plumbing Fee..:	67.00
Total Calculated Fees:	105.75
Total Additional Fees:	.00
Total Fees Due.....:	105.75
Total Payments.....:	.00
BALANCE DUE.....:	105.75

CONTRACTORS DECLARATION

I certify that I am properly licensed by the State of California Contractors License Law.

Signature X_____

COMPLETE A or B

WORKER'S COMPENSATION DECLARATION

A I hereby affirm that I have a policy of Worker's Compensation Insurance. A certified copy of a certificate of that insurance is herewith furnished, and on file with the Town. I further affirm that I shall keep the insurance in effect throughout the job.

Signature X_____

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

B I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of the State of California.

Signature X R Samet

CERTIFICATION OF PERMIT ISSUANCE

I certify that I have read this application and state that the above information is correct. I agree to comply with all Town ordinances and State Laws relating to building construction, and hereby authorize representatives of this Town to enter upon the above mentioned property for inspection purposes.

Signature X R Samet

TOWN OF LOS GATOS

OWNER-BUILDER VERIFICATION

ATTENTION OWNER-BUILDERS!

IF YOU PLAN TO IMPROVE YOUR PROPERTY AND EMPLOY PERSONS OTHER THAN YOUR IMMEDIATE FAMILY, THE FOLLOWING INFORMATION WILL BE OF BENEFIT TO YOU. STATE AND FEDERAL LAWS REQUIRE THAT YOU:

1. REGISTER WITH THE STATE AND FEDERAL GOVERNMENTS AS AN EMPLOYER.
2. WITHHOLD AND REMIT INCOME TAX FOR EACH EMPLOYEE.
3. PAY SOCIAL SECURITY COSTS ON EACH EMPLOYEE.
4. WITHHOLD AND REMIT SOCIAL SECURITY COSTS ON EACH EMPLOYEE.
5. PAY WORKER'S COMPENSATION INSURANCE COSTS ON EACH EMPLOYEE.
6. WITHHOLD AND REMIT DISABILITY INSURANCE COSTS FOR EACH EMPLOYEE.
7. PAY UNEMPLOYMENT INSURANCE COSTS ON EACH EMPLOYEE.

YOU MAY CONSTRUCT IMPROVEMENTS FOR SALE ONLY UNDER SPECIFIC, LIMITED CONDITIONS.

YOU MAY CONSTRUCT IMPROVEMENTS FOR RENTAL-OCCUPANCY ONLY UNDER SPECIFIC, LIMITED CONDITIONS.

YOU MAY SUBCONTRACT PORTIONS OF THE CONSTRUCTION TO ANY PERSON OR FIRM, BUT THEY MUST BE LICENSED BY THE STATE OF CALIFORNIA.

INFORMATION ABOUT INSURANCE, LIEN LAWS, AND OTHER CONSTRUCTION MATTERS MAY BE OBTAINED FROM THE CONTRACTORS STATE LICENSE BOARD AND VARIOUS BUSINESS AND TRADE ASSOCIATIONS.

Please complete and return this information at your earliest opportunity to avoid unnecessary delay in processing and issuing your Building Permit.

1. I personally plan to provide the major labor and materials for construction of the proposed property improvement: ____ (yes) or ✓ (no).

2. I have signed an application for a Building permit for the proposed work: ✓ (yes) or ____ (no).

I AGREE TO CHECK THAT EACH SUBCONTRACTOR HAS A VALID TOWN OF LOS GATOS BUSINESS LICENSE BEFORE THEY BEGIN WORK. (YOU MAY VERIFY BUSINESS LICENSE STATUS WITH THE FINANCE DEPARTMENT AT 354-6835).

R Sawneta
(SIGNATURE)

2/6/96
(DATE)

Property Owner: Radki Sawneta

Address: 321 Bachman Ave
(Of job site)

BLDI:FORMS\OWNERVER

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

J# 19429

JAN 25, 1996

Advance Construction
192 E Rincon Avenue
Campbell, CA 95008

ACKNOWLEDGEMENT

Bay Area Air Quality Management District acknowledges receipt of your Asbestos Demolition/ Renovation Plan described as: Demolition

site address: 321 Bachman Avenue
Los Gatos, CA 95030

start date: Feb 5, 1996

completion date: Feb 17, 1996

removal amounts: 0 linear ft. 0 square ft. friable acm

Should it become necessary to revise this plan, please do so in the spaces provided below and immediately send a copy to the District by fax or by mail. Do not revise notifications which are exempt or for which you have not yet received acknowledgement.

ASBESTOS NOTIFICATION REVISION — BAAQMD J# 19429

revision #	start date	completion date	removal amounts
1	__/__/__	__/__/__	_____ lin. ft. _____ sq. ft.
2	__/__/__	__/__/__	_____ lin. ft. _____ sq. ft.
3	__/__/__	__/__/__	_____ lin. ft. _____ sq. ft.
4	__/__/__	__/__/__	_____ lin. ft. _____ sq. ft.
5	__/__/__	__/__/__	_____ lin. ft. _____ sq. ft.

NOTE: This form is not intended as a verification of either the completeness of your original notification or of its compliance with District Regulation 11-2 .

CERTIFICATE OF COMPLIANCE: RESIDENTIAL

Date..... 12/20/95

Project Title..... SAMMETA ADDITION
Project Address..... 321 BACHMAN DR
LOS GATOS CA 95030
Documentation Author... DAVID W. KNIGHT
Company..... MONTEREY ENERGY GROUP INC
Telephone..... [redacted]

Building Permit #
Plan Check / Date
Field Check/ Date

Compliance Method..... MICROPAS4 by Enercomp, Inc.
Climate Zone..... 04

MICROPAS4 v4.02 File-SAMMETA Nth-CTZ04S92 Program-FORM CF-1R
User#-MP0113 User-MONTEREY ENERGY GROUP INC Run-R-19R R-13W R-19F 2P GAS

GENERAL INFORMATION

Conditioned Floor Area(\... 315.7 sf
Building Type..... Single Family Detached
Construction Type ..... Addition Alone
Building Front Orientation. Front Facing 22-deg-(N)
Number of Dwelling Units .. 1
Number of Stories..... Raised Floor (Package B
Floor Construction Type...

Town of Los Gatos
BUILDING DEPARTMENT
PLAN APPROVED
DATE
[illegible]

BUILDING SHELL INSULATION

Component Type	Insulation R-value	Assembly U-Value	Location/Comments
Wall	R-13	0.088	North, east, south, west
Roof	R-19	0.051	vaulted
Floor	R-19	0.037	to crawlspace

FENESTRATION

Orientation	Area (sf)	U-Value	# of Panes	Interior Shading/ Description	Exterior Shading	Overhang/ Fins	Framing Type
Window Left (E)	19.0	0.600	2	Drapes.Std	None	None	Wood
Window Right (W)	40.0	0.600	2	Drapes.Std	None	None	Wood

HVAC SYSTEMS

Equipment Type	Minimum Efficiency	Duct Location	Duct R-value	Thermostat Type
Furnace	0.750 AFUE	Crawlspace	R-4.2	Setback
NoCooling	10.00 SREER	Attic	R-4.2	Setback

SPECIAL FEATURES/REMARKS

RECEIVED
DEC 27 1995
TOWN OF LOS GATOS
BUILDING/ENGINEERING SERVICES
BY

Project Title..... SAMMETA ADDITION Date..... 12/20/95

MICROPAS4 v4.02 File-SAMMETA Wth-CT2045S92 Program-FORM CF-1R
User#-MP0113 User-MONTERRY ENERGY GROUP INC Run-R-19R R-13W R-19F 2P GAS

COMPLIANCE STATEMENT

This certificate of compliance lists the building features and performance specifications needed to comply with Title-24, Parts 1 and 6 of the California Code of Regulations, and the administrative regulations to implement them. This certificate has been signed by the individual with overall design responsibility. When this certificate of compliance is submitted for a single building plan to be built in multiple orientations, any shading feature that is varied is indicated in the Special Features/ Remarks section.

DESIGNER or OWNER

Name.... GARY KOHLSAAT
Company. GARY KOHLSAAT ARCHITECT
Address. 501 N. SANTA CRUZ AVE. #A
LOS GATOS CA 95030
Phone... [redacted]
License. _____
Signed.. _____ 12/20/95 (date)

DOCUMENTATION AUTHOR

Name.... DAVID W. KNIGHT
Company. MONTERRY ENERGY GROUP INC
Address. 227 FOREST AVE. SUITE 5
PACIFIC GROVE CA 93950, C
Phone... (408) 372-8328
Signed.. David Knight 12/20/95 (date)

ENFORCEMENT AGENCY

Name.... _____
Title... _____
Agency.. _____
Phone... ( ) _____
Signed.. _____ (date)

Certified Energy Analyst
David W. Knight
R02-91-162
CABEC
California Association of Building Energy Consultants

COMPUTER METHOD SUMMARY — Page 1 — C-2R

Project Title..... SAMMETA ADDITION
Project Address..... 321 BACHMAN DR
LOS GATOS CA 95030
Documentation Author... DAVID W. KNIGHT
Company..... MONTERRY ENERGY GROUP INC
Telephone..... (408) 372-8328

Compliance Method..... MICROPAS4 by Enercomp, Inc.
Climate Zone..... 04

Date..... 12/20/95

Building Permit #
Plan Check / Date
Field Check/ Date

MICROPAS4 v4.02 File-SAMMETA Wth-CT204S92 Program-FORM C-2R
User#-MP0113 User-MONTERRY ENERGY GROUP INC Run-R-19R R-13W R-19F 2P GAS

MICROPAS4 ENERGY USE SUMMARY

Energy Use (kBtu/sf-yr)	Standard Design	Proposed Design	Compliance Margin
Space Heating.....	15.71	14.65	1.06
Space Cooling.....	13.94	13.60	0.34
Total	29.65	28.25	1.40

*** Water Heating not calculated ***

GENERAL INFORMATION

Conditioned Floor Area.....	315.7 sf
Building Type.....	Single Family Detached
Construction Type	Addition Alone
Building Front Orientation.	Front Facing 22 deg (N)
Number of Dwelling Units..	.295
Number of Building Stories.	1
Weather Data Type.....	ReducedYear
Floor Construction Type....	Raised Floor (Package B)
Number of Building Zones...	1
Conditioned Volume.....	2942.2 cf
Footprint Area.....	315.7 sf
Ground Floor Area.....	315.7 sf
Slab-On-Grade Area.....	0 sf
Glazing Percentage.....	18.7 % of FA
Average Ceiling Height.....	9.3 ft

BUILDING ZONE INFORMATION

Zone Type	Floor Area (sf)	Volume (cf)	# of Dwell Units	Cond-itioned	Thermostat Type	Vent Height (ft)	Special Vent Area (sf)
HOUSE Residence	316	2942	0.29	Yes	Setback	2.0	n/a

Project Title..... SAMMETA ADDITION Date..... 12/20/95

MICROPAS4 v4.02 File-SAMMETA Wth-CTZ04S92 Program-FORM C-2R
User#-MP0113 User-MONTEREY ENERGY GROUP INC Run-R-19R R-13W R-19F 2P GAS

OPAQUE SURFACES

Surface	Area (sf)	U-value	Insul R-val	Act Azm	Tilt	Solar Gain	Form 3 Reference	Location/ Comments
HOUSE - New								
1 Wall	9	0.068	R-13	22	90	Yes	None	north
2 Wall	154	0.088	R-13	112	90	Yes	None	east
3 Wall	212	0.088	R-13	202	90	Yes	None	south
4 Wall	92	0.088	R-13	292	90	Yes	None	west
5 Roof	321	0.051	R-19	0	0	Yes	None	vaulted
6 Floor	316	0.037	R-19	0	0	No	None	to crawlspace

FENESTRATION SURFACES

Surface	Area (sf)	# of Pan-es	Frame Type	Vent Open Type	U-value	Act Azm	Tilt	SC Glass Only	SC Int Shade	Interior Shading/ Description
HOUSE - New										
1 Window	19.0	2	Wood	Hinged	0.600	112	90	0.88	0.78	Drapes,Std
2 Window	40.0	2	Wood	Hinged	0.600	292	90	0.88	0.78	Drapes,Std

HVAC SYSTEMS

System Type	Minimum Efficiency	Duct Location	Duct R-Value	Duct Efficienoy
HOUSE				
Furnace	0.750 AFUE	Crawlspace	R-4.2	0.830
NoCooling	10.00 SEER	Attic	R-4.2	0.810

SPECIAL FEATURES/REMARKS

Project Title.....	SAMMETA ADDITION	Date..... 12/20/95
Project Address.....	321 BACHMAN DR LOS GATOS CA 95030	Building Permit #
Documentation Author...	DAVID W. KNIGHT	
Company.....	MONTERRY ENERGY GROUP INC	Plan Check / Date
Telephone.....	(408) 372-8328	
Compliance Method.....	MICROPAS4 by Enercomp, Inc.	Field Check/ Date
Climate Zone.....	04	

MICROPAS4 v4.02 File-SAMMETA Wth-CTZ04S92 Program-HVAC SIZING
User#-MP0113 User-MONTERBY ENERGY GROUP INC Run-R-19R R-13W R-19F 2P GAS

GENERAL INFORMATION

Floor Area.....	315.7 sf
Volume.....	2942.2 cf
Front Orientation.....	Front Facing 22 deg (N
Sizing Location.....	LOS GATOS
Latitude.....	37.2 degrees
Winter Outside Design.....	31 F
Winter Inside Design.....	70 F
Summer Outside Design.....	90 F
Summer Inside Design.....	78 F
Summer Range.....	32 F
Interior Shading Used.....	No
Exterior Shading Used.....	No
Overhang Shading Used.....	No
Latent Load Fraction.....	0.20

HEATING AND COOLING LOAD SUMMARY

Description	Heating (Btuh)	Cooling (Btuh)
Opaque Conduction and Solar.....	2697	343
Glazing Conduction.....	1381	425
Glazing Solar.....	n/a	2787
Infiltration.....	1613	237
Internal Gain.....	n/a	620
Ducts.....	569	501
Sensible Load.....	6260	5513
Latent Load.....	n/a	1103
Minimum Total Load	6260	6615

Note: The loads shown are only one of the criteria affecting the selection of HVAC equipment. Other relevent design factors such as air flow requirements, outdoor design temperaturen, coil sizing, availability of equipment, oversizing safety margin, etc., must also be considered. It is the HVAC designer's responsibility to consider all factors when selecting the HVAC equipment.

Mandatory Measures Checklist: Residential

MF-1R

NOTE: Low-rise residential buildings subject to the Standards must contain these measures regardless of the compliance approach used. Items marked with an asterisk (*) may be superseded by more stringent compliance requirements listed on the Certificate of Compliance. When this checklist is incorporated into the permit documents, the features noted shall be considered by all parties as binding minimum component performance specifications for the mandatory measures whether they are shown elsewhere in the documents or on this checklist only.

DESCRIPTION	DESIGNER	ENFORCEMENT
Building Envelope Measures		
* §150(a): Minimum R-19 ceiling insulation.	✓	
§150(b): Loose fill insulation manufacturer's labeled R-Value.	✓	
* §150(c): Minimum R-13 wall insulation in framed walls (does not apply to exterior mass walls).	✓	
* §150(d): Minimum R-13 raised floor insulation in framed floors; minimum R-8 in concrete raised floors.	✓	
§150(f): Slab edge insulation - water absorption rate no greater than 0.3%, water vapor transmission rate no greater than 2.0 perm/inch.	NA	
§118: Insulation specified or installed meets California Energy Commission quality standards. Indicate type and form.	✓	
§118-17: Fenestration Products, Exterior Doors and Infiltration/Exfiltration Controls a. Doors and windows between conditioned and unconditioned spaces designed to limit air leakage. b. Manufactured fenestration products have label with certified U-value, and infiltration rate if applicable. c. Exterior doors and windows weatherstripped; all joints and penetrations caulked and sealed.	✓	
§150(g): Vapor barriers mandatory in Climate Zones 14 and 16 only.	NA	
§150(h): Special filtration barrier installed to comply with §151 energy Commission quality standards.	NA	
§150(e): Installation of Fireplaces, Decorative Gas Appliances and Gas Logs 1. Masonry and factory built fireplaces have: a. Closable metal or glass door b. Outside air intake with damper and control c. Flue damper and control 2. No continuous burning gas pilots allowed.		
Space Conditioning, Water Heating and Plumbing System Measures		
§110-13: HVAC equipment, water heaters, showerheads and faucets certified by the Commission.	NA	
§150(i): Setback thermostat on all applicable heating systems.	✓	
§150(j): Pipe and Tank Insulation 1. Indirect hot water tanks (e.g., unfired storage tanks or backup solar hot water tanks) have insulation blanket (R-12 or greater) or combined interior/exterior insulation (R-16 or greater). 2. First 5 feet of pipes closest to water heater tank, non-recirculating systems, insulated (R-4 or greater). 3. All buried or exposed piping insulated in recirculating sections of hot water system. 4. Cooling system piping below 55°F insulated. 5. Piping insulated between heating source and indirect hot water tank.	✓	
* §150(m): Ducts and Fans 1. Ducts constructed, installed and sealed to comply with UMC Sections 1002 and 1004; ducts insulated to a minimum installed value of R-4.2 or ducts enclosed entirely within conditioned space. 2. Exhaust fan systems have backdraft or automatic dampers. 3. Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers.	✓	
§114: Pool and Spa Heating Systems and Equipment 1. System is certified with 78% thermal efficiency, on-off switch, weatherproof operating instructions, no electric resistance heating and no pilot light.	✓	
2. System is installed with: a. At least 36" pipe between filter and heater for future solar heating. b. Cover for outdoor pools or outdoor spa.	NA	
3. Pool system has directional inlets and a circulation pump time switch.	NA	
§115: Gas-fired central furnace, pool heater, spa heater or household cooking appliance have no continuously burning pilot light. (Exception: Non-electrical cooking appliance with pilot < 150 Btu/hr.)	NA	
Lighting Measures		
§150(k): 40 lumens/watt or greater for general lighting in kitchens and rooms with water closets; and recessed ceiling fixtures IC (insulation cover) approved.	✓	

SANTA CLARA COUNTY
CENTRAL FIRE PROTECTION DISTRICT
14700 WINCHESTER BOULEVARD
LOS GATOS, CA 95030-1818 (105) 378 4010
SERVICE SINCE 1917 FAX (105) 378 9312

CONTROL NUMBER

PERMIT NUMBER B95-00131
B95-00132

PLAN CHECK NO

PLAN REVIEW COMMENTS

CODE/SEC	SHEET	NO.

Resubmittal for Remodel

No Fire Dept Impact

OK to issue Bldg Permit

JURIS	PLANS SPECS NEW REMODEL AS	CONST. DESCRIP.	BY	DATE	PAGE
	W ☐ ☐ X ☐	V	Julie Linney	1:23:96	OF

SEC. FLOOR	OCC	OCC LOAD	AREA	ARCH/ENG/CONTRACTOR/OWNER
			300	Gary Kohlsaat Arch.

NAME OF FACILITY: Sammet Residence

LOCATION: 321 Bachman

SANTA CLARA COUNTY
CENTRAL FIRE PROTECTION DISTRICT
14700 WINCHESTER BOULEVARD
LOS GATOS, CA 95030-1818
(408) 378-4010
FAX (408) 378-9342

SERVICE SINCE 1947

CONTROL NUMBER

PERMIT NUMBER B95-001131

PLN CHECK NO.

PLAN REVIEW COMMENTS

CODE/SEC | SHEET | NO.

Bedroom addition of 300 sq. ft.

No Fire Dept. Requirements.

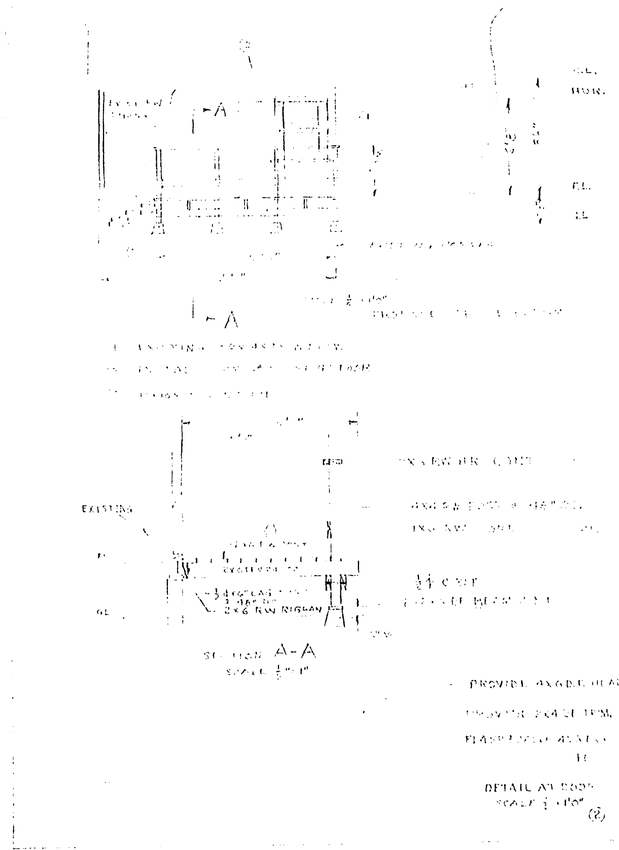
Approved: OK to issue Bldg Permit.

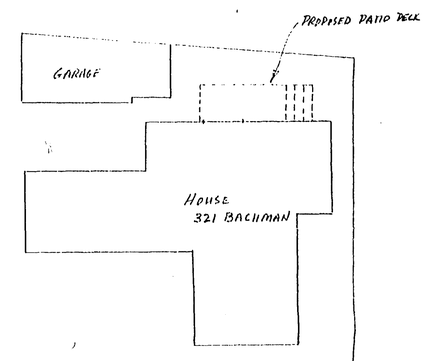
JURIS | PLANS [ ] SPECS [ ] NEW [ ] REMODEL [X] AS [ ] | CONST. DESCRIP. V NR | BY J. Linney | DATE 12-28-95 | PAGE 1 OF 1

SEC/FLOOR | OCC R/3 | OCC LOAD 0 | AREA 300 | ARCH/ENG/CONTRACTOR/OWNER Gary Kohlsaat

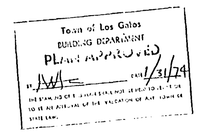
NAME OF FACILITY Sammeta Radki | LOCATION 321 Bachman Ave

Serving West Valley Cities of:
Campbell, Cupertino, Monte Sereno, Saratoga, Town of Los Gatos, and Adjacent County Areas

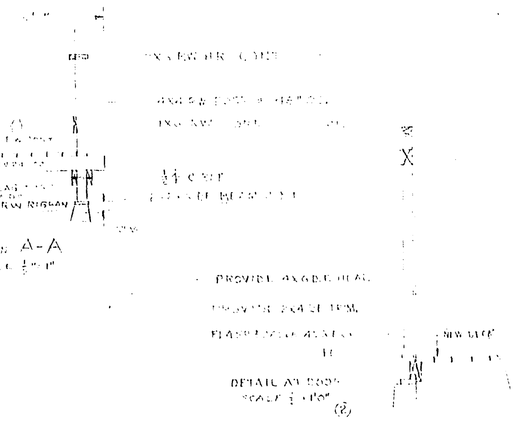




PLOT PLAN
SCALE 1/8" = 1'0"



J.L.
321 Bachman



24X

GENERAL NOTES

-THE FOLLOWING SPECIFICATIONS SHALL CONFORM TO THE 1991 UNIFORM BUILDING CODE AND ANY OTHER CITY ORDINANCES WHICH ARE IN FORCE AT THE TIME OF THIS ENQUIRY.

-CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS, PRIOR TO STARTING ANY FIELD WORK.

-ANY DISCREPANCIES BY THE FIELD CONDITIONS, OR ANY CONDITIONS DIFFERENT FROM THOSE INDICATED ON PLANS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION, AND IN DISCREPANCY NOT REPORTED TO THE ARCHITECT SHALL ABSOLVE THE SUBMITTER FROM ANY LIABILITY.

-TYPICAL DETAILS SHALL APPLY WHERE NO SPECIFIC DETAILS OR DIRECTIONS ARE GIVEN.

-LARGER SCALE DRAWINGS ON PLANS OR DETAILS TAKE PRECEDENCE OVER SCALES USED.

-THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF ALL WORK IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.

STRUCTURAL STEEL

-STRUCTURAL STEEL SHALL CONFORM TO A.S.T.M. (A-36) SPECIFICATIONS AND TO THE A.I.S.C. SPECIFICATIONS FOR FABRICATION AND ERECTION.

-ALL BOLTS SHALL CONFORM TO A.S.T.M. (A-307) FOR UNFINISHED BOLTS.

-ALL BOLT HOLES IN STEEL MEMBERS SHALL BE TRUE, BURNING OF HOLES FOR CONNECTIONS WILL NOT BE PERMITTED.

-PROVIDE FULL BEARING ON UNTHREADED PORTION OF BOLT SHANK FOR ALL STEEL CONNECTIONS.

-PROVIDE LEVELING NUTS FOR ALL BOLTS AT BEAM SEATS AND COLUMN BASE PLATES.

-ALL NUTS FOR STRUCTURAL STEEL CONNECTIONS SHALL BE HEAVY HEXAGONAL NUTS.

-ALL WELDING SHALL BE AS INDICATED ON THE DETAILS AND PERFORMED IN A QUALIFIED SHOP, UNDER CONTINUOUS INSPECTION PER U.B.C. 306. FIELD WELDING, OTHER THAN MISCELLANEOUS TACK WELDING, IS NOT PERMITTED, UNLESS NOTED OTHERWISE IN THE DETAILS.

LUMBER

-WOOD MEMBERS LESS THAN 4" IN WIDTH SHALL BE DOUGLAS FIR NO. 2 AND 4" OR WIDER SHALL BE DOUGLAS FIR NO. 1, UNLESS NOTED OTHERWISE ON PLANS.

-UNLESS NOTED OTHERWISE ON PLANS, ALL NAILING SHALL BE PER UNIFORM BUILDING CODE, TABLE NO. 25-Q.

-ALL CONNECTING HARDWARE SHALL BE SIMPSON COMPANY TYPE OR EQUAL, AND INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS, UNLESS NOTED OTHERWISE ON PLANS.

-GLU-LAMINATED BEAMS SHALL BE OF A GRADE COMBINATION PROVIDING A MINIMUM Fb=2400 psi. CAMBER AS INDICATED ON PLANS.

-ROOF SHEATHING SHALL BE MIN. 1/2" CDX WITH EXTERIOR GLUE, GROUP 2. EXPOSED SHEATHING AT ROOF OVERHANG SHALL BE AS INDICATED ON THE ARCHITECT'S DRAWINGS.

-WALL SHEATHING, IF REQUIRED, SHALL BE MIN. 3/8" CDX PLYWOOD WITH EXTERIOR GLUE, GROUP 2.

-FLOOR SHEATHING SHALL BE T&G INT-APA WITH EXTERIOR GLUE, GROUP 2. SEE PLANS FOR SIZE.

-BEARING AND NONBEARING WALLS SHALL HAVE DOUBLE TOP PLATES, LAPPED AT INTERSECTIONS. PLATE JOINTS SHALL BE STAGGERED 4'-0" MIN. AS INDICATED ON THE STRUCTURAL DETAILS.

-UNLESS NOTED OTHERWISE ON PLANS, WALLS SHALL BE OF 2 x 4 STUDS (STUD GRADE OR BETTER) AT 16" ON CENTER.

-ALL HEADERS ARE AS NOTED ON PLANS.

-ALL WOOD BEARING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR OR REDWOOD.

-HOLES FOR BOLTS SHALL BE BORED WITH A BIT 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER. ALL BOLTS SHALL BE RETIGHTENED PRIOR TO APPLICATION OF PLYWOOD, GYP. BOARD, ETC.

-STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, ETC. UNLESS SPECIFICALLY NOTED OR DETAILED.

-2x SOLID BLOCKING SHALL BE PLACED BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS.

-ALL BOLTS BEARING ON WOOD SHALL HAVE STANDARD CUT WASHERS UNDER HEAD AND NUT, UNLESS NOTED OTHERWISE.

CONCRETE

-CONCRETE FOR SLABS ON GROUND, BEAM FOOTINGS OR PIERS SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 2500 psi AT 28 DAYS, UNLESS NOTED OTHERWISE ON PLANS.

-MAXIMUM AGGREGATE SIZE SHALL BE 3/4", AND MAXIMUM SLUMP SHALL BE 4 1/2".

-ANCHOR BOLTS, HOLD-DOWN BOLTS, DOWELS, AND OTHER REQUIRED INSERTS, SHALL BE POSITIONED AND FIRMLY SECURED IN PLACE, BEFORE CONCRETE IS POURED.

-CONTRACTOR SHALL TAKE ALL THE NECESSARY MEASURES TO PROVIDE A PROPER COMPACTION OF THE CONCRETE.

-THE EXCAVATED BOTTOM OF ALL FOOTINGS SHALL EXTEND TO ELEVATIONS SHOWN ON THE DETAILS AND THE FOOTINGS SHALL BE POURED IN NEAT EXCAVATIONS, WITHOUT SIDE FORMS AS POSSIBLE.

REINFORCING STEEL

-REINFORCING STEEL SHALL BE DEFORMED BARS, CONFORMING TO ASTM A615-80 REQUIREMENTS AND WELDED WIRE MESH PER ASTM SPECIFICATION A-185.

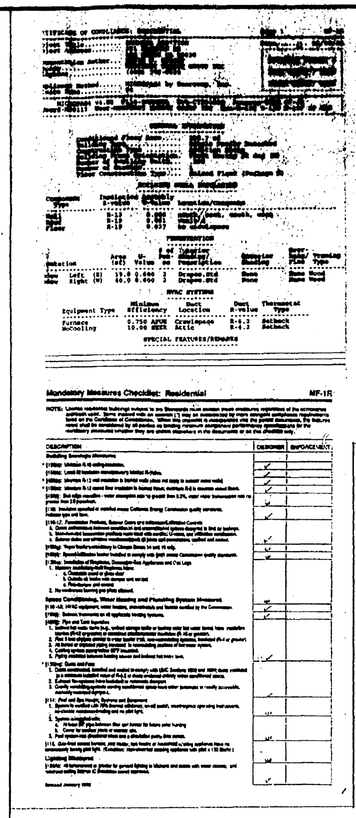
-BARS NO. 4 AND SMALLER SHALL BE OF GRADE 40, AND BARS NO. 5 AND LARGER SHALL BE OF GRADE 60.

-ALL REINFORCING BARS SHALL BE CLEAN OF ANY RUST, OR FOREIGN MATERIALS.

-ALL REINFORCING SPLICES SHALL BE LAPPED A MINIMUM OF 30 BAR DIAMETERS BUT NOT LESS THAN 24".

-CONCRETE COVERAGE FOR REINFORCEMENT SHALL BE:
- 3" WHERE POURED AGAINST EARTH,
- 2" WHERE POURED AGAINST FORMS,
- 1" FOR SLABS POURED AGAINST FORMS.

-SEE PLAN FOR QUANTITY AND LOCATION OF ANCHOR BOLTS, LOCATE BOLTS WITHIN 12" FROM CORNERS AND BUTT JOINTS.

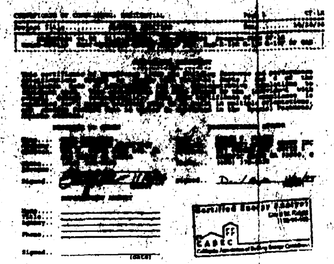


Mandatory Measures Checklist: Residential MF-1R

NOTE: Unless mandatory building features in the Standards which contain check conditions regardless of the occupancy, each item required with an asterisk (*) may be substituted by more energy efficient features. Applicants must specify on the Certificate of Compliance (CF-1R) which features are substituted. When this occurs, the Certificate of Compliance must show that the substituted features comply with the standards by an overall performance method. Any substitutions must be clearly identified on the plans and in the documents or on the checklist only.

DESCRIPTION	DESIGNER	ENFORCEMENT
Building Shell Measures:		
* (Title) Window U-40 requirements.		
* (Title) Loose fill insulation manufacturer's labels R-Value.		
* (Title) Window U-1.1 and insulation in framed walls when not apply to exempt areas only).		
* (Title) Window U-1.2 insulation in framed floors, minimum R-11 in exterior wood floors.		
(Title) Site-built insulation - water absorption rate not to exceed then 0.3%, water vapor transmission rate not to exceed 2 perm/inch.		
(Title) Insulation specified or certified meets California Energy Commission quality standards.		
(Title) Loose fill insulation.		
(Title) Fenestration Products, Exterior Doors and Infiltration/Exfiltration Controls:		
a. Glazed and unglazed fenestration and exterior doors assembled in field as buildings.		
b. Manufactured fenestration and exterior doors certified by manufacturer.		
c. Exterior doors and window assemblies in factory or field labeled, certified and marked.		
(Title) Vapor barrier conforming to Category Class for use in walls.		
(Title) Special insulation materials installed in comply with good energy Contractor quality standards.		
(Title) Air Conditioning, Heating and Water Heating Systems and Equipment:		
1. Minimum conditioning and heating types.		
a. Equipment sized per gross load.		
b. Thermostats and controls.		
c. Piping insulation and seals.		
2. Pre-conditioned heating and cooling allowed.		
Space Conditioning, Water Heating and Plumbing Systems (Mandatory):		
(Title) All HVAC equipment, water heaters, showerheads and heaters certified by the Commission.		
(Title) Systems, components are all applicable heating requirements.		
(Title) Pipe and Tank Insulation:		
1. Pipes insulated: (a) domestic hot water storage tanks or heating water hot water heated from: installation heaters (Field fabricated or insulation manufacturer insulation (R-4) or greater).		
2. Pipe 1 inch diameter exterior to heat source (1/2 inch recommended systems insulated (R-4 or greater).		
3. All forms of exposed pipes insulated. 4. Surrounding portions of hot water systems.		
5. Cooling systems pipes below 55°F insulated.		
6. Piping insulation protected from damage and freezing hot water tank.		
(Title) Water Conservation:		
1. Showerheads certified and marked (energy) with GMC Sections 1604 and 1606 (tank controlled to a minimum available value of 4.2 gpm) shower-activated utility valve conditioned alarm.		
2. Exterior fenestration hose bibs/faucets or automatic dampers.		
3. Quality controlling systems (pressure valves) hose bibs either passages or readily accessible, manually operated dampers.		
(Title) Roof and Spa Heads, Systems and Equipment:		
1. Spaces to conditioned with 50% thermal efficiency, on-off switch, weatherproof type using heat sensor, no electric resistance heating and no pilot light.		
2. Systems controlled with:		
a. 24 hour clock timer between (the spa heater to below solar heating		
b. Cover for outdoor pools or exterior spa.		
3. Pool heaters not fired by natural gas, a minimum pump time system.		
(Title) Solar Heat (use of fireplaces, pool heaters, spa heaters or household) using appliances have no continuously burning light. Exception: Approved solar energy appliances with pilot < 150 Btu/hr.)		
Lighting (Mandatory):		
(Title) All fluorescent fixtures or similar for general lighting in kitchens and rooms with water closets, and indoor/outdoor lighting fixtures in Attached/detached approved.		

Revised January 1996



Recycled Energy Efficient

CABEC

Certified Energy Analyst

Certified Building Performance Contractor

NOTE:

ALL WORK SHALL COMPLY W/ 1991 UBC, UMC, UPC AND 1990 NEC.

PROJECT SUMMARY

PROJECT ADDRESS:	921 BACHMAN AVENUE LOS GATOS, CA 95030
OWNER:	RADHI SAMMETA 921 BACHMAN AVE. LOS GATOS, CA 95030 [redacted]
A.P.N.:	510-17-88
ZONING:	R-1D(LHP
LOT AREA:	2,883 sq. ft. (+/-)

BUILDING AREA:

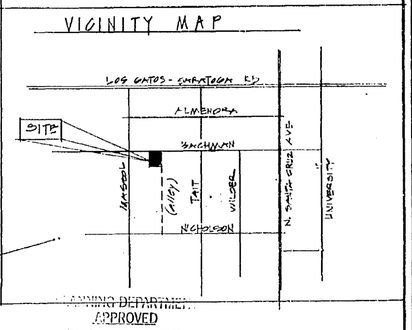
	EXISTING	REMOVED	ADDITION	TOTAL
FIRST FLOOR	1,248 s.f.	467	300	1,081 s.f.
GARAGE	148 s.f.	148	0	0

F.A.R. ADJUSTMENT: .35 - (2.5-5 / 25) X .20) = .37 (37 %)

ACTUAL FAR: EXISTING = 44 % PROPOSED = 42 %

SCOPE OF WORK:
REMOVE GARAGE, SUNROOM, AND SECOND STORY LOFT; REPLACE GARAGE AREA WITH SECOND BEDROOM AND BATHROOM; REMODEL EXISTING BATHROOM; PROVIDE ONE UNCOVERED ON-SITE PARKING SPACE

VICINITY MAP

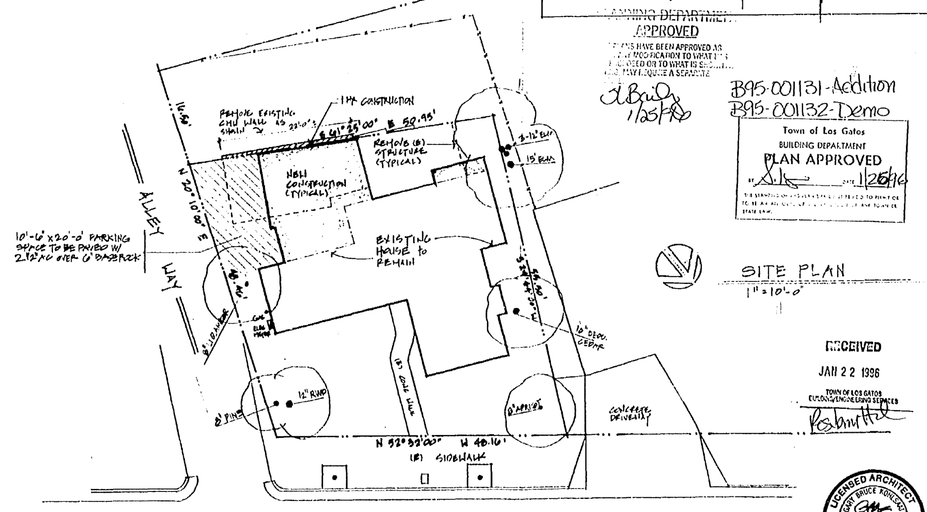


PLANNING DEPARTMENT
APPROVED
THESE PLANS HAVE BEEN APPROVED AS A MODIFICATION TO WHAT IS SHOWN ON THE APPROVED PLANS AND MAY REQUIRE A SEPARATE PERMIT.

BA95-001131-Addition
BA95-001132-Demo

Town of Los Gatos
BUILDING DEPARTMENT
PLAN APPROVED
1/26/96

THIS APPROVAL DOES NOT INCLUDE ANY VIOLATIONS OF TITLE 24 OR OTHER STATE OR LOCAL LAWS.



SITE PLAN
1"=10'-0"

RECEIVED
JAN 22 1996
TOWN OF LOS GATOS
ENGINEERING/SURVEYING

LICENSED ARCHITECT
GARY BRUCE RUNQUIST
C 19245
REN. 2/28/97
STATE OF CALIFORNIA

BACHMAN AVENUE

REVISIONS	BY
1/19/96	

A REMODEL AND ADDITION TO
THE SAMMETA RESIDENCE
921 BACHMAN AVENUE LOS GATOS, CALIF.

P.O. BOX 1388 • LOS GATOS, CA. • (408) [redacted]

Date	12.26.95
Scale	AS SHOWN
Drawn	MAY
Job	
Sheet	1
Of	4 Sheets

IF THE IMAGE IS LESS READABLE THAN THIS TAG, IT IS DUE TO THE QUALITY OF THE ORIGINAL DOCUMENT.

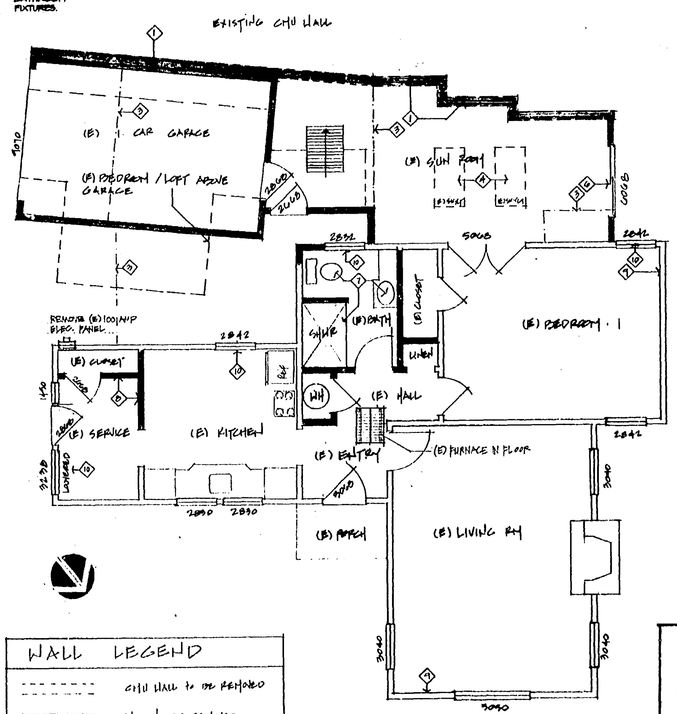
24 X 36 PRINTED ON NO. 1000R CLEARPRINT 5

24X

KEY

DEMOLITION FLOOR PLAN NOTES

1. REMOVE EXISTING PORTION OF C.M.U. WALL AS SHOWN.
2. REMOVE ENTIRE GARAGE, INCLUDING ROOF, LOFT FLOOR, ALL TRIM AND DOOR AS SHOWN.
3. SAWCUT EXISTING SLAB TO PROVIDE FOR FOUNDATION WORK & NEW CONSTRUCTION.
4. REMOVE EXISTING ROOF AND SKYLITE FROM SUN ROOM.
5. EXISTING 8' C.M.U. WALL TO REMAIN.
6. REMOVE EXISTING 6068 SLIDER AND ENTIRE EXTERIOR WALL FROM SUN ROOM AS INDICATED.
7. REMOVE AND DISPOSE OF ALL EXISTING BATHROOM FIXTURES.
8. INTERIOR WALL TO BE REMOVED (TYPICAL)
9. EXISTING WALL TO REMAIN (TYPICAL)
10. REMOVE EXISTING WINDOW.



WALL LEGEND

- CHU WALL TO BE REMOVED
- WALL TO BE REMOVED
- (E) WALL TO REMAIN

INSULATION SCHEDULE

LOCATION	EXISTING	NEW
RAISED FLOORS	N/A	R-19
EXTERIOR WALLS	N/A	R-13
ATTIC CEILINGS	N/A	R-30
CATHEDRAL CLGS	N/A	R-19

THE FOLLOWING INSULATION VALUES ARE MINIMUMS. REFER TO THE TITLE 24 ENERGY COMPLIANCE CALCULATIONS FOR ADDITIONAL INFORMATION.

AS BUILT : DEMOLITION PLAN — 1/4" = 1'-0" — (E) 1,248 Sq. Ft.

KEY

29. NEW 28" CABINET AND VANITY WITH DRAWERS.

33. PROVIDE TILE BACKSPLASH AT ALL COUNTERS WITH TILE TO MATCH FLOOR TILE.

34. ADJUST AS REQUIRED ALL KITCHEN APPLIANCES CONNECTIONS.

35. PROVIDE NEW VINYL FLOORING IN KITCHEN AND DINING AREA, VARIETY STYLE AND COLOR PER OWNER.

36. RELOCATE AND ADJUST EXISTING FLUE/VENT AS REQUIRED TO ACCOMMODATE NEW REMODELED BATH ROOM FIXTURES.

37. RELOCATE ADJUST EXISTING FLUE/VENT AS REQUIRED TO ACCOMMODATE NEW REMODELED BATH ROOM FIXTURES.

38. 24" SHOWER ; UPPER LIGHT ; VERIFY FINISH W/OWNER.

39. 18" PASS LIGHT ; UPPER VERIFY FINISH W/ OWNER.

40. PROVIDE WALL MOUNT WATER HEATER, LOW EXHAUST W/ 3/8" THICK GYPBD. ; PROVIDE FLASHING PLATFORM ; SEISMIC STRAP AS PER UBC ; UMC ; UPC ; PROVIDE COMBUSTION AIR FOR ALL BURNING APPLIANCES AS PER UBC AND UMC.

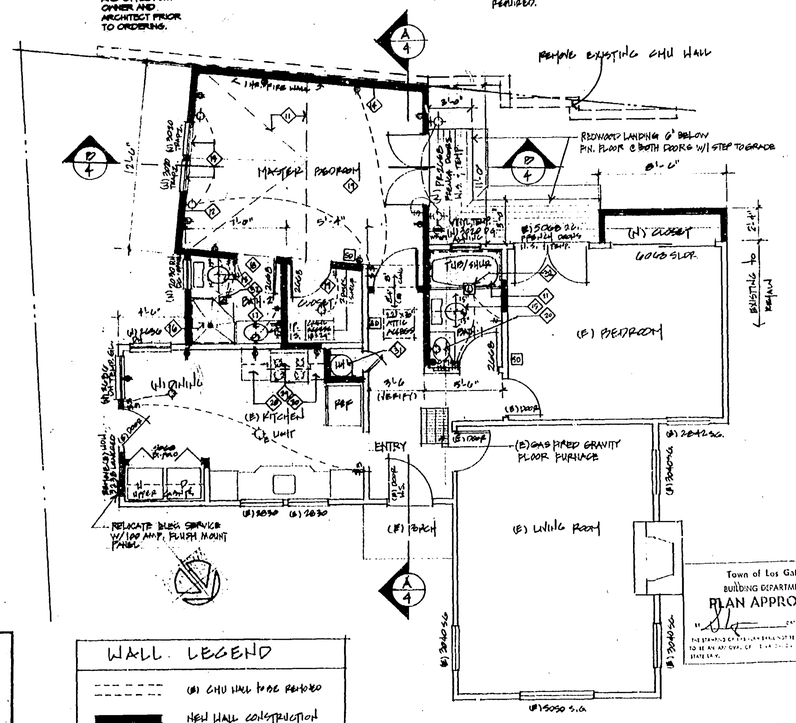
41. PROVIDE NEW 24" SHOWER ; UPPER LIGHT ; VERIFY FINISH W/OWNER.

42. RELOCATE (E) GAS PANEL ; OVEN, RANGE TOP ; RE-PLUMB AS REQUIRED.

43. 15" SQUARE ATTIC VENT.

44. PROVIDE NEW 24" SHOWER ; UPPER LIGHT ; VERIFY FINISH W/OWNER.

45. COMBINATION EXHAUST FAN AND FLUORESCENT LIGHT TO PROVIDE 40 LUMENS/SQFT. SWITCH FAN SEPARATELY



WALL LEGEND

- (E) CHU WALL TO BE REMOVED
- NEW WALL CONSTRUCTION
- (E) WALL TO REMAIN

Town of Los Gatos
BUILDING DEPARTMENT
PLAN APPROVED
1/25/96
THE STAMPING OF THIS PLAN DOES NOT INCLUDE THE APPROVAL OF ANY DEPARTMENT OTHER THAN THE BUILDING DEPARTMENT. COMPLIANCE WITH ALL APPLICABLE CODES AND ORDINANCES IS REQUIRED.

PLANNING DEPARTMENT
APPROVED
THESE PLANS HAVE BEEN APPROVED AS NOTED

LICENSED ARCHITECT
GARY BRUCE HUBBARD
C 19245
REN. 2/28/97
STATE OF CALIFORNIA

REMODELED FLOOR PLAN — 1/4" = 1'-0" — 1,091 Sq Ft

REVISIONS	BY
1/19/96	

P.O. BOX 1388 • LOS GATOS, CA. • 95031 • (408) 354-4...

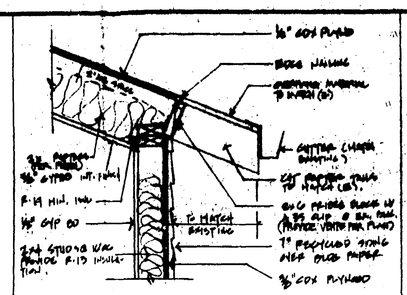
THE SAMMETA RESIDENCE

A REMODEL AND ADDITION TO

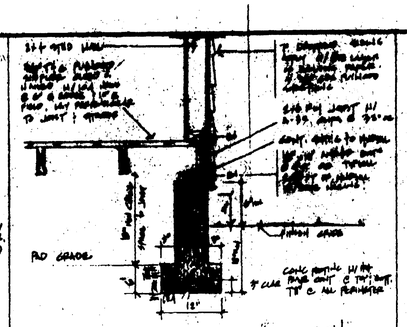
821 BACHMAN AVENUE LOS GATOS, CALIF

Date 12-26-95
Scale AS shown
Drawn MAF
Job
Sheet 2
Of 4 Sheets

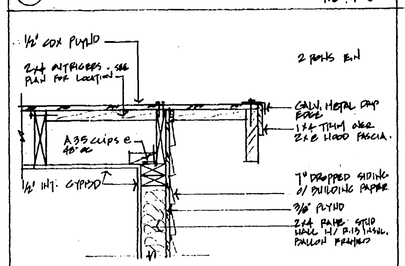
24X



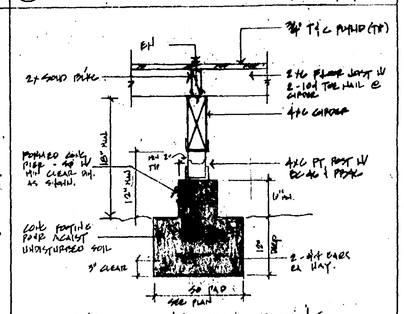
⑤ EAVE DETAIL 1½"=1'-0"



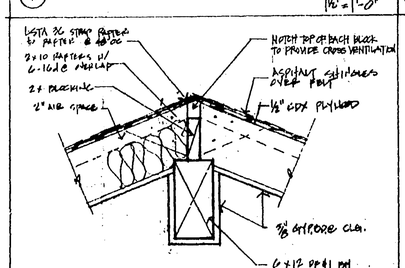
① TYPICAL PERIMETER FTG 1"=1'-0"



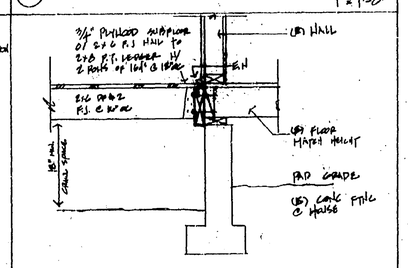
⑥ RAKE DETAIL 1½"=1'-0"



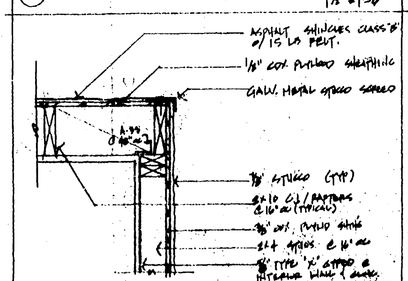
② TYPICAL INT. PIER FOOTING 1"=1'-0"



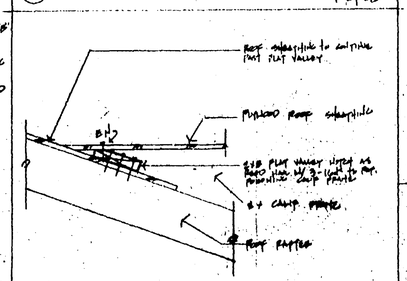
⑦ RIDGE BEAM @ BEDROOM 1½"=1'-0"



③ (E) FTNG to HSE FLOOR DTL 1"=1'-0"



⑧ RAKE DETAIL @ 1 HR WALL 1½"=1'-0"

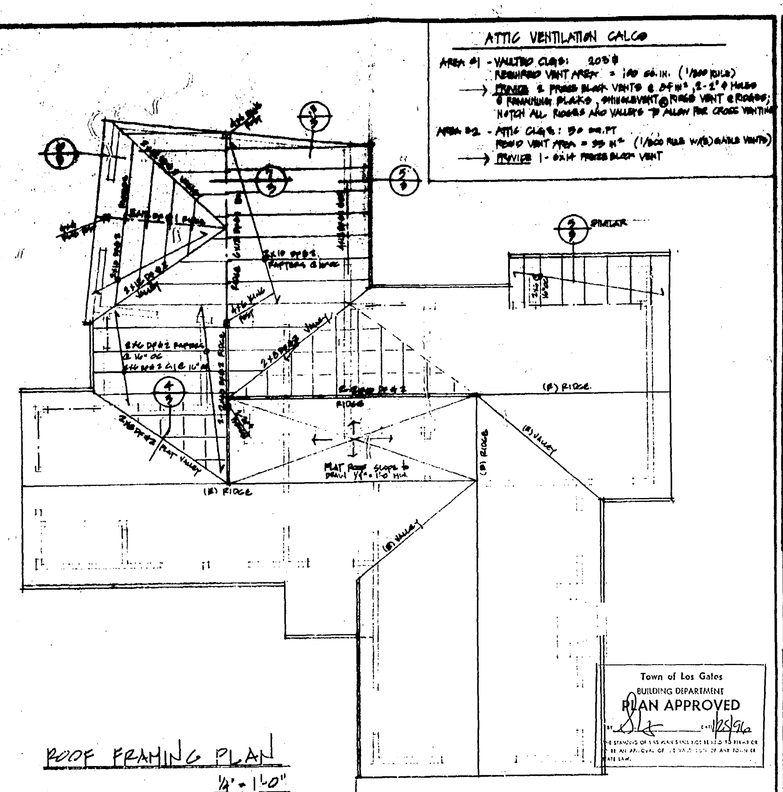


④ CALIP FRAME DTL H/S

ATTIC VENTILATION CALCS

AREA #1 - VAULTED CLGS: 203 SF
REQUIRED VENT AREA = 1/150 SQ. IN. (1/300 RULE)
→ PROVIDE 6 POWER BLACK VENTS @ 24"W'S 2-2" Ø HOLES @ 10" MINIMUM SPACING, SHINGLE VENT @ RIDGE & RIDGE; NOTCH ALL RIDGES AND VALLEYS TO ALLOW FOR CROSS VENTING

AREA #2 - ATTIC CLGS: 50 SQ. FT.
REQ'D VENT AREA = 50 IN² (1/300 RULE W/(50) GABLE VENTS)
→ PROVIDE 1 - 6x14 PRESS BLOCK VENT

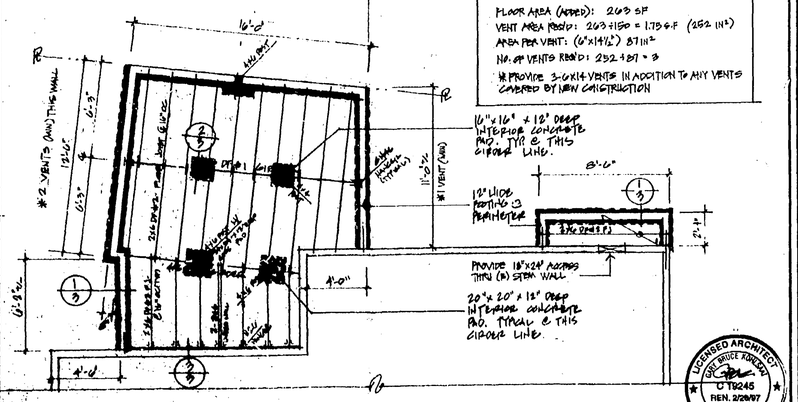


ROOF FRAMING PLAN 1/4"=1'-0"

Town of Los Gatos
BUILDING DEPARTMENT
PLAN APPROVED
By [signature] Date 12/5/96
THIS STANDING OF THIS PLAN SHALL NOT BE TAKEN TO BE A PERMIT OR AN APPROVAL OF ANY PART OF THE WORK HEREIN SHOWN OR NOTED IN VIOLATION OF ANY LAW.

CRAWL SPACE VENTILATION TABLE

FLOOR AREA (ADDED): 263 SF
VENT AREA REQ'D: 263 ÷ 150 = 1.75 S.F. (252 IN²)
AREA PER VENT: (6"x14½") 87 IN²
NO. OF VENTS REQ'D: 252 ÷ 87 = 3
→ PROVIDE 3-6X14 VENTS IN ADDITION TO ANY VENTS COVERED BY NEW CONSTRUCTION



PARTIAL FOUNDATION PLAN 1/4"=1'-0"

LICENSED ARCHITECT
GEORGE FONTES
C 19245
REN. 2/29/97
STATE OF CALIFORNIA

REVISIONS	BY
1/22/96	

A REMODEL AND ADDITION TO
THE SAMMETA RESIDENCE
BY BACHMAN ARCHES
LOS GATOS, CALIF.

Date 12-26-95
Scale 1/4, 1/2 = 1'-0"
Drawn HM
Job
Sheet 3 of 4

24 X 36 PRINTED ON NO. VISION DUPLICATING

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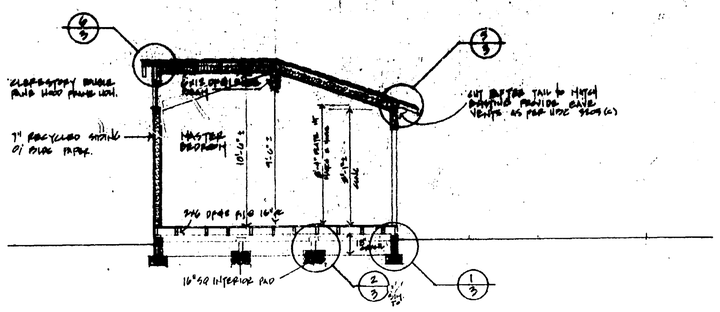
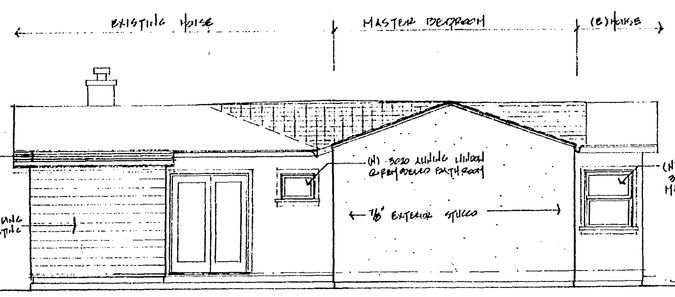


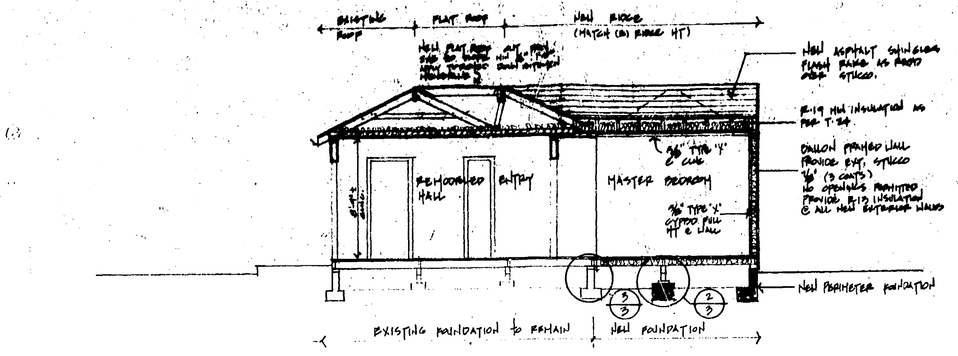
(B) BUILDING SECTION

1/4" = 1'-0"



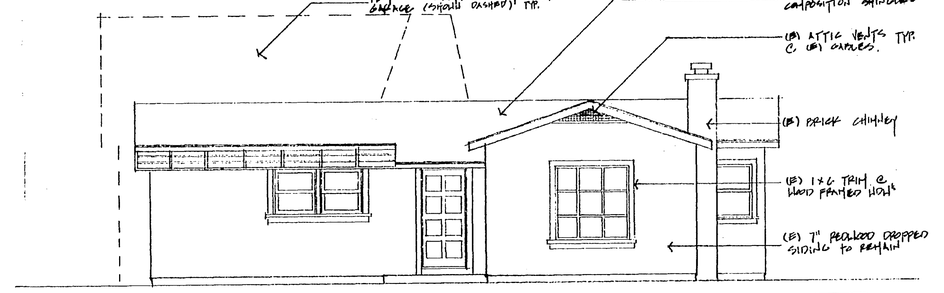
SOUTH - WEST ELEVATION (BACK)

1/4" = 1'-0"



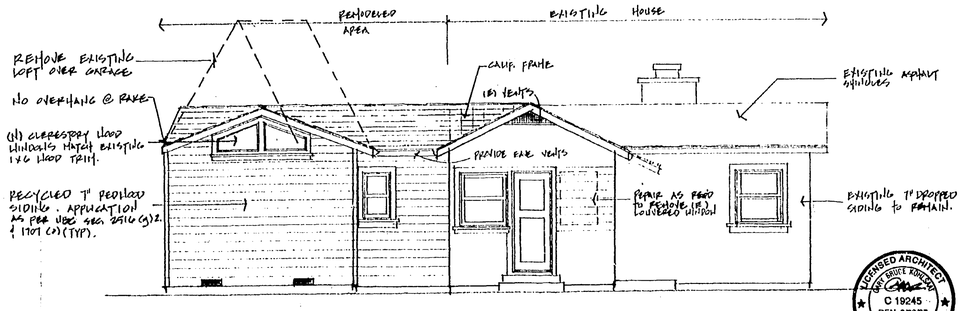
NORTH - WEST ELEVATION (SIDE)

1/4" = 1'-0"



(A) BUILDING SECTION

1/4" = 1'-0"



NORTH - EAST ELEVATION (FRONT LOOKING FROM BACHMAN AVE.)

1/4" = 1'-0"

SOUTH - EAST ELEVATION (SIDE LOOKING FROM ALLEY WAY)

1/4" = 1'-0"

Town of Los Gatos
BUILDING DEPARTMENT
PLAN APPROVED
1/20/96

REVISIONS	BY
1/23/96	

P.O. BOX 1300 · LOS GATOS, CA.

THE SAMETA RESIDENCE

A REMODEL AND ADDITION TO

321 BACHMAN AVENUE · LOS GATOS, CALIF.

LICENSED ARCHITECT
JOE BRUCE JOHNSON
C 19245
REN. 2/28/97
STATE OF CALIFORNIA

Date	12-26-95
Scale	AS SHOWN
Drawn	HAK
Job	
Sheet	4
Of 4	Sheets

24X

GENERAL NOTES

-THE FOLLOWING SPECIFICATIONS SHALL CONFORM TO THE 1991 UNIFORM BUILDING CODE AND ANY OTHER CITY ORDINANCES WHICH ARE IN FORCE AT THE TIME OF THIS PROJECT.

-CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS, PRIOR TO STARTING ANY FIELD WORK.

-ANY DEVIATION CALLED BY THE FIELD CONDITIONS, OR ANY CONDITIONS DIFFERENT FROM THOSE INDICATED ON PLANS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION. ANY DISCREPANCY NOT REPORTED TO THE ENGINEER, WILL ABSOLVE THE ENGINEER FROM ANY LIABILITY.

-TYPICAL DETAILS SHALL APPLY WHERE NO SPECIFIC DETAILS OR SECTIONS ARE PROVIDED.

-DIMENSIONS SHOWN ON PLANS OR DETAILS TAKE PRECEDENCE OVER SCALES SHOWN.

-THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF ALL WORK IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.

STRUCTURAL STEEL

-STRUCTURAL STEEL SHALL CONFORM TO A.S.T.M. (A-36) SPECIFCATIONS AND TO THE A.I.S.C. SPECIFICATIONS FOR FABRICATION AND ERECTION.

-ALL BOLTS SHALL CONFORM TO A.S.T.M. (A-307) FOR UNFINSHED BOLTS.

-ALL BOLT HOLES IN STEEL MEMBERS SHALL BE TRUE, BURNING OF HOLES FOR CONNECTIONS WILL NOT BE PERMITTED.

-PROVIDE FULL BEARING ON UNTHREADED PORTION OF BOLT SHANK FOR ALL STEEL CONNECTIONS.

-PROVIDE LEVELING NUTS FOR ALL BOLTS AT BEAM SEATS AND COLUMN BASE PLATES.

-ALL NUTS FOR STRUCTURAL STEEL CONNECTIONS SHALL BE HEAVY HEXAGONAL NUTS.

-ALL WELDING SHALL BE AS INDICATED ON THE DETAILS AND PERFORMED IN A QUALIFIED SHOP, UNDER CONTINUOUS INSPECTION PER U.B.C. 306. FIELD WELDING, OTHER THAN MISCELLANEOUS TACK WELDING, IS NOT PERMITTED, UNLESS NOTED OTHERWISE IN THE DETAILS.

LUMBER

-WOOD MEMBERS LESS THAN 4" IN WIDTH SHALL BE DOUGLAS FIR NO. 2 AND 4" OR WIDER SHALL BE DOUGLAS FIR NO. 1, UNLESS NOTED OTHERWISE ON PLANS.

-UNLESS NOTED OTHERWISE ON PLANS, ALL NAILING SHALL BE PER UNIFORM BUILDING CODE, TABLE NO. 25-Q.

-ALL CONNECTING HARDWARE SHALL BE SIMPSON COMPANY TYPE OR EQUAL, AND INSTALATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS, UNLESS NOTED OTHERWISE ON PLANS.

-GLU-LAMINATED BEAMS SHALL BE OF A GRADE COMBINATION PROVIDING A MINIMUM Fb=2400 psi. CAMBER AS INDICATED ON PLANS.

-ROOF SHEATHING SHALL BE MIN. 1/2" CDX WITH EXTERIOR GLUE, GROUP 2. EXPOSED SHEATHING AT ROOF OVERHANG SHALL BE AS INDICATED ON THE ARCHITECT'S DRAWINGS.

-WALL SHEATHING, IF REQUIRED, SHALL BE MIN. 3/8" CDX PLYWOOD WITH EXTERIOR GLUE, GROUP 2.

-FLOOR SHEATHING SHALL BE T&G INT-APA WITH EXTERIOR GLUE, GROUP 2, SEE PLANS FOR SIZE.

-BEARING AND NONBEARING WALLS SHALL HAVE DOUBLE TOP PLATES, LAPPED AT INTERSECTIONS. PLATE JOINTS SHALL BE STAGGERED 4'-0" MIN. AS INDICATED ON THE STRUCTURAL DETAILS.

-UNLESS NOTED OTHERWISE ON PLANS, WALLS SHALL BE OF 2 x 4 STUDS (STUD GRADE OR BETTER) AT 16" ON CENTER.

-ALL HEADERS ARE AS NOTED ON PLANS.

-ALL WOOD BEARING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR OR REDWOOD.

-HOLES FOR BOLTS SHALL BE BORED WITH A BIT 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER. ALL BOLTS SHALL BE RETIGHTENED PRIOR TO APPLICATION OF PLYWOOD, GYP. BOARD, ETC.

-STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, ETC. UNLESS SPECIFICALLY NOTED OR DETAILED.

-2x SOLID BLOCKING SHALL BE PLACED BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS.

-ALL BOLTS BEARING ON WOOD SHALL HAVE STANDARD CUT WASHERS UNDER HEAD AND NUT, UNLESS NOTED OTHERWISE.

CONCRETE

-CONCRETE FOR SLABS ON GROUND, BEAM FOOTINGS OR PIERS SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 2500 psi AT 28 DAYS, UNLESS NOTED OTHERWISE ON PLANS.

-MAXIMUM AGGREGATE SIZE SHALL BE 3/4", AND MAXIMUM SLUMP SHALL BE 4 1/2".

-ANCHOR BOLTS, HOLD-DOWN BOLTS, DOWELS, AND OTHER REQUIRED INSERTS, SHALL BE POSITIONED AND FIRMLY SECURED IN PLACE, BEFORE CONCRETE IS POURED.

-CONTRACTOR SHALL TAKE ALL THE NECESSARY MEASURES TO PROVIDE A PROPER COMPACTION OF THE CONCRETE.

-THE EXCAVATED BOTTOM OF ALL FOOTINGS SHALL EXTEND TO ELEVATIONS SHOWN ON THE DETAILS AND THE FOOTINGS SHALL BE POURED IN NEAT EXCAVATIONS, WITHOUT SIDE FORMS AS POSSIBLE.

REINFORCING STEEL

-REINFORCING STEEL SHALL BE DEFORMED BARS, CONFORMING TO ASTM A615-40 REQUIREMENTS AND WELDED WIRE MESH PER ASTM SPECIFICATION A-185.

-BARS NO. 4 AND SMALLER SHALL BE OF GRADE 40, AND BARS NO. 5 AND LARGER SHALL BE OF GRADE 60.

-ALL REINFORCING BARS SHALL BE CLEAN OF ANY RUST, OR FOREIGN MATERIALS.

-ALL REINFORCING SPLICES SHALL BE LAPPED A MINIMUM OF 30 BAR DIAMETERS BUT NOT LESS THAN 24".

-CONCRETE COVERAGE FOR REINFORCEMENT SHALL BE:
- 3" WHERE POURED AGAINST EARTH,
- 2" WHERE POURED AGAINST FORMS,
- 1" FOR SLABS POURED AGAINST FORMS.

-SEE PLAN FOR QUANTITY AND LOCATION OF ANCHOR BOLTS, LOCATE BOLTS WITHIN 12" FROM CORNERS AND BUTT JOINTS.

CERTIFICATE OF COMPLIANCE: RESIDENTIAL — Page 1 — CF-1R

Project Title.......... SAMMETA ADDITION — Date........ 12/20/95
Project Address........ 321 BACHMAN DR, LOS GATOS CA 95030
Documentation Author... DAVID W. KNIGHT
Company................ MONTEREY ENERGY GROUP INC
Telephone.............. (408) 373-8330
Compliance Method...... MICROPAS4 by Enercomp, Inc.
Climate Zone........... 04

BUILDING PERMIT # / PLAN CHECK / DATE / FIELD CHECK / DATE

MICROPAS4 v4.02 File-SAMMETA Wth-CTZ04S92 Program-FORM CF-1R
User#-MP0113 User-MONTEREY ENERGY GROUP INC Run-R-19R R-13W R-19F 3P GAS

GENERAL INFORMATION

Conditioned Floor Area..... 318.7 sf
Building Type.............. Single Family Detached
Construction Type.......... Addition Alone
Building Front Orientation. Front Facing 33 deg (N)
Number of Dwelling Units... .399
Number of Stories.......... 1
Floor Construction Type.... Raised Floor (Package B)

BUILDING SHELL INSULATION

Component Type	Insulation R-value	Assembly U-Value	Location/Comments
Wall	R-13	0.088	north, east, south, west
Roof	R-19	0.051	vaulted
Floor	R-19	0.037	to crawlspace

FENESTRATION

Orientation	Area (sf)	U-Value	# of Panes	Interior Shading/ Description	Exterior Shading	Over-hang/ Fins	Framing Type
Window Left (E)	19.0	0.600	2	Drapes.Std	None	None	Wood
Window Right (W)	40.0	0.600	2	Drapes.Std	None	None	Wood

HVAC SYSTEMS

Equipment Type	Minimum Efficiency	Duct Location	Duct R-value	Thermostat Type
Furnace	0.750 AFUE	Crawlspace	R-4.2	Setback
NoCooling	10.00 SEER	Attic	R-4.2	Setback

SPECIAL FEATURES/REMARKS

CERTIFICATE OF COMPLIANCE: RESIDENTIAL — Page 2 — CF-1R

Project Title.......... SAMMETA ADDITION — Date........ 12/20/95
MICROPAS4 v4.02 File-SAMMETA Wth-CTZ04S92 Program-FORM CF-1R
User#-MP0113 User-MONTEREY ENERGY GROUP INC Run-R-19R R-13W R-19F 3P GAS

COMPLIANCE STATEMENT

This certificate of compliance lists the building features and performance specifications needed to comply with Title-24, Parts 1 and 6 of the California Code of Regulations, and the administrative regulations to implement them. This certificate has been signed by the individual with overall design responsibility. When this certificate of compliance is submitted for a single building plan to be built in multiple orientations, any shading feature that is varied is indicated in the Special Features/Remarks section.

DESIGNER or OWNER
Name.... GARY KOHLSAAT
Company. GARY KOHLSAAT ARCHITECT
Address. 501 N. SANTA CRUZ AVE. SA, LOS GATOS CA 95030
Phone... (408) 395-3555
License.
Signed.. [signature] 1/19/96 (date)

DOCUMENTATION AUTHOR
Name.... DAVID W. KNIGHT
Company. MONTEREY ENERGY GROUP INC
Address. 287 FOREST AVE. SUITE 5, PACIFIC GROVE CA 93950, C
Phone... (408) 373-8330
Signed.. [signature] 12/20/95 (date)

ENFORCEMENT AGENCY
Name....
Title...
Agency..
Phone...
Signed.. (date)

Certified Energy Analyst — David W. Knight — R 90-01-142 — CABEC California Association of Building Energy Consultants

Mandatory Measures Checklist: Residential — MF-1R

NOTE: Lowrise residential buildings subject to the Standards must contain these measures regardless of the compliance approach used. Items marked with an asterisk (*) may be superseded by more stringent compliance requirements listed on the Certificate of Compliance. When this checklist is incorporated into the permit documents, the features noted shall be considered by all parties as binding minimum component performance specifications for the mandatory measures whether they are shown elsewhere in the documents or on this checklist only.

DESCRIPTION	DESIGNER	ENFORCEMENT
Building Envelope Measures		
* §150(a): Minimum R-19 ceiling insulation.	✓	
§150(b): Loose fill insulation manufacturer's labeled R-Value.	✓	
* §150(c): Minimum R-11 wall insulation in framed walls (does not apply to exterior mass walls).	✓	
* §150(d): Minimum R-13 raised floor insulation in framed floors, minimum R-8 in concrete raised floors.	✓	
§150(f): Slab edge insulation - water absorption rate no greater than 0.3%, water vapor transmission rate no greater than 2.0 perm/inch.	n/a	
§118: Insulation specified or installed meets California Energy Commission quality standards. Indicate type and form.	✓	
§116-17: Fenestration Products, Exterior Doors and Infiltration/Exfiltration Controls a. Doors and windows between conditioned and unconditioned spaces designed to limit air leakage. b. Manufactured fenestration products have label with certified U-value, and infiltration certification. c. Exterior doors and windows weatherstripped; all joints and penetrations caulked and sealed.	✓	
§150(g): Vapor barriers mandatory in Climate Zones 14 and 16 only.	n/a	
§150(l): Special infiltration barrier installed to comply with §151 meets Commission quality standards.	n/a	
§150(e): Installation of Fireplaces, Decorative Gas Appliances and Gas Logs 1. Masonry and factory-built fireplaces have: a. Closeable metal or glass door b. Outside air intake with damper and control c. Flue damper and control 2. No continuous burning gas pilots allowed.		
Space Conditioning, Water Heating and Plumbing System Measures		
§110-113: HVAC equipment, water heaters, showerheads and faucets certified by the Commission.	n/a	
§150(i): Setback thermostat on all applicable heating systems.	✓	
§150(j): Pipe and Tank Insulation 1. Indirect hot water tanks (e.g., unfired storage tanks or backup solar hot water tanks) have insulation blanket (R-12 or greater) or combined interior/exterior insulation (R-16 or greater). 2. First 5 feet of pipes closest to water heater tank, non-recirculating systems, insulated (R-4 or greater). 3. All buried or exposed piping insulated in recirculating sections of hot water system. 4. Cooling system piping below 55°F insulated. 5. Piping insulated between heating source and indirect hot water tank.	✓	
* §150(m): Ducts and Fans 1. Ducts constructed, installed and sealed to comply with UMC Sections 1002 and 1004; ducts insulated to a minimum installed value of R-4.2 or ducts enclosed entirely within conditioned space. 2. Exhaust fan systems have backdraft or automatic dampers. 3. Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers.	✓	
§114: Pool and Spa Heating Systems and Equipment 1. System is certified with 78% thermal efficiency, on-off switch, weatherproof operating instructions, no electric resistance heating and no pilot light. 2. System is installed with: a. At least 36" pipe between filter and heater for future solar heating. b. Cover for outdoor pools or outdoor spa. 3. Pool system has directional inlets and a circulation pump time switch.	n/a	
§115: Gas-fired central furnaces, pool heaters, spa heaters or household cooking appliances have no continuously burning pilot light. (Exception: Non-electrical cooking appliances with pilot < 150 Btu/hr.)	n/a	
Lighting Measures		
§150(k): 40 lumens/watt or greater for general lighting in kitchens and rooms with water fixtures, and recessed ceiling fixtures IC (insulation cover) approved.	✓	

Revised January 1992

RE: 321 Bachman Avenue
Architecture and Site Application S-95-87

Requesting approval of plans to remove an existing second story loft, remove a sunroom, remodel a garage to add a second bedroom and bath, and to permit a reduction in side and rear setbacks on a nonconforming lot in the R-1D LHP zone.
PROPERTY OWNER: Radhi Sammeta
APPLICANT: Gary Kohlsaat, Architect

Dear Mr. Kohlsaat:

On December 18, 1995 the above referenced application was found to be Categorically Exempt from CEQA, Section 15301, by the Development Review Committee. The Committee recommended approval of the application subject to the following conditions:

To the Satisfaction of the Planning Director
(Planning Section)

1. All conditions of this application shall be included on the cover sheet of the Building Permit plans.
2. All windows shall be made of real wood, vinyl clad windows are permitted in the interior for the bathroom.
3. Siding material shall be real wood and not a composite or fabricated wood product.
4. The parking area shall be paved pursuant to Town Code.

To the Satisfaction of the Director of Parks, Forestry and Maintenance Services

5. Existing trees shall be protected prior to and during construction by measures subject to approval.
6. All existing planted trees shown on the plan are specific subjects of approval of this plan and shall remain on site.

To the Satisfaction of the Director of Building and Engineering Services

7. The maximum size of construction plans submitted for building permits shall be 24 in. X 36 in.
8. California Title 24 Energy Compliance forms shall be blue lined on the construction plans.
9. The construction plans for this project shall be prepared under direct supervision of a licensed architect or engineer. (Business and Professionals Code Section 5538)
10. This project requires minimum Class C roofing assembly.
11. The Town standard Santa Clara Valley Nonpoint Source Pollution Control Program specification sheet shall be part of plan submittal. The specification sheet (Size 24" X 36") is available at the Building Department service counter.

12. The Project requires the following agencies approval before issuing a building permit:
a) West Valley Sanitation District: 378-2408
b) Central Fire District: 378-4015
c) Your project School district certificate of approval from the Los Gatos School District: 395-5570*

*Note: obtain the School district form from the Town Building Department.

NOTE:
ALL WORK SHALL COMPLY W/ 1991 UBC, UMC, UPC AND 1990 NEC.

PROJECT SUMMARY

PROJECT ADDRESS: 321 BACHMAN AVENUE, LOS GATOS, CA 95030

OWNER: RADHI SAMMETA, 321 BACHMAN AVE., LOS GATOS, CA 95030, (408) 395-9245

A.P.N.: 510-17-85

ZONING: R-1D:LHP

LOT AREA: 2,552 sq. ft. (+/-)

BUILDING AREA:

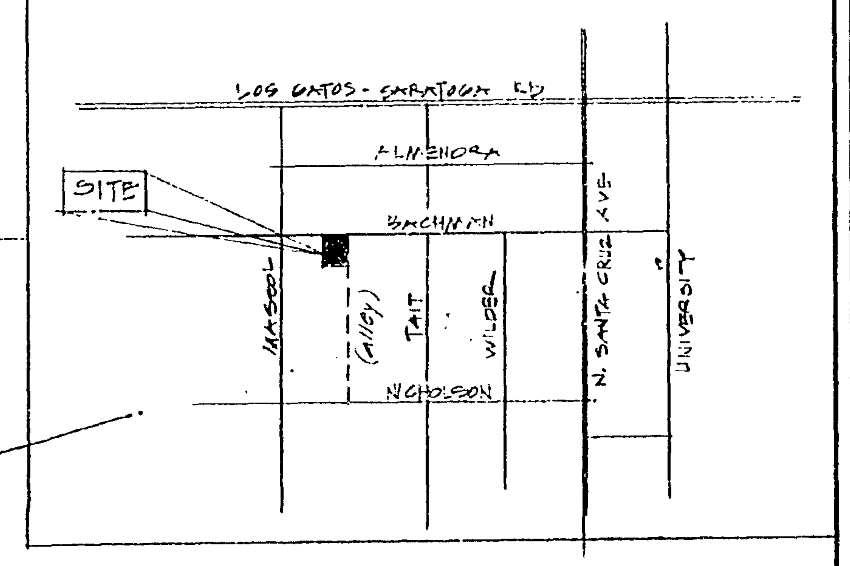
	EXISTING	REMOVED	ADDITION	TOTAL
FIRST FLOOR	1,248 s.f.	467	300	1,081 s.f.
GARAGE	198 s.f.	198	0	0

F.A.R. ADJUSTMENT: .35 - [(2.5-5)/25 X .20] = .37 (37 %)

ACTUAL FAR: EXISTING = 49 % PROPOSED = 42 %

SCOPE OF WORK:
REMOVE GARAGE, SUNROOM, AND SECOND STORY LOFT; REPLACE GARAGE AREA WITH SECOND BEDROOM AND BATHROOM; REMODEL EXISTING BATHROOM; PROVIDE ONE UNCOVERED ON-SITE PARKING SPACE

VICINITY MAP

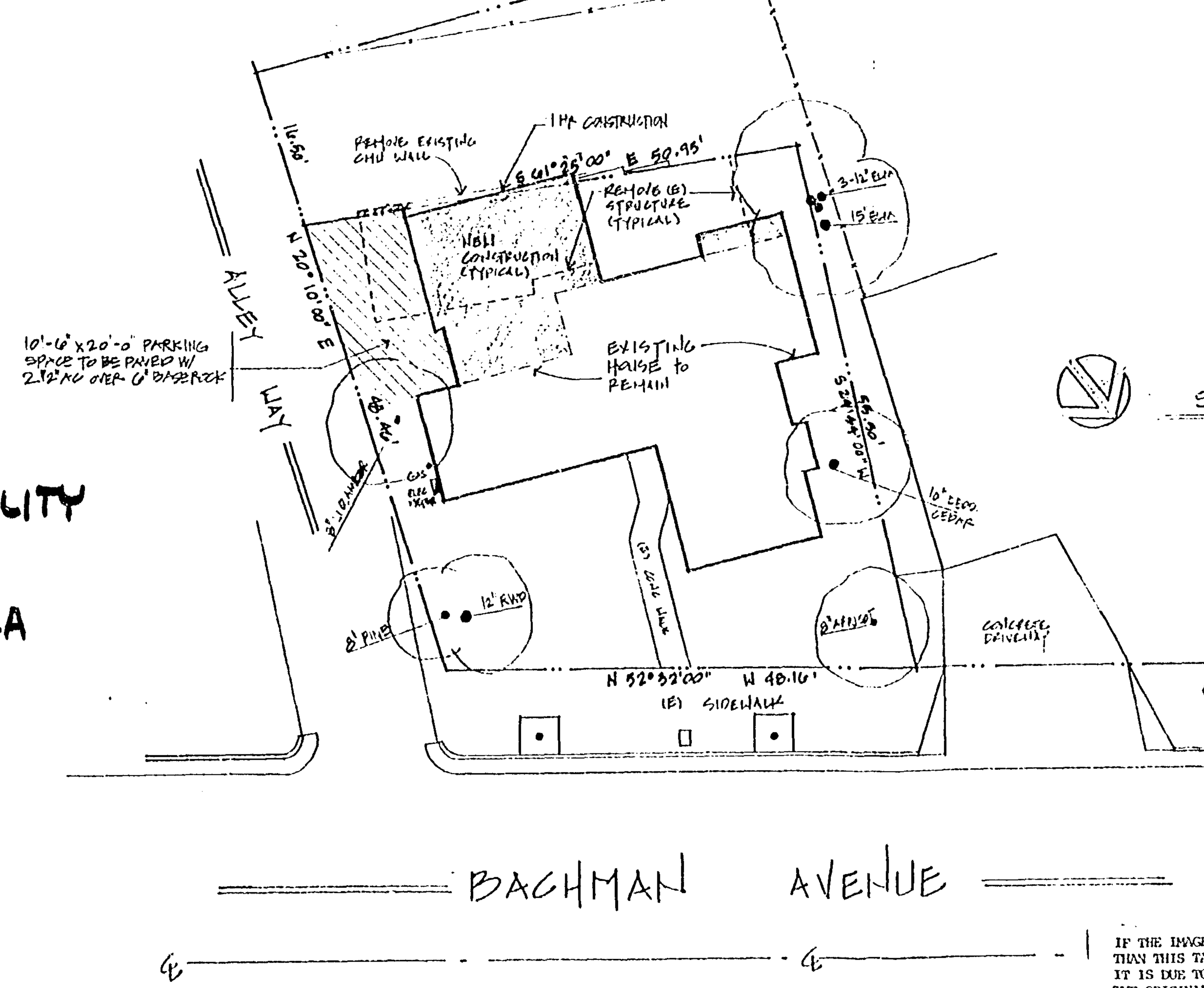


NOTE:

THIS PLAN SET REFLECTS CHANGES TO STRUCTURE RELATED TO LOT LINE ADJUSTMENT. THESE CHANGES ARE MINOR IN NATURE.

OWNER ASSUMES ALL RESPONSIBILITY FOR WORK PERFORMED IN THE AREA OF LOT LINE ADJUSTMENT. THIS AREA HAS A PENDING APEAL PERIOD WHICH MAY REQUIRE FUTURE CHANGES TO THIS PLAN.

R Sammeta
RADHI SAMMETA 2/23/96



SITE PLAN
1" = 10'-0"

Town of Los Gatos
BUILDING DEPARTMENT
PLAN APPROVED
BY [signature] DATE 2/23/96
THE STAMPING OF THIS PLAN SHALL NOT BE HELD TO PERMIT OR TO BE AN APPROVAL OF THE VIOLATION OF ANY TOWN OR STATE LAW.

B95-001131

LICENSED ARCHITECT — GARY BRUCE KOHLSAAT — C 19245 — REN. 2/28/97 — STATE OF CALIFORNIA

IF THE IMAGE IS LESS READABLE THAN THIS TAG, IT IS DUE TO THE QUALITY OF THE ORIGINAL DOCUMENT.

REVISIONS	BY
1/19/96	
2/20/96	

GARY KOHLSAAT ARCHITECT — P.O. BOX 1500 • LOS GATOS, CA. • 95031 • (408) 395-2555

A REMODEL AND ADDITION TO
THE SAMMETA RESIDENCE
321 BACHMAN AVENUE — LOS GATOS, CALIF

Date 12.26.95
Scale As shown
Drawn MAY
Job
Sheet 1 Of 4 Sheets

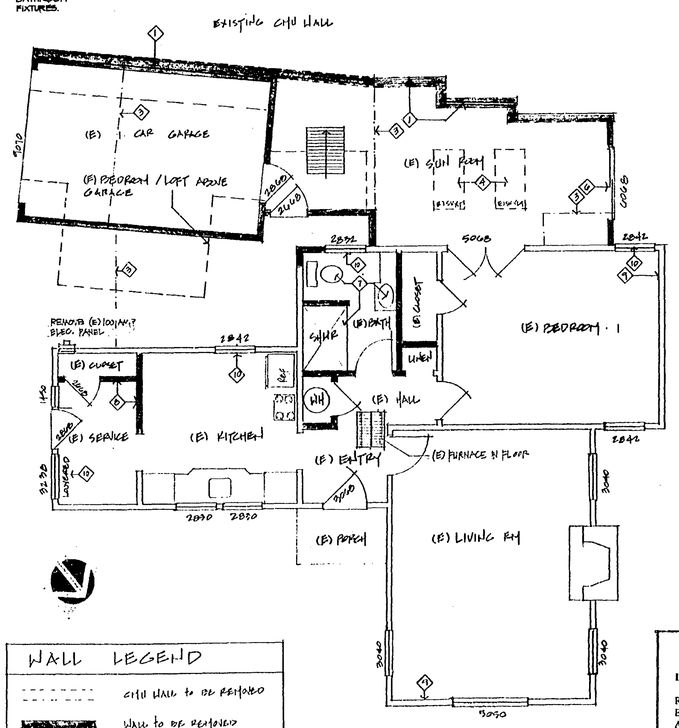
24 X 36 PRINTED ON NO. 1000H CLEARPRINT

24X

KEY

DEMOLITION FLOOR PLAN NOTES:

1. REMOVE EXISTING PORTION OF C.M.U. WALL AS SHOWN.
2. REMOVE ENTIRE 6 GARAGE STRUCTURE INCLUDING LOFT ABOVE ALL THIS AREA IS SHOWN HATCHED.
3. SAW CUT EXISTING SLAB TO PROVIDE FOR FOUNDATION WORK & NEW CONSTRUCTION.
4. REMOVE EXISTING ROOF AND SKYLITE, FROM SUN ROOM.
5. EXISTING 8" C.M.U. WALL TO REMAIN.
6. REMOVE EXISTING 6068 SLIDER AND ENTIRE EXTERIOR WALL FROM SUN ROOM AS INDICATED.
7. REMOVE AND DISPOSE OF ALL EXISTING BATHROOM FIXTURES.
8. INTERIOR WALL TO BE REMOVED (TYPICAL).
9. EXISTING WALL TO REMAIN (TYPICAL).
10. REMOVE EXISTING WINDOW.



WALL LEGEND

- ------ CMU WALL TO BE REMOVED
- ▬▬▬ WALL TO BE REMOVED
- ═══ (E) WALL TO REMAIN

INSULATION SCHEDULE

LOCATION	EXISTING	NEW
RAISED FLOORS	N/A	R-19
EXTERIOR WALLS	N/A	R-13
ATTIC CEILINGS	N/A	R-30
CATHEDRAL CLGS	N/A	R-19

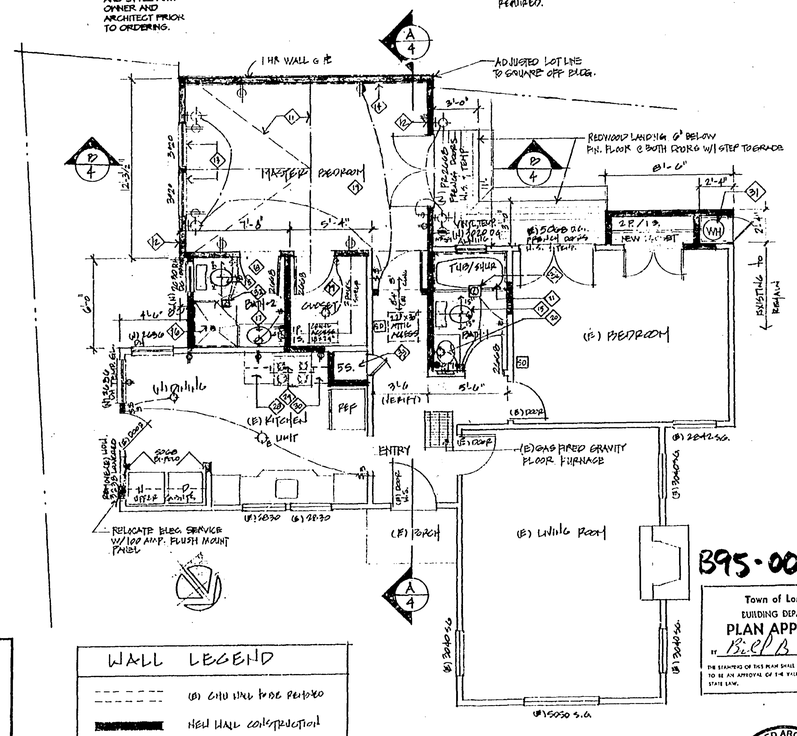
THE FOLLOWING INSULATION VALUES ARE MINIMUMS. REFER TO THE TITLE 24 ENERGY COMPLIANCE CALCULATIONS FOR ADDITIONAL INFORMATION.

AS BUILT : DEMOLITION PLAN — 1/4" = 1'-0" — (E) 1,248 Sq.Ft.

KEY

REMODELED FLOOR PLAN NOTES:

11. OUTLINE OF NEW MASTER BEDROOM CEILING.
12. NEW WALL CONSTRUCTION (TYP.).
13. NEW 3030 D.H. TRAPEZOID WOOD FRAME CLERESTORY WINDOW, SEE EXTERIOR SOUTH-EAST ELEVATION. VERIFY R.O. WITH MFR.
14. PROVIDE 5/8" TYPE 'X' GYPSUM BOARD @ NEW 1 HOUR FIRE RATED WALL. SEE CONSTRUCTION DETAILS FOR ASSEMBLY.
15. NEW LOW FLOW WATER CLOSET WITH A 1.6 GALLON PER FLUSH. VERIFY COLOR AND STYLE WITH OWNER AND ARCHITECT PRIOR TO ORDERING.
16. NEW 86" NEO ANGLE SHOWER STALL ; PROVIDE SAFETY GLAZING AS PER UBC SEC. 2406(d).
17. NEW 9' CABINET WITH VANITY AND DRAWERS. VERIFY FINISHES WITH OWNER AND ARCHITECT.
18. NEW FLOORING @ MASTER BATH . VERIFY TYPE AND STYLE WITH OWNER AND ARCHITECT.
19. PROVIDE AND INSTALL NEW CARPET. VERIFY COLOR AND GRADE WITH OWNER.
20. NEW 7'6" CABINET AND VANITY WITH DRAWERS.
21. PROVIDE TILE SURROUND TO 7' HT. @ TUB SHOWER. PROVIDE SAFETY GLAZING AS PER UBC. SEC. 2406(d).
22. NEW CLOSET. PROVIDE POLE AND SHELF. VERIFY FLOOR FINISH WITH OWNER.
23. INSTALL NEW WATER HEATER IN ATTIC SPACE ABOVE CLOSET. VERIFY SIZE WITH TITLE-24 AND PROVIDE COMBUSTION AIR FOR FUEL BURNING APPLIANCES AS PER UBC AND UMC.
24. ADJUST AS REQUIRED ALL KITCHEN APPLIANCES CONNECTIONS.
25. PROVIDE NEW VINYL FLOORING IN KITCHEN AND DINING AREA. VERIFY STYLE AND PATTERN WITH OWNER.
26. BUILD NEW WALLS TO ACCOMMODATE WASHER AND DRYER. VENT DRYER AS PER UMC SEC. 921.
27. RELOCATE ADJUST EXISTING PLUMBING AS REQUIRED TO ACCOMMODATE NEW REMODELED BATH ROOM FIXTURES.
28. 24" BASE CABINET ; UPPER CABINET VERIFY FINISH W/ OWNER.
29. RELOCATE (E) GAS, PLUG & CAP AT NEW PANEL LOCATION ; RE-PAINT AS REQUIRED.
30. 12" BASE CABINET ; UPPER CABINET VERIFY FINISH W/ OWNER.
31. PROVIDE NEW 40 GAL. WATER HEATER LIKE CURRENT W/ 3/4" THREE QUARTER TURN BRASS WORKING PLATFORM ; SEISMIC STRAP AS PER UBC & UMC. ALSO PROVIDE COMBUSTION AIR FOR FUEL BURNING APPLIANCES. VENT TO 1 3/8" THICK SOLID CORE W/ FULL WEATHERSTRIPPING.
32. COMBINATION EXHAUST FAN AND FLUORESCENT LIGHT TO PROVIDE 40 LUMENS/VENT. SWITCH FAN SEPARATELY
33. LINEN CLOSET W/ 5 ADJ. SHELVES; PROVIDE POLE



WALL LEGEND

- ------ (E) CMU WALL TO BE REMOVED
- ▬▬▬ NEW WALL CONSTRUCTION
- ═══ (E) WALL TO REMAIN

B95-001131

Town of Los Gatos
BUILDING DEPARTMENT
PLAN APPROVED
BY B.C.B DATE 2/23/96
THE STARTING OF THIS PLAN SHALL NOT BE HELD TO PERMIT OR TO BE AN APPROVE OF THE VIOLATION OF ANY TOWN OR STATE LAW.

LICENSED ARCHITECT
GARY BRUCE KORSMO
C 19245
REN. 2/28/97
STATE OF CALIFORNIA

REMODELED FLOOR PLAN — 1/4" = 1'-0" — 1,001 Sq.Ft.

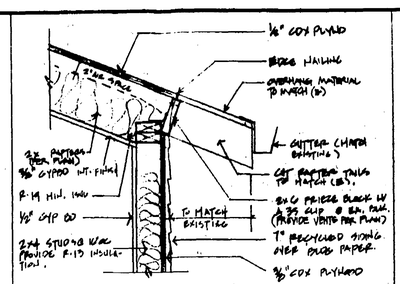
REVISIONS	BY
1/19/96	
2/20/96	

GARY KORSMO ARCHITECT
P.O. BOX 1300 • LOS GATOS, CA. • 95031 • (408) 395-2383

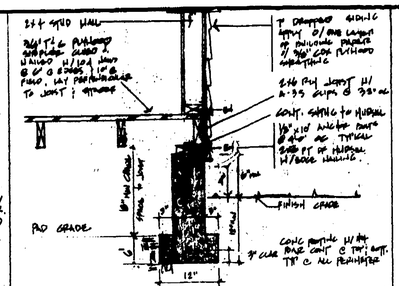
THE SAMMETA RESIDENCE
A REMODEL AND ADDITION TO
521 BACHMAN AVENUE
LOS GATOS, CALIF.

Date	12-26-95
Scale	AS SHOWN
Drawn	MAY
Job	
Sheet	2
Of	4 Sheets

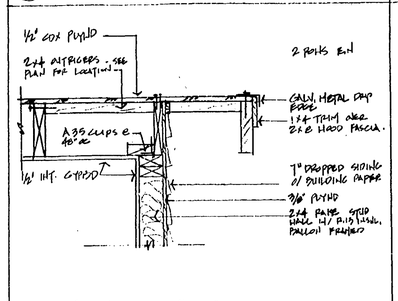
24X



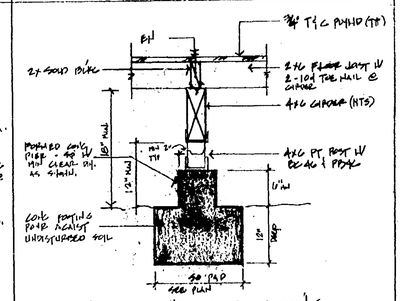
5 EAVE DETAIL 1½" = 1'-0"



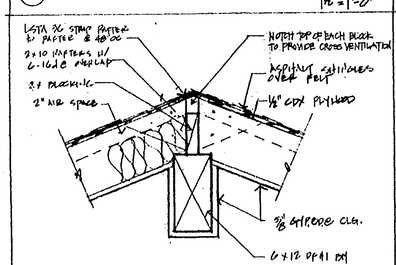
1 TYPICAL PERIMETER FTNG 1" = 1'-0"



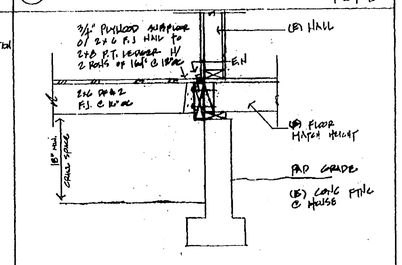
6 RAKE DETAIL 1½" = 1'-0"



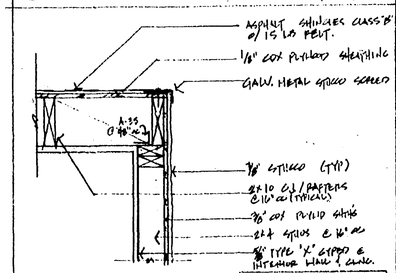
2 TYPICAL INT. PIER FOOTING 1" = 1'-0"



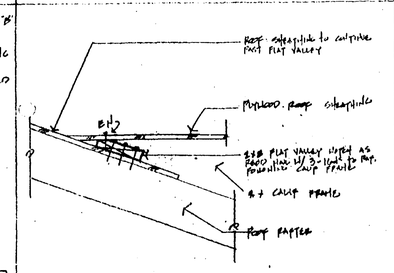
7 RIDGE BEAM @ BEDROOM 1½" = 1'-0"



3 (E) FTNG to 1ST FLOOR DTL 1" = 1'-0"



8 RAKE DETAIL @ 1HR WALL 1½" = 1'-0"

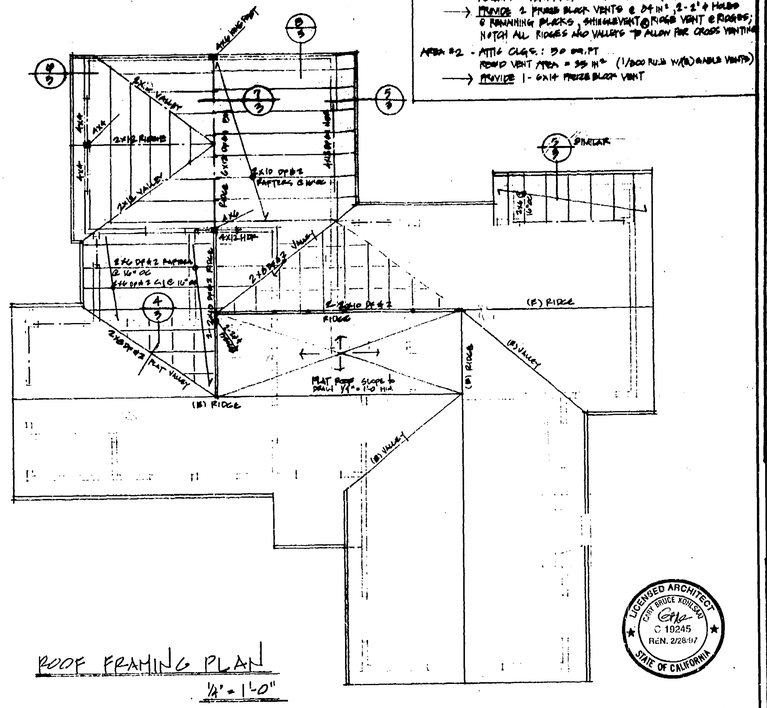


4 CALIF. FRAME DTL H/S

ATTIC VENTILATION CALCS

AREA #1 - VAULTED CLGS: 202 ☐
REQUIRED VENT AREA = 1/300 SQ. IN. (1/300 RULE)
→ PROVIDE: 2 MYERS BLACK VENTS @ 24 IN², 2-2'-0 MOLDED RAINWATER BLOCKS, SHEILDVENT @ RIDGE VENT @ RIDGES; NOTCH ALL RIDGES AND VALLEYS TO ALLOW FOR CROSS VENTING

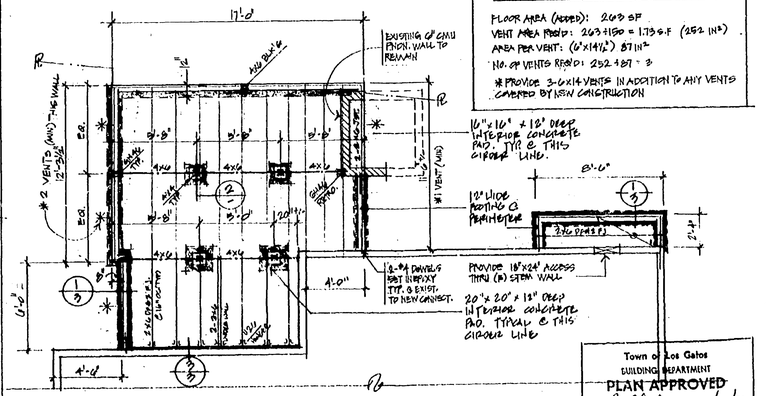
AREA #2 - ATTIC CLGS.: 130 SQ. FT.
REQ'D VENT AREA = 39 IN² (1/300 RULE W/(50) GABLE VENTS)
→ PROVIDE 1 - 6X14 FRIEZE BLOCK VENT



ROOF FRAMING PLAN
¼" = 1'-0"

CRAWL SPACE VENTILATION TABLE

FLOOR AREA (ADDED): 203 SF
VENT AREA REQ'D: 203 ÷ 150 = 1.35 S.F. (252 IN²)
AREA PER VENT: (6"x14½") 87 IN²
NO. OF VENTS REQ'D: 252 ÷ 87 = 3
* PROVIDE 3-6X14 VENTS IN ADDITION TO ANY VENTS COVERED BY NEW CONSTRUCTION



PARTIAL FOUNDATION PLAN
¼" = 1'-0"

Town of Los Gatos
BUILDING DEPARTMENT
PLAN APPROVED
BY Bill B DATE 2/23/96
THE ISSUANCE OF THIS PLAN SHALL NOT BE HELD TO PERMIT OR TO BE AN APPROVAL OF THE VIOLATION OF ANY TOWN OR STATE LAW.

B95-001131

LICENSED ARCHITECT
GARY BRUCE KNIGHT
C 10245
REN. 2/28/97
STATE OF CALIFORNIA

REVISIONS	BY
1/22/96	
2/20/96	

P.O. BOX 1388 • LOS GATOS, CA. • (408)395-4898

A REMODEL AND ADDITION TO

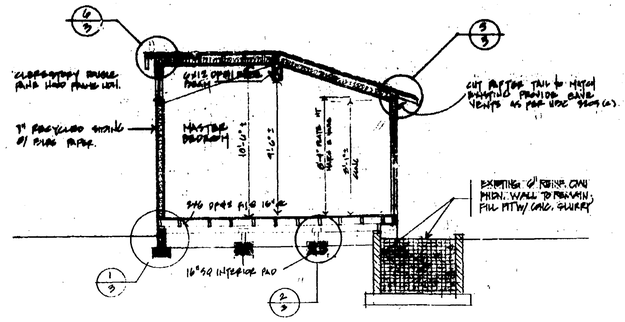
THE SAMMETA RESIDENCE

LOS GATOS, CALIF

821 BACHMAN AVENUE

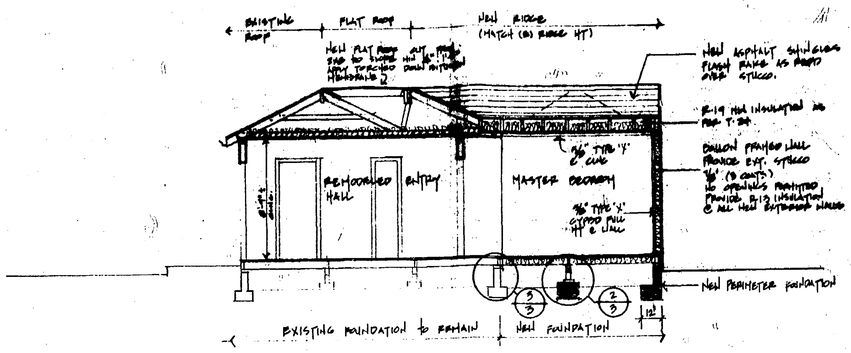
Date	12-22-95
Scale	AS SHOWN
Drawn	HM
Job	
Sheet	3
Of	4 Sheets

24X



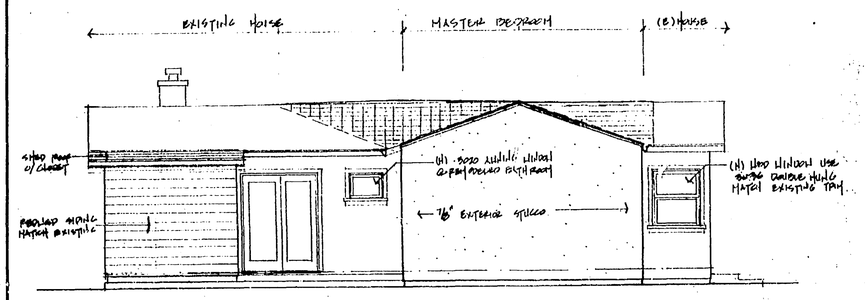
B BUILDING SECTION

1/4" = 1'-0"



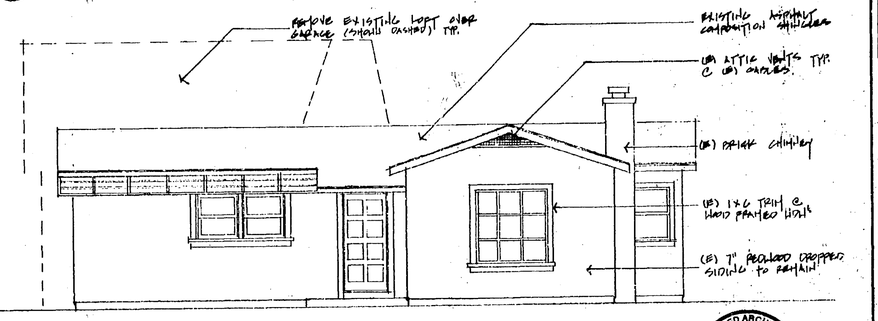
A BUILDING SECTION

1/4" = 1'-0"



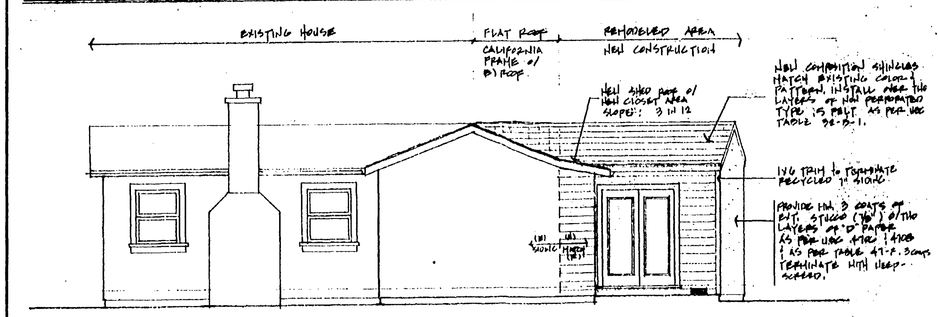
SOUTH - WEST ELEVATION (BACK)

1/4" = 1'-0"



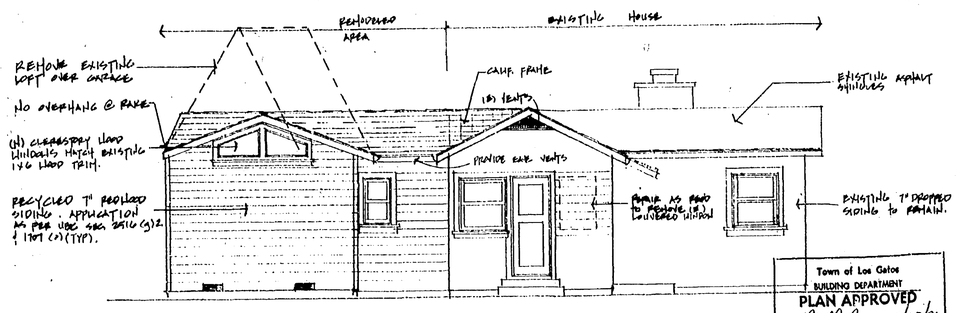
NORTH - EAST ELEVATION (FRONT LOOKING FROM BACHMAN AVE.)

1/4" = 1'-0"



NORTH - WEST ELEVATION (SIDE)

1/4" = 1'-0"



SOUTH - EAST ELEVATION (SIDE LOOKING FROM ALLEY WAY)

1/4" = 1'-0"

LICENSED ARCHITECT
GARY BRUCE ROBISON
C 19245
REN. 2/28/97
STATE OF CALIFORNIA

Town of Los Gatos
BUILDING DEPARTMENT
PLAN APPROVED
BY Bill B. DATE 2/28/96
THE STAMPING OF THIS PLAN SHALL NOT BE HELD TO PERMIT OR TO BE AN APPROVAL OF THE VIOLATION OF ANY PROVISION OF STATE LAW.

BPS-001131

REVISIONS	BY
1/22/96	
2/20/96	

P.O. BOX 1309 • LOS GATOS, CA. 95031 • (408) 354-6872

THE SAMUETA RESIDENCE

A REMODEL AND ADDITION TO
251 BACHMAN AVENUE
LOS GATOS, CALIF.

Date	12-26-95
Scale	AS SHOWN
Drawn	MAX
Job	
Sheet	4
Of 4	Sheets

24X

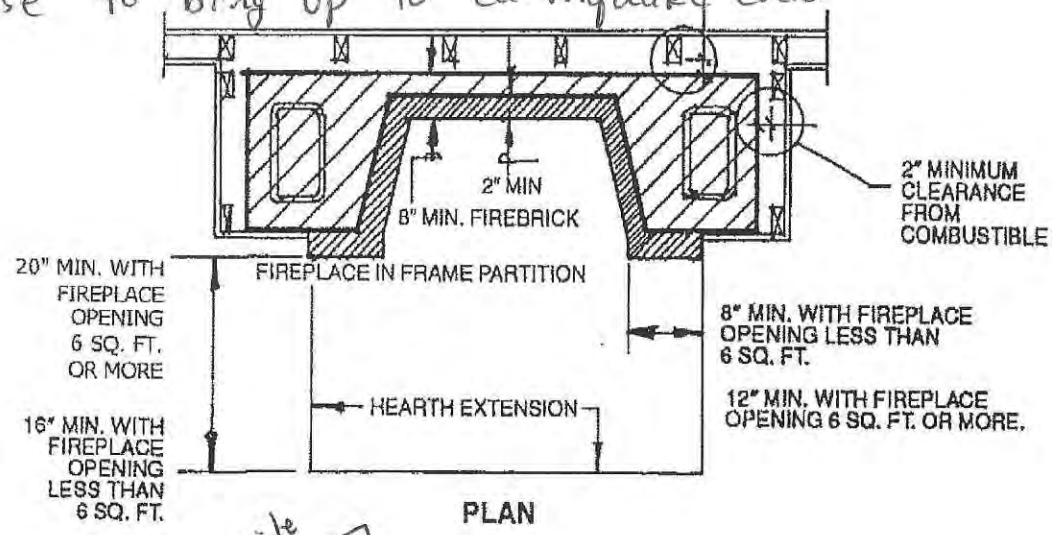
TOWN OF LOS GATOS

STANDARD MASONRY CHIMNEY & FIREPLACE REQUIREMENTS

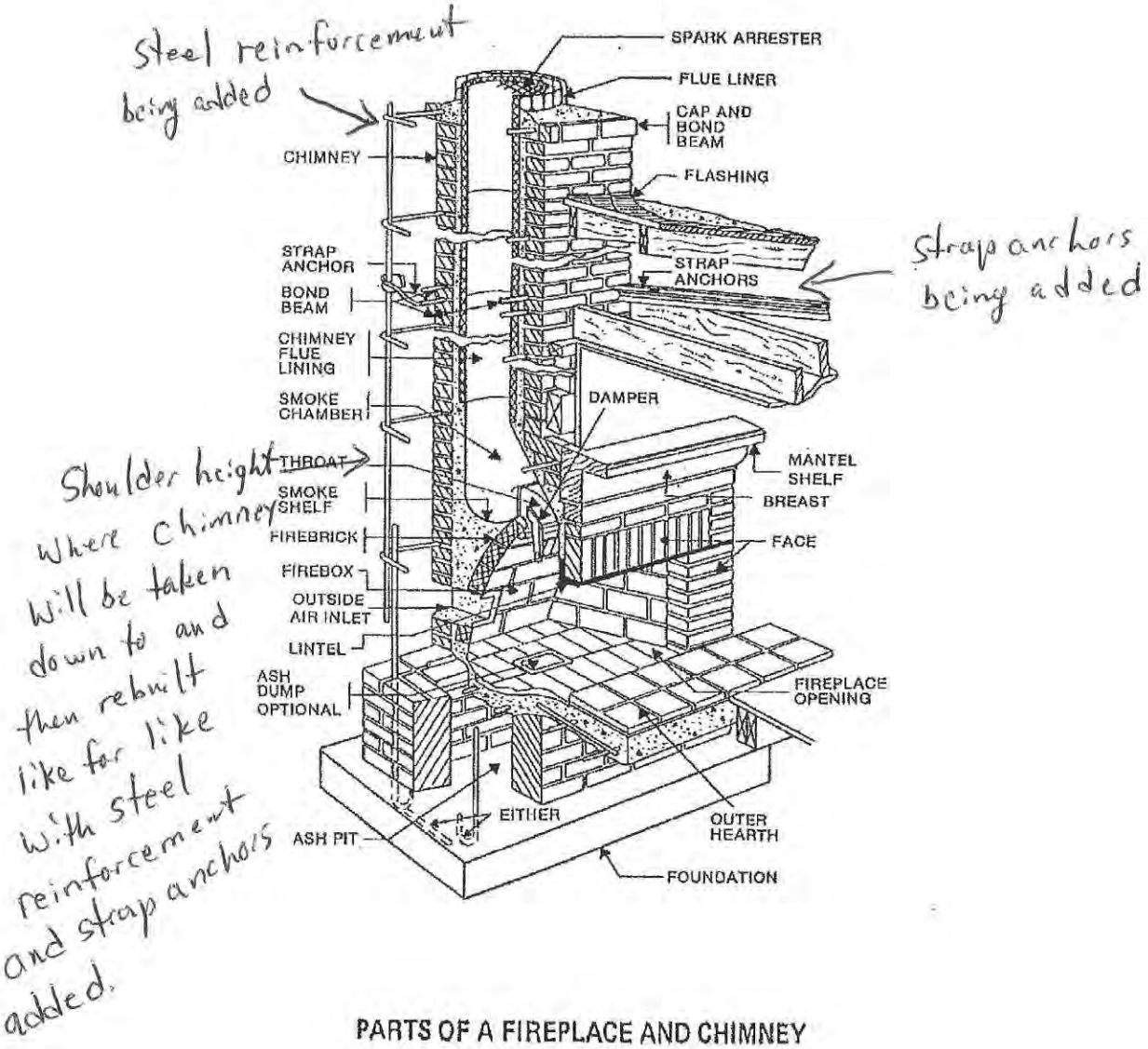
The Town of Los Gatos requires a building permit for any construction, repair or alteration of a masonry chimney or fireplace. The requirements of Chapter 21, Section 2111 of the 2016 California Building Code and the 2016 California Residential Code shall be applicable. Please submit the application and plans to the Town of Los Gatos Community Development Department at 110 E. Main Street, Los Gatos CA. Incomplete submittals will not be accepted. We do not accept submittals by mail or courier. Permits can only be issued to the property owner or a properly licensed contractor.

Per Town of Los Gatos Ordinance 1905, the Town of Los Gatos does not allow new wood-burning appliances or relocation of existing wood-burning appliances that do not meet minimum EPA Phase II Certified Standards or equivalent.

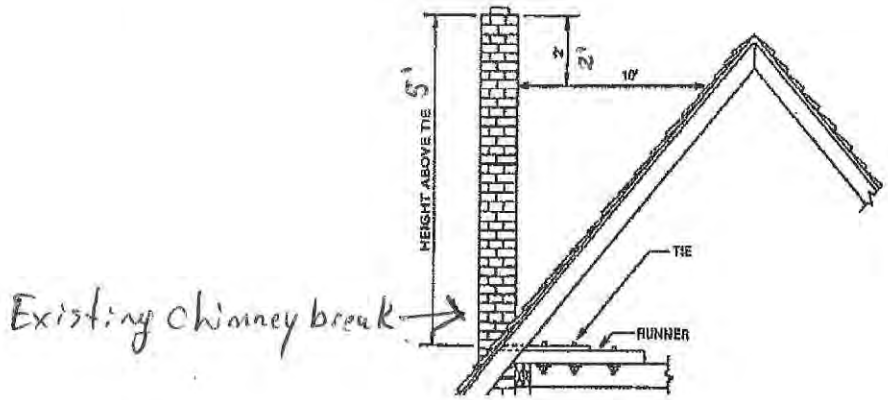
Chimney Repair Plans: 321 Bachman Ave, Log Gatos 95030
Take down existing broken chimney to shoulder and rebuild like for like with steel reinforcement and strapping to the house to bring up to earthquake code.

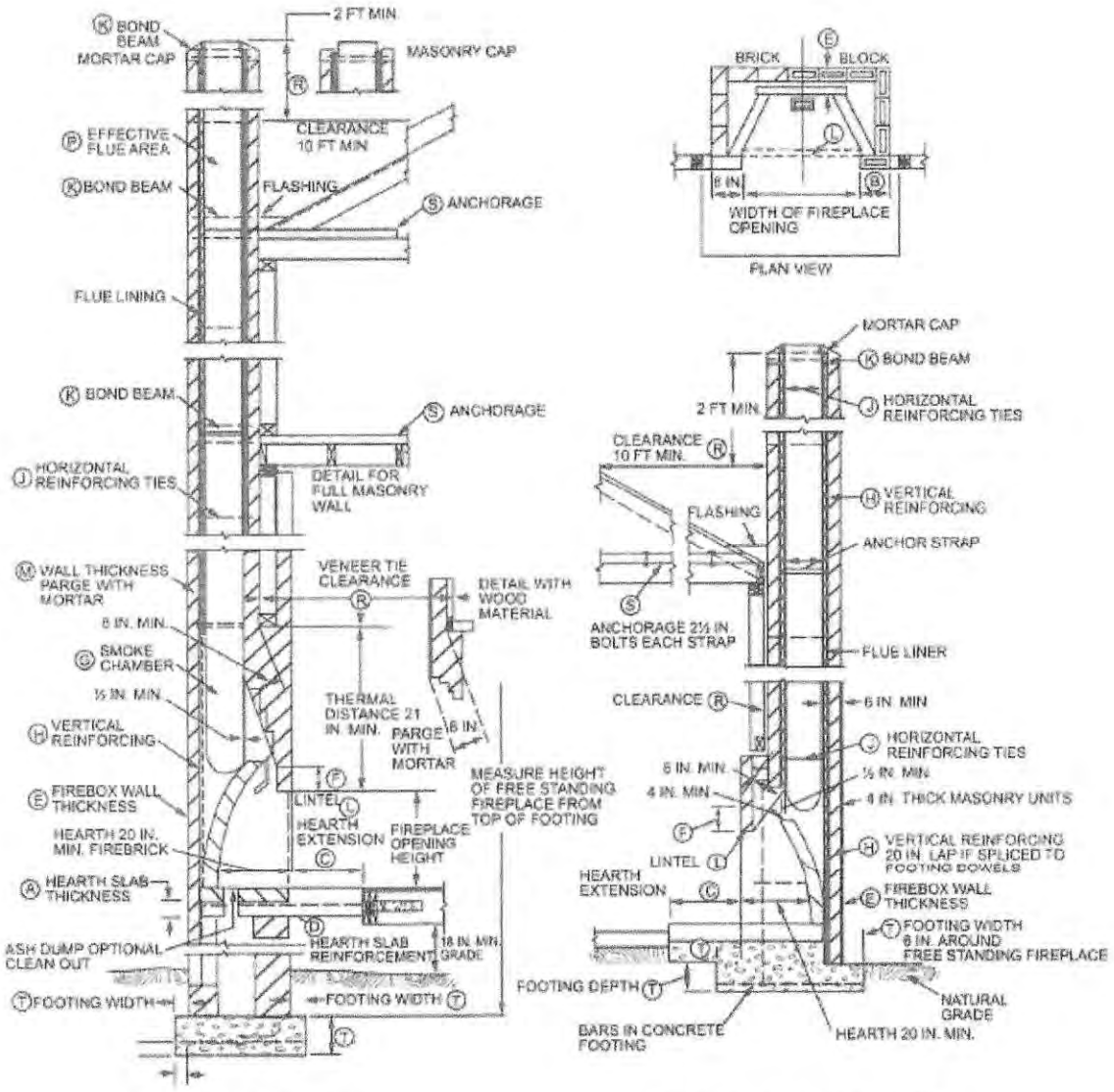


No repairs or changes needed inside house.



PARTS OF A FIREPLACE AND CHIMNEY





For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FIGURE R1001.1
FIREPLACE AND CHIMNEY DETAILS

CHIMNEYS AND FIREPLACES

TABLE R1001.1
SUMMARY OF REQUIREMENTS FOR MASONRY FIREPLACES AND CHIMNEYS

ITEM	LETTER[a]	REQUIREMENTS
Hearth slab thickness	A	4″
Hearth extension (each side of opening)	B	8″ fireplace opening < 6 square foot. 12″ fireplace opening ≥ 6 square foot.
Hearth extension (front of opening)	C	16″ fireplace opening < 6 square foot. 20″ fireplace opening ≥ 6 square foot.
Hearth slab reinforcing	D	Reinforced to carry its own weight and all imposed loads.
Thickness of wall of firebox	E	10″ solid brick or 8″ where a firebrick lining is used. Joints in firebrick $^1/_4$″ maximum.
Distance from top of opening to throat	F	8″
Smoke chamber wall thickness Unlined walls	G	6″ 8″
Chimney Vertical reinforcing[b]	H	Four No. 4 full-length bars for chimney up to 40″ wide. Add two No. 4 bars for each additional 40″ or fraction of width or each additional flue.
Horizontal reinforcing	J	$^1/_4$″ ties at 18″ and two ties at each bend in vertical steel.
Bond beams	K	No specified requirements.
Fireplace lintel	L	Noncombustible material.
Chimney walls with flue lining	M	Solid masonry units or hollow masonry units grouted solid with not less than 4-inch nominal thickness.
Distances between adjacent flues	—	See Section R1003.13.
Effective flue area (based on area of fireplace opening)	P	See Section R1003.15.
Clearances Combustible material Mantel and trim Above roof	R	 See Sections R1001.11 and R1003.18. See Section R1001.11, Exception 4. 3′ at roofline and 2′ at 10′.
Anchorage[b] Strap Number Embedment into chimney Fasten to Bolts	S	 $^3/_{16}$″ × 1″ Two 12″ hooked around outer bar with 6″ extension. 4 joists Two $^1/_2$″ diameter.
Footing Thickness Width	T	 12″ min. 6″ each side of fireplace wall.

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 square foot = 0.0929 m^2.

Note: This table provides a summary of major requirements for the construction of masonry chimneys and fireplaces. Letter references are to Figure R1001.1, which shows examples of typical construction. This table does not cover all requirements, nor does it cover all aspects of the indicated requirements. For the actual mandatory requirements of the code, see the indicated section of text.

a. The letters refer to Figure R1001.1.

b. Not required in Seismic Design Category *A or B*.

TOWN OF LOS GATOS
COMMUNITY DEVELOPMENT
BUILDING PERMIT

Permit ID/Type:	E18-135 BUILDING/ELECTRICAL/RESIDENTIAL/OTHER	Applied:	10/05/2018
Work Description:	ADD THREE CIRCUIT TO ALLOW THE REMAINING KNOB AND TUBE THAT IS IN USE TO BE ABANDON, ALTER 19 LIGHTS, SWITCHES AND OUTLETS.	Approved:	
Status:	ACTIVE	Issued:	
Address:	321 BACHMAN AVE, LOS GATOS, CA 95030	Expires:	4/3/2019
Owner:	MCCAFFREY PATRICIA A TRUSTEE PO BOX 33056 LOS GATOS, CA 95031	Phone:	[redacted]
Contractor:	BOYNTON ELECTRIC DBA POWER PROS PO. BOX 991 SAN MARTIN, CA 95046	Phone:	408-842-4111
License No.:	721016		

Job Value:	$0.00	Buildings:	1
Total Sq. Ft.:	<$SQUARE_FEET$>	Houses:	0
Building Use:	Dwellings	Census #:	434
Occupancy Type:	R-3	Construction Type:	V-B

Total Fees	$120.85
Total Payments	$0.00
Balance Due	$120.85

LICENSED CONTRACTOR'S DECLARATION

I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

License Class C10 California Contractor License No. 721016

Expiration Date Sep 1st 2020 Contractor Signature _____

WORKERS' COMPENSATION DECLARATION WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

I hereby affirm under penalty of perjury one of the following declarations:

____ I have and will maintain a certificate of consent to self-insure for workers' compensation, issued by the Director of Industrial Relations as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. Policy No. _____

X I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier WESCO Insurance Policy Number OWC1006754 Expiration Date 11/1/19

Name of Agent _____ Phone # _____

____ I certify that, in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that, if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

_____ 10/5/18

Signature of Applicant Date

TOWN OF LOS GATOS
COMMUNITY DEVELOPMENT
BUILDING PERMIT

Permit ID/Type:	B17-0257 Residential - Reroof	Applied:	04/21/2017
Work Description:	T/O COMP, R/R COMP 1400 SF	Approved:	
Status:	Issued	Issued:	04/21/2017
Address:	321 BACHMAN AVE	Expires:	10/18/2017
Owner:	MCCAFFREY PATRICIA A TRUSTEE PO BOX 33056 LOS GATOS CA, 95031	Phone:	[redacted]
Contractor:	JIREH INC P O BOX 1726 LOS GATOS, CA, 95031	Phone:	(408) 298-9399
License No.:	800707		
Job Value:	$6,950.00	Buildings:	1
Total Sq. Ft.:	1400	Houses:	0
Building Use:	Dwellings	Census #:	434
Occupancy Type:	R-3.1	Construction Type:	V-B

Total Fees	$344.63
Total Payments	$344.63
Balance Due	**$0.00**

LICENSED CONTRACTOR'S DECLARATION

I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.
License Class C-39 Contractor License No. 800707
Expiration Date 10/31/17 Contractor Signature [signature]

WORKERS' COMPENSATION DECLARATION WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

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__X__ I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:
Carrier Hallmark FIC Policy Number 1WC80432 Expiration Date 5/1/2018
Name of Agent ____ Phone # ____
____ I certify that, in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that, if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

[signature]
Signature of Applicant

4-21-17
Date

9/20/17
B17-0257

FAXED 9/20/17

TOWN OF LOS GATOS

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING DIVISION
PHONE: (408) 354-6876 FAX: (408) 354-7593
www.losgatosca.gov/building

CIVIC CENTER
110 E. MAIN STREET
P.O. BOX 949
LOS GATOS, CA 95031

BUILDING DIVISION PERMIT APPLICATION

*PROJECT ADDRESS: 321 Bachman Ave Los Gatos		*APN#: 510-17-100
*OWNER NAME: Patti McCaffrey	*PHONE: [redacted]	E-MAIL
*STREET ADDRESS: 321 Bachman Ave	*CITY, STATE, ZIP: Los Gatos, CA 95030	FAX
APPLICANT NAME: Los Gatos Roofing	PHONE: 408 298-9399	E-MAIL: tina@losgatosroofing.cor
STREET ADDRESS: 888 Faulstich Ct	CITY, STATE, ZIP: San Jose, CA 95112	FAX: 408 298-9371
TENANT CONTACT NAME	PHONE	E-MAIL
**BUSINESS NAME: Jireh Inc dba Los Gatos Roofing		CONTACT FAX: (408) 298-9371
BUSINESS ADDRESS, CITY, STATE, ZIP: 888 Faulstich Ct San Jose CA 95112		

*CONTACT: ☐ OWNER ☐ H.O.A. ☐ TENANT ☒ CONTRACTOR ☐ PERMIT SERVICE ☐ ARCHITECT ☐ DESIGNER ☐ ENGINEER

*CONTRACTOR NAME: Jireh, Inc. dba Los Gatos Rfg.	PHONE: (408) 298-9399	LICENSE TYPE: C-39	
*STATE LICENSE #: 800707	STATE LICENSE EXPIRES: 10/31/17	TOWN BUSINESS LICENSE #: 34051	
*DESCRIPTION OF WORK: Tear OFF 2 layers Composition. Install OSB where necessary. Install underlayment. Install Owens Corning Duration Mar Composition shingles Class A 14 Sq.			
*CONSTRUCTION VALUATION (Per Structure): $6,950			
*AREA OF REMODEL SPACE: S.F.	*NEW OR RELOCATED PLUMBING FIXTURES: Y N		
**EXISTING USE(S)	**PROPOSED USE(S)		
**OCCUPANCY(S):	**CONSTRUCTION TYPE:	HISTORIC DISTRICT OR PRE-1941? Y N	
FIRE SPRINKLERS: Y N	FIRE HAZARD AREA: Y N	**HAZARDOUS MATERIALS? Y N	*SEPTIC ☐ or SEWER ☐

	EXISTING		PROPOSED	
First Floor		S.F.		S.F.
Second Floor		S.F.		S.F.
Third Floor/Attic – Habitable? Y N		S.F		S.F
Basement/Cellar – Habitable? Y N		S.F.		S.F.
Garage – Attached ☐ Detached ☐		S.F.		S.F.
Pool House/Cabana ☐ Pool/Spa ☐		S.F.		S.F.
Porch ☐ Deck ☐ Retaining Wall ☐		S.F./L.F.		S.F.

REROOF - RESIDENTIAL AND COMMERCIAL

TEAR-OFF: SHAKE ☐ COMP ☐ WOOD SHINGLES ☐ TILE ☐ B.U.R. ☐	# of SQUARES PER STRUCTURE /	COOL ROOF Y N
NEW: SHAKE ☐ COMP ☐ WOOD SHINGLES ☐ TILE ☐ B.U.R. ☐		ICC ES/ESR #
CONSTRUCTION VALUATION (PER STRUCTURE): /		CLASS A ☐ C ☐

*REQUIRED INFORMATION FOR ALL APPLICATIONS
**REQUIRED FOR COMMERCIAL APPLICATIONS

Please complete Electrical, Mechanical, and Plumbing details on reverse side

TOWN OF LOS GATOS
COMMUNITY DEVELOPMENT
BUILDING PERMIT

Permit ID/Type:	M18-102 Residential - HVAC	Applied:	07/12/2018
Work Description:	INSTALL CONDENSER	Approved:	
Status:	Issued	Issued:	07/12/2018
Address:	321 BACHMAN AVE	Expires:	01/07/2019
Owner:	MCCAFFREY PATRICIA A TRUST 321 BACHMAN AVE LOS GATOS, CA LOS GATOS ,	Phone:	
Contractor:	RANDO AAA HVAC INC; DBA AAA FURNACE & A/C 1712 STONE AVENUE #1 SAN JOSE, CA, 95125	Phone:	293-4717
License No.:	768871		

20901 PAID JUL 16 2018 TOWN OF LOS GATOS

Job Value:	$0.00	Buildings:	1
Total Sq. Ft.:		Houses:	0
Building Use:	Dwellings	Census #:	434
Occupancy Type:	R-3	Construction Type:	V-B

Total Fees	$123.60
Total Payments	$123.60
Balance Due	**$0.00**

LICENSED CONTRACTOR'S DECLARATION

I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.
License Class _____ Contractor License No. _____
Expiration Date _____ Contractor Signature _____

WORKERS' COMPENSATION DECLARATION WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

I hereby affirm under penalty of perjury one of the following declarations:
_____ I have and will maintain a certificate of consent to self-insure for workers' compensation, issued by the Director of Industrial Relations as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. Policy No. _____
_____ I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:
Carrier _____ Policy Number _____ Expiration Date _____
Name of Agent _____ Phone # _____
_____ I certify that, in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that, if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

_____ _____
Signature of Applicant Date

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Homeowner's Statement

(Includes justification statement and historical research details)

To whom it may concern,

We moved to Los Gatos in 2010 and lived many years in a townhouse in the Vasona Terrace complex. Our kids went to Los Gatos schools. When they grew up and moved out, we moved to the Almond Grove neighborhood, to 321 Bachman Avenue in September 2024. We love this quiet historic neighborhood!

Our plan for the home is to add an attached single car garage in the back of the property opening to the alley, add an ADU above the garage if possible, and add more historically-inspired elements to the front and side of the house to allow it to fit in better with the other historic homes nearby. We feel that turning the large front window into an (above ground) bay window and adding covered porches to the front and side would accomplish this task. Adding a garage in the back of the house off the alley would allow us to park and charge our electric car and free up a space on the street, as well as provide much needed storage space for this small house. We plan to have the garage, porches, and bay window fit aesthetically with the existing house and add elements to make it look more Victorian style like other houses nearby.

We would also like to move our laundry area from the kitchen to the new garage, since the kitchen is small we would rather use the washer/dryer space for kitchen storage instead.

If the ADU is not approved, we would like to make the garage as tall as possible to allow for us to have as much attic / loft storage space as possible. The garage will be in the back of the house away from the front street and the garage of our next door neighbor's house (to the west, at 240 Massol Avenue) is already taller than our house so we hope a garage of the maximum allowable height will be acceptable (see photo of the neighbor's garage later in this document).

If the ADU is not approved, we would also like to have a full bathroom in the garage as well, for convenience.

The house already has some areas that extend into the easements, but we do not plan to build further into those areas, except for the garage itself. This property is small and non-standard and we plan to apply to get approval to have the garage built closer than 5 feet from the south property line in order to get as much garage space as is allowed. We have noticed **other garages and structures for houses backing on to the same alley that are already quite close to their property lines (3 feet or less), so we hope a 3 or 4 feet easement would be an acceptable distance**. For example:

- 231 Tate Avenue has a 'cottage' structure next to the alley that looks to be right up against the property line, the fence on the south side is only about a foot from the structure. The cottage was built around 1965 (source: 2005 historic tour brochure).

- 225 and 223 Tate Avenue have garages opening to the alley that are only about 3 ft from their fences on the right (south).
- 217 Tate Avenue has a carport opening to the alley that is only about 3 ft from their fence on the right (south)
- The garage for our immediate neighbor's house (240 Massol) appears to be between about 4ft from our fence at one end but only about 2 ft from our fence at the other.

We logged into the computer in the lobby of the LG planning office and looked at what was on file for our own house as well as properties nearby. Details are on later pages in this document but here are the highlights:

- **1996 Architectural plans for our own house showed that it used to have a garage with a 'bedroom/loft' above the garage.** This was demolished in 1996 and replaced with a new bedroom and bathroom attached to the main house. We have obtained approval from the architect from 1996 (who is still in business) and attached copies of the plans to this application.
- We also found architectural diagrams on file for 312 Bachman (across the street) and 240 Massol (next door), but neither of the diagrams showed easement lines (only property lines). The plans for 240 Massol especially do seem to confirm that the garage is very close to the fence between our two properties and is likely nonconforming (see later pages for details)

We did some research at the Los Gatos library as well. Details are in later pages in this document but here are the highlights:

- **Our house was built in 1939, based on the 1941 Tax Assessment Survey (the survey says the house was 2 years old at the time). This differs from what the real estate listing says (1949).**
- We think our house used to be part of the property at 240 Massol Avenue, based on the 'Remodeling' section of a 1971 survey where the owner said "**back property split up and sold to closest property owners**", but it doesn't give a year. (source: Historic Property Research Collection)

We have spoken to our immediate neighbours at 307 Bachman (immediate neighbor to the left (east), across the alley), 240 Massol (immediate neighbor to the right (west)), and 232 Massol (immediate neighbor behind us, backing onto the same alley, we share a fence), and they don't have any issues with us building an attached garage.

Please see the rest of the pages in this document for pictures of nearby houses and more details on the research we did.

Thank you for your time considering our application. Let us know if you have any questions.

Stanley and Jean Melax
321 Bachman Avenue, Los Gatos CA

Photos of nearby structures:

The garage for our immediate neighbor to the right (240 Massol) is about 4 ft from our shared fence at one end, but only about 2 ft away from our shared fence at the other end:

The garage at 240 Massol (next door neighbor) is taller than our house:

View of the alley, standing next to our house, looking South. Note the first structure, a ‘cottage’ at the back of 231 Tate, is very close to the alley, so probably very close to the property line.

The ‘cottage’ at the back of 231 Tate is within a foot of the fence on the right side:

The garage at the back of 225 Tate is about 3 feet from the fence to its right:

The garage at the back of 223 Tate is about 3 feet from the fence to its right:

The carport at the back of 217 Tate is about 3 feet from the fence to its right:

321 Bachman Avenue Research Notes (more details)

We purchased the house from Patricia Ann McCaffrey on 9/25/2024

For quick reference, these are the properties nearby:

1. 328 Bachman (across the street)
2. 320 Bachman (across the street)
3. 312 Bachman (across the street)
4. 308 Bachman (across the street)
5. 300 Bachman (across the street)
6. 307 Bachman (immediate neighbor to the left (east), across the alley)
7. 240 Massol (immediate neighbor to the right (west))
8. 232 Massol (immediate neighbor behind us, backing onto the same alley, we share a fence)
9. 231 Tate (nearby, backs on to the same alley)
10. 225 Tate (nearby, backs on to the same alley)
11. 303 Bachman (two houses to the left (east)

LG Planning department computer 7/25/2025

321 Bachman: there are **1996 architectural diagrams in the microfiche folder showing a new primary bedroom and a bathroom were added, and that an existing garage with a "bedroom / loft" above it was demolished.** The architect (Gary Kohlsaat, garyk@kohlsaatarch.com) gave permission for me to have copies of the plans (received 8/4/2025 and are included with this application).

LG Planning department computer 8/1/2025

- #1: has permit applications on file but no architectural plans
- #3: lots of architectural plans to add a basement, etc, but none showed property lines
- #6: no architectural diagrams or plans; 2018 permit to refurbish cottage, new front door, 5 new windows; secondary dwelling unit approved in 1985 but no plans on file
- #7: 103 pages of microfiche, ran out of time to review them all but there was a 1974 architectural diagram that might be relevant but the scans were very faint.
- #10: ran out of time to research fully
- #11: building permit on file for 1951 but no architectural plans on file
- Nothing major on file for the other neighbors

LG Library 8/3/2025

We planned to look at the Sanborn Maps on file at the LG library but the 'history room' was not open the day we did the research (only open Tuesdays from 11:30-1:30 according to the sign on the door)

Project Bellringer: only #1 was included on the list in the binder, but a newspaper article from 1976 says #9 was a "Bellringer house" too.

Historic Property Research Collection:

- #1: Sometime between 1934 and 1945 added a small porch off the dining room, and front porch was screened in with climbing roses and honeysuckle, 'garage had been in lower backyard', built estimated "1885 A.K".
- #7: ~1880 A.K., **under 'Remodeling' section of 1971 survey says "back property split up and sold to closest property owners" but doesn't give a year**. Also says "33 ft additional in back area" and "garage used for office".
- #9: a 2005 historic tour brochure says "about 1965, Douglas and Marjorie Rose purchased the property and built a cottage on the back of the lot that they rented out in addition to the house. That cottage is not open for viewing", 1976 newspaper article says it is a Bellringer house, has a phantom front door that once opened to Tate but now front door is elsewhere
- #10: has a folder but nothing relevant to our project
- No other houses above has folders in the collection

Anne Bloomfield's Survey of 1991: none of the nearby houses are included, nothing on Bachman or Massol, a few on Tate but only up to #30 Tate.

1941 Tax Assessment Survey (note these show dimensions of buildings but not their relationship to property lines):

- 321 Bachman: **says the house was 2 years old in 1941**, a scan is included in this application
- #1: 45 years old
- #2: 17 years old
- #3: 40 years old
- #4: 40 yo
- #5: 10 yo
- #6: not included
- #7: 30 years old, worth $1700
- #8: not included
- #9: 40 years old
- #10: not included

Planning department computer 8/4/2025:

LFTown / planning / address files / Bachman Ave / 321 / microfiche folder:

- Nothing under any of the other folders
- Home occupation permit 5/26/88 for Joyce Bahnsen
- 97 scanned pages. Filled out form to request these documents on 8/4/2025.
- Page 71 and 82: **exhibit C PLAT to accompany the lot line adjustment Feb 1996** (page 82) and Sep 1996 (page 71). Filled out form to request these documents on 8/4/2025.

FTown / building / address / Bachman Ave / 321 folder (requested and received copies of all on 8/4/2025):

- permits folder has 3 folders:
    - B17-0257 - permit for new roof - 4/21/2017
    - E18-135 - permit for add three circuit to allow the remaining knob and tube that is in use to be abandon, alter 19 lights, switches and outlets 10/05/2018
    - M18-102 - permit to install condenser 7/12/2018
- Plans folder has one folder B21-0233: plans for chimney repair 3/21/17
- Microfiche folder has 49 pages including the architectural diagrams

240 Massol

- Has plans approved 1/20/15 is for removing a brick fireplace and window, adding a breakfast nook, etc but the plans also show the existing garage
- On the 2015 plans, the only thing that looks nonconforming to easements is the garage. There is no scale marking on the plans but it is 3/16” away from the fence when viewed at 50%
- “The Poncetta Residence”
- Architect: Flury Bryant design group

312 Bachman

- Page 94 of microfiche has an architectural plan. The only thing that might be non-conforming is the extended garage (I think, its hard to read as the focus of the diagrams was the main house only)
- 17 May 2004, approved 6/21/2004
- “Hubbard Santangeli Residence”
- Architect E. Gary Schloh

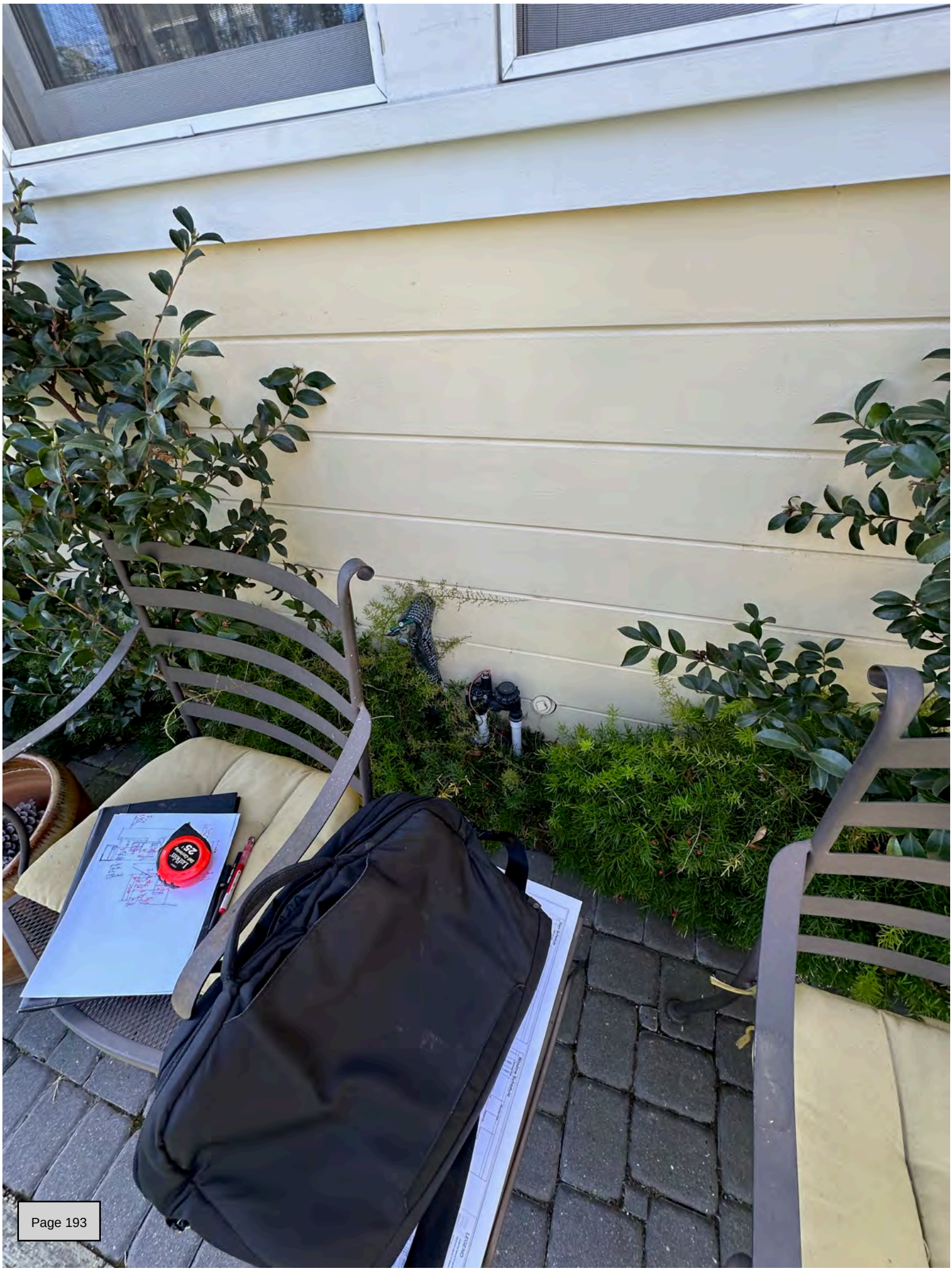
LG library, 8/4/2025:

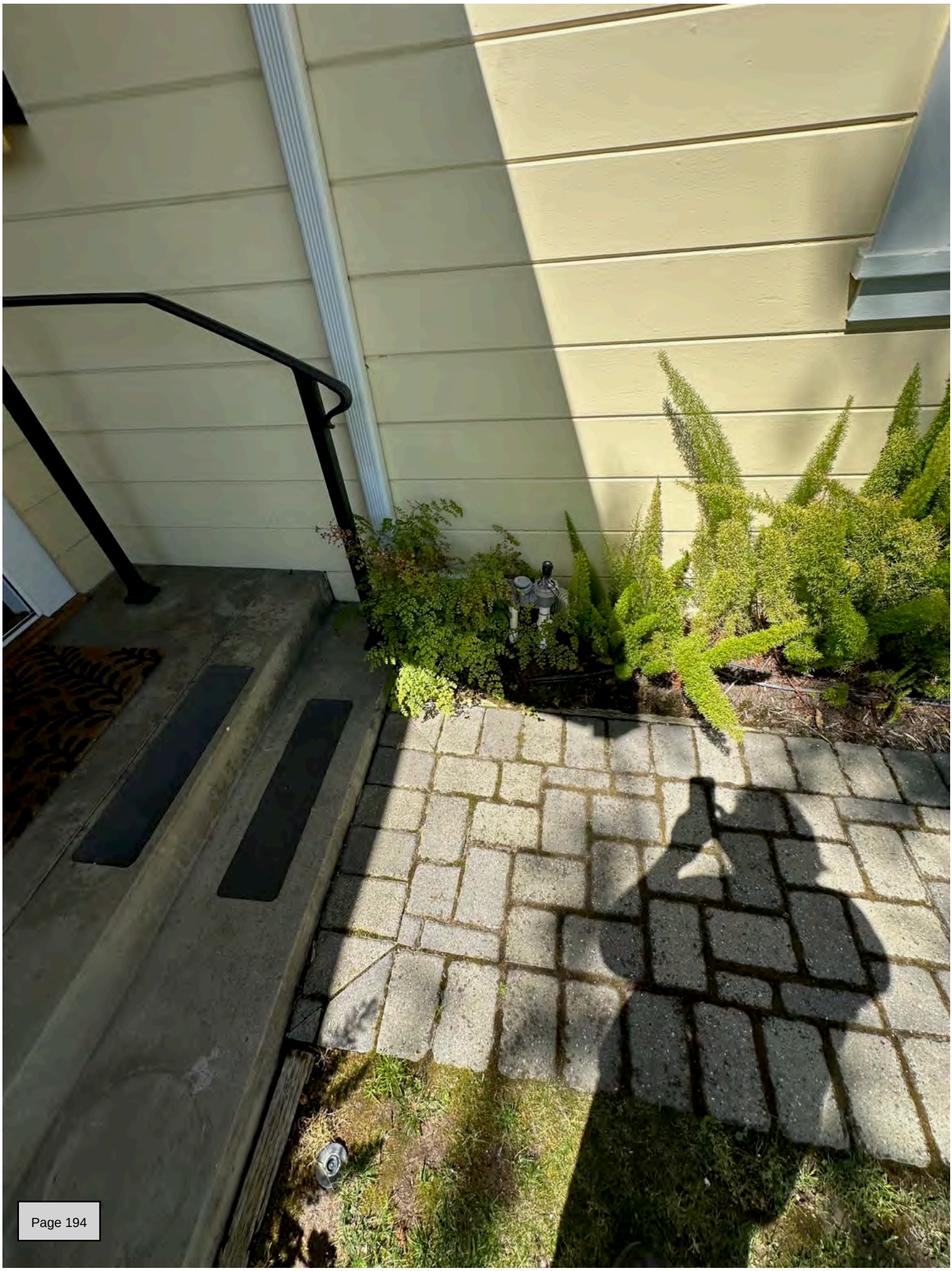
Polk directories (shows residents of 321 Bachman):

1939, 1940: 321 Bachman is not listed

1941: Biermann C F
1943, 1944, 1945: Kleiner Rudolph
1947: Countryman J. L.
1949-50, 1954, 1956, 1958: Fetsch Carrie Mrs
1952: no pink street guide section
1955: no Los Gatos in guide
1960, 1962, 1964: Young Doris Mrs
1965: Vandeberg Bessie E Mrs
1967: “vacant”
1968: Smyth Ethelyn H Mrs
1969: “no return”
1970, 1971, 1972, 1974: Hamner Eldo Mrs (spelled Hammer in 1970)
1974 was last Polk Directory on file, telephone directories after that don’t have street look-up

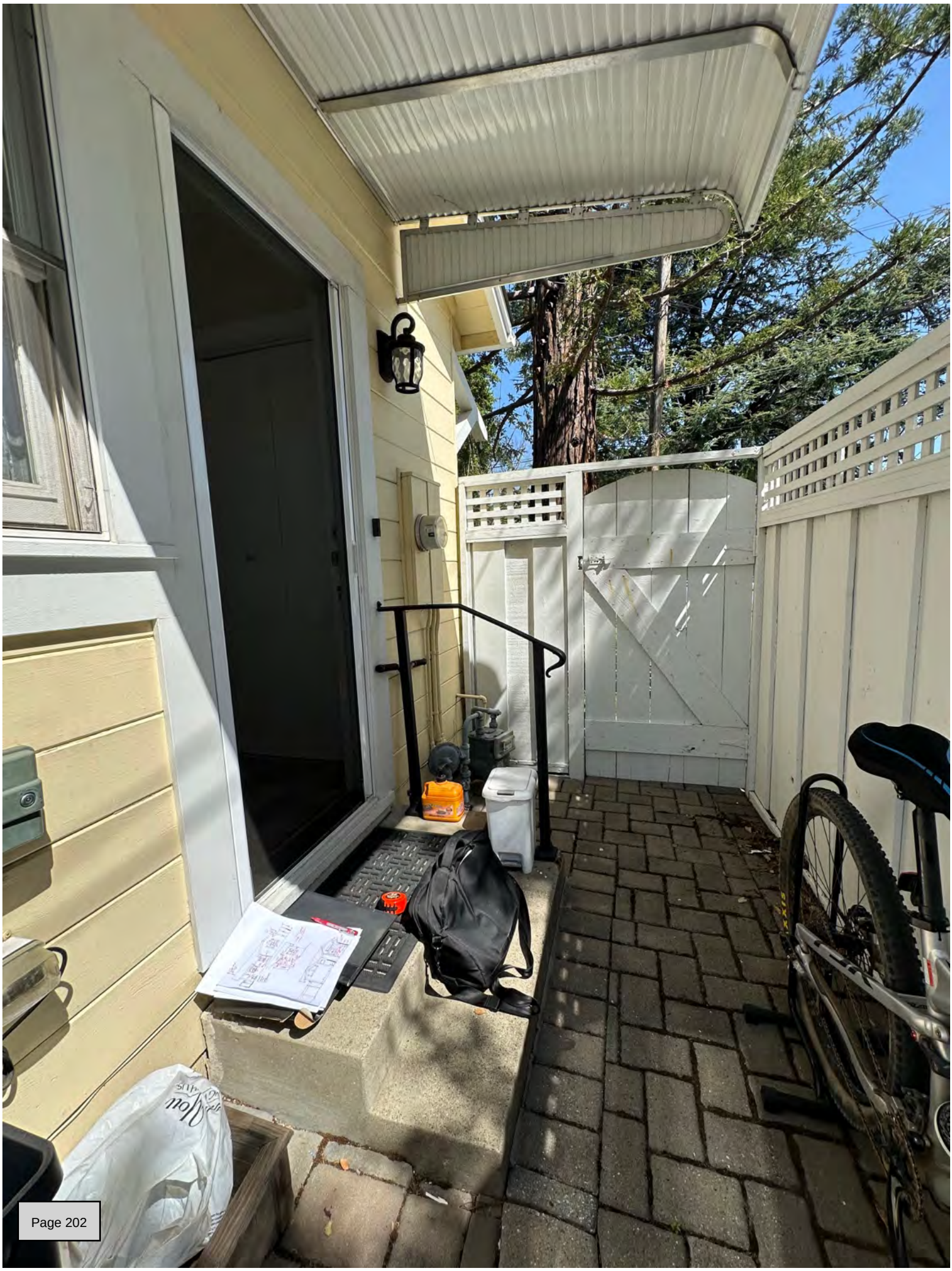
321
Bachman Ave

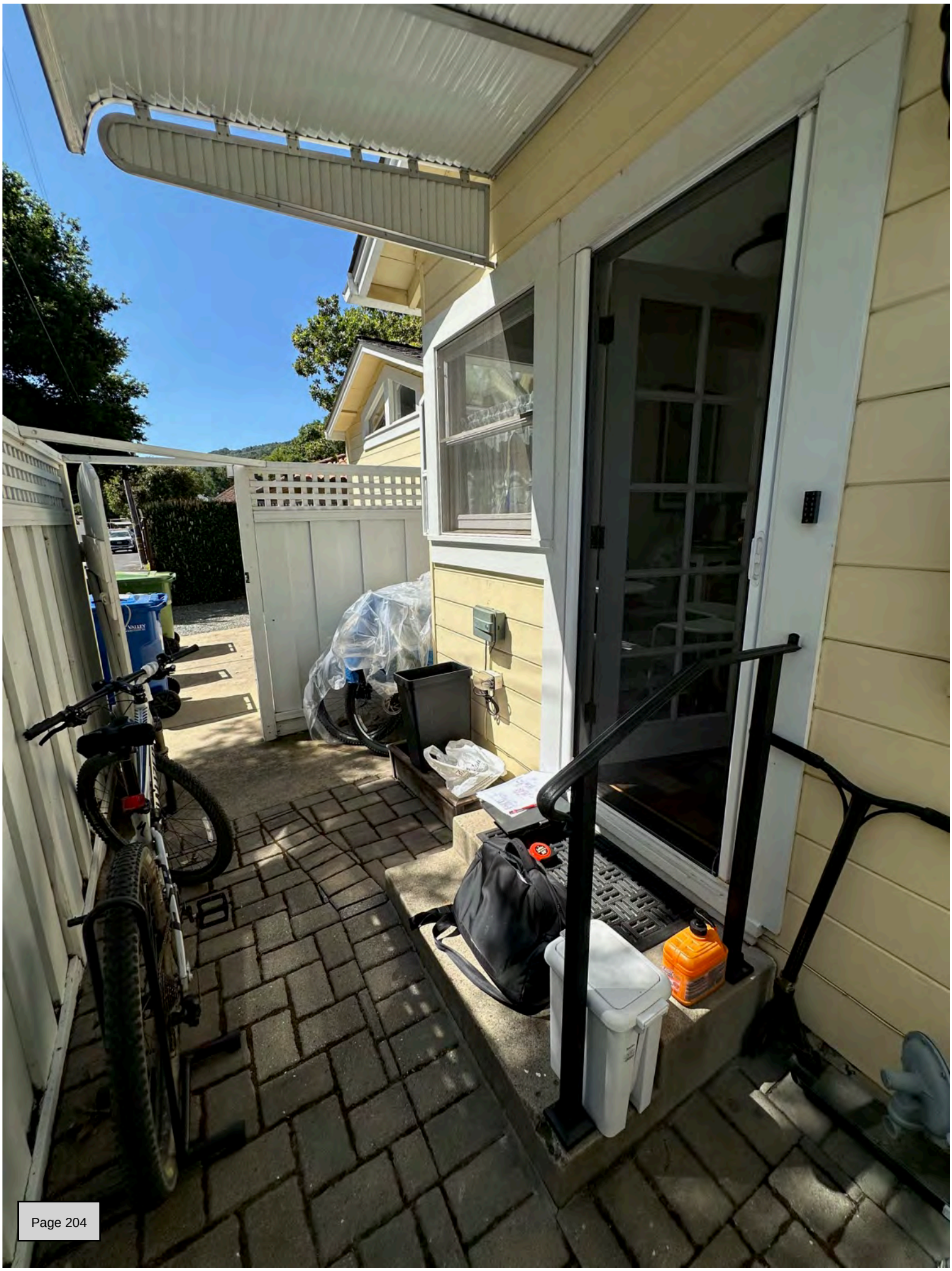




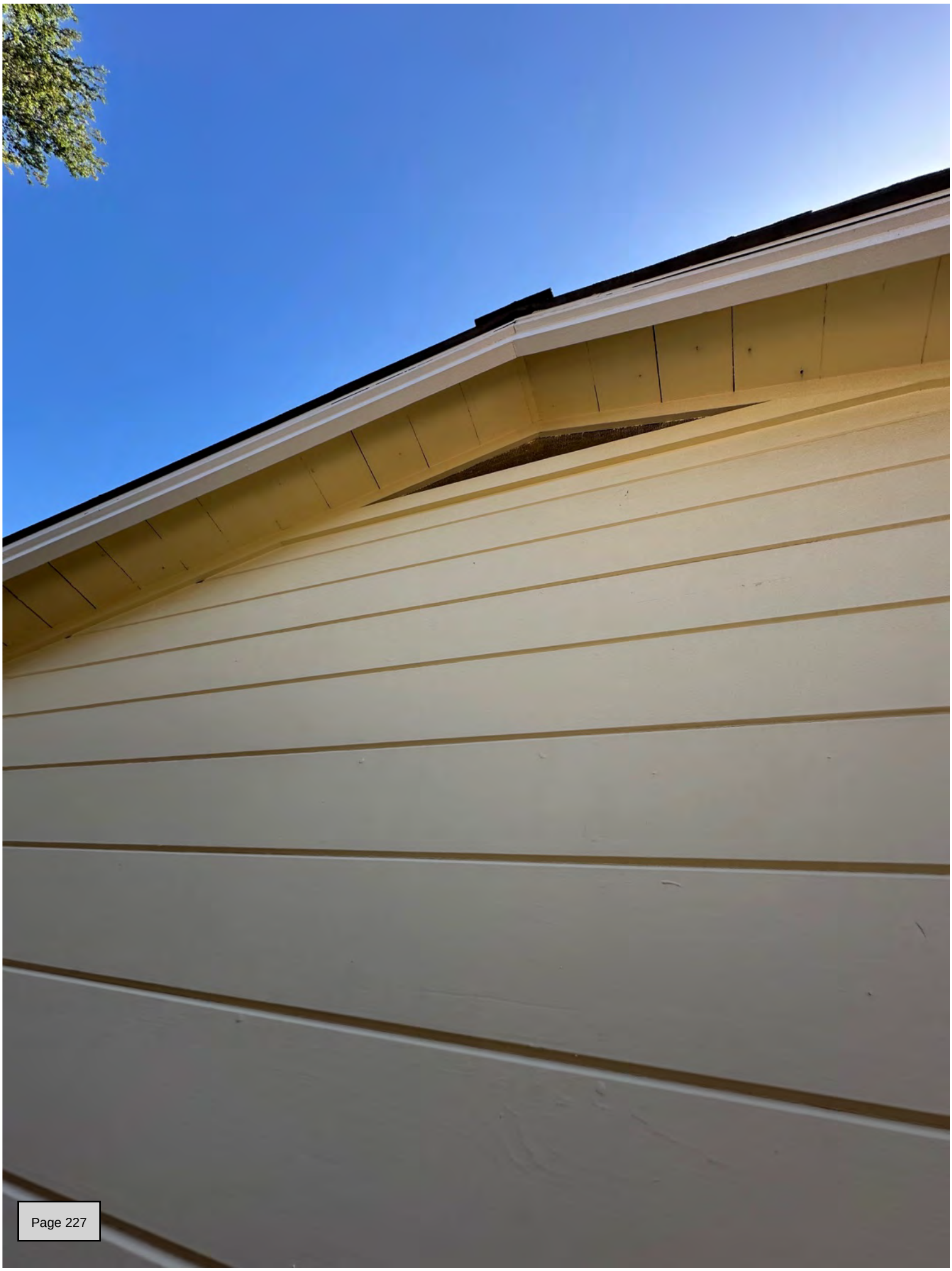
Orbit

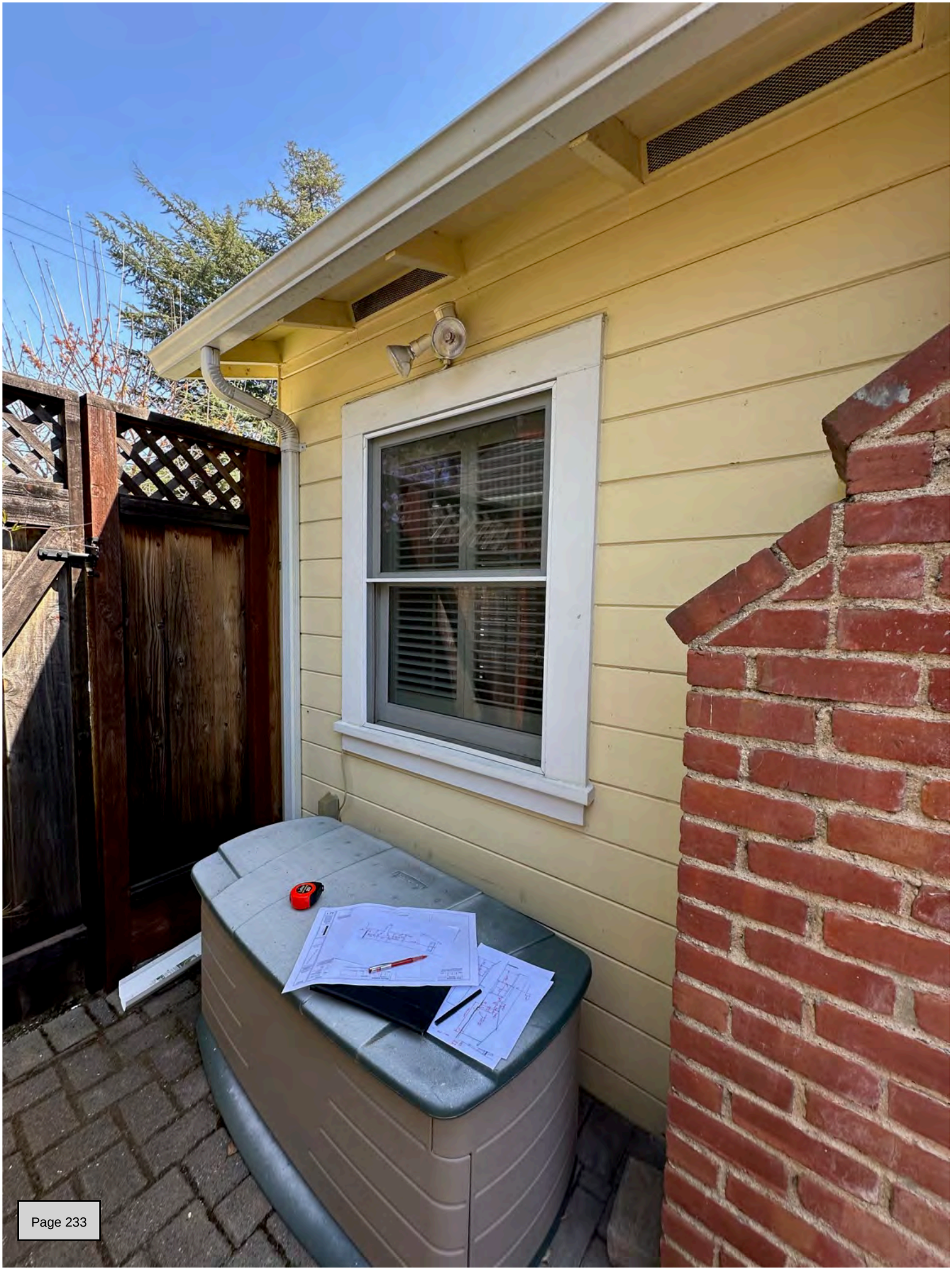
Lufkin
Self-Contained
25'





T3524 076717
WEST VALLEY





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1 Rendering from Bachman (w/ street trees)

ATTACHMENT 6

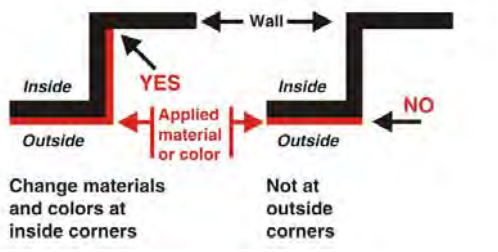
1 Rendering from Bachman (w/o street trees)

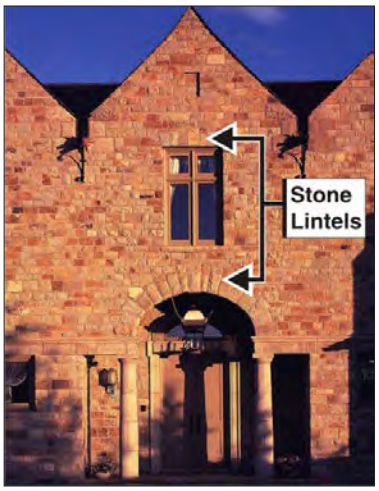
3.8.3 Use traditional detailing

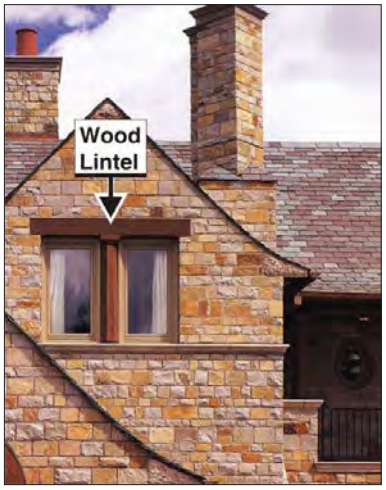
- Treat openings in walls as though they were constructed of the traditional material for the style. For example, be sure to provide substantial wall space above arches in stucco and stone walls. Traditionally, wall space above the arch would have been necessary to structurally span the opening, and to make the space too small is inconsistent with the architectural style.
- Openings in walls faced with stone, real or synthetic, should have defined lintels above the opening except in Mission or Spanish Eclectic styles. Lintels may be stone, brick or wood as suits the style of the house.
- Treat synthetic materials as though they were authentic. For example, select synthetic stone patterns that place the individual stones in a horizontal plane as they would have been in a load bearing masonry wall.
- Select roof materials that are consistent with the traditional architectural style (e.g., avoid concrete roof tiles on a Craftsman Style house.)

3.8.4 Materials changes

- Make materials and color changes at inside corners rather than outside corners to avoid a pasted on look.







Use stone or wood lintels over openings in stone walls

3.9 ADDITIONS/ACCESSORY BUILDINGS/SECONDARY UNITS

- Site additions in the least conspicuous place. In many cases this is a rear or side elevation - only rarely is it a rooftop.
- The existing built forms, components and materials should be reinforced. Heights and proportions of additions and alterations should be consistent with and continue the original architectural style and design.
- Additions should be subordinate, and compatible in scale and proportion to the historically significant portions of the existing structure.
- When an addition or remodel requires the use of newly constructed exterior elements, they should be identical in size, dimension, shape and location as the original, and

Additions, accessory buildings and secondary units should match the form, architectural style, and details of the original house

Original structure

Addition incorporated into the roof successfully adds space while respecting the integrity of the existing house and the scale of the neighborhood

Placing a two story addition to the rear can minimize its impact on the historic resource and the scale of the neighborhood

should utilize the same materials as the existing protected exterior elements.

- When an addition necessitates the removal of architectural materials, such as siding, windows, doors, and decorative elements, they should be carefully removed and reused in the addition where possible.
- The introduction of window and door openings not characteristic in proportion, scale, or style with the original architecture is strongly discouraged (e.g., sliding windows or doors in a structure characterized by double hung windows and swinging doors).
- The character of any addition or alteration should be in keeping with and subordinate to the integrity of the original structure.
- The amount of foundation exposed on the addition should match that of the original building.
- Do not add roof top additions where the roof is of historic significance.
- Second floor additions are discouraged in neighborhoods with largely one story homes. If horizontal expansion of the house is not possible, consider incorporating a second floor addition within the roof form as shown in the example to the left.
- Second floor additions which are not embedded within the roof form should be located to the rear of the structure.
- The height and proportion of an addition or a second story should not dominate the original structure.
- Deck additions should be placed to the rear of the structure only, and should be subordinate in terms of scale and detailing.
- New outbuildings, such as garages, should be clearly subordinate to the main structure in massing, and should utilize forms, materials and details which are similar to the main structure.
- Garages should generally be located to the rear of the lot behind the rear wall of the residence. One car wide access driveways should be utilized.

MELAX RES GARAGE

321 BACHMAN AVE, LOS GATOS, CA 95030

STANDARD ABBREVIATIONS

&	and
@	at
C.L.	centerline
Ø	diameter
PLT	plate
#	pound/number
(E)	existing
(N)	new
AB	anchor bolt
AC	air conditioner
AGG	aggregate
ALT	alternate
ALUM	aluminum
APPROX	approximate
ARCH	architect
ASB	asbestos
ASPH	asphalt
AVE	avenue
AVG	average
BD	board
BITUM	bituminous
BLDG	building
BLK	block
BVLD	boulevard
BM	benchmark/beam
CAB	cabinet
CB	catch basin
CEM	cement
CI	cast iron
CJ	control joint
CLG	ceiling
CLKG	caulking
CLR	clear
CNTR	counter
CO	cleanout
COL	column
CONC	concrete
CONN	connection
CONST	construction
CONT	continuous
CORR	corridor
CTR	center
CYL	cylinder
DBL	double
DEPT	department
DF	Douglas Fir/drinking fountain
DIA	diameter
DIM	dimension
DISP	dispenser
DN	down
DS	downspout
DW	dishwasher
DWG	drawing
EA	each
EJ	expansion joint
EL	elevation
ELEC	electrical
ELEV	elevator
EMER	emergency
ENCL	enclosure
EP	electric panelboard
EQ	equal
EQUIP	equipment
EXIST	existing
EXP	exposed
EXT	exterior
FA	fire alarm
FD	floor drain
FDN	foundation
FE	fire extinguisher
FEC	fire extinguisher cabinet
FHC	fire hose cabinet
FIN	finish
FL	floor
FLASH	flashing
FOC	face of concrete
FOF	face of finish
FOS	face of stud
FPRF	fire proof
FS	full size
FT	foot/feet
FTG	footing
FURN	furnish
FURR	furring
FUT	future
GA	gauge
GB	grab bar
GALV	galvanized
GL	glass
GRD	grade
GYP	gypsum
HB	hose bib
HC	hollow core
HD	hot dipped
HDWE	hardware
HDWD	hardwood
HM	hollow metal
HORIZ	horizontal
HR	hour
HT	height
HTG	heating
HTR	heater

ID	inside diameter
IN	inches
INT	interior
INSUL	insulation
JAN	janitor
JT	joint
KD	kiln dried
LAM	laminated
LAV	lavatory
MAT	material
MAX	maximum
MC	medicine cabinet
MDF	medium density fiberboard
MECH	mechanical
MEMB	membrane
MET	metal
MFGR	manufacture(r)
MH	manhole
MIN	minimum
MIR	mirror
MISC	miscellaneous
MO	masonry opening
MOD	module/modular
MTD	mounted
MUL	mullion
NIC	not in contract
NO	number
NOM	nominal
NTS	not to scale
OC	on center
OD	outside diameter
OFF	office
OPNG	opening
OPP	opposite
PART	partition
PBO	provided/supplied by owner
PERP	perpendicular
PG	plate glass
PL	property line
PLYWD	plywood
PR	pair
PT	pressure treated
QT	quarry tile
R	rise/radius
RD	roof drain
REINF	reinforce/reinforcing
REF	reference
REFR	refrigerator
REQ	required
RESIL	resilient
REV	revision
RM	room
RO	rough opening
RWD	redwood
RWL	rain water leader
SECT	section
SEL	select
SD	soap dispenser
SG	sheet glass
SH	shelf
SHT	sheet
SHWR	shower
SIM	similar
SPEC	specification
SQ	square
SS	stainless steel
STD	standard
STL	steel
STRUCT	structural
SUSP	suspend(ed)
SYM	symmetrical
TB	towel bar
TEL	telephone
TER	terrazzo
T&G	tongue & groove
TOC	top of curb
TOP	top of plate
TP	top of pavement
TPG	tempered plate glass
TV	television
TW	top of wall
TYP	typical
VENT	ventilation
VERT	vertical
VEST	vestibule
VGDF	vertical grain Douglas Fir
VOL	volume
W/	with
WC	water closet
WD	wood
WF	wide flange
WIN	window
W/O	without
WP	waterproof(ing)
WSCT	wainscot
WT	weight

2502SD102525.vwx Oct. 25, 2025

GENERAL CODE NOTES

1. FINISHED ROOFING MATERIAL SHALL BE INSTALLED AND COMPLETED PRIOR TO FRAME INSPECTION. SEE CRC SECT. R109, INSPECTIONS FOR ORDER OF INSPECTIONS BY ENFORCING AGENCY.

2. OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED. OTHER OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 13/8 INCHES (35 MM) IN THICKNESS, SOLID OR HONEYCOMBCORE STEEL DOORS NOT LESS THAN 13/8 INCHES (35 MM) THICK, OR 20-MINUTE FIRE-RATED DOORS, EQUIPPED WITH A SELF-CLOSING AND SELF-LATCHING DEVICE, CRC SECT. R302.5.1.

3. ENCLOSED SPACE UNDER STAIRS THAT IS ACCESSED BY A DOOR OR ACCESS PANEL SHALL HAVE WALLS, UNDER-STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH ½-INCH (12.7 MM) GYPSUM BOARD., CRC SECTION R302.7.

4. EACH HABITABLE ROOM SHALL COMPLY WITH MIN. AREA FOR NATURAL LIGHT AND VENTILATION OR MEET THE REQUIREMENTS FOR EXCEPTIONS, PER CRC SECTIONS R303.1. BATHROOMS SHALL COMPLY WITH MIN. AREA FOR NATURAL LIGHT OR MEET REQUIREMENTS FOR EXCEPTIONS. PER CRC SECT. R303.3. BATHROOMS AND LAUNDRY ROOMS SHALL BE PROVIDED WITH EXHAUST FANS THAT COMPLY WITH CRC SECT. R303.3.1 & R303.4 AND THE CALIFORNIA MECHANICAL CODE.

5. INSTALL WATERPROOF MATERIAL SUCH AS TILE, ON TUB AND SHOWER WALLS +72" MIN ABOVE THE FLOOR PER CRC R307.2

6. SAFETY GLAZING, SUBJECT TO HUMAN IMPACT SHALL BE INSTALLED AT HAZARDOUS LOCATIONS PER CRC SECT. R308.1. AREAS TO BE DEFINED AS "HAZARDOUS LOCATIONS" ARE LISTED IN CRC SECT 308.4 AND INCLUDE: GLAZING IN DOORS, SLIDING DOOR ASSEMBLIES AND PANELS, SHOWER OR TUB ENCLOSURES AND IN WINDOWS WITHIN COMPARTMENTS WHERE EXPOSED EDGE OF GLAZING IS LESS THAN 60" ABOVE A STANDING SURFACE AND DRAIN INLET, GLAZING IN WINDOWS ADJACENT TO DOORS WITHIN 24" OF EITHER SIDE OF A DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE WALKING SURFACE.

7. EGRESS WINDOWS IN EACH BEDROOM SHALL COMPLY WITH CRC SECTION R310, OPERABLE FROM THE INSIDE TO PROVIDE A FULL, CLEAR OPENING WITHOUT THE USE OF SEPARATE TOOLS. ESCAPE WINDOWS SHALL HAVE A MINIMUM NET CLEAR OPENABLE AREA OF 5.7 SF, AND 5.0 SF AT GRADE FLOOR OPENINGS. MINIMUM NET CLEAR HEIGHT 24", WIDTH OF 20" MINIMUM, AND FINISHED SILL NOT MORE THAN 44" ABOVE THE FINISHED FLOOR.

8. HANDRAILS SHALL BE PROVIDED ON NOT LESS THAN ONE SIDE OF RAMPS EXCEEDING A SLOPE OF 1 UNIT VERTICAL IN 12 UNITS HORIZONTAL (8.33-PERCENT SLOPE). HANDRAIL HEIGHT, MEASURED ABOVE THE FINISHED SURFACE OF THE RAMP SLOPE, SHALL BE NOT LESS THAN 34 INCHES (864 MM) AND NOT MORE THAN 38 INCHES (965 MM). HANDRAILS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE STAIRS OR RAMP. HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1 1/2" BETWEEN THE WALL AND THE HANDRAIL. HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF AT LEAST 1 1/4" AND NOT GREATER THAN 2". NON-CIRCULAR HANDRAILS SHALL HAVE A PERIMETER DIMENSION OF AT LEAST 4" AND NOT GREATER THAN 6 1/4" WITH A MAX. CROSS SECTION DIMENSION OF 2 1/4". EDGES SHALL HAVE A MIN. RADIUS OF 0.01". CRC R311.7.8, R311.7.8.1, R311.7.8.3, R311.7.8.4 AND R311.7.8.5.

9. GUARDRAILS (GUARDS), REQUIRED GUARDS AT OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, PORCHES, BALCONIES OR LANDINGS, SHALL BE NOT LESS THAN 42 INCHES (1067 MM) IN HEIGHT AS MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE OR THE LINE CONNECTING THE LEADING EDGES OF THE TREADS, INTERIOR OR EXTERIOR, CRC R312.1.2 EXCEPTION- GUARDS ON THE OPEN SIDES OF STAIRS SHALL HAVE A HEIGHT OF NOT LESS THAN 34" AND NOT MORE THAN 38" MEASURED VERTICALLY FROM A LINE CONNECTING THE LEADING EDGES OF THE TREADS. GUARDS SHALL NOT HAVE AN OPENING FROM THE WALKWAY SURFACE TO THE REQUIRED HEIGHT WHICH ALLOW PASSAGE OF A 4" DIAMETER SPHERE. CRC R312.1.3

10. SMOKE ALARMS SHALL BE PROVIDED AND INSTALLED PER CRC SECTION R314, AND NFPA 72. SMOKE ALARMS SHALL HAVE THEIR PRIMARY POWER SOURCE FROM THE BUILDING WIRING AND EQUIPPED WITH A BATTERY BACKUP. LOCATE ALARMS IN EACH SLEEPING ROOM AND ON THE CEILING OR WALL OUTSIDE SLEEPING AREA IN IMMEDIATE VICINITY OF BEDROOMS AND BE NOT LESS THAN 3 FEET FROM A BATHROOM DOOR THAT CONTAINS A BATHTUB OR SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE ALARM REQUIRED BY SECTION R314.

11. NEWLY CONSTRUCTED DWELLINGS SHALL HAVE AT LEAST ONE BATHROOM ON THE ENTRY LEVEL SHALL BE PROVIDED WITH REINFORCEMENT INSTALLED IN ACCORDANCE WITH CRC SECTION R327. WHERE THERE IS NO BATHROOM ON THE ENTRY LEVEL, AT LEAST ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE DWELLING SHALL COMPLY WITH SECTION R327.

12. ENERGY STORAGE SYSTEMS INSTALLED IN A LOCATION SUBJECT TO VEHICLE IMPACT (I.E. GARAGE OR CARPORT) SHALL BE PROVIDED WITH IMPACT PROTECTION, CRC SEC 328.8. SEE FIGURE R328.8.1.

13. INSTALL UNDERFLOOR ACCESS WITH ACCESSIBLE MINIMUM CLEARANCE 18" x 24" AND FREE FROM PIPES, DUCTS AND SIMILAR OBSTRUCTION, CRC SECTION R408.4.

14. INSTALL ATTIC ACCESS WITH MINIMUM 22" x 3O" ROUGH OPENING LOCATED IN HALLWAY OR OTHER READILY ACCESSIBLE LOCATION, HAVING A 30" MINIMUM UNOBSTRUCTED HEADROOM IN THE ATTIC SPACE, ABOVE THE OPENING, CRC R807.1.

15. WATER HEATERS SHALL BE STRAPPED FOR SEISMIC BRACING, TOP AND BOTTOM PER CPC SECTION 507.2 AND SECURED TO THE STRUCTURE. LISTED WATER HEATERS SHALL BE INSTALLED IN ACCORDANCE WITH THEIR LISTINGS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PER CPC 504.3.1. UNLISTED WATER HEATERS SHALL BE INSTALLED WITH A CLEARANCE OF 12" ON ALL SIDES AND REAR PER CPC 504.3.2. COMBUSTION AIR SHALL BE PROVIDED IN ACCORDANCE WITH CMC SECTION 701. WATER HEATER CLOSET OPENING SHALL HAVE A MINIMUM OF 1 SQ. IN. PER 1000 BTU INPUT, BUT NOT LESS THAN 100 SQ. IN. ONE OPENING SHALL COMMENCE WITHIN 12" OF THE TOP OF THE ENCLOSURE AND ONE OPENING SHALL COMMENCE WITHIN 12" OF THE BOTTOM OF THE ENCLOSURE PER CMC 701.5.

16. WATER HEATER PRESSURE RELIEF VALVES SHALL BE EQUIPPED WITH PIPING DIRECTLY TO THE EXTERIOR AND TERMINATING NOT LESS THAN 6" ABOVE GRADE. INSTALL HOSE BIBBS AT LOCATIONS NOTED HB. USE FAUCET TYPE EQUIPPED WITH BACKFLOW OR BACK SIPHONAGE PROTECTION PER CPC SECTION 603.5.7.

17. VENTING OF GAS APPLIANCES SHALL BE IN ACCORDANCE WITH CMC SECTION 802. VERIFY RUN, OFFSETS, SLOPES AND DIRECTION OF VENTS THROUGH FRAMING TO PROVIDE MINIMUM CLEARANCE TO COMBUSTIBLES FOR TYPE FLUE USED.

18. GAS APPLIANCES INSTALLED IN THE GARAGE SHALL BE ELEVATED SO THAT PILOTS AND BURNERS ARE AT LEAST 18" ABOVE THE FLOOR PER CPC 507.13. PROTECT APPLIANCES FROM DAMAGE BY INSTALLING A PROTECTIVE STEEL POST, 3" DIA. X 24" HIGH, 12" IN FRONT OF APPLIANCE, UNLESS LOCATED OUTSIDE THE NORMAL PATH OF A VEHICLE.

19. GAS PIPE CONNECTION TO EACH APPLIANCES SHALL HAVE AN ACCESSIBLE SHUT-OFF VALVE AND BE INSTALLED WITH FLEX-CONNECTORS PER CPC 1212.6.

20. INSTALL SOLID BACKING AT WALLS AND WATERPROOF MEMBRANE AT SHOWER PAN, SEAMLESS TYPE "OATEY" UP 12" MIN WALLS AND OVER SHOWER CURB. SHAPE SHOWER PAN FLOOR USING 3/4" PLYWOOD SHIMMED TO FORM SLOPE TO DRAIN. INSTALL 4 X 4 PTDF CURB, PER CPC 408.5 - 408.7.

21. SHOWER AND TUB-SHOWER VALVES SHALL BE PRESSURE BALANCED AND/OR THERMOSTATIC MIXING VALVES AND SHALL COMPLY WITH CPC SECTION 408.3.

22. ALL SHOWER HEADS IN THE EXISTING RESIDENCE WITH A FLOW RATE GREATER THAN 2.5 GPM WILL NEED TO BE REPLACED WITH A MAXIMUM 1.8 GPM SHOWER HEAD. FAUCETS WITH A FLOW RATE GREATER THAN 2.2 GPM WILL NEED TO BE REPLACED WITH MAXIMUM FLOW RATE OF 1.2 GPM FOR LAVATORY FAUCETS AND 1.8 GPM FOR KITCHEN FAUCETS PER CALIFORNIA CIVIL CODE ARTICLE 1101.4 AND CALGREEN SECTION 4.303.

23. INSTALL WATER CLOSETS (TOILETS) HAVING A 1.28 GALLONS/FLUSH MAXIMUM. PER CALIFORNIA CIVIL CODE ARTICLE 1101.4 AND CALGREEN SECTION 4.303.1.1 THE WATER CLOSET SPACE SHALL BE SET NO CLOSER THAN 15" FROM ITS CENTER TO A SIDE WALL AND NO CLOSER THAN 30" CENTER TO CENTER TO A SIMILAR FIXTURE. CLEARANCE IN FRONT OF WATER CLOSET SHALL BE NOT LESS THAN 24" PER CPC SECTION 402.5.

24. WHIRLPOOL TUB SHALL COMPLY WITH CPC SECTION 409.0 AND THE CEC. ELECTRICAL POWER SOURCE SHALL BE EQUIPPED WITH GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION.

25. LIGHT FIXTURES INSTALLED IN CLOSETS SHALL BE SURFACE MOUNTED FLUORESCENT, LOCATED ON THE WALL ABOVE THE DOOR AND HAVE MINIMUM CLEARANCES OF 12" TO STORAGE SHELVES, PER CEC SECTION 410.2.

26. ELECTRICAL RECEPTACLES LOCATED IN THE GARAGE, (SEE EXCEPTIONS FOR SPECIFIC EQUIPMENT) EXTERIOR (WATERPROOF), CRAWL SPACE, BATHROOMS. KITCHEN COUNTERS AND WITHIN 6' AND WITHIN 6' EACH WAY FROM SINKS OR LAVATORIES, SHALL BE GROUND_FAULT CIRCUIT INTERRUPTER PROTECTED (GFI) IN ACCORDANCE WITH CEC SECTION 210.8.

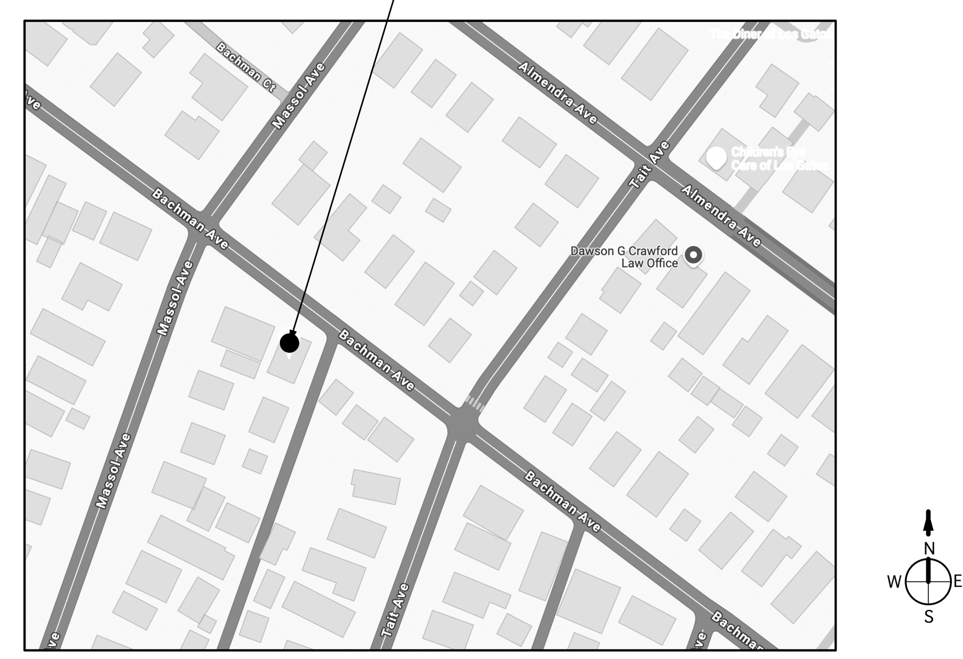
27. INSTALL LIGHT FIXTURES, LOCATED IN KITCHENS AND ROOMS HAVING WATER CLOSETS THAT DO NOT EXCEED 40 LUMENS/WATT (FLUORESCENT TYPE) PER CALIFORNIA TITLE 24. INSTALL FIXTURES RATED FOR DAMP LOCATIONS (DL), EXTERIOR AND IN SHOWER OR TUB COMPARTMENTS. INSTALL FIXTURES RECESSED IN THE CEILINGS RATED FOR INSULATION PROTECTION (IC/AT) AND AIRTIGHT PER CEC SECTION 410.10.

APPLICABLE CODES

2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA RESIDENTIAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA FIRE CODE
2022 CALIFORNIA ENERGY CODE
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

VICINITY MAP N.T.S.

PROJECT LOC.



OPERATIONAL MANUAL

OPERATION AND MAINTENANCE MANUAL. AT THE TIME OF FINAL INSPECTION, A MANUAL, COMPACT DISC, WEB-BASED REFERENCE OR OTHER MEDIA ACCEPTABLE TO THE ENFORCING AGENCY WHICH INCLUDES ALL OF THE FOLLOWING SHALL BE PLACED IN THE BUILDING:
1. DIRECTIONS TO THE OWNER OR OCCUPANT THAT THE MANUAL SHALL REMAIN WITH THE BUILDING THROUGHOUT THE LIFE CYCLE OF THE STRUCTURE.
2. OPERATION AND MAINTENANCE INSTRUCTIONS FOR THE FOLLOWING: A. EQUIPMENT AND APPLIANCES, INCLUDING WATER-SAVING DEVICES AND SYSTEMS, HV AC SYSTEMS, WATER-HEATING SYSTEMS AND OTHER MAJOR APPLIANCES AND EQUIPMENT. B. ROOF AND YARD DRAINAGE, INCLUDING GUTTERS AND DOWNSPOUTS. AC. SPACE CONDITIONING SYSTEMS, INCLUDING CONDENSERS AND AIR FILTERS. D. LANDSCAPE IRRIGATION SYSTEMS. E. WATER REUSE SYSTEMS.
3. INFORMATION FROM LOCAL UTILITY, WATER AND WASTE RECOVERY PROVIDERS ON METHODS TO FURTHER REDUCE RESOURCE CONSUMPTION, INCLUDING RECYCLE PROGRAMS AND LOCATIONS.
4. PUBLIC TRANSPORTATION AND/OR CARPOOL OPTIONS AVAILABLE IN THE AREA.
5. EDUCATIONAL MATERIAL ON THE POSITIVE IMPACTS OF AN INTERIOR RELATIVE HUMIDITY BETWEEN 30-60 PERCENT AND WHAT METHODS AN OCCUPANT MAY USE TO MAINTAIN THE RELATIVE HUMIDITY LEVEL IN THAT RANGE.
6. INFORMATION ABOUT WATER-CONSERVING LANDSCAPE AND IRRIGATION DESIGN AND CONTROLLERS WHICH CONSERVE WATER.
7. INSTRUCTIONS FOR MAINTAINING GUTTERS AND DOWNSPOUTS AND THE IMPORTANCE OF DIVERTING WATER AT LEAST 5 FEET AWAY FROM THE FOUNDATION.
8. INFORMATION ON REQUIRED ROUTINE MAINTENANCE MEASURES, INCLUDING, BUT NOT LIMITED TO, CAULKING, PAINTING, GRADING AROUND THE BUILDING, ETC.
9. INFORMATION ABOUT STATE SOLAR ENERGY AND INCENTIVE PROGRAMS AVAILABLE.
10. A COPY OF ALL SPECIAL INSPECTION VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY OR THIS CODE.

CALGREEN ENVIRONMENT AIR QUALITY

ALL ADHESIVES, SEALANTS, CAULKS, PAINTS, COATINGS AND AEROSOL PAINT CONTAINERS MUST REMAIN ON THE SITE FOR FIELD VERIFICATION BY THE BUILDING INSPECTOR PER CGBSC 4.504.2.4 VERIFICATION OF COMPLIANCE WITH THIS SECTION SHALL BE PROVIDED AT THE REQUEST OF THE ENFORCING AGENCY. DOCUMENTATION MAY INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING:
1. MANUFACTURER'S PRODUCT SPECIFICATION. 2. FIELD VERIFICATION OF ON-SITE PRODUCT CONTAINERS.

PRIOR TO FINAL INSPECTION, A LETTER SIGNED BY THE GENERAL CONTRACTOR OR THE OWNER/BUILDER (FOR ANY OWNER/BUILDER PROJECTS) MUST BE PROVIDED TO THE TOWN OF LOS GATOS BUILDING OFFICIAL CERTIFYING THAT ALL ADHESIVES, SEALANTS, CAULKS, PAINTS, COATINGS, AEROSOL PAINTS, AEROSOL COATINGS, CARPET SYSTEMS (INCLUDING CARPETING, CUSHION AND ADHESIVES), RESILIENT FLOORING SYSTEMS, AND COMPOSITE WOOD PRODUCTS INSTALLED ON THIS PROJECT ARE WITHIN THE EMISSION LIMITS SPECIFIED IN CGBSC SEC. 4.504.

SCOPE OF WORK

NEW POP OUT W/ WDWS AT LIVING RM. (2) NEW SKYLIGHTS IN LIVING RM.
NEW FRONT ENTRY PORCH W/ COLUMNS AND FLAT ROOF. NEW BAY WDW AT KITCHEN. NEW DOOR AND STEPS DOWN TO A NEW PATIO W/ COLUMNS AND A FLAT ROOF. RELOCATE (E) A.C.
NEW GARAGE W/ LAUNDRY AREA.

PROJECT INFORMATION

OWNER: JEAN AND STANLEY MELAX
PHONE: (408) 656-2503
MAILING & PROPERTY ADDRESS: 321 BACHMAN AVE, LOS GATOS, CA 95030

APN# 510-17-100
ZONING: R-1D:LHP
TYPE V-B ; NON-SPRINKLERED
(E) OCCUPANCY GROUP: R3 PROPOSED OCCUPANCY: R3/U

LOT SIZE: 3538.456 SQ. FT. (SURVEY)

HOUSE F.A.R. CALC: 0.3744 (SURVEY)
TOTAL FLOOR AREA ALLOWED: 1324.653 SQ. FT. (SURVEY)
(E) HOUSE AREA: 1098.403 SQ. FT. (SURVEY)
NEW GARAGE AREA: 312 SQ. FT. (SURVEY)
GARAGE F.A.R. CALC.
CALCULATION NOT NEEDED AS GARAGES UP TO 400 SQUARE FEET ARE EXEMPT FROM F.A.R.

BUILDING LOT COVERAGE
EXISTING FIRST FLOOR: 1098.403 SQ. FT.
LOT SIZE: 3538.456 (PER SURVEY)
(E) LOT COVERAGE: 0.31= 31%

PROPOSED FIRST FLOOR: 1098.403 SQ. FT.
PROPOSED GARAGE: 312 SQ. FT.
PROPOSED COVERED PORCH: 200 SQ. FT.
TOTAL PROPOSED: 1610.403 SQ. FT.
LOT SIZE: 3538.456 (PER SURVEY)
PROPOSED LOT COVERAGE: 0.455= 46%

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JURISDICTION APPROVAL STAMPS

MELAX RES GARAGE

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LOS GATOS, CA 95030

**DO NOT SCALE PLANS
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COVER SHEET

NOTFORCONSTRUCTION

Oct. 25, 2025

J. KRETSCHMER | ARCHITECT
101 OLD BLOSSOM HILL ROAD
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G1.0

New Stormwater Control Requirements for Large Single-Family Home Development

Santa Clara Valley Urban Runoff Pollution Prevention Program, 2023

What is Stormwater Pollution?

In natural landscapes, most of the rainwater soaks into the soil. However, in urban areas, **impervious or hard surfaces** such as buildings, driveways, sidewalks, and streets prevent rainwater from soaking into the ground and cause **stormwater runoff**. As stormwater runoff flows over impervious surfaces, it can pick up pollutants such as litter, motor oil, metals, and pesticides, and carry them into storm drains. This polluted runoff flows directly into local creeks and San Francisco Bay, without any cleaning or filtering to remove pollutants.

Why are Stormwater Quality Controls Being Required for My Project?

Local agencies in urbanized portions of the Bay Area are responsible for controlling stormwater pollution by complying with the Municipal Regional Stormwater Permit (MRP), reissued by the Regional Water Quality Control Board in May 2022. Larger development projects have been required to implement stormwater quality controls for over a decade. A new requirement in the MRP now mandates stormwater quality controls for some large single-family homes.

How Do These Requirements Impact My Project?

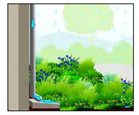
Beginning July 1, 2023, single-family home projects that **create and/or replace 10,000 square feet or more of impervious surface** must meet stormwater quality requirements by including **site design measures, source control measures**, **low impact development (LID) treatment measures**, and **construction site best management practices**, as appropriate for the project. Runoff from portions of the public right of way, such as the street frontage, that are constructed or reconstructed as part of the project will also need to be treated using LID treatment measures.

These features are explained below and should be incorporated into the project design as early as possible.

Site Design Measures

Site design measures help to reduce stormwater flow and water quality impacts of the project by:

- Preserving existing vegetation;
- Reducing the amount of impervious surface using landscaping and/or pervious pavement;
- Directing flow from roof downspouts to landscaping instead of impervious surfaces.



If designed properly, site design measures can reduce or eliminate the need for treatment measures.

Source Control Measures

Source controls prevent potential pollutant sources from contacting stormwater. Examples include:

- Storing household chemicals (e.g., paints, pesticides, fertilizers, and cleaning products) indoors
- Connecting swimming pools and spas to the sanitary sewer system

LID Stormwater Treatment Measures

LID measures are treatment systems designed to treat a specific amount of stormwater runoff from buildings, streets, and parking lots by filtration through a special soil media, infiltration into the ground, or storage for future use. This reduces the quantity of water and pollutants flowing into storm drains and local creeks. The site design and LID treatment measures described on the next page can be used to collect runoff from roofs, driveways, and other impervious surfaces to meet stormwater quality requirements.

Landscape Dispersion

Landscaped areas can be designed to collect stormwater runoff from building roofs and paved areas. For design guidance, see the Landscape Designs for Stormwater Management Fact Sheet.

Landscape Dispersion Factsheet

Roof and driveway draining to landscaping

Bioretention Areas or Rain Gardens

Bioretention areas or rain gardens are shallow, depressed, landscaped areas that use a special soil mix to remove pollutants from stormwater runoff. For design guidance, see the Rain Garden Fact Sheet.

Rain Garden Factsheet

Bioretention area

Rainwater Harvesting

Rain barrels or cisterns can be used to collect and store rainwater for use in landscape irrigation and toilet flushing. For guidance on the determining the storage capacity of the rain barrel or cistern, see the Rain Barrels and Cisterns Fact Sheet.

Rain Barrels Factsheet

Rain barrel

Pervious Concrete, Porous Asphalt, and Pervious Pavers

Pervious surfaces can be used in driveways, backyards, and walkways. Pervious surfaces include the following: pervious concrete or porous asphalt, grid pavers with gaps filled with gravel or turf, interlocking pavers made of pervious material, and solid interlocking pavers that have gaps between them. For design guidance, see the Pervious Pavement Fact Sheet.

Pervious Paving Factsheet

Driveway with pervious pavers

Construction Site Measures

Project sites are required to use construction best management practices (BMPs), such as:

- Controlling soil erosion onsite and preventing sediment from being carried or tracked offsite;
- Covering construction materials and containing wastes such that they do not enter storm drains;
- Protecting storm drain inlets using rubber mats, gravel bags, etc.

What is Required for My Project?

Check with your local Planning Department for information on which stormwater requirements apply and what information is required to be submitted with the project application. You may be required to submit a Stormwater Control Plan prior to project approval.

This fact sheet was developed by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). For more information, visit www.scvurppp.org

PROPERTY MAINTENANCE FACT SHEET

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Landscape Maintenance Techniques for Pest Reduction

Who should use this Fact Sheet?

- Development Project Applicants
- City/County Planners
- Landscape Maintenance Personnel
- Landscape Architects
- Homeowners

Why is it Important to Reduce Pesticide Usage?

When it rains, pesticides used in maintaining landscapes and gardens are washed off the plants and soils they are used to protect. This stormwater runs off the landscape and flows to the nearest storm drain, which ultimately carries the water to a local creek or the San Francisco Bay without treatment. Pesticides carried with stormwater into creeks and the Bay may be harmful to fish and other organisms that live there. Minimizing use of pesticides in landscape maintenance helps protect water quality, aquatic life, and human health.

What is Integrated Pest Management?

Integrated Pest Management (IPM) is a decision-making process for managing pests that uses monitoring to determine pest-caused injury levels and determine the best methods for their control. IPM uses a combination of :

- biological controls (e.g., natural enemies or predators);
- physical or mechanical controls (e.g., hand labor or mowing);
- cultural controls (e.g., mulching, discing, or alternative plant type selection); and
- reduced risk chemical controls (e.g., soaps or oils)

in order to minimize pesticide usage. The IPM method uses the least hazardous pesticides only as a last resort for controlling pests.

How Can Landscape Design and Maintenance Techniques Reduce Pesticide Usage?

Pesticides are often used in maintaining landscapes. The amount of pesticides entering our creeks and Bay can be decreased by using alternative design and maintenance techniques that:

- Reduce the potential for the pesticides to run off the landscape;
- Reduce the amount of chemicals necessary to ensure healthy plants or eliminate the need for pesticide usage at all; or,
- Decrease the need for landscape maintenance by designing landscapes that minimize pest infestation and create low maintenance environments.

Refer to the back of this fact sheet for more design and maintenance tips.

07/01/2016

Pest Reducing Landscape Design Techniques

- Design the landscape for efficient irrigation and drainage.
- Design the landscape to conform to natural drainage patterns.
- Retain existing native, pest-resistant trees, shrubs and plants.
- Select pest-resistant plants adapted to your specific area. Consider site-specific characteristics such as the soil, topography, climate, amount and timing of sunlight, prevailing winds, rainfall, air movement, patterns of land use, ecological consistency and plant interactions.
- Prevent the need for routine pruning by selecting plants based on their size and shape when mature.
- Situate plants to facilitate maintenance. Install mowing strips, tree wells and pathway edging to reduce problems associated with maintaining the interface between different elements of the design.
- Plant at the right time of year.

Pest Reducing Landscape Maintenance Techniques

- Employ nonchemical Integrated Pest Management methods (biological, physical and cultural controls) before using chemicals to treat a pest problem.
- If pesticides are necessary, use the least toxic pesticide available. Avoid use of organophosphates such as diazinon and chlorpyrifos (Dursban) as well as copper-based pesticides.
- Do not over apply pesticide. Spray only where the infestation exists. Follow the manufacturer's instructions for mixing and applying materials.
- Properly sweep up spilled fertilizers or pesticides. Do not wash away or bury such spills.
- Properly dispose of chemical wastes by recycling, reusing, or disposing of as hazardous waste. Do not dispose of debris into or near channels or other waterways or leave it where it may contact runoff.
- Apply pesticides at the appropriate time to maximize their effectiveness and minimize the likelihood of discharging undegraded pesticides into runoff. With the exception of pre-emergent pesticides, avoid application if rain is expected.
- Maintain healthy soils by incorporating organic matter, making regular pH adjustments, and appropriately fertilizing.
- Do not overwater.
- Minimize irrigation overspray.
- Prune to increase air circulation but do not overprune.
- Apply 2-4 inches of mulch or geotextiles to exposed soils to prevent weed growth.
- Mow lawns and turf high and leave clippings in place.
- Replace problem plants with locally-adapted, pest resistant plants.
- Remove, rake up and dispose of diseased plant parts.

ADDITIONAL RESOURCES

IPM Access, www.efn.org/~ipmpa, *IPM Based Landscape Design.*

Bio-Integral Resource Center (BIRC) (510) 524-2567 www.birc.org

Central Contra Costa County Sanitary District *Our Water Our World* IPM Fact Sheets www.centralsan.org

San Francisco Department of the Environment www.sfenvironment.com

IPM Information: www.mywatershedwatch.org

University of California Cooperative Extension Master Gardeners: www.mastergardeners.org

University of California IPM (800) 994-8849 www.ipm.ucdavis.edu

- Natural Enemies Handbook: The Illustrated Guide to Biological Pest Control
- The UC Guide to Solving Garden and Landscape Problems: An Interactive CD- ROM
- Pests of Landscape Trees and Shrubs

07/01/2016

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STORMWATER REDUCTION, PEST CONTROL

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Oct. 25, 2025

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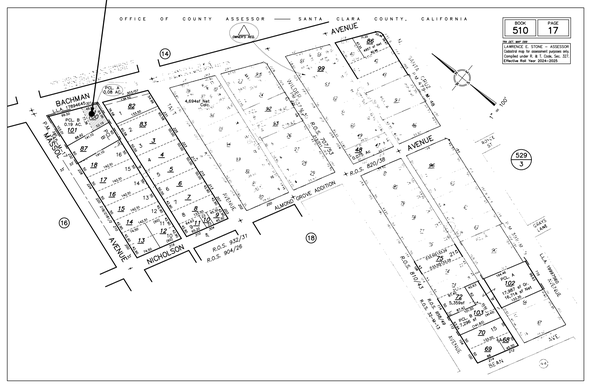
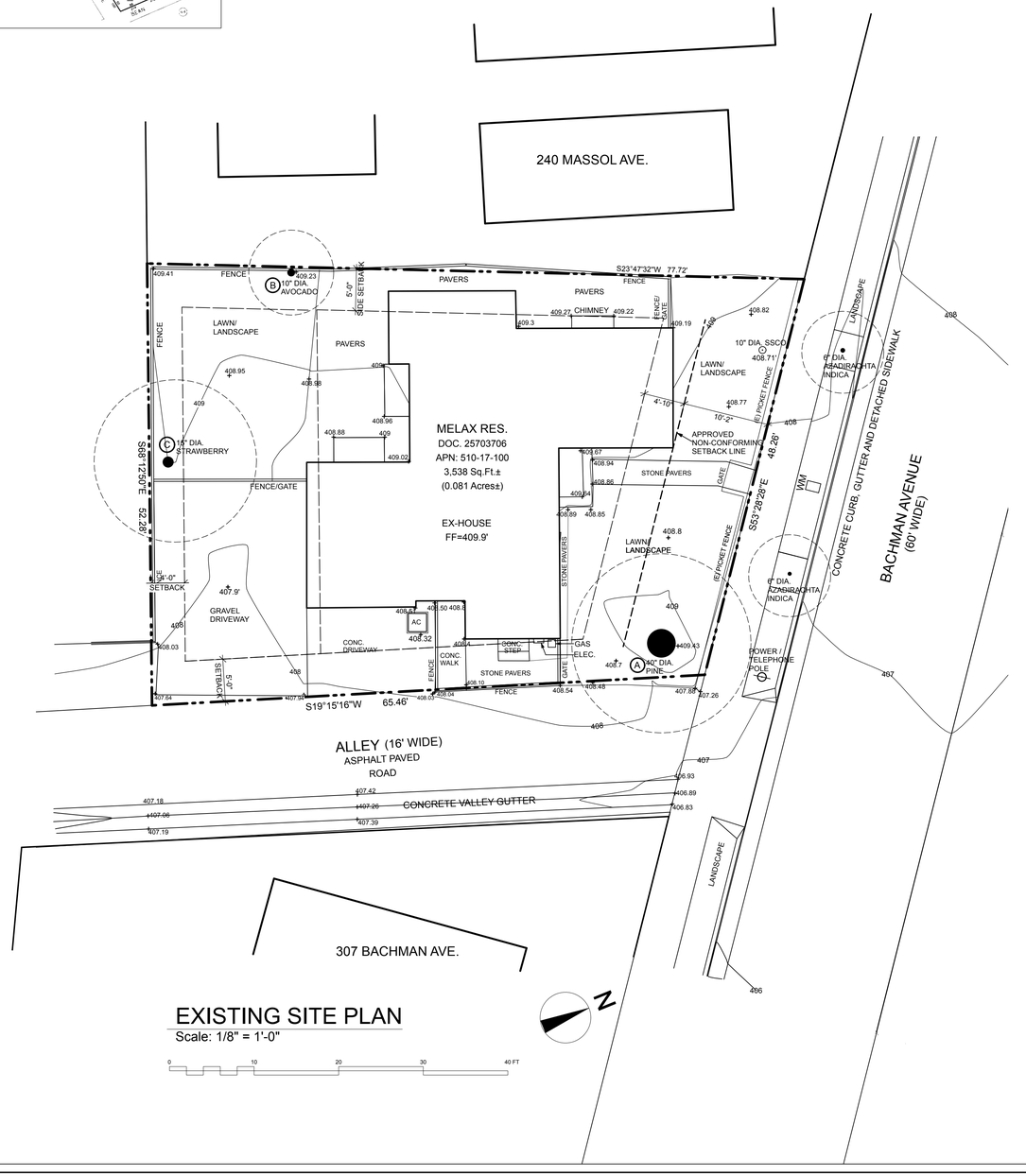
G1.1

PROJECT SITE

APN MAP N.T.S.



NOTES:
1. IT IS RECOMMENDED TO HAVE THE SIDE AND FRONT YARD PROPERTY LINES ESTABLISHED THROUGH A SURVEY PRIOR TO FORMING ANY PORTION OF THE FOUNDATION.
2. FINISH GRADE AROUND THE STRUCTURE SHALL SLOPE AWAY FROM THE FOUNDATION AT A MINIMUM OF 5% FOR AT LEAST 10 FEET FROM THE STRUCTURE, PER CBC 1804.4.
3. EAVE PROJECTIONS OF >2' AND <5' FROM THE PROPERTY LINE SHALL BE 1 HR FIRE RATED PER CRC R302 & TABLE R302.1(1).
4. IF THERE ARE ANY DISCREPANCIES, STOP WORK AND CONTACT THE ARCHITECT IMMEDIATELY.



EXISTING SITE PLAN

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

0 10 20 30 40 FT

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(E) SITE PLAN

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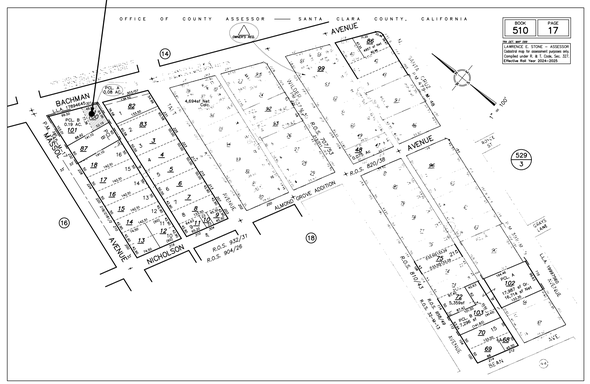
A1.0

LOS GATOS TOWN CODE
CHAPTER 29 – ZONING REGULATIONS ARTICLE I. – IN GENERAL
DIVISION 2. TREE PROTECTION
SEC. 29.10.1005. PROTECTION OF TREES DURING CONSTRUCTION.
(A) PROTECTIVE TREE FENCING SHALL SPECIFY THE FOLLOWING:
(1) **SIZE AND MATERIALS**. SIX (6) FOOT HIGH CHAIN LINK FENCING, MOUNTED ON TWO-INCH DIAMETER GALVANIZED IRON POSTS, SHALL BE DRIVEN INTO THE GROUND TO A DEPTH OF AT LEAST TWO (2) FEET AT NO MORE THAN 10-FOOT SPACING. FOR PAVING AREA THAT WILL NOT BE DEMOLISHED AND WHEN STIPULATED IN A TREE PRESERVATION PLAN, POSTS MAY BE SUPPORTED BY A CONCRETE BASE.
(2) **AREA TYPE TO BE FENCED**. TYPE I: ENCLOSURE WITH CHAIN LINK FENCING OF EITHER THE ENTIRE DRIPLINE AREA OR AT THE TREE PROTECTION ZONE (TPZ), WHEN SPECIFIED BY A CERTIFIED OR CONSULTING ARBORIST. TYPE II: ENCLOSURE FOR STREET TREES LOCATED IN A PLANTER STRIP: CHAIN LINK FENCE AROUND THE ENTIRE PLANTER STRIP TO THE OUTER BRANCHES. TYPE III: PROTECTION FOR A TREE LOCATED IN A SMALL PLANTER CUTOUT ONLY (SUCH AS DOWNTOWN): ORANGE PLASTIC FENCING SHALL BE WRAPPED AROUND THE TRUNK FROM THE GROUND TO THE FIRST BRANCH WITH 2-INCH WOODEN BOARDS BOUND SECURELY ON THE OUTSIDE. CAUTION SHALL BE USED TO AVOID DAMAGING ANY BARK OR BRANCHES.
(3) **DURATION OF TYPE I, II, III FENCING**. FENCING SHALL BE ERECTED BEFORE DEMOLITION, GRADING OR CONSTRUCTION PERMITS ARE ISSUED AND REMAIN IN PLACE UNTIL THE WORK IS COMPLETED. CONTRACTOR SHALL FIRST OBTAIN THE APPROVAL OF THE PROJECT ARBORIST ON RECORD PRIOR TO REMOVING A TREE PROTECTION FENCE.
(4) **WARNING SIGN**. EACH TREE FENCE SHALL HAVE PROMINENTLY DISPLAYED AN 8.5 X 11-INCH SIGN STATING: "WARNING—TREE PROTECTION ZONE–THIS FENCE SHALL NOT BE REMOVED AND IS SUBJECT TO PENALTY ACCORDING TO TOWN CODE 29.10.1025". (B) ALL
PERSONS, SHALL COMPLY WITH THE FOLLOWING PRECAUTIONS:
(1) **PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, INSTALL THE FENCE** AT THE DRIPLINE, OR TREE PROTECTION ZONE (TPZ) WHEN SPECIFIED IN AN APPROVED ARBORIST REPORT, AROUND ANY TREE AND/OR VEGETATION TO BE RETAINED WHICH COULD BE AFFECTED BY THE CONSTRUCTION AND PROHIBIT ANY STORAGE OF CONSTRUCTION MATERIALS OR OTHER MATERIALS, EQUIPMENT CLEANING, OR PARKING OF VEHICLES WITHIN THE TPZ. THE DRIPLINE SHALL NOT BE ALTERED IN ANY WAY SO AS TO INCREASE THE ENCROACHMENT OF THE CONSTRUCTION.
(2) **PROHIBIT ALL CONSTRUCTION ACTIVITIES WITHIN THE TPZ, INCLUDING BUT NOT LIMITED TO**: EXCAVATION, GRADING, DRAINAGE AND LEVELING WITHIN THE DRIPLINE OF THE TREE UNLESS APPROVED BY THE DIRECTOR.
(3) **PROHIBIT DISPOSAL OR DEPOSITING OF OIL, GASOLINE, CHEMICALS OR OTHER HARMFUL MATERIALS** WITHIN THE DRIPLINE OF OR IN DRAINAGE CHANNELS, SWALES OR AREAS THAT MAY LEAD TO THE DRIPLINE OF A PROTECTED TREE.
(4) **PROHIBIT THE ATTACHMENT OF** WIRES, SIGNS OR ROPES TO ANY PROTECTED TREE.
(5) **DESIGN UTILITY SERVICES AND IRRIGATION LINES** TO BE LOCATED OUTSIDE OF THE DRIPLINE WHEN FEASIBLE.
(6) **RETAIN THE SERVICES OF A CERTIFIED OR CONSULTING ARBORIST WHO SHALL SERVE AS THE PROJECT ARBORIST** FOR PERIODIC MONITORING OF THE PROJECT SITE AND THE HEALTH OF THOSE TREES TO BE PRESERVED. THE PROJECT ARBORIST SHALL BE PRESENT WHENEVER ACTIVITIES OCCUR WHICH MAY POSE A POTENTIAL THREAT TO THE HEALTH OF THE TREES TO BE PRESERVED AND SHALL DOCUMENT ALL SITE VISITS.
(7) **THE DIRECTOR AND PROJECT ARBORIST SHALL BE NOTIFIED OF ANY DAMAGE THAT OCCURS TO A PROTECTED TREE** DURING CONSTRUCTION SO THAT PROPER TREATMENT MAY BE ADMINISTERED.
(ORD. NO. 2114, §§ I, II, 8-4-03)
PAGE 1 OF 4**SEC. 29.10.1010. PRUNING AND MAINTENANCE.**
ALL PRUNING SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE INTERNATIONAL SOCIETY OF ARBORICULTURE BEST MANAGEMENT PRACTICES—TREE PRUNING AND ANSI A300-PART 1 TREE, SHRUB AND OTHER WOODY PLANT MANAGEMENT—STANDARD PRACTICES, (PRUNING) AND ANY SPECIAL CONDITIONS AS DETERMINED BY THE DIRECTOR. FOR DEVELOPMENTS, WHICH REQUIRE A TREE PRESERVATION REPORT, A CERTIFIED OR CONSULTING ARBORIST SHALL BE IN REASONABLE CHARGE OF ALL ACTIVITIES INVOLVING PROTECTED TREES, INCLUDING PRUNING, CABLING AND ANY OTHER WORK IF SPECIFIED.
(1) **ANY PUBLIC UTILITY INSTALLING OR MAINTAINING ANY OVERHEAD WIRES OR UNDERGROUND PIPES OR CONDUITS IN THE VICINITY OF A PROTECTED TREE** SHALL OBTAIN PERMISSION FROM THE DIRECTOR BEFORE PERFORMING ANY WORK, INCLUDING PRUNING, WHICH MAY CAUSE INJURY TO A PROTECTED TREE. (E.G. CABLE TV/FIBER OPTIC TRENCHING, GAS, WATER, SEWER TRENCH, ETC.).
(2) **PRUNING FOR CLEARANCE OF UTILITY LINES AND ENERGIZED CONDUCTORS** SHALL BE PERFORMED IN COMPLIANCE WITH THE CURRENT VERSION OF THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A300 (PART 1)-PRUNING, SECTION 5.9 UTILITY PRUNING. USING SPIKES OR GAFFS WHEN PRUNING, EXCEPT WHERE NO OTHER ALTERNATIVE IS AVAILABLE, IS PROHIBITED.
(3) **NO PERSON SHALL PRUNE, TRIM, CUT OFF, OR PERFORM ANY WORK, ON A SINGLE OCCASION OR CUMULATIVELY, OVER A THREE-YEAR PERIOD, AFFECTING TWENTY-FIVE PERCENT OR MORE OF THE CROWN OF ANY PROTECTED TREE WITHOUT FIRST OBTAINING A PERMIT** PURSUANT TO THIS DIVISION EXCEPT FOR POLLARDING OF FRUITLESS MULBERRY TREES (*MORUS ALBA*) OR OTHER SPECIES APPROVED BY THE TOWN ARBORIST. APPLICATIONS FOR A PRUNING PERMIT SHALL INCLUDE PHOTOGRAPHS INDICATING WHERE PRUNING IS PROPOSED.
(4) **NO PERSON SHALL REMOVE ANY HERITAGE TREE OR LARGE PROTECTED TREE BRANCH OR ROOT THROUGH PRUNING OR OTHER METHOD GREATER THAN FOUR (4) INCHES IN DIAMETER** (12.5" IN CIRCUMFERENCE) WITHOUT FIRST OBTAINING A PERMIT PURSUANT TO THIS DIVISION.
(ORD. NO. 2114, §§ I, II, 8-4-03)
SEC. 29.10.1015. NO LIMITATION OF AUTHORITY.
NOTHING IN THIS DIVISION LIMITS OR MODIFIES THE EXISTING AUTHORITY OF THE TOWN UNDER DIVISION 29 OF TITLE 29 (ZONING REGULATIONS), TITLE 26 (PUBLIC TREES) OR THE HILLSIDE DEVELOPMENT STANDARDS AND GUIDELINES TO REQUIRE TREES AND OTHER PLANTS TO BE IDENTIFIED, RETAINED, PROTECTED, AND/OR PLANTED AS CONDITIONS OF THE APPROVAL OF DEVELOPMENT. IN THE EVENT OF CONFLICT BETWEEN PROVISIONS OF THIS DIVISION AND CONDITIONS OF ANY PERMIT OR OTHER APPROVAL GRANTED PURSUANT TO CHAPTER 29 OR CHAPTER 26 OF THE TOWN CODE OR THE HILLSIDE DEVELOPMENT STANDARDS AND GUIDELINES, THE MORE PROTECTIVE REQUIREMENTS SHALL PREVAIL.
(ORD. NO. 2114, §§ I, II, 8-4-03)
SEC. 29.10.1020. RESPONSIBILITY FOR ENFORCEMENT.
ALL OFFICERS AND EMPLOYEES OF THE TOWN SHALL REPORT VIOLATIONS OF THIS DIVISION TO THE DIRECTOR OF COMMUNITY DEVELOPMENT. WHENEVER AN ENFORCEMENT OFFICER AS DEFINED IN SECTION 1.30.015 OF THE TOWN CODE DETERMINES THAT A VIOLATION OF THIS CODE HAS OCCURRED, THE ENFORCEMENT OFFICER SHALL HAVE THE AUTHORITY TO ISSUE AN ADMINISTRATIVE CITATION PURSUANT TO THE PROVISIONS OF SECTION 1.30.020 OF THE TOWN CODE
(ORD. NO. 2114, §§ I, II, 8-4-03)
WHENEVER AN ENFORCEMENT OFFICER CHARGED WITH THE ENFORCEMENT OF THIS CODE DETERMINES THAT A VIOLATION OF THAT PROVISION HAS OCCURRED, THE ENFORCEMENT OFFICER SHALL HAVE THE AUTHORITY TO ISSUE AN ADMINISTRATIVE CITATION TO ANY PERSON RESPONSIBLE FOR THE VIOLATION.
PAGE 2 OF 4

SEC. 29.10.1025. ENFORCEMENT—REMEDIES FOR VIOLATION.
IN ADDITION TO ALL OTHER REMEDIES SET FORTH IN THIS CODE OR OTHERWISE PROVIDED BY LAW, THE FOLLOWING REMEDIES SHALL BE AVAILABLE TO THE TOWN FOR VIOLATION OF THIS DIVISION:
(1) **TREE REMOVALS IN ABSENCE OF OR IN ANTICIPATION OF DEVELOPMENT**. IF A VIOLATION OCCURS IN THE ABSENCE OF OR PRIOR TO PROPOSED DEVELOPMENT, THEN DISCRETIONARY APPLICATIONS AND/OR BUILDING PERMIT APPLICATIONS WILL NOT BE ACCEPTED OR PROCESSED BY THE TOWN UNTIL THE VIOLATION HAS BEEN REMEDIED TO THE REASONABLE SATISFACTION OF THE DIRECTOR. MITIGATION MEASURES AS DETERMINED BY THE DIRECTOR MAY BE IMPOSED AS A CONDITION OF ANY SUBSEQUENT APPLICATION APPROVAL OR PERMIT FOR DEVELOPMENT ON THE SUBJECT PROPERTY. A MITIGATION PLAN SHALL INCLUDE SPECIFIC MEASURES FOR THE PROTECTION OF ANY REMAINING TREES ON THE PROPERTY, AND SHALL PROVIDE FOR THE REPLACEMENT OF EACH HILLSIDE TREE THAT WAS REMOVED ILLEGALLY WITH A NEW TREE(S) IN THE SAME LOCATION(S) AS THOSE ILLEGALLY REMOVED TREE(S). THE REPLACEMENT RATIO SHALL BE AT A GREATER RATIO THAN THAT REQUIRED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN SEC. 29.10.0985 OF THIS DIVISION. IF THE COURT OR THE DIRECTOR DIRECTS A REPLACEMENT TREE OR TREES TO BE PLANTED AS PART OF THE REMEDY FOR THE VIOLATION, THE TREES SHALL BE PERMANENTLY MAINTAINED IN A GOOD AND HEALTHY CONDITION. THE PROPERTY OWNER SHALL EXECUTE A FIVE-YEAR WRITTEN MAINTENANCE AGREEMENT WITH THE TOWN. FOR THOSE TREES ON PUBLIC PROPERTY, REPLACEMENT IS TO BE DETERMINED BY THE DIRECTOR OF COMMUNITY DEVELOPMENT OR BY THE DIRECTOR OF PARKS AND PUBLIC WORKS.
(2) **PENDING DEVELOPMENT APPLICATIONS, INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED FURTHER UNTIL THE VIOLATION HAS BEEN REMEDIED**. IF AN APPLICATION HAS BEEN DEEMED COMPLETE, IT MAY BE DENIED BY THE DIRECTOR OR FORWARDED TO THE PLANNING COMMISSION WITH A RECOMMENDATION FOR DENIAL AT THE DIRECTOR'S DISCRETION. MITIGATION MEASURES AS DETERMINED BY THE DIRECTOR MAY BE IMPOSED AS A CONDITION OF APPROVAL. A MITIGATION PLAN SHALL INCLUDE SPECIFIC MEASURES FOR THE PROTECTION OF ANY REMAINING TREES ON THE PROPERTY, AND SHALL PROVIDE FOR THE REPLACEMENT OF EACH HILLSIDE TREE THAT WAS REMOVED ILLEGALLY WITH A NEW TREE(S) IN THE SAME LOCATION(S) AS THOSE ILLEGALLY REMOVED TREE(S). THE REPLACEMENT RATIO SHALL BE AT A GREATER RATIO THAN THAT REQUIRED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN SEC. 29.10.0985 OF THIS DIVISION. IF THE COURT OR THE DIRECTOR DIRECTS A REPLACEMENT TREE OR TREES TO BE PLANTED AS PART OF THE REMEDY FOR THE VIOLATION, THE TREES SHALL BE PERMANENTLY MAINTAINED IN A GOOD AND HEALTHY CONDITION. THE PROPERTY OWNER SHALL EXECUTE A FIVE-YEAR WRITTEN MAINTENANCE AGREEMENT WITH THE TOWN. FOR THOSE TREES ON PUBLIC PROPERTY, REPLACEMENT IS TO BE DETERMINED BY THE DIRECTOR OF COMMUNITY DEVELOPMENT OR BY THE DIRECTOR OF PARKS AND PUBLIC WORKS.
(3) **PROJECTS UNDER CONSTRUCTION**.
A. IF A VIOLATION OCCURS DURING CONSTRUCTION, THE TOWN MAY ISSUE A STOP WORK ORDER SUSPENDING AND PROHIBITING FURTHER ACTIVITY ON THE PROPERTY PURSUANT TO THE GRADING, DEMOLITION, AND/OR BUILDING PERMIT(S) (INCLUDING CONSTRUCTION, INSPECTION, AND ISSUANCE OF CERTIFICATES OF OCCUPANCY) UNTIL A MITIGATION PLAN HAS BEEN FILED WITH AND APPROVED BY THE DIRECTOR, AGREED TO IN WRITING BY THE PROPERTY OWNER(S) OR THE APPLICANT(S) OR BOTH, AND EITHER IMPLEMENTED OR GUARANTEED BY THE POSTING OF ADEQUATE SECURITY IN THE DISCRETION OF THE DIRECTOR. A MITIGATION PLAN SHALL INCLUDE SPECIFIC MEASURES FOR THE PROTECTION OF ANY REMAINING TREES ON THE PROPERTY, AND SHALL PROVIDE FOR THE REPLACEMENT OF EACH HILLSIDE TREE THAT WAS REMOVED ILLEGALLY WITH A NEW TREE(S) IN THE SAME LOCATION(S) AS THOSE ILLEGALLY REMOVED TREE(S). THE REPLACEMENT RATIO SHALL BE AT A GREATER RATIO THAN THAT REQUIRED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN SEC. 29.10.0985 OF THIS DIVISION. IF THE COURT OR THE DIRECTOR DIRECTS A REPLACEMENT TREE OR TREES TO BE PLANTED AS PART OF THE REMEDY FOR THE VIOLATION, THE TREES SHALL BE PERMANENTLY MAINTAINED IN A GOOD AND HEALTHY CONDITION. THE PROPERTY OWNER SHALL EXECUTE A FIVE-YEAR WRITTEN MAINTENANCE AGREEMENT WITH THE TOWN. FOR THOSE TREES ON PUBLIC PROPERTY, REPLACEMENT IS TO BE DETERMINED BY THE DIRECTOR OF COMMUNITY DEVELOPMENT OR BY THE DIRECTOR OF PARKS AND PUBLIC WORKS.
B. THE VIOLATION OF ANY PROVISIONS IN THIS DIVISION DURING THE CONDUCT BY ANY PERSON OF A TREE REMOVAL, LANDSCAPING, CONSTRUCTION OR OTHER BUSINESS IN THE TOWN SHALL CONSTITUTE GROUNDS FOR REVOCATION OF ANY BUSINESS LICENSE ISSUED TO SUCH PERSON.
(4) **CIVIL PENALTIES**.
NOTWITHSTANDING SECTION 29.20.950 RELATING TO CRIMINAL PENALTY, ANY PERSON FOUND TO HAVE VIOLATED SECTION 29.10.0965 SHALL BE LIABLE TO PAY THE TOWN A CIVIL PENALTY AS PRESCRIBED IN SUBSECTIONS A. THROUGH D.
PAGE 3 OF 4
A. AS PART OF A CIVIL ACTION BROUGHT BY THE TOWN, A COURT MAY ASSESS AGAINST ANY PERSON WHO COMMITS, ALLOWS, OR MAINTAINS A VIOLATION OF ANY PROVISION OF THIS DIVISION A CIVIL PENALTY IN AN AMOUNT NOT TO EXCEED FIVE THOUSAND DOLLARS PER VIOLATION.
B. WHERE THE VIOLATION HAS RESULTED IN REMOVAL OF A PROTECTED TREE, THE CIVIL PENALTY SHALL BE IN AN AMOUNT NOT TO EXCEED FIVE THOUSAND DOLLARS PER TREE UNLAWFULLY REMOVED, OR THE REPLACEMENT VALUE OF EACH SUCH TREE, WHICHEVER AMOUNT IS HIGHER. SUCH AMOUNT SHALL BE PAYABLE TO THE TOWN AND DEPOSITED INTO THE TREE REPLACEMENT FUND. REPLACEMENT VALUE FOR THE PURPOSES OF THIS SECTION SHALL BE DETERMINED UTILIZING THE MOST RECENT EDITION OF THE GUIDE FOR PLANT APPRAISAL, AS PREPARED BY THE COUNCIL OF TREE AND LANDSCAPE APPRAISERS AND THE SPECIES AND GROUP CLASSIFICATION GUIDE PUBLISHED BY THE WESTERN CHAPTER OF THE INTERNATIONAL SOCIETY OF ARBORICULTURE.
C. IF THE COURT OR THE DIRECTOR DIRECTS A REPLACEMENT TREE OR TREES TO BE PLANTED AS PART OF THE REMEDY FOR THE VIOLATION, THE TREES SHALL BE PERMANENTLY MAINTAINED IN A GOOD AND HEALTHY CONDITION. THE PROPERTY OWNER SHALL EXECUTE A FIVE YEAR WRITTEN MAINTENANCE AGREEMENT WITH THE TOWN.
D. THE COST OF ENFORCING THIS DIVISION, WHICH SHALL INCLUDE ALL COSTS, STAFF TIME, AND ATTORNEYS' FEES.
(5) **INJUNCTIVE RELIEF**. A CIVIL ACTION MAY BE COMMENCED TO ABATE, ENJOIN, OR OTHERWISE COMPEL THE CESSATION OF SUCH VIOLATION.
(6) **COSTS**. IN ANY CIVIL ACTION BROUGHT PURSUANT TO THIS DIVISION IN WHICH THE TOWN PREVAILS, THE COURT SHALL AWARD TO THE TOWN ALL COSTS OF INVESTIGATION AND PREPARATION FOR TRIAL, THE COSTS OF TRIAL, REASONABLE EXPENSES INCLUDING OVERHEAD AND ADMINISTRATIVE COSTS INCURRED IN PROSECUTING THE ACTION, AND REASONABLE ATTORNEY FEES.
(ORD. NO. 2114, §§ I, II, 8-4-03)
SEC. 29.10.1030. FEES.
THE FEE, AS ADOPTED BY TOWN RESOLUTION, PRESCRIBED THEREFORE IN THE MUNICIPAL FEE SCHEDULE SHALL ACCOMPANY THE REMOVAL OR PRUNING PERMIT APPLICATION SUBMITTED TO THE TOWN FOR REVIEW AND EVALUATION PURSUANT TO THIS DIVISION.(ORD. NO. 2114, §§ I, II, 8-4-03)
SEC. 29.10.1035. SEVERABILITY.
IF ANY PROVISION OF THIS DIVISION OR THE APPLICATION THEREOF TO ANY PERSON OR CIRCUMSTANCE IS HELD TO BE INVALID BY A COURT OF COMPETENT JURISDICTION, SUCH INVALIDITY SHALL NOT AFFECT ANY OTHER PROVISION OF THIS DIVISION WHICH CAN BE GIVEN EFFECT WITHOUT THE INVALID PROVISION OR APPLICATION, AND TO THIS END THE PROVISIONS OF THIS DIVISION ARE DECLARED TO BE SEVERABLE.
(ORD. NO. 2114, §§ I, II, 8-4-03)
SEC. 29.10.1040. NOTICES.
ALL NOTICES REQUIRED UNDER THIS DIVISION SHALL CONFORM TO NOTICING PROVISIONS OF THE APPLICABLE TOWN CODE.
SEC. 29.10.1045. APPEALS.
ANY INTERESTED PERSON MAY APPEAL A DECISION OF THE DIRECTOR PURSUANT TO THIS DIVISION IN ACCORDANCE WITH THE PROCEDURES SET FORTH IN SECTION 29.20.260 OF THE TOWN CODE. ALL APPEALS SHALL COMPLY WITH THE PUBLIC NOTICING PROVISIONS OF SECTION 29.20.450 OF THE TOWN CODE.
(ORD. NO. 2114, §§ I, II, 8-4-03)
PAGE 4 OF 4

PROJECT SITE

APN MAP N.T.S.

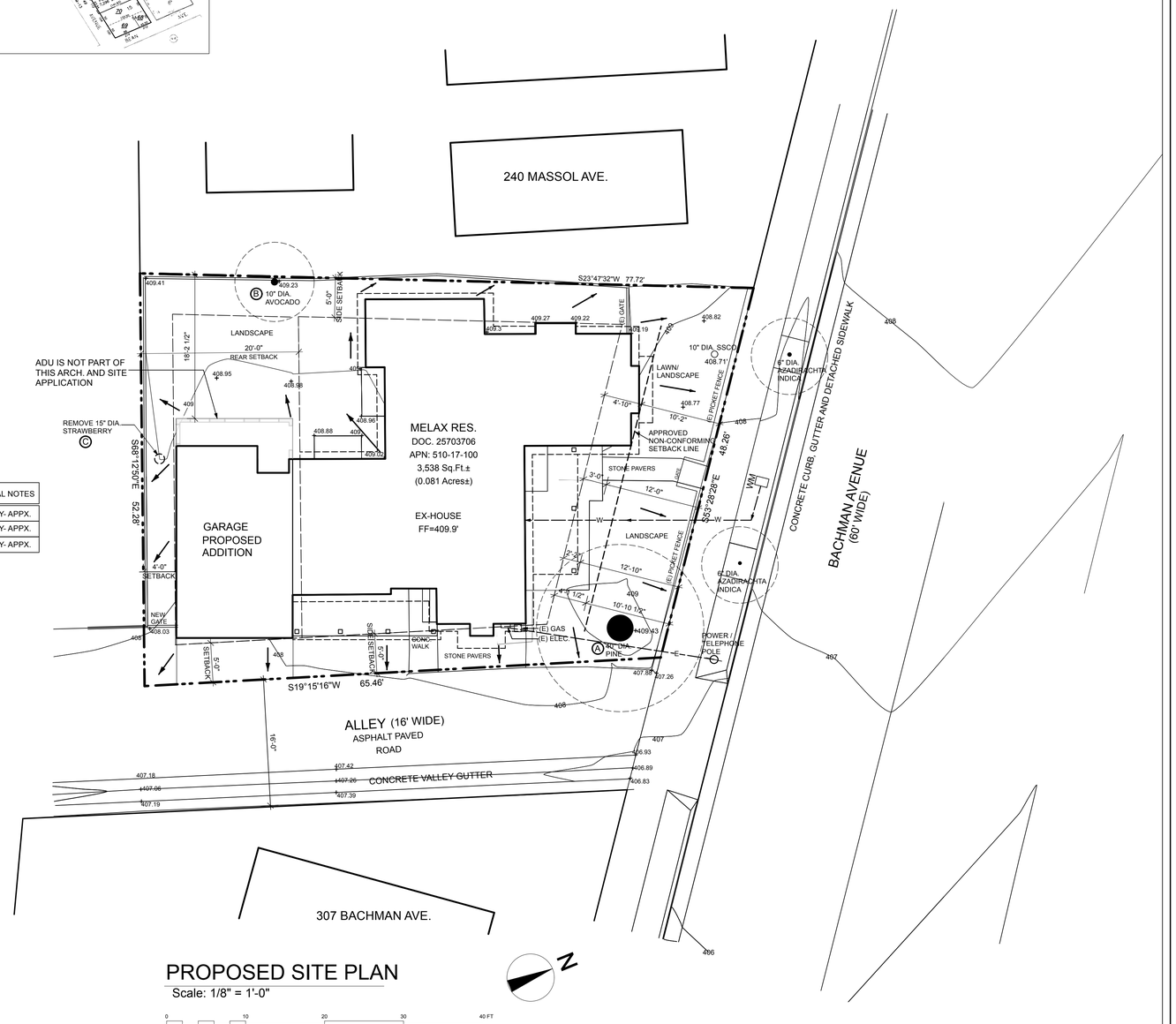


NOTES:
1. IT IS RECOMMENDED TO HAVE THE SIDE AND FRONT YARD PROPERTY LINES ESTABLISHED THROUGH A SURVEY PRIOR TO FORMING ANY PORTION OF THE FOUNDATION.
2. FINISH GRADE AROUND THE STRUCTURE SHALL SLOPE AWAY FROM THE FOUNDATION AT A MINIMUM OF 5% FOR AT LEAST 10 FEET FROM THE STRUCTURE, PER CBC 1804.4.
3. EAVE PROJECTIONS OF >2' AND <5' FROM THE PROPERTY LINE SHALL BE 1 HR FIRE RATED PER CRC R302 & TABLE R302.1(1).
4. IF THERE ARE ANY DISCREPANCIES, STOP WORK AND CONTACT THE ARCHITECT IMMEDIATELY.

TREE SCHEDULE

MRK	SIZE	COMMON/BOTANICAL NAME	CONDITION	SAVED, REMOVED PRUNED	ADDITIONAL NOTES
A	40" DIA.	PINE / PINUS	HEALTHY	SAVED	21' CANOPY- APPX.
B	10" DIA.	AVOCADO / PERSEA AMERICANA	HEALTHY	SAVED	10' CANOPY- APPX.
C	15" DIA.	STRAWBERRY /ARBUTUS UNEDO	HEALTHY	REMOVED*	16' CANOPY- APPX.

* NOTE: TREE TO BE REMOVED DUE TO TO THE PROXIMITY OF THE PROPOSED GARAGE ADDITION.



PROPOSED SITE PLAN

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

0 10 20 30 40 FT

MELAX RES GARAGE

321 BACHMAN AVE
LOS GATOS, CA 95030

DO NOT SCALE PLANS
SCALE REFLECTS DRAWINGS PRINTED ON ARCH D 24x36 SIZE SHEETS

(N) SITE PLAN

NOTFORCONSTRUCTION

Oct. 25, 2025

J. KRETSCHMER | ARCHITECT
101 OLD BLOSSOM HILL ROAD
LOS GATOS, CA 95032
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MEMBER AMERICAN INSTITUTE OF ARCHITECTS

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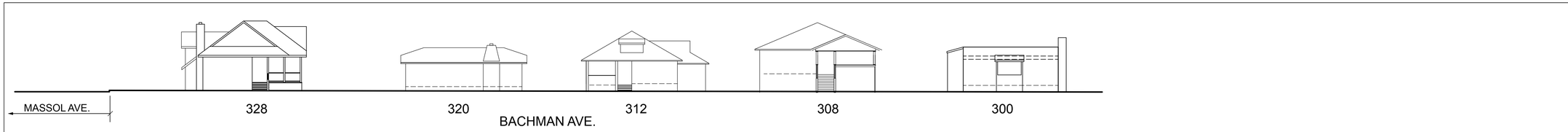
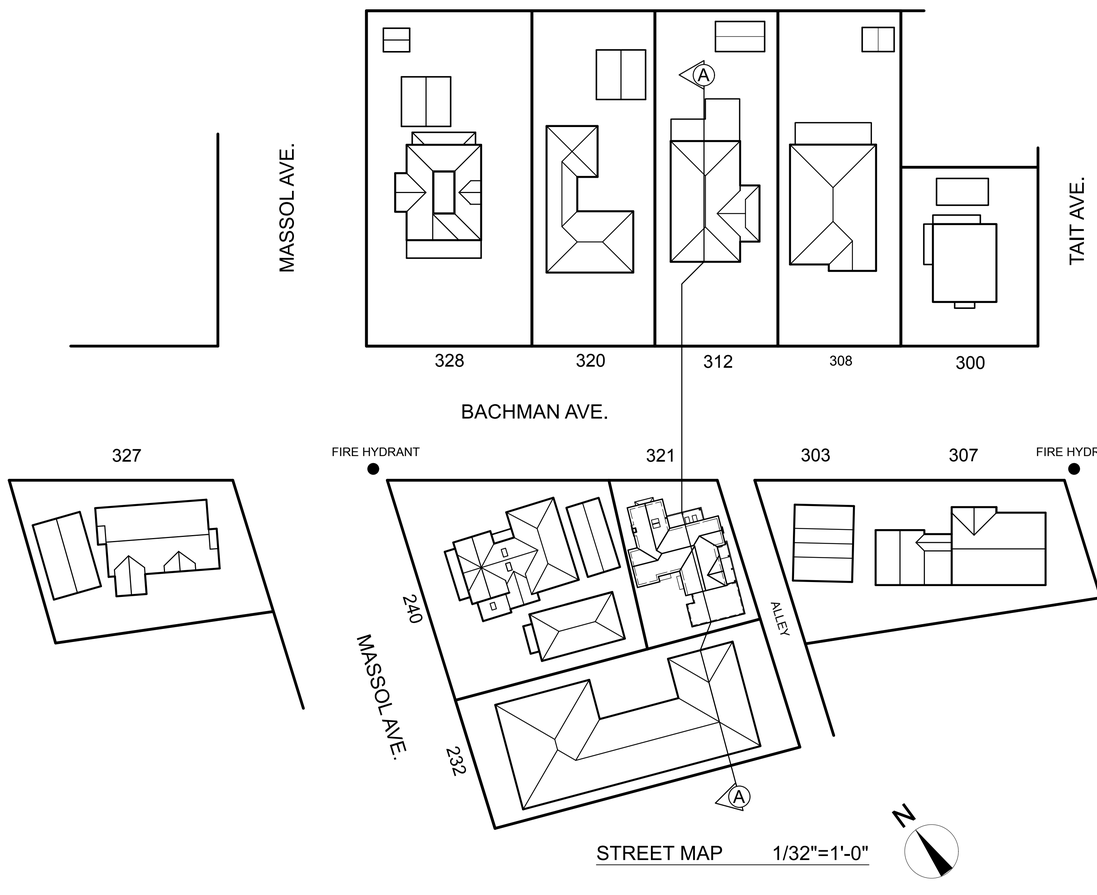
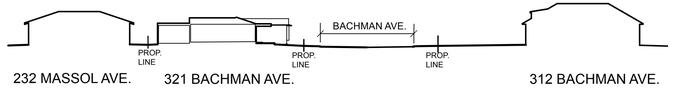
A1.1



STREETSCAPE 1/16"=1'-0"

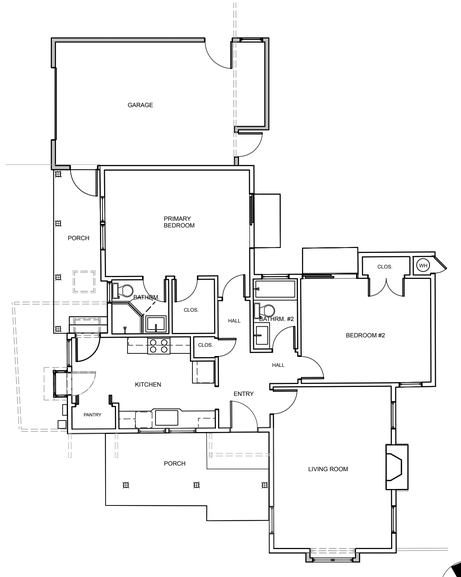


STREET MAP 1/32"=1'-0"



A PROPERTY SECTION 1/32"=1'-0"

PROPOSED NORTH ELEVATION 1/4"=1'-0"



PROPOSED 1ST FLOOR PLAN 1/8"=1'-0"
(E) = GRAY

MELAX RES GARAGE

321 BACHMAN AVE
LOS GATOS, CA 95030

DO NOT SCALE PLANS
SCALE REFLECTS
DRAWINGS PRINTED ON
ARCH D 24x36 SIZE SHEETS

STREETSCAPE

NOTFORCONSTRUCTION

Oct. 25, 2025

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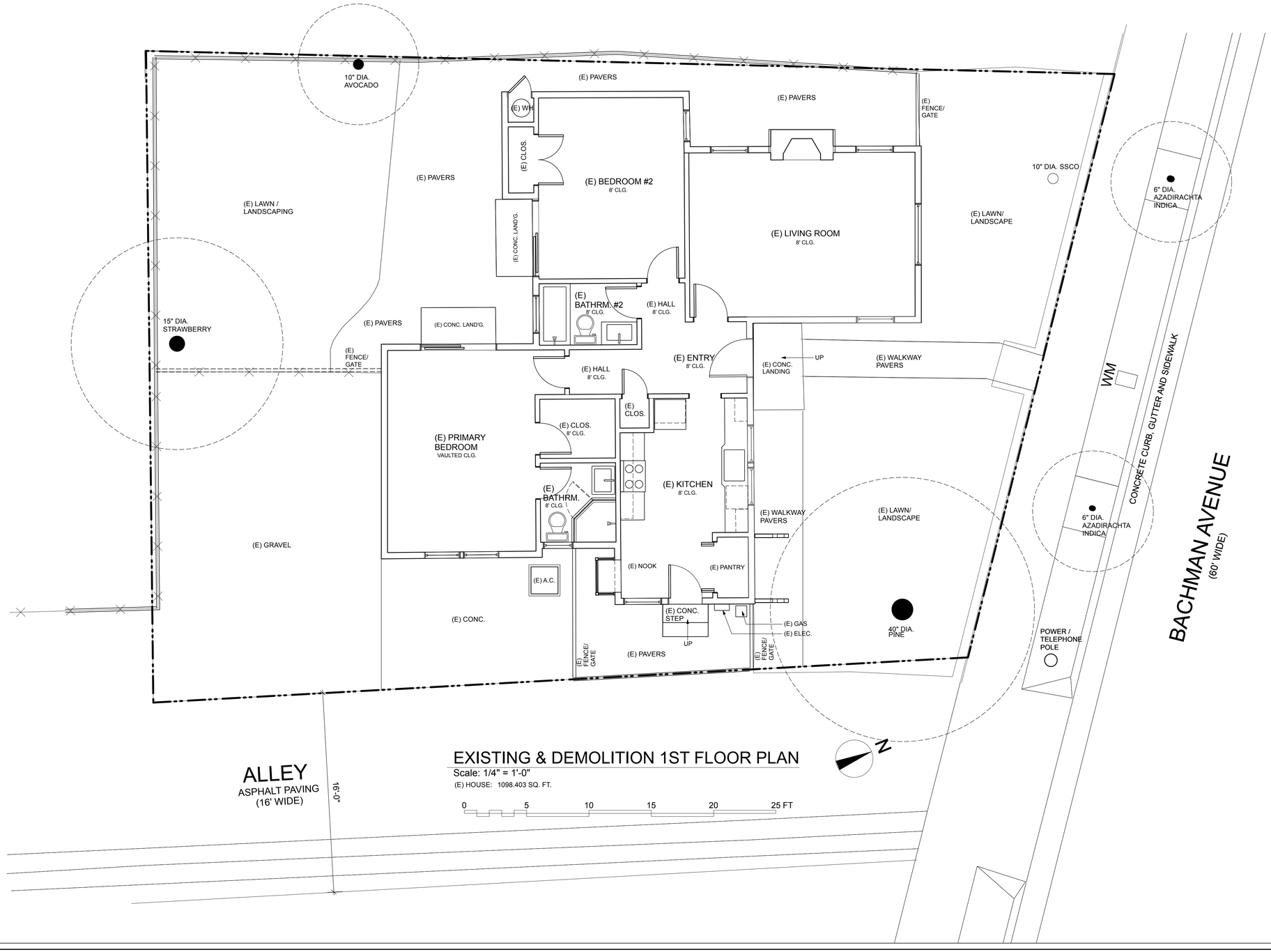
A1.2

LEGEND

- EXISTING WALLS TO BE REMOVED
- EXISTING WALLS TO REMAIN
- NEW WALLS
  - 2x6 STUD WALLS AT ALL EXTERIOR AND PLUMBING WALLS
  - 2x4 STUD WALLS AT INTERIOR
- ALL DIMENSIONS ARE FACE OF FINISH
- LOCATION OF NEW 6"X14" VENTS

(N) NEW
(E) EXISTING
(R) REPLACE



EXISTING & DEMOLITION 1ST FLOOR PLAN

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

(E) HOUSE: 1098.403 SQ. FT.

0 5 10 15 20 25 FT

MELAX RES GARAGE

321 BACHMAN AVE
LOS GATOS, CA 95030

DO NOT SCALE PLANS
SCALE REFLECTS DRAWINGS PRINTED ON ARCH D 24x36 SIZE SHEETS

(E) FIRST FLOOR PLAN

NOTFORCONSTRUCTION

Oct. 25, 2025

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A2.0

NOTES:
1. VERIFY ALL DIMENSIONS IN THE FIELD. IF DIMENSIONS DO NOT MATCH THOSE ON PLANS, CONTACT THE ARCHITECT.
2. IF ANY CONFLICT ARISES BETWEEN THE ARCHITECT'S AND THE STRUCTURAL ENGINEER'S DRAWINGS, STOP WORK AND CONTACT THE ARCHITECT FIRST.

LEGEND

- EXISTING WALLS TO BE REMOVED
- EXISTING WALLS TO REMAIN
- NEW WALLS
  - 2x6 STUD WALLS AT ALL EXTERIOR AND PLUMBING WALLS
  - 2x4 STUD WALLS AT INTERIOR
- ALL DIMENSIONS ARE FACE OF FINISH
- LOCATION OF NEW 6"X14" VENTS
- (N) NEW
- (E) EXISTING
- (R) REPLACE

PROJECT INFORMATION

NOTE: ALSO ON G1.0

3. **FAR for lots less than 5,000 S.F.**: The allowable FAR for all structures (excluding up to 400 S.F. of garage space) on any lot containing less than 5,000 S.F. shall be determined by the following formula:

   FAR = .40 - ([A - 2] x .05)
   3

   where:
   A is the net lot area **in thousands** of S.F. (e.g. 4,500 S.F. is written as 4.5)

Note:
The product of the FAR equation will be a decimal, which shall be rounded to two decimal places. For example, a product of 0.358 shall be rounded to 0.36, which is the FAR for a 4,500 S.F. lot.
To calculate the maximum living area, multiply the FAR by the lot area as follows:

0.36 x 4,500 S.F. = 1,620 S.F. of maximum floor area

LOT SIZE: 3538.456 sq. ft. (survey)
HOUSE F.A.R. CALC: 0.3744 (survey)

Total floor area allowed:
1324.653 sq. ft. (survey)

(E) House Area: 1098.403 sq. ft. (survey)

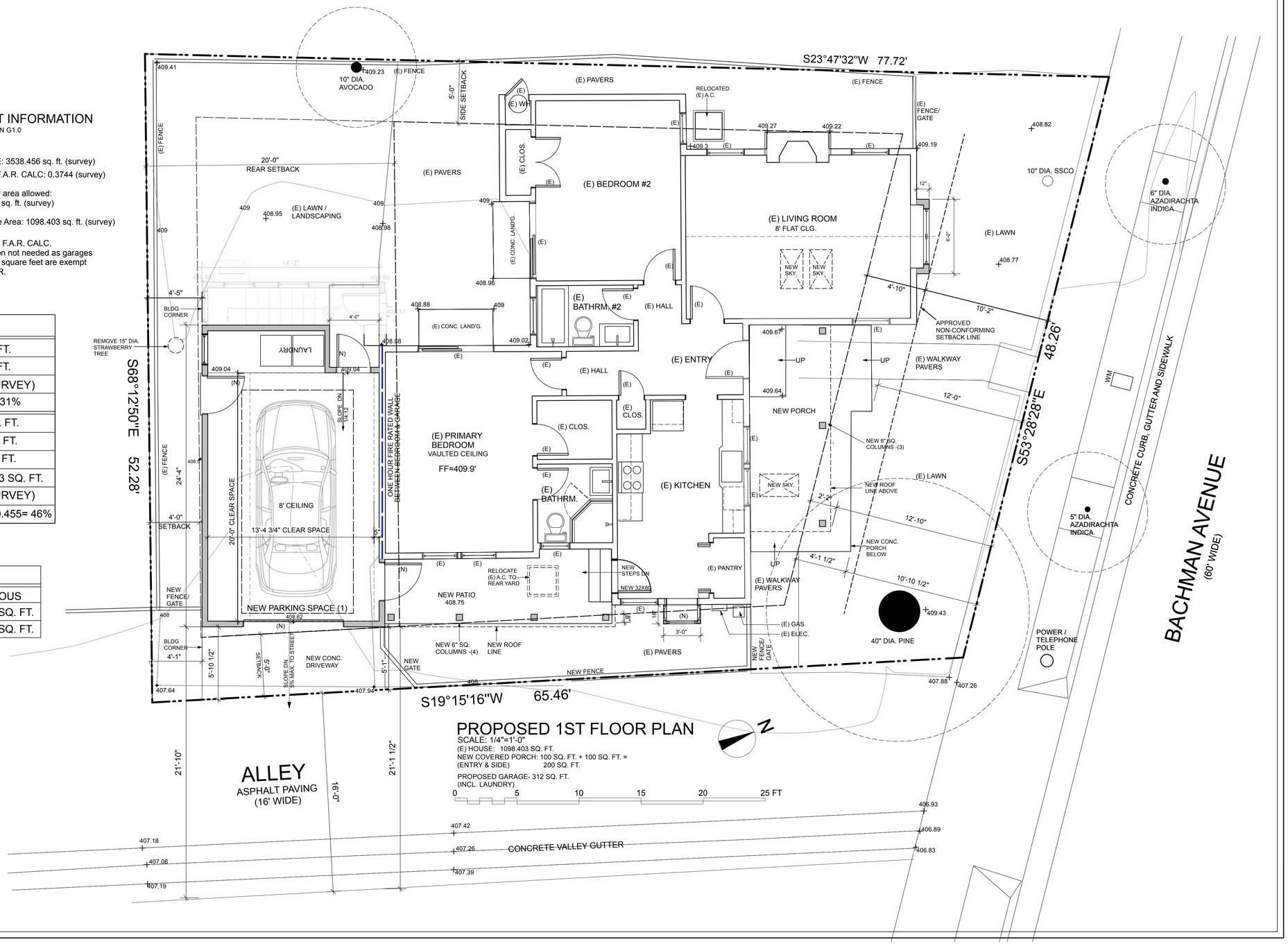
GARAGE F.A.R. CALC.
Calculation not needed as garages up to 400 square feet are exempt from F.A.R.

BUILDING LOT COVERAGE

EXISTING	FIRST FLOOR: 1098.403 SQ. FT.
	TOTAL (E): 1098.403 SQ. FT.
	LOT SIZE: 3538.456 (PER SURVEY)
	(E) LOT COVERAGE: 0.31= 31%
PROPOSED	FIRST FLOOR: 1098.403 SQ. FT.
	GARAGE: 312 SQ. FT.
	COVERED PORCH: 200 SQ. FT.
	TOTAL PROPOSED: 1610.403 SQ. FT.
	LOT SIZE: 3538.456 (PER SURVEY)
	PROPOSED LOT COVERAGE: 0.455= 46%

SURFACE AREA

	PERVIOUS	IMPERVIOUS
EXISTING	2440.053 SQ. FT.	1098.403. SQ. FT.
PROPOSED	1928.053 SQ. FT.	1610.403. SQ. FT.



PROPOSED 1ST FLOOR PLAN

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

(E) HOUSE: 1098.403 SQ. FT.
NEW COVERED PORCH: 100 SQ. FT. + 100 SQ. FT. = 200 SQ. FT.
(ENTRY & SIDE)
PROPOSED GARAGE- 312 SQ. FT.
(INCL. LAUNDRY)

0 5 10 15 20 25 FT

MELAX RES GARAGE

321 BACHMAN AVE
LOS GATOS, CA 95030

DO NOT SCALE PLANS
SCALE REFLECTS DRAWINGS PRINTED ON ARCH D 24x36 SIZE SHEETS

(N) FIRST FLOOR PLAN

NOTFORCONSTRUCTION

Oct. 25, 2025

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LOS GATOS, CA 95032
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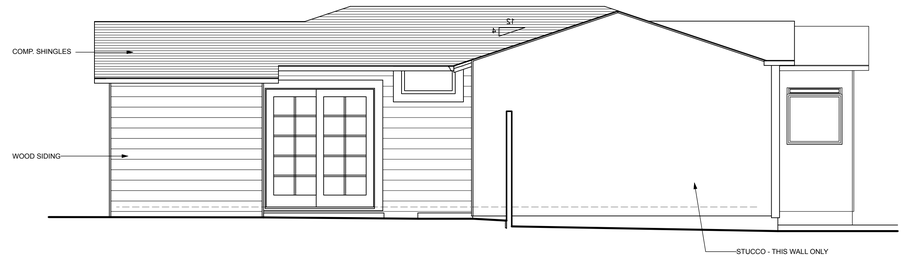
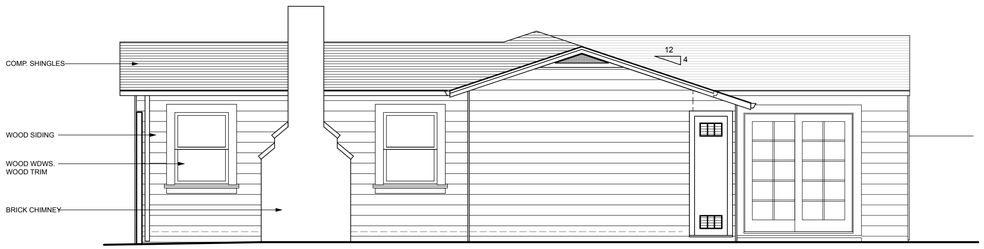
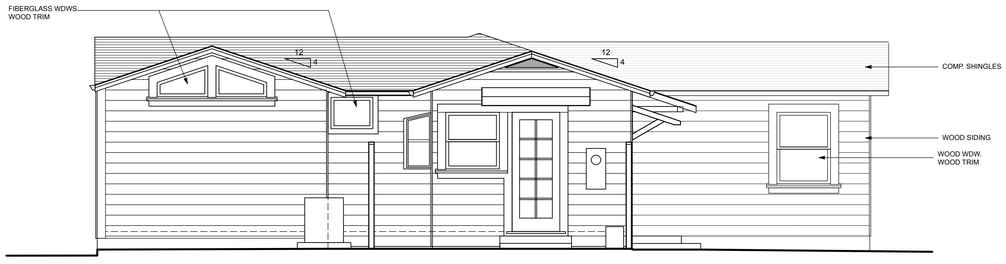
A2.1



(E) WEST ELEVATION 1/4"=1'-0"



(E) SOUTH ELEVATION 1/4"=1'-0"



(E) EAST ELEVATION 1/4"=1'-0"

(E) NORTH ELEVATION 1/4"=1'-0"

0 5 10 15 20 25 FT

MELAX RES
GARAGE

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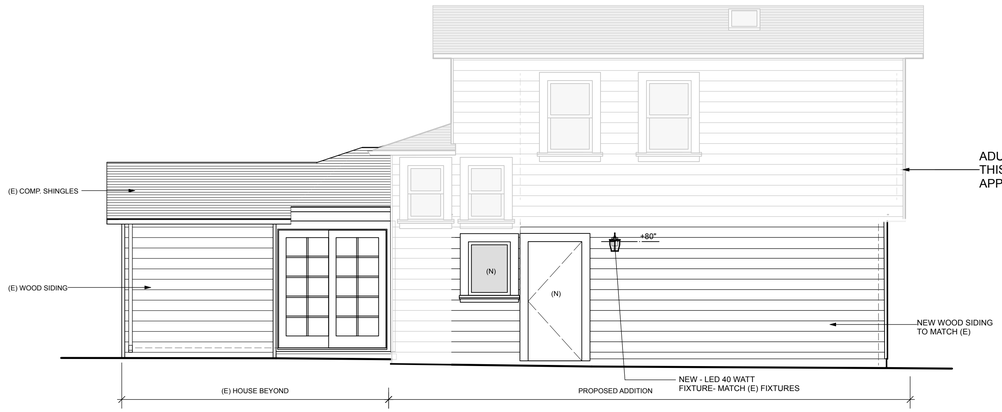
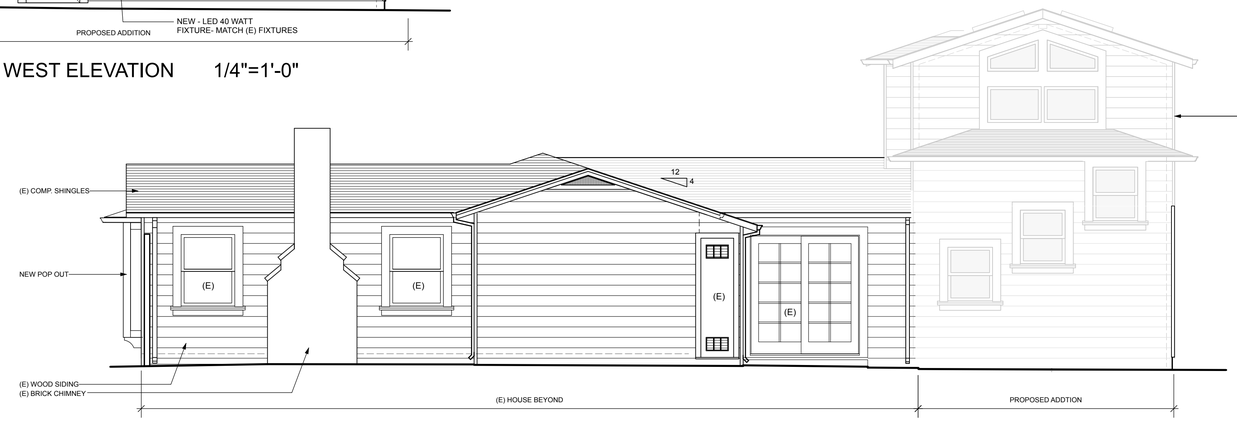
A3.0

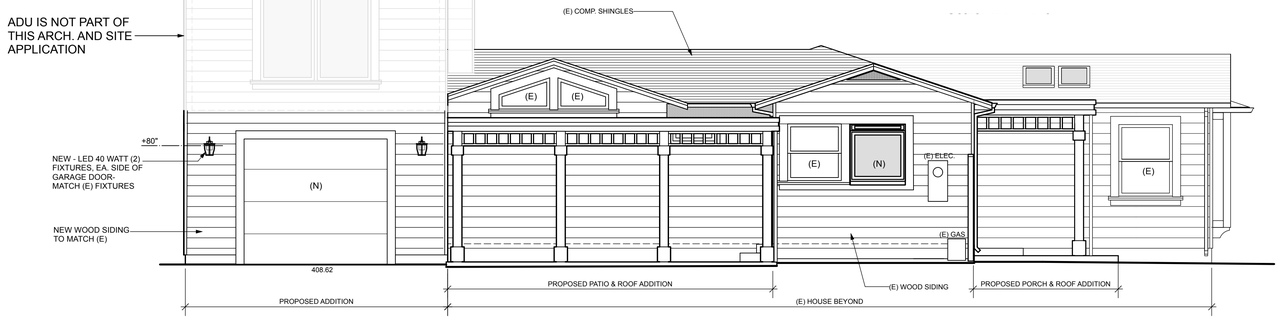
NOTES:
1. PROVIDE UNDERFLOOR VENTILATION PER CRC SEC R408.
2. PROVIDE ATTIC VENTILATION PER CRC SEC 806.2
3. ALL EGRESS WINDOWS, PER CRC R310 ARE TO HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT., MINIMUM NET CLEAR OPENING (OR 5 SQ. FT. MIN. FOR GRADE FLOOR) WITH HEIGHT OF 24" AND A MINIMUM NET CLEAR OPENING WIDTH OF 20". THE BOTTOM OF THE CLEAR OPENING MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
4. PROVIDE SPLASH BLOCKS AWAY FROM HOUSE AT EACH DOWN SPOUT.



PROPOSED WEST ELEVATION 1/4"=1'-0"



PROPOSED SOUTH ELEVATION 1/4"=1'-0"



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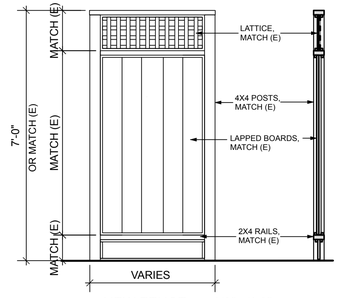
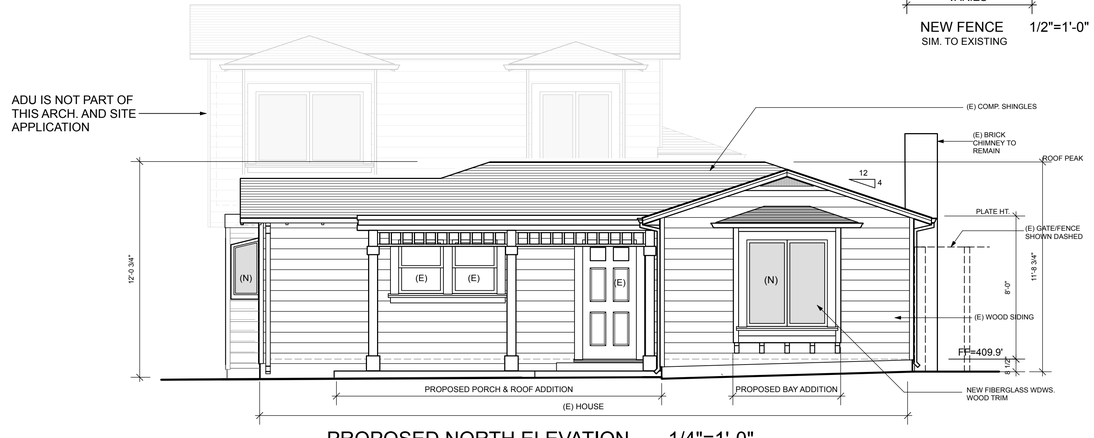


NEW FENCE 1/2"=1'-0"
SIM. TO EXISTING



PROPOSED NORTH ELEVATION 1/4"=1'-0"

0 5 10 15 20 25 FT

2502SD102525.vwx Oct. 25, 2025

MELAX RES GARAGE

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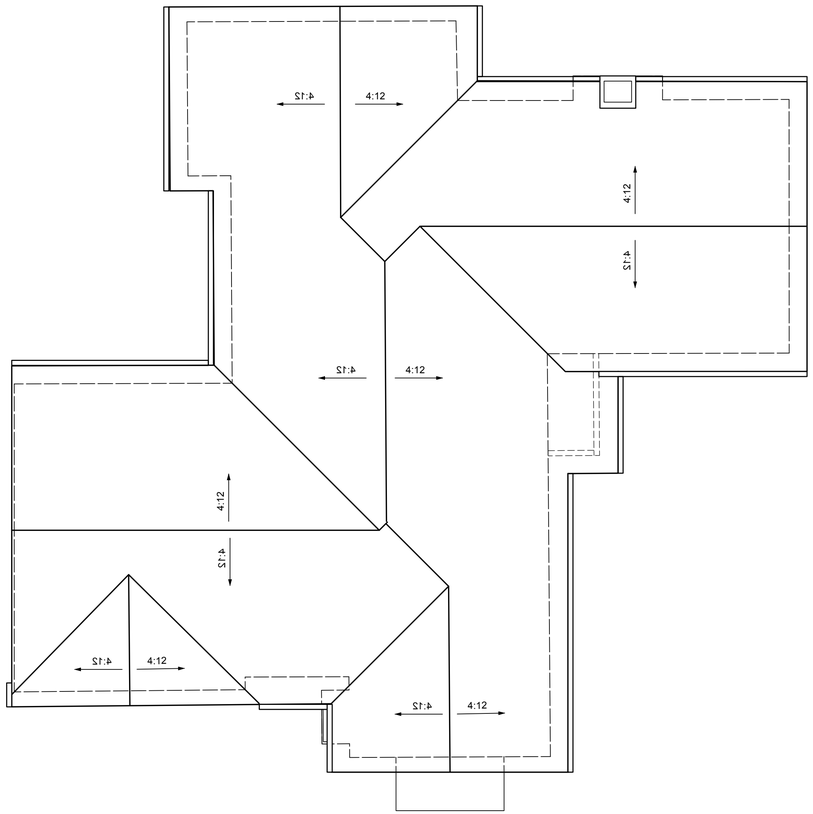
A3.1



EXISTING ROOF PLAN

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

N

0 5 10 15 20 25 FT

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(E) ROOF PLAN

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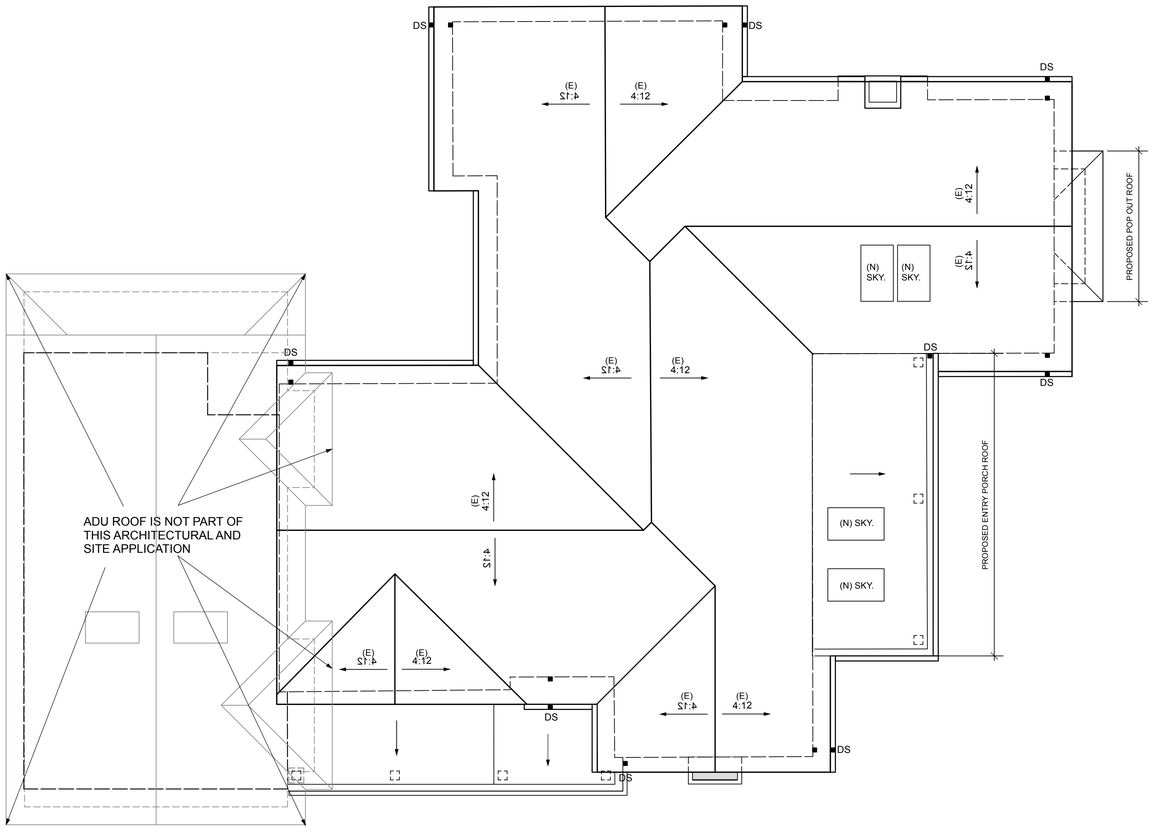
A4.0



PROPOSED SOUTH ELEVATION

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

0 5 10 15 20 25 FT

MELAX RES
GARAGE

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A4.1

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DATE: November 14, 2025

TO: Historic Preservation Committee

FROM: Joel Paulson, Community Development Director

SUBJECT: Consider a Request for Approval to Construct an Addition and Exterior Alterations to an Existing Pre-1941 Single-Family Residence on Property Zoned R-1D. **Located at 446 San Benito Avenue**. APN 410-16-051. Request for Review Application PHST-25-021. Exempt Pursuant to CEQA Guidelines, Section 15301: Existing Facilities. Property Owner/Applicant: Devendra Deshwal. Project Planner: Maria Chavarin.

RECOMMENDATION:

Consider a request for approval to construct an addition and exterior alterations to an existing pre-1941 single-family residence located at 446 San Benito Avenue.

PROPERTY DETAILS:

1. Date primary structure was built: 1905 per County Assessor's Database; 1920s per Anne Bloomfield Survey
2. Town of Los Gatos Historic Status Code: "✓" or historic and some altered
3. Does property have an LHP Overlay? No
4. Is structure in a historic district? No
5. If yes, is it a contributor? N/A
6. Findings required? Yes
7. Considerations required? Yes

BACKGROUND:

The County Assessor indicates that the residence located at 446 San Benito Avenue was constructed in 1905 and the 1991 Bloomfield Survey estimates the construction date as the 1920s (Attachment 1). The building footprint shown on the Sanborn Fire Insurance Maps is consistent between 1928 and 1944 (Attachment 1). The footprint of the residence remained consistent between 1928 and 1944.

PREPARED BY: Maria Chavarin
Assistant Planner

The 1991 Anne Bloomfield Survey rates the residence as historic and some altered (Attachment 1). This rating suggests that, at the time of the survey in 1991, very few modifications had been made to the residence including window and porch alterations. Town permit records provide the following permit history:

- 2004 – Electrical Permit;
- 2010 – Building Permit – front porch and roof eaves repairs; and
- 2015 – Building Permit – re-roof.

The applicant provided evidence that there have been unpermitted additions to the original structure (Attachment 1). Building permits show that the permitted floor area of the house is 684 square feet where the actual existing floor area of the house is 889 square feet. The applicant provided as-built plans for the existing house (Attachment 1, Annexure 10), showing the existing floor area of 889 square feet. The applicant's position is that unpermitted additions were made to the house.

In addition to the applicant's research on the history of the property (Attachment 1), the applicant proposes to construct a 1,393-square foot first floor addition and a 479-square foot attached garage toward the side and rear of the residence and exterior modifications such as siding replacement (Attachment 3).

At the September 24, 2025, meeting, the Historic Preservation Committee deliberated on a preliminary review for a single-story addition and a new two-story addition including exterior alterations to a pre-1941 residence. The Committee discussed each of the areas of interest outlined in the staff report dated September 19, 2025. The Committee evaluated the proposal and provided feedback to the applicant to apply the recommendations to a future design.

DISCUSSION:

The applicant has returned to the Committee requesting a formal recommendation of the revised project, proposing a single-story addition with exterior alterations including siding replacement (Attachments 2 and 4). The applicant's project description (Attachment 2) describes the existing structures on site, details the proposed single-story addition, and addresses the areas of interest provided in the staff report dated September 19, 2025.

The development plans show a single-story addition to the side and rear of the existing residence. The addition consists of a 479-square-foot attached garage, and a 1,393-square foot addition totaling 2,238-square foot residence. The proposed residence complies with the maximum allowed floor area allowed for the property. Based on the project scope and once the demolition calculation is verifired, the project could be completed under a Building Permit application.

The design of the attached garage is setback from the front façade of the residence to minimize visual impact from the public street. The added habitable area is located to the rear of the existing residence and not visible from the street. The new roof forms on the front elevation appear to align with the original bungalow architectural style of the existing residence. The exterior changes consist of removing and replacing doors and windows including window types, introduction of new roof ridges to accommodate the new garage and new habitable areas, and siding replacement. The proposed windows would be white metal-clad wood; the new roof is a gable roof to match the existing roof style and materials (shingles); the proposed garage and entry doors consist of wood material; and the proposed siding is a shingle wood siding to match existing.

Town Code Section 29.10.020 clarifies that demolition of a historic structure means removal of more than twenty-five percent of the wall(s) facing a public street or fifty percent of all exterior walls. When approved by the deciding body, the following is exempt from the demolition definition:

a. *Replacement*. The exterior wall covering may be removed if the covering is not original to the structure.
b. *Repair*. The removal and replacement of in kind non-repairable exterior wall covering (siding) resulting in no change to its exterior appearance or historic character if approved by the deciding body.
c. *Removal*. The removal of an addition(s) that is not part of the original structure and which has no historic significance, as determined by the Historic Preservation Committee. Demolition shall be determined by subsections (1) and (2) above for the original structure, where walls enclosed by additions shall be considered as exterior walls.

The applicant requests that the Committee make the repair finding, exempting the in-kind replacement of the damage siding from the demolition calculation.

FINDINGS AND CONSIDERATIONS:

A. Findings

Sec. 29.10.020. Demolition (historic structures)
All remaining exterior walls must be contiguous and must retain the existing exterior wall covering. No new exterior wall covering shall be permitted over the existing exterior wall covering. The following are exempt from this definition:
___ *a. Replacement*. The exterior wall covering may be removed if the covering is not original to the structure.
_X_ *b. Repair.* The removal and replacement of in kind non-repairable exterior wall covering

(siding) resulting in no change to its exterior appearance or historic character if approved by the deciding body.

___ *c. Removal.* The removal of an addition(s) that is not part of the original structure and which has no historic significance, as determined by the Historic Preservation Committee. Demolition shall be determined by subsections (1) and (2) above for the original structure, where walls enclosed by additions shall be considered as exterior walls.

B. Considerations

Sec. 29.80.290. Standards for review.
In evaluating applications, the deciding body shall consider the architectural style, design, arrangement, texture, materials and color, and any other pertinent factors. Applications shall not be granted unless:

_X_ For pre-1941 structures, the proposed work will neither adversely affect the exterior architectural characteristics or other features of the property which is the subject of the application.

C. Residential Design Guidelines

Sections 3.9 of the Town's Residential Design Guidelines offers recommendations for the construction of additions to existing residences (Attachment 3).

CONCLUSION:

The applicant is seeking a recommendation of approval from the Committee for the construction of a single-story addition and exterior alterations to an existing pre-1941 single-family residence on property zoned R-1D, located at 446 San Benito Avenue. A new single-story addition, if not triggering a technical demolition, would be processed through a Building Permit application. Should the Committee find merit in the request, the recommendation would be forwarded to the Community Development Director. If confirmed through Planning review to be in substantial conformance with the Committee's review and recommendations, the application would not return to the Committee.

ATTACHMENTS:

1. Applicant's Research
2. Project Description
3. Section 3.9, Residential Design Guidelines
4. Development Plans

TOWN OF LOS GATOS
HISTORIC PRESERVATION COMMITTEE
HISTORIC RESEARCH WORKSHEET

Applicants shall provide written evidence and supporting documents to justify their request for a remodel, alteration, addition, determination of significance, or demolition of a designated or presumptive historic resource. This worksheet is intended to assist the applicant in gathering written evidence and supporting documents, and to assist the Historic Preservation Committee during evaluation of the request.

Applicants shall provide written evidence and supporting documents of the historical and architectural characteristics, regarding both structures (construction date, alteration dates, photographic documentation) and people (owner and/or resident names). If written evidence cannot fit on this worksheet, please attach separate sheets.

The Historic Preservation Committee reviews the application using the Town's Historic District Ordinance requirements. Copies of the ordinance(s) are available at Town Hall. The Committee meets the fourth Wednesday of every month. The filing deadline is 20 days prior to the meeting by 11:00 AM.

The applicant shall research the following (please check the box once you complete your research):

1. Los Gatos Public Library (see How to Research the History of a House in Los Gatos):
   - ■ Sanborn Maps
   - ■ 1941 Tax Assessment
   - ■ 1989 Anne Bloomfield Historic Resource Survey forms
   - ■ Polk's Directories
   - ■ Telephone Directories
   - □ Other
2. Santa Clara County Resources (especially helpful for properties previously located in the county's jurisdiction):
   - ■ Santa Clara County Planning Department records
   - □ San Jose Public Library (California Room)
3. Community Development Department Resources:
   - ■ Sanborn Maps
   - ■ 1989 Anne Bloomfield Historic Resource Survey forms
   - ■ Community Development Department property files (permit history)

Research was conducted on (please enter date): 03/21/2025

Records and Documents found (please attach copies): 1. San Born Maps. 2. 1941 Tax Assesment
3. 1989 Anne Bloomfield Historic Survey. 4. Telephone Directories. 5. Computer Records. 6. SCC replies

The justification for the removal of 446 San Benito Ave from the Historic Inventory is attached as Attachment-1 containing all these documents as Annexures 1 to 10.

HOW TO RESEARCH THE HISTORY OF A HOUSE IN LOS GATOS
At the Los Gatos Public Library
100 Villa Avenue, Los Gatos CA 95030

Locked Cases Area

1. The Los Gatos *Sanborn Fire Insurance Maps* located on the microfilm file cabinet. These maps indicate the outline of buildings in 1884, 1888, 1891, 1895, 1904, 1928 and 1944 (please note the 1944 maps have been relabeled and appear out-of-order, before the 1928 maps). These can be used to identify a construction date range.

Bookcase #11

1. The 1941 *Tax Assessment Survey*. The listings are alphabetical by street name. An entry will note how old the owner thought the house was in 1941 (please note that this information is not always accurate).
2. The 1991 *Anne Bloomfield Historic Resources Survey*. These listings are alphabetical by street name.
3. A list of the *Museums of Los Gatos Historic Homes Tours* and programs.
4. A list of the 100 *Bellringers* and information.
5. As it Was by Dora Rankin.

Bookcase #12

1. The 1924-1974 *Polk's Directories* (please note that some years are missing), with reverse listings by address and then resident name.
2. *Business and Telephone Directories*, as early as 1881-82.

History Room (Docent Hours: 1:00-5:00 Mondays and Thursdays; 10:00-12:00 Wednesdays)

1. History of Los Gatos by George Bruntz and Los Gatos Observed by Alistair Dallas (979.473).
2. Information in the Residences drawers of the Vertical File, filed by street.
3. The Patrons' Inquiries, binder #3 Residences, listed by street, located on the shelf above the computers. These may provide information found under previous searches.

General

1. ancestry.com is available free while inside the library.
2. A Field Guide to American Houses by Virginia Savage McAlester (728 M11 in non-fiction)

JUSTIFICATION FOR REMOVAL FROM HISTORIC INVENTORY
446 San Benito Avenue Los Gatos, CA, 94032

SUBJECT: Request for removal of a Pre-1941 Property from Historic Resources Inventory for the Property Zoned R-1D, Located at 446 San Benito Avenue. APN 410-16-051.

PROPERTY OWNER/APPLICANT: Devendra Deshwal

PROPERTY DETAILS:

1. Date primary structure was built: as per ANNE BLOOMFIELD ARCHITECTURAL SURVEY- LOS GATOS RESEARCH -Year 1920, As Per Town Record -1905
2. Town of Los Gatos Historic Status Code: N/A
3. Does property have an LHP Overlay? No
4. Is the structure in a historic district? No
5. If yes, is it a contributor? N/A

DETAILED JUSTIFICATION:

A wide-ranging research has been conducted in line with the guidelines of the Historic Research WorkSheet, Historic Preservation Committee, Town of Los Gatos and the details of the research are given as below:

1. **LOS GATOS PUBLIC LIBRARY:**
   a. **SANBORN MAPS:** The Sanborn maps of 1928 & 1944 are attached as Annexures-1 & 2. These maps show the main house and an accessory structure in the rear yard. The main house still exists but the accessory structure is no longer existing as will be seen from the existing site plan sheet A1 in the plan set of the existing house attached as Annexure 10. .
   b. **1941 TAX ASSESSMENT:** The 1941 Tax Assessment Survey is attached as Annexure-3. It does not convey any pointer to the historical character of this building. (The survey report is for lot 43 (Old No.) as also correlated in the ANNE BLOOMFIELD SURVEY.
   c. **1989 ANNE BLOOMFIELD HISTORIC RESOURCE SURVEY FORM:**
   The Anne Bloomfield Historic Resource Survey Form is attached as Annexure-4. The survey also mentions its old lot No. as 43 and also provides its likely year of construction as 1920. The original style is said to be “Banglow”. It also mentions that some alterations to existing windows and the Porch were done to the original house. A photo of the house is also given but the features of the house are not very clear from it. As such, the survey does not establish it to be a structure of historic importance.
   d. **POLK’S DIRECTORIES & TELEPHONE DIRECTORY:**

Contd P2

The Polk's Directories & Telephone directories were researched to know the details of persons staying or associated with this house. A chronological detail of the persons stayed is given in Annexure -5 attached including the relevant pages of the Polk's Directory.

A search was made on the internet for important persons associated with Los Gatos and a list of 83 people appeared as per the link below:

https://www.famousfix.com/list/people-from-los-gatos-california

None of these famous people lived in this house..

Thus a perusal of Annexure 5 and the Google search shows that no significant persons are associated with this house/structure.

e. HISTORIC PROPERTY RESEARCH COLLOECTION:

The Historic Property Research Collection in the Los Gatos Library was searched and no record pertaining to this structure was found in box no. 9 relevant for the San Benito Ave. A record of only one house i.e. for 441, was found in the box. This establishes the house at 446 San Benito Ave does not have any historical importance.

2. SANTA CLARA COUNTY RESOURCES:

A request was made to the planning department of the Santa Clara County to ascertain if any plans or any other records are available in the county records. The county replied that no plan or any other records are available for 446 San Benito Ave & asked to contact the town of Los Gatos for the same. Thus no historical records are available in the county for this structure. The email screenshot of the replies from the county are attached as Annexure 6 & 7.

3. TOWN OF LOS GATOS- COMPUTER RECORDS:

A search was made on the computer installed in the lobby to find out the records of 446 San Benito Ave. The search yielded some of the records including the permit records for some of the works done in this house. These records are attached as Annexure 8 (11 pages). A perusal of these records indicate that some alteration works have been done to the original house as below:

1. Electrical service upgrade
2. Front porch repair and repair of the eve.
3. Repair of the roof and eave including replacement of the rafters. The shape of the house given in this permit is rectangular box type.
4. In addition other unpermitted works have also been carried out in the house as brought out in succeeding paras.

4. ADDITIONAL DETAILS:

(a) In addition, the details of the house were also downloaded from the Town of Los Gatos city portal and the same are attached as Annexure-9.. A perusal of these records show that the permitted floor area of this house is 684 Sq Ft only. whereas the existing floor area of the house is 889 sq ft without the front porch. It speaks of some unpermitted addition made to the house as discussed in following paras.

Contd P3

(b) The plans of the existing house have been prepared and are attached as Annexure 10 (24 pages). The floor area of the existing house is 889 Sq Ft as against the permitted floor area of 684 Sq Ft only.

It is also seen that the ceiling height of the bedroom & bathroom on the right side is only 6'-9" to 6'-11", as against the main house ceiling height of 8'-0"(+). It is marked with A, B & C on sheet A4, A5 & A6.1.

It establishes that some unpermitted constructions have been made to the house. The possible unpermitted portion is marked in redlines in sheet A2 (Existing Floor Plan) & A2.1 (Area Calculations).

The photo survey of the existing house has also been done & the photos of the house are given in sheet A 6.1 to A6.17 & A7 of the attached plan set (Annexure -10).

A quick perusal of the photos & plan indicate that the house is not structurally sound & also some alterations have been made which are not code compliant as outlined below:

i. The ridge board of the porch is not provided as seen in plan sheet A6.7. Thus the porch roof is not structurally sound.
ii. The height in the bedroom 2 is less than 7'-6" the minimum admissible height.
iii. A wall has been constructed between bedroom 1 & closet which is abutting the middle of the window as seen in Sheet A6.17.
iv. The existing windows of the bedroom are not egress compliant as per the current code requirement etc.
v. The architectural design of the house is very simple- a rectangular box with front porch enclosed on all sides and no uniqueness is noticed in the architectural details/design.
vi. Further due to alteration to window & porch etc, the original design is no longer existing.

(c) As would be seen from the plan sheet A7, all the houses around this house have been modified and present a good look and this house in the existing condition is totally a misfit in the area.

(d) The APN map and the Tract Map of the lot are also attached as Annexure 11 & 12.

CONCLUSION:

In view of the above points, it is clear that the existing house has no architectural merit for the following reasons:

a. The structure is not associated with events that have made a significant contribution to the Town;
b. No significant persons are associated with the structure.
c. There are no distinctive characteristics of type, period or method of construction or representation of work of a master;
d. The structure does not yield information to Town history; and,

Contd P4

e. The integrity has been compromised due to alterations such that the structure no longer has the potential to convey significance.

In view of above submissions, it can be seen that the existing house at 446 San Benito Ave has no historic significance or architectural merit. Due to the poor condition of the house it needs repair and due to family needs extra space is also required to be added. Therefore, it is requested that the house may be removed from Historic Resources Inventory.

Thank you for your considerations

Best regards,

03/25/2025

Devendra Deshwal
Homeowner
446 San Benito Ave,
Los Gatos CA, 95032
Phone- 408 318 1053

LOS GATOS MEMORIAL LIBRARY
LOS GATOS, CALIFORNIA
81 OF 114

ANNEXURE-1

(1928 SANBORN MAPS)

446 San Benoto Ave

MONTGOMERY

SAN BENITO AV.

ANDREWS

THURSTON AV.

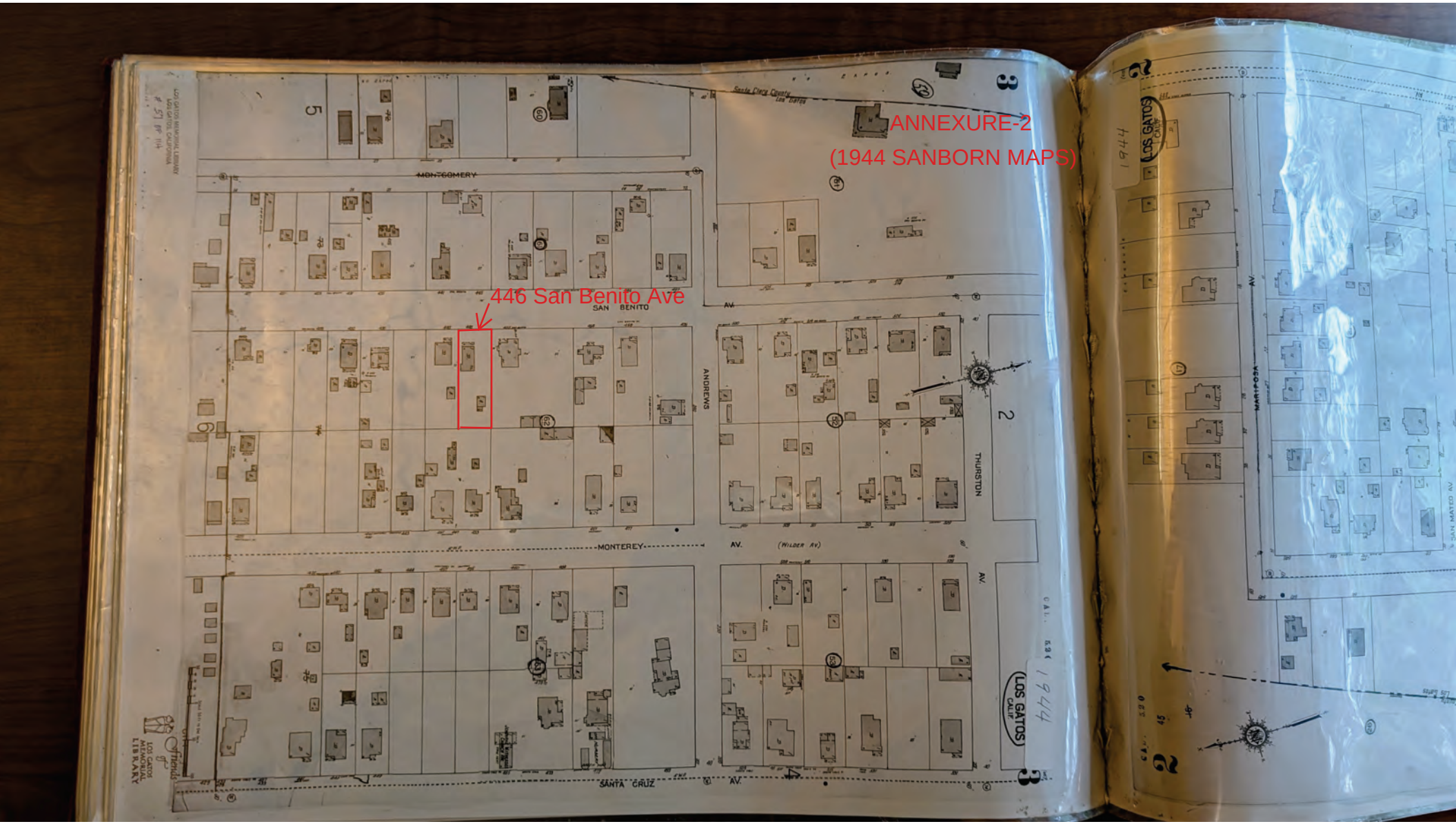
MONTEREY AV. (WILDER AV.)

SANTA CRUZ AV.

MARIPOSA AV.

LOS GATOS MARCH 1928 CALIF.

GIFT from Friends of LOS GATOS MEMORIAL LIBRARY


ANNEXURE-2
(1944 SANBORN MAPS)
446 San Benito Ave
MONTGOMERY
SAN BENITO
ANDREWS
THURSTON
MONTEREY
AV.
(WILDER AV.)
SANTA CRUZ
LOS GATOS
CALIF.
1944

REAL ESTATE APPRAISAL COMPUTATION.

BLOCK NO. 21 LOT NO. 43 BLOCK BOOK PAGE 3

Description, Dimensions and Ownership of Real Property Described herein, conforms with Official Block Book, and Assessment Map of The City Named on Reverse. No accountability Assumed for Matters Legal in Character. Computation of Values of Land and Buildings in Accordance with Contract Provisions for Equatax System Valuation.

SYMBOL	FRONT		DEPTH	PCT.	COEF.	UNIT	COMPUTED VALUE	
	48	x	150	115	55.20	11	$	607
		x						
		x						
		x						
	Added For Corner							
	Added For Alley							
						TOTAL	$	

SYMBOLS
F.T.=Front Triangle. R.T.=Rear Triangle. B.L.=Back Lot Comp. C.I.=Corner Influence. ♂ = Reverse Corner Comp.

VALUATION RECORD				
YEAR	1940	19	19	19
Land Value	$ 607	$	$	$
Building Value	$ 1255	$	$	$
Number of Bldgs	2			

OWNERSHIP RECORD

1940
1941 M. J. Wilcox
1942
1943
1944
1945
1946
1947

Retail Business ☐ Residence ☐
Semi Business ☐ Industrial ☐

SPECIAL REMARKS

SKETCHES OR REMARKS, OR METES AND BOUNDS DESCRIPTION

REVISIONS AND ADJUSTMENTS: Record Below Subsequent Changes in Value due to Re-appraisal. Indicate Reason for Action Such as Additions, Alterations, Rebuilding, Fire Loss, Demolition, or Removal of Buildings.

DATE	Reason for Action	BY	COST FACTOR	REPRO. COST	DEPRECIATION	REVISED VALUE

ARCHITECTURAL HISTORY
(415) 922-1063
2229 WEBSTER STREET
SAN FRANCISCO, CA 94115

ND

Anne Bloomfield

817
P

ARCHITECTURAL/CULTURAL SURVEY
LOS GATOS RESEARCH

File address 446 San Benito

PARCEL MAP INFORMATION

Parcel # 410-16-051 Lot size: 48 front ft. x 150 ft. deep

Lot shape: Rectangle ✓ L___ Rectangle with small rear jog___ Other___

Location: N__ S__ E ✓ W__ side of SB St___ Ave ✓ Other___

distance to cross st: 291 ft. N__ S ✓ E__ W__ from Andrews

at NE__ NW__ SE__ SW__ corner of___

HISTORIC INFORMATION ON PARCEL MAP

Old tract or subdivision name ~~North~~ Brunskull Sub Old Block #___ Old lot # 43

FIELD SURVEY INFORMATION (handwritten in red)

Preliminary rating ✓ Estimated age 1920s? Style Bungalow # stories__

Alterations some windows altered, porch altered

Other___

COUNTY ASSESSOR--PROPERTY CHARACTERISTICS (paste on copy) Page___ EFFective date___

OWNERSHIP SHOWN ON MAPS

Source Name	Source Date	Source Page	Location of property, or Old tract/block/lot	Lot Size	Owner Name
	1891				
Blk Book	1908				
Survey	1941				

MISCELLANEOUS

PHOTOS: Roll/frame # 040/37 Date 17-5-90

National Register listed date___

County Inventory 1979___

Town of Los Gatos: Designation___ Recognition___

District Name___

Previous Survey ___

Gebhard: page #___ illustration page #___

Butler/Junior League___

ANNEXURE-5

OWNERSHIP HISTORY OF 446 SAN BENITO AVE, LOS GATOS

As per Telephone directories of various years available in the Los gatos Library, the ownership details are as below:

Period	Homeowners
Prior to 1934	No record found
1934 to 1941	Mr Conroy Owen
1941 to 1943	Mr M J Wuseri (The 1941 Tax assessment indicated his name (name not legible).
1943 to 1944	Vacant
1945 to 1947	Mrs Kinter Paula
1949 to 2025	Mr Cushman Arth C
2025 onwards	Mrs Rajkumari & Devendra Deshwal

38 N. FIRST ST. JAMES ROGER McCHESNEY AND THORNTON D. WEBSTER INCORPORATED REAL ESTATE — INSURANCE — LOANS TEL. COLUMBIA 2200

510 Wheeler A P (o)
511 Lee Jerry (o)
513 Vacant
519 Smith Chas (o)
529 Bellilo Paul
Thurston intersects
530 Panighetti M I Mrs (o)
533 Bezzone Paul (o)
590 Matrone Toney

MONTGOMERY AV—North from Saratoga to Thurston 3 w of Santa Cruz

24 Barnhill Lee
25 Vacant
26 Vacant
27 Vacant
42 Giordano Bart
44 Mariani Caesar
45 Traves Harry (o)

NEW YORK — Southeast from Los Gatos Creek to Bella Vista

10 Effirat W F
41 Vacant
44 Vacant
47 Holliday E R (o)
51 Gillette J C Rev (o)
55 Vacant
Pleasant av intersects
57 Vacant
123 Lepurin Mary Mrs (o)
129 Vacant
130 Vacant
137 Schonbeck Fritz (o)
141 Meyers L S
near Vacant
146 Vacant
148 English Annabel

NICHOLSON AV—West from Santa Cruz to Glen Ridge, 2 n of Main

209 Grant Fred
211 Lewis Dora Mrs
216 Mullen S A Mrs nurse (o)
22 Cornelius Stanley (o)
Wilder av intersects
5 Harrub M F Mrs
Tait av intersects
04 Christensen Christoffer
310 Vacant
315 Curtis F N
Massol av intersects
391 Hobbie J G (o)

OAK — From Stacia to Loma Alta, 1 e of San Jose

OAK HILL WAY — From Jackson to Central, 2 s of Main

14 Vacant
15 Gollin W W
20 Haykel Julia Mrs
21 Lumbard M L Mrs
25 VanWinkle J H (o)
35 Zehnder Robt civ eng (o)
39 Treadwell N E Mrs (o)
45 Pendlebury W M F (o)

OLIVE AV—West from 545 N Santa Cruz av

104 Vacant
105 Burke W F
106 Curtis P E (o)
108 Vacant
110 Biagini Fred (o)
129 Newfarmer R O
San Benito av intersects

OVERLOOK ROAD—

PALM AV—

4 Koulouris Angelo (o)
5 Seely B R Mrs
6 Millar G A (o)
8 Aubert Alba (o)
9 Mains H L (o)
35 Jenkins D T (o)
45 Sproles L W Mrs
55 Huff M W (o)

PARK — Southwest from Main, 2 e of Front

nr Main Los Gatos Swimming Pool
Memorial Park
20 American Legion Post No 158
36 Shore J D
Union Ice Co
50 Green H F restr
86 Vacant
96 Fox John

PENNSYLVANIA AV—West from Bay View to Wissahickon

2 Dell A I Mrs (o)
4 Eaton Ernest (o)
8 Rhinelander A J (o)
24 LeFevre M F Mrs
28 Countryman F N (o)
Glenridge av intersects
Peralta av intersects
305 Vacant
309 Case L G (o)
323 Swanson Nels (o)
324 Volpa Jos (o)
327 Bache Dallas (o)
337 Mack E E (o)
345 Hawkins E A (o)
345½ Vacant
347 Vacant
360 Atkinson Owen
Walnut av intersects
361 Angell E G
363 Miniss Kath Mrs
365 Beale H G
371 Leet Georgianna Mrs
380 Roberts Wm
381 McCullagh Mary

PERALTA—North from 105 Pennsylvania to Hernandez

9 Kline Augusta
McEachern N A (o)
Murray W M
10 Herryman Fred jr (o)
11 Erickson A L jr
Whiting H H
18 Bell F A (o)
20 Hallet Cecile Mrs
32 Rankin Dora M
Rankin H A (o)
33 Simon Benj (o)
39 Mortimer A B
41 Vacant

PINE—West 1 blk from 401 San Jose av

PLEASANT AV—North from intersection of Main and Jackson to New York

24 Alexander E P
26 Lindstrom Henry (o)
34 Reilly C A
43 Drew Weldon
44 Gasmann Alf
45 Vacant
46 Bruegge W O (o)

PROSPECT — South from Reservoir rd to city limits

RESERVOIR ROAD—South from junction of Clelland and Villa to Prospect

39 DeRome S F Mrs
50 Young Wiston

ROBERTS ROAD—East from Los Gatos Creek near Cypress av

50 Ghetti L G (o)

ROGERS ROAD—From 5 Kimball to Reservoir rd

SAN BENITO AV—North from Saratoga to Ashler, 2 w of Santa Cruz

410 McAuley G M Mrs
411 Carr F D (o)
415 Biancalani Augusto (o)
416 DeGuire R P (o)
418 Godfrey F P (o)
421 Frame Alva (o)
423 Bedal C E
428 Pedrazzi Antone (o)
431 Muhlke C V
432 Wilson F A Mrs (o)
435 Tickner C H (o)
Tickner W S
436 Bachman Sarah Mrs (o)
440 Idemoto Kamekichi
441 Solari Jas (o)
446 Conroy Owen
455 Fouch H M Mrs
456 Rovere Victor (o)

EVERY STORE should appear in the Directory and the Directory should be in Every Store.

Besides its use to the storekeeper, it is a convenience the customer looks for. The store that offers an old Directory, or no Directory at all, fails to show its patrons a courtesy they will find elsewhere.

P3

1936

M. R. NEAL REAL ESTATE
Loans, Exchanges, Rental Property
Phone Ballard 8736 SAN JOSE, CALIFORNIA 458 E. Santa Clara St.

FUEL
Williams & Russo
INC.
773 W. San Carlos San Jose
Tel. Ballard 1162
BUILDING MATERIAL

ROGERS ROAD—From 5 Kimball to Reservoir rd
Stine N C Mrs
West B W
SAN BENITO AV — North from Saratoga to Mariposa av, 2 w of Santa Cruz
410 McAuley G M Mrs
411 Carr F D (o)
415 Biancalani Augusto
416 Belillo Vincent
418 Godfrey F P (o)
421 Frame Alva (o)
423 Vacant
428 Vacant
431 Booher P E
432 Wilson F A Mrs (o)
435 Tickner W S (o)
436 Bachman Sarah Mrs
Bachman Wm
440 Lifshitz P H
441 Solari Jas (o)
446 Conroy Owen
455 Foutch H M Mrs
456 Vacant
459 Vacant
463 Hummel Minna Mrs (o)
464 Galatea J B
468 McArthur C V
470 Vacant
485 Storie R N
497 Perusio Michl (o)
Andrews intersects
500 Pasero Bonnie (o)
501 Graves D W
512 Parish E D Mrs
513 King Gertrude Mrs
514 Vacant
516 Strong M E Mrs (o)
525 Smith J W (o)
526 Viorata Louis (o)
532 Serra Jos
Thurston intersects
Olive av intersects
561 Riggs W A (o)
565 Hall M E Mrs
Ashler ends
615 Cornell L C (o)
621 Sanders C K
San Mateo av ends
630 Brokaw Eliz Mrs (o)
641 Hamilton Julia Mrs (o)
642 Jefferson Philip
647 MacKenzie Ian
Mariposa av ends
SAN JOSE — Northeast from e end of E Main to Kennedy rd
34 Sprague W C (o)
41 Lewis Ella
46 Chamberlin Winnie E (o)
Obert S H
49 Rogers Rachel Mrs (o)
54 Burke C G Mrs (o)
Loma Alta intersects
99 Vacant
100 Dwyer M G Mrs (o)
101 Lupton H W (o)
103 Graves Mabel Mrs
104 Hubbell W H
111 Vacant
112 Burns J R
Mabie I D (o)
116 Vacant
120 Huelter Fredk (o)
rear Williams Sidney
122 Vacant
123 History Club of Los Gatos
Stacia intersects
204 Pettis G S
207 Sprague H C Mrs (o)
214 Ryan J W (o)
215 Harder W R Dr
Riggs Z S (o)
220 Bragdon I S Mrs (o)
rear Johnson O L
221 Ashley A B (o)
226 Mileham Eleanora Mrs
227 Vacant
228 Sager H S
235 Colvin E F (o)
236 Traub L W
241 Bromley L A (o)
Jones H A Mrs (o)
242 Moberly L A (o)
245 Worsley J H (o)
247 Ring F E (o)
249 Helm D W (o)
250 Wichman E M Mrs
254 Winters W D
255 Poole W D (o)
256 Harrison Emily G (o)
Wheeler av intersects
262 Hamman R F (o)
263 Tate S P (o)
264 Lindstrom C M
268 Burke W F (o)
269 Kerlin G B Mrs (o)
271 Vacant
Charles intersects
301 Cole M C Rev
302 Lint E F Mrs (o)
303 Lloyd F W
309 Rasmussen A L
310 Brady M C Mrs
314 Soule Mary Mrs
315 Robinson Margt Mrs (o)
316 Hudson J J
318 Burnette P L (o)
331 Stanley Anna Mrs (o)
Harding av intersects
333 Rasmussen G P (o)
334 Hopkins R C (o)
340 Davies E J
346 Ducoty G L (o)
349 Kirkendall C A
Salani Pia Mrs (o)
357 Jenkins A E Mrs (o)
363 Vacant
367 Mann J C
368 Vacant
371 Bigelow V C
Thrash M E Mrs (o)
Caldwell intersects
389 Dalziel A S (o)
400 Vollmar E E
401 Le Favour Adelaide Mrs (o)
402 Snyder A V (o)
404 Hedricks C J
Hedricks Mary P (o)
405 Flint I V Mrs (o)
407 Sutton Walter (o)
409 Brun L E
410 Torrey L B
411 Andrews Alice J (o)
Andrews C B
SAN MATEO AV—From Santa Cruz av to San Benito av, 1 n of Ashland av
15 Geraudo Bart
16 Giraudo Paul
18 Vacant
21 Wark W W
28 Walsh Alice Mrs
30 Lord A L (o)
SANTA CLARA—Changed to Palm av
SANTA CRUZ AV, NORTH—
1 Comper & Burtner drugs
3 Boone H F barber
3½ La Canada Building
Rooms
1 Colvin E F dentist
6 Brun L E dentist
7 Jones H G phys
17 Tremaine Courtney dentist
Street continued
5 Booker E O dry gds
6 MacCallum C A gro
7 Angelus Culures restr
8 Gagliasso G J fruits
Whiteman C T meats
8½ F & A M Hall
9 Vacant
10 Vacant
11 Kopp Zelda Mrs variety store
12 Vlamis Wm restr
13½ Streepey J B jwlr
15 IOOF Hall
16 Lincoln Mkt
Allario Frank gro
Barbieri Guido fruits
Zucconi Jos meats
17 Safeway Stores
17½ Vacant
18 Safeway Stores
19 Aymar Adolph baker
21 Crall H J Co stationers
22½ Redmen's Hall
23 Vacant

1941
P4

62 West San Fernando **SAN JOSE HARDWARE CO.** COL. 2100
RUSSWIN BUILDERS' HARDWARE — SHERWIN-WILLIAMS PAINTS
PIPE, IRON AND STEEL — HOUSEHOLD GOODS — TOOLS AND CUTLERY

365 Belbin Emily A
Bless E D ◎
Walnut av intersects
371◊Leet Georgianna Mrs ◎
Oakley H A Mrs
380◊Roberts Wm
381 Vacant

PERALTA — North from 105 Pennsylvania to Hernandez
9◊Autrey Helen L
10◊Berryman F W jr ◎
11◊Hanson Ina Mrs
15 Faulkner Elvira Mrs
18◊Tremaine Courtney ◎
20◊Lapum M H ◎
28 Fasten Oliver
32◊Rankin Henrietta A ◎
33 Rubin Chas
39◊Edwards W A ◎
41◊Mors G L

PINE—West 1 blk from 401 San Jose av

PLEASANT AV — North from intersection of Main and Jackson to New York av
18◊Dwyer E L ◎
20◊Andrews D E ◎
22◊Pearson I M Mrs ◎
24◊Moran W H
26◊Hardwicke Bernard
34 Reilly J A Mrs ◎
40◊Francini Peter ◎
44 Gassman Alf ◎
45 Garner H E
46◊Bruegge W O ◎

PROSPECT—South from Reservoir rd to city limits

RESERVOIR ROAD — South from junction of Cleiland and Villa to Prospect
39◊DeRome Fannie Mrs ◎
40 Evans L B
50◊Young C E ◎
60◊Gunter H C

ROBERTS ROAD — East from Los Gatos Creek near Cypress av

ROGERS ROAD — From 5 Kimball to Reservoir rd
60◊French W J
250◊Galatin A B
◊Stines N C

SAN BENITO AV—North from Saratoga to Mariposa av, 2 w of Santa Cruz
410 DeGuire Frances Mrs ◎
411 Vacant
415 Sallozi Frank ◎
416 Augustin John
418 Godfrey F P ◎
421◊Frame A G ◎
423◊Peterson J L
428 Yokum John
431 Lindquist V H
432◊Wilson F A Mrs ◎
435 Tickner L C Mrs ◎
436 Tobar John ◎
440 Parodi Jos ◎
441 Solari Jas ◎
446◊Conroy Owen
455 Foutch H M Mrs
456 Vacant
459◊DeBold E M ◎
463 Hummel Minna Mrs
464◊Galatea J B ◎
468◊McArthur C V ◎
485 Gariciulo Pasquale
Andrews intersects
500◊Pasero Bernardo ◎
505 Mattos Geo
512◊Giorello Carlo ◎
513◊Lee A E Mrs ◎
514 Vacant
rear Wilder B A Mrs ◎
516◊Strong M E Mrs ◎
525 Smith J W ◎
526 Beltran Emilio
532◊Serra Jos ◎
Thurston intersects Olive av intersects
535 Rudy L E
546 Goulart H E ◎
557◊Jefferson Philip ◎
559 Vacant
561◊Riggs F L Mrs ◎
565◊Tiffany B C
Ashler av ends
615◊Cornell L C ◎
◊Cornell Maurine M music tchr
◊Cornell Maxine M music tchr
620◊Wilhelm J M
621 Klein Kath ◎
Reiter A H
San Mateo av ends
630 Jewart C A
641◊Heinzen J B ◎
642 Vacant
647 MacKenzie Ian ◎
Mariposa av ends

SAN JOSE AV — Northeast from e end of E Main to Kennedy rd
340◊Sprague W C ◎
46 Chamberlain Winnie E ◎
47 Vacant
49 Rogers Rachel Mrs ◎
54◊Burke C G Mrs ◎
Loma Alta av intersects
99◊Mann Chas
100◊Dwyer M G Mrs ◎
101◊Lupton H W ◎
103◊Brown A B Mrs
104◊Wright C N
104½◊Baumgartner Wm
111 Erickson A J Mrs ◎
112 Burns J R
◊Mabie I D ◎
116 Petrovich P S ◎
120◊Huelter Fredk ◎
rear Albini Peter
122◊Spreckels Richd ◎
123◊History Club of Los Gatos
Simons way begins Stacia intersects
204 Hart L A Mrs
◊Nelson E H Mrs
207◊Sprague H C Mrs ◎
214◊Ryan J W ◎
215◊Harder W R ◎
220◊Harding M I Mrs ◎
221◊Vowles W F ◎
224 Dodd W H
226 Slown D A
227◊Evans E E ◎
Walbaum Gustave
rear Traub L W
228 Vacant
231◊Straub P J ◎
235◊Colvin E F ◎
236 Greco Louis
241◊Jones H A Mrs ◎
242◊Gaillac C A Mrs
◊Moberry L A ◎
245 Sigsby M C ◎
247◊Ring F E ◎
249◊Helm D W
250 Vacant
254 Banister J R
255◊Poole W D
256◊Harrison Emily G ◎
Walkington A B
Wheeler av intersects
262 Vacant
263◊Severns W E ◎
264◊Craib Jas
268◊Burke W F ◎
269◊Railsback A M
271 Benoit A E
Charles intersects
301◊Aston J F
302◊Wells D H osteo
303 Schuman Richd ◎
309◊Beckwith Ruth E
310◊Brady M C Mrs real est
314◊Soule M E Mrs
315 Robinson Margt Mrs ◎

Mary Denegri W. I. Geoffroy
Denegri, Geoffroy & Origlia
910 So. Second St. — FUNERAL DIRECTORS — SAN JOSE
Tel. Ballard 91
Gerald M. Origlia

TEL. BALLARD 6212
PAUL HUDSON
CREDIT JEWELER
THE HOUSE OF BLUE WHITE DIAMONDS
275 S. FIRST STREET San Jose

SARATOGA

P5

1943

MERNER LUMBER
BUILDING MATERIALS
MILLWORK — CELOTEX
BUILDERS' HARDWARE
817 The Alameda
Tel. Ballard 2462

LOS GATOS HOUSEHOLDERS DIRECTORY (1943) 855

418 Godfrey F P ®
421◊Frame A G ®
423◊Peterson J L
428 Chavez Gabriel
431◊Wigglesworth W C ®
432 Vacant
435 Tickner C L Mrs ®
436 Vacant
440 Parodi Jos ®
441 Solari Jas ®
446 Vacant
455 Foutch H M
456◊Lawrence Morris
459 Montgomery R E
463 Hummel Minna Mrs
464◊Galatea J B ®
468◊McArthur C V ®
485 Gariciulo Pasquale ®
497◊Perusio J L ®

Andrews intersects

500◊Pasero Bernardo ®
505◊Baron E F
512◊Fiorello Carlo ®
513 Bengston J E
514 Vacant
rear Vacant
516◊Strong M E Mrs ®
525◊Briscoe Benj ®
526 Reading A C
532◊Serra Jos ®

Thurston intersects
Olive av intersects

535◊Rudy L E ®
546 Goulart H E ®
557◊Jexerson Philip ®
559 DeSelle Melvin
561◊Riggs F L Mrs ®
562 Bensen A J
565◊Tiffany B C ®

Ashler av ends

615◊Cornell L C ®
620◊Wilhelm J M
621 Klein Kath ®

San Mateo av ends

630 Vacant
641◊Heinzen J B ®
642 Seamon Kath Mrs
644 Sheriffs R W
647 McKenzie Ian ®

Mariposa av ends

SAN JOSE AV — Northeast from e end of E Main to Kennedy rd

34◊Sprague W C ®
41 Rehdorf Frank
46◊Chambelain Winnie E ®
49◊Rogers Rachel Mrs ®
54◊Burke C G Mrs ®

Loma Alta av intersects

99 Drury G E
100◊Dwyer M G Mrs ®
101◊Lupton H W ®
103 Stuart Harry
104◊Wright C N
104½◊Baumgartner Wm
111 Erickson A M J Mrs ®
112 Prestigiacoma Ignacio
116◊Petrovich P S ®
120◊Huelter Fredk ®
rear◊Wright W D
122◊Spreckles Richd ®
123◊History Club of Los Gatos

Simons way begins
Stacia intersects

204◊Beall E S
207◊Sprague H C Mrs ®
214◊Ryan J W ®
215◊Harder W R ®
220◊Harding M I Mrs ®
221◊Vowles W F ®
224 Vacant
226 Vacant
227 Vacant
rear Vacant
228◊Kennett W H
231◊Straub W H
235 Vacant
236 Greco Louis
241◊Spaeth E D chiropractor ®
242 Moberry L A ®
◊Von Damon Minna Mrs
245◊Railsbach A M
247 Vacant
249◊Helm D W
250◊Spedding R W
254◊Jameson Frank
255◊Poole W D
256◊Walkington A B ®

Wheeler av intersects

262 Harmann R F
263◊Stevens W E ®
264◊Hazelwood E E jr
268◊Hazelwood E E
269 Hook H D
271◊DeBold E M

Charles intersects

301 Davidson F L
302◊Wells D H osteo ®
303 Schuman Richd ®
309◊Beckwith A B Mrs ®
310◊Brady M C Mrs real est
314 Vacant
315 Robinson Margt Mrs ®
316◊Espersen R E
318◊Burnett P L ®
321 Bourguignon L C ®
324◊Smith L E ®
331◊Heath D C ®

Harding av intersects

333 Rasmussen L R Mrs ®
334◊Vollmar E E ®
340◊Zucconi Jos ®
346◊Wells W I ®
349◊Vavallino F G ®
350◊Leslie C S Mrs ®
357◊Jenkins A E Mrs ®
363 Vacant

Fillmer av begins

365◊Thrash M E Mrs ®
371◊Henard J A ®

Caldwell av intersects

389◊Dalziel A S ®
408◊Snyder A V ®
413◊Kent H L ®
416◊Obert S H ®
418◊Higbee G H ®
421◊Klint Freda
423◊Sutton Walter ®
430◊Hedricks C J ®
432◊Torrey L B ®
439◊Brun L E ®
445◊Andrews C B ®

Spencer av intersects

SAN MATEO AV—From Santa Cruz av to San Benito av, 1 n of Ashland av

14 Robershotte A N
16 Giaraudo Paul ®
18 Girodano Bart ®
21 Walibaum Shirley
27◊Krauss Julius ®
28◊Walsh Alice M Mrs ®
30 Dudley J D ®
33◊Rexford G W ®

SANTA CRUZ AV, NORTH — North from Main to city limits, principal business street

1◊Comper & Burtner Drugs
3 Vacant
3½ La Canada Building
◊Courtney Hope Shop women's clo

Rooms:

6◊Brun L E dentist
7◊Jones H G phys
17◊Tremaine Courtney dentist

Street continued

5 Vacant
6◊Whiteman C T gro
7◊Culures Angelo restr
8◊La Montagne E E fruit
8½◊Masonic Hall
9 Vacant
11 Vacant
12 Vlamis Wm liquors
13½◊Streepey J B jwlr
14 Vlamis Wm restr
15 I O OF Hall
16◊Am Red Cross
17◊Panning C W gro
17½ Vacant
18◊Sprouse-Reitz Co varieties
19◊Aymar Adolph baker
21◊Crail H J & Co staty
22½ Redmen's Hall
23◊Home Appliance Store
24◊Templeman A M hdw
26-28◊Lincoln Market
Allario Frank gro
Barbieri Guido fruits
Zucconi Jos meats

THE WARDROBE

Emery Adoradio
NATIONALLY KNOWN BRANDS
K. H. T. and Hyde Park Clothes
STETSON Hats
FREEMAN Bootmaker Cradle Heel Shoes
ARROW Shirts, Underwear, Ties, Handkerchiefs
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SAN JOSE, CALIFORNIA
36 EAST SAN ANTONIO STREET

Page 269

P6

1944

SAN JOSE ICE COMPANY

COLD ALONE IS NOT ENOUGH

COMMERCIAL REFRIGERATORS HOUSEHOLD

E. Santa Clara St. at 8th Tel. Ballard 65

963 Bellman C J
966 Canniel J B
Decker W C
965½ Dier Grace Mrs
Walnut av intersects
971◊Leet G V Mrs ◎
980 King G T
981◊Balch W C ◎

PERALTA — North from 103 Pennsylvania av to Hernandez av
9 Bramhall E H
100◊Berryman F W jr ◎
11 Merrill H K
180◊Young J V
180◊Tremaine Courtney ◎
181½ Sawyer Florence
200◊Lapum M H ◎
320◊Rankin Henrietta ◎
33 Rubin Chas
39 Knutzen T J
410◊Mors G L ◎

PINE—West 1 blk from 401 San Jose av

PLEASANT AV — North from intersection of Main and Jackson to New York av
180◊Dwyer E L ◎
200◊Andrews D E ◎
220◊Pearson I M Mrs
24 Kingery G L
260◊Gelatt D H Mrs
34 McGregor D R
40 Curtis G D
44 Gasmann Alf ◎
45 Landau M R
460◊Bruegge W O ◎

PROSPECT—South from Reservoir rd to city limits

RESERVOIR ROAD — South from junction of Clelland and Villa to Prospect
390◊De Rome Fannie Mrs ◎
40 Evans L B
500◊Young C E ◎
600◊Gunter H C

ROBERTS ROAD — East from Los Gatos Creek near Cypress av

ROGERS ROAD—From 5 Kimball to Reservoir rd
600◊Colvin E F dentist
250 Kidwell W J
◊Stines N C

SAN BENITO AV—North From Saratoga av to Mariposa av, 2 w of Santa Cruz av
410 DeGuire F A Mrs ◎
411 Marshman F L
416 Ballori Frank ◎
416 Coffelt O R
418 Godfrey E P ◎
421◊Frame A G ◎
423◊Peterson J L
428 Chavez Gabriel
431◊Borger Henry
432 Sparry A E Mrs
438 Tickner L C Mrs ◎
436 Copeland G H ◎
440 Moras Jos
Parodi J G ◎
441 Solari Jos ◎
446 Vacant
Foutch Helen M
456◊Lawrence Morris
459◊Montgomery R E ◎
463 Hummell Mary Mrs
464◊Galatea J B ◎
468◊McArthur C V ◎
485 Gariciulo Pasquale
497 Barnum I S Mrs
◊Perusio J L ◎

Andrews intersects
500◊Pasero Bernardo ◎
505◊Baron E F
512◊Florelle Carlo ◎
513 Bengston J E ◎
514 Wilder Bessie Mrs
rear Vacant
516◊Strong M E Mrs ◎
525◊Briscoe Benj ◎
526 Reading A C
532 Adams Peggy

Thurston intersects Olive av intersects
535◊Rudy L E ◎
546◊Goulart H E ◎
557◊Jefferson Philip ◎
559◊Stewart V T
561 Vacant
562 Benson A J
565◊Tiffany B C ◎

Ashler av ends
615◊Cornell L C ◎
620◊Wilhelm J M
621 Klein Kath Mrs ◎

San Mateo av ends
630◊Golden Leonard
641◊Heinzen J B ◎
642 Sparks Richd
644◊Beatty H C
647◊MacKenzie Ian ◎

Mariposa av ends

SAN JOSE AV — Northeast from e end of E Main to Kennedy rd
340◊Sprague W C ◎
460◊Chamberlin Winnie E ◎
490◊Rogers Ruth J ◎
540◊Burke C G Mrs ◎

Loma Alta av intersects
99 Drury G E
100 Eaton W P
101◊Lupton H W ◎
103 Stewart Harry
1040◊Wright C M
1041¼◊Baumgartner Wm
111 Erickson A M J Mrs ◎
112 Prestigiacomo Ignacio
1160◊Petrovich P S ◎
120 Hueiter Fredk
1201½ Cooper Olga Mrs
1220◊Speckles Richd ◎
1230◊History Club of Los Gatos

Simons way begins Stacia intersects
2040◊Beall E S
2070◊Sprague H C Mrs ◎
2140◊Ryan J W ◎
2150◊Harder W R ◎
220 Erwin Simon
Feuerbacher F D
◊Horne B W
2210◊Vowles W F ◎
226 Greco Domonic
227 Bruckmann Henry
2380◊Kennett W H
2310◊Straub P J ◎
2350◊Collins Jas ◎
236 Greco Louis
2410◊Spaeth O E chiropractor ◎
2420◊Van Damon Minnie Mrs
242a◊Belmont E S
2450◊Railsback A M
247 Vacant
2490◊Helm D W
2500◊Mendonsa H D
2540◊Jameson F E
2550◊Poole W D ◎
256 Beebe D E
256½ Mullins R C

Wheeler av intersects
2620◊Haman R F
2630◊Severns W E ◎
2640◊Hazelwood E E jr
268 Burke W F
2690◊Newton W C
2710◊DeBold E M

Charles intersects
3010◊Aikman Rae
3020◊Wells D H osteo ◎
3030◊Schuman Richd ◎
3090◊Beckwith A B Mrs ◎
310 Brady M C Mrs real est
314 Stoltz G R
315 Vacant
316 Cravens Louise Mrs
3180◊Burnette P L ◎
321 Bourguignon L C ◎
3240◊Smith L E ◎
3310◊Heath D C elec contr ◎

Harding av intersects
333 Rasmussen L R Mrs ◎
3340◊Vollmar E E ◎
3400◊Zucconi J P ◎

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P7

1947

PALM AV—Contd
ΔSproles L W Mrs ⊛
55ΔGunn G R
ΔTeubner E A ⊛

PARK — Southwest from Main, 2 e of Front
nr MainΔLos Gatos Swimming Pool
18ΔAtkinson H E Mrs music tchr ⊛
36ΔWolenik Leo ⊛
48ΔGropper John ⊛
50ΔLagomarsino Geo ⊛
82ΔMoore Alice Mrs
83 Spediacci Lino ⊛
90ΔFox J P ⊛

PENNSYLVANIA AV — West from Bay View ct to Wissahickon av
2ΔStindt C G ⊛
4ΔO'Hara R J
8ΔRhinelander A J ⊛
24ΔFelice P C ⊛
28ΔCountryman Fayette N ⊛
Krauss W A
Glenridge av intersects
57ΔMacGibbon E G Mrs ⊛
307ΔWhite Minerva Mrs
309 Case L G bldg contr ⊛
323ΔSwanson Nels ⊛
323½ Holden J T
324ΔHarvey B B Mrs C S pract
Harvey M P ⊛
327ΔHayden A L ⊛
337ΔLeeper J R ⊛
345ΔSollazzi F J ⊛
347ΔEbaugh M A Mrs
Palm av intersects
357 Ghiotti L J
360ΔSeeley B R Mrs ⊛
361ΔSchultz B E ⊛
363ΔBellman C J ⊛
365ΔBaldwin R W radio repr
ΔDecker W C ⊛
Walnut av intersects
371ΔSperry A E Mrs ⊛
380 King G T ⊛
381ΔBalch W C ⊛

PERALTA — North from 105 Pennsylvania av to Hernandez av
9 Fisher G R
Ireland H F
Norman Otto
Shane M E
100ΔBerryman F W jr ⊛
11 Hanson I E Mrs
Kutney D E
ΔLorentzen A A Mrs
154ΔDaly J R ⊛
186ΔTremaine Courtney ⊛
18½ Bolton Nancy Mrs
204ΔLapum M H ⊛
324ΔRankin Henrietta M ⊛
333ΔRubin Chas ⊛
394ΔWoody R J ⊛
41 Mors G L ⊛

PINE AV — West 1 blk from 401 San Jose av
18ΔMacDonald M L ⊛
22ΔMinyard F D ⊛
22bΔvon Damm Albt ⊛
26ΔWebster Edna ⊛
29ΔFrye E S ⊛
30ΔMartin R P ⊛
31ΔGibson J P ⊛
40ΔBassett A W ⊛
41ΔErwin S W bldg contr ⊛
44ΔMustache Domingo ⊛
49 Lloyd R W
60 Henritsen H E

PLEASANT AV — North from intersection of Main and Jackson to New York av
18ΔDwyer E L ⊛
20ΔAndrews D E ⊛
22ΔPearson I M Mrs C S pract ⊛
24ΔHolmes Bert ⊛
26ΔGelatt D H Mrs ⊛
34ΔKeller F M ⊛
40ΔCurtis G D ⊛
44 Gasman Alfd ⊛
45 Vacant
46 Gib Jas ⊛

PROSPECT—South from Reservoir rd to city limits

RESERVOIR ROAD — South from junction of Cleland av and Villa to Prospect
39ΔDe Rome Fannie Mrs ⊛
ΔMcClenegan Jos
40ΔEvans L B ⊛
50ΔYoung C E ⊛
60 Kincaid A M

ROBERTS ROAD — East from Los Gatos Creek near Cypress av

ROGERS ROAD — From 5 Kimble av to Reservoir rd
60ΔColvin E F ⊛
250 Stines H P Mrs

ROSE—South from Roberts rd, 2 w of San Jose av

ROSE AV — Northeast from Saratoga av, 4 w of Santa Cruz av
101 Tedeschi Nancy
108ΔVolpa Jos ⊛
110ΔRescher R H ⊛
112ΔDel Bianco Enrico ⊛
116 Rivolta Santino
120 Romitti Lorraine
140ΔPastore J E ⊛
145ΔKing G H ⊛
214 Elroy Albt
298ΔBruce R E ⊛
Weaverling L H
300ΔOlsen C N ⊛

ROSE COURT — Northwest from Rose av, 1 n of Saratoga av
1 Koch H H
2ΔErickson L R ⊛
3 Gould F A ⊛
5ΔGager F G ⊛
6 Wells F A
7ΔWillard K L Mrs ⊛
9ΔChase Maude E ⊛
10ΔLuther J D Mrs ⊛
11ΔFrost T S ⊛
12ΔSmith Walter
13 Woroshiloff L A
14ΔCressy F S ⊛

ROYCE — From Santa Cruz av to University av, 3 n of Main
106 Hatch E J ⊛

SAN BENITO AV—North from Saratoga av to Mariposa av, 2 w of Santa Cruz av
410ΔDe Guire F A Mrs ⊛
411ΔFremier W J jr ⊛
415 Sallozi Frank ⊛
416 Nelson Marcelette Mrs ⊛
418 Godfrey P P ⊛
421ΔFrame A G ⊛
423ΔSadler F J ⊛
428 Loder L R Mrs ⊛
431ΔAmerio Dario
432ΔCook E D ⊛
435ΔBrinker C A ⊛
rear Tangen Anna Mrs
436 Copeland G H ⊛
440 Moras Jos
Parodi J G ⊛
441ΔHorstman C J ⊛
446 Kinter Paula Mrs
450 Poutch H M Mrs
456ΔLetts C B ⊛
459ΔMontgomery R E ⊛
463 Gremmler C M ⊛
464ΔGalatea J B ⊛
468ΔMcArthur C V ⊛
485 Garciulo Pasquale
497ΔBarnum Rose ⊛
Andrews intersects
500 Pasero Bernardo ⊛
505ΔSpagnola Raymond ⊛
512 Bergher Elias ⊛
513ΔBengston J E ⊛
514ΔWilder B A Mrs ⊛
516ΔStrong N E Mrs ⊛
525ΔHuxtable W W ⊛
526ΔSmith Kenneth
532 Adams C R
Thurston intersects
Olive av intersects
535ΔRudy L E ⊛
545 Jefferson Philip
546 Lee S J ⊛
557 Case L G jr
559ΔGillmor W P ⊛
561ΔMadsen P W ⊛
565ΔTiffany B C ⊛
Ashler av ends
615ΔArne I A ⊛
620ΔWilhelm J M ⊛
621ΔKlein K A Mrs ⊛
623ΔMatusek A H ⊛
630 Brokaw M M Mrs

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FOR LIST OF ABBREVIATIONS SEE PAGES 19 AND 20
PARK AV.—Cont'd
PENNSYLVANIA AV — West from Roy View ct to Winchicken av
PLEASANT AV — North from intersection of Main and Jackson to New York av
PRESCOTT — South from Reservoir rd to city limits
RESERVOIR ROAD — South from junction of Cleland av and Villa av to Prospect
ROBERTS ROAD — East from Los Gatos Creek near Cypress av
ROGERS ROAD — From S Kimble av to Reservoir rd
ROSE — South from Roberts rd, 2 w of San Jose av
ROSE AV — Northeast from Saratoga av, 4 w of Santa Cruz av
ROSE COURT — Northwest from Rose av, 1 n of Sarahea ct
ROYCE — From Santa Cruz av to University av, 3 e of Main
SAN BENITO AV—North from Saratoga av to Mariposa av, 2 w of Santa Cruz av
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P8
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P9

1954

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PINE AV—Contd
17110 James Vernon ® EL 4-4033
17121 Bassett Arth W ® EL 4-4218
17128 Erwin Simeon W ® EL 4-3457
17140 McGrain Frank
17151 Carlson Lester E ® EL 4-2134
17170 Bonacorsi Frank F EL 4-1421
17171 Parks Walter N ® EL 4-2354
17250 Galloway Ernest S ® EL 4-2686

12

PLEASANT AV—North from intersection of Main and Jackson to New York av
17 **Pleasant Apartments**
apt 1 Jepson Stanley
2 Vacant
3 Watson John E EL 4-4898
4 Breck Geo
5 Hill Marian E EL 4-9660
6 Wilson Milton O
7 Gould Fred A
8 Kruljac Joseph A
9 Dresback James M
10 Gregory Marjorie A EL 4-3768
18 Dwyer Earl L ® EL 4-4193
20 Parker John W ® EL 4-3885
22 Pearson Ida M Mrs ® CSP EL 4-4181
24 Gibson John R ® EL 4-4368
26 Gelatt Dora H Mrs ® EL 4-4360
34 Malone Robt EL 4-1518
36 Snook Burton D ®
40 Curtis Geo D ® EL 4-4373
44 Jensen Harry C ®
45 Wilson Jas ® EL 4-2001
46 Vacant

6

PROSPECT—South from Reservoir rd to city limits
85 Wilson Vere D ® EL 4-1713
90 Monsarrat Sam A ® EL 4-9041
161 Cole Emile C F ® EL 4-2694
175 Phelps Happer K ® EL 4-9027
200 Convent of The Holy Names EL 4-1730
at Kimble av Cook Alice M Mrs ® EL 4-9078
Cozzens Florence H Mrs EL 4-9079

10

RAMEL WAY—East from El Nido av
Worcester Edw Mrs EL 4-2136

6

RESERVOIR ROAD—South from junction of Cleland av and Villa av to Prospect
11 Mattenberger Wm L ® EL 4-1734
39 DeRome Fannie Mrs ® EL 4-3073
Kehl Louise G Mrs
39a Lederman Wm H
40 Evans Lanty B ® EL 4-2673
60 Bither Earl A EL 4-9076
79 Vacant
83 Curtis Paul E ® EL 4-4934
93 Merrill Alberto E ® EL 4-1876
99 Killeen John F ® EL 4-1894
111 Henderson Ralph D ® EL 4-2016
Findlay Bernard A EL 4-2809

12

ROBERTS ROAD—East from Los Gatos Creek near Cypress av
16858 Williams Thos ® EL 4-4017
cor San Jose-Los Gatos rd McCarthy Eug I ® EL 4-2859

10

ROBIE LANE—From 16707 Shannon rd, 1 e of San Jose av
11 Sarkanbardis Mirdza EL 4-1122
16298 Gunn Clarence E ® EL 4-3953
16301 Friesen Frank K EL 4-1058
16310 Gunn Harold A ® bldg contr EL 4-3771
16319 Spottswood Harvey V ® EL 4-3867
16322 Pearce Allen B EL 4-3448
16334 Hall Rosabel ® EL 4-3279
16346 Richards Roy I ® EL 4-9298
16370 Martin Peter A ® EL 4-9114
16382 Spotswood Garth L ® EL 4-2777
16408 Barnhill Alf M EL 4-1140

8

ROGERS ROAD—From 5 Kimble av to Reservoir rd
Stines Norman C ® EL 4-1591
60 Byrne Andrew T EL 4-2644
Colvin Ernest F ® EL 4-1551
250 Drury G E ® EL 4-1923

4

ROYCE—From Santa Cruz av to University av, 3 n of Main
106 Jones Kenneth V EL 4-2236
114 Los Gatos Daily Times EL 4-3900
116 Smith Lloyd E EL 4-3564

2

SAN BENITO AV—North from Saratoga av to Mariposa av, 2 w of Santa Cruz av
410 Allison Claxton A EL 4-3193
411 Lund Hazle G Mrs EL 4-9386
415 Sallozi Frank ®
416 Nichols Emma
418 Godfrey Frank P ®
421 Frame Alva G ® EL 4-3906
423 Kerner Paul E ® EL 4-4629
428 Feeham Maria
431 Albiani Sisto
432 Cook Ernest D ® EL 4-4079
435 Schneider Geo M ® EL 4-4912
436 McAnally Arch B ®
437 Macris Fortine Mrs ® EL 4-4051
438 Parodi Jos ®
440 Russell J Elmo EL 4-3609
441 Feathers Helen Mrs
446 Cushman Arth C ® EL 4-2388
455 Foutch Helen O Mrs
456 Letts Chas B ® EL 4-3009
459 Montgomery Robt E ® EL 4-4519
463 Lawless John T ® EL 4-9598
464 Galatea John B ® EL 4-2728
468 McArthur Chas V ® EL 4-3688
497 Popham Robt L ® EL 4-2609
Andrews intersects
500 Pasero Bernardo ® EL 4-4237
501 Burgess Lee C ® EL 4-1071
505 Richards Hannah Mrs ®
512 Istre Louis jr
513 Crain Chas E ® EL 4-2487
514 Wilder Bessie A Mrs ®
515 Malatesta Edw J ® EL 4-3651
516 Strong Mae E Mrs ®
517 Mullick Rose A Mrs ®
525 Veitch John H EL 4-3484
526 Reading Alva C ® EL 4-3019
532 Lopez Josephine Mrs ® EL 4-2819

Thurston intersects Olive av intersects
535 Anderson Richd D EL 4-2170
546 Gilbert Paul H ®
557 Congdon Dow G ®
559 McNamee Philip L EL 4-2162
561 Madsen Paul W ® EL 4-3135
585 Hall Elbert J ® EL 4-3727
Ashler av ends
615 Graves Lorenzo H ® EL 4-4457
620 Wilhelm John M ® EL 4-9052
621 Klein Kath A Mrs ® EL 4-3971
Morgensen Adolph L EL 4-3000
623 Thorsby Carl E EL 4-2445
629 Matje Jos ® EL 4-2218
San Mateo av ends
630 Brokan Margery M EL 4-4495
Triniatitch John
639 Cilker Elsie E Mrs ® EL 4-3538
640 Balch Albert E ® EL 4-1448
641 Kirkpatrick Frank W ® EL 4-4718
642 Sommer Frank ® EL 4-1874
644 Forbes Francis H ® EL 4-4365
647 Mackenzie Ian ® EL 4-4131
Mariposa av intersects

10

SAN JOSE AV—Northeast from e end of E Main to Kennedy rd
6-10 **Medico-Dental Building**
6 Feldkamp Irving M phys EL 4-2773
8 Wareham Warren S dentist EL 4-2193
10 Carlisle Fred B dentist EL 4-1545
31 Thompson Rollin B
33 Ogden Gladys Mrs
Shannon Donald S EL 4-4976
34 Sprague Josephine Mrs ® EL 4-3332
Smith Bessie L Mrs
35 Steed Fred H EL 4-9501
37 Ryder Robt A EL 4-9600
41 Cotton W J EL 4-2761
46 Chamberlin Cecil F ® EL 4-2384
Kutney Don C
49 Rogers Ruth T ® EL 4-2107
54 **Apartments**
1 Woods Geo M ®
2 Dowell Loren Mrs
3 Paur R F EL 4-9464
4 Stanton Ione Mrs EL 4-9283
99 Stewart Mary Mrs EL 4-2009
99a Koth Rudolph J
Loma Alta av intersects
100 Hardinge Kath Mrs ® EL 4-3145
101 Ide Lottie C Mrs
Jones Grace E EL 4-1195
Soleri Rudolph EL 4-4793
103 Legnitto Geo J ® EL 4-1406
104 Adams Richd L EL 4-3439
111 Erickson A M J Mrs ® EL 4-3182
112 Prestigiacomo Ignazio ® EL 4-4866
116 Petrovich Paul S ®
120 Huelter Fredk ® EL 4-3366
120½ Dymak Dan
122 Spreackels Anna S Mrs ® EL 4-4238
123 History Club of Los Gatos EL 4-4138
Simons way begins Stacia intersects
204 Beall Edwin S ® EL 4-2845

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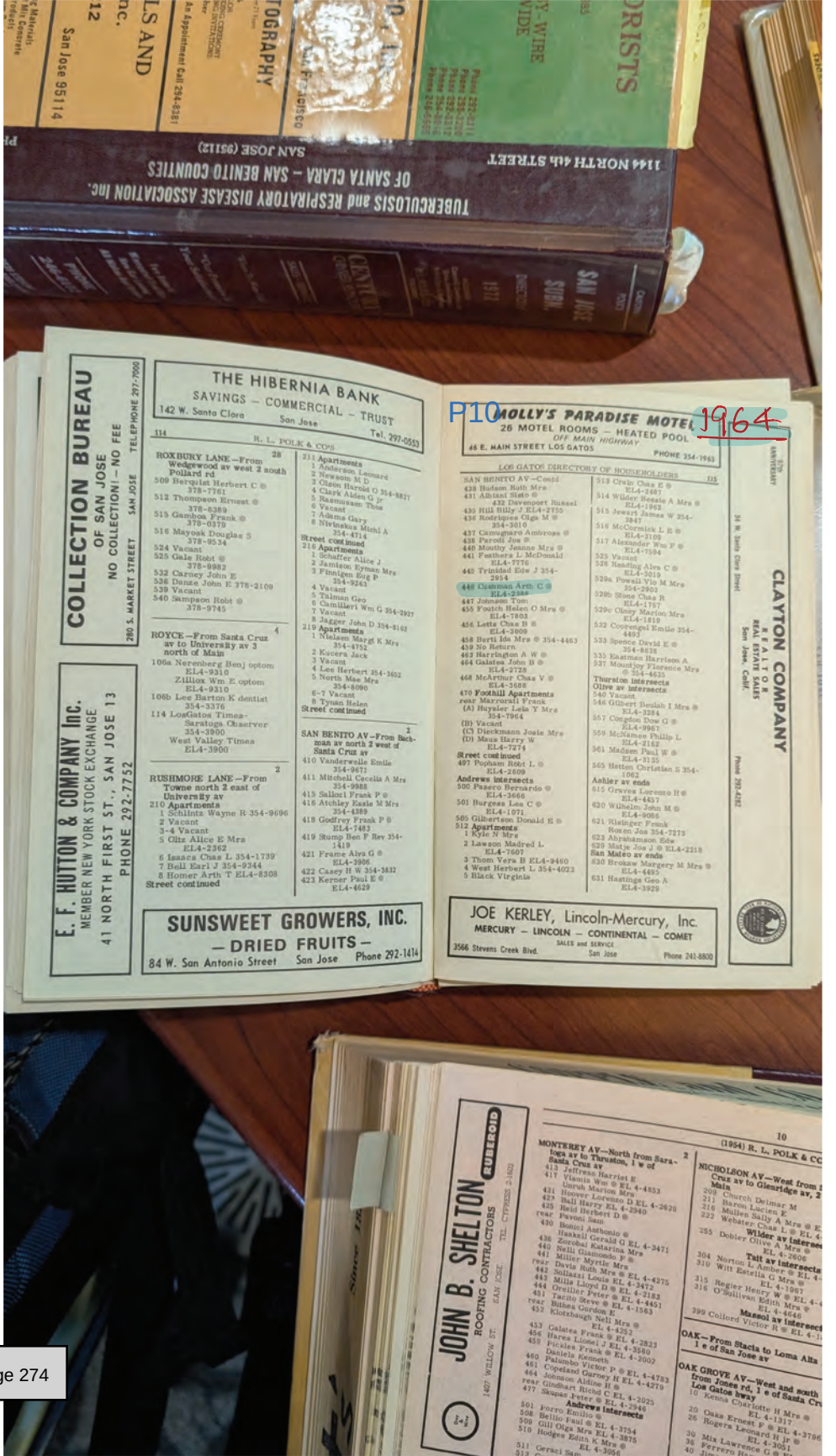
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ROYCE—From Santa Cruz av to University av 3 north of Main
RUSHMORE LANE—From Towne north 2 east of University av
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P10
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PHONE 354-1963
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Andrews intersects
Street continued
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CUBEROID
10
(1954) R. L. POLK & CO
MONTEREY AV—North from Saratoga av to Thruston, 1 e of Santa Cruz av
NICHOLSON AV—West from Santa Cruz av to Glenridge av, 2 e of Main
OAK—From Stacia to Loma Alta 1 e of San Jose av
OAK GROVE AV—West and south from Jones rd, 1 e of Santa Cruz to Los Gatos hwy

e-permits@pln.sccgov.org

Active

1 of 6

Best regards,
E-Permits/clr

One attachment • Scanned by Gmail

Request for Copi...

Devendra Deshwal <dsdeshwal@gmail.com>
to E-Permits

Thu, Mar 13, 5:30 PM (10 days ago)

Good evening.
The request for copies of the plans duly filled and signed is attached please.
Best regards,
Devendra Deshwal
PE # C89732

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Request for Copi...

E-Permits
to me

Fri, Mar 14, 10:00 AM (9 days ago)

Hello, we do not have any plans on record for 446 San Benito Ave. This address is currently in the Town of Los Gatos, CA. Their Planning Dept number is (408) 354-6872.

Thanks,

County of Santa Clara Planning E-Permits

Thank you for the information. | Thank you for your help. | Thank you for your assistance.

Reply | Forward

REQ 25-179 446 San Benito Inbox ×

DO NOT REPLY - Santa Clara County Department of Planning and Development <noreply@accela.com>
to me

Mon, Mar 17, 9:25 AM (6 days ago)

Hello,

The property is in the City Of Los Gatos. The County of Santa Clara Department of Planning and Development has reviewed the records we maintain, and no responsive records were found. This completes our response to your CPRA request.

Thank you,

Reply Forward

[redacted]

ANNEXURE-8

CITY COMPUTER RECORDS

1. Electrical Service Upgrade (5 pages)

SAN BENITO AVE - 446

[redacted]

[redacted]

TOWN OF LOS GATOS
COMMUNITY DEVELOPMENT DEPARTMENT
ELECTRICAL PERMIT

Permit Number: **E04-000258**
Work Description: UPGRADE SERVICE 200 AMPS
Building Address: 446 SAN BENITO AV LG
Applied: 05/24/2004
Approved:

Status: APPLIED
Issued:
Expired:

OWNER CUSHMAN JACK E SR;GENELDA F 05/24/2004 Phone: 266-3351
446 SAN BENITO AVE
LOS GATOS, CA
95030-5305

CONTRACTOR OWNER/BUILDER 05/24/2004
SAME
License: 000000

--Square Footage--

New Residence: 0 Remodel: 0 Commercial: 0

Description	Tot Fee
Electical Permit Fees	83.00

Total Calculated Fees:	$83.00
Total Additional Fees:	$0.00
Total Fees Due:	$83.00
Total Payments:	$0.00
Balance Due:	$83.00

LICENSED CONTRACTOR'S DECLARATION
I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 of division 3 of the Business and Professions Code, and my license is in full force and effect.
Signature X_____

COMPLETE A or B

WORKER'S COMPENSATION DECLARTION
A) I hereby affirm under penalty of perjury I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.
Signature X_____

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE
B) I certify that, in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that, if I should become subject to the worker's compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.
Signature X_____

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO $100,000, IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE.

CERTIFICATION OF OWNER/BUILDER DECLARATION
I hereby affirm under penalty of perjury that I, as owner of the property, have read this application and the owner/builder information form attached is correct. I agree to comply with all Town ordinances and State Laws relating to building construction, and hereby authorize representatives of this Town to enter upon the above mentioned property for inspections.
Signature X_____

NOTICE:
1. Signs are regulated. See Planning Dept. for requirements
2. Outdoor lights are regulated against shining on other properties, shoestring lighting is not permitted.

OWNER-BUILDER VERIFICATION

1. I or my immediate family (parent, spouse, or child) will perform (check one):
   - A. ☒ All the work authorized by this permit.
   - B. ☐ A portion of the work
   - C. ☐ None of the work.

If B or C is checked, complete 2 or 3 below.

2. A state licensed contractor will be hired to do (complete section below):
   - A. ☐ All of the work.
   - B. ☐ A portion of the work
   - C. ☐ None of the work

Contractor	Address/City	Phone Number	State License #	Type of work to be performed

3. ☐ I will utilize unlicenced person(s) other than my family to perform all or portions of the authorized work. I understand that I may be an employer (see reverse side). A Certificate of Insurance covering worker's compensation must be on file at the Community Development office.

Person/Firm	Address/City	Phone Number	Type of work to be performed

- I AGREE TO CHECK THAT EACH CONTRACTOR AND SUBCONTRACTOR HAS A VALID TOWN OF LOS GATOS BUSINESS LICENSE BEFORE THEY BEGIN TO WORK. YOU MAY VERIFY BUSINESS LICENSE STATUS WITH THE FINANCE DEPARTMENT AT (408) 354-6831 OR (408) 399-5704.

Property Owner's Initial JC

Any changes to this form shall be submitted to the Community Development Department

n:\master\finance\permit

TOWN OF LOS GATOS
COMMUNITY DEVELOPMENT DEPARTMENT
PO Box 949, Los Gatos, CA 95031
(408) 354-6881

OWNER-BUILDER INFORMATION

Attention Property Owner:

If you plan to improve your property and employ persons other than your immediate family, the following information will be of benefit to you. State and Federal laws require that you:

- Register with the State and Federal government as an employer.
- Withhold and remit income tax for each employee.
- Withhold and remit social security costs on each employee and pay social security costs on each employee
- Withhold and remit disability insurance costs for each employee and pay worker's compensation insurance costs for each employee.
- Pay employee unemployment insurance costs on each employee.
- There may be financial risks for you if you do not carry out these obligations and these risks are especially serious with respect to worker's compensation insurance
- If the structure is intended for sale, property owners who are not licensed contractors are allowed to perform their work personally or through their own employees, without a licensed contractor or subcontractor, only under limited conditions.
- A frequent practice of unlicenced persons professing to be contractors is to secure an "Owner-Builder" building permit, erroneously implying that the property owner is providing his or her own labor and material personally.

Information about licensed contractors, insurance, and lien laws may be obtained by contacting the Contractors' State License Board and/or various business and trade associations.

Please complete the "Owner-Builder Verification" form (reverse side) and sign below so that we can confirm that you are aware of these matters. The building permit cannot be issued until the verification has been completed and signed to the Community Development Department.

I declare under penalty of perjury that the information provided on the reverse side is true and correct. I have read and understand the Owner-Builder Information.

Property Owner's Signature: Jack Cushman Date: 5/24/04

Job Address: 446 SAN BENITO ct Permit #: E04-00258

Print Owner's Name: JACK CUSHMAN

[redacted]

TOWN OF LOS GATOS

COMMUNITY DEVELOPMENT DEPARTMENT - BUILDING DIVISION * PHONE 354-6881 FAX (408) 354-7593

INSPECTION REQUESTS PHONE 354-6877

APPLICATION FOR ELECTRICAL PERMIT

E04-

UNIT FEE	no. of ITEMS	AMOUNT	$	FEE
LIGHTS, SWITCHES, OUTLETS		2.00 EA		
RESIDENTIAL APPLIANCES: COOK TOP, OVEN, RANGE, DISPOSALS, CLOTHES DRYER OR OTHER MOTOR OPERATED APPLIANCE NOT EXCEEDING ONE HORSEPOWER		6.00 EA		
NONRESIDENTIAL APPLIANCES: MEDICAL & DENTAL DEVICES, FOOD & BEVERAGE CABINETS, LAUNDRY MACHINES, DRINKING FOUNTAINS OR OTHER SIMILAR EQUIPMENT. NOTE: SEE BELOW FOR OTHER EQUIPMENT		7.00 EA		
POWER APPARTUS: GENERATORS, TRANSFORMERS, A.C. HEATPUMPS, BAKING EQUIPMENT				
UP TO 10 KV		13.00 EA		
OVER 10 KV, AND NOT OVER 50 KV		21.00 EA		
OVER 50 KV, AND NOT OVER 100 KV		41.00 EA		
OVER 100 KV		57.00 EA		
MOTORS:				
UP TO 10 HP		13.00 EA		
UP TO 25 HP		21.00 EA		
UP TO 55 HP		41.00 EA		
OVER 55 HP		62.00 EA		
TRANSFORMERS:				
UP TO 5 KVA		13.00 EA		
UP TO 10 KVA		21.00 EA		
UP TO 50 KVA		36.00 EA		
OVER 50 KVA		52.00 EA		
BUSWAYS (PER 100 FT) CONDUITS		7.00 EA		
SERVICE EQUIPMENT:				
200 AMPS OR LESS		52.00 EA		
201 TO 999 AMPS		72.00 EA		
SUB PANELS DISCONNECTS		26.00 EA		
TEMP POWER POLE		52.00 EA		
TEMP DISTRIBUTION SYSTEM & TEMPORARY LIGHTING SYSTEM		26.00 EA		
PRIVATE SWIMMING POOL		41.00 EA		
PUBLIC SWIMMING POOL		77.00 EA		
SPAS OR SAUNAS		26.00 EA		
ILLUMINATED SIGNS		41.00 EA		
PHOTOVOLTAIC SYSTEM (RES)		49.00 EA		
SOLAR SYSTEMS		49.00 EA		
NEW SF/MFR ONLY _____ SQ FT X $0.10 =				
PERMIT ISSUANCE		31.00		
ADDITIONS TO PERMIT		10.00		
PLAN CHECK FEE (25% OF ELECTRICAL FEE)				
		TOTAL FEES		

SITE ADDRESS & SUITE # 446 San Benito — ☐ Historic - Pre-1941

USE OF EXISTING BUILDING (Please Check) — ☐ Commerical Building/ Parking Structure

☐ Single-family Residence ☐ Condo/Apartment/ Townhome ☐ Attached Garage or ☐ Detached Garage

PROPERTY OWNER: JACK CUSHMAN — PHONE (REQUIRED): 408-266-3351

MAIL ADDRESS: 1833 ANDREWS AVE

CITY: San Jose — ZIP: 95124

CONTRACTOR — PHONE

MAIL ADDRESS

CITY — ZIP

STATE LICENSE

TOWN LICENSE

MUST SHOW CURRENT WORKER'S COMP

COMMERCIAL TENANT — PHONE (REQUIRED)

MAIL ADDRESS: 446 SAN BENITO AVE

CITY: Los gatos — ZIP: 95030

DESCRIPTION OF WORK:

SERVICE Change

I certify that I have read this application and state that the above information is correct. I agree to comply with all town and county ordinances and state laws relating to building construction, and hereby authorize representatives of this Town to enter upon the property for inspection purposes.

Signed Jack Cushman Date 5/24/04

NOTICE:

1. SIGNS ARE REGULATED, SEE PLANNING DEPT.
2. OUTDOOR LIGHTS ARE REGULATED AGAINST SHINING ON OTHER PROPERTIES, SHOESTRING LIGHTING NOT PERMITTED.

N.Dev\FORMS\ELECTAPP.XLS Rev 1/04

TOWN of LOS GATOS

Community Development

Building Permit

Permit ID/Type:	B10-0174 BUILDING/BUILDING/RESIDENTIAL/REPAIR	Applied:	03/11/2010
Work Description:	REPAIR FRONT PORCH AND REPAIR EVE'S ON HOUSE	Approved:	
Status:		Issued:	
Address:	446 SAN BENITO AVE, LOS GATOS, CA 95030	Expires:	9/7/2010
Owner:	CUSHMAN GENELDA 3139 CYRUS AVESAN JOSE, CA 95124	Phone:	jack 266-3351
Contractor:	OWNER/BUILDER SAMELOS GATOS, CA	Phone:	
License No.:	000000		
Job Value:	$2,000.00	Buildings:	1
Total Sq. Ft.:		Houses:	0
Building Use:	Dwellings	Census #:	434
Occupancy Type:	R-3	Construction Type:	V-B

Total Fees	$190.07
Total Payments	$0.00
Balance Due	$190.07

LICENSED CONTRACTOR'S DECLARATION
I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.
License Class _____ California Contractor License No. _____
Expiration Date _____ Contractor Signature _____

WORKERS' COMPENSATION DECLARATION WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

I hereby affirm under penalty of perjury one of the following declarations:
____ I have and will maintain a certificate of consent to self-insure for workers' compensation, issued by the Director of Industrial Relations as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. Policy No. _____
____ I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are: Carrier_____Policy Number _____ Expiration Date_____
Name of Agent _____ Phone # _____
J.C I certify that, in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that, if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

X Jack Cushman 3-11-10
Signature of Applicant Date

OWNER-BUILDER DECLARATION

I hereby affirm under penalty of perjury that I am exempt from the Contractors' State License Law for the reason(s) indicated below by the checkmark(s) I have placed next to the applicable item(s) (Section 7031.5, Business and Professions Code: Any city or county that requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for the permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he or she is exempt from licensure and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).):

[X] I, as owner of the property, or my employees with wages as their sole compensation, will do (_) all of or (_) portions of the work, and the structure is not intended or offered for sale (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who, through employees' or personal effort, builds or improves the property, provided that the improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the Owner-Builder will have the burden of proving that it was not built or improved for the purpose of sale.).

(_) I, as owner of the property, am exclusively contracting with licensed Contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon, and who contracts for the projects with a licensed Contractor pursuant to the Contractors' State License Law.).

(_) I am exempt from licensure under the Contractors' State License Law for the following reason:

By my signature below I acknowledge that, except for my personal residence in which I must have resided for at least one year prior to completion of the improvements covered by this permit, I cannot legally sell a structure that I have built as an owner-builder if it has not been constructed in its entirety by licensed contractors. I understand that a copy of the applicable law, Section 7044 of the Business and Professions Code, is available upon request when this application is submitted or at the following. Web site: http://www.leginfo.ca.gov/calaw.html

X Date 3-11-10 Signature of Property Owner or Authorized agent _____

DECLARATION REGARDING CONSTRUCTION LENDING AGENCY

I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civil Code).

Lender's Name _____ Lender's Address _____

By my signature below, I certify to each of the following:
I am the property owner or authorized to act on the property owner's behalf. I have read this application and the information I have provided is correct. I agree to comply with all applicable city and county ordinances and state laws relating to building construction. I authorize representatives of this city or county to enter the above-identified property for inspection purposes.

X _____ 3-11-10
Signature of Property Owner or Authorized Agent Date

TOWN OF LOS GATOS

B10-174

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING DIVISION
PHONE (408) 354-6876 FAX (408) 354-7593
www.LosGatosCA.gov/building

CIVIC CENTER
110 E. MAIN STREET
P.O. BOX 949
LOS GATOS, CA 95031

NOTICE TO PROPERTY OWNER

Dear Property Owner:

An application for a building permit has been submitted in your name listing yourself as the builder of the property improvements specified at 446 San Benito

We are providing you with an Owner-Builder Acknowledgment and Information Verification Form to make you aware of your responsibilities and possible risk you may incur by having this permit issued in your name as the Owner-Builder.

We will not issue a building permit until you have read, initialed your understanding of each provision, signed, and returned this form to us at our official address indicated. An agent of the owner cannot execute this notice unless you, the property owner, obtain the prior approval of the permitting authority.

OWNER'S ACKNOWLEDGMENT AND VERIFICATION OF INFORMATION DIRECTIONS:
Read and initial each statement below to signify you understand or verify this information.

____1. I understand a frequent practice of unlicensed persons is to have the property owner obtain an "Owner-Builder" building permit that erroneously implies that the property owner is providing his or her own labor and material personally. I, as an Owner-Builder, may be held liable and subject to serious financial risk for any injuries sustained by an unlicensed person and his or her employees while working on my property. My homeowner's insurance may not provide coverage for those injuries. I am willfully acting as an Owner-Builder and am aware of the limits of my insurance coverage for injuries to workers on my property.

____2. I understand building permits are not required to be signed by property owners unless they are responsible for the construction and are not hiring a licensed Contractor to assume this responsibility.

____3. I understand as an "Owner-Builder" I am the responsible party of record on the permit. I understand that I may protect myself from potential financial risk by hiring a licensed Contractor and having the permit filed in his or her name instead of my own.

____4. I understand Contractors are required by law to be licensed and bonded in California and to list their license numbers on permits and contracts.

____5. I understand if I employ or otherwise engage any persons, other than California licensed Contractors, and the total value of my construction is at least five hundred dollars ($500), including labor and materials, I may be considered an "employer" under state and federal law.

____6. I understand if I am considered an "employer" under state and federal law, I must register with the state and federal government, withhold payroll taxes, provide workers' compensation disability insurance, and contribute to unemployment compensation for each "employee." I also understand my failure to abide by these laws may subject me to serious financial risk.

(over)

____7. I understand under California Contractors' State License Law, an Owner-Builder who builds single-family residential structures cannot legally build them with the intent to offer them for sale, unless all work is performed by licensed subcontractors and the number of structures does not exceed four within any calendar year, or all of the work is performed under contract with a licensed general building Contractor.

____8. I understand as an Owner-Builder if I sell the property for which this permit is issued, I may be held liable for any financial or personal injuries sustained by any subsequent owner(s) that result from any latent construction defects in the workmanship or materials.

____9. I understand I may obtain more information regarding my obligations as an "employer" from the Internal Revenue Service, the United States Small Business Administration, the California Department of Benefit Payments, and the California Division of Industrial Accidents. I also understand I may contact the California Contractors' State License Board (CSLB) at 1-800-321-CSLB (2752) or www.cslb.ca.gov for more information about licensed contractors.

____10. I am aware of and consent to an Owner-Builder building permit applied for in my name, and understand that I am the party legally and financially responsible for proposed construction activity at the following address: 2446 San Benito

____11. I agree that, as the party legally and financially responsible for this proposed construction activity, I will abide by all applicable laws and requirements that govern Owner-Builders as well as employers.

____ 12. I agree to notify the issuer of this form immediately of any additions, deletions, or changes to any of the information I have provided on this form. Licensed contractors are regulated by laws designed to protect the public. If you contract with someone who does not have a license, the Contractors' State License Board may be unable to assist you with any financial loss you may sustain as a result of a complaint. Your only remedy against unlicensed Contractors may be in civil court. It is also important for you to understand that if an unlicensed Contractor or employee of that individual or firm is injured while working on your property, you may be held liable for damages. If you obtain a permit as Owner-Builder and wish to hire Contractors, you will be responsible for verifying whether or not those Contractors are properly licensed and the status of their workers' compensation insurance coverage. Before a building permit can be issued, this form must be completed and signed by the property owner and returned to the agency responsible for issuing the permit.

Note: A copy of the property owner's driver's license, form notarization, or other verification acceptable to the agency is required to be presented when the permit is issued to verify the property owner's signature.

Signature of property owner Jack Cardoza Date: 3-11-10

I have contracted with the following person (firm) to provide the proposed construction:

Person and/or Firm Name:		
Address	City	Zip
Phone	Contractors State License Number	

If needed, provide additional contractor information on separate form.

TOWN OF LOS GATOS

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING DIVISION
PHONE: (408) 354-6876 FAX: (408) 354-7593
www.losgatosca.gov/building

CIVIC CENTER
110 E. MAIN STREET
P.O. BOX 949
LOS GATOS, CA 95031

Application # B10-174

BUILDING DIVISION PERMIT APPLICATION

SITE ADDRESS 446 SAN BENITO WY Suite _____ Today's Date 3/11/10

TYPE OF WORK TO BE DONE ☐ New ☐ Addition ☐ Alteration ☒ Repair ☐ Reroof ☐ Deck ☐ Pool/Spa ☐ Ret Wall

DETAILED DESCRIPTION OF WORK TO BE DONE REPAIR FRONT PORCH, REPAIR FUELS ON HOUSE

PROJECT AREA	New/Add Sq. Ft.	Remodel/Alter Sq. Ft	Reroof/Pool/Porch/Deck SF	Retaining Wall LF
1st Floor				
2nd Floor				
Attic/Basement/Cellar/Porch				
Attached/Detached Garage				

CONSTRUCTION VALUATION (Required): _____ **Include costs of all labor and materials**

BUILDING DETAILS: Heated? ☐ Cooled? ☐ # of Stories ____ ☐ Pre 1941/Historic District ☐ Has A Fire Sprinkler System

Is there a Swimming Pool and/or Spa located at this address: ☐ **Yes** ☐ **No**

Proposed Use of Building: _____ Construction Type _____ Occupancy Type _____

CONTACT NAME JACK CUSHMAN Phone 408 266 3351 Fax _____

Address _____ City _____ Zip _____

Property Owner Name JACK CUSHMAN Phone **(Required)** 408 266 3351

Address 3139 CYRUS DR City SAN JOSE Zip 95124

Architect/Engineer/Designer _____ License # _____ Phone _____

Address _____ City _____ Zip _____

Contractor Name _____

State License No. _____ License Type _____ Expires _____ Town Business Lic. No. _____

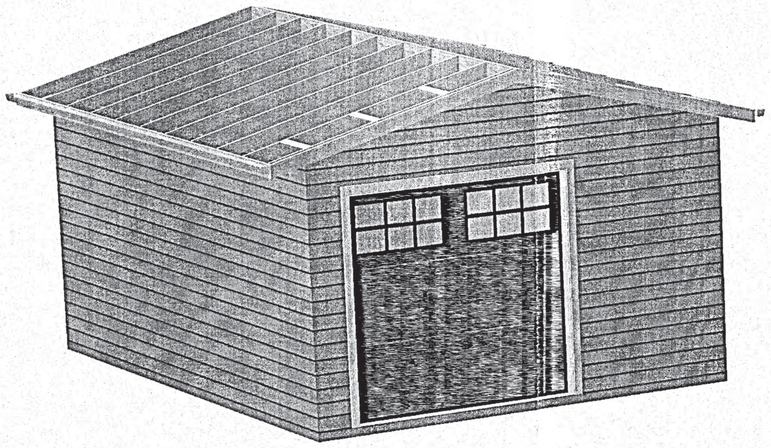
Commercial Tenant _____ Phone _____

Address _____ City _____ Zip _____

Please complete the Electrical, Mechanical & Plumbing details on reverse side

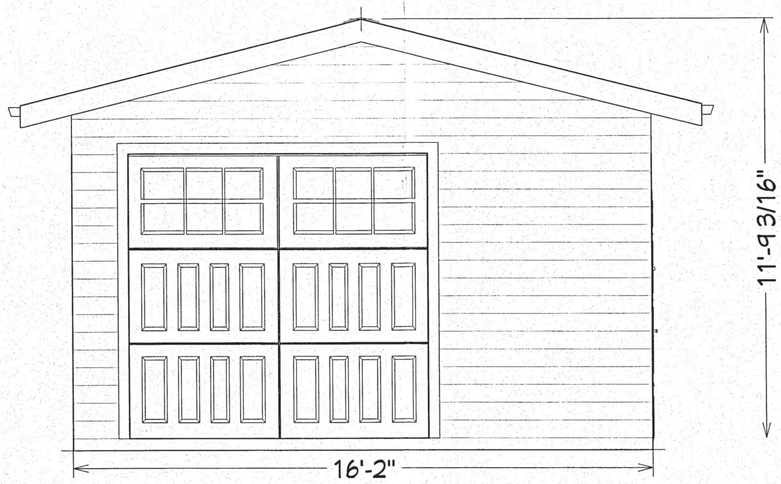
N:\DEV\FORMS\Building\BldgApplication.wpd

3. REROOF INCLUDING REPLACEMENT OF ROOF PERMIT -1 Page



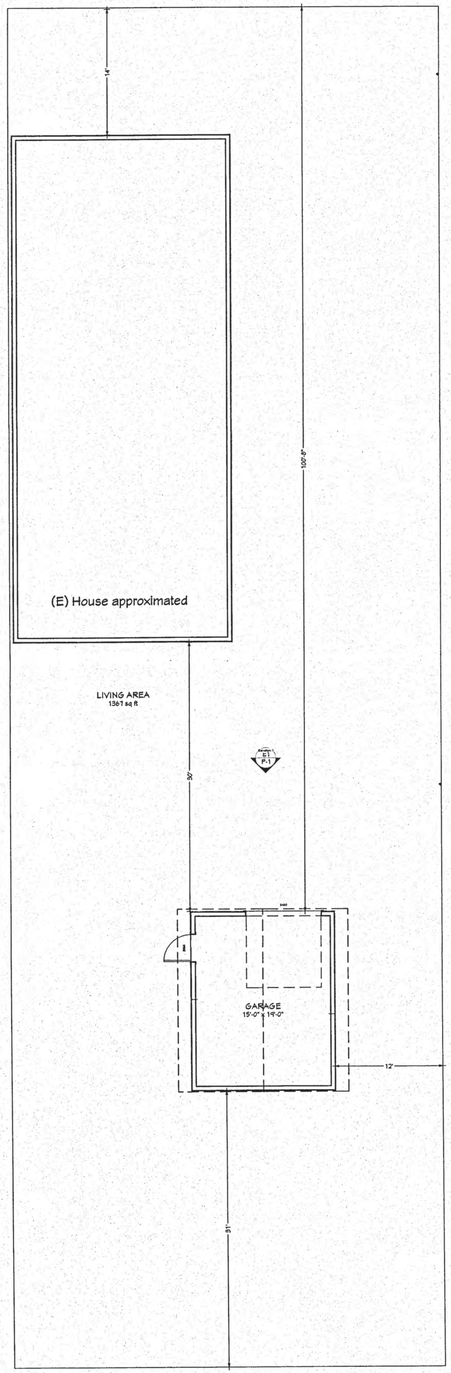
Project Description

Roof rafters replaced only as necessary
All (N) 1/2" plywood decking
All (N) Composition Shingles to match existing over #15 felt



1/2" = 1'

San Benito Ave



1/4" = 1'

B15-0600

Project Summary
Roof Repair/ Re-shingle

446 San Benito Ave, Los Gatos
APN: 410-16-051
District: R-1D
Property Size: .16ac/ 7200sf
Type of construction: V-B
Year Built: 1905

Town of Los Gatos
BUILDING DIVISION
PLAN APPROVED
BY M. Mashayekhi DATE 7-24-15
Plan check approval of documents does not authorize construction to proceed in violation of any federal, state, or local regulations

Applicable Codes
2013 California Residential Code
2013 California Building Code
2013 California Electrical Code
2013 California Energy Code
2013 California Mechanical Code
2013 California Plumbing Code
2013 California Green Building Standards
2013 California Fire Code

EXPIRED as of 3/20/16

REVISION TABLE
NUMBER | DATE | REVISED BY | DESCRIPTION

Roof Repair for:
446 San Benito Ave, Los Gatos
APN: 410-16-051

DATE:
7/7/2015

SCALE:
As Noted

SHEET:
A-1

446 SAN BENITO AVE.

B15-0600

Town of Los Gatos

Parcel Report

Assessor's Parcel Number: 410 16 051

Basic Parcel Information

Situs Address:	446 SAN BENITO AV
Owner's Name:	CUSHMAN DEBORAH F TRUSTEE
Co-Owner:	
Owner's Address:	3139 CYRUS AVE
City, State:	
Zip Code:	95124
Lot Size (Assessed):	7,200 Sq. Ft.
Lot Size GIS:	Sq. Ft.
Property Value:	$178,473.00
Zoning:	R-1D
Elem School:	

Property Characteristics

Buildings on Parcel:	Lot Size (Acres): 0.16	Land Use Description: Medium Density Residential
No. of Units:	Williamson Act Flag:	
Total # of Floors: 1	Well Flag:	County Use Code: 1
Bedrooms /Baths:	Pool Code: N	Year Built: 1905
Total # of Rooms:	Building Square Ft.: 684.00	Effective Year: 1905
	Garage Code: 0	2010 Census Block:
	Percentage Improved:	

Assessor's Information

Tax Rate Area:	3000	Tract:	
Tax Year:	20241125	Block and Lot No.:	
Document Date:	20211012	Record Book/Volume/Page:	
Document	25129718		
Deed Type:	DEED		

Additional Information

Has Secondary Unit?:	No	Is Historic Site?:	No
Is In Hillside Planning Area?:	No	FEMA Flood Panel / Zone:	0376 / X
Is In Hillside Specific Plan?:	No	Street Sweeping:	T5 (Week1 Monday)

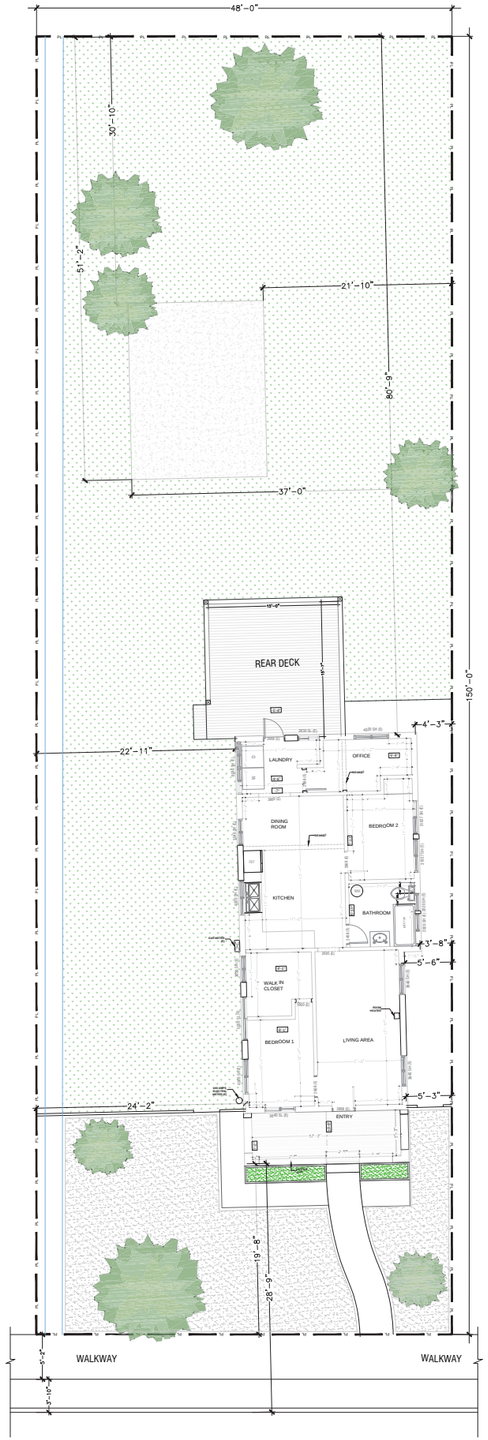
Town of Los Gatos, Information Services

Report generated 3/4/2025 9:50:59 AM

SYMBOLS

PL PROPERTY LINE

EXISTING WALL



EXISTING SITE PLAN

SCALE 1/8" = 1'-0"

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :

(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-

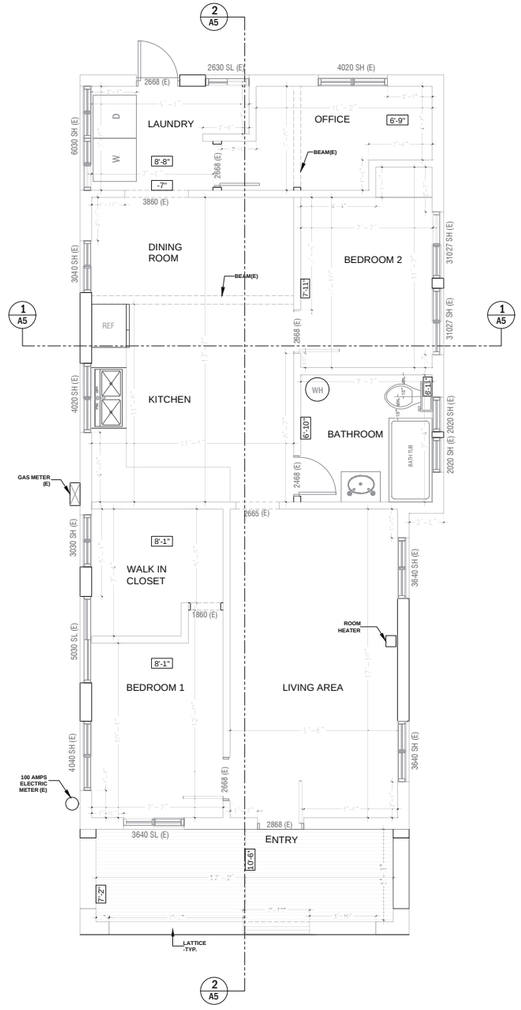
EXISTING SITE PLAN

DATE
03/03/2025

SCALE
1/8 "=1'-0"

SHEET
A1

SYMBOLS



EXISTING FIRST FLOOR PLAN

SCALE 1/4" = 1'-0"

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :

(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-

EXISTING FLOOR PLANS

DATE
03/03/2025

SCALE
1/4"=1'-0"

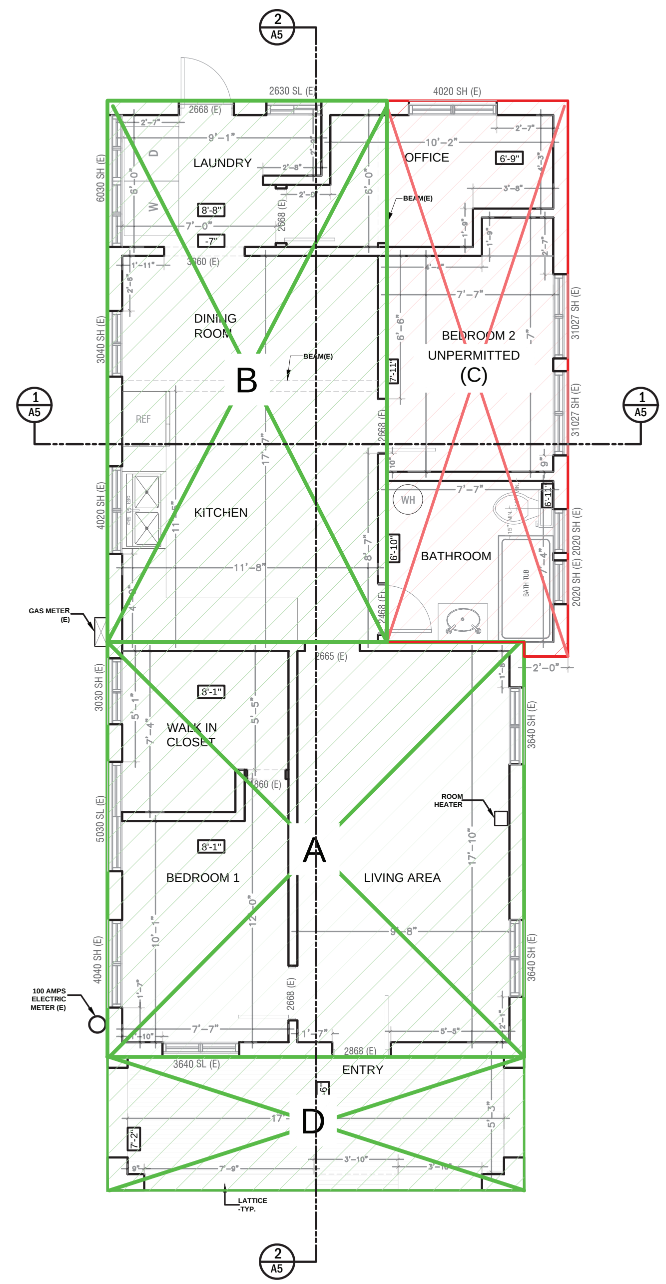
SHEET
A2

SYMBOLS

EXISTING WALL

AREA CALCULATIONS (EXISTING HOUSE)

FLOOR AREA	
A	19'-0" X 18'-11"= 359.41 SQ FT
B	12'-8" X 24'-8"= 314.50 SQ FT
PERMITTED / FLOOR AREA	674.00 SQ FT **= SAYS 684SQ FT (AS PER RECORDS)**
UNPERMITTED ADDITION	
C	8'-1" X 24'-10"= 204.83 SQ FT
TOTAL EXISTING FLOOR AREA	**TOTAL FLOOR AREA** (A+B+C)= 889 SQ FT
PORCH AREA	
D	18'-11" X 6'-1"= 115.58 SQ FT



EXISTING FIRST FLOOR PLAN

SCALE 1/4" = 1'-0"

OWNER :-

RAJ KUMARI & DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :

(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

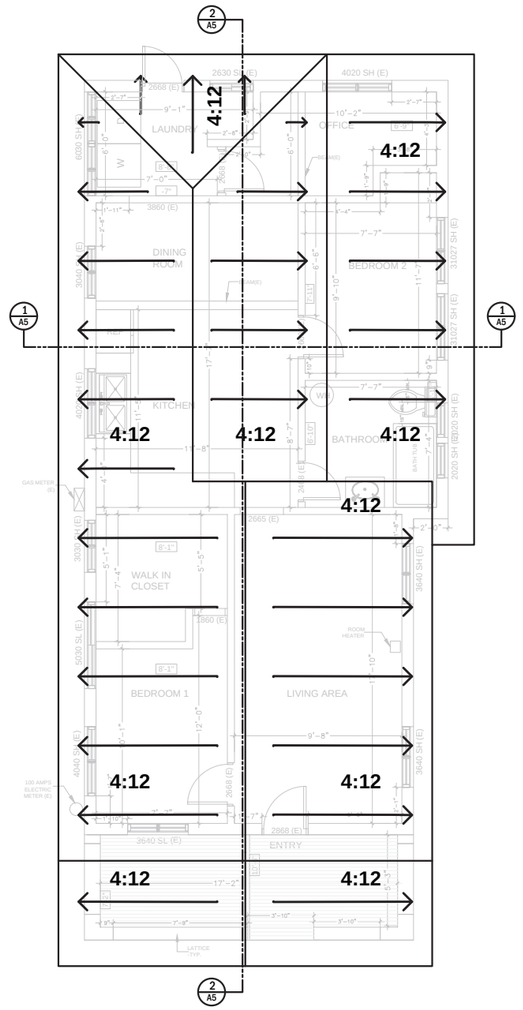
SHEET TITLE:-

AREA CALCULATION

DATE
03/03/2025

SCALE
1/4"=1'-0"

SHEET
A2.1



EXISTING ROOF PLAN

SCALE 1/4" = 1'-0"

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS	DESCRIPTION	DATE
NUMBER		

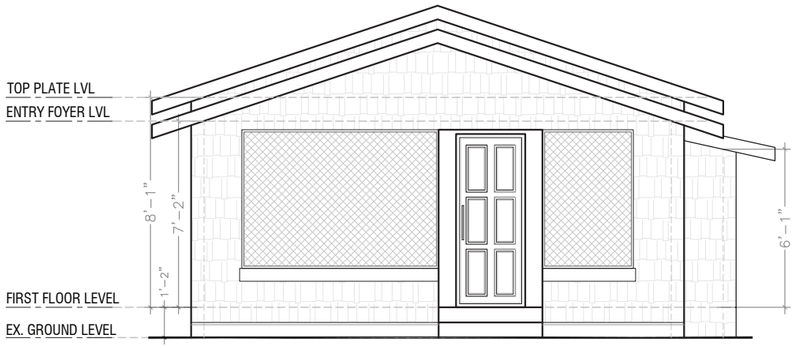
PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING ROOF PLAN

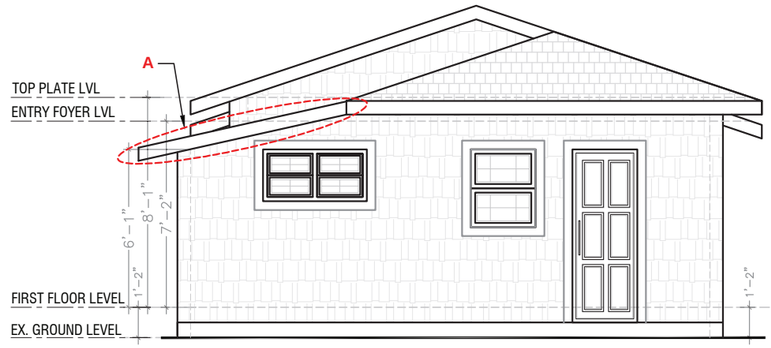
DATE
03/03/2025

SCALE
1/4"=1'

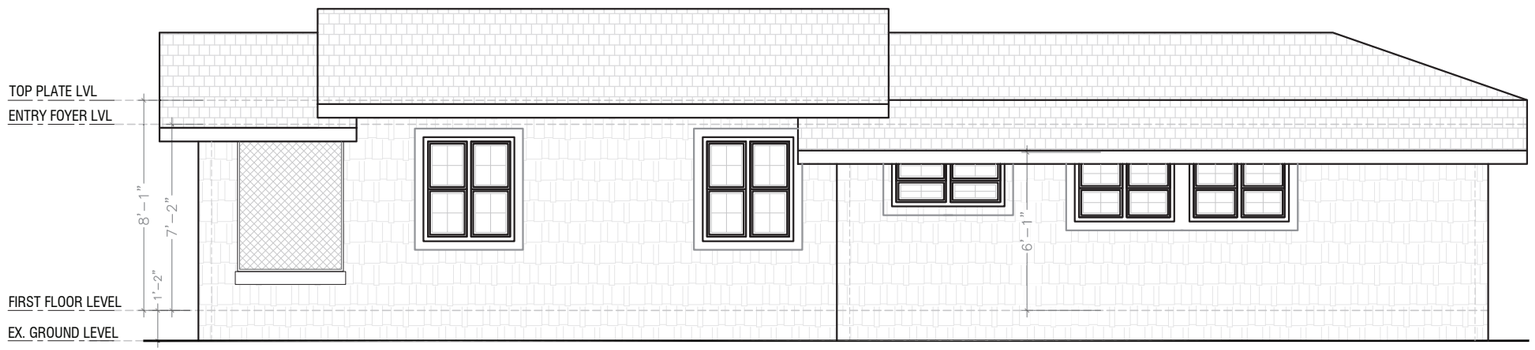
SHEET
A3



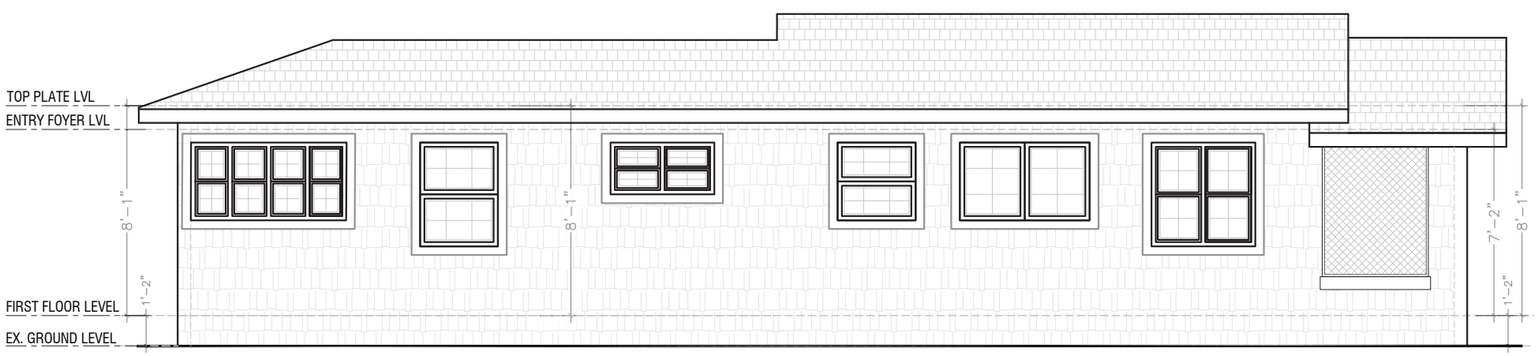
EXISTING FRONT ELEVATION
SCALE 3/8" = 1'-0"



EXISTING REAR ELEVATION
SCALE 3/8" = 1'-0"



EXISTING RIGHT ELEVATION
SCALE 3/8" = 1'-0"



EXISTING LEFT ELEVATION
SCALE 3/8" = 1'-0"

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
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LICENSED PROFESSIONAL ENGINEER
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CIVIL
STATE OF CALIFORNIA

REVISIONS	DESCRIPTION	DATE
NUMBER		

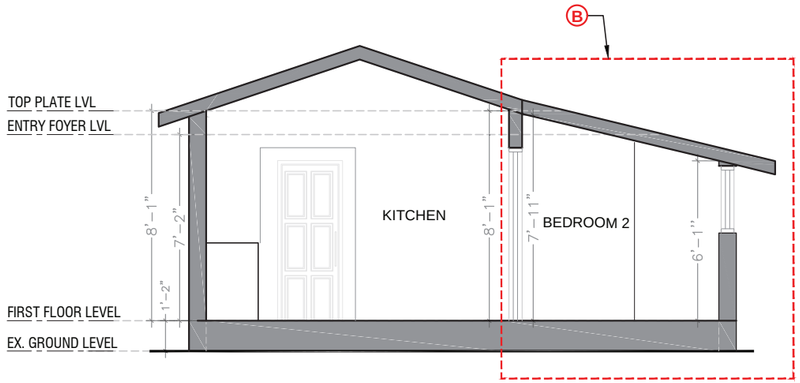
PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING ELEVATIONS

DATE
03/03/2025

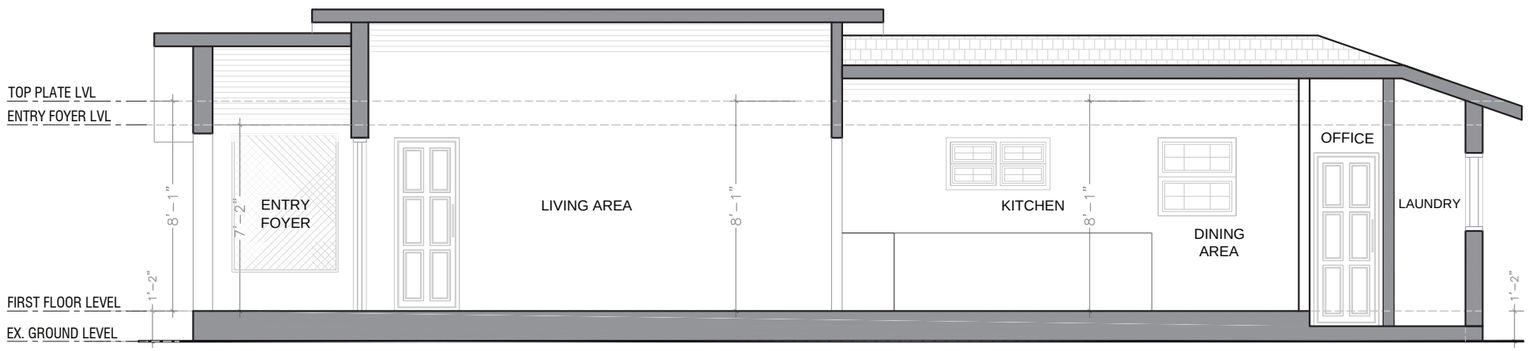
SCALE
3/8"=1'-0"

SHEET
A4



EXISTING SECTION - 1/A5

SCALE : 3/8"=1'-0"



EXISTING SECTION - 2/A5

SCALE : 3/8"=1'-0"

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
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CIVIL
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :

(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

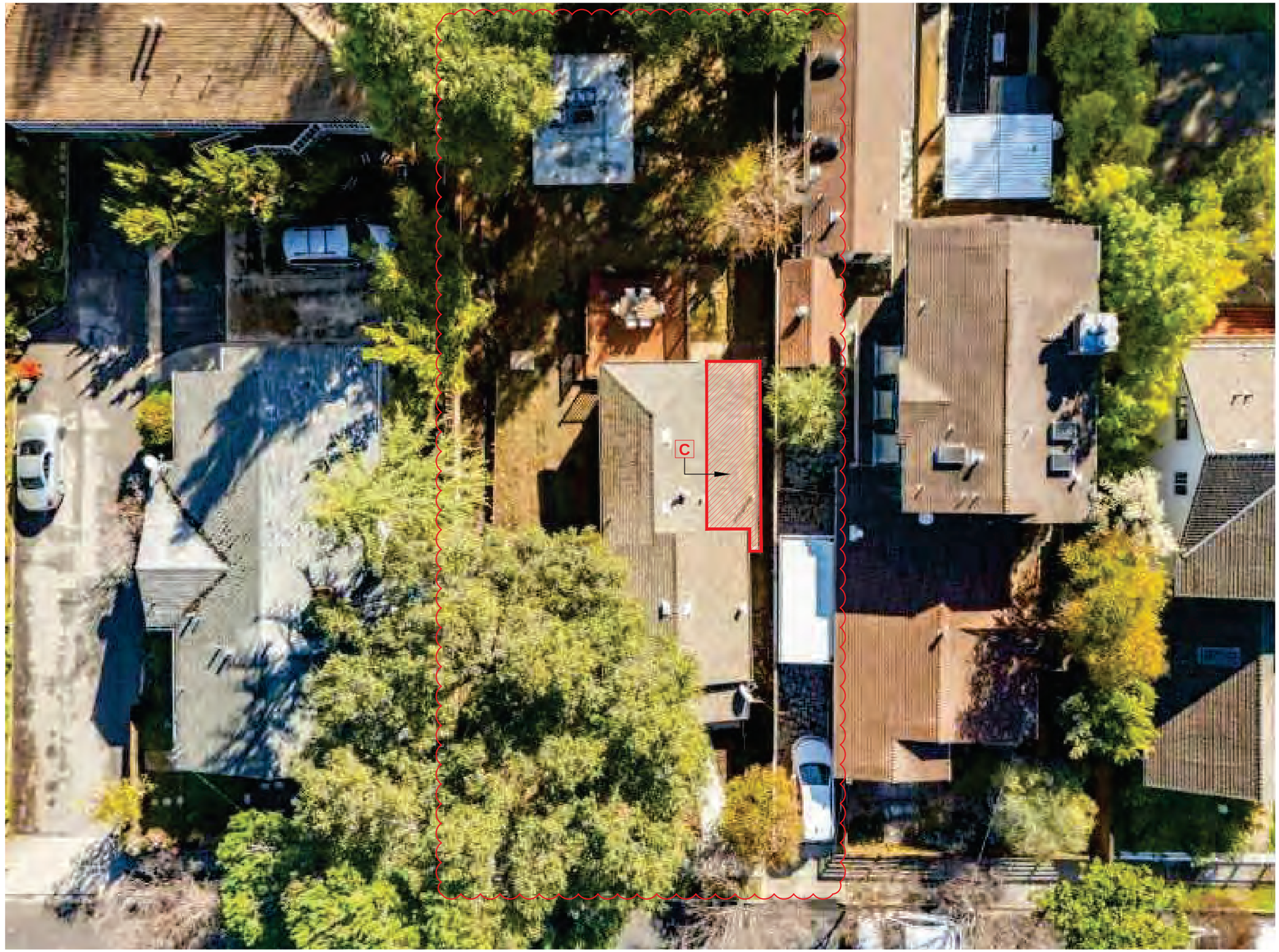
SHEET TITLE:-

EXISTING SECTIONS

DATE
03/03/2025

SCALE
3/8"=1'-0"

SHEET
A5



1. SITE

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
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REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :

(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

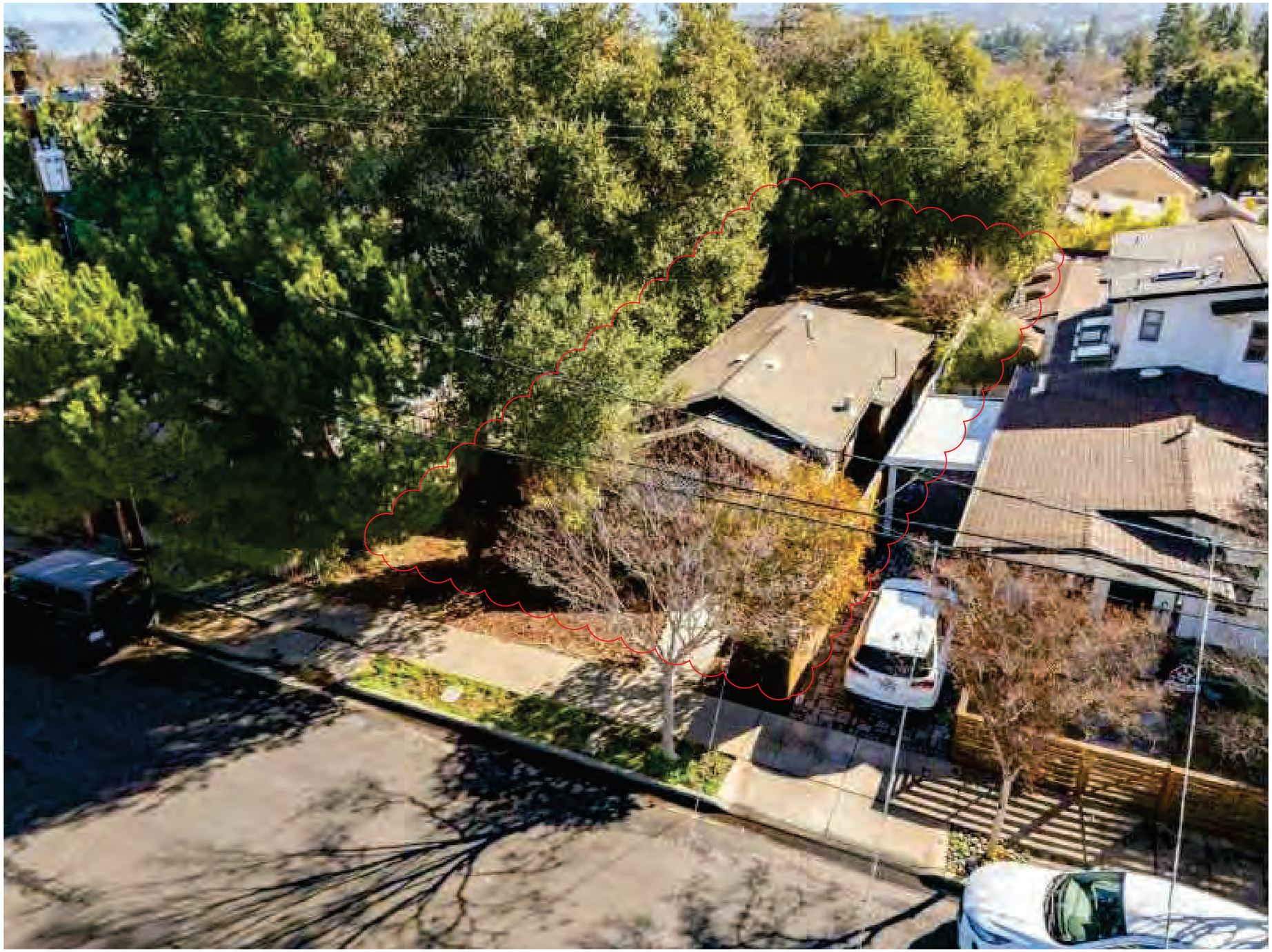
SHEET TITLE:-

EXISTING SITE PHOTO-1

DATE
03/03/2025

SCALE
NTS

SHEET
A6.1



2. SITE FRONT AERIAL VIEW

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
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CIVIL
STATE OF CALIFORNIA

REVISIONS	DESCRIPTION	DATE
NUMBER		

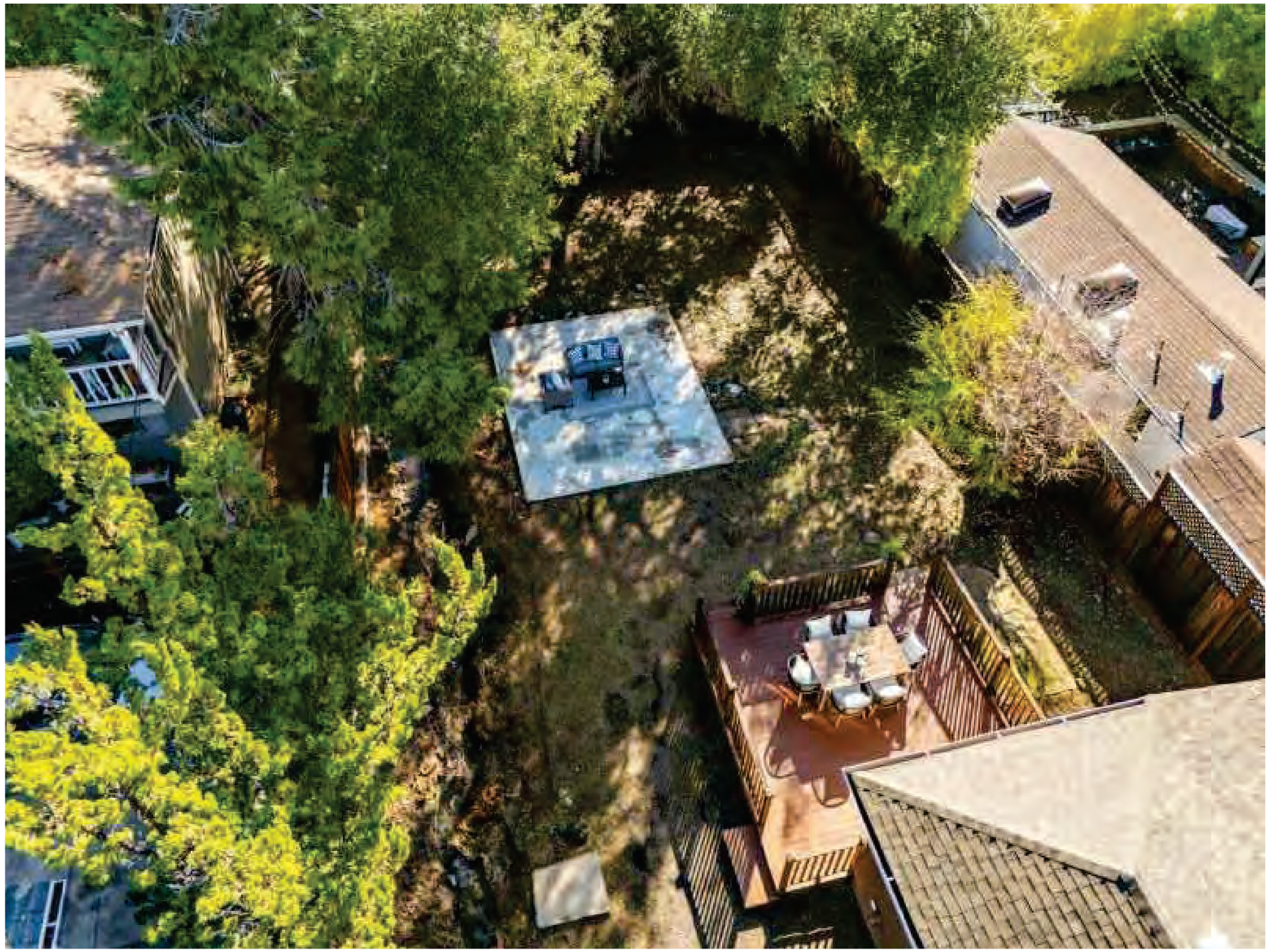
PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-2

DATE
03/03/2025

SCALE
NTS

SHEET
A6.2



3. SITE REAR AERIAL VIEW

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
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EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
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CIVIL
STATE OF CALIFORNIA

REVISIONS		
NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-3

DATE
03/03/2025

SCALE
NTS

SHEET
A6.3

4. FRONT VIEW

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
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CIVIL
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :

(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-

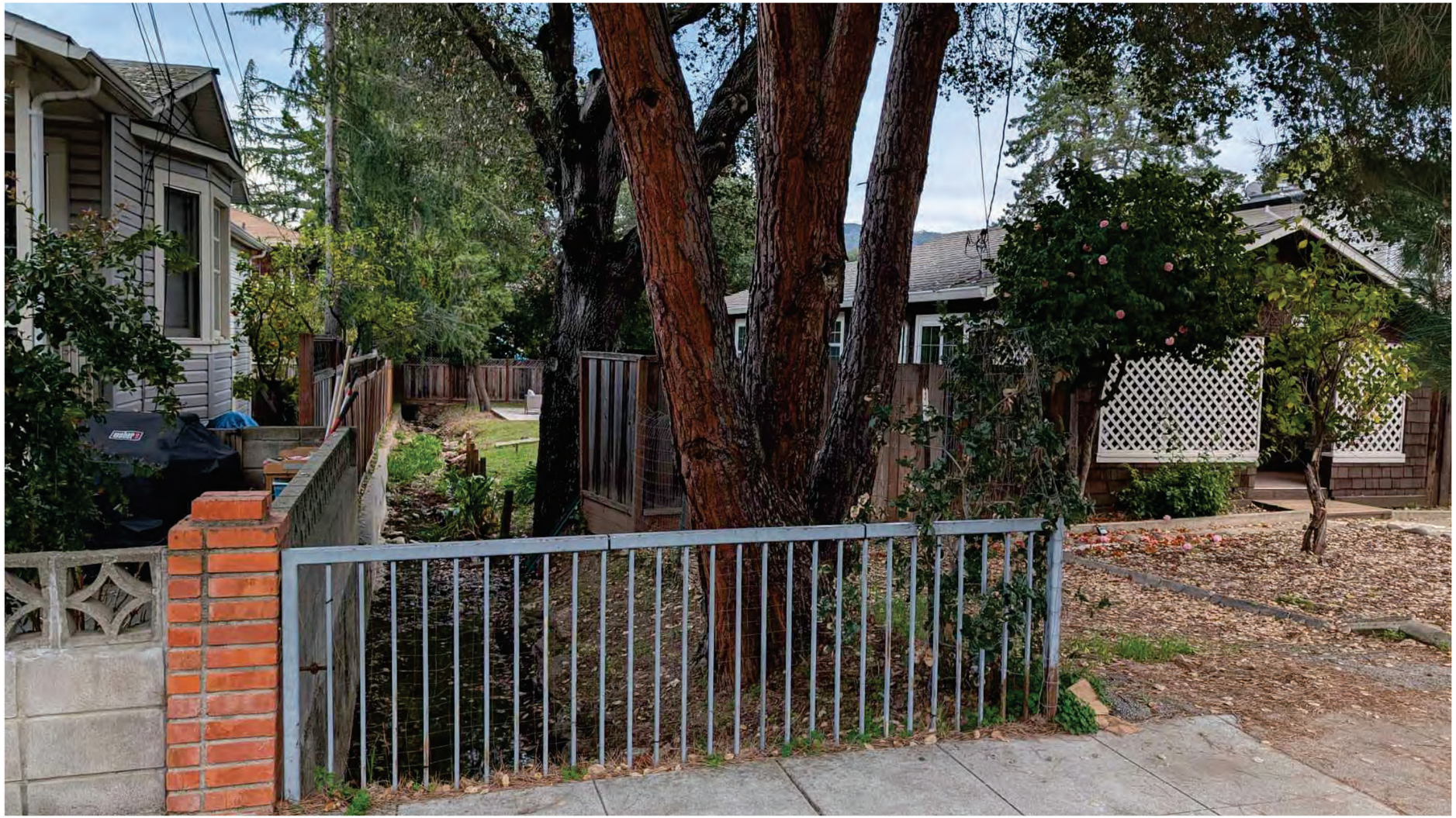
EXISTING SITE PHOTO-4

DATE
03/03/2025

SCALE
NTS

SHEET
A6.4

LEFT VIEW



5. SITE LEFT VIEW

OWNER :-
RAJ KUMARI
& DEVENDRA

DESIGNER :-
UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
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LICENSED PROFESSIONAL ENGINEER
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REVISIONS		
NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-5

DATE
03/03/2025

SCALE
NTS

SHEET
A6.5

6. ENTRY FOYER (PORCH)

OWNER :-
RAJ KUMARI
& DEVENDRA

DESIGNER :-
UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
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REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-6

DATE
03/03/2025

SCALE
NTS

SHEET
A6.6

7. ENTRY PORCH (CEILING)

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS	NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-7

DATE
03/03/2025

SCALE
NTS

SHEET
A6.7

8. LEFT VIEW

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS	DESCRIPTION	DATE
NUMBER		

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-8

DATE
03/03/2025

SCALE
NTS

SHEET
A6.8

9. LEFT VIEW

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :

(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-

EXISTING SITE PHOTO-9

DATE
03/03/2025

SCALE
NTS

SHEET
A6.9

10. LEFT REAR VIEW

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
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C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS		
NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-10

DATE
03/03/2025

SCALE
NTS

SHEET
A6.10

11. RIGHT SIDE

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
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LICENSED PROFESSIONAL ENGINEER
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C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS	NUMBER	DATE	DESCRIPTION

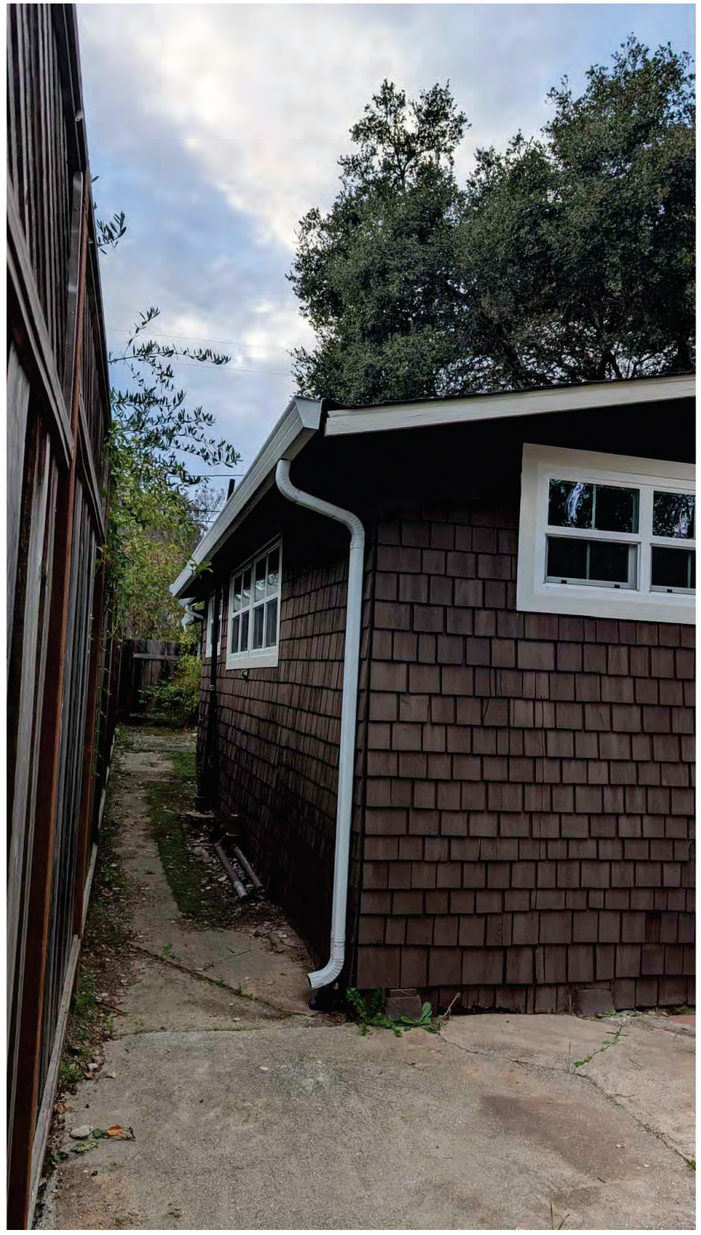
PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-11

DATE
03/03/2025

SCALE
NTS

SHEET
A6.11



12. RIGHT VIEW (FROM REAR)

OWNER :-

RAJ KUMARI & DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
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LICENSED PROFESSIONAL ENGINEER
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C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-12

DATE
03/03/2025

SCALE
NTS

SHEET
A6.12

13. REAR VIEW

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
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CIVIL
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :

(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-

EXISTING SITE PHOTO-13

DATE
03/03/2025

SCALE
NTS

SHEET
A6.13

14. REAR DECK SITE VIEW

OWNER :-
RAJ KUMARI
& DEVENDRA

DESIGNER :-
UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
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LICENSED PROFESSIONAL ENGINEER
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CIVIL
STATE OF CALIFORNIA

REVISIONS	DATE	DESCRIPTION
NUMBER		

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-14

DATE
03/03/2025

SCALE
NTS

SHEET
A6.14

15. SITE REAR VIEW

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
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CIVIL
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REVISIONS		
NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-15

DATE
03/03/2025

SCALE
NTS

SHEET
A6.15

16. SITE REAR VIEW

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
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20801, VERDE MOOR CT.
SARATOGA, CA - 95070
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REVISIONS

NUMBER	DATE	DESCRIPTION

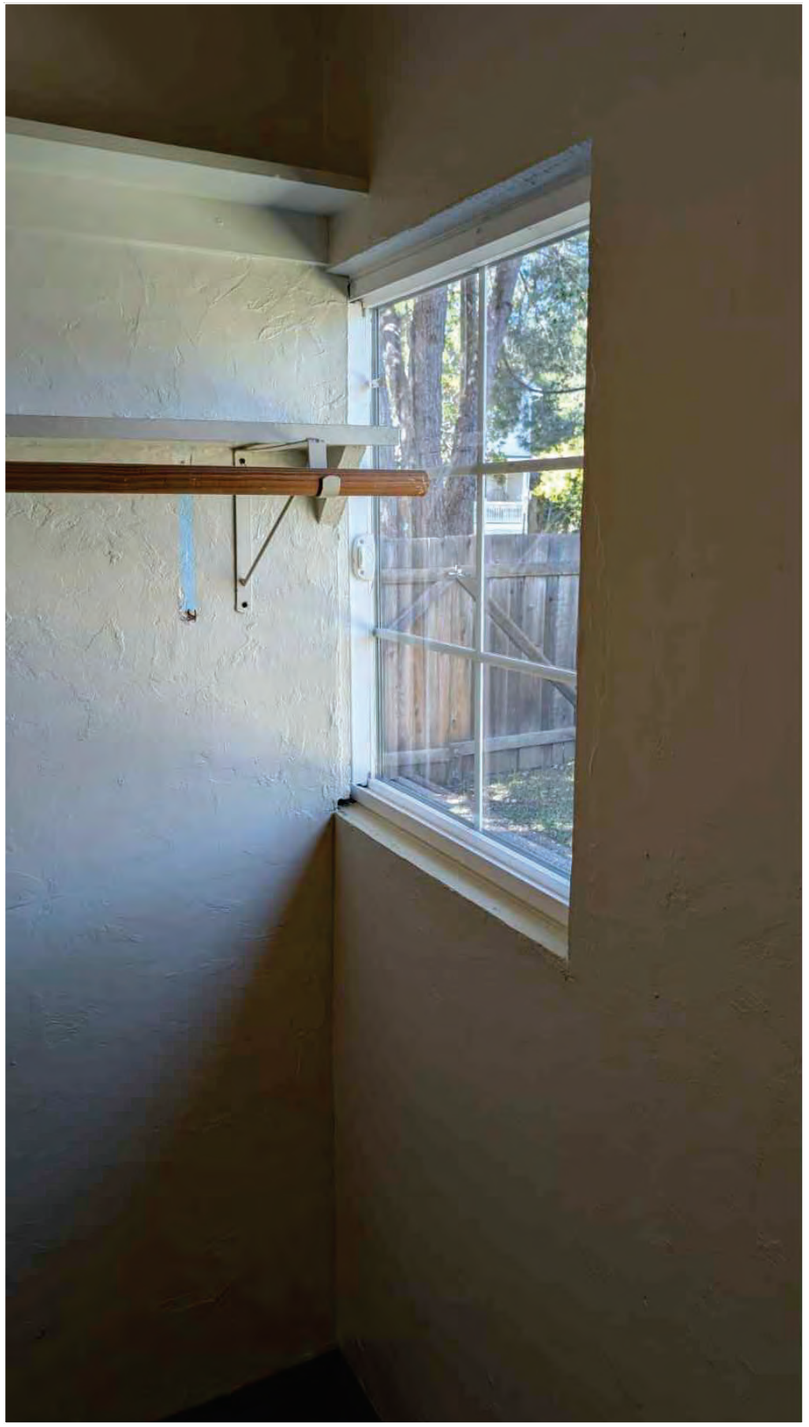
PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING SITE PHOTO-16

DATE
03/03/2025

SCALE
NTS

SHEET
A6.16



17. CLOSET VIEW

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

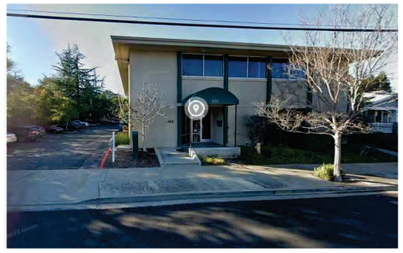
SHEET TITLE:-
EXISTING SITE PHOTO-17

DATE
03/03/2025

SCALE
NTS

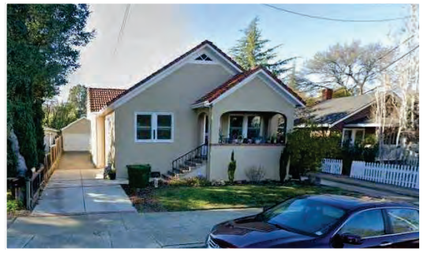
SHEET
A6.17

461 MONTEREY AVE

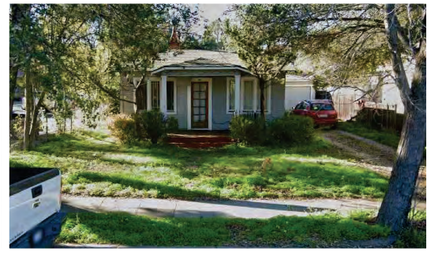


459 MONTEREY AVE

453 MONTEREY AVE



451 MONTEREY AVE



443 MONTEREY AVE

HOUSES **ROW OF CONTEXT TO REAR / ADJACENT** OF THE HOUSE

458 SAN BENITO AVE

456 SAN BENITO AVE

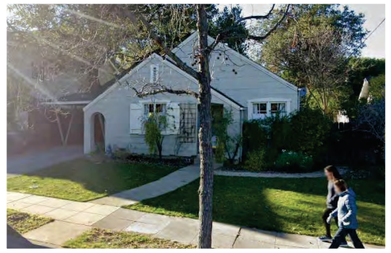
446 SAN BENITO AVE

440 SAN BENITO AVE

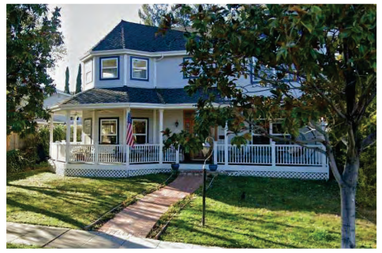
438 SAN BENITO AVE

HOUSES **ROW OF CONTEXT** TO THE HOUSE

SAN BENITO ROAD



459 SAN BENITO AVE



455 SAN BENITO AVE

445 SAN BENITO AVE

447 SAN BENITO AVE

437 SAN BENITO AVE

HOUSES **ROW OF CONTEXT TO FRONT** OF THE HOUSE

OWNER :-
RAJ KUMARI
& DEVENDRA

DESIGNER :-
UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
CONTEXT PHOTO GRAPHS

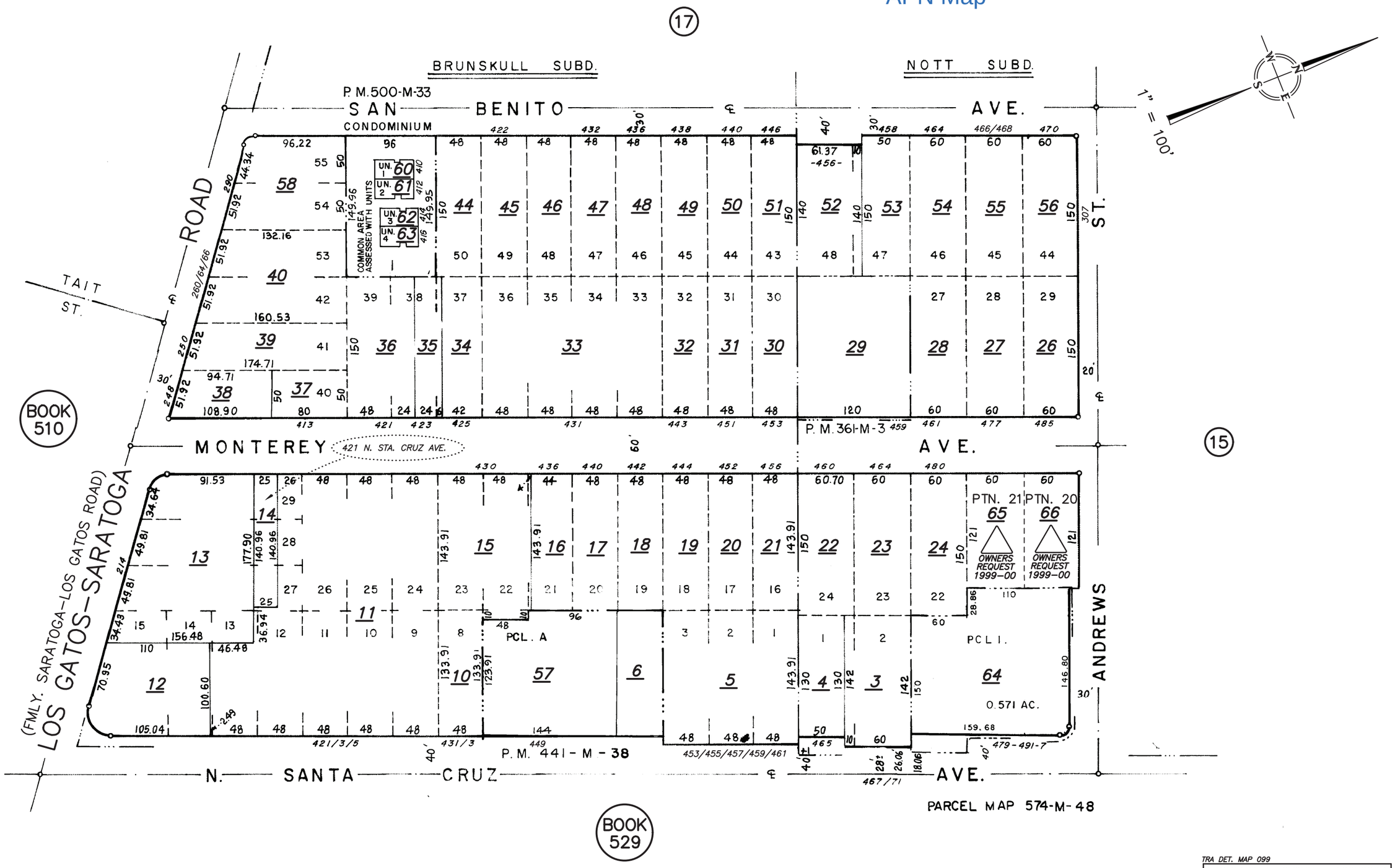
DATE
03/03/2025

SCALE
NTS

SHEET
A7

BOOK 410 | PAGE 16

ANNEXURE-11
APN Map



TRA DET. MAP 099

LAWRENCE E. STONE – ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2024–2025

ANNEXURE-12
TRACT MAP

REFERENCES

(A) BRUNSKULL SUB., "K"–M–67

(B) PARCEL MAP, 475–M–20

(C) RECORD OF SURVEY 746–M–27

(D) PARCEL MAP, 500–M–33

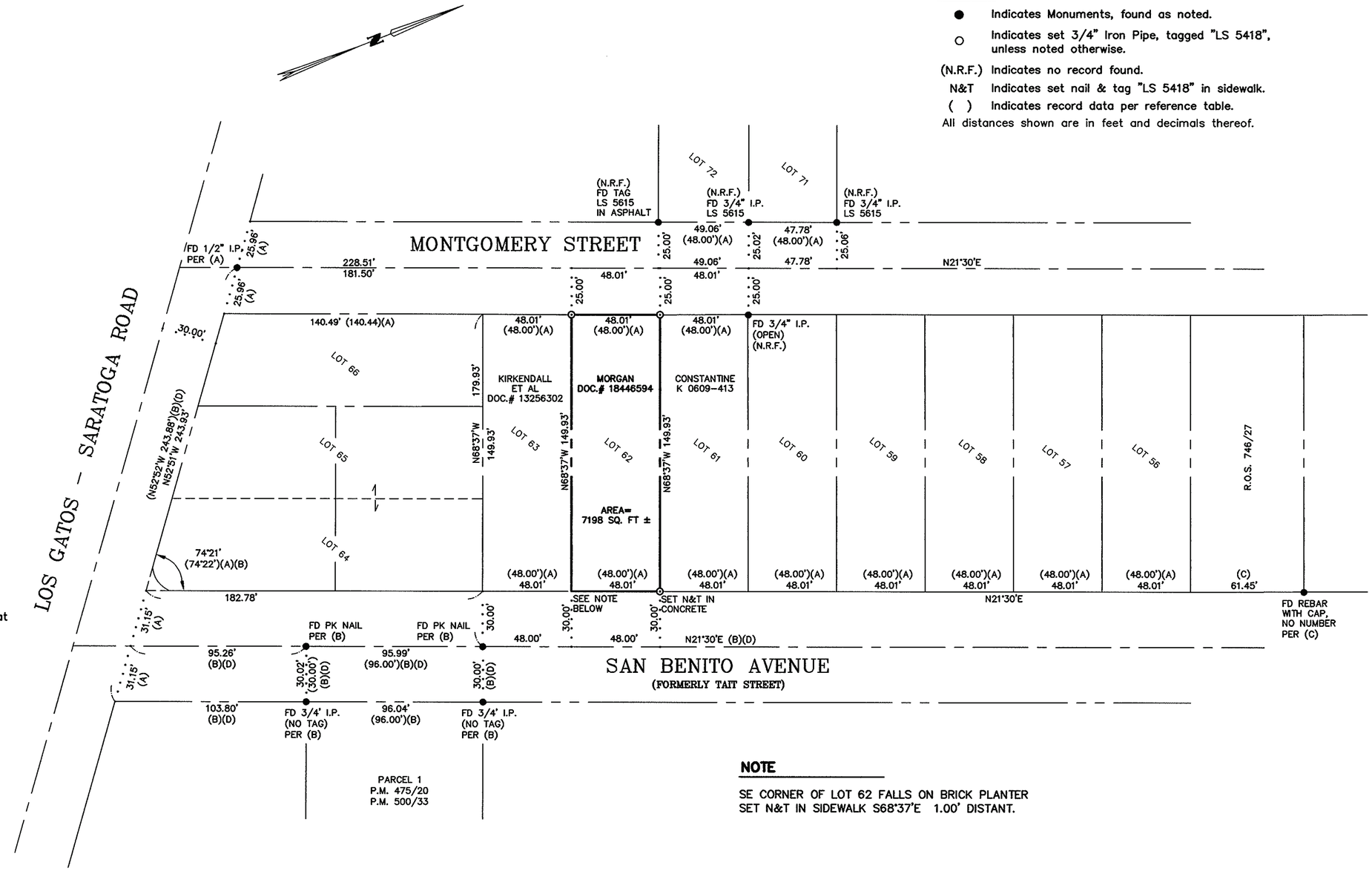
BASIS OF BEARINGS

BEARING NORTH 21°30' EAST ALONG THE CENTER LINE OF SAN BENITO AVENUE AS SHOWN UPON THAT CENTAIN PARCEL MAP FILED FOR RECORD IN BOOK 475 OF MAPS, AT PAGE 20, SANTA CLARA COUNTY RECORDS, WAS USED AS THE BASIS OF BEARINGS FOR THIS MAP.

LEGEND

- ● Indicates Monuments, found as noted.
- ○ Indicates set 3/4" Iron Pipe, tagged "LS 5418", unless noted otherwise.
- (N.R.F.) Indicates no record found.
- N&T Indicates set nail & tag "LS 5418" in sidewalk.
- ( ) Indicates record data per reference table.

All distances shown are in feet and decimals thereof.



SURVEYOR'S STATEMENT

This map correctly represents a survey made by me or under my direction in conformance with the requirements of the Professional Land Surveyors' Act at the request of Gilbert Clevenger in January, 2005.

ROBERT J. CRAIG
Professional Land Surveyor No. 5418
Renewal Date 9/30/2006

LICENSED LAND SURVEYOR ROBERT J. CRAIG 5418 LICENSE RENEWAL DATE 30 SEPT 2006 STATE OF CALIFORNIA

NOTE

SE CORNER OF LOT 62 FALLS ON BRICK PLANTER
SET N&T IN SIDEWALK S68°37'E 1.00' DISTANT.

COUNTY SURVEYOR'S STATEMENT

This map has been examined in accordance with Section 8766 of the Professional Land Surveyors' Act this 23RD day of NOVEMBER 2006.

GWENDOLYN GEE, COUNTY SURVEYOR
Professional Land Surveyor No. 6780
Renewal Date 9/30/2006

GWENDOLYN GEE EXP. 9-30-06 No. 6780 STATE OF CALIFORNIA

RECORDER'S STATEMENT

Filed this 29th day of November, 2005, at 2:42 p.m. in Book 794 of Maps, at Page 34, at the request of DUNBAR & CRAIG LAND SURVEYS, INC.

County Recorder BRENDA DAVIS File: 18696891

By Deputy Dianakula Fee: $8.00

This map being filed in accordance with Section 8762(b) (1)(2)(3) of the Professional Land Surveyors' Act.

APN: 410–17–056

DUNBAR & CRAIG LICENSED LAND SURVEYORS 236 N. SANTA CRUZ AVENUE #104 LOS GATOS, CALIFORNIA 95030 (408) 399–6929 LICENSED LAND SURVEYOR NO. 5418		**RECORD OF SURVEY** LOT 62, BRUNSKULL SUB. AS SHOWN IN BOOK "K" OF MAPS, PAGE 67 RECORDS OF SANTA CLARA COUNTY SITUATED IN TOWN OF LOS GATOS SANTA CLARA COUNTY, CALIFORNIA	
SCALE 1"=40'	DRAWN CHC	JOB NO. 05006	SHEET 1
DATE NOVEMBER 22, 2005	CHECKED RJC	INDEX SANTA CLARA CO.	OF 1
DESIGN RJC	DWG NAME 05006ROS.dwg	GRID 139–28–52	

794/34/34

18696891

34

PROJECT DESCRIPTION OF THE PROPOSED DEVELOPMENT

446 SAN BENITO AVE, LOS GATOS, CA, 95030

(Second Submission before HPC)

PROJECT NAME: - Addition & Remodelling of Existing House

PROJECT ADDRESS: - 446 San Benito Ave, Los Gatos, CA-95030

OWNERS: - [redacted]

PROPERTY DETAILS (EXISTING): -

1. APN No: - 410-16-051
2. The existing house is in R1-D Zone & the primary structure was built in 1920 i.e. prior to 1941. And, therefore, the house is considered a historic inventory.
3. The lot area is 7200 Sqft and the living area of the existing house is 850 Sqft.
4. The floor height of the existing structure is 8'-0".

DETAILS OF THE PROPOSED PROJECT: -

It is proposed to make an addition to this house on the first floor. The broad parameters of the addition are as under:

ZONING: - R1-D
CONSTRUCTION TYPE: - V-B (NON-SPRINKLERED)
OCCUPANCY: - R3U SINGLE FAMILY RESIDENTIAL WITH ATTACHED GARAGE
STORIES:- 1
LOT AREA = 7,200 SQ FT (0.1653 ACRES)
FLOOR AREA ALLOWED = 0.33 X 7200 = 2376 SQ FT
GARAGE FLOOR AREA ALLOWED = 0.094 X 7200 = 677 SQ FT

	EXISTING	PROPOSED	ADDITION /REDUCTION
b. LIVING AREA FIRST FLOOR	845	2238 SQFT	+ 1393 SQ FT
b. GARAGE	0 SQ FT	479 SQ FT	+479 SQ FT
c. FRONT PORCH	111 SQ FT	111 SQ FT	0 SQ FT
d. REAR DECK (1ST FLOOR)	0 SQ FT	224 SQ FT	+ 224 SQ FT
TOTAL FLOOR AREA	845 SQ FT	2238 SQ FT < (PERMITTED) 2376 SQ FT (33%)	+ 1393 SQ FT

ACTION TAKEN TO ADDRESS THE COMMENTS RECEIVED VIA LETTER DATED 09/25/2025 BASED ON REVIEW APPLICATION PHST-25-015:

1. **Appropriateness of the location and scale of the proposed additions (RDG 3.9):** It was felt by the committee members that the proposed structure is giving a massive look. To address the comments the proposed house is now made a single story structure and now it looks appropriate in location and scale.
2. **Appropriateness of the attached garage, apparent aluminum roll-up doors, and proportion of the garage relative to the front façade of the residence (RDG 4.8.15):** The attached garage is less than 50% of the front facade in line with the design guidelines. Further, to avoid a massive look, the garage doors have been bifurcated into two doors and have been offset with each other by 4 ft. In addition, a trellis is also proposed over the offset garage door to give an historic look. The garage doors will be wooden roll up doors and not aluminium. A member of the public had also suggested keeping the garage in the front as it gives a feeling of a single family home rather than the apartment. Further, it will help provide space for a possible ADU in future on the backside of the house.
3. **Compatibility of the proposed contemporary front door with the architecture of the existing/expanded residence (RDG 4.8.3):** The design of the front door has been changed to keeping it in line with the architecture of the existing/proposed residence.
4. **Inclusion of vinyl windows, which are discouraged (RDG 4.8.4):** The windows have now been proposed to be metal clad wood windows in line with the design guidelines.
5. **Appropriateness of stucco siding and its inclusion on only one elevation (RDG 4.8.9, .10, and .11):** The stucco which was proposed on the rear side has now been changed to wood shingles in line with the design guidelines.
6. **Use of the belly band on the side elevations to break up the two-story mass (RDG 3.3.3):** This is no longer relevant due the structure being modified to a single story structure only.

REQUEST FOR PERMISSION TO REPLACE THE DAMAGES SHINGLES ON THE RIGHT SIDE OF THE EXISTING HOUSE:

As would be seen from sheet A2.1, a lot of existing wood shingles are damaged and the same are proposed to be replaced with matching shingles. It is requested to review and grant permission for the same as outlined in sheet A2.1.

With all these changes, the modified plans are in compliance with the design guidelines and are submitted for review and approval.

Best regards,

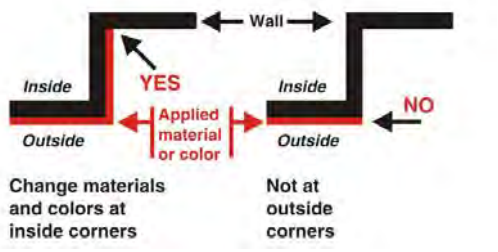
Devendra Deshwal

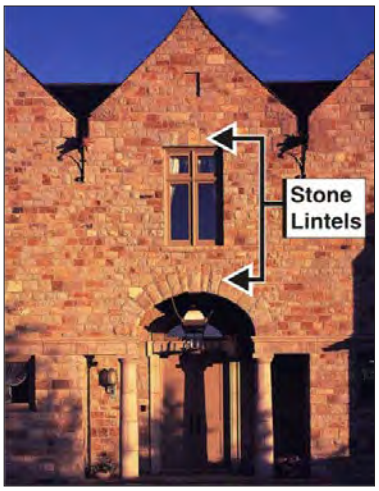
3.8.3 Use traditional detailing

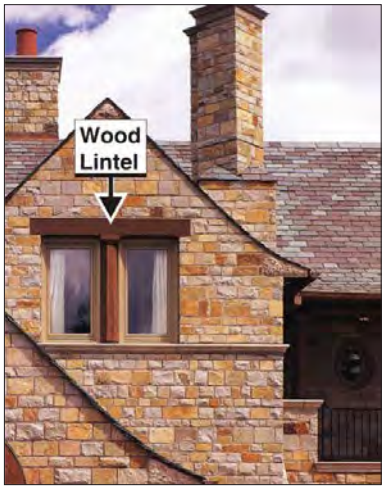
- Treat openings in walls as though they were constructed of the traditional material for the style. For example, be sure to provide substantial wall space above arches in stucco and stone walls. Traditionally, wall space above the arch would have been necessary to structurally span the opening, and to make the space too small is inconsistent with the architectural style.
- Openings in walls faced with stone, real or synthetic, should have defined lintels above the opening except in Mission or Spanish Eclectic styles. Lintels may be stone, brick or wood as suits the style of the house.
- Treat synthetic materials as though they were authentic. For example, select synthetic stone patterns that place the individual stones in a horizontal plane as they would have been in a load bearing masonry wall.
- Select roof materials that are consistent with the traditional architectural style (e.g., avoid concrete roof tiles on a Craftsman Style house.)

3.8.4 Materials changes

- Make materials and color changes at inside corners rather than outside corners to avoid a pasted on look.







Use stone or wood lintels over openings in stone walls

3.9 ADDITIONS/ACCESSORY BUILDINGS/SECONDARY UNITS

- Site additions in the least conspicuous place. In many cases this is a rear or side elevation - only rarely is it a rooftop.
- The existing built forms, components and materials should be reinforced. Heights and proportions of additions and alterations should be consistent with and continue the original architectural style and design.
- Additions should be subordinate, and compatible in scale and proportion to the historically significant portions of the existing structure.
- When an addition or remodel requires the use of newly constructed exterior elements, they should be identical in size, dimension, shape and location as the original, and

Additions, accessory buildings and secondary units should match the form, architectural style, and details of the original house

Original structure

Addition incorporated into the roof successfully adds space while respecting the integrity of the existing house and the scale of the neighborhood

Placing a two story addition to the rear can minimize its impact on the historic resource and the scale of the neighborhood

should utilize the same materials as the existing protected exterior elements.

- When an addition necessitates the removal of architectural materials, such as siding, windows, doors, and decorative elements, they should be carefully removed and reused in the addition where possible.
- The introduction of window and door openings not characteristic in proportion, scale, or style with the original architecture is strongly discouraged (e.g., sliding windows or doors in a structure characterized by double hung windows and swinging doors).
- The character of any addition or alteration should be in keeping with and subordinate to the integrity of the original structure.
- The amount of foundation exposed on the addition should match that of the original building.
- Do not add roof top additions where the roof is of historic significance.
- Second floor additions are discouraged in neighborhoods with largely one story homes. If horizontal expansion of the house is not possible, consider incorporating a second floor addition within the roof form as shown in the example to the left.
- Second floor additions which are not embedded within the roof form should be located to the rear of the structure.
- The height and proportion of an addition or a second story should not dominate the original structure.
- Deck additions should be placed to the rear of the structure only, and should be subordinate in terms of scale and detailing.
- New outbuildings, such as garages, should be clearly subordinate to the main structure in massing, and should utilize forms, materials and details which are similar to the main structure.
- Garages should generally be located to the rear of the lot behind the rear wall of the residence. One car wide access driveways should be utilized.

ADDITION & REMODELING OF THE HOUSE
446 SAN BENITO AVE, LOS GATOS, CA 95030
APN - 410-16-051

SCOPE OF WORK

1. ADDITION ON LEFT AND REAR SIDE OF THE HOUSE.
2. REMODELING OF THE HOUSE

DRAWING INDEX

A0 -COVER SHEET
A1.1 - EXISTING SITE PLAN
A1.2 - PROPOSED SITE PLAN
A2 - EXISTING TECHNICAL DEMOLITION FLOOR PLAN
A2.1 - EXISTING WOOD SHINGLES DETAILS
A3 - PROPOSED FLOOR PLANS
A4.1 -EXISTING ROOF PLAN
A4.2 - PROPOSED ROOF PLAN
A4.3 - HRV FAN DETAILS
A5.1 -EXISTING ELEVATIONS
A5.2 - PROPOSED ELEVATION
A5.3 - PROPOSED MATERIAL SHEET
A5.4 - PROPOSED 3D VIEWS
A5.5 - STREETSCAPE
A6 -PROPOSED SECTIONS
A7 - CONTEXT PHOTOGRAPHS
A7.1 - NEIGHBORHOOD SURVEY-1
A7.2 - NEIGHBORHOOD SURVEY-2
CG1 - CAL GREENS RESIDENTIAL MANDATORY MEASURES
CG2 - CAL GREENS RESIDENTIAL MANDATORY MEASURES
CG3 - CAL GREENS RESIDENTIAL MANDATORY CHECKLIST
CBMP - CONSTRUCTION BEST MANAGEMENT PRACTICES
CB- CLEAN BAY BLUE PRINT

PROJECT DATA

LOT AREA = 7,200 SQ FT (0.1653 ACRES)
FAR ALLOWED = 0.35-($\frac{A-5}{25}$ X 0.20) = 0.35-($\frac{7-2-5}{25}$ X 0.20) = 0.33
FLOOR AREA ALLOWED = 0.33 X 7200 = 2376 SQ FT
GARAGE FAR ALLOWED = 0.10-($\frac{A-5}{25}$ X 0.07) = 0.10-($\frac{7-2-5}{25}$ X 0.07) = 0.094
GARAGE FLOOR AREA ALLOWED = 0.094 X 7200 = 677 SQ FT

		EXISTING	PROPOSED	ADDITION / REDUCTION
a.	LIVING AREA FIRST FLOOR	845* SQ FT	2238 SQ FT	+1393 SQ FT
b.	GARAGE	0 SQ FT	479 SQ FT	+ 479 SQ FT
c.	FRONT PORCH	111 SQ FT	111 SQ FT	+ 0 SQ FT
d.	REAR DECK (1ST FLOOR)	0 SQ FT	224 SQ FT	+ 224 SQ FT
TOTAL FLOOR AREA		845 SQ FT (PERMITTED)	2238 SQ FT < 2376 SQ FT (33%)	+ 1393 SQ FT

(* 72 SQ FT OF EXISTING LIVING SPACE IS CONVERTED INTO THE GARAGE SPACE. THUS FOR ENERGY REPORT EXISTING LIVING AREA IS TAKEN 773 SQ FT)

PROJECT INFORMATION

APN	-	410-16-051
ZONING	-	R1-D

		EXISTING	PROPOSED
BEDROOMS	-	2	5
BATHROOMS	-	1	3
GARAGE	-	0	2 CAR
CONSTRUCTION TYPE	-	V-B (NON-SPRINKLERED)	
OCCUPANCY	-	R3U SINGLE FAMILY RESIDENTIAL WITH ATTACHED GARAGE	
STORIES	-	1	

APPLICABLE CODES

2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA RESIDENTIAL CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
2022 CALIFORNIA FIRE CODE
2022 CALIFORNIA ENERGY CODE
ALL APPLICABLE LOCAL, COUNTY & FEDERAL CODES, LAWS AND REGULATIONS

GENERAL NOTES

- ALL CONSTRUCTION SHALL COMPLY WITH ADOPTED ORDINANCES AND POLICIES OF THE GOVERNING AGENCY AND THE LATEST ADOPTED ADDITIONS OF THE FOLLOWING 2022 CALIFORNIA RESIDENTIAL AND BUILDING CODE (CBC, CRC), CALIFORNIA ELECTRICAL CODE 2022, CALIFORNIA ENERGY CODE 2022, AND 2022 CALIFORNIA GREEN BUILDING CODE.
- THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY EXISTING CONDITIONS AND PROGRESSES OF THE WORK, ALL THE REASONABLE SAFEGUARDS FOR SAFETY AND PROTECTION INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS, PROMULGATING SAFETY REGULATIONS AND NOTIFYING OWNERS AND USERS OF ADJACENT UTILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, GRADES AND OTHER CONDITIONS AND HE SHALL CORRELATE ALL SUCH ITEMS AT THE JOB SITE, HE SHALL REPORT ANY DISCREPANCIES TO THE DESIGNER FOR CLARIFICATION AND/OR CORRECTION PRIOR TO BEGINNING ANY WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR WORK AND COORDINATION OF ALL TRADES AND THE GOVERNING AGENCIES, AND SHALL PROVIDE ALL MATERIALS AND LABOUR SHOWN IN THESE PLANS TO RENDER THE JOB COMPLETE.

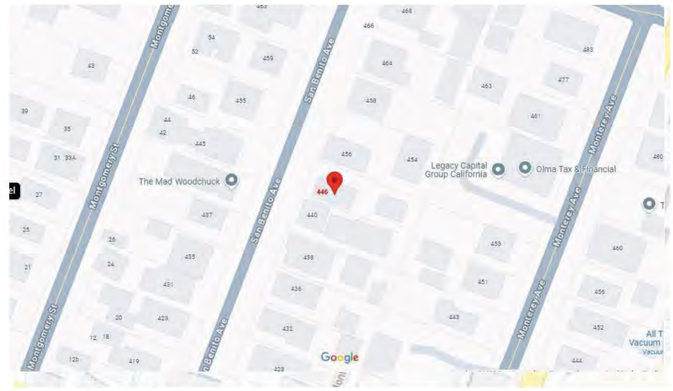
CHANGES TO THE PLAN DURING CONSTRUCTION OTHER THAN:
1. CABINET CHANGES WHEN NOT BEING SUPPORTED ENTIRELY BY ROOF STRUCTURE.
2. INTERIOR DOOR AND ZERO CLARENCE FIREPLACE RELOCATION SHOWN ON THE APPROVE PLANS
3. A SINGLE NON BEARING WALL RELOCATION WHEN NOT CREATING AN ADDITIONAL ROOM AND
4. INTERIOR NON - STRUCTURAL WALL FINISHES;

SHALL CAUSE PLANS APPROVAL AND CONSTRUCTION TO BE SUSPENDED, A NEW PLAN CHECK (FOR THE NEW PLAN CHANGES) WILL BE SUBMITTED FOR REVIEW AND APPROVAL THROUGH THE COMMON PLAN CHECK PROCESS.

CALGREEN NOTES:

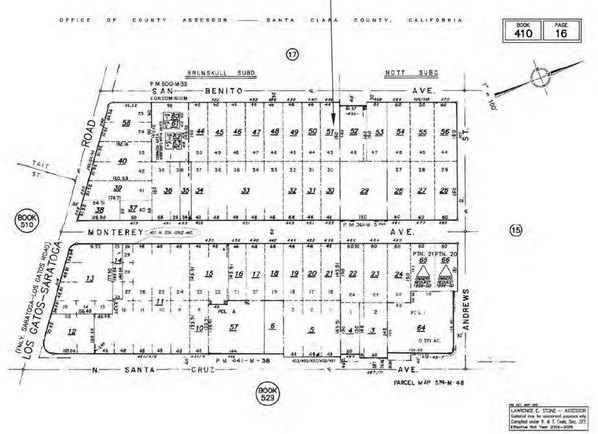
PER CALIFORNIA CIVIL CODE ARTICLE 1101.4 AND CAL-GREEN SECTION 301.1 FOR ALL BUILDING ALTERATIONS OR IMPROVEMENTS TO A SINGLE FAMILY RESIDENTIAL PROPERTY , EXISTING PLUMBING FIXTURES IN THE ENTIRE HOUSE THAT DO NOT MEET COMPLAINT FLOW RATES WILL NEED TO BE UPGRADED, WATER CLOSETS WITH A FLOW RATE IN EXCESS OF 1.6gpf WILL NEED TO BE REPLACED WITH WATER CLOSETS WITH A MAXIMUM FLOW RATE OF 1.28 gpf. SHOWER HEADS WITH A FLOW GREATER THAN 2.5gpm WILL NEED TO BE REPLACED WITH A MAXIMUM 1.8 gpm @80 psi SHOWER HEAD. LAVATORY AND KITCHEN FAUCETS WITH A FLOW RATE GREATER THAN 2.2 gpm WILL NEED TO BE REPLACED WITH A FAUCET WITH MAXIMUM FLOW RATE OF 1.2 gpm @60 psi (OR 1.8 gpm @60 psi FOR KITCHEN FAUCETS)

VICINITY MAP



APN MAP

446 SAN BENITO AVE,
LOS GATOS, CA 95030



APPROVAL STAMP

OWNER :-
[redacted]

DESIGNER :-
UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENCED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS	DESCRIPTION	DATE
NUMBER		

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
COVER SHEET

DATE
03/03/2025

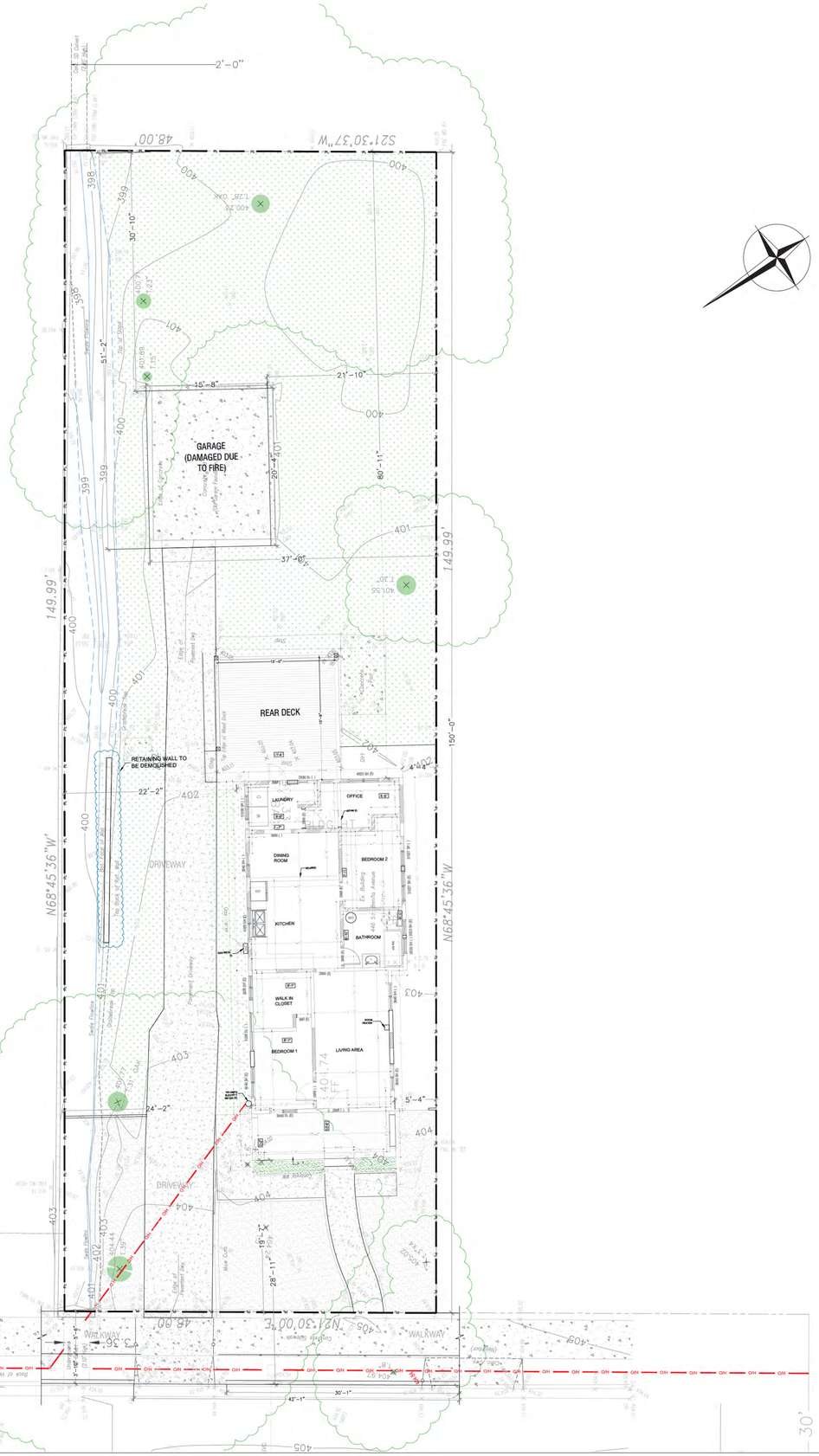
SCALE
NTS

SHEET
A0

ATTACHMENT 4

SYMBOLS

- PROPERTY LINE
- EXISTING WALL
- EXISTING WALL TO BE REMOVED
- NEW WALL
- NEW ADDITION



EXISTING SITE PLAN

SCALE 1/8" = 1'-0"

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
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LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS	DESCRIPTION	DATE
NUMBER		

PROJECT :

(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

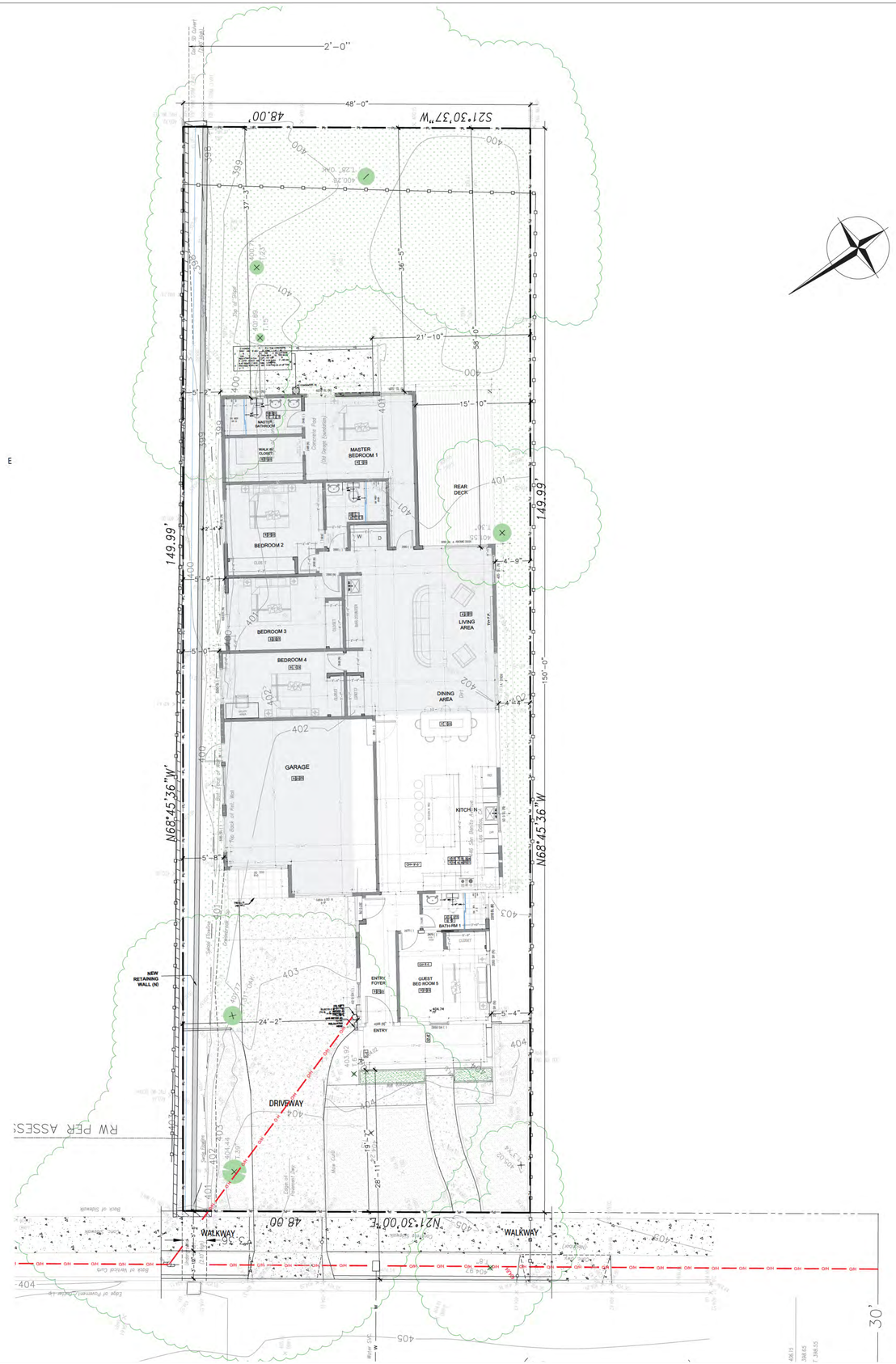
SHEET TITLE:-

EXISTING SITE PLAN

DATE
03/03/2025

SCALE
1/8 "=1'-0"

SHEET
A1.1



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

SYMBOLS

- PROPERTY LINE
- EXISTING WALL
- EXISTING WALL TO BE REMOVED
- NEW WALL
- NEW ADDITION

NOTES: –
PROPERTY LINE DIMENSIONS ARE TAKEN FROM THE APN MAP

FIRE ACCESS NOTES
BUILDING ADDRESS IS TO BE PLAINLY LEGIBLE AND VISIBLE FROM THE PUBLIC STREET. THESE NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND.

REFRIGERANT SUCTION LINE NOTES
COMPLY WITH CEnC 120.3 REFRIGERANT SUCTION LINE LOCATED OUTSIDE SHALL HAVE PIPE INSULATION AND BE PROTECTED BY COVER WITH UV RESISTANCE AND CLASS I OR II VAPOR RETARDER.

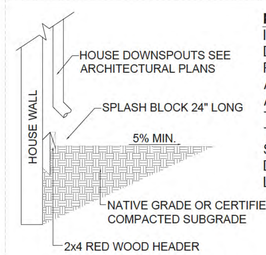
SITE DRAINAGE & GRADING NOTES
1. SPLASH BLOCK TO BE PLACED BELOW EACH DOWN SPOUT.
2. THE SITE SHOULD BE FINE GRADED TO PROVIDE MIN. 5% SLOPE AWAY FROM BUILDING PERIMETER & ADJACENT PROPERTY LINES. IN NO CASE SHALL THE FINISH GRADING RESULT IN AN INCREASE IN SHEET FLOW ONTO ADJACENT PROPERTIES.
3. DRAINED WATER FROM IMPERVIOUS SURFACES TO BE DIRECTED TO THE LANDSCAPED AREA AT A SLOPE OF 2%.

RESIDENTIAL LANDINGS & THRESHOLDS SECTIONS R311.3 & R311.7.6

R311.3 FLOORS AND LANDING AT EXTERIOR DOORS:
THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE LANDING SHALL NOT BE LESS THAN THE DOOR SERVED. EVERY EACH WIDTH OF LANDING SHALL HAVE A MINIMUM DIMENSION OF 36 INCHES MEASURED IN THE DIRECTION OF TRAVEL. EXTERIOR LANDING SHALL BE PERMITTED TO HAVE A SLOPE NOT TO EXCEED ¼ UNIT VERTICAL IN 12 UNITS HORIZONTAL (2PERCENT)

R311.3.1 FLOOR ELEVATIONS AT REQUIRED EGRESS DOORS:
LANDING OR FLOORS AT THE REQUIRED EGRESS DOORS SHALL NOT BE MORE THAN 1 ½ INCHES LOWER THAN THE TOP OF THE THRESHOLD. EXCEPTION THE EXTERIOR LANDING OR FLOOR SHALL NOT BE MORE THAN 7 ¾" INCHES BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING OR FLOOR.

FIRE SAFETY NOTES
1. Smoking shall be prohibited except in approved area. Signs shall be posted in accordance with section 310.
2.(a) Combustible debris, rubbish and waste material shall not be accumulated within buildings.
(b) Combustible debris, rubbish and waste material shall be removed from building at the end of each work shift.
3. Where rubbish containers with capacity exceeding 5.33 cubic feet (40 gallons) (0.15m^3) are used for temporary storage of combustible debris, rubbish and waste material, they shall have tight-fitting or self-closing lids. Such rubbish containers shall be constructed entirely of materials that comply with either of the following:
(i) Noncombustible materials.
(ii) Materials that meet a peak rate of heat released not exceeding 300kW/m^2 when tested in accordance with ASTM E1354 at an incident heat influx of 50kW/m^2 in the horizontal orientation.
4. Materials susceptible to spontaneous ignition shall not be disposed of by burning on the site unless approved.
5. Combustible debris, rubbish and waste material shall not be disposed of by burning on the site unless approved.
6. Temporary wiring for electrical power and lighting installations used in connection with the construction, alteration or demolition of buildings, structures, equipment or similar activities shall comply with the Californian Electrical Code.
7(a). Storage of flammable and combustible liquids shall be in accordance with section 5704.
(b). The storage, use and handling of flammable and combustible liquids at construction sites shall be in accordance with section 5706.2. Ventilation shall be provided for operations involving the application of materials containing flammable solvents.
(c). Flammable and combustible liquid storage areas shall be maintained clear of combustible vegetation and waste materials, Such storage areas shall not be used for the storage of combustible materials.
(d) leaking vessels shall be immediately repaired or taken out of service and spills shall be cleaned up and disposed off properly.
8. Approved vehicle access for fire fighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet (30480mm) of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads,capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.
9. Structures under construction, alteration or demolition shall be provided with not less than one approved portable fire extinguisher in accordance with section 906 and sized for not less than ordinary hazard as follows:
1. At each stairway on all floor levels where combustible materials have accumulated.
2. In every storage and constructions shed
3. Additional portable fire extinguishers shall be provided where special hazards exist including but not limited to, the storage and use of flammable and combustible liquids.



SPLASH BLOCK DETAIL
NTS

NOTE: SPLASH BLOCKS TO BE INSTALLED AT ALL DOWNSPOUTS. TO ENSURE ROOF WATER IS DIRECTED AWAY FROM THE FOUNDATION. ANY EXISTING DOWNSPOUTS THAT CONNECT DIRECTLY TO THE STORM DRAIN SYSTEM SHALL BE DISCONNECTED AND DIRECTED TOWARDS LANDSCAPED AREAS.

OWNER :-
[redacted]

DESIGNER :-
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LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
CIVIL
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
PROPOSED SITE PLAN

DATE
03/03/2025

SCALE
1/8"=1'-0"

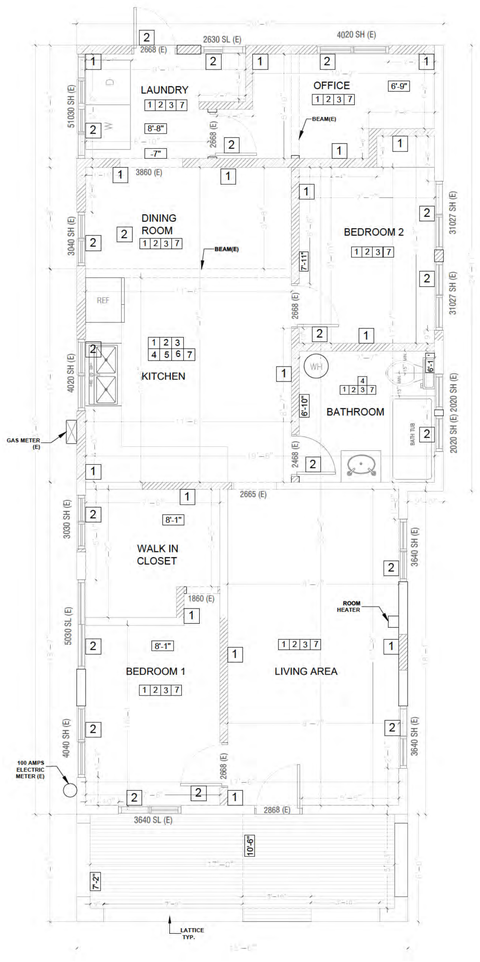
SHEET
A1.2

SYMBOLS

- EXISTING WALL
- EXISTING WALL TO BE REMOVED
- NEW WALL

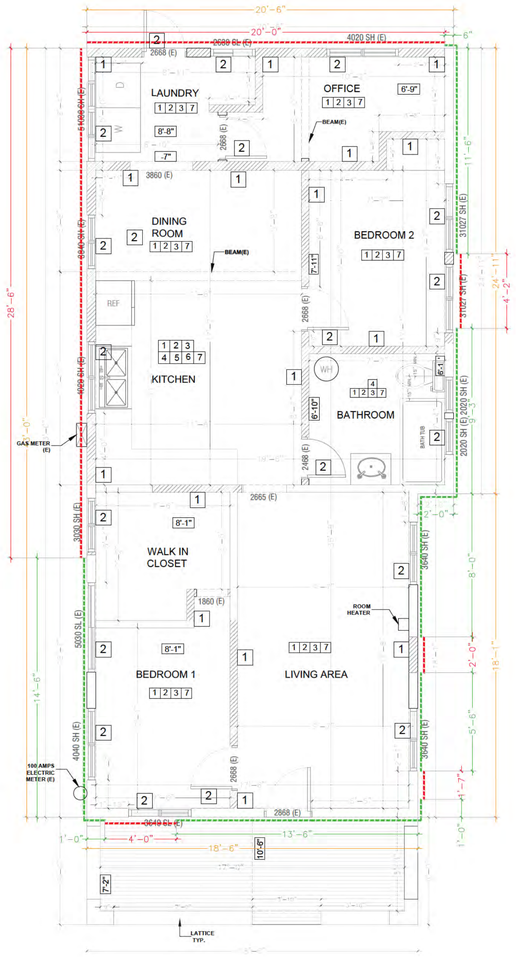
LEGEND

1. EXISTING WALL TO BE REMOVED
2. EXISTING DOOR/WINDOW TO BE REMOVED
3. EXISTING LIGHT FIXTURES TO BE REMOVED
4. EXISTING PLUMBING FIXTURES TO BE REMOVED
5. EXISTING APPLIANCES TO BE REMOVED
6. EXISTING CABINETRY TO BE REMOVED
7. EXISTING FLOORING TO BE REMOVED



EXISTING FIRST FLOOR PLAN

SCALE 1/4" = 1'-0"



TECHNICAL DEMOLITION DIAGRAM

SCALE 1/4" = 1'-0"

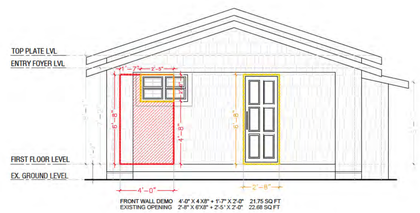
EXISTING WALLS	EXISTING AREA	DEMO AREA	TOTAL DEMO/ ALTERED AREA	%TOTAL DEMO/ ALTERED AREA	
FRONT WALL	185.20 SQ FT	21.75 SQ FT	21.75 SQ FT	11.74%	LESS THAN 25% OK
RIGHT WALL	345.72 SQ FT	26.76 SQ FT	26.76 SQ FT	7.74%	
LEFT WALL	395.85 SQ FT	230.37 SQ FT	230.37 SQ FT	58.19%	
REAR WALL	169.59 SQ FT	161.90 SQ FT	161.90 SQ FT	95.46%	
TOTAL WALL	1096.36 SQ FT	440.78 SQ FT	440.78 SQ FT	40.20%	LESS THAN 50% OK

	EXISTING FOOTPRINT (LINER FEET)	WIDTH OF PRESERVED WALL FRAMING IN LINEAR FEET (INCLUDING EXISTING OPENINGS)	WIDTH OF DEMOLISHED WALL FRAMING IN LINEAR FEET (INCLUDING NEW AND ENLARGED OPENINGS)
TOTAL	127'	70-9'	60'-3"
FRONT WALL	18'-6"	14'-6"	4'

SINCE 70' IS GREATER THAN 57', THEN NO TECH DEMO
TOTAL DEMOLITION OF EXISTING EXTERIOR WALL IS LESS THAN 50% = $\frac{60.25}{127}$ = 47.44%
TOTAL REMOVAL OF WALL AREA FACING PUBLIC STREET IS LESS THAN 25% = $\frac{4}{18.5}$ = 21.62%

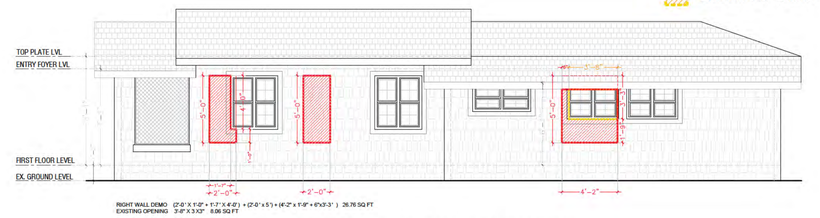
- EXISTING WALL FRAMING
- PRESERVED WALL FRAMING
- DEMOLISHED WALL FRAMING

DEMOLISHED WALL
EXISTING OPENING



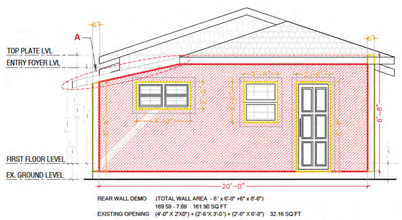
EXISTING FRONT ELEVATION

SCALE 3/16" = 1'-0"



EXISTING RIGHT ELEVATION

SCALE 3/16" = 1'-0"



EXISTING REAR ELEVATION

SCALE 3/16" = 1'-0"

EXISTING LEFT ELEVATION

SCALE 3/16" = 1'-0"

OWNER :-

RAJ KUMARI
& DEVENDRA

DESIGNER :-

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LICENSED PROFESSIONAL ENGINEER DEVENDRA SINGH DESHWAL C 89732 STATE OF CALIFORNIA CIVIL

REVISIONS	DESCRIPTION	DATE
NUMBER		

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING & TECHNICAL DEMOLITION FLOOR PLAN

DATE
03/03/2025

SCALE
AS SHOWN IN PLAN

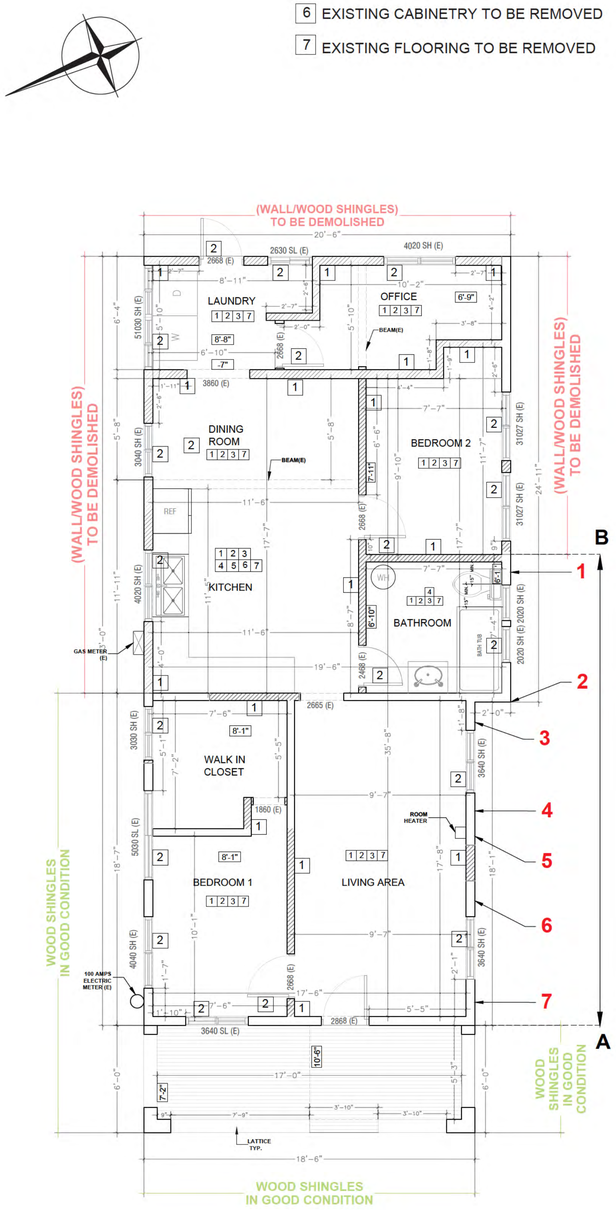
SHEET
A2

SYMBOLS

- EXISTING WALL
- EXISTING WALL TO BE REMOVED
- NEW WALL

LEGEND

1. EXISTING WALL TO BE REMOVED
2. EXISTING DOOR/WINDOW TO BE REMOVED
3. EXISTING LIGHT FIXTURES TO BE REMOVED
4. EXISTING PLUMBING FIXTURES TO BE REMOVED
5. EXISTING APPLIANCES TO BE REMOVED
6. EXISTING CABINETRY TO BE REMOVED
7. EXISTING FLOORING TO BE REMOVED

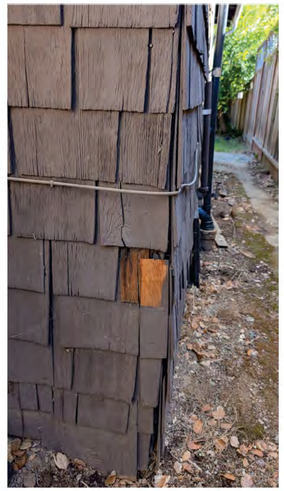


EXISTING FIRST FLOOR PLAN

SCALE 1/4" = 1'-0"

WOOD SHINGLES PROPOSED TO BE REPLACED FROM A TO B

1



2

3

4

5

6

7

NOTES:

1. THE EXISTING SHINGLES IN LENGTH A TO B ARE WARPED OR SPLIT OR DECAYED AS SEEN IN PHOTOS ABOVE. IT IS PROPOSED TO REPLACE THESE SHINGLES WITH NEW ONES OF MATCHING SHAPE & COLOUR.

2. THE EXISTING HOUSE DOES NOT HAVE PERIMETER FOOTING WHILE PROVIDING THE PERIMETER FOOTING SOME SHINGLES WILL NEEDS TO BE REPLACED IN THE BOTTOM 1'-0" HEIGHT

OWNER :-

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LICENSED PROFESSIONAL ENGINEER * DEVENDRA SINGH DESHWAL * C 89732 * CIVIL * STATE OF CALIFORNIA

REVISIONS	NUMBER	DATE	DESCRIPTION

PROJECT :

(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

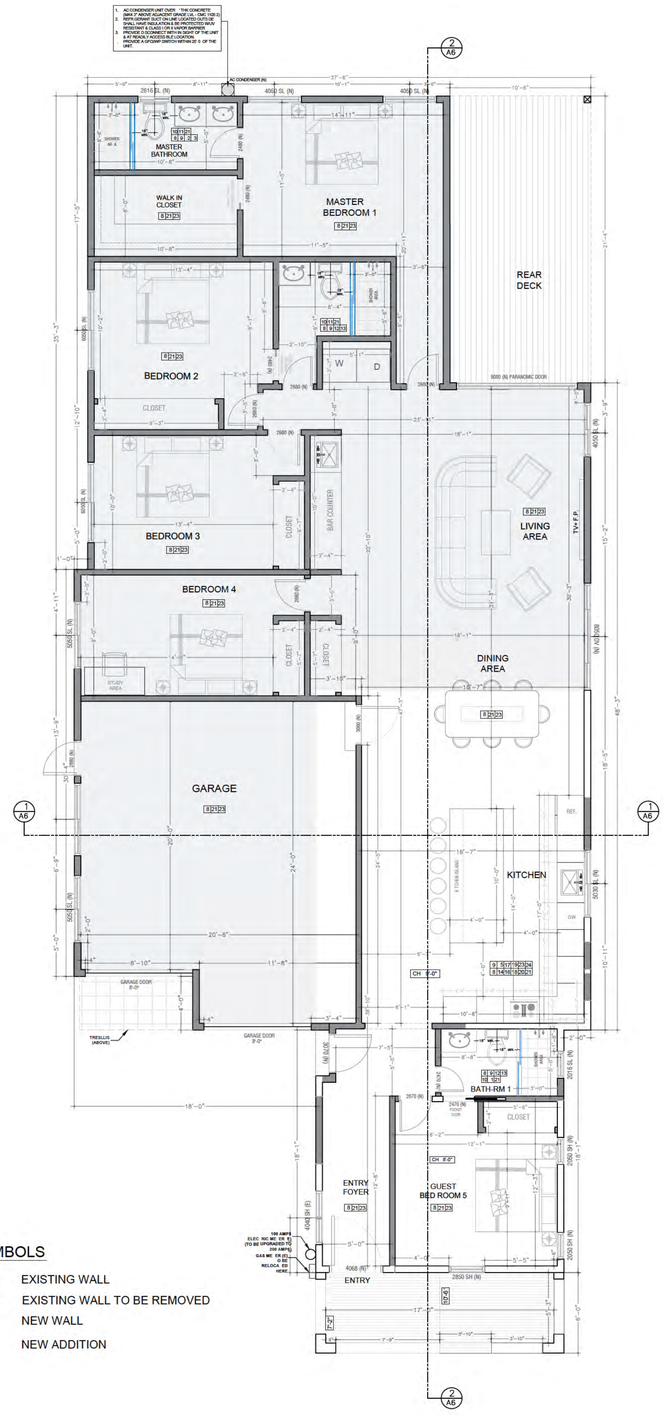
SHEET TITLE:-

EXISTING WOOD SHINGLES DETAILS

DATE
03/03/2025

SCALE
AS SHOWN IN PLAN

SHEET
A2.1



SYMBOLS

- EXISTING WALL
- EXISTING WALL TO BE REMOVED
- NEW WALL
- NEW ADDITION

FIRST FLOOR
GARAGE = 677 SQ FT
LIVING AREA = 2027 SQ FT

PROPOSED FIRST FLOOR PLAN

SCALE 3/16" = 1'-0"

LEGEND

1. EXISTING WALL TO BE REMOVED
2. EXISTING DOOR/WINDOW TO BE REMOVED
3. EXISTING LIGHT FIXTURES TO BE REMOVED
4. EXISTING PLUMBING FIXTURES TO BE REMOVED
5. EXISTING APPLIANCES TO BE REMOVED
6. EXISTING CABINETRY TO BE REMOVED
7. EXISTING FLOORING TO BE REMOVED
8. NEW LIGHT FIXTURES
9. NEW PLUMBING FIXTURES
10. TILE ON WALLS TO EXTEND TO THE CEILING AT SHOWER
11. NEW TILE FLOORING
12. NEW VANITY
13. SHOWER
14. NEW FAUCET, AERATOR, SOAP DISPENSER
15. NEW DOUBLE BOWL SINK W/ GARBAGE DISPOSAL
16. NEW REFRIGERATOR, PLUMB FOR ICE-MAKER
17. NEW GAS RANGE WITH HOOD
18. NEW DISHWASHER
19. NEW CABINETRY AND COUNTERTOP
20. BACKSPLASH FROM COUNTERTOP TO CABINET (IN HOOD AREA UPTO CEILING)
21. NEW RECEPTACLES
22. NEW BATHTUB
23. NEW WOOD FLOORING
24. PLUMB FOR WASHER

NOTES:

A. GENERAL NOTES
1. ALL CONSTRUCTION SHALL COMPLY WITH ADOPTED ORDINANCES AND POLICIES OF THE GOVERNING AGENCY AND THE LATEST ADOPTED ADDITIONS OF THE FOLLOWING 2022 CALIFORNIA RESIDENTIAL AND BUILDING CODE (CBC, CRC), CALIFORNIA ELECTRICAL CODE 2022, CALIFORNIA ENERGY CODE 2022, AND 2022 CALIFORNIA GREEN BUILDING CODE.THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY EXISTING CONDITIONS AND PROGRESS OF THE WORK, ALL THE REASONABLE SAFEGUARDS FOR SAFETY AND PROTECTION INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS, PROMULGATING SAFETY REGULATIONS AND NOTIFYING OWNERS AND USERS OF ADJACENT UTILITIES. -THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, GRADES AND OTHER CONDITIONS AND HE SHALL CORRELATE ALL SUCH ITEMS AT THE JOB SITE; HE SHALL REPORT ANY DISCREPANCIES TO THE DESIGNER FOR CLARIFICATION AND/OR CORRECTION PRIOR TO BEGINNING ANY WORK -THE CONTRACTOR SHALL BE RESPONSIBLE FOR WORK AND COORDINATION OF ALL TRADES AND THE GOVERNING AGENCIES, AND SHALL PROVIDE ALL MATERIALS AND LABOR SHOWN IN THESE PLANS TO RENDER THE JOB COMPLETE.
2. ALL WORK DESCRIBED IN THE DRAWINGS SHALL BE VERIFIED FOR DIMENSION, GRADE, EXTENT AND COMPATIBILITY TO THE EXISTING SITE. ANY DISCREPANCIES AND UNEXPECTED CONDITIONS THAT AFFECT OR CHANGE THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE DESIGNER ATTENTION IMMEDIATELY. DO NOT PROCEED WITH THE WORK IN THE AREA OF DISCREPANCIES UNTIL ALL SUCH DISCREPANCIES ARE RESOLVED. IF THE CONTRACTOR CHOOSES TO DO SO HE SHALL BE PRECEDING AT HIS OWN RISK.
3. OMISSIONS FROM THE DRAWING AND SPECIFICATIONS OR THE MIS-DISCRIPTION OF THE WORK WHICH IS MANIFESTLY NECESSARY TO CARRY OUT THE INTENT OF THE DRAWING AND SPECIFICATIONS, OR WHICH IS CUSTOMARILY REFORMED, SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH OMITTED OR MIS-DESCRIBED DETAILS OF WORK AS IF FULLY AND COMPLETELY SET FORTH AND DESCRIBED IN THE DRAWING AND SPECIFICATIONS.
4. CHANGES TO THE PLAN DURING CONSTRUCTION OTHER THAN:
(a). CABINET CHANGES WHEN NOT BEING SUPPORTED ENTIRELY BY ROOF STRUCTURE.
(b). INTERIOR DOOR AND ZERO CLEARANCE FIREPLACE RELOCATION SHOWN ON THE APPROVE PLANS
(c). A SINGLE NON BEARING WALL RELOCATION WHEN NOT CREATING AN ADDITIONAL ROOM AND
(d). INTERIOR NON - STRUCTURAL WALL FINISHES;
SHALL CAUSE PLANS APPROVAL AND CONSTRUCTION TO BE SUSPENDED, A NEW PLAN CHECK (FOR THE NEW PLAN CHANGES) WILL BE SUBMITTED FOR REVIEW AND APPROVAL THROUGH THE COMMON PLAN CHECK PROCESS.

B. BATHROOM & KITCHEN NOTES
1. 22" MIN SHOWER DOOR CLEARANCE
2. TEMPER GLAZING FOR THE SHOWER DOOR AND SLIDING WINDOWS. CEMENT BOARD SUBSTRATE FOR SHOWER WALLS.
3. LAVATORY FACETS TO HAVE A FLOW RATE OF 1.2 GPM OR LESS AT 60 PSI. (CALGREEN 4.303.1)
4. WATER CLOSETS TO HAVE A FLOW RATE OF 1.28 GALLONS/FLUSH OR LESS. (CALGREEN 4.303.1)
5. CEMENT BOARD SUBSTRATE (IE. DUROCK OR WONDERBOARD ETC) FOR TILE APPLICATION SURROUNDING THE BATH TUB WALLS.
6. KITCHEN FAUCETS TO HAVE A FLOW RATE OF 1.8 GPM OR LESS AT 60 PSI. (CALGREEN 4.303.1)
7. SHOWER COMPARTMENTS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FINISHED WITH A NONABSORBENT SURFACE TO HEIGHT NOT LESS THAN 6 FEET ABOVE THE FLOOR PER CRC R307.2.
8. ALL HOSE BIBS INSTALLED SHALL BE PROTECTED BY AN APPROVED NON-REMOVABLE TYPE BACK FLOW PREVENTION DEVICE.
9. BATHROOMS, WATER CLOSET COMPARTMENTS, LAUNDRY ROOMS, ETC., SHALL BE PROVIDED WITH NATURAL VENTILATION BY MEANS OF OPENABLE EXTERIOR OPENINGS WIAN AREA OF NOT LESS THAN 1/20 OF THE FLOOR AREA WIMIN. OF 1-1/2 SQ.FT. OR 5 AIR CHANGES PER HOUR.
10. EXHAUST FAN
(EACH BATHROOM SHALL BE MECHANICALLY VENTILATED WITH A MINIMUM 50 CPM FOR INTERMITTENT VENTILATION OR 20 CFM FOR CONTINUOUS VENTILATION.
(EXHAUST AIR SHALL BE EXHAUSTED DIRECTLY TO THE OUTDOORS.
NOTE: WINDOW OPERATION IS NOT PERMISSIBLE METHOD OF PROVIDING BATHROOM EXHAUST FOR HUMIDITY CONTROL (2022 CRC R303.3.1)
(FANS SHALL BE ENERGY STAR COMPLIANT AND DUCTED TO TERMINATE TO THE OUTSIDE.
(UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY HUMIDITY CONTROL.
(HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RATE OF <5R>50% TO A MAXIMUM OF 80% BY MANUAL OR AUTOMATIC MEANS.
(HUMIDITY CONTROLS MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE BUIL T-IN (2022 CGBS 405.6.1)
11.
a) WATER RESISTANT GYPSUM BACKING BOARD SHALL NOT BE USED WHERE THERE WILL BE DIRECT EXPOSURE TO WATER, OR IN AREAS SUBJECT TO CONTINUOUS HIGH HUMIDITY. [R702.3.7.1]
b) MATERIALS USED AS BACKERS FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL PANELS IN SHOWER AREAS SHALL BE GLASS MAT GYPSUM PANEL, FIBER-REINFORCED GYPSUM PANELS, NON-ASBESTOS FIBER-CEMENT BACKER BOARD, OR NON-ASBESTOS FIBER-CEMENT REINFORCED CEMENTITIOUS BACKER UNITS INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS. [R702.4.2]
12. PRIOR TO BUILDING FINAL INSPECTION AN 'APPLIANCE CERTIFICATE', SIGNED BY THE INSTALLER OR GEN. CONTRACTOR, SHALL BE POSTED IN A CONSPICUOUS LOCATION.
13. DISHWASHER SHALL BE CONNECTED WITH AN APPROVED DRAINAGE AIR GAP DEVICES LOCATED ABOVE THE FLOOD LEVEL RIM OF THE SINK.(CPC 807.3).
14. ALL PIPING 3 INCH OR MORE IN DIAMETER AND ALL HOT WATER PIPES FROM THE HEATING SOURCE TO THE KITCHEN FIXTURES MUST BE INSTALLED WITH MIN. 1-INCH THICK INSULATION.[CNC 150.0(j)2]. EXISTING INACCESSIBLE PIPING DOES NOT REQUIRE INSULATION.
15. ALL 15 & 20 AMP DWELLING UNIT RECEPTACLE OUTLETS SHALL BE LISTED TEMPER - RESISTANT (TR) RECEPTICALES.(CEC 406.12)
16. RECEPTACLES EXCEEDING 20 AMP IN WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS WEATHER PROOF WHEN THE ATTACHMENT PLUG IS REMOVED.
17. RECEPTACLES SHALL NOT BE INSTALLED WITHIN OR DIRECTLY OVER THE BATHTUB OR SHOWER STALL.
18. - ALL INSTALLED LIGHT FIXTURES SHALL BE HIGH EFFICACY.
-AT LEAST ONE LIGHT FIXTURE SHALL BE CONTROLLED BY VACANCY SENSOR SWITCH THAT REQUIRE A MANUAL ON ACTIVATION (DOES NOT AUTOMATICALLY TURN ON) AND AUTOMATICALLY TURNS OFF WITHIN 30 MINUTES AFTER THE ROOM IS VACATED. ALL OTHER LIGHT FIXTURES SHALL BE CONTROLLED BY A VACANCY SENSOR OR DIMMER.
- ALL LIGHT FIXTURES SHALL CONTAIN BULBS THAT ARE LABELED AS JA8-2022 (JA8 -2022E FOR SEALED LENS OR RECESSED FIXTURES). SCREW BULBS ARE PERMITTED EXCEPT IN RECESSED LIGHTING FIXTURES.
19. RECESSED LIGHTING SHALL BE LISTED AS IC (ZERO CLEARANCE TO INSULATION) AND AT (AIR TIGHT), BE SEALED/CAULKED BETWEEN THE HOUSING AND CEILING, SHALL NOT CONTAIN A SCREW BASE SOCKET, AND CONTAIN BULBS MARKED WITH JA8-2022E EFFICIENCY LABEL. (CEES 150.0(K))
20. KITCHEN RECEPTACLES SHALL MEET ALL OF THE FOLLOWING REQUIREMENTS: (CEC 210.8, 210.12, 210.23, 210.52, 406.12, 422.16)
GFCI PROTECTION SHALL BE PROVIDED FOR ALL COUNTERTOP RECEPTACLES, RECEPTACLES WITHIN 6 FEET OF A SINK(INCLUDING BELOW COUNTER AND BEHIND APPLIANCE), AND FOR RECEPTACLES SUPPLYING DISHWASHERS. THE RESET BUTTON FOR GFCI RECEPTACLES SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION (I.E. NOT BEHIND AN APPLIANCE).
ALL OUTLETS AND DEVICES (I.E. RECEPTACLES , LIGHTING, HOODS ETC.) IN THE KITCHEN SHALL BE AFCI PROTECTED AND TAMPER RESISTANT (TR)
RECEPTACLES SHALL BE PROVIDED AT ALL COUNTERTOP AREAS WITHIN A MINIMUM DIMENSION OF 12 INCHES.
COUNTERTOP RECEPTACLES SHALL BE LOCATED SO THAT NO POINT ALONG THE WALL IS MORE THAN 24 INCHES FROM A RECEPTACLE.
COUNTERTOP RECEPTACLES SHALL BE LOCATED NO MORE THAN 20 INCHES ABOVE THE COUNTERTOP.
INSLAND/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.
ELECTRIC STOVES AND OVENS SHALL BE SUPPLIED WITH A 40- OR 50- AMP BRANCH CIRCUIT.
RANGE HOODS SHALL BE PERMITTED TO BE CORD AND PLUG- CONNECTED WITH A FLEXIBLE COURT IDENTIFIED AS SUITABLE FOR USE ON RANGE HOODS IN THE INSTALLATION INSTRUCTIONS OF THE APPLIANCE MANUFACTURER, WHERE ALL THE FOLLOWING CONDITIONS ARE MET.
a. THE FLEXIBLE CORD IS TERMINATED WITH A GROUND-TYPE ATTACHMENT PLUG.
b. THE LENGTH OF THE CORD IS 18 INCHES TO 4 FEET.
c. RECEPTACLES ARE LOCATED TO PROTECT AGAINST PHYSICAL DAMAGE TO THE FLEXIBLE CORD.
d. RECEPTACLES ARE ACCESSIBLE.
e. THE RECEPTACLE IS SUPPLIED BY AN INDIVIDUAL BRANCH CIRCUIT.
21. KITCHEN RECEPTACLES SHALL BE SUPPLIED BY CIRCUITS MEETING ALL OF THE FOLLOWING REQUIREMENTS: (CEC 210.11, 210.52, 422.16)
COUNTERTOP RECEPTACLES SHALL BE SUPPLIED BY A MINIMUM OF TWO 20 AMP- BRANCH CIRCUITS.
A DEDICATED CIRCUIT IS REQUIRED FOR CORD AND PLUG CONNECTED RANGE EXHAUST HOODS, SEPARATE CIRCUITS MAY BE REQUIRED FOR THE GARBAGE DISPOSAL, DISHWASHER, AND BUILT-IN MICROWAVE BASED ON THE MANUFACTURES REQUIREMENTS AND THE MOTOR RATING
ANY NEW RECEPTACLES ADDED IN THE DINING AREA, BREAKFAST ROOM, PANTRY, OR SIMILAR AREAS SHALL BE SUPPLIED BY A 20-AMP CIRCUIT, THE COUNTERTOP CIRCUITS MAY BE USED TO SUPPLY THESE AREAS.
THE EXISTING ELECTRICAL PANEL MAY NEED TO BE UPGRADED, OR SUB- PANEL ADDED, IF THE REQUIREMENTS ABOVE CANNOT BE ACCOMMODATED.
22. CABINET REQUIREMENTS
IF INSTALLING A CABINET NEXT TO AN EXISTING FIRE RATED WALL/WALLS (I.E. BETWEEN APARTMENT UNITS OR TOWNHOMES ETC.) THE INTEGRITY OF THE FIRE RATED WALL/WALLS CONSTRUCTED SHALL BE MAINTAINED (I.E., FIRE BLOCKING SHALL BE INSTALLED IN THE WALL/ WALLS PER R302.11 AND R302.11.1 OF THE CRC AND SHALL BE CONSTRUCTED PER CRC 302 FIRE RESISTANT CONSTRUCTION. CONTINUITY OF SUCH FIRE RESISTANCE- RATED WALL/WALLS SHALL BE PER R302.2.3 OF THE CRC. (I.E.,CONTINUITY OF PROTECTION SHALL BE FULL HEIGHT FROM FLOOR TO CEILING ETC.)
A FIRE PERMIT "FP" SHALL BE REQUIRED WHEN REMODELING STRUCTURES THAT HAVE EXISTING FIRE SPRINKLERS. A FIRE INSPECTION SHALL BE REQUIRED BEFORE A BUILDING FINAL CAN BE SIGNED OFF. FIRE INSPECTORS SHALL SIGH-OFF ALL FIRE INSPECTIONS ON THE BUILDING PERMIT.

C. TUB/SHOWER AND WATER CLOSET REQUIREMENTS:
1. THE MIXING VALVE IN A SHOWER (INCLUDING OVER A TUB) SHALL BE PRESSURE BALANCING SET AT A MAXIMUM 120 DEGREE F. THE WATER-FILLER VALVE IN BATHTUBS/WHIRLPOOLS SHALL HAVE A TEMPERATURE LIMITING DEVICE SET AT A MAXIMUM OF 120 DEGREE F. THE WATER HEATER THERMOSTAT CANNOT BE USED TO MEET THESE PROVISIONS. (CPC 408.3, 409.4).
2. NEW OR RECONFIGURED SHOWER STALL SHALL BE A MINIMUM FINISHED INTERIOR OF 1,024 SQUARE INCHES, BE CAPABLE OF ENCOMPASSING A 30 INCH DIAMETER CIRCLE. ANY DOORS SHALL SWING OUT OF THE ENCLOSURE HAVE A CLEAR OPENING OF 22 INCHES MINIMUM. (CPC 408.5, 408.6)
3. SHOWER STALLS AND BATHTUB WITH SHOWER HEADS INSTALLED, SHALL HAVE WALLS FINISHED WITH A NON-ABSORBENT SURFACE FOR A MINIMUM OF 6 FEET ABOVE FLOOR. (CBC 1210 AND CRC R307.2)
4. THE WATER CLOSET SHALL HAVE A CLEARANCE OF 30 INCHES WIDE (15 INCHES ON CENTER) AND 24 INCHES IN FRONT) (CPC 402.5).
5. WHERE THE WATER CLOSET (OR OTHER PLUMBING FIXTURE) COMES INTO CONTACT WITH THE WALL OR FLOOR THE JOINT SHALL BE CAULKED AND SEALED TO BE WATERTIGHT. (CPC 402.2)
6. IF INSTALLING A TUB NEXT TO AN EXISTING FIRE RATED WALL/WALLS (I.E. BETWEEN APARTMENT UNITS OR TOWNHOMES ETC.) THE INTEGRITY OF THE FIRE RATED WALL/WALLS CONSTRUCTED SHALL BE MAINTAINED (I.E., FIRE BLOCKING SHALL BE INSTALLED IN THE WALL/ WALLS PER R302.11 AND R302.11.1 OF THE CRC AND SHALL BE CONSTRUCTED PER CRC 302 FIRE RESISTANT CONSTRUCTION. CONTINUITY OF SUCH FIRE RESISTANCE- RATED WALL/WALLS SHALL BE PER R302.2.3 OF THE CRC. (I.E.,CONTINUITY OF PROTECTION SHALL BE FULL HEIGHT FROM FLOOR TO CEILING ETC.)
7. HYDRO-MASSAGE TUBS (I.E. JACUZZI TUBS) SHALL HAVE ACCESS TO THE MOTOR, BE SUPPLIED BY A GFCI PROTECTED DEDICATED CIRCUIT, AND BE LISTED BY A RECOGNIZED TESTING AGENCY (I.E. UL). ALL METAL CABLES, FITTINGS, PIPING, OR OTHER METAL SURFACES, WITHIN 5 FEET OF THE INSIDE WALL OF THE HYDRO-MASSAGE TUB SHALL BE PROPERLY BONDED. HYDRO-MASSAGE TUB SHALL BE BONDED WITH A MINIMUM #6 AWG BARE COPPER WIRE AND THE BONDING SHALL BE ACCESSIBLE.(CEC 680.70)
8. UNDERLAYMENT MATERIAL USED AS BACKERS FOR WALL TILE OR SOLID SURFACE MATERIAL IN TUB AND SHOWER ENCLOSURES SHALL BE EITHER GLASS MAT/ FIBER-REINFORCED GYPSUM BACKING PANELS (I.E. DensSHIELD, Dens Armour Plus), NON-ASBESTOS FIBER CEMENT/ FIBER MAT BACK BOARD (I.E. HARDIBACKER, CEMENT BOARD). ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.WATER RESISTANT GYPSUM BOARD (I.E. PURPLE BOARD) MAY BE USED WHEN ATTACHING DIRECTLY TO STUDS, OVERLAID WITH MINIMUM GRADE B BUILDING PAPER AND WIRE LATH. TILE SHALL BE ATTACHED TO THE WIRE LATH. (CBC 2509 AND CRC R702.4)
9. SHOWER FLOORS SHALL BE LINED WITH AN APPROVED SHOWER PAN OR AN ON-SITE BUILT WATERTIGHT APPROVED LINING (I.E. HOT MOP). ON SITE BUILT SHOWER LININGS SHALL EXTEND A MINIMUM OF 3 INCHES VERTICALLY UP THE WALL AND SHALL BE SLOPED 1/4" PER FOOT TO WEEP HOLES. (CPC 408.7)
10. WHEN A CURB IS PROVIDED AT A SHOWER, IT SHALL BE A MINIMUM OF 1 INCH ABOVE THE SHOWER FLOOR AND BETWEEN 2 INCHES AND 9 INCHES ABOVE THE TOP OF THE DRAIN. A WATERTIGHT NAILING FLANGE THAT EXTENDS A MINIMUM OF 1 INCH HIGH SHALL BE INSTALLED WHERE THE SHOWER FLOOR MEETS THE VERTICAL SURFACE OF THE SHOWER COMPARTMENT. THE FINISHED FLOOR OF THE SHOWER COMPARTMENT SHALL BE UNIFORMLY SLOPED BETWEEN 1/4" AND 1/2" PER FOOT TOWARDS TO THE DRAIN. (CPC 408.5)
WHERE THE CURB IS NOT PROVIDED AT THE SHOWER COMPARTMENT, THE ENTIRE BATHROOM SHALL BE CONSIDERED A WET LOCATION. THE FLOORING IN THE ENTIRE BATHROOM SHALL COMPLY WITH THE WATER PROOFING REQUIREMENTS DESCRIBED ABOVE FOR SHOWER FLOORS AND ALL LIGHTING FIXTURES SHALL BE APPROVED FOR WET LOCATIONS.

D. TEMPERED GLAZING (CBC 2406.4, 2403.1 AND CRC 308.1, R308.4)
TEMPERED GLAZING SHALL BE INSTALLED IN THE LOCATIONS LISTED BELOW. TEMPERED GLAZING SHALL BE PERMANENTLY IDENTIFIED BY A MANUFACTURER MARKING THAT IS PERMANENTLY APPLIED AND CANNOT BE REMOVED WITHOUT BEING DESTROYED (E.G. SAND BLASTED, ACID ETCHED, CERAMIC FIRED, LAZER ETCHED, OR EMBOSSED)
WITHIN A PORTION OF WALL ENCLOSED A TUB/SHOWER WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE STANDING SURFACE AND DRAIN INLET.
WITHIN 60 INCHES OF TUB/SHOWER WHERE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE.
GLAZING WITHIN 24 INCHES OF EITHER SIDE OF DOOR IN THE PLANE OF THE DOOR IN CLOSED POSITION.
GLAZING ON THE HINGE-SIDE OF AN IN-SWINGING DOOR THAT IS INSTALLED PERPENDICULAR TO A DOOR IN A CLOSED POSITION AND WITHIN 24 INCHES OF THE DOOR

E. KITCHEN MECHANICAL
1. A MECHANICAL PERMIT IS REQUIRED TO REPLACE THE KITCHEN EXHAUST HOOD THAT INCLUDES AN OUTSIDE AIR VENT. THE VENT MUST TERMINATE ON THE BUILDING EXTERIOR AT LEAST 3FT FROM OTHER OPENINGS INTO THE BUILDING [CMC502.2.1]. FLEXIBLE (CORRUGATED) DUCTING IS NOT ALLOWED FOR EXHAUST HOODS [CMC 504.3].

F. CALGREEN NOTES 1:
PER CALIFORNIA CIVIL CODE ARTICLE 1101.4 AND CALGREEN SECTION 301.1 FOR ALL BUILDING ALTERATIONS OR IMPROVEMENTS TO A SINGLE FAMILY RESIDENCIAL PROPERTY , EXISTING PLUMBING FIXTURES IN THE ENTIRE HOUSE THAT DO NOT MEET COMPLAINT FLOW RATES WILL NEED TO BE UPGRADED, WATER CLOSETS WITH A FLOW RATE IN EXCESS OF 1.6gpf WILL NEED TO BE REPLACED WITH WATER CLOSETS WITH A MAXIMUM FLOW RATE OF 1.28 gpf SHOWER HEADS WITH A FLOW GREATER THAN 2.5gpm WILL NEED TO BE REPLACED WITH A MAXIMUM 2.0 gpm SHOWER HEAD .LAVATORY AND KITCHEN FAUCETS WITH A FLOW RATE GREATER THAN 1.8 gpm @80 psi WILL NEED TO BE REPLACED WITH A FAUCET WITH MAXIMUM FLOW RATE OF 1.2 gpm @60 psi(OR 1.8 gpm @60 psi FOR KITCHEN FAUCETS)

G. BEDROOM EGRESS WINDOW
SLEEPING ROOMS & BASEMENT SLEEPING ROOMS SHALL HAVE AT LEAST ONE OPERABLE EMERGENCY ESCAPE & RESCUE OPENING. SUCH OPENINGS SHALL OPEN DIRECTLY INTO PUBLIC WAY, YARD OR COURT THAT OPENS TO A PUBLIC WAY.
EMERGENCY ESCAPE & RESCUE OPENING SHALL HAVE: A NET CLEAR OPENING OF NOT LESS THAN 5.7 SQFT. EXCEPTION - 5.0 SQFT AT GRADE FLOOR.
THE NET CLEAR HEIGHT OF THE OPENING SHALL NOT NE LESS THAN 24" & NET CLEAR WIDTH SHALL NOT BE LESS THAN 20 INCHES.
THE SILL HEIGHT OF THE EGRESS SHALL NOT BE GREATER THAN 44" (3'6") ABOVE THE FINISH FLOOR

H. CLOTH DRYER EXHAUST DUCT NOTES:
1. DRYER EXHAUST DUCT MUST BE EQUIPPED WITH A BACKDRAFT DAMPER WITH NO SCREEN. DUCT IS LIMITED TO 14 FEET IN LENGTH WITH TWO 90 DEGREE ELBOWS FROM THE DRYER TO THE POINT OF TERMINATION PER CMC 504.3.2.2 (DUCT SHALL TERMINATE AT LEAST 36" FROM OPENINGS INTO THE BUILDING). A CLOTH DRYER EXHAUST DUCT SHALL NOT BE CONNECTED TO A VENT CONNECTOR, GAS VENT, CHIMNEY AND SHALL NOT TERMINATE INTO A CRAWL SPACE, ATTIC, OR OTHER CONCEALED SPACE (CMC 504.4)
2. CLOTH DRYERS IN CLOSETS REQUIRE A MINIMUM OF 100SQIN OF MAKE UP AIR WHICH CAN BE SUPPLIED BY LOUVERS OR UNDERCUTTING THE DOOR (CMC 504.4.1)

I. PLUMBING VENT TERMINATION:
ALL PLUMBING VENTS SHALL TERMINATE NOT LESS THAN 6" ABOVE THE ROOF NOR LESS THAN 1' FROM ANY VERTICAL SURFACE. VENTS SHALL TERMINATE NOT LESS THAN 10" FROM OR 3' ABOVE ANY WINDOW, DOOR, OPENING, AIR INTAKE, OR VENT SHAFT NOR 3' FROM LOT LINE. (CPC 906)

J. CAL GREEN NOTES 2:

4.406.1 RODENT PROOFING. ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN SOLE/BOTTOM PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS.
4.408.1 CONSTRUCTION WASTE MANAGEMENT. RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65% OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE.
4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. SUBMIT A CONSTRUCTION WASTE MANAGEMENT PLAN.
4.410.1 OPERATION AND MAINTENANCE MANUAL. AN OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OCCUPANT OR OWNER.
4.410.2 RECYCLING BY OCCUPANTS. WHERE 5 OR MORE MULTIFAMILY DWELLING UNITS ARE CONSTRUCTED ON A BUILDING SITE,READILY ACCESSIBLE AREAS SHALL BE IDENTIFIED FOR THE COLLECTION OF RECYCLING.
4.503.1 FIREPLACES. ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE.
4.503.3 MOISTURE CONTENT OF BUILDING MATERIALS. MOISTURE CONTENT OF BUILDING MATERIALS USED IN WALL AND FLOOR FRAMING IS CHECKED BEFORE ENCLOSURE.
4.504.1 COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. DUCT OPENINGS AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED DURING CONSTRUCTION.
4.504.2 FINISH MATERIAL POLLUTANT CONTROL. ADHESIVES, SEALANTS AND CAULKS. ADHESIVES, SEALANTS AND CAULKS SHALL BE COMPLIANT WITH VOC AND OTHER TOXIC COMPOUND LIMITS. PAINTS AND COATINGS: PAINTS, STAINS
AND OTHER COATINGS SHALL BE COMPLIANT WITH VOE LIMITS. AEROSOL PAINTS AND COATINGS. AEROSOL PAINTS AND COATINGS SHALL BE COMPLIANT WITH PRODUCT WEIGHTED MIR LIMITS FOR ROC AND OTHER TOXIC COMPOUNDS.
VERIFICATION. DOCUMENTATION SHALL BE PROVIDED TO VERIFY THAT COMPLIANT VOE LIMIT FINISH MATERIALS HAVE BEEN USED.
4.504.3 CARPET SYSTEMS. ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE TESTING AND PRODUCT REQUIREMENTS OF ONE OF THE FOLLOWING:
1.CARPET AND RUG LNSTITUTE'S GREEN LABEL PLUS PROGRAM.
2.CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.1,
FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350.)
3. NSFI ANSI 140 AT THE GOLD LEVEL.
4. SCIENTIFIC CERTIFICATIONS SYSTEMS INDOOR ADVANTAGE TM GOLD. CARPET CUSHION. ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CARPET AND RUG LNSTITUTE'S GREEN LABEL
PROGRAM. CARPET ADHESIVE. ALL CARPET ADHESIVE SHALL MEET THE REQUIREMENTS OF TABLE 4.504.1.
4.504.5 COMPOSITE WOOD PRODUCTS. HARDWOOD PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEET THE
REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXICS CONT ROL MEASURE FOR COMPOSI TE WOOD (17 CCR 93,20 ET SEQ.), BY OR BEFORE THE DATES SPECIFIED IN THOSE SECTION S, AS SHOWN IN TABLE 4.504.5.
4.505.2 CONCRETE SLAB FOUNDATIONS. VAPOR RETARDER AND CAPILLARY BREAK IS INSTALLED AT SLAB-ON-GRADE FOUNDATIONS.
4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESI GN. DUCT SYSTEMS ARE SIZED, DESIGNED, AND EQUIPMENT IS SELECTED USING THE FOLLOWING METHODS:
1. ESTABLISH HEAT LOSS AND HEAT GAIN VALUES ACCORDING TO ANSI/ACCA 2 MANUAL J-2011 OR EQUIVALENT.
2. SIZE DUCT SYSTEMS ACCORDING TO ANSI/ACCA 1

OWNER :-
[redacted]

DESIGNER :-
UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION
2		

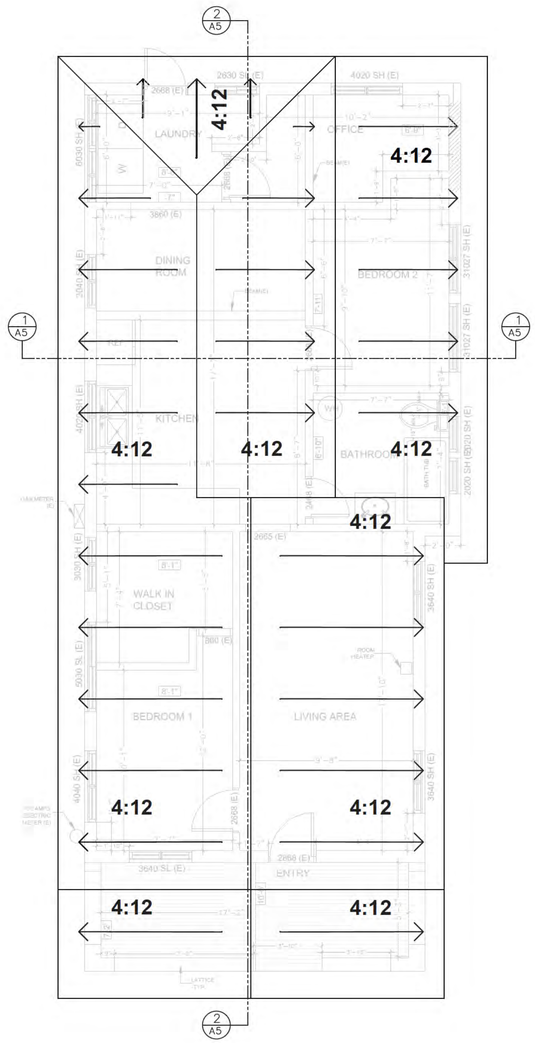
PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
PROPOSED FLOOR PLANS

DATE
03/03/2025

SCALE
3/16"=1'-0"

SHEET
A3



EXISTING ROOF PLAN

SCALE 1/4" = 1'-0"

OWNER :-

[redacted]

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
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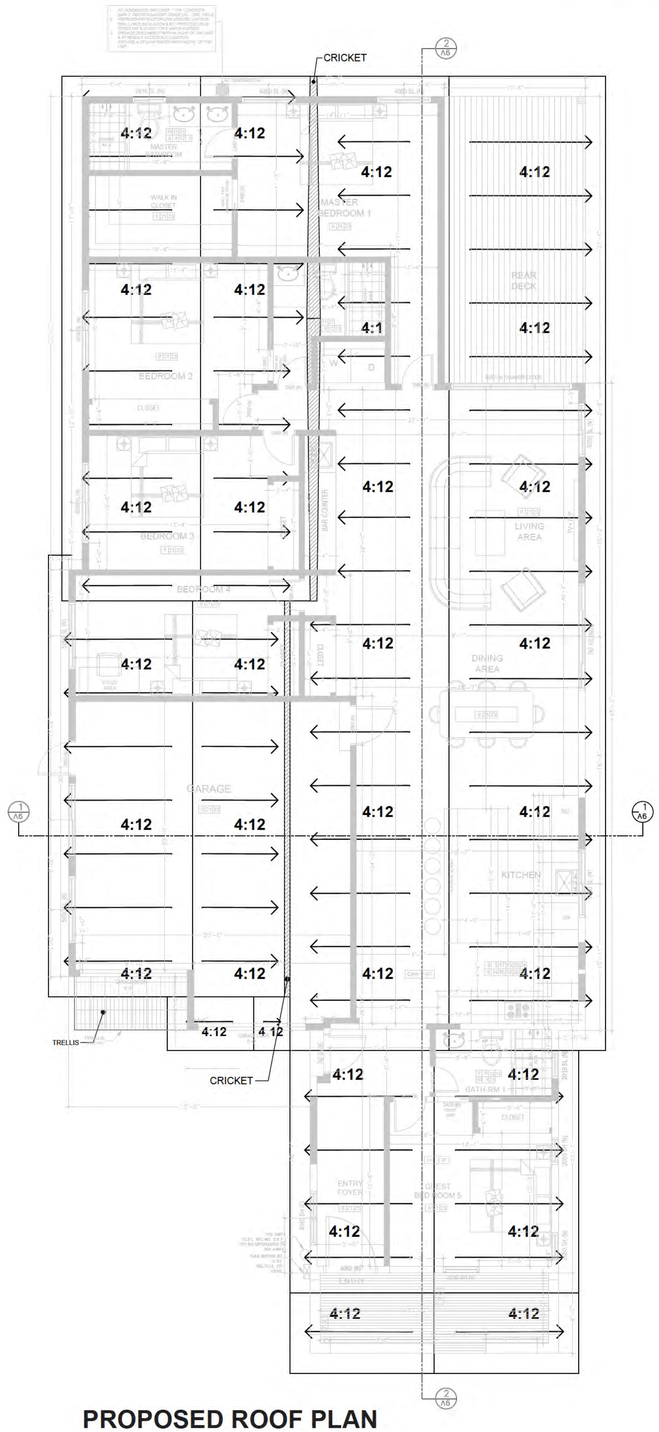
SHEET TITLE:-
EXISTING ROOF PLAN

DATE
03/03/2025

SCALE
1/4"=1'

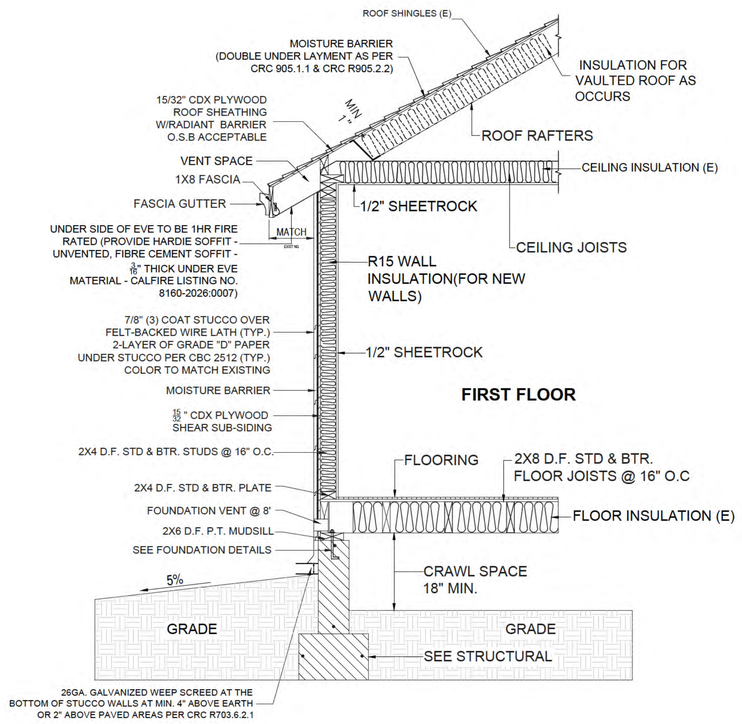
SHEET
A4.1



PROPOSED ROOF PLAN

SCALE 3/16" = 1'-0"

ENERGY/ANALYSIS REPORT



FENESTRATION/GLAZING:

U-FACTOR £ 0.30

SHGC £ 0.23

REQUIRED SPECIAL FEATURES

THE FOLLOWING ARE FEATURES THAT MUST BE INSTALLED AS CONDITION FOR MEETING THE MODELED ENERGY PERFORMANCE FOR THIS COMPUTER ANALYSIS.

- INDOOR AIR QUALITY, BALANCED FAN
- IAQ VENTILATION SYSTEM: AS LOW AS 0.627273 W/CFM
- IAQ VENTILATION SYSTEM HEAT RECOVERY: MINIMUM 58 SRE AND 62 ASRE
- IAQ VENTILATION SYSTEM: SUPPLY OUTSIDE AIR INLET, FILTER, AND H/ERV CORES ACCESSIBLE PER RACM REFERENCE MANUAL
- IAQ VENTILATION SYSTEM: FAULT INDICATOR DISPLAY

HERS FEATURE SUMMARY:

THE FOLLOWING IS A SUMMARY OF THE FEATURES THAT MUST BE FIELD-VERIFIED BY A CERTIFIED HERS RATER AS A CONDITION FOR MEETING THE MODELED ENERGY PERFORMANCE FOR THIS COMPUTER ANALYSIS. REGISTERED CF2RS AND CF3RS ARE REQUIRED TO BE COMPLETED IN THE HERS REGISTRY

- • INDOOR AIR QUALITY VENTILATION
- • KITCHEN RANGE HOOD
- • MINIMUM AIRFLOW
- • VERIFIED SEER/SEER2
- • FAN EFFICACY WATTS/CFM
- • DUCT LEAKAGE TESTING

ATTIC SPACE VENTING CALCULATIONS FOR NEW ADDITION AT ROOFING:-

FIRST FLOOR AREA ADDITION : 1393 SQ FT

ADDITIONAL VENTS REQUIRED = 1393 X 1/150 = 9.28SQ FT X 144 = 1266.24 SQ IN

PROVIDE: 1. EVE VENT 20 - 3 NOS X 2' ROUND DIA HOLE (V1) = 9.42 SQ IN = 188.40 SQ IN

2 . DORMER VENT 3 - 24" X 12" (V2)
(GALVANIZED STEEL HALF ROUND VENT)
OR EQ. (N/FA = 100 SQ IN)] 12 X100 = 1200.0 SQ IN

TOTAL = 1388.40 SQ IN > 1266.24 SQ IN

CRAWLSPACE VENTING CALCULATIONS FOR NEW ADDITION:

Required = 1393 sq.ft. * 1/150 = 9.28Sq.Ft * 144 = 1266.24 Sq.In
= Required
(1) 15" x 6" = 90 Sq.In for each * 15 = 1350 Sq.In > 1266.24 Sq. In (Okay)

·One ventilation opening shall be within 3 feet of each corner of the building but not in shear wall areas unless reinforced and detailed.
·Contractor to make up for any existing blocked crawl space vents.

R15 INSULATION

OWENS CORNING

ECOTOUCH® PINK® FIBERGLAS™ INSULATION

Owens Corning® EcoTouch® PINK® Fiberglas™ Insulation with PureBind® Technology is a preformed, flexible blanket insulation. It is produced in R-values from 11 to 49, with thicknesses ranging from 3½ inches to 14 inches. It is available unfaced, or faced with either a kraft or foil vapor retarder.

Features

- Excellent thermal control
- Effective acoustical control
- Long term performance and will not settle nor slump within wall cavities
- With less dust than other fiberglass products, EcoTouch® PINK® Fiberglas™ insulation has excellent stiffness and recovery characteristics[2]
- Compression packaging from Owens Corning speeds job site handling and installation

1 According to 2010 clinical trial conducted in Toronto, Canada by Dubner Worldwide on behalf of Owens Corning Insulation Systems, LLC.

Standards, Codes Compliance

- Manufactured in compliance with ASTM C665
- Federal Specification HH-I-521F has been canceled and is replaced by ASTM C665
- Classified non-combustible when tested in accordance with ASTM E136
- Unfaced EcoTouch® PINK® Fiberglas™ insulation is acceptable for use in ICC building construction types I through V kraft and foil faced EcoTouch® PINK® Fiberglas™ insulation are acceptable for use in ICC building construction types III, IV and V
- Certified to meet California Code of Regulations, Title 24, Chapter 12-13, Article 3, "Standards for Insulating Material"

Applications

- Wood-framed wall, floor and roof/ceiling cavity wall assemblies
- Metal-framed wall and floor cavity wall assemblies
- Furring strips installed on the interior surface of basement walls
- Interior surfaces of basement and unvented crawl space foundation walls

Physical Properties

PROPERTY	TEST	VALUE
Thermal Resistance	ASTM C518	See "Availability" table for R-values
Surface Burning Characteristics[2] (flame spread / smoke developed) Unfaced Kraft faced Foil faced	ASTM E84 / UL 723	25/ 50 NR / NR 25 / 150
Critical Radiant Flux (W/cm²)	ASTM E970	> 0.12
Water Vapor Permeance (perms) Kraft faced Foil faced	ASTM E96	1.0 0.5
Water Vapor Sorption (by weight%)	ASTM C1104	< 5%
Odor Emission	ASTM C1304	Pass
Corrosion Resistance	ASTM C665, part 13.8	Pass
Fungi Resistance	ASTM C1338	Pass

2 The surface burning characteristics of EcoTouch® Insulation were derived from products tested in accordance with ASTM E84. This standard is used solely to measure and describe properties of products in response to heat and flame under controlled laboratory conditions, and should not be used to describe or appraise the fire hazard of materials under actual fire conditions. However, the results of these tests may be used as elements of a fire risk assessment that takes into account all of the factors pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest five rating.

Design Considerations

- For optimum insulation performance the building thermal barrier (insulation) should be in continual alignment with the building air barrier. In framed cavities, the product thickness should match the depth of the framing members.
- Follow the local, applicable building code(s) to determine the need for and placement of a vapor retarder.
- Do not install insulation on top, or within 3 inches of a recessed light fixture unless the fixture is labeled as "insulation contact" (IC) rated.
- Kraft and standard foil facings will burn and cannot be left exposed. Install facings in substantial contact with the assembly finish material. Protect from open flame or other heat source.

Product Data Sheet | EcoTouch® Pink® Fiberglas™ Insulation | September 2020

Availability

	WIDTH		LENGTH		THICKNESS	R-VALUE
Metal Frame Construction	15" (406mm)	24" (610mm)	48" (1,219mm)	96" (2,438mm)	3 ½" (89mm)	11
	15" (406mm)	24" (610mm)	48" (1,219mm)	96" (2,438mm)	3 ½" (89mm)	13
	15" (406mm)	24" (610mm)		96" (2,438mm)	3 ½" (89mm)	13
	15" (406mm)	24" (610mm)	48" (1,219mm)	96" (2,438mm)	6 ¼" (159mm)	19
	15" (406mm)	24" (610mm)		96" (2,438mm)	6" (152mm)	21
		24" (610mm)	48" (1,219mm)		6 ¼" (171mm)	22
	14" (406mm)	24" (610mm)		64" (1,626mm)	3½" (89mm)	15
	16" (406mm)	24" (610mm)	48" (1,219mm)		9 ¼" (241mm)	35
Wood Frame Construction Walls	11" (406mm)		93" (2,362mm)	105" (2,667mm)	3 ½" (89mm)	11
	11" (406mm)		47" (1,067mm)		3 ½" (89mm)	12
	11" (406mm)			105" (2,667mm)	3 ½" (89mm)	13
	11" (406mm)		93" (2,362mm)		6 ¼" (159mm)	19
	12" (406mm)		48" (1,219mm)		9 ¼" (241mm)	30
	15" (381mm)	23" (584mm)	48" (1,219mm)	93" (2,362mm)	3 ½" (89mm)	11
	15" (381mm)	23" (584mm)	48" (1,219mm)	93" (2,362mm)	3 ½" (89mm)	13
	15" (381mm)	23" (584mm)		93" (2,362mm)	3 ½" (89mm)	13
	15" (381mm)	16 ¼"	23" (584mm)	48" (1,219mm)	93" (2,362mm)	6 ¼" (159mm)
	15" (381mm)		23" (584mm)		93" (2,362mm)	6 ¼" (159mm)
	15" (381mm)		23" (584mm)		105" (2,667mm)	6 ¼" (159mm)
	23" (597mm)		23" (584mm)		93" (2,362mm)	5 ½" (139mm)
Floor/Ceiling	15" (381mm)	16 ¼"	23" (584mm)	48" (1,219mm)	93" (2,362mm)	6 ¼" (159mm)
	13" (381mm)		23" (584mm)	48" (1,219mm)		9 ¼" (171mm)
	15" (381mm)		23" (584mm)	48" (1,219mm)		8" (203mm)
	15 ¼" (394mm)		23 ¼" (600mm)	48" (1,219mm)		8 ¼" (210mm)
	16" (406mm)	16 ¼"	24" (610mm)	48" (1,219mm)		9 ¼" (241mm)
	15 ¼" (394mm)		24 ¼" (600mm)	48" (1,219mm)		10 ¼" (241mm)
	16" (406mm)		24" (610mm)	48" (1,219mm)		12" (305mm)
	16" (406mm)		24" (610mm)	48" (1,219mm)		14" (356mm)

3 Made to order product
4 Delivers R19 value when installed in 5.5" deep cavity.

Installation

See Owens Corning publication "Installation Guide for Light Density Insulation" (Pub. No. 10017858) for more information.

Certifications and Sustainable Features

- Certified by SCS Global Services to contain an average of 65% with minimum 47% post consumer and balance 18% pre-consumer recycled glass content
- GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. GREENGUARD validated to be Formaldehyde Free. For more information, visit ul.com/gg
- Environmental Product Declaration (EPD) has been certified by UL Environment

Environmental and Sustainability

Owens Corning is a worldwide leader in building material systems, insulation and composite solutions, delivering a broad range of high-quality products and services. Owens Corning is committed to driving sustainability by delivering solutions, transforming markets and enhancing lives. More information can be found at www.owenscorning.com.

Disclaimer of Liability

Technical information contained herein is furnished without charge or obligation and is given and accepted at recipient's sole risk. Because conditions of use may vary and are beyond our control, Owens Corning makes no representation about, and is not responsible or liable for the accuracy or reliability of data associated with particular uses of any product described herein.

SCS Global Services provides independent verification of recycled content in building materials and verifies recycled content claims made by manufacturers. For more information, visit www.SCSglobalservices.com.

LEED® is a registered trademark of the U.S. Green Building Council.

Notes

Fiberglass products may cause temporary skin and mucous membrane irritation (itch). For mechanical abrasion effects of fibers, a condition which is completely reversible, Owens Corning does not recommend the use of unfaced EcoTouch® PINK® Fiberglas™ insulation in exposed applications where it will be subject to routine human contact due to this potential temporary irritation.

For additional information, refer to the Safe Use Instructions Sheet (SUIS) found in the SDS Database via https://sds.owenscorning.com.

OWENS CORNING INSULATING SYSTEMS, LLC
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO 43659 USA
1-800-GET-PINK
www.owenscorning.com

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OWNER :-

[redacted]

DESIGNER :-

UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENCED PROFESSIONAL ENGINEER · DEVENDRA SINGH DESHWAL · C 89732 · STATE OF CALIFORNIA

REVISIONS	NUMBER	DATE	DESCRIPTION
	2		

PROJECT :

(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-

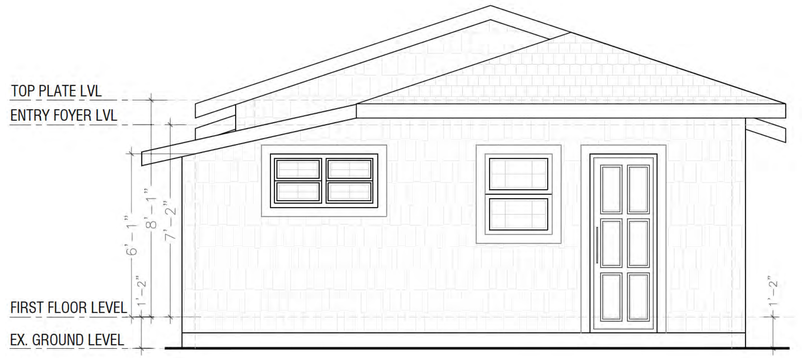
PROPOSED ROOF PLAN

DATE
03/03/2025

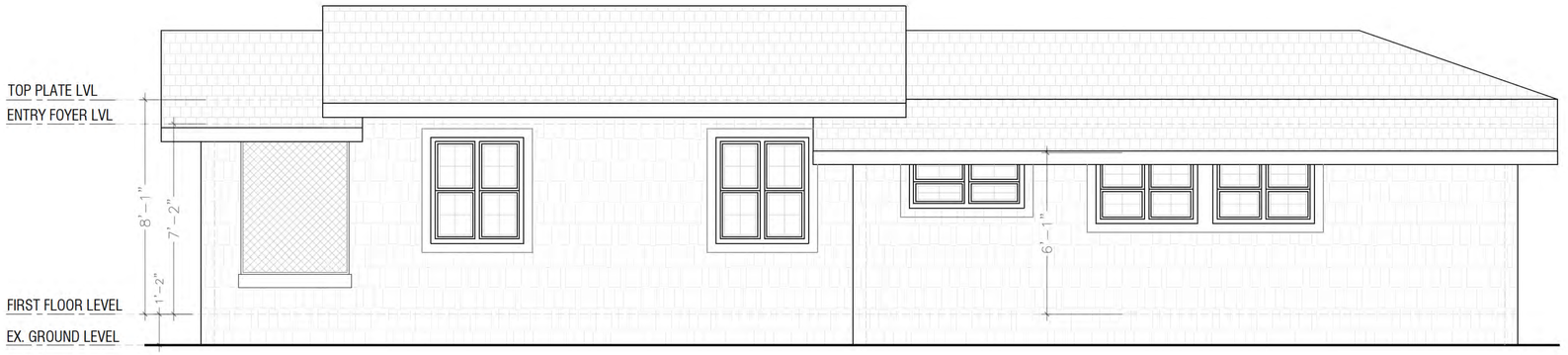
SCALE
3/16"=1'-0"

SHEET
A4.2

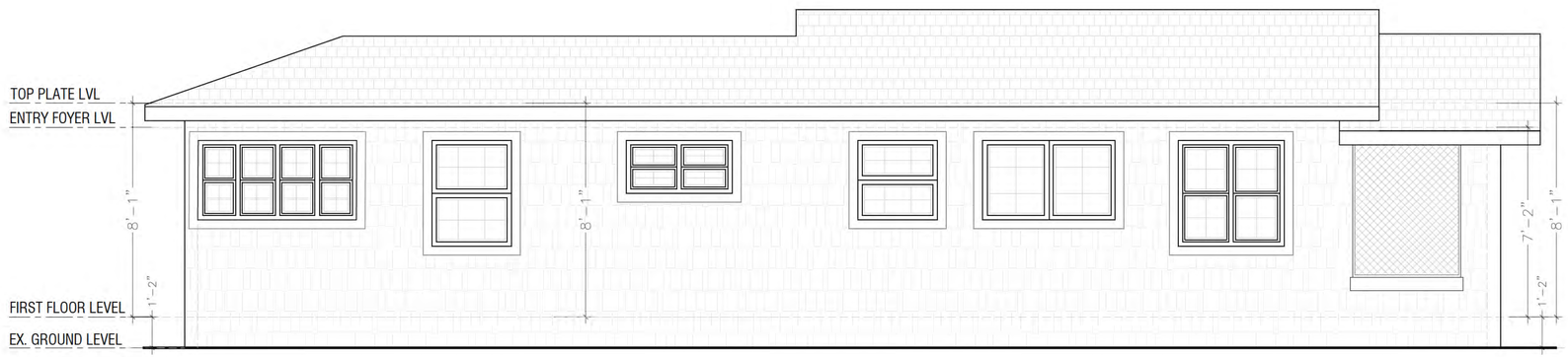
EXISTING FRONT ELEVATION
SCALE 3/8" = 1'-0"



EXISTING REAR ELEVATION
SCALE 3/8" = 1'-0"



EXISTING RIGHT ELEVATION
SCALE 3/8" = 1'-0"



EXISTING LEFT ELEVATION
SCALE 3/8" = 1'-0"

OWNER :-
[redacted]

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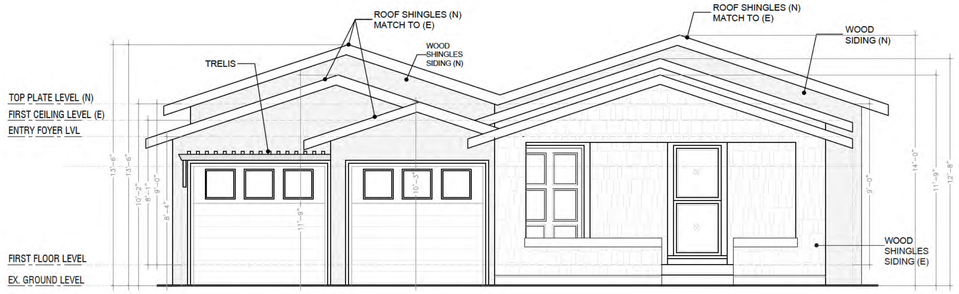
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
EXISTING ELEVATIONS

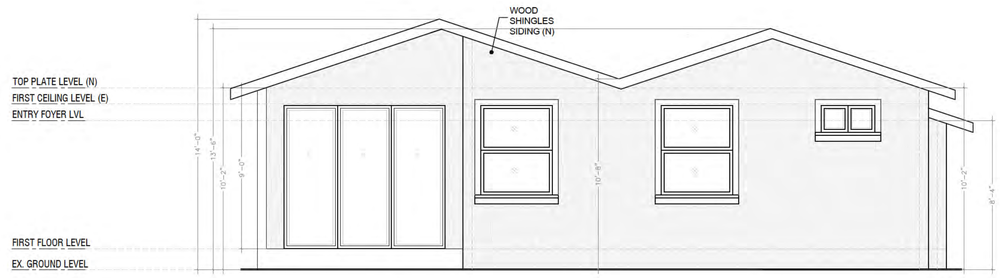
DATE
03/03/2025

SCALE
3/8"=1'-0"

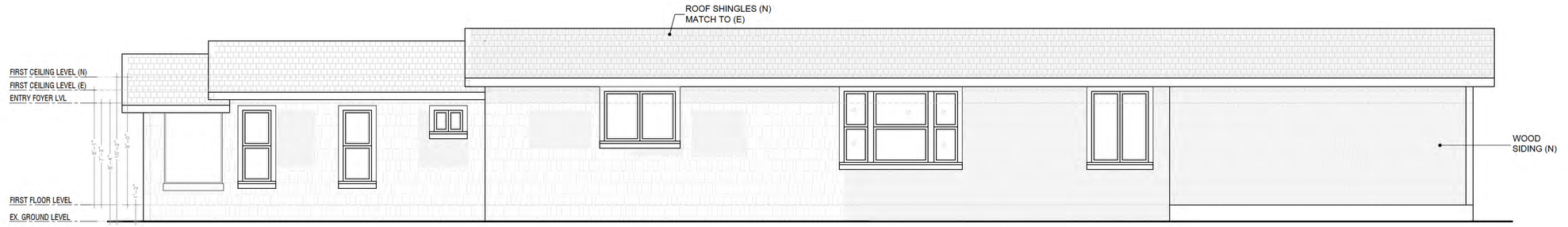
SHEET
A5.1



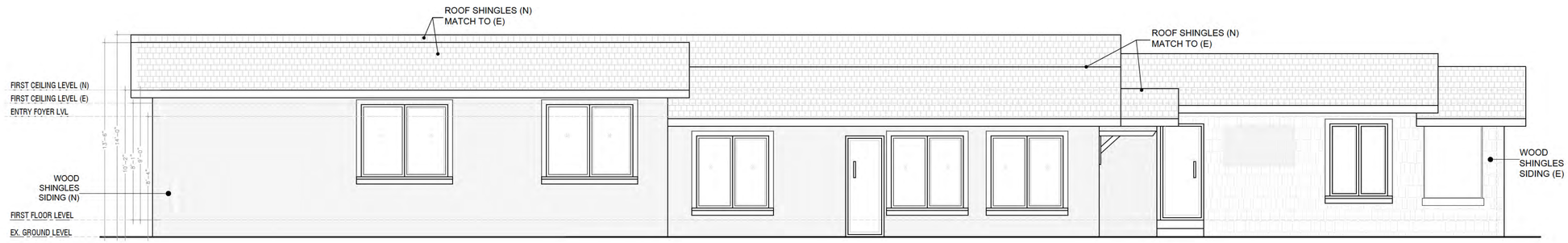
PROPOSED FRONT ELEVATION
SCALE 1/4" = 1'-0"



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



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



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

OWNER :-

[redacted]

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446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
PROPOSED ELEVATIONS

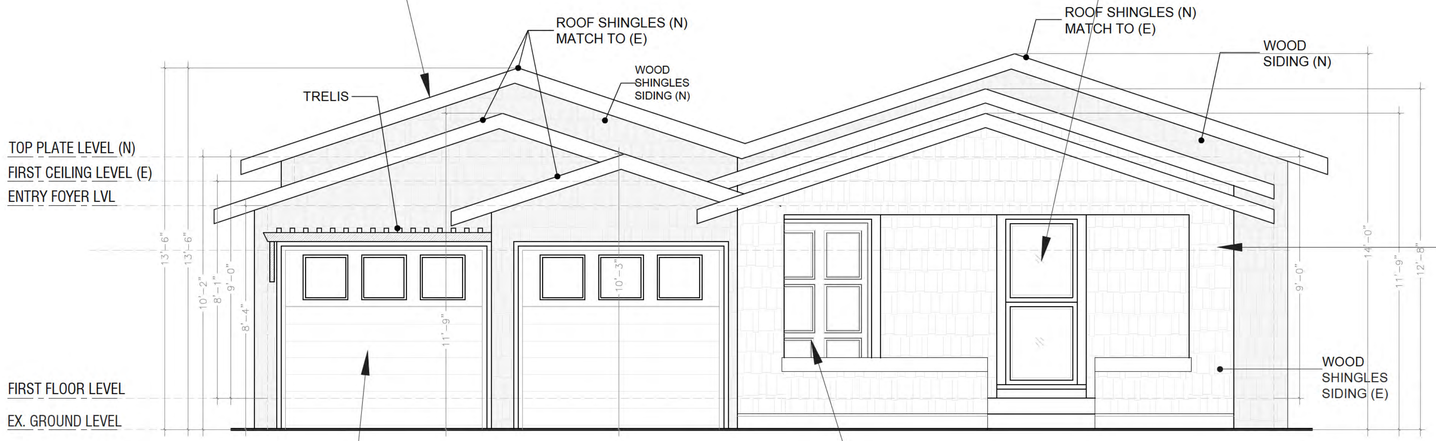
DATE
03/03/2025

SCALE
1/4"=1'-0"

SHEET
A5.2

MIN.CLASS A SHINGLES
(TO MATCH EXISTING)

(MARVIN WINDOW)
Metal Clad Wood Windows
WHITE EXTERIOR



PROPOSED FRONT ELEVATION
SCALE 3/8" = 1'-0"

GARAGE DOOR (WOOD)

MAIN EXTERIOR DOOR (WOOD)

WOOD SHINGLES SIDING
(TO MATCH EXISTING)

OWNER :-
[redacted]

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REVISIONS	DESCRIPTION	DATE
NUMBER		

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
MATERIAL SHEET

DATE
03/03/2025

SCALE
3/8"=1'-0"

SHEET
A5.3

PROPOSED RIGHT SIDE VIEW

PROPOSED LEFT SIDE VIEW

OWNER :-

[redacted]

DESIGNER :-

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C 89732
STATE OF CALIFORNIA

REVISIONS	DESCRIPTION	DATE
NUMBER		
1		
2		

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
PROPOSED 3D VIEWS

DATE
03/03/2025

SCALE
1/4"=1'

SHEET
A5.4

458 SAN BENITO

456 SAN BENITO

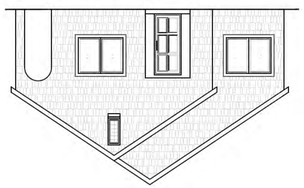
446 SAN BENITO

440 SAN BENITO

438 SAN BENITO

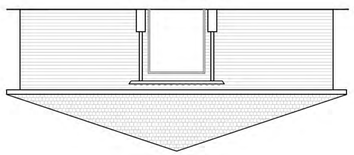
SAN BENITO AVENUE ROAD

459 SAN BENITO



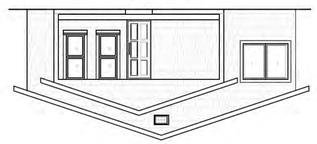
455 SAN BENITO

445 SAN BENITO



447 SAN BENITO

437 SAN BENITO



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REVISIONS	DESCRIPTION	DATE
NUMBER		

PROJECT :

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446 SAN BENITO AVE, LOS GATOS, CA 95030

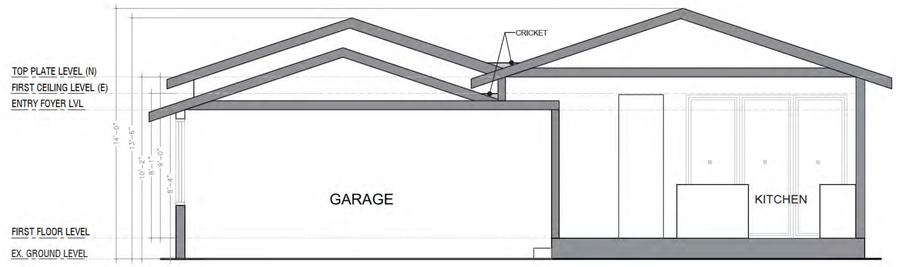
SHEET TITLE:-

STREET -SCAPE

DATE
03/03/2025

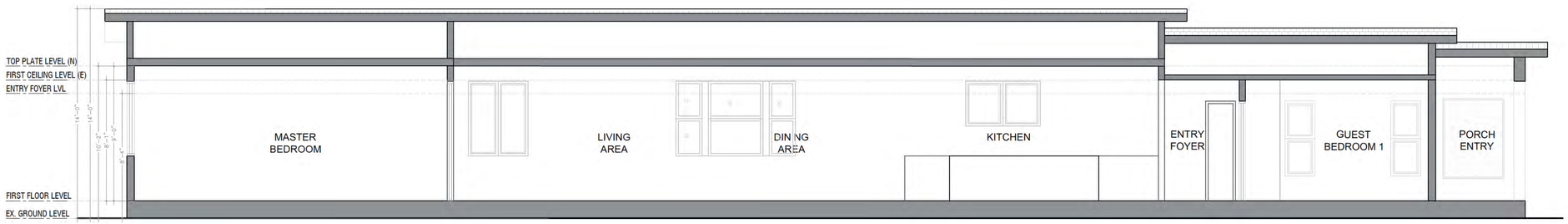
SCALE
1/8"=1'-0"

SHEET
A5.5



PROPOSED SECTION - 1/A6

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



PROPOSED SECTION - 2/A6

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

OWNER :-

[redacted]

DESIGNER :-

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REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :

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SHEET TITLE:-

PROPOSED SECTIONS

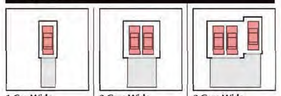
DATE
03/03/2025

SCALE
1/4"=1'-0"

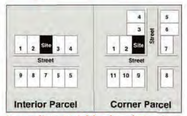
SHEET
A6

Neighborhood Patterns

Garage Doors

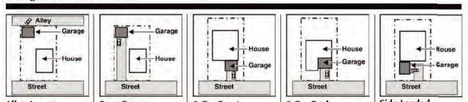


1 Car Wide	2 Cars Wide	3 Cars Wide
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
5 or more	5 or more	5 or more
✓ 2 - 4	2 - 4	2 - 4
0 - 1	0 - 1	0 - 1



Immediate Neighborhood Parcels

Garage Location on the site



Alley Access	Rear Garage	2 Car Front	2 Car Back	Side Loaded
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrences	Frequency of Occurrences
5 or more	5 or more	5 or more	5 or more	5 or more
2 - 4	2 - 4	2 - 4	✓ 2 - 4	2 - 4
0 - 1	0 - 1	0 - 1	0 - 1	0 - 1

Building Heights

1 Story	1 1/2 Story	1 and 2 Story	2 Story	2 Story plus
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrences	Frequency of Occurrences
5 or more	5 or more	5 or more	✓ 5 or more	5 or more
✓ 2 - 4	2 - 4	2 - 4	2 - 4	2 - 4
0 - 1	0 - 1	0 - 1	0 - 1	0 - 1

Architectural Styles 1

Craftsman Bungalow

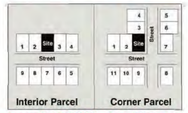
Frequency of Occurrence
5 or more
2 - 4
✓ 0 - 1

Spanish / Mission Revival

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Colonial/Greek Revival

Frequency of Occurrence
5 or more
2 - 4
0 - 1



Immediate Neighborhood Parcels

Victorian

Frequency of Occurrence
5 or mo'e
2 - 4
0 - 1

Italianate

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Architectural Styles 2

European Romantic

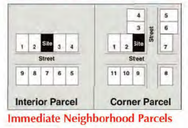
Frequency of Occurrence
5 or more
✓ 2 - 4
0 - 1

Ranch

Frequency of Occurrence
5 or more
2 - 4
✓ 0 - 1

Modern

Frequency of Occurrence
5 or more
2 - 4
0 - 1



Immediate Neighborhood Parcels

Builder Contemporary

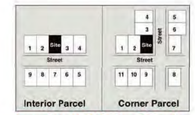
Frequency of Occurrence
✓ 5 or more
2 - 4
0 - 1

Other Historic Style	Other Non-Historic Style
Frequency of Occurrence	Frequency of Occurrence
5 or more	5 or more
2 - 4	2 - 4
0 - 1	0 - 1

Form and Massing

Building Height on Adjacent Parcels

Parcel 2	Parcel 3
1 Story	1 Story
1 1/2 Story	1 1/2 Story
2 Story	2 Story
1 and 2 Story	1 and 2 Story
2 Story Plus	2 Story Plus



Immediate Neighborhood Parcels

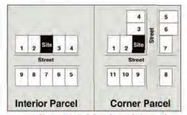
Street Presence

Straight Facade *Wide*	Straight Facade *Narrow*	L Shape	T Shape *Narrow Forward*	Other (Diagram)
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
5 or more	5 or more	5 or more	5 or more	5 or more
✓ 2 - 4	✓ 2 - 4	2 - 4	2 - 4	2 - 4
0 - 1	0 - 1	✓ 0 - 1	0 - 1	0 - 1

Entries

Recessed: *In Wall or Under Roof*	Attached: *With Low Eave*	Attached: *With High Eave*	Narrow Porch	Wide Porch
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
5 or more	5 or more	5 or more	5 or more	5 or more
✓ 2 - 4	✓ 2 - 4	2 - 4	2 - 4	2 - 4
0 - 1	0 - 1	0 - 1	0 - 1	✓ 0 - 1

Roofs 1



Immediate Neighborhood Parcels

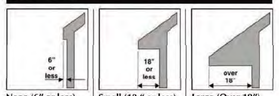
Roof Forms

All Gable Roofs	All Hip Roofs	Gable and Hip Mix	Flat / Low Slope	Other (Diagram)
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
✓ 5 or more	5 or more	5 or more	5 or more	5 or more
2 - 4	✓ 2 - 4	✓ 2 - 4	2 - 4	2 - 4
0 - 1	0 - 1	0 - 1	0 - 1	0 - 1

Roof Pitches

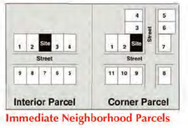
Flat	Low Pitch	Moderate Pitch	Steep Pitch	Very Steep Pitch
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
5 or more	5 or more	✓ 5 or more	5 or more	5 or more
2 - 4	2 - 4	2 - 4	✓ 2 - 4	2 - 4
0 - 1	0 - 1	0 - 1	0 - 1	0 - 1

Roof Overhangs



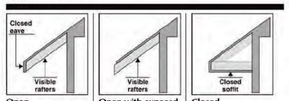
None (6" or less)	Small (18 " or less)	Large (Over 18")
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
5 or more	✓ 5 or more	5 or more
✓ 2 - 4	2 - 4	2 - 4
0 - 1	0 - 1	0 - 1

Roofs 2



Immediate Neighborhood Parcels

Roof Eaves



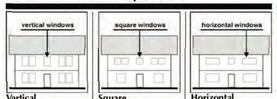
Open	Open with exposed rafter tails	Closed
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
✓ 5 or more	5 or more	5 or more
2 - 4	2 - 4	2 - 4
0 - 1	✓ 0 - 1	0 - 1

Roof Features

None	Gable or Hip Dormers	Shed Dormers
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
✓ 5 or more	5 or more	5 or more
2 - 4	2 - 4	2 - 4
0 - 1	✓ 0 - 1	0 - 1

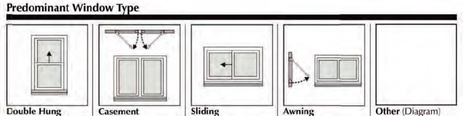
Windows 1

Predominant Window Proportions



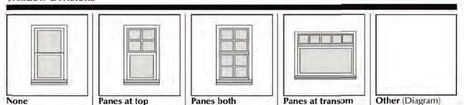
Vertical	Square	Horizontal
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
5 or more	5 or more	✓ 5 or more
✓ 2 - 4	2 - 4	2 - 4
0 - 1	✓ 0 - 1	0 - 1

Predominant Window Type



Double Hung	Casement	Sliding	Awning	Other (Diagram)
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
5 or more	5 or more	5 or more	5 or more	5 or more
✓ 2 - 4	✓ 2 - 4	✓ 2 - 4	2 - 4	2 - 4
0 - 1	0 - 1	0 - 1	0 - 1	0 - 1

Window Divisions



None	Panes at top	Panes both	Panes at transom	Other (Diagram)
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
✓ 5 or more	5 or more	5 or more	5 or more	5 or more
2 - 4	2 - 4	2 - 4	2 - 4	2 - 4
0 - 1	✓ 0 - 1	0 - 1	0 - 1	✓ 0 - 1

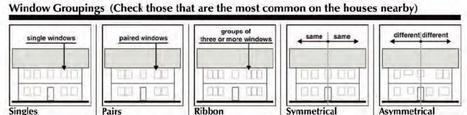
Window Material

Wood or looks like wood	Metal
Frequency of Occurrence	Frequency of Occurrence
✓ 5 or more	5 or more
2 - 4	2 - 4
0 - 1	0 - 1

Windows 2

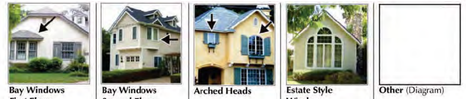
Immediate Neighborhood Parcels

Window Groupings (Check those that are the most common on the houses nearby)



Singles	Pairs	Ribbon	Symmetrical	Asymmetrical
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
5 or more	5 or more	5 or more	5 or more	5 or more
✓ 2 - 4	✓ 2 - 4	✓ 2 - 4	2 - 4	2 - 4
0 - 1	0 - 1	0 - 1	0 - 1	0 - 1

Special Window Shapes (Check all boxes that are common on an individual house)



Bay Windows *First Floor*	Bay Windows *Second Floor*	Arched Heads	Estate Style Windows	Other (Diagram)
Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence	Frequency of Occurrence
5 or more	5 or more	5 or more	5 or more	5 or more
2 - 4	2 - 4	2 - 4	2 - 4	2 - 4
0 - 1	0 - 1	0 - 1	0 - 1	0 - 1

OWNER :-
[redacted]

DESIGNER :-
UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

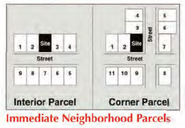
SHEET TITLE:-
NEIGHBOR--HOOD SURVEY 1

DATE
03/03/2025

SCALE
NTS

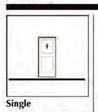
SHEET
A7.1

Doors 1



Immediate Neighborhood Parcels

Door Size



Single

Frequency of Occurrence
✓ 5 or more
2 - 4
0 - 1

Double

Frequency of Occurrence
5 or more
2 - 4
✓ 0 - 1

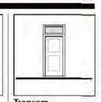
Door Setting

Door Only

Frequency of Occurrence
✓ 5 or more
2 - 4
0 - 1

Sidelights

Frequency of Occurrence
5 or more
2 - 4
✓ 0 - 1



Transom

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Door Details

Plain

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Panels

Frequency of Occurrence
✓ 5 or more
2 - 4
0 - 1

Panels and Glass

Frequency of Occurrence
5 or more
✓ 2 - 4
0 - 1

Divided Panes

Frequency of Occurrence
5 or more
2 - 4
0 - 1

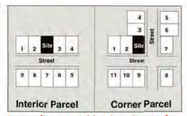
Shaped Door Head

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Accent Materials in the neighborhood

Stone Wall Bases
Brick Wall Bases
Stone Chimneys
Brick Chimneys
Other

Materials



Immediate Neighborhood Parcels

Primary Wall Materials

Wood Siding

Frequency of Occurrence
5 or more
✓ 2 - 4
0 - 1

Shingles

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Stucco

Frequency of Occurrence
5 or more
✓ 2 - 4
0 - 1

Brick or Stone

Frequency of Occurrence
5 or more
✓ 2 - 4
0 - 1

Mix of Materials

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Roof Materials

Composition Shingles

Frequency of Occurrence
✓ 5 or more
2 - 4
0 - 1

Wood Shakes

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Tile or Concrete Flat

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Tile or Concrete Arched

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Metal

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Accent Details

Front Yard Fence

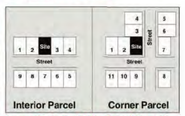
Frequency of Occurrence
5 or more
✓ 2 - 4
0 - 1

Front Yard Entry Arbor

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Trellises

Frequency of Occurrence
5 or more
2 - 4
✓ 0 - 1



Immediate Neighborhood Parcels

Stone or Brick Base

Frequency of Occurrence
5 or more
2 - 4
✓ 0 - 1

Stone or brick Chimneys

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Shutters

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Brackets

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Gable Infill Texture

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Shaped or Detailed Entry Columns

Frequency of Occurrence
5 or more
✓ 2 - 4
0 - 1

Column Caps and Bases

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Detailed Columns and Railings

Frequency of Occurrence
5 or more
✓ 2 - 4
0 - 1

Half Timber Beams

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Towers / Turrets

Frequency of Occurrence
5 or more
2 - 4
0 - 1

Other Distinctive Features in the Immediate Neighborhood (Within the parcels above) and **the Broader Neighborhood** (Within 1 block)

Summary of predominant neighborhood characteristics

Select those with three or more examples in the Immediate Neighborhood

Neighborhood Patterns

Garage Doors
✓ 1 Car Wide
2 Cars Wide
3 Cars Wide

Garage Location on the Site
Alley Access
Rear Garage
2 Car Front
✓ 2 Bar Back
Side Load

Building Heights
1 Story
1 1/2 Story
1 and 2 Story
✓ 2 Story
2 Stories Plus

Architectural Styles

Craftsman Bungalow
Spanish/Mission Revival
Victorian
Greek Revival

Colonial Revival
European Romantic
Ranch
✓ Builder Contemporary

Modern
Other Historic Style
Other Non-Historic Style

Form and Massing

Street Presence
Straight Facade: Wide
✓ Straight Facade: Narrow
L-Shape
T Shape: Narrow Forward
Other

Entries
Recessed: in Wall or Under Roof
✓ Attached: With Low Eave
Attached: With High Eave
Narrow Porch
Wide Porch

Roofs

Roof Forms
✓ All Gable Roofs
All Hip Roofs
Gable and Hip Mix
Flat/Low Slope
Other

Roof Overhangs
✓ None (6" or less)
Small (18" or less)
Large (Over 18")

Roof Eaves
✓ Open
Open with exposed rafter tails
Closed

Roof Pitches
Flat
Low Pitch
✓ Moderate Pitch
Steep Pitch
Very Steep Pitch

Roof Features
✓ None
Gable Dormers
Shed Dormers

Windows

Predominant Window Proportions
Vertical
Square
✓ Horizontal

Window Divisions
✓ None
Panes at Top
Panes at top and bottom
Panes at transom
Other

Window Groupings
Singles
✓ Pairs
✓ Ribbon
Symmetrical
Asymmetrical

Predominant Window Type
✓ Double Hung
Casement
✓ Sliding
Awning
Other

Window Material
✓ Wood or looks like wood
Metal

Special Window Shapes
Bay Windows: First Floor
Bay Windows: Second Floor
Arched Heads
Estate Style Windows
✓ Other

Doors

Door Size
✓ Single
Double

Door Setting
✓ Door Only
Sidelights
Transom

Door Detail
Plain
✓ Panels
Panels and Glass
Divided Glass Panes
Shaped Door Head

Materials

Accent Materials Common in the Immediate Neighborhood
Stone Wall Bases
Brick Wall Bases
Stone Chimneys
Brick Chimneys
✓ Other

Primary Wall Materials
✓ Wood Siding
Shingles
✓ Stucco
Brick or Stone
Mix of Materials

Roof Materials
✓ Composition Shingles
Wood Shakes
Tile or Concrete: Flat
Tile or Concrete: Arched
Metal

Accent Details

✓ Front Yard Fences
Front Yard Entry Arbor
Trellises
Stone or Brick Bases
Stone or Brick Chimneys

Shutters
Brackets
Gable Infill Texture
✓ Shaped or Detailed Entry Columns

Column Caps and Bases
✓ Detailed Porch Railings
Half Timber Beams
Towers/Turrets

Other Distinctive Features in the immediate neighborhood

Other Distinctive Features in the broader neighborhood (Within one block each direction)

OWNER :-
[redacted]

DESIGNER :-
UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER
DEVENDRA SINGH DESHWAL
C 89732
STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
NEIGHBOR--HOOD SURVEY 2

DATE
03/03/2025

SCALE
NTS

SHEET
A7.2

461 MONTEREY AVE

459 MONTEREY AVE

453 MONTEREY AVE

451 MONTEREY AVE

443 MONTEREY AVE

HOUSES **ROW OF CONTEXT TO REAR / ADJACENT** OF THE HOUSE

458 SAN BENITO AVE

456 SAN BENITO AVE

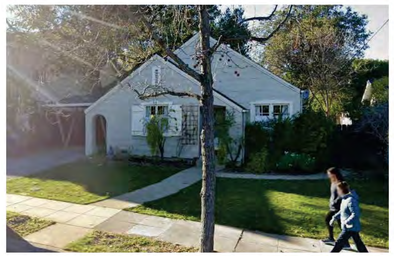
446 SAN BENITO AVE

440 SAN BENITO AVE

438 SAN BENITO AVE

HOUSES **ROW OF CONTEXT** TO THE HOUSE

SAN BENITO ROAD



459 SAN BENITO AVE

455 SAN BENITO AVE

445 SAN BENITO AVE

447 SAN BENITO AVE

437 SAN BENITO AVE

HOUSES **ROW OF CONTEXT TO FRONT** OF THE HOUSE

ADDRESS	LIVING AREA
440 San Benito Ave, LOS GATOS, CA 95030	**2902 SQ FT**
456 San Benito Ave, LOS GATOS, CA 95030	**3143 SQ FT**
458 San Benito Ave, LOS GATOS, CA 95030	**2982 SQ FT**
438 San Benito Ave, LOS GATOS, CA 95030	**2396 SQ FT**
456 San Benito Ave, LOS GATOS, CA 95030	**1500 SQ FT**

ADDRESS	LIVING AREA
455 San Benito Ave, LOS GATOS, CA 95030	**2982 SQ FT**
445 San Benito Ave, LOS GATOS, CA 95030	**3566 SQ FT**
447 San Benito Ave, LOS GATOS, CA 95030	**650 SQ FT**
437 San Benito Ave, LOS GATOS, CA 95030	**1008 SQ FT**
459 San Benito Ave, LOS GATOS, CA 95030	**1370 SQ FT**

ADDRESS	LIVING AREA
461 Monterey Ave LOS GATOS, CA 95030	**3271 SQ FT**
453 Monterey Ave LOS GATOS, CA 95030	**1377 SQ FT**
451 Monterey Ave LOS GATOS, CA 95030	**1366 SQ FT**
443 Monterey Ave LOS GATOS, CA 95030	**576 SQ FT**
446 San Benito Ave, LOS GATOS, CA 95030	**2024 SQ FT**

THE LIVING AREA OF 446 San Benito Ave, LOS GATOS, CA 95030 IS **NOT BIGGEST**

OWNER :-
[redacted]

DESIGNER :-
UNICORN STRUCTURES
PRINCIPAL
DEVENDRA DESHWAL
20801, VERDE MOOR CT.
SARATOGA, CA - 95070
PH. NO.: 408-318-1053
EMAIL:dsdeshwal@gmail.com

LICENSED PROFESSIONAL ENGINEER · DEVENDRA SINGH DESHWAL · C 89732 · STATE OF CALIFORNIA

REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT :
(ADDITION & REMODELING OF EXISTING HOUSE)
446 SAN BENITO AVE, LOS GATOS, CA 95030

SHEET TITLE:-
CONTEXT PHOTO GRAPHS

DATE
03/03/2025

SCALE
NTS

SHEET
A7

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TOWN OF LOS GATOS
HISTORIC PRESERVATION
COMMITTEE REPORT

MEETING DATE: 11/19/2025

ITEM NO: 8

DATE: November 14, 2025

TO: Historic Preservation Committee

FROM: Joel Paulson, Community Development Director

SUBJECT: Consider a Request for Approval to Construct Exterior Alterations to an Existing Pre-1941 Single-Family Residence on Property Zoned R-1:8. **Located at 310 Johnson Avenue**. APN 529-39-006. Exempt Pursuant to CEQA Section 15301: Existing Facilities. Request for Review Application PHST-25-024. Property Owner/Applicant: Sumit Ahluwalia. Project Planner: Sean Mullin.

RECOMMENDATION:

Consider a request for approval to construct exterior alterations to an existing pre-1941 single-family residence on property zoned R-1:8, located at 310 Johnson Avenue.

PROPERTY DETAILS:

1. Date primary structure was built: 1900 (effective year built 1920) per County Assessor's Database
2. Bloomfield Preliminary Rating: N/A
3. Does property have an LHP Overlay? No
4. Is structure in a historic district? No
5. If yes, is it a contributor? N/A
6. Findings required? No
7. Considerations required? Yes

BACKGROUND:

The subject property is located on the south side of Johnson Avenue, approximately 65 feet south of intersection with Foster Road. The County Assessor reports that the residence was constructed in 1900, with an effective year built of 1920. The Anne Bloomfield Survey does not include the property. The Sanborn Fire Insurance Maps cover the area beginning in 1891; however, the current lot configuration and existing residence is not reflected until 1928 (Attachment 1). The footprint of the residence remains consistent between the 1928 and the 1956 maps. Town records include a permit for rehabilitation in 1983 and a permit to repair/replace earthquake damage to the fireplace in 1990. Building Permits were also issued to

PREPARED BY: Sean Mullin, AICP
Planning Manager

the applicant in 2025 for foundation replacement and an interior remodel to reconfigure the floor plan with no exterior alterations.

DISCUSSION:

The applicant submitted Letter of Justification indicating that non-original brick siding and wainscoting detached from the residence and collapsed during the permitted foundation replacement work, revealing the original wood siding beneath (Attachment 2). With the scope of the permitted project expanding to address the failed brick siding, the applicant proposes exterior alterations, including:

- Expanding the front porch;
- Relocating the front entry door; and
- New window locations.

Attachment 2 details the proposed design and materials. Additionally, the applicant provided details on proposed exterior materials (Attachment 3), existing and proposed elevations, and a proposed floor plan (Attachment 4). Staff provided an exhibit showing the existing and proposed floor plan at a consistent scale in Attachment 5.

In summary, the existing wood siding beneath the failed brick would be repaired/replaced in-kind (Attachments 4 and 5). The existing front entry door, now hidden from view, would be replaced with a window and a new entry door would be created at the center of the front façade to provide a clear entry. The existing window beneath the failed brick would be expanded into three window set to match the existing windows and detailing. The existing front porch would be expanded across the front façade, served by new entry stairs.

CONSIDERATIONS:

A. Considerations

Sec. 29.80.290. Standards for review.
In evaluating applications, the deciding body shall consider the architectural style, design, arrangement, texture, materials and color, and any other pertinent factors. Applications shall not be granted unless:

__X__ For pre-1941 structures, the proposed work will neither adversely affect the exterior architectural characteristics or other features of the property which is the subject of the application.

CONCLUSION:

The applicant is seeking a recommendation of approval from the Committee to construct exterior alterations to an existing pre-1941 single-family residence on property zoned R-1:8, located at 310 Johnson Avenue. The proposed project, if not triggering a technical demolition, would be processed through a Building Permit application. Should the Committee find merit in the request, the recommendation would be forwarded to the Community Development Director. If confirmed through Planning review to be in substantial conformance with the Committee's review and recommendations, the application would not return to the Committee.

ATTACHMENTS:

1. Sanborn Fire Insurance Maps Exhibit
2. Letter of Justification
3. Project Details
4. Development Plans
5. Floor Plan Exhibit
6. Repair Photos
7. Door Example
8. 1941 Tax Assessment Record
9. Neighborhood Photos

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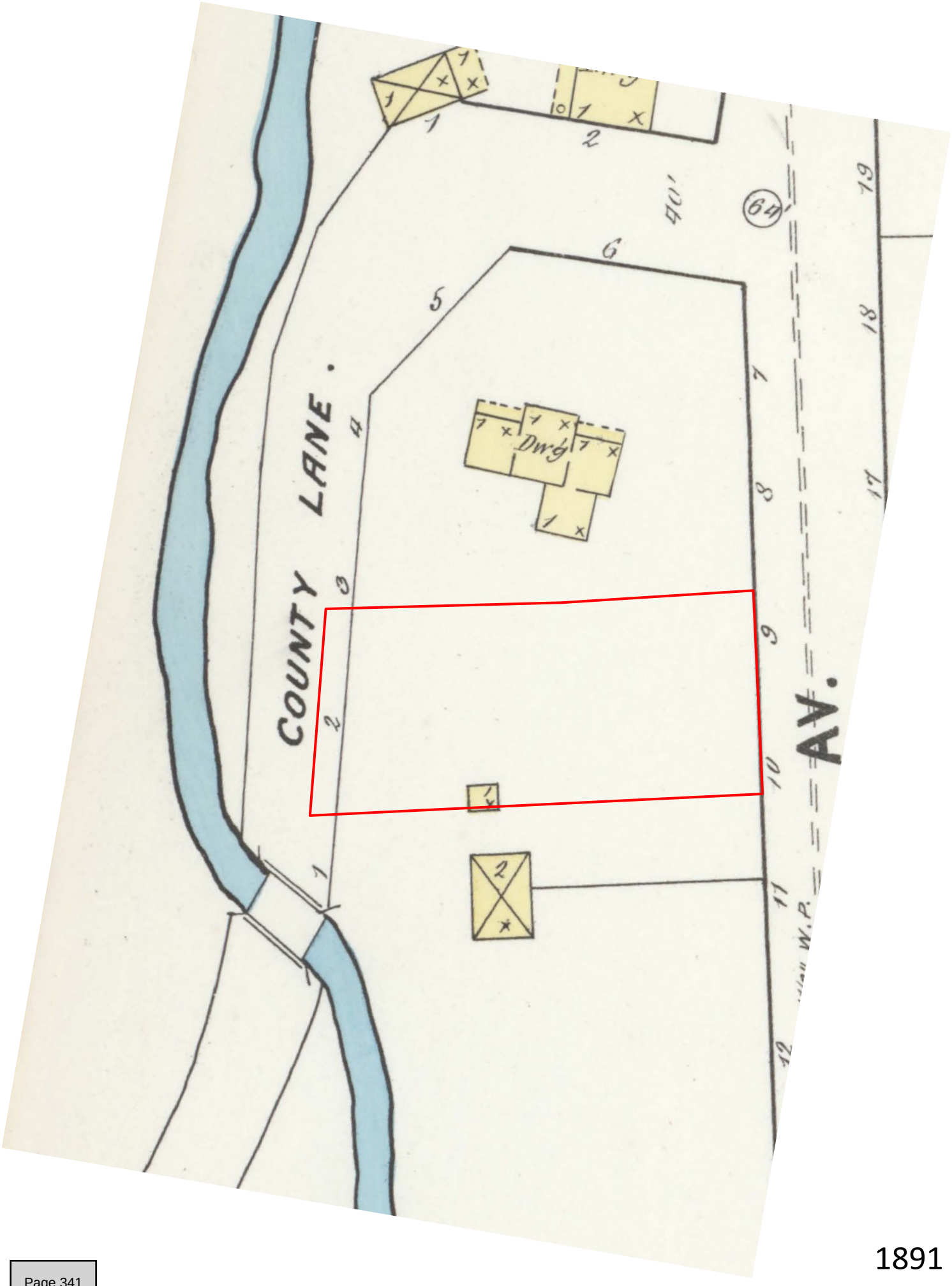
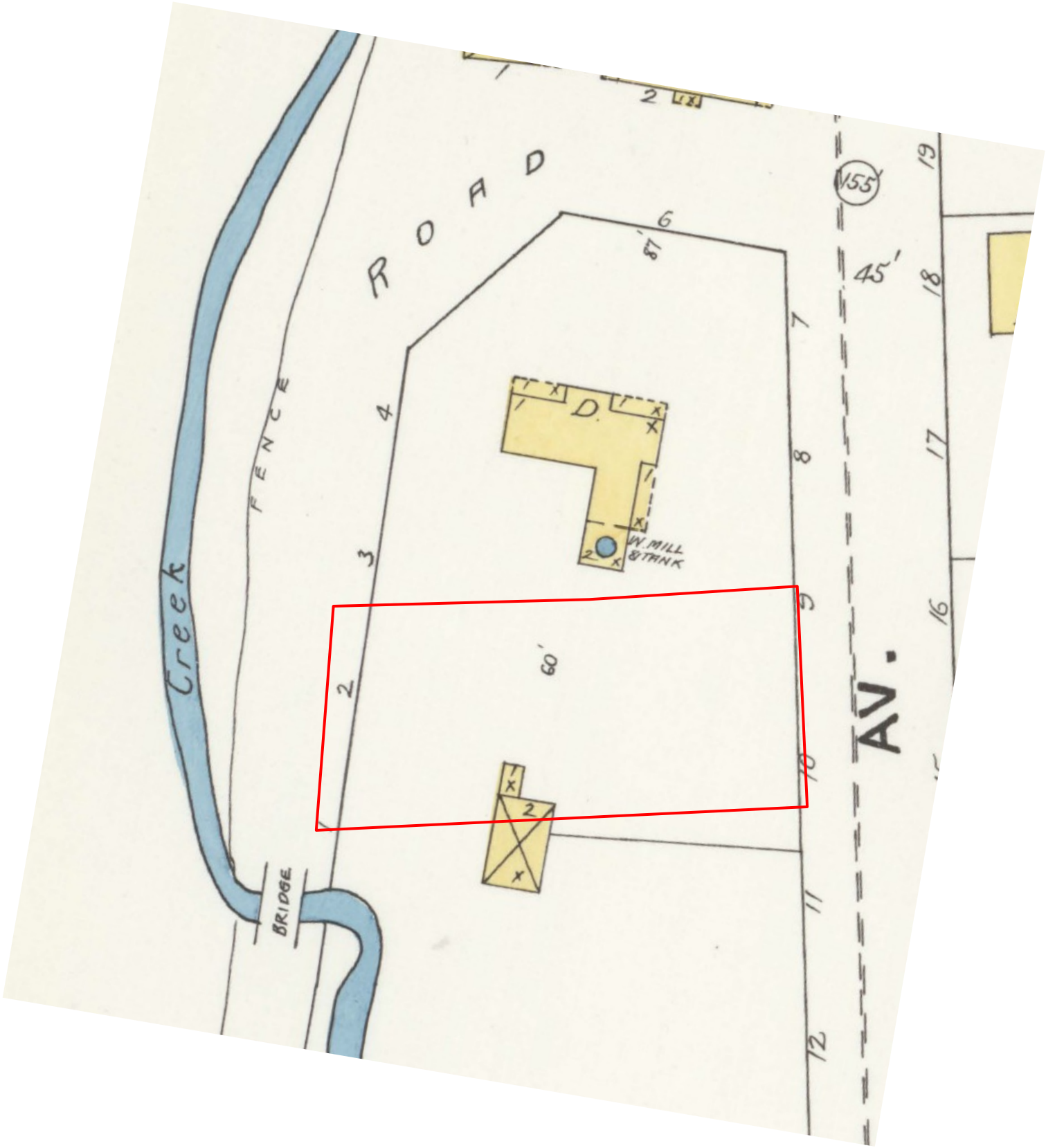
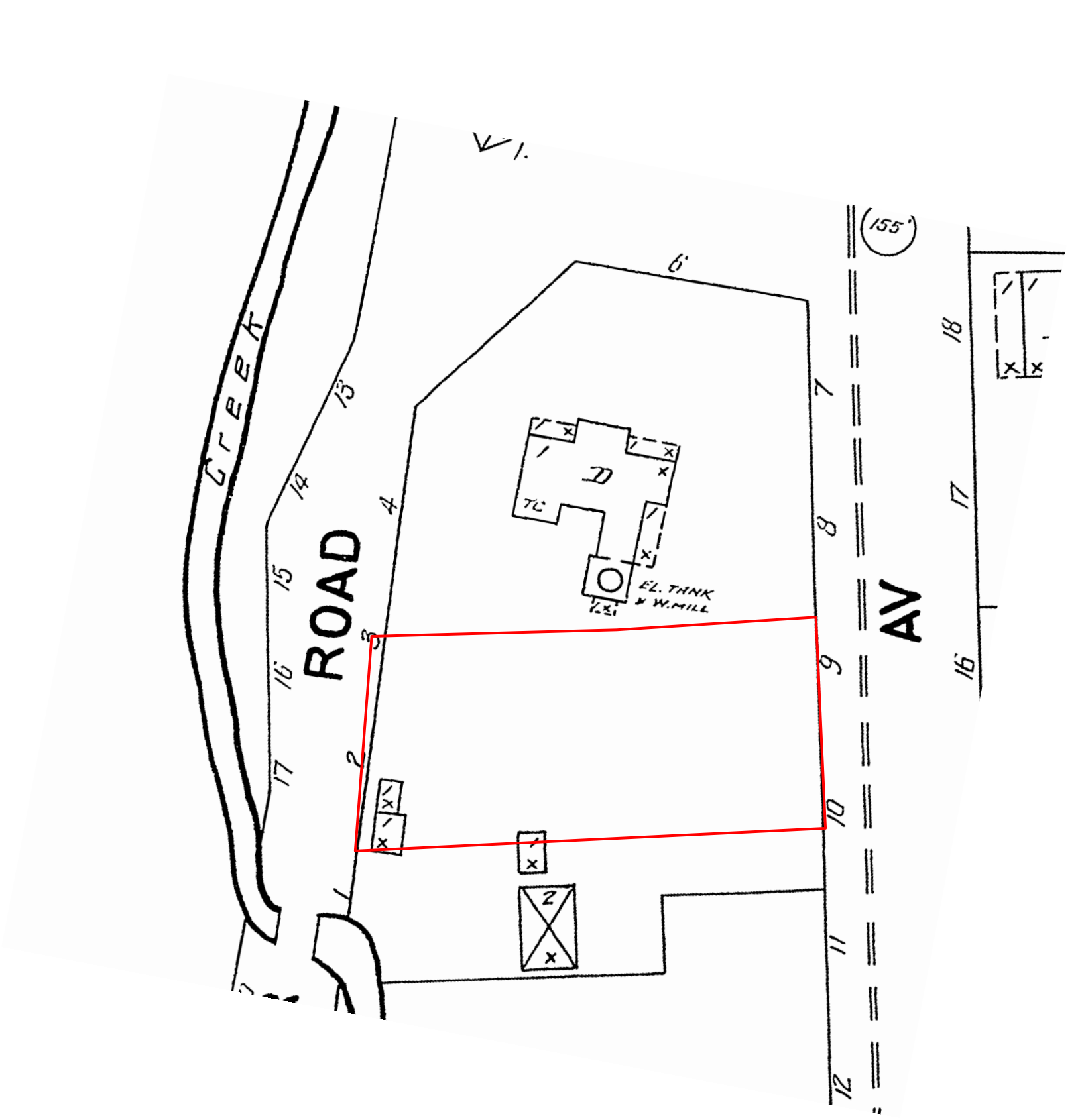


1891

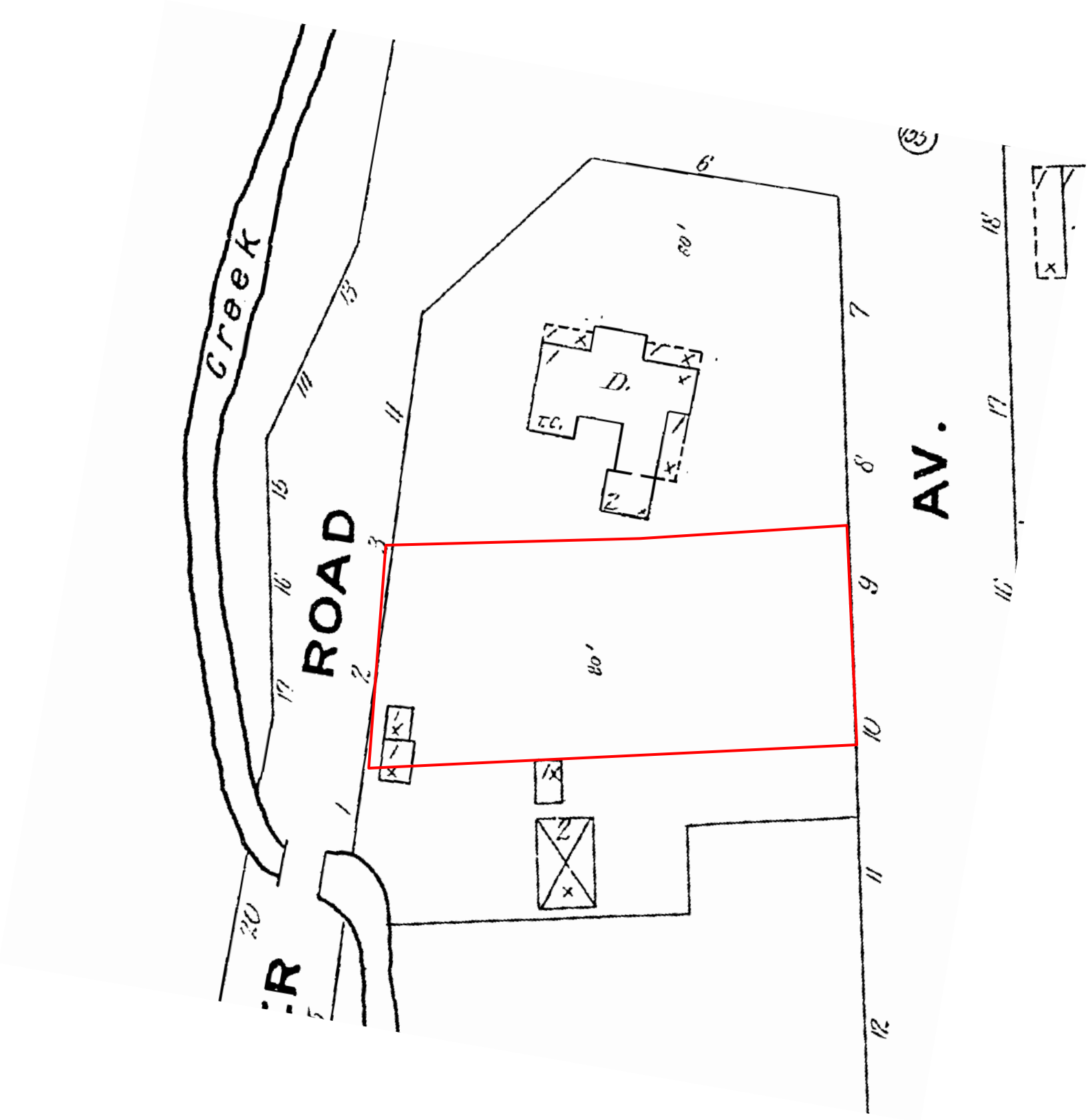
ATTACHMENT 1



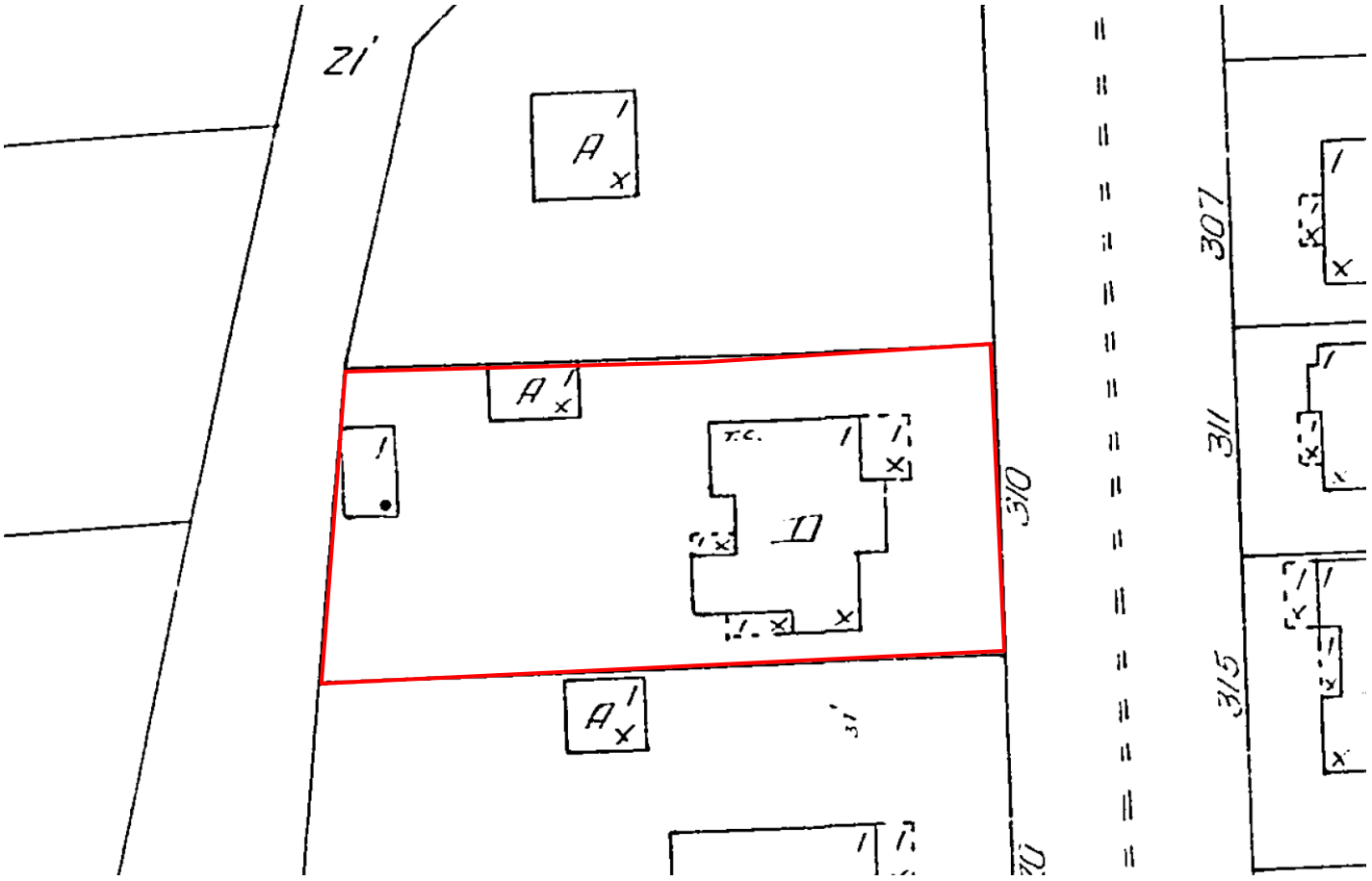
1895



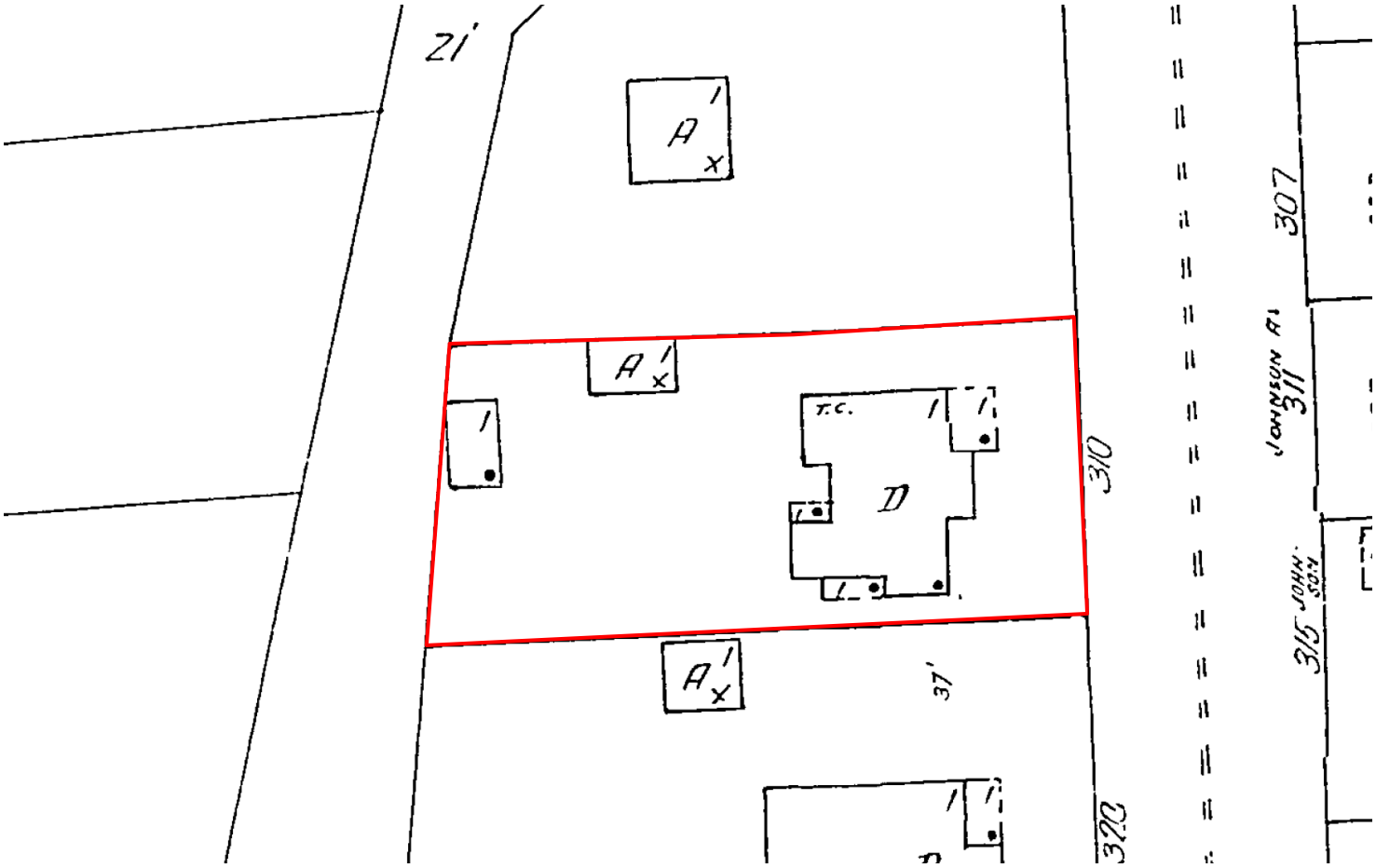
1904



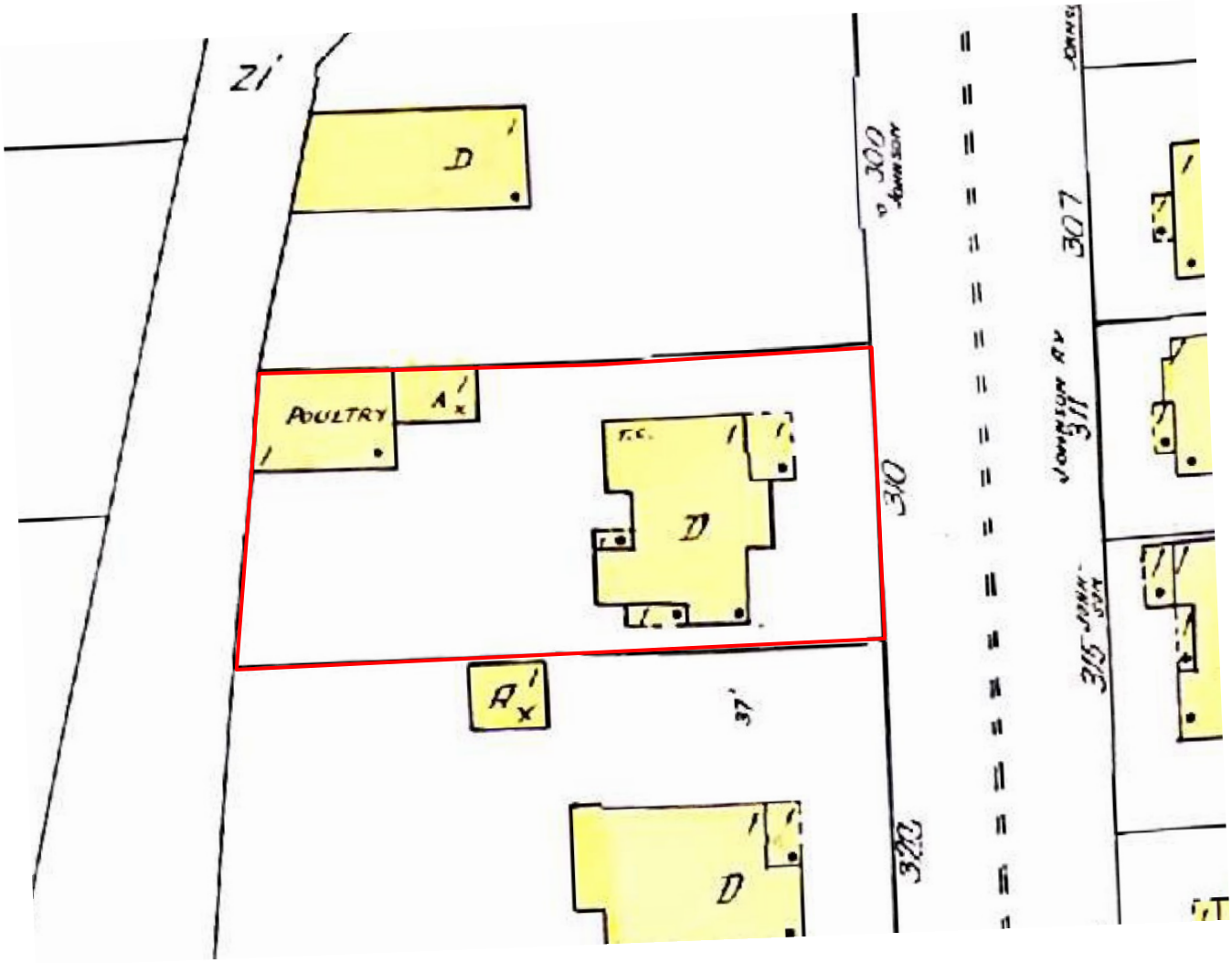
1908



1928


21'
A 1 X
A 1 X
1
T.C.
1
1
D
1
310
A 1 X
37'
1
1
320
307
JOHNSON PL
311
315 JOHNSON PL

1944



1956

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Letter of Justification

Property: 310 Johnson Avenue, Los Gatos, CA
To: Town of Los Gatos Historic Preservation Committee
From: Sumit Ahluwalia & Swathi Jayaramaiah, Owners
Subject: Request for Approval — Entryway and Façade Improvements at 310 Johnson Avenue

Dear Members of the Historic Preservation Committee,

We are writing to respectfully request approval for proposed exterior improvements to our home at 310 Johnson Avenue. Our goal is to preserve the home's historic charm, address damage from essential foundation work, and improve the balance and street presence of the front façade in a manner consistent with the architectural rhythm of Johnson Avenue.

1. Background and Structural Context

When we purchased this home, it exhibited severe structural deterioration — more than ten inches of differential settlement and a cracked, failing foundation. Walking through the house, one could feel the slope beneath one's feet.

Multiple licensed contractors and foundation specialists confirmed the extent of the damage, noting that the foundation and framing were in such poor condition that **demolition and rebuilding were recommended**. Instead, we made the deliberate choice to invest in a complete foundation replacement to **save the original structure**.

Excerpts from the inspection report included:
• "A total of 27 vertical fractures were found along the foundation and basement retaining wall."
• "A majority of the posts have rotted and/or are sitting directly on soil or a thin slab; pier blocks are damaged, misaligned, and in some cases undermined."
• "Several existing girders are heavily notched and undersized."

Given these findings, a full foundation replacement was the only viable path to structural stability. The work has been extremely costly — roughly three times our initial estimate — and has required us to draw on personal and retirement savings to complete it.

During the foundation work, the **non-original brick wainscoting** on the front and sides of the house collapsed. Beneath it, we discovered sections of **original wood siding**, confirming that the brick was a later alteration and helping to guide the design decisions in this proposal.

2. Historic Context and Design Rationale

Research conducted at the Los Gatos Library and Museum uncovered archival references to 310 Johnson Avenue, including the **1928 Sanborn Fire Insurance Map** and a **1941 Tax Assessor's record**. These sources show that the house existed by the late 1920s and had a **symmetrical interior layout**. The **right-hand side** featured a **covered porch with a street-facing entrance**, while the **left-hand side**, where the later brick wall stood, **did not yet project forward**.

Over the years, the right porch was enclosed and the brick addition appeared on the left, creating the current visual imbalance. Our proposal takes cues from that early configuration as a **reference point**, using its proportions and balance to inform the revised façade rather than to replicate it precisely.

By **bringing the left side of the façade forward** to align more closely with the right and **reintroducing a modest, street-facing entry beneath the main gable**, the design restores a more natural balance to the front elevation. This helps **offset the heavy visual mass of the right-hand side** while keeping all changes within the existing footprint and roof forms. The approach respects the home's evolution while subtly improving its coherence and presence on the street.

3. Proposed Design

The proposed work includes:

• **Wood siding restoration** where the brick fell, using period-appropriate lap siding that matches neighboring historic cottages.
• **A modest, centered front entry** under the main gable, consistent with early Los Gatos proportions and scale.
• **Extension of the left façade** to balance the enclosed right-hand mass and reestablish architectural symmetry.
• **A small porch landing and steps**, designed for safe entry with simple, cottage-scale posts and railings.
• **Relocation of an existing window** to maintain rhythm and proportion along the front elevation.

These adjustments do not increase the home's overall mass, height, or roof profile. They simply refine the existing form to achieve better balance and visual continuity.

4. Materials and Detailing

We plan to:

• Use **wood lap siding and trim** in restored areas, matching original profiles where possible.
• Install a **wood Craftsman-style entry door** (likely a 4-lite over 1-panel design) with clear divided-lite glass.
• Retain existing stucco elsewhere to preserve continuity and manage cost.
• Match window and trim detailing to existing profiles for consistency across the façade.

This combination keeps the project historically sensitive but practical, improving the home's appearance without prompting unnecessary replacement of intact materials.

5. Neighborhood Compatibility and Intent

Johnson Avenue is a street of well-kept early cottages that share modest scale, gabled roofs, and simple detailing. The proposed design maintains that rhythm by:

• Preserving the single-story scale and roof forms.
• Using traditional materials and restrained detailing.
• Re-establishing a symmetrical, street-facing façade that feels consistent with neighboring homes.

Our intent is not to modernize or reinvent the house, but to allow it to **sit comfortably and proudly among its historic neighbors** by improving balance and curb presence while retaining its existing character. Our hope is that this home will continue to sit proudly on Johnson Avenue for the next hundred years.

6. Closing Remarks

This project reflects our commitment to preserving a piece of Los Gatos's architectural history and ensuring its continued contribution to the neighborhood's charm. The improvements proposed here are modest but meaningful: they repair damage from unavoidable foundation work, use historically compatible materials, and restore visual harmony to the façade.

We respectfully request the Committee's approval of our proposed entryway and façade improvements and deeply appreciate your time, attention, and continued stewardship of Los Gatos's historic neighborhoods.

Warm regards,

Sumit Ahluwalia & Swathi Jayaramaiah
Owners, 310 Johnson Avenue, Los Gatos, CA

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Entry oriented to the street front

Per section 3.6.1 of the Los Gatos Residential Design Guidelines document, we would like to orient the entry to the street front. We believe that the original entry was oriented towards the street front. The orientation of this image is facing the home, with the street at the back. This was likely a porch at some point, and could be the original entry.

3.6.1
Entries
Provide a clear expression of entry
Orient the entry to the street front. It should be visible from the street.

Door

A traditional wooden door that's typical of the ones in the neighbourhood. We would like one sidelight because that seems to fit with the proportions of the home. We'll have glass in the door to bring light into the house. A close example is below.

Columns and railing

Square 10-12” columns with subtle details and the top and bottom are common on Johnson Ave. Below is a close example of the columns that we will build. The railings will be similar to this home on Johnson Ave.

Porch and stairs

The floor of the porch and the stairs will be wood that’s suitable for outdoor use. Our porch and stairs will look similar to this house on Johnson Ave. The wainscoting will be the original siding.

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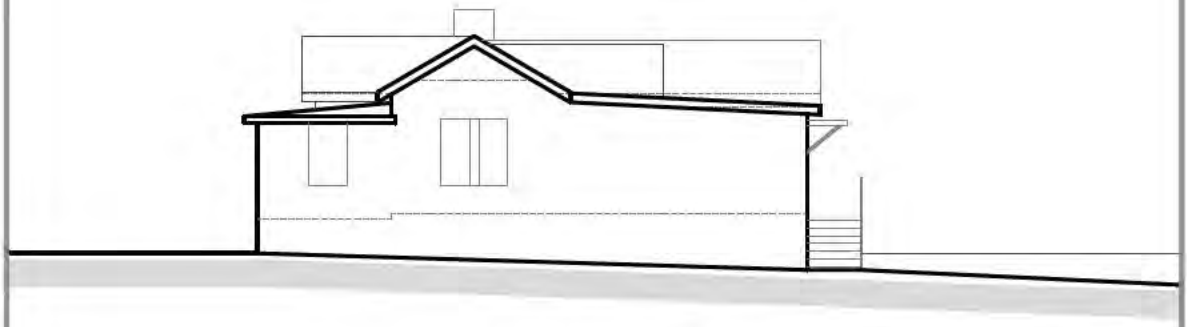
FRONT ELEVATION



RIGHT ELEVATION

REAR ELEVATION

DATE	7/12/25
SCALE	
JOB NO.	2543

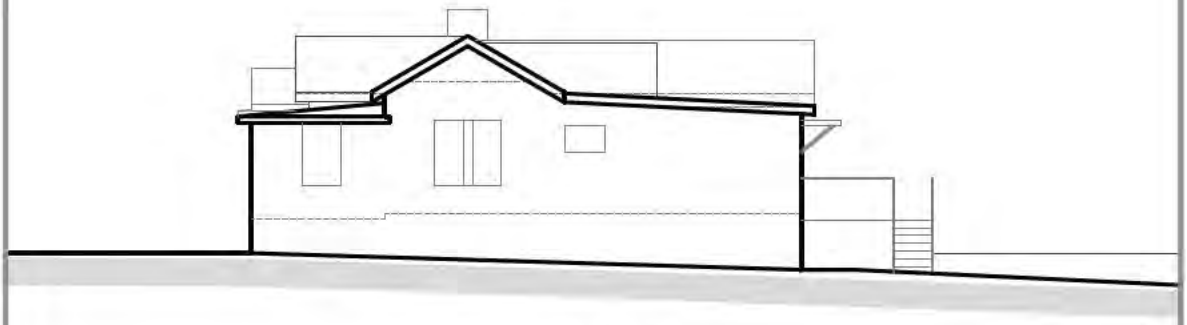
EXISTING ELEVATIONS

310 JOHNSON AVENUE, LOS GATOS. CA 95030

HOME REMODEL

ATTACHMENT 4

FRONT ELEVATION



RIGHT ELEVATION

REAR ELEVATION

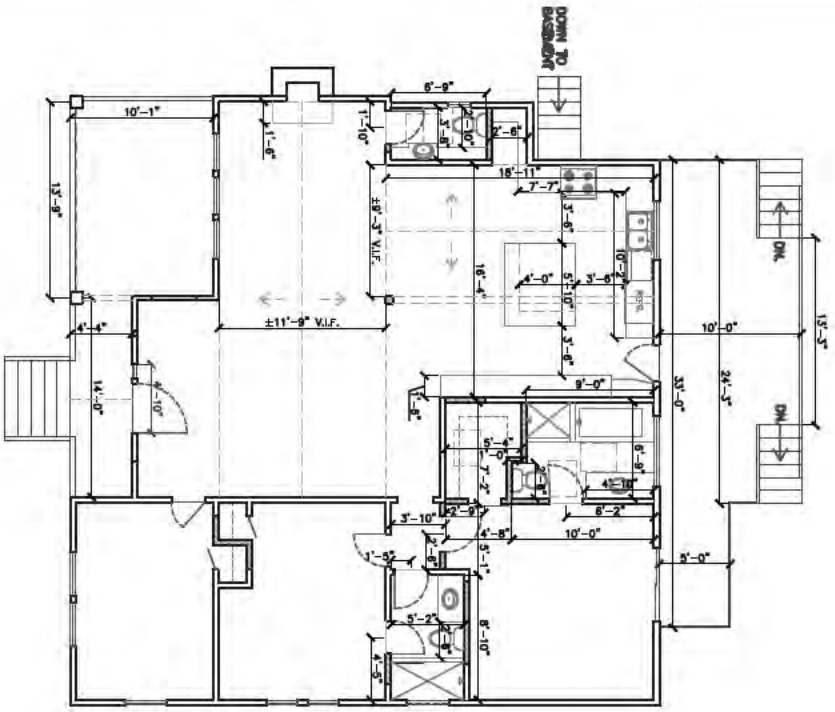
DATE	7/12/25
SCALE	
JOB NO.	2543

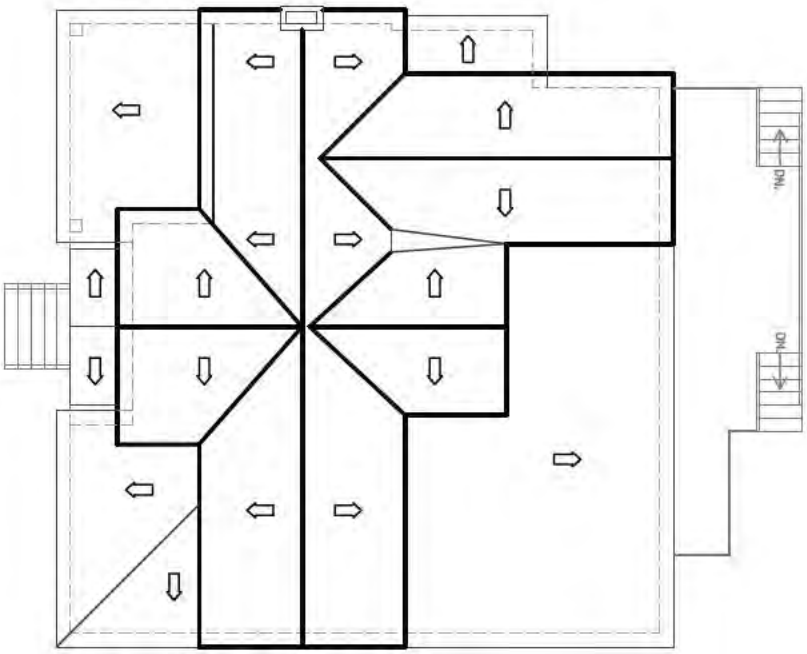
PROPOSED ELEVATIONS

310 JOHNSON AVENUE, LOS GATOS. CA 95030

[redacted]

HOME REMODEL





NORTH

DATE	7/12/25
SCALE	
JOB NO.	25437

FRONT PORCH AND REAR DECK DESIGN

NEW FLOOR, ROOF PLANS

310 JOHNSON AVENUE, LOS GATOS, CA 95030

[redacted]

HOME REMODEL

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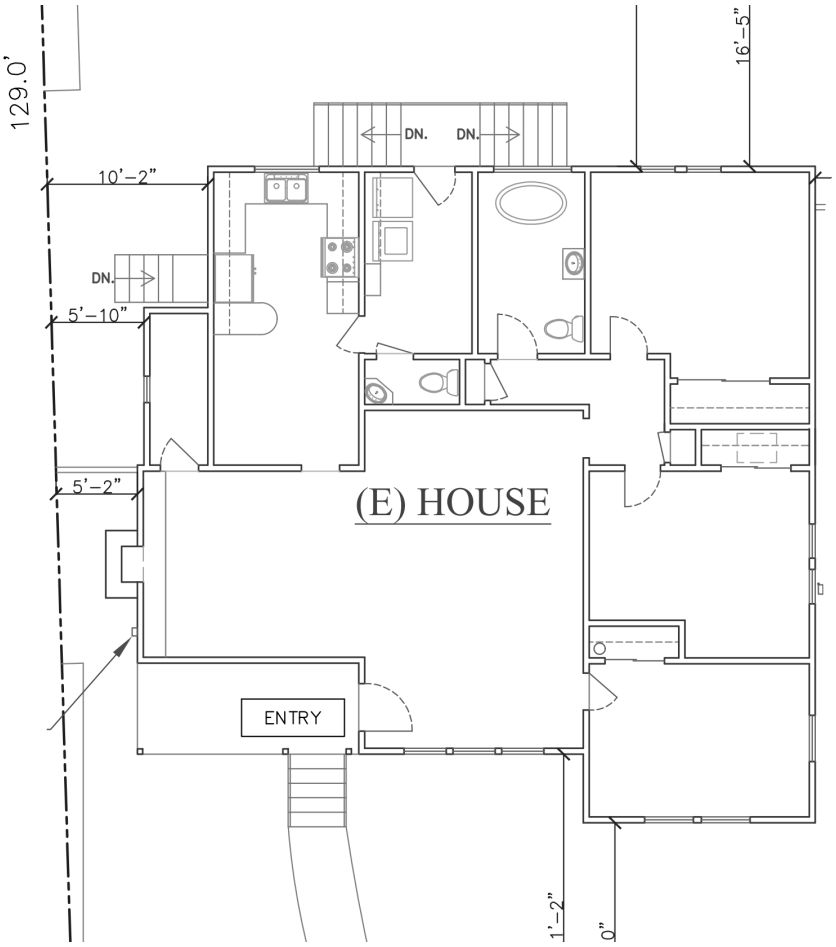

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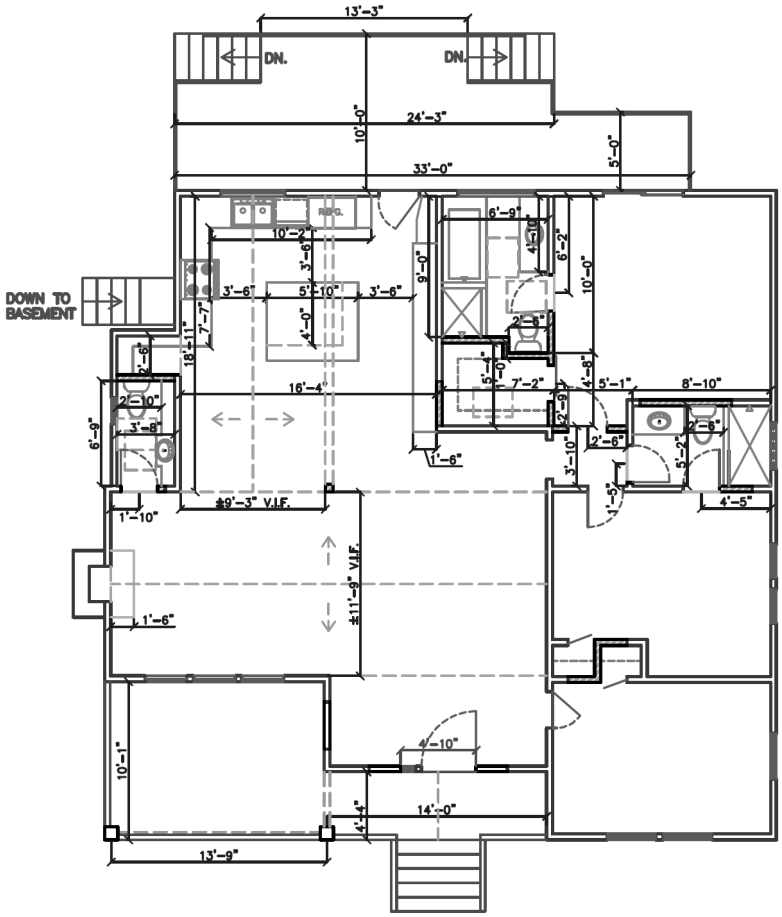
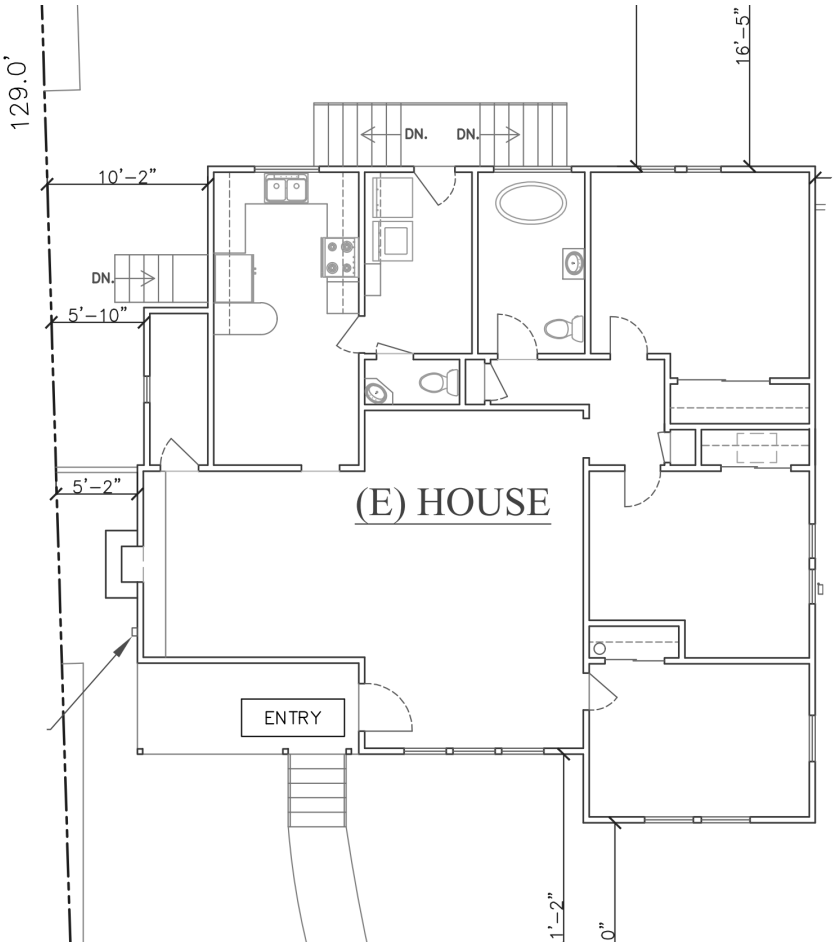


Proposed



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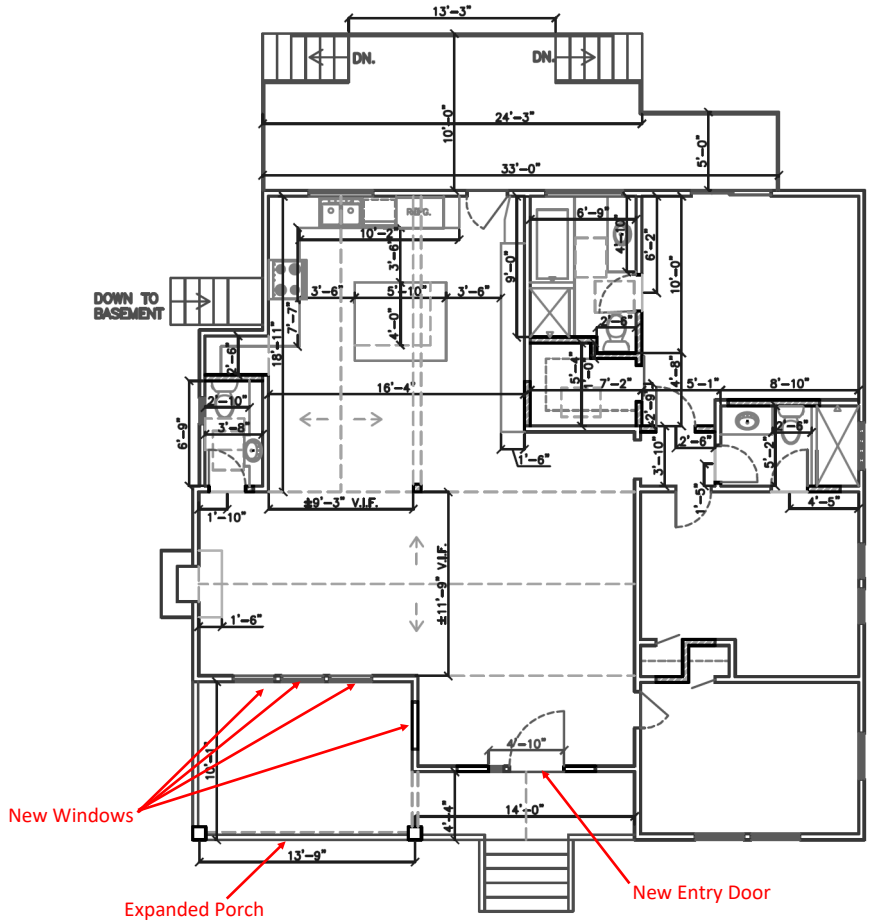

Proposed

ATTACHMENT 6

310

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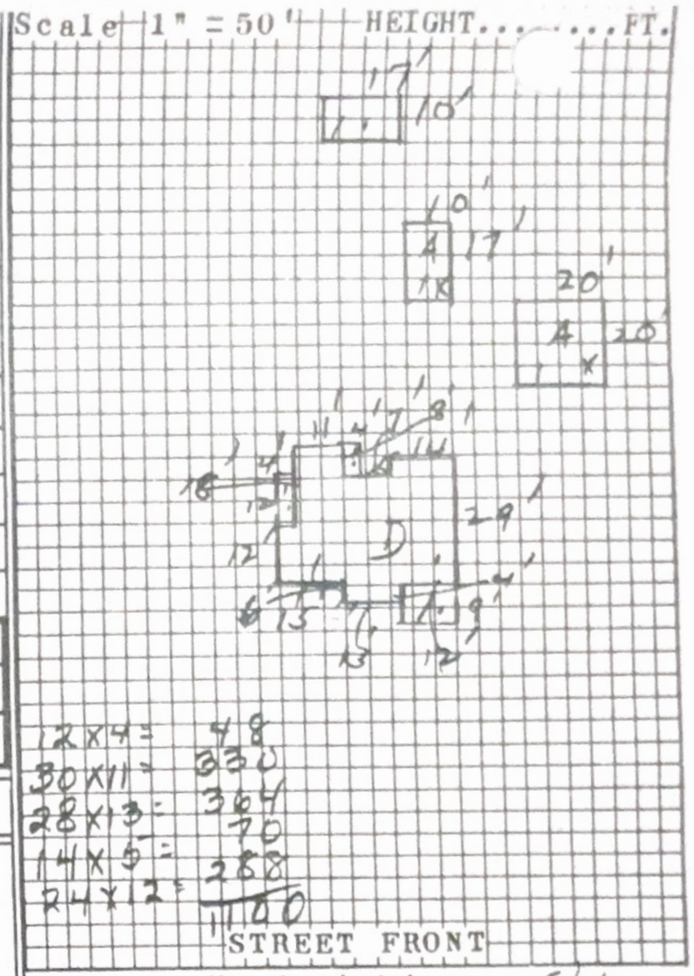
LOCATION 10 X Mason AVE. | CITY OF LOS GAT CALIFORNIA

BLOCK NUMBER 126 LOT NUMBER | OWNERSHIP M. Mc Donnell

SUBDIVISION OR TRACT, 150 ft. on S. side of Johnson Ave by depth to

DESCRIPTION Foster Rd., E. by Chafer.

Sect.	Dimensions			Area or Cubage		Unit Cost	Repro. Cost	Out'bldgs	Pres. Value
(A)	X	X	=	1100	cu.ft sq.ft @$	2.95	$ 3245.		$ 50
(B)	X	12 X 4	=	48	cu.ft sq.ft @$	.90	43.		
(C)	X	8 X 4	=	32	cu.ft sq.ft @$	.90	29.	Miscel.	
(D)	X	12 X 9	=	108	cu.ft sq.ft @$	1.75	189.	Retain. Wall	
	X	X	=		cu.ft sq.ft @$	.		Tank	
	X	X	=		cu.ft sq.ft @$	.		Pool	
		Reproduction Cost of Main Building					$ 3506.	36 % Good	$ 1260.
Garage	X	17 20 X 20 10	=	400	cu.ft sq.ft @$	.80	$ 320.	70 % Good	$ 285.
Depreciation %		Pct. Good %					TOTAL DEPRECIATED VALUE		$ 1595.



PRICED BY W. W. Holden DATE 5/1/41

CLASSIFICATION 1 2 3 4 A B C

QUALITY: Cheap....; Medium....; Good....; Special.....

OCCUPANCY Owner Vacant Tenant Not Home

Age 60+ Yrs. Remodeled Age 40 Yrs.

Condition: New Good Medium Poor

Obsolescence Yes No Functional Defects....%

Special Depreciation For: Lack of Utility.....%

Over....% Under....% Improvement: Location.....%

DESIGN: Good....; Acceptable....; Poor....; Freak.....

FLOOR PLAN: Good....; Acceptable....; Awkward.....

Perimeter of Walls 162 ft; Number of angles.....

RENT $ _____ Per Mo. Source of Information: Tenant Agent Estimated

Miscellaneous Remarks Add 50

See Reverse

EXTERIOR DESCRIPTION

COMMERCIAL BLDGS
_____ Stories
_____ Stores
_____ Office Bldg
_____ Aparts
_____ Rms. Hotel
_____ Rmg. House
_____ Rms. Hosp.
Bank _____ Hall
_____ Whse. Loft
_____ Car Garage
_____ Seat Theatre
Mill _____ Factory
Gas Station _____
Green House _____
School _____

RESID'L BUILDINGS
_____ Stories
5 Rooms
_____ Apts
_____ Family
Duplex ✓ Flat _____
Dwlg. ✓ Bung. _____
Cottage ___ Shack ___

CONSTRUCTION
Lt. ___ Med. ✓ Hvy. ___
Masonry _____
Reinfd. Conc. ___ Fr. ___ Fl. ___
Steel Frame _____
Wood Frame ✓
Mill Frame _____
Single Wall _____
Double Wall ✓

FOUNDATION
Deep ✓ Shallow ✓
Concrete _____ ✓
Brick ___ Stone ___
Posts ___ Piers ___
Mudsill _____
Piles _____

ROOF
Gable ✓ Flat _____
Hip ___ Gambrel ___
Mansard ___ Drmr ___
Plain ✓ Cut up ___

ROOFING
Wood Shingle _____ ✓
Pat. Shingles _____
Tar & Gravel _____
_____ Tile
Composition _____
Metal _____
Cor. Iron _____ ✓
Good ___ Med. ✓ Chp ___

PORCHES: NUMBER
Front ✓ Rear ✓
Open ___ Roofed ✓
Screened _____
Glassed In _____

OUTBUILDINGS
Garage ✓ Cars
Detchd ✓ Attached ___
Shed ___ Barn ___
Poultry House _____

EXTERIOR WALLS
_____ Brick
_____ Stone
_____ Terra Cotta
_____ Tile
Stucco
_____ On Wood Lath
_____ On Chick Wire
Rustic ✓ OP _____ RW
Resawed _____
Brd. & Bat. _____
Shiplap _____
Novelty ___ T&G ___
Corr. Iron _____ ✓
Painted _____ ✓
Stained _____

EXTERIOR TRIM
Masonry _____
Metal _____
Plastic _____
Tile _____ ✓
Wood _____
Glass _____
Ornamental _____ ✓
Plain _____ ✓

STORE FRONT
_____ Bulkhead
_____ Plate in Met.
_____ Plate in Wood
_____ Plate Mit'red
_____ Sheet Glass.

INTERIOR DESCRIPTION

INSIDE TRIM
Stock ✓ Spec. _____
Pine ✓ Hdwd. _____
Painted ✓ Enam. _____

WALLS & CEILINGS
Plastered 4 Rms
Plast. Bd. _____ Rms
Compo. Bd. 1 Rms
Stucco _____ Rms
Wainscot _____
Paneled _____
Beamed Ceiling _____

DECORATING
Papered 4 Rms
Tinted _____ Rms
Canvas _____ Rms
Sanitas _____ Rms
Cloth & Pap. _____ Rms
_____ Rms Unfin.
Plain ✓ Med. ___ Good ___

FLOORS
Number of Rooms RW
Pine _____
Hardwood _____
Cement _____
Tile _____
Marble _____
Terrazzo _____
Composition _____
Earth _____

PLUMBING
No. of Fixt. 5
Old Style _____ ✓
Modern _____
Good ___ Med. ___ Chp. ✓

BATH ROOMS
Large ✓ Small _____
Rooms _____ NO.
Good _____
Medium _____ ✓
Cheap _____
Shower _____
Tile Floor _____
Tile Wall ½ ¾ 9/11

LIGHTING
No. of Fixt. _____
Electric _____
Old Style _____
Modern _____
Gas ___ Oil _____
Good ___ Med. ___ Chp. ___
Special _____

HEATING
Firepl. ___ Stove ___
Hot Air Furn. _____
___ Ducts: ___ Pipeless
Gas or Oil Fire ___
Radiant Fire _____
Steam or Hot Wat. ___
Arcola System _____
Thermostat _____
Floor ✓
Wall Furn. _____

BUILT-IN FEATURES.
Kitch. Cab. ✓ Ft
Buffet _____ Ft
Book Cases _____
Lockers _____
Patent Beds _____
Refrigerator _____
Open Shelvg. _____

MISCELLANEOUS
Sidewalk Lights ___
Fire Escapes _____
Plate Glass _____

MECHANICAL EQUIPMENT - Pres. Val.
Ventilating System $ _____
Sprinkler System $ _____
Automatic Fire Alarm $ _____
Vacuum Cleaning System $ _____
Water Heater ✓ Storage ___ Automatic
Air Conditioning $ _____
Well _____ Windmill ___ Elec. Pump _____
Tank _____ Pressure System _____

OUTBUILDINGS-VALUE Under $400
Dimen. 17 X 10 Ft: Age _____
Walls _____ Roof _____ Floor _____
Area 170 SqFt @ $ _____
Repro. Cost $ _____
____ % Good: PRES. VALUE $ _____

BASEMENT
Garage _____ Cars
Full ___ Part ___ None ___
Floor: Cm. St. Wd. Dt
Walls: Cm. St. Wd. Dt
Un. _____ Finished

ELEVATORS
Speed: ___ Hi ___ Low
Elec. ___ Hyd. ___ Auto
Pass. Ft. Dmb Wt.
Height _____ Ft
Sidewalk _____

ATTACHMENT 8

BLOCK NO. 126 LOT NO. BLOCK BOOK PAGE

Description, Dimensions and Ownership of Real Property Described herein, conforms with Official Block Book, and Assessment Map of The City Named on Reverse. No accountability Assumed for Matters Legal in Character. Computation of Values of Land and Buildings in Accordance with Contract Provisions for Equatax System Valuation.

SYMBOL	FRONT	DEPTH	PCT.	COEF.	UNIT	COMPUTED VALUE
	150	x 119 ⊕	107	1/60 N D	7½	$ 1204
		x				
		x				
		x				
	Added For Corner					
	Added For Alley					

SYMBOLS
F.T.=Front Triangle. R.T.=Rear Triangle. B.L.=Back Lot Comp.
C.I.=Corner Influence. ♂ = Reverse Corner Comp.

TOTAL $

YEAR	1940	19	19	19
Land Value	$ 120	$	$	$
Building Value	$ 1600	$	$	$
Number of Bldgs	4			

OWNERSHIP RECORD

1940
1941 M. Mc Donnell
1942
1943
1944
1945
1946
1947

Retail Business ☐ Residence ☐
Semi Business ☐ Industrial ☐

SPECIAL REMARKS ⊕ Average Depth.

SKETCHES OR REMARKS, OR METES AND BOUNDS DESCRIPTION

REVISIONS AND ADJUSTMENTS: Record Below Subsequent Changes in Value due to Re-appraisal. Indicate Reason for Action Such as Additions, Alterations, Rebuilding, Fire Loss, Demolition, or Removal of Buildings.

DATE	Reason for Action	BY	COST FACTOR	REPRO. COST	DEPRECIATION	REVISED VALUE
1946.	65 ft was conveyed to Samson estate			3rd el	0.B.	
	85 ft retained by Mc Donnell & Hwy + garage + Chicken House -					
	Land valuation - assessed @ $5 per ft.					

ATTACHMENT 9

47
7ATS333

239

121
HAPPY HALLOWEEN
BOO
BOO
121

234

202

CEMETERY
139
TOYOTA
TACOMA LX
4WD

TOWN OF LOS GATOS
HISTORIC PRESERVATION COMMITTEE
REPORT

MEETING DATE: 11/19/2025

ITEM NO: 9

DATE: November 14, 2025

TO: Historic Preservation Committee

FROM: Joel Paulson, Community Development Director

SUBJECT: Consider a Request for Approval to Modify a Previously Approved Project to Construct a Second-Story Addition Exceeding 100 Square Feet and Exterior Alterations to an Existing Contributing Single-Family Residence in the Almond Grove Historic District on Property Zoned R-1D:LHP. **Located at 328 Bachman Avenue**. APN 510-14-037. Request for Review Application PHST-25-025. Exempt Pursuant to CEQA Guidelines, Section 15301: Existing Facilities. Property Owner: Snighdha Uday Dharmavaram. Applicant: Bess Wiersema. Project Planner: Sean Mullin.

RECOMMENDATION:

Consider a request for approval to modify a previously approved project to construct a second-story addition exceeding 100 square feet and exterior alterations to an existing contributing single-family residence in the Almond Grove Historic District on property zoned R-1D:LHP located at 328 Bachman Avenue.

PROPERTY DETAILS:

1. Date primary structure was built: 1900 per County Assessor's Database; 1885 per researched records
2. Town of Los Gatos Historic Status Code: N, probably built since 1950
3. Does property have an LHP Overlay? Yes
4. Is structure in a historic district? Yes, Almond Grove Historic District
5. If yes, is it a contributor? No
6. Findings required? No
7. Considerations required? Yes

PREPARED BY: Sean Mullin, AICP
Planning Manager

BACKGROUND:

On January 22, 2025, the Committee considered a Minor Residential Development application for a request to construct a second-story addition exceeding 100 square feet and exterior alterations to the existing contributing single-family residence. The project included a second-story addition of 132 square feet on the rear elevation and demolition of a portion of the first floor at the rear elevation, which the applicant indicated was not historic given the contemporary materials of the siding (T1-11 panels) and windows (aluminum). The project also included an addition on the first floor within the footprint of the area to be demolished and a new wood deck on the rear elevation.

The approved exterior materials include a composition roof, wood scalloped siding, horizontal wood ship-lap siding, wood trim, a wood deck and railing, and a wrought iron railing at the new lightwell. Exterior alterations included five new wood windows on the first floor, two sets of French doors opening up to the deck on the rear elevation, and two new vinyl windows on the second floor on the rear elevation to match two existing vinyl windows on the front elevation.

The Committee recommended approval of the Minor Residential Development application, which was approved by the Town on March 31, 2025.

On October 29, 2025, the applicant contacted staff and provided a detail of modifications to the approved project. While these modifications are in substantial compliance with the Minor Residential Development approval as it relates to size and mass, they do deviate from the approved exterior appearance of the residence and are being forwarded to the Committee for consideration.

DISCUSSION:

The applicant provided a project description (Attachment 1), details of the project revisions (Attachment 2) and revised development plans (Attachment 3). The applicant now proposes a reduced project scope. The reconstruction of the below-grade area has been removed from the project. As a result, the necessary light wells were eliminated. The second-story addition was also reconfigured and reduced in size, eliminating the gable-end addition. A new dormer is now proposed on the rear elevation to match the existing dormer. The existing hipped-roof on the first floor of the rear elevation would be carried across the rear façade. All other exterior alterations approved with the Minor Residential Development application would remain.

CONSIDERATIONS:

A. Considerations

Sec. 29.80.290. Standards for review.
In evaluating applications, the deciding body shall consider the architectural style, design,

arrangement, texture, materials and color, and any other pertinent factors. Applications shall not be granted unless:

_X_ In historic districts, the proposed work will neither adversely affect the exterior architectural characteristics or other features of the property which is the subject of the application, nor adversely affect its relationship, in terms of harmony and appropriateness, with its surroundings, including neighboring structures, nor adversely affect the character, or the historical, architectural or aesthetic interest or value of the district.

B. Residential Design Guidelines

Section 3.9 and 4.8.4 of the Residential Design Guidelines offers recommendations for construction of additions to an existing residences and window materials (Attachment 5).

CONCLUSION:

The applicant is requesting a recommendation of approval to modify a previously approved project to construct a second-story addition exceeding 100 square feet and exterior alterations to an existing contributing single-family residence in the Almond Grove Historic District on property zoned R-1D:LHP located at 328 Bachman Avenue. Should the Committee find merit in the request, a recommendation of approval would be forwarded to the Community Development Director and the proposed project would continue through the Building Permit process and would not return to the Committee.

ATTACHMENTS:

1. Project Description
2. Details of Project Revisions
3. Development Plans

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Town of Los Gatos Planning Dept.

Attn: HPC

Re: 328 Bachman Ave.

11-12-2025

To whom it concerns,

In January, renovation plans for 328 Bachman Ave. were approved by the HPC. Due to budget constraints, we have re-worked a portion of the proposed addition, *reducing* the impact on the existing building volume.

Changes:

- Reduced square footage of addition by approximately 74 +/- square feet
- Removed the proposed large open gable from the rear elevation.
- Addition of a new, *smaller* dormer that matches and mirrors an existing dormer at the rear elevation.

Because the scope of work is now reduced, and the revised volume of the structure fits within the previously approved story poles, it is our hope that the HPC will find the new plans in keeping with the town's historic standards.

Appreciatively,

Bess Wiersema

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T **408.292.3252** F **253.399.1125**
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TOWN OF LOS GATOS
Ms. Maria Chavarin (Planning)
Mr. Robert Gray (Building)
Ms. Susan O'Brien (OCC - Building)
110 East Main Street
Los Gatos, CA 95030

Tuesday, October 21, 2025

RE: Snigdha/Dharmavaram Residence
328 Bachman Avenue
Los Gatos CA, 95030
B25-0330

Ladies & gentlemen,

This letter is intended to explain and/or identify voluntary revisions made to the plans based on returning preliminary construction cost items. All revisions are noted with "B2" for the Building Permit 2nd Review. I have indicated the sheets that were revised with more detailed descriptions of the changes.

PLANNING DIVISION: (Ms Chavarin)

1. With respect to Planning implications, the following changes were made which would have negated most of the reviews already completed.
   - The owner has decided to completely abandon the reconstruction of the Cellar/Basement. The plan is to now simply reconstruct the stairs to be more inviting with respect to rise/run, but all other aspects shall remain "as-is".
   - Due to the above, there will be NO light-wells so "Tree-Protection" fencing is no longer required.
   - The entire 2nd story addition has also been reconfigured to be a simple second dormer to match the existing along that same roof plane.
   - See also the changes made for the Building Division for description.

BUILDING DIVISION: (Mr. Gray, Ms. O'Brien)

1. A1.1: TITLE SHEET/SITE PLAN: New floor areas have been identified with the reduction of scope of work, specifically the 2nd story addition.
2. A1.1: TITLE SHEET/SITE PLAN: All light-wells have been removed and storm water retention wattles have been reconfigured and dedicated to the area of scope of work.
3. A2.1: CELLAR/BASEMENT FLOOR PLAN(S): Revised so only the stair is noted for reconstruction. All windows in that space shall remain.
4. A2.2: 1ST LEVEL FLOOR PLAN(S): The front bedroom bath/closet has been reconfigured resulting in the elimination of a proposed new window along that right side exterior wall.

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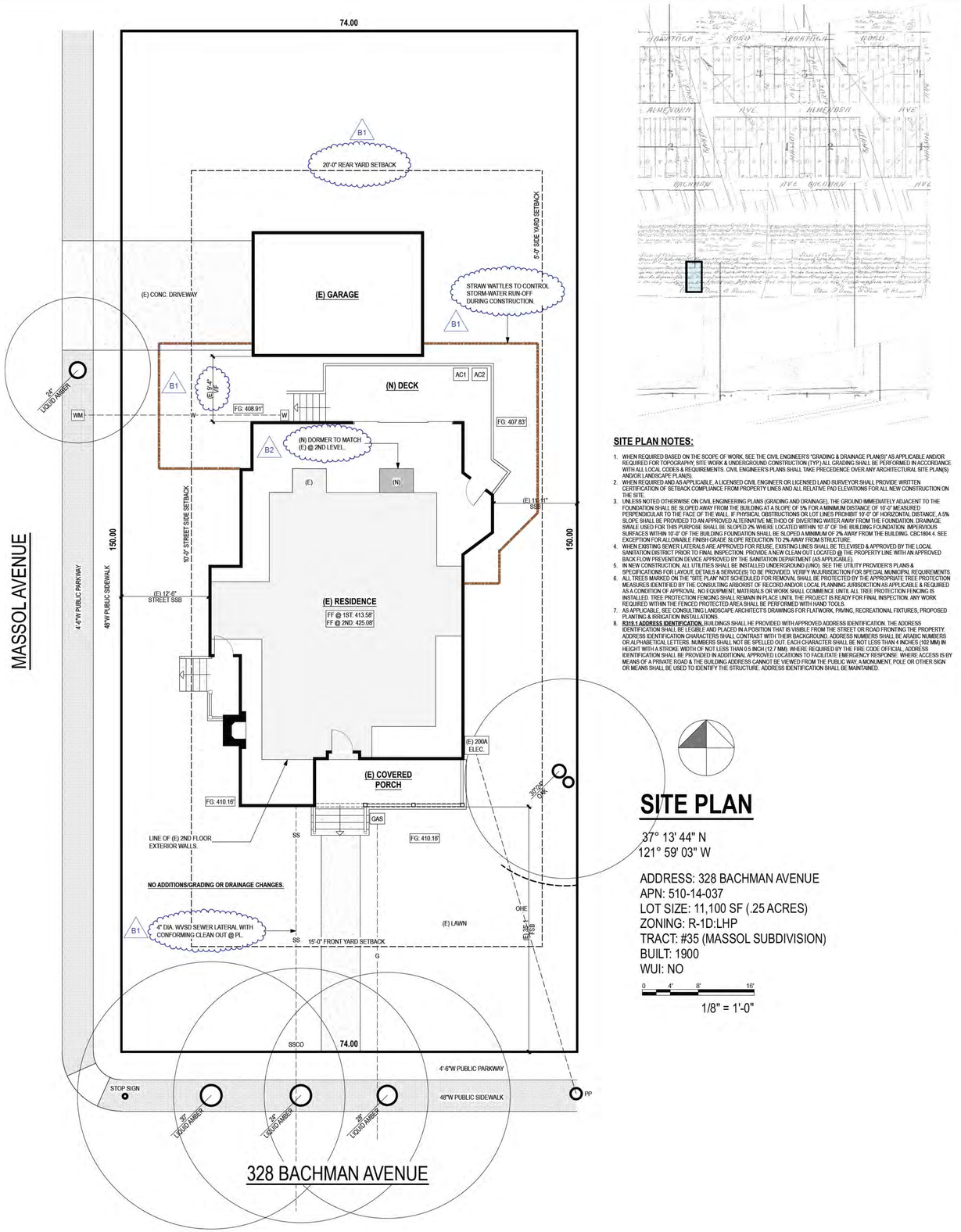
5. A2.3: 2ND LEVEL FLOOR PLAN(S): As previously mentioned, the Primary Bathroom Suite has been completely reconfigured to ONLY include a new dormer matching the existing.
6. A2.4: ROOF PLAN(S): Correct roof line layout has been revised indicating the new dormer.
7. A2.5: (E) “COLORIZED” EXTERIOR ELEVATIONS: Slight adjustments to the (e) exterior elevations have been made indicating the reduction of demolition.
8. A3.1: EXTERIOR ELEVATIONS: All plan adjustments made resulting in exterior modifications have been made.
9. A3.2: EXTERIOR ELEVATIONS: All plan adjustments made resulting in exterior modifications have been made.
10. A3.3: EXTERIOR ELEVATIONS: All plan adjustments made resulting in exterior modifications have been made.
11. A3.4: EXTERIOR ELEVATIONS: All plan adjustments made resulting in exterior modifications have been made.
12. A4.1: SECTIONS: All plan adjustments made resulting in sectional modifications have been made.
13. A4.2: SECTIONS: All plan adjustments made resulting in sectional modifications have been made.
14. ME.1: CELLAR/BASEMENT ELECTRICAL: Reduced scope of work indicated.
15. ME.2: 1ST LEVEL ELECTRICAL: Reduced scope of work indicated.
16. ME.3: 2ND LEVEL ELECTRICAL: Revised scope of work indicated.
17. S.1: FOUNDATION PLAN: Revision to scope of work indicated, stamped & signed by EOR.
18. S.2: 2ND LEVEL FLOOR FRAMING: Revision to scope of work indicated, stamped & signed by EOR.
19. S.3: ROOF FRAMING: Revision to scope of work indicated, stamped & signed by EOR.
20. T24: New Title 24 Energy Calculations provided for reduction of SF, glass area, etc…..
21. STRUCTURAL CALCS: New calculations provided for redesign of shear, beams, etc…

If you have any further questions or requirements, please do not hesitate to ask.

Best,

Mike Rowe for
Studio-Three



SITE PLAN NOTES:

1. WHEN REQUIRED BASED ON THE SCOPE OF WORK, SEE THE CIVIL ENGINEER'S "GRADING & DRAINAGE PLAN(S)" AS APPLICABLE AND/OR REQUIRED FOR TOPOGRAPHY, SITE WORK & UNDERGROUND CONSTRUCTION (TYP.) ALL GRADING SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL CODES & REQUIREMENTS. CIVIL ENGINEER'S PLANS SHALL TAKE PRECEDENCE OVER ANY ARCHITECTURAL SITE PLAN(S) AND/OR LANDSCAPE PLAN(S).
2. WHEN REQUIRED AND AS APPLICABLE, A LICENSED CIVIL ENGINEER OR LICENSED LAND SURVEYOR SHALL PROVIDE WRITTEN CERTIFICATION OF SETBACK COMPLIANCE FROM PROPERTY LINES AND ALL RELATIVE PAD ELEVATIONS FOR ALL NEW CONSTRUCTION ON THE SITE.
3. UNLESS NOTED OTHERWISE ON CIVIL ENGINEERING PLANS (GRADING AND DRAINAGE), THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF 5% FOR A MINIMUM DISTANCE OF 10'-0" MEASURED PERPENDICULAR TO THE FACE OF THE WALL. IF PHYSICAL OBSTRUCTIONS OR LOT LINES PROHIBIT 10'-0" OF HORIZONTAL DISTANCE, A 5% SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATIVE METHOD OF DIVERTING WATER AWAY FROM THE FOUNDATION. DRAINAGE SWALE USED FOR THIS PURPOSE SHALL BE SLOPED 2% WHERE LOCATED WITHIN 10'-0" OF THE BUILDING FOUNDATION. IMPERVIOUS SURFACES WITHIN 10'-0" OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2% AWAY FROM THE BUILDING. CBC1804.4. SEE EXCEPTION FOR ALLOWABLE FINISH GRADE SLOPE REDUCTION TO 2% AWAY FROM STRUCTURE.
4. WHEN EXISTING SEWER LATERALS ARE APPROVED FOR REUSE, EXISTING LINES SHALL BE TELEVISED & APPROVED BY THE LOCAL SANITATION DISTRICT PRIOR TO FINAL INSPECTION. PROVIDE A NEW CLEAN OUT LOCATED @ THE PROPERTY LINE WITH AN APPROVED BACK FLOW PREVENTION DEVICE APPROVED BY THE SANITATION DEPARTMENT (AS APPLICABLE).
5. IN NEW CONSTRUCTION, ALL UTILITIES SHALL BE INSTALLED UNDERGROUND (UNO). SEE THE UTILITY PROVIDER'S PLANS & SPECIFICATIONS FOR LAYOUT, DETAILS & SERVICE(S) TO BE PROVIDED. VERIFY W/JURISDICTION FOR SPECIAL MUNICIPAL REQUIREMENTS.
6. ALL TREES MARKED ON THE "SITE PLAN" NOT SCHEDULED FOR REMOVAL SHALL BE PROTECTED BY THE APPROPRIATE TREE PROTECTION MEASURES IDENTIFIED BY THE CONSULTING ARBORIST OF RECORD AND/OR LOCAL PLANNING JURISDICTION AS APPLICABLE & REQUIRED AS A CONDITION OF APPROVAL. NO EQUIPMENT, MATERIALS OR WORK SHALL COMMENCE UNTIL ALL TREE PROTECTION FENCING IS INSTALLED. TREE PROTECTION FENCING SHALL REMAIN IN PLACE UNTIL THE PROJECT IS READY FOR FINAL INSPECTION. ANY WORK REQUIRED WITHIN THE FENCED PROTECTED AREA SHALL BE PERFORMED WITH HAND TOOLS.
7. AS APPLICABLE, SEE CONSULTING LANDSCAPE ARCHITECT'S DRAWINGS FOR FLATWORK, PAVING, RECREATIONAL FIXTURES, PROPOSED PLANTING & IRRIGATION INSTALLATIONS.
8. **R319.1 ADDRESS IDENTIFICATION.** BUILDINGS SHALL HE PROVIDED WITH APPROVED ADDRESS IDENTIFICATION. THE ADDRESS IDENTIFICATION SHALL BE LEGIBLE AND PLACED IN A POSITION THAT IS VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBERS SHALL NOT BE SPELLED OUT. EACH CHARACTER SHALL BE NOT LESS THAN 4 INCHES (102 MM) IN HEIGHT WITH A STROKE WIDTH OF NOT LESS THAN 0.5 INCH (12.7 MM). WHERE REQUIRED BY THE FIRE CODE OFFICIAL, ADDRESS IDENTIFICATION SHALL BE PROVIDED IN ADDITIONAL APPROVED LOCATIONS TO FACILITATE EMERGENCY RESPONSE. WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD & THE BUILDING ADDRESS CANNOT BE VIEWED FROM THE PUBLIC WAY, A MONUMENT, POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. ADDRESS IDENTIFICATION SHALL BE MAINTAINED.

SITE PLAN

37° 13' 44" N
121° 59' 03" W

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

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

PROJECT DATA:

PROJECT ADDRESS:	328 BACHMAN AVENUE LOS GATOS, CA 95030
APN:	510-14-037
CONSTRUCTED:	1900
LOT AREA:	11,100 SF (0.25 ACRES)
ZONING:	R-1D:LHP
TRACT:	35 (MASSOL SUBDIVISION)
OCCUPANCY:	R3/U (SINGLE FAMILY RESIDENCE)
CONSTRUCTION TYPE:	V-B (NON-SPRINKLERED)
WUI ZONE:	NO
JURISDICTION:	TOWN OF LOS GATOS
FIRE SPRINKLERS:	NO

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

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

HABITABLE AREAS:	EXISTING:	PROPOSED:	ALLOWED:
LIVING AREA @ 1ST	1,647 SF	1,647 SF	
LIVING AREA @ 2ND	997 SF	1,055 SF	
CELLAR (NIC IN FAR)	(1,393 SF)	(1,393 SF)	
HABITABLE TOTAL:		2,702 SF	3,300 SF (FAR = .30)

GARAGE AREA:			
(E) GARAGE AREA:	360 SF	360 SF	
GARAGE TOTAL:	360 SF	360 SF	921 SF (FAR = .083)

NON-HABITABLE AREAS:			
(E) COVERED PORCH	180 SF	180 SF	
(N) WOOD DECK:		291 SF	
NON-HABITABLE TOTAL:		471 SF	N/A

PROJECT INFO:

OWNER: [redacted]
328 BACHMAN AVENUE
LOS GATOS, CA 95030
[redacted]

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

STRUCTURAL ENGINEER: CHARLES WILLIAMS R.C.E.
MR. CHARLES WILLIAMS P.E.
PO BOX 1152
MOUNTAIN VIEW, CA 94042
(650) 279-8756
clwrce@aol.com

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

GOVERNING CODES:

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

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

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

SHEET INDEX:

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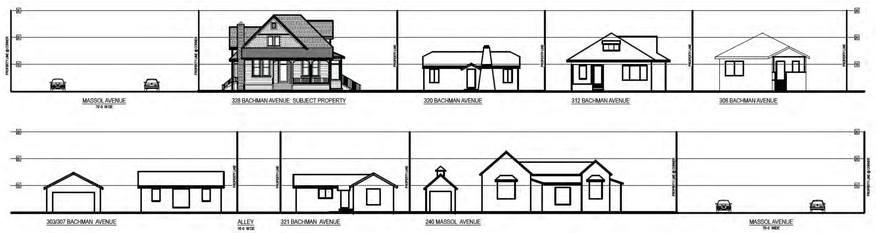
S.2	2ND FLOOR FRAMING PLAN
S.3	ROOF FRAMING PLAN
SD.1	STRUCTURAL DETAILS
SD.2	STRUCTURAL DETAILS
SD.3	STRUCTURAL DETAILS
SD.4	STRUCTURAL DETAILS
SN.1	STRUCTURAL NOTES
SN.2	STRUCTURAL NOTES
T24-1	TITLE 24 CALCULATIONS
T24-2	TITLE 24 CALCULATIONS

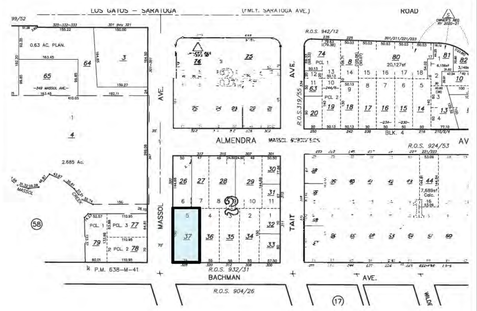
PROJECT SCOPE OF WORK:

SCOPE OF WORK: INTERIOR REMODEL TO AN EXISTING TWO-STORY, SINGLE FAMILY RESIDENCE WITH A CELLAR CONSTRUCTED IN 1900 (HISTORICAL). INCLUDES INTERIOR BATH REMODEL, KITCHEN REMODEL & STAIR RECONSTRUCTION @ MAIN LEVEL, A 44 SF ADDITION (UNDER THE ROOF LINE), & 14 SF DORMER ADDITION @ THE PRIMARY BATH @ 2ND LEVEL. REMODEL & ADDITION CREATES 4 BEDROOMS & 4.5 BATHS. ALL NEW DETAILS SHALL MATCH (E) HISTORICAL CONSTRUCTION IN MATERIALS, STYLE & ARCHITECTURAL PROPORTIONS.

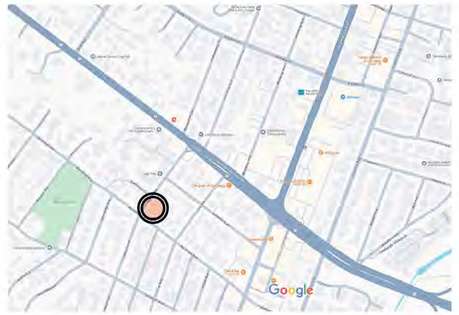
STREETSCAPE: BACHMAN AVENUE



PARCEL MAP (APM):



VICINITY MAP:



STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

638 UNIVERSITY AVE
LOS GATOS
CALIFORNIA
95032

t 408.292.3252
f 253.399.1125

B1 05/15/25
B2 10/08/25

[redacted]
RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

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

TITLE/SITE PLAN

A1.1

ATTACHMENT 3

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or altera ion increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addit on of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application.

Note: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section.

Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a cer ificate of final comple ion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

Exceptions:
1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.
2. [HCD] For purposes of *CAL*Green, live/work units, complying with Section 419 of the *California Building Code*, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable.

DIVISION 4.1 PLANNING AND DESIGN

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Addi ions and Alterations
N	New

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES

SECTION 4.102 DEFINITIONS

4.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLES. Wat les are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

4.106 SITE DEVELOPMENT

4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less han one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by he enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.

(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering he drainage path.

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the *California Electrical Code,* Article 625.

Exceptions:
1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
   1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power.
   1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without addi ional parking facilities.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

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 accordance with the *California Electrical Code.*

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall iden ify the overcurrent protec ive device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities.
When parking is provided, parking spaces for new multifamily dwellings, hote s and motels shall meet the requirements of Sections 4.106.4.2.1 and 4.106.4.2.2. Calcula ions for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details.

4.106.4.2.1Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms.
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exceptions:

1.When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces.

2.When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, he number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed.

Notes:

a.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts.

4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms.
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required.

Notes:

a.Construction documents shall show loca ions of future EV spaces.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of he total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts.

3.EV Chargers. Five (5) percent of he 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 he common use parking area and shall be available for use by all residents or guests.

When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by he ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces.

4.106.4.2.2.1 Electric vehicle charging stations (EVCS).
Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Sec ion 4.106.4.2.2.1.

Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable requirements.

4.106.4.2.2.1.1 Location.
EVCS shall comply with at least one of the following options:

1.The charging space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.

2.The charging space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Sec ion 4.106.4.2.2.1.1 and Sec ion 4.106.4.2.2.1.2, Item 3.

4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions.
The charging spaces shall be designed to comply with the following:

1.The minimum length of each EV space shall be 18 feet (5486 mm).

2.The minimum width of each EV space shall be 9 feet (2743 mm).

3.One in every 25 charging spaces, but not less han one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).

a.Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.2.1.3 Accessible EV spaces.
In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 1109A.

4.106.4.2.3 EV space requirements.
1.Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the location or the proposed location of the EV space. Construction documents shall identify the raceway termination point, receptacle or charger location, as applicable. The service panel and/ or subpanel shall have a 40-ampere minimum dedicated branch circuit, including branch circuit overcurrent protec ive device installed, or space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space, at the time of original construction in accordance with the California Electrical Code.

2.Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on amperage of installed or future receptacles or EVSE, raceway method(s), wiring schematics and electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space at the time of original construction in accordance with the California Electrical Code.

4.106.4.2.4 Identification.
The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

4.106.4.2.5 Electric Vehicle Ready Space Signage
Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings.
When new parking facilities are added, or electrical systems or ligh ing of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be electric vehicle charging spaces (EV spaces) capable of suppor ing future Level 2 EVSE.

Notes:

1.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

2.There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL

4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, he 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 fit ings (faucets and showerheads) shall comply with he sections 4.303.1.1, 4.303.1.2, 4.303.1 3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specifica ion for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more han 0.2 gallons per cycle.

4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above he maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1 8 gallons per minute at 60 psi.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.1.4.5 Pre-rinse spray valves.
When installed, shall meet the requirements in the *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 Sec ion 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALUES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5,0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8,0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)]

4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings.
Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the *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 1701.1 of he *California Plumbing Code.*

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

TABLE - MAXIMUM FIXTURE WATER USE

FIXTURE TYPE	FLOW RATE
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

4.304 OUTDOOR WATER USE

4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with a local water efficient landscape ordinance or he current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

NOTES:

1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the *California Code Regulations,* Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are available at: https://www.water.ca.gov/

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance wi h this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of his section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material collected will be taken.
4. Identify construction me hods employed to reduce he amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies wi h Section 4.408.1.

Note: The owner or contractor may make he determination if the construc ion and demolition waste materials will be diverted by a waste management company.

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construc ion waste reduction requirement in Section 4.408.1

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects hat generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet he minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.5 DOCUMENTATION. Documentation shall be prov ded to the enforcing agency which demonstrates compliance with Section 4.408.2, items 1 through 5, Sec ion 4.408.3 or Section 4.408.4..

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance wi h this section.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

4.410 BUILDING MAINTENANCE AND OPERATION

4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of he structure.
2. Operation and maintenance instructions for the following:
   a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
   b. Roof and yard drainage, including gutters and downspouts.
   c. Space conditioning systems, including condensers and air filters.
   d. Landscape irrigation systems.
   e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool op ions available in the area.
5. Educational material on he positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irriga ion design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspections verifica ions required by the enforcing agency or his code.
11. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.
12. Information and/or drawings identifying the location of grab bar reinforcements.

4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of this section.

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL

4.501.1 Scope
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.

SECTION 4.502 DEFINITIONS

5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, par icleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

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RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

A.P.N. 510-14-037

4/2/25
BUILDING SUBMITTAL SET

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

2022 CalGreen

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

A1.2

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O³/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

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

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

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

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings wi h vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503 FIREPLACES

4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL

4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and o her related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to he enforcing agency to reduce the amount of water, dust or debris which may enter the system.

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

4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollu ion or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of ***California Code of Regulations***, Title 17, commencing with section 94507.

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4 504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504 3 shall apply.

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for 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 Sec ion 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specifica ion.
2. Field verification of on-site product containers.

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]

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

ARCHITECTURAL APPLICATIONS	VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVE	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

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 QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT

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

SEALANTS	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

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

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

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 THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.5 - FORMALDEHYDE LIMITS[1]

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS 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 FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Vola ile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing me hod for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC aspx.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed , at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

hhttps://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4 504.5

4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. 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.
5. Other me hods 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 wi h at least one of the following:

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 wi h 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 he 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.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommenda ions prior to enclosure.

4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.
   a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automa ic means of adjustment.
   b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)

Notes:

1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.
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 me hods:

1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calcula ion), 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), 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 Selec ion), or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure he system functions are acceptable.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 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 certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and cer ified 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:

1. State certified appren iceship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspec ion or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the par icular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certifica ion by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. O her programs acceptable to the enforcing agency.

Notes:

1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC] When required by the enforcing agency, the owner or the responsible entity acting as he owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with his code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for he particular type of inspection or task to be performed. In addition, the special inspector shall have a cer ification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job func ion, as determined by the local agency.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

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 methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in he appropriate section or identified applicable checklist.

ADDITIONAL TOWN OF LOS GATOS CALGREEN NOTES:

1. VERIFICATION OF OF REPLACEMENT OF ALL EXISTING TO REMAIN NON-COMPLIANT PLUMBING FIXTURES WITH WATER-CONSERVING PLUMBING FIXTURES AS SPECIFIED IN CIVIL CODE SECTION 1101.1-1101.8, SHALL BE PROVIDED TO THE TOWN BUILDING INSPECTOR, PRIOR TO FINAL INSPECTION. THIS REQUIREMENT APPLIES TO ALL EXISTING TO REMAIN PLUMBING FIXTURES LOCATED WITHIN THE STRUCTURE UNDER THE SCOPE OF THIS PERMIT.
2. EFFECTIVE JANUARY 1, 2014 ALL RESIDENTIAL BUILDINGS UNDERGOING PERMIT ALTERATION, ADDITIONS, OR IMPROVEMENTS SHALL REPLACE NON-COMPLIANT PLUMBING FIXTURES WITH WATER-CONSERVING PLUMBING FIXTURES. PLUMBING FIXTURE REPLACEMENT IS REQUIRED PRIOR TO ISSUANCE 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 NON-COMPLIANT PLUMBING FIXTURE, TYPES OF RESIDENTIAL BUILDINGS AFFECTED AND IMPORTANT ENACTMENT DATES.

   CIVIL CODE SECTION 1101.3(C) "NONCOMPLIANT PLUMBING FIXTURE MEANS"
   1. ANY TOILET MANUFACTURED TO USE MORE THAN 1.6 GALLONS OF WATER PER FLUSH.
   2. ANY URINAL MANUFACTURED TO USE MORE THAN 1.0 GALLON OF WATER PER FLUSH.
   3. ANY SHOWER HEAD MANUFACTURED TO HAVE A FLOW CAPACITY OF MORE THAN 2.5 GALLONS OF WATER PER MINUTE.
   4. ANY INTERIOR FAUCET THAT EMITS MORE THAN 2.2 GALLONS OF WATER PER MINUTE.
3. ALL DOCUMENTATION SHALL BE PROVIDED, PRIOR TO FIRST INSPECTION, CONFIRMING COMPLIANCE TO THE WASTE MANAGEMENT PLAN PROVIDED TO THE JURISDICTION. CGBSC SECTION 4.408.2.1.
4. ALL ADHESIVES, SEALANTS, CAULKS, PAINTS, COATINGS, AND AEROSOL PAINT CONTAINERS MUST REMAIN ON THE SITE FOR FIELD VERIFICATION BY THE BUILDING INSPECTOR. CGBSC SECTION 4.504.2.4.
5. PRIOR TO FINAL INSPECTION, A LETTER SIGNED BY THE GENERAL CONTRACTOR OR THE OWNER/BUILDER (FOR ANY OWNER/BUILDER PROJECTS) MUST BE PROVIDED TO THE TOWN OF LOS GATOS BUILDING OFFICIAL CERTIFYING THAT ALL ADHESIVES, SEALANTS, CAULKS, PAINTS, COATINGS, AEROSOL PAINTS, AEROSOL COATINGS, CARPET SYSTEMS (INCLUDING CARPETING, CUSHION AND ADHESIVE), RESILIENT FLOORING SYSTEMS, AND COMPOSITE WOOD PRODUCTS INSTALLED ON THIS PROJECT ARE WITHIN THE EMISSION LIMITS SPECIFIED IN CGBSC SECTION 4.504.

STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

638 UNIVERSITY AVE
LOS GATOS
CALIFORNIA
95032

t 408.292.3252
f 253.399.1125

RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

A.P.N. 510-14-037

4/2/25
BUILDING SUBMITTAL SET

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

2022 CalGreen

A1.3

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

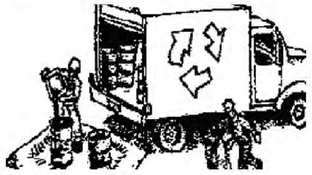
Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Construction Best Management Practices (BMPs)

West Valley Clean Water Authority
Campbell • Los Gatos • Monte Sereno • Saratoga

Construction projects are required to implement year-round stormwater BMPs.

Materials, Waste, and Sediment Management



Construction Entrances and Perimeter

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

Non-Hazardous Materials and Dust Control

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

Hazardous Materials

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

Waste Management

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

Equipment Management & Spill Control

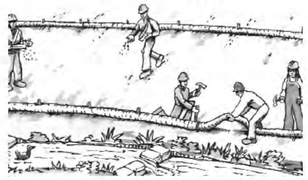
Vehicle and Equipment Maintenance

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

Spill Prevention and Control

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

Earthmoving



Grading and Earthwork

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

  Ensure all subcontractors working onsite are implementing appropriate BMPs.

Contaminated Soils

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

Landscaping

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

Concrete Management & Dewatering

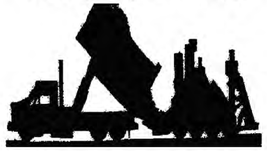
Concrete Management

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

Dewatering

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

Paving/Asphalt Work



Paving

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

Sawcutting & Asphalt/Concrete Removal

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

Painting & Paint Removal

Painting Cleanup and Removal

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

Copper Architectural Features

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

During Installation

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

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

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

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

February 2024, WVCWA 4/24

STUDIO THREE DESIGN

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RESIDENCE
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CA 95030

A.P.N. 510-14-037

4/2/25
BUILDING SUBMITTAL SET

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

LOS GATOS BMP

A1.4

CONDITIONS OF APPROVAL – March 20, 2025

328 Bachman Avenue
Minor Residential Application MR-24-016

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

TO THE SATISFACTION OF THE DIRECTOR OF COMMUNITY DEVELOPMENT:

Planning Division

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

    Applicant shall bear any and all losses, damages, injuries, liabilities, costs and expenses (including, without limitation, staff time and in-house attorney's fees on a fully-loaded basis, attorney's fees for outside legal counsel, expert witness fees, court costs, and other litigation expenses) arising out of or related to any Challenge ("Costs"), whether incurred by Applicant, Town, or awarded to any third party, and shall pay to the Town upon demand any Costs incurred by the Town. No modification of the Project, any application, permit certification, condition, environmental determination, other approval, change in applicable laws and regulations, or change in such Challenge as Town, in its sole discretion, determines appropriate, all the applicant's sole cost and expense. No modification of the Project, any application, permit certification, condition, environmental determination, other approval, change in applicable laws and regulations, or change in processing methods shall alter the applicant's indemnity obligation.
11. COMPLIANCE MEMORANDUM: A memorandum shall be prepared and submitted with the building plans detailing how the Conditions of Approval will be addressed.
12. DEMOLITION AFFIDAVIT: Prior to issuance of a building permit, a demolition affidavit must be submitted and signed by the property owner, project architect, project engineer and contractor.

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4/2/25
BUILDING SUBMITTAL SET

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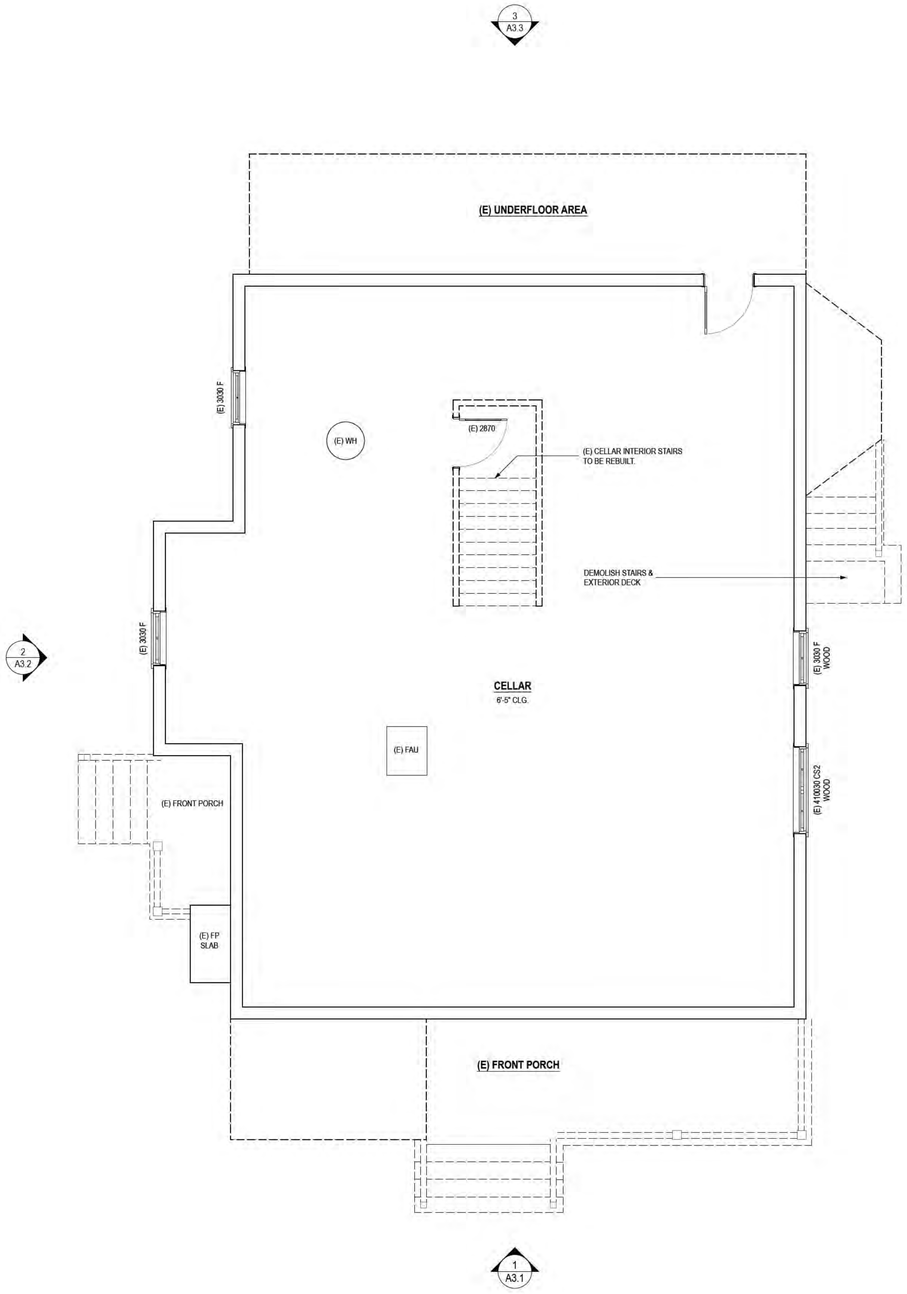
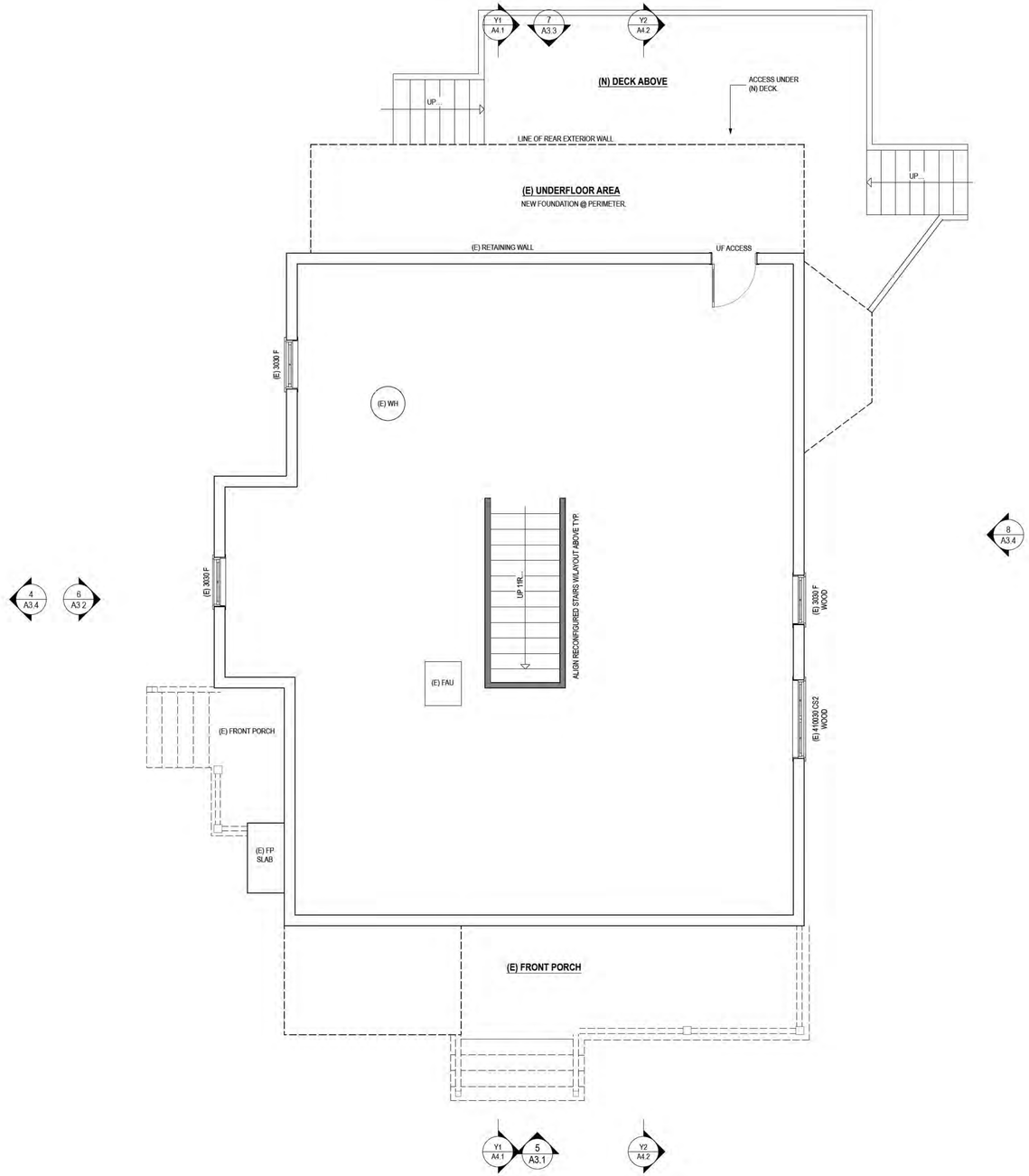
LOS GATOS COA

A1.5





NORTH
37° 13' 44" N
121° 59' 03" W

EXISTING CELLAR PLAN

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

(E) CONC. RW WALL TO BE REMOVED

(E) 2X DF STUD WALL TO REMOVE

(E) CELLAR AREA: 1,393 SF

NORTH
37° 13' 44" N
121° 59' 03" W

PROPOSED CELLAR PLAN

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

(E) CONC. RW WALL TO BE REMOVED

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

(E) CELLAR AREA: 1,393 SF

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B1 05/15/25
B2 10/08/25

[redacted]
RESIDENCE
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10/23/25
BUILDING SUBMITTAL SET

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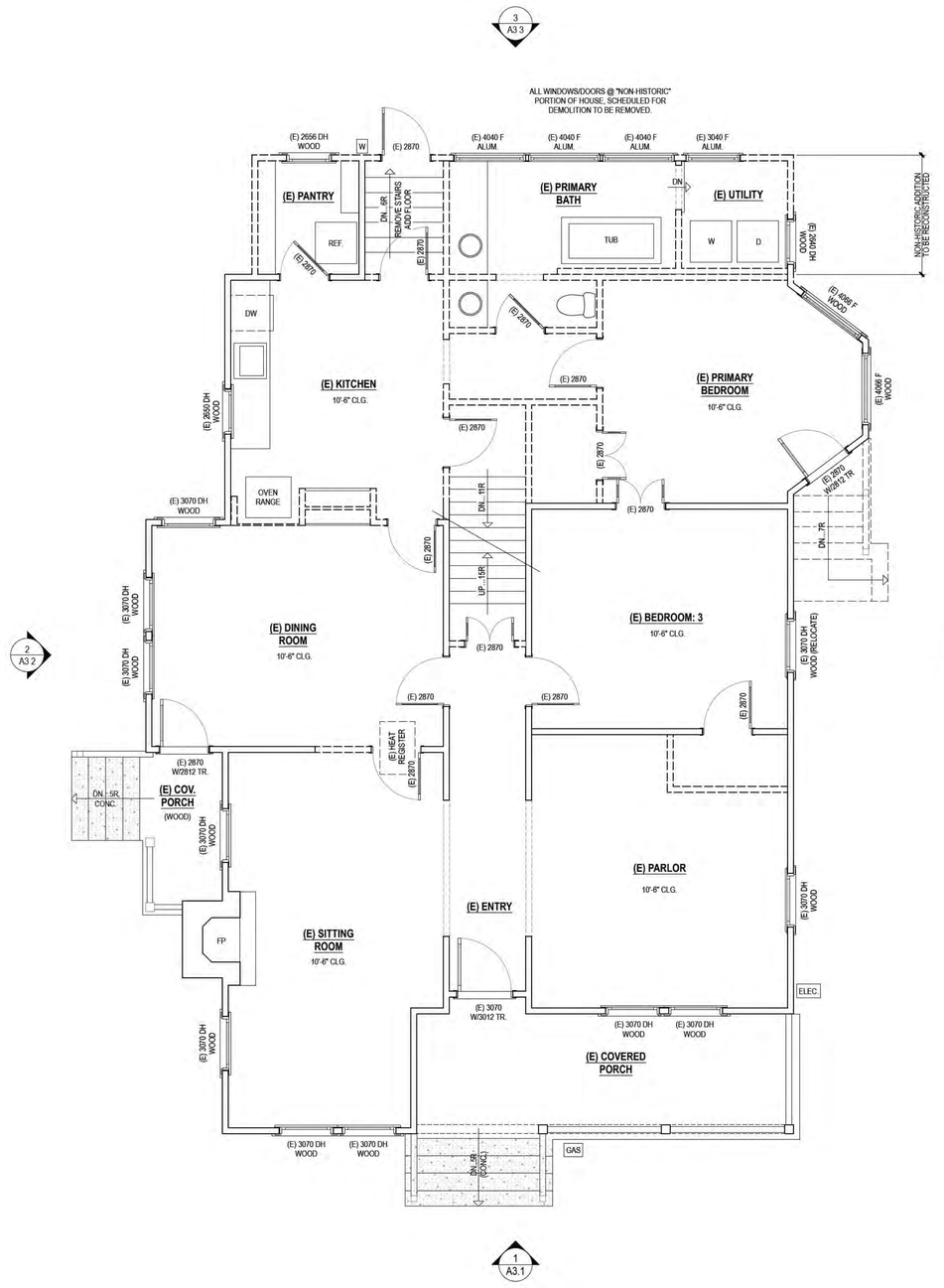
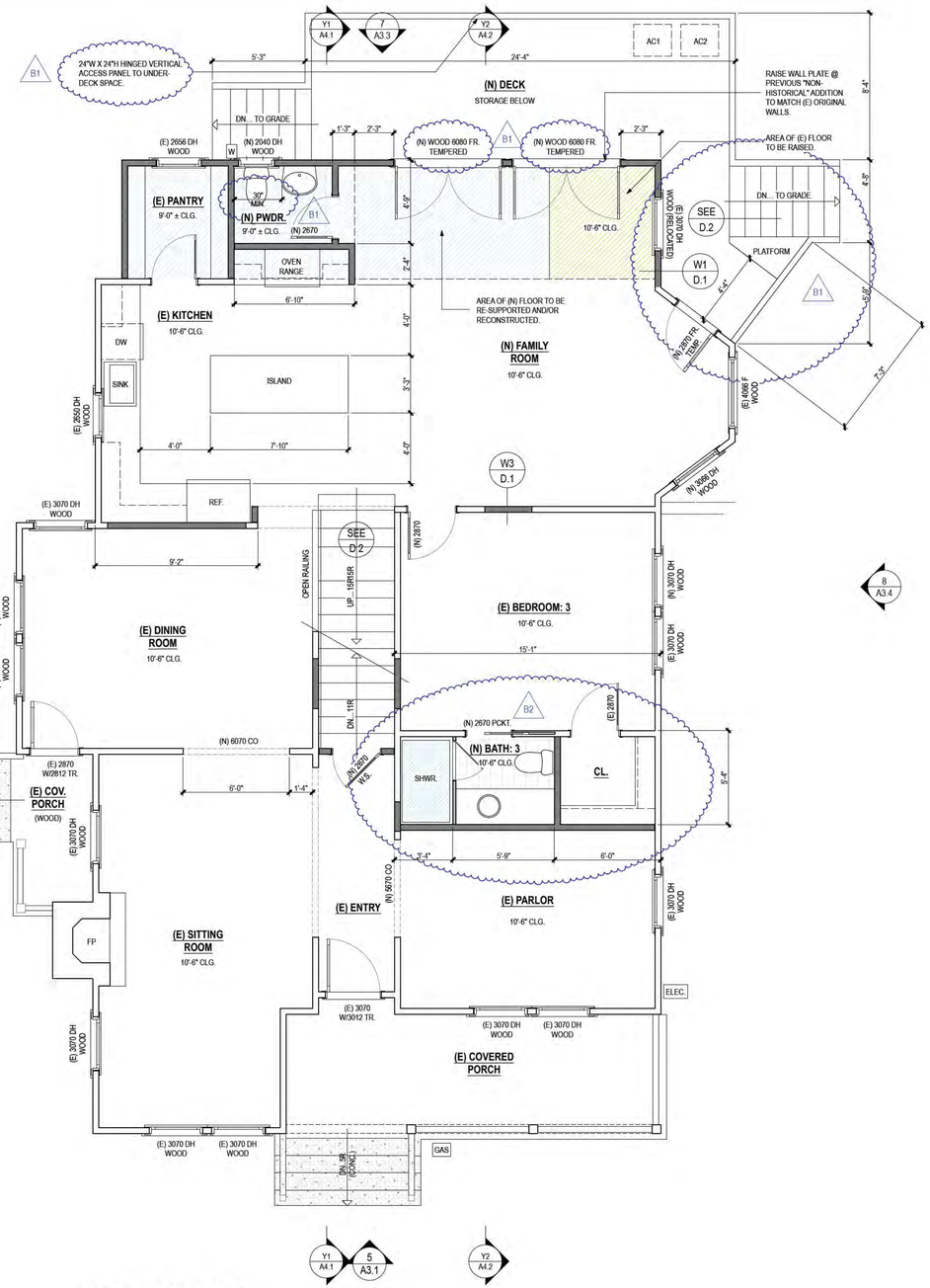
CELLAR PLANS

A2.1





NORTH

37° 13' 44" N
121° 59' 03" W

EXISTING 1ST LEVEL FLOOR PLAN/DEMO

0 2' 4' 8'

1/4" = 1'-0"

(E) 2X DF STUD WALL TO REMAIN

(E) 2X DF STUD WALL TO REMOVE

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

NORTH

37° 13' 44" N
121° 59' 03" W

PROPOSED 1ST LEVEL FLOOR PLAN

0 2' 4' 8'

1/4" = 1'-0"

NO NEW FLOOR AREA

(E) 2X DF STUD WALL TO REMAIN

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

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

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B1 05/15/25

B2 10/08/25

[redacted]
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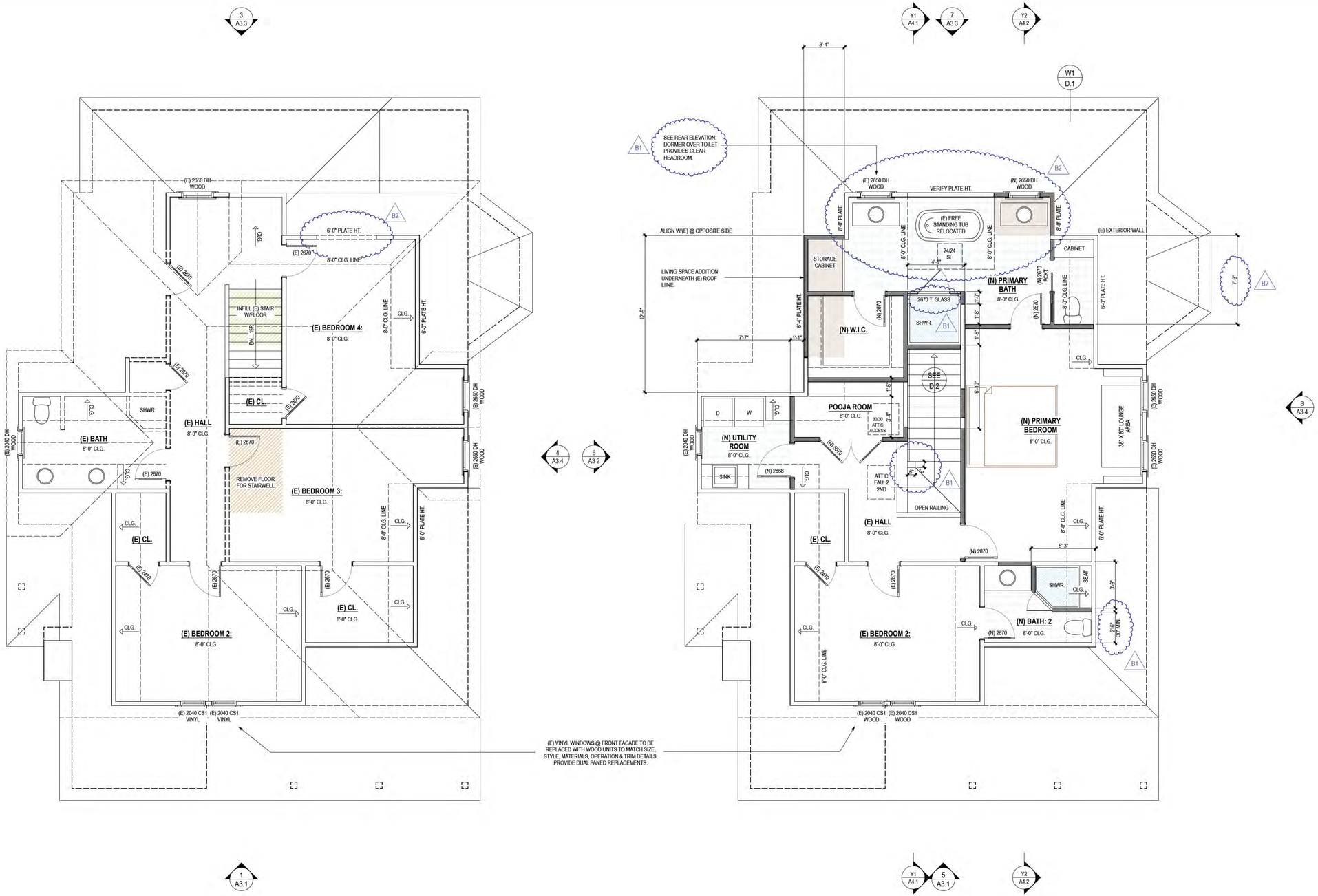
1ST FLOOR PLANS

A2.2



NORTH

37° 13' 44" N
121° 59' 04" W

EXISTING 2ND LEVEL FLOOR PLAN/DEMO

0 2' 4' 8'

1/4" = 1'-0"

(E) 2X DF STUD WALL TO REMAIN

(E) 2X DF STUD WALL TO REMOVE

(E) LIVING AREA: 997 SF

NORTH

37° 13' 44" N
121° 59' 04" W

PROPOSED 2ND LEVEL FLOOR PLAN

0 2' 4' 8'

1/4" = 1'-0"

(E) 2X DF STUD WALL TO REMAIN

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

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

STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

638 UNIVERSITY AVE
LOS GATOS
CALIFORNIA
95032

t 408.292.3252
f 253.399.1125

B1 05/15/25
B2 10/08/25

[redacted]
RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

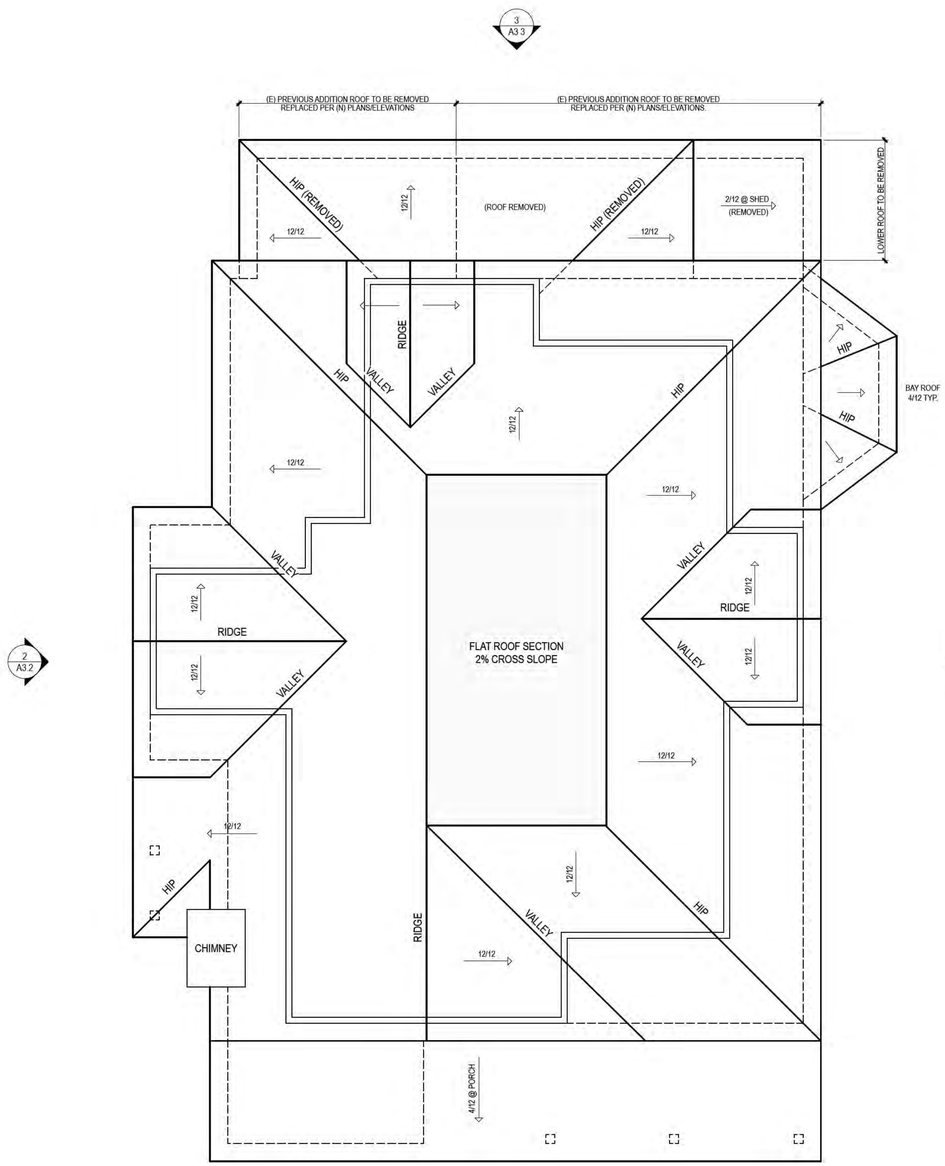
A.P.N. 510-14-037

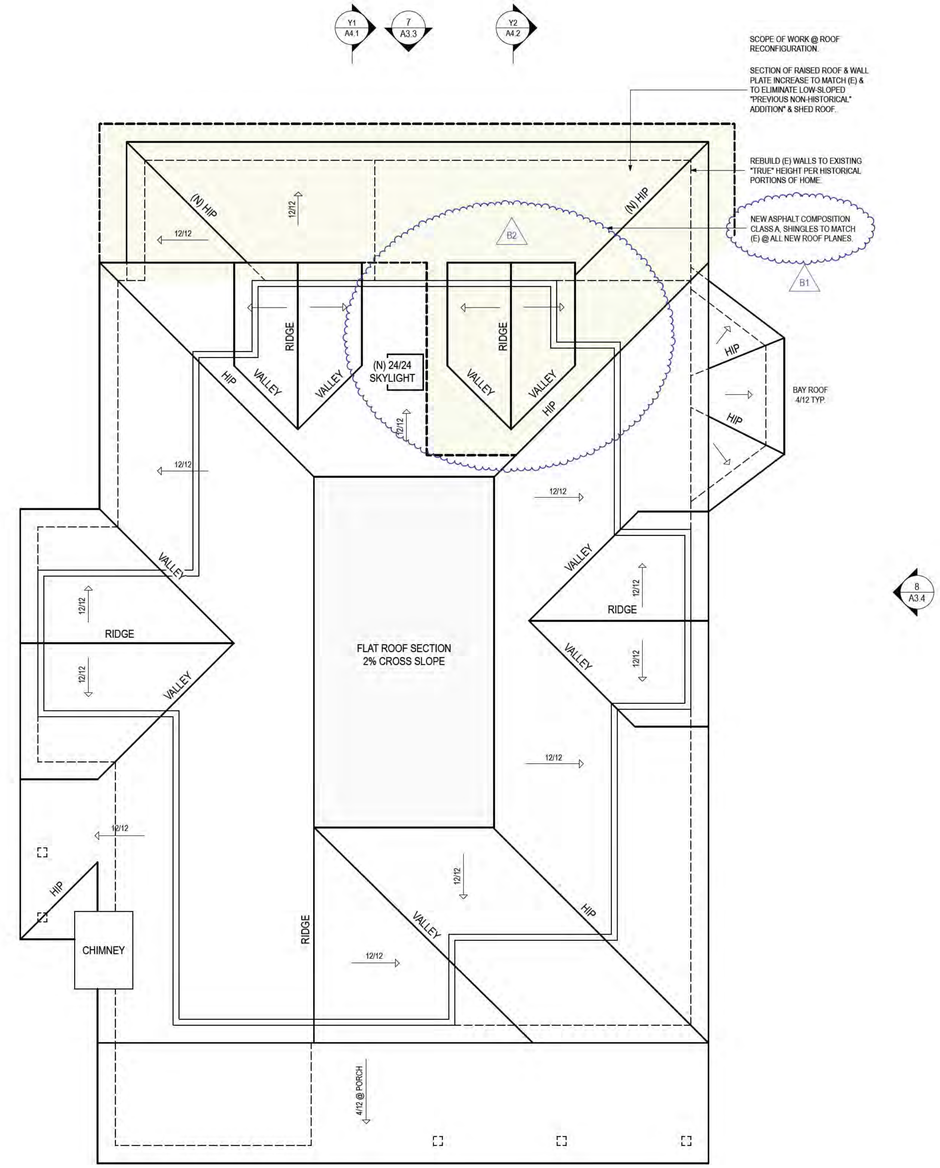
10/23/25
BUILDING SUBMITTAL SET

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

2ND FLOOR PLANS

A2.3





NORTH
37° 18' 23" N
121° 54' 38" W

EXISTING ROOF PLAN

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

NORTH
37° 18' 23" N
121° 54' 38" W

PROPOSED ROOF PLAN

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

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(E) & (N) ROOF PLAN

A2.4

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

EXISTING FRONT ELEVATION (SOUTHWEST)

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

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

EXISTING LEFT SIDE ELEVATION (NORTHWEST)

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

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

EXISTING RIGHT SIDE ELEVATION (NORTHEAST)

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

B2

TOWN OF LOS GATOS DEMOLITION CALCS (TOTAL EXTERIOR WALLS)

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

- REMOVAL IS LESS THAN 25% OF ALL EXTERIOR WALLS FACING A PUBLIC STREET. **NO TECHNICAL DEMOLITION**.
- REMOVAL IS LESS THAN FIFTY 50% OF ALL EXTERIOR WALLS. **NO TECHNICAL DEMOLITION**.
- AN EXTERIOR WALL ENCOMPASSES THE TOTAL HEIGHT AND WIDTH OF THE STUDS/STRUCTURAL ELEMENTS USED IN FRAMING THE SIDE OF THE BUILDING.
- MEASUREMENT OF EXISTING EXTERIOR WALLS, FOR THE PURPOSE OF DEMOLITION CALCULATION, IS A LINEAR MEASUREMENT OF THE PERIMETER OF EACH FLOOR OF THE BUILDING (THE PERIMETER OF THE FIRST FLOOR PLUS THE PERIMETER OF THE SECOND FLOOR).
  THERE IS AN EXEMPTION FOR REPAIR. PLEASE SEE SECTION 29.10.020 FOR THE EXEMPTION.
- ADDITIONAL INFORMATION:
- DRY ROT OR ANY OTHER DAMAGE DOES NOT EXEMPT THE PROJECT FROM ANY PROVISION SET FORTH BY SECTION 29.10.09030. IF YOU FIND DRY ROT AND NEED TO REPAIR IT, **STOP** WORK AND CONTACT THE PLANNING DIVISION AT (408) 354-6872 TO DISCUSS THE CHANGES BEFORE YOU PROCEED.
- IF YOU ENCOUNTER AN UNANTICIPATED SITUATION THAT CHANGES THE SCOPE OF WORK, **STOP** WORK AND CONTACT THE PLANNING DIVISION AT (408) 354-6872 TO DISCUSS THE CHANGES BEFORE YOU PROCEED.
- THE INSTALLATION OF NEW DOORS OR WINDOWS WITHIN EXISTING DOOR AND WINDOW OPENINGS DOES NOT COUNT AS DEMOLITION.

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

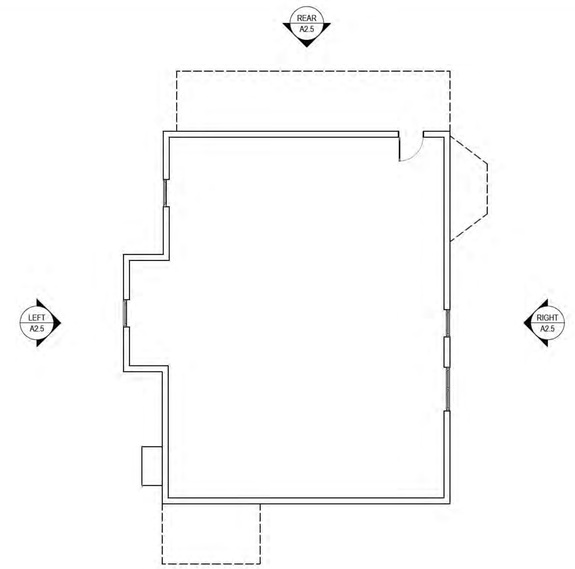
EXISTING REAR ELEVATION (NORTHWEST)

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

B2

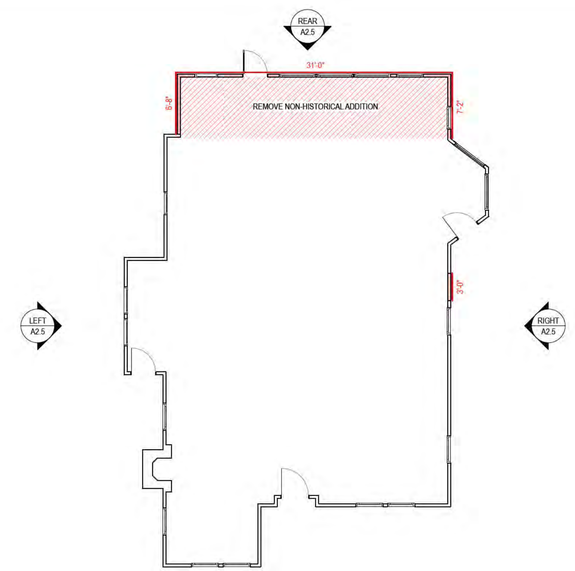
TOWN OF LOS GATOS DEMOLITION CALCS (TOTAL EXTERIOR WALLS FACING PUBLIC)

	TOTAL EXT. WALL AREA (SF)	WALL AREA TO BE REMOVED (SF)	WALL AREA TO REMAIN (SF)
FRONT	593	0	593
LEFT SIDE	896	72	824
TOTALS	1489.00	72.00	1417
TOTAL PROPOSED (%)		4.84%	95.16%
		4.84% < 25% THEREFORE NO TECHNICAL DEMO	



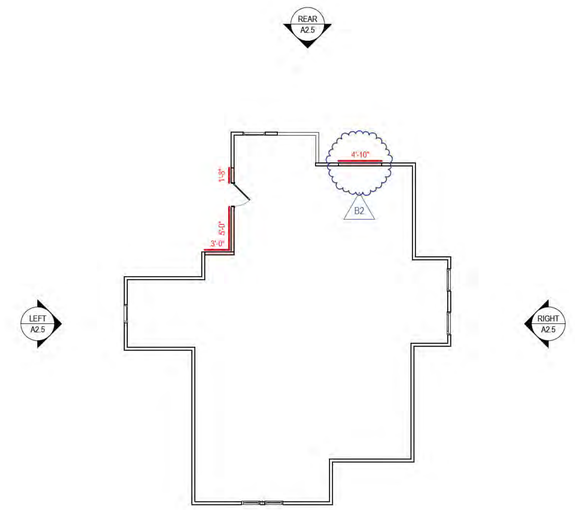
EXISTING CELLAR LEVEL EXTERIOR WALL DEMO 1/8" = 1'-0"

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



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

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



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

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

STUDIO THREE DESIGN

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CA 95030

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10/22/25
BUILDING SUBMITTAL SET

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

(E) 2ND FLOOR PLAN/DEMO

A2.5

BACHMAN AVE. STREET VIEW

1. EXISTING FRONT ELEVATION (SOUTHWEST)

BACHMAN AVENUE SIDE 1/4" = 1'-0"

FRONT PORCH RAILING DETAIL

5. PROPOSED FRONT ELEVATIO (SOUTHWEST)

BACHMAN AVENUE SIDE 1/4" = 1'-0"

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

(E & N) FRONT ELEVATIONS

A3.1

MASSOL AVE. STREET VIEW

2. EXISTING LEFT SIDE ELEVATION (NORTHWEST)

MASSOL AVENUE SIDE 1/4" = 1'-0"

6. PROPOSED LEFT SIDE ELEVATION (NORTHWEST)

MASSOL AVENUE SIDE 1/4" = 1'-0"

STUDIO THREE DESIGN

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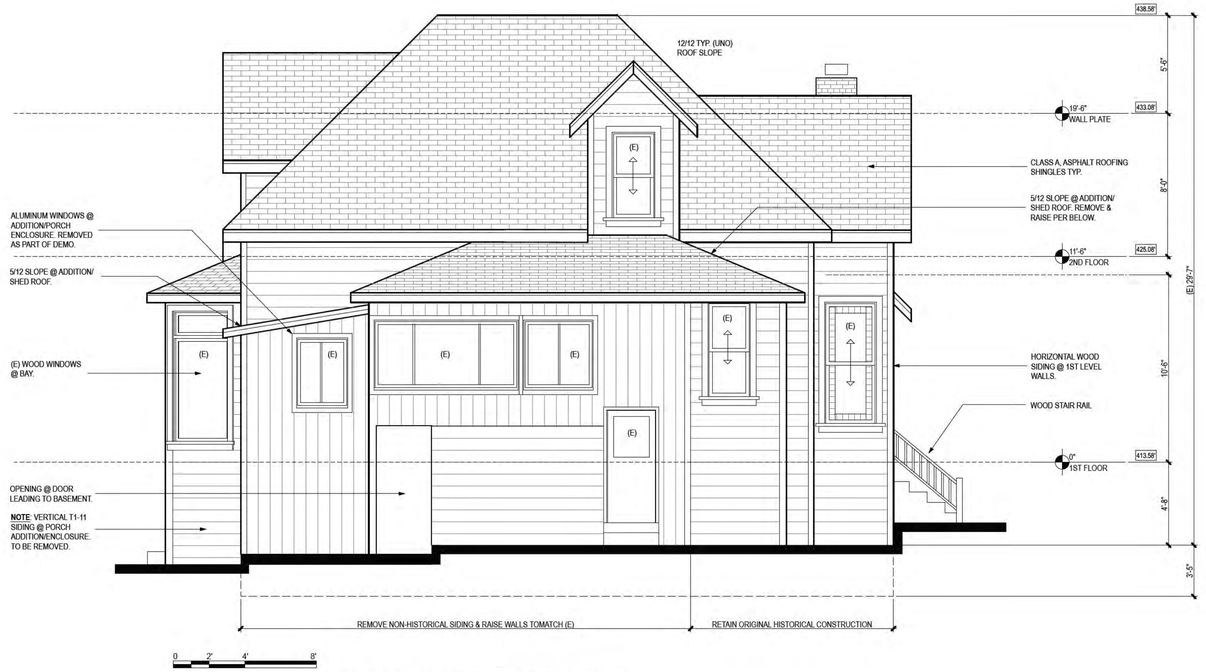
(N & E) LEFT ELEVATIONS

A3.2

NON-HISTORICAL ADDITION TO REMOVE



3. EXISTING REAR ELEVATION (NORTHWEST)

1/4" = 1'-0"

EXTERIOR ELEVATION FINISH SCHEDULE

ROOFING

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

EXTERIOR SIDING

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

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

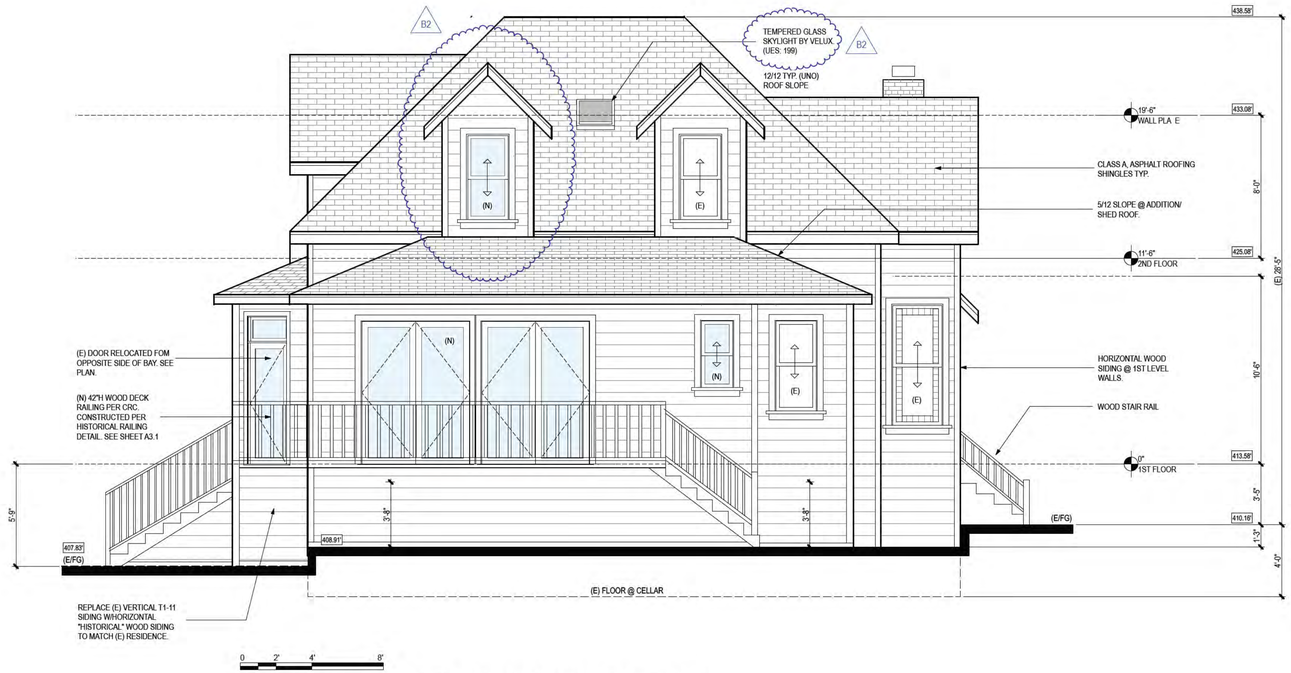
WALL BASE: A MINIMUM 0.019-INCH (0.5 MM) (NO. 26 GALVANIZED SHEET GAUGE), CORROSION-RESISTANT WEEP SCREED OR PLASTIC WEEP SCREED, WITH A MINIMUM VERTICAL ATTACHMENT FLANGE OF 3-1/2 INCHES (89 MM) SHALL BE PROV DED AT OR BELOW THE FOUNDATION PLATE LINE ON EXTERIOR STUD WALLS IN ACCORDANCE WITH ASTM C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

DOORS AND WINDOWS

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

ACCENTS

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



3. PROPOSED REAR ELEVATION (NORTHWEST)

1/4" = 1'-0"

STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
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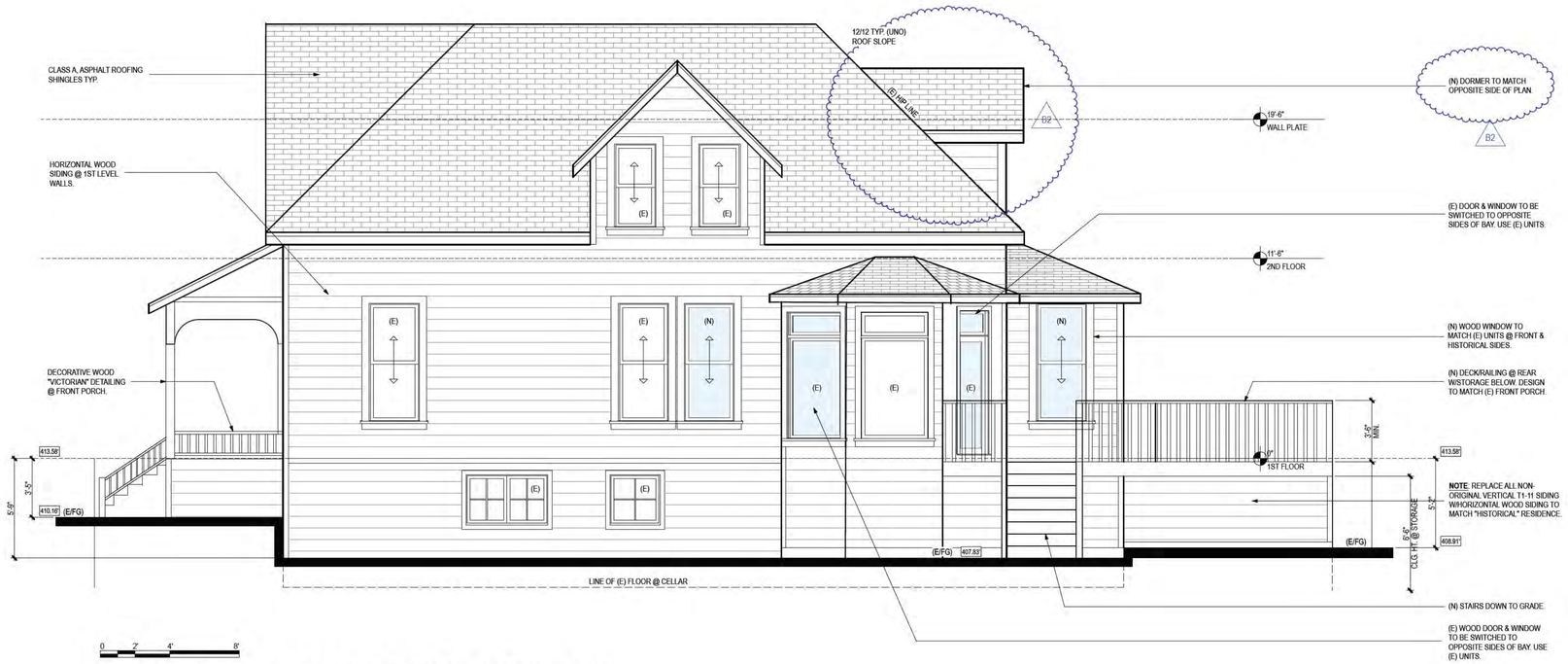
SCALE: 1/4" = 1'-0"

(N & E) REAR ELEVATIONS

A3.3

4. EXISTING RIGHT SIDE ELEVATION (NORTHEAST)

1/4" = 1'-0"



8. PROPOSED RIGHT SIDE ELEVATION (NORTHEAST)

1/4" = 1'-0"

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(N & E) RIGHT ELEVATIONS

A3.4

BUILDING SECTION NOTES:

ROOF ASSEMBLY:
1. SEE ROOF PLAN AND/OR EXTERIOR ELEVATIONS FOR SPECIFICATION OF ROOF SLOPE, ROOFING MATERIALS & UNDERLAYMENT. PROVIDE "RADIANT BARRIER" SHEATHING AS SPECIFIED IN THE TITLE 24 ENERGY REPORT AS APPLICABLE.
2. SEE ROOF FRAMING PLAN FOR SIZES & SPACING OF FRAMING MEMBERS:
3. ALL OPEN ATTIC SPACES SHALL BE VENTED PER CRC SECTION R806.2. SEE ROOF NOTES & VENTILATION CALCULATIONS PROVIDED.

CEILING ASSEMBLY:
1. SEE CEILING FRAMING PLAN(S) & HEADER/CEILING JOIST FRAMING SCHEDULE (SHEET SN.2) FOR SIZES & SPACING OF FRAMING MEMBERS NOT SPECIFICALLY DESIGNATED OR IDENTIFIED ON THE FRAMING PLAN(S).

WALL ASSEMBLY:
1. USE 2X4 OR 2X6 DF#2 STUDS @ 16"OC (TYP.) UNO. AS NOTED ON FLOOR/FRAMING PLAN(S).
2. USE 2X6 DF#2 STUDS @ ALL "BALLOON FRAMED" WALLS & WALLS OVER 10'-0" IN HEIGHT.
3. PROVIDE 2X DF#2 SOLID FIRE BLOCKING @ 10'-0"OC HORIZONTAL & VERTICAL
4. SEE SHEET SD.1 (DETAILS) FOR CONVENTIONAL FRAMING APPLICATIONS (WALLS, HEADERS, ALLOWABLE HOLES/ NOTCHING, ETC…)
5. SEE FRAMING PLAN(S) FOR ALL DESIGNATED SHEAR WALLS & CONSTRUCT ACCORDING TO STRUCTURAL DESIGN & FRAMING PLAN(S).

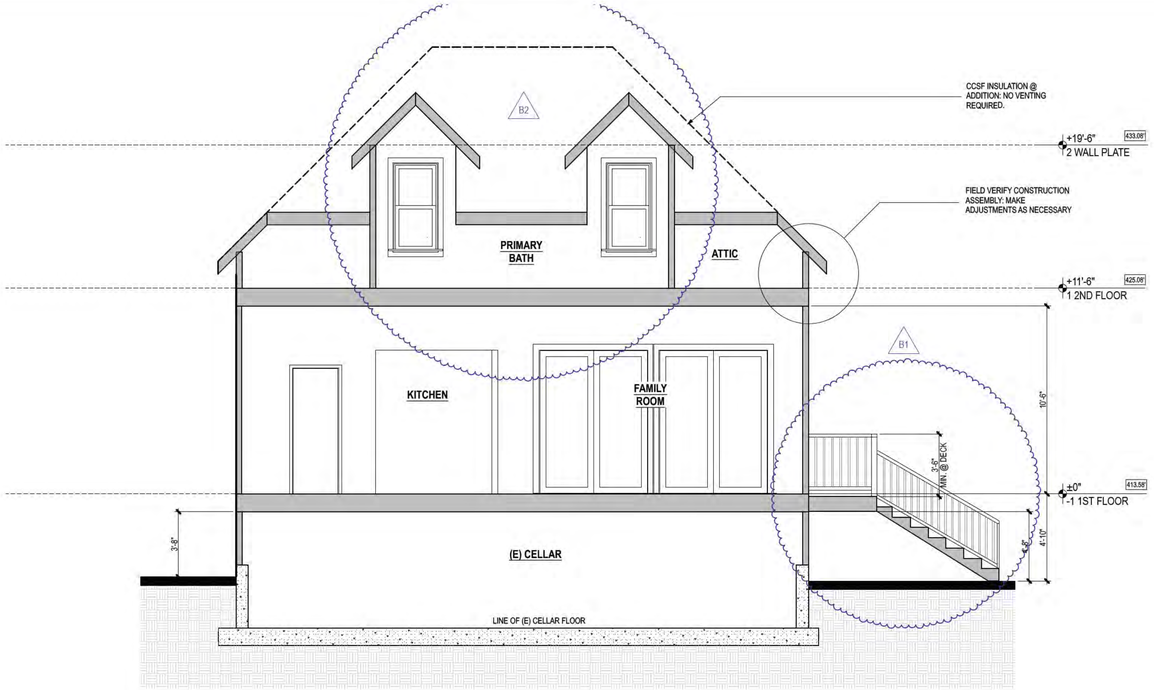
FLOOR ASSEMBLY:
1. SEE FOUNDATION & FLOOR FRAMING PLAN(S) FOR SIZES & SPACING OF FRAMING MEMBERS (JOISTS, FLOOR BEAMS, SUPPORTING POSTS, ETC…)

INTERIOR WALL FINISHES			
CEILING	WALL	FIRE SEPARATION WALL	FLOOR MATERIAL
5/8" GYP. BD. SMOOTH TEXTURE	5/8" GYP. BD. TEXTURE TBD BY OWNER	5/8" "TYPE X" GYP. BD.	SELECTED BY OWNER

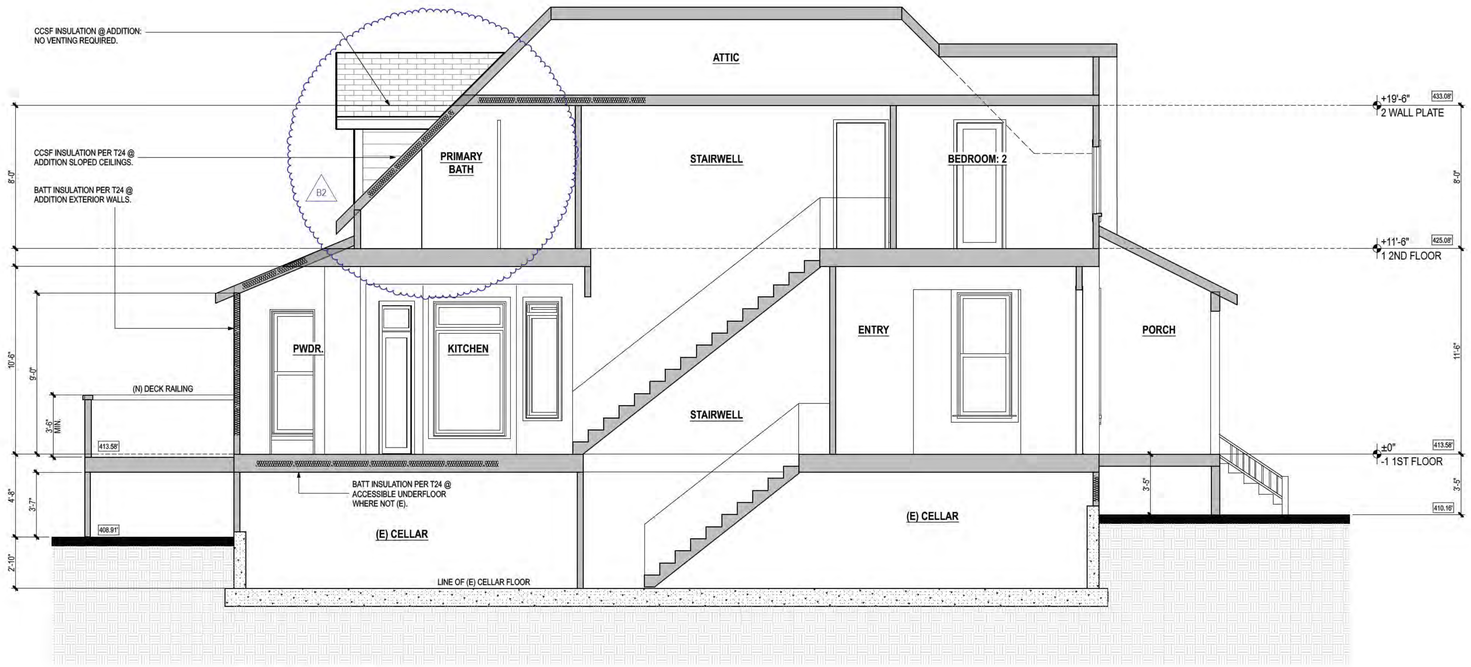
INSULATION			
FLAT CEILING	VAULTED CEILING	WALL	UNDERFLOOR
BATT (UNO) PER T24 AS APPLICABLE.	CLOSED CELL SPRAY FOAM (R6.5 PER INCH) MIN. VALUES PER T24.	BATT PER T24 @ 2X4 WALLS BATT PER T24 @ 2X6 WALLS	BATT PER T24 (UNO)

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

B1



X1. BUILDING SECTION



Y1. BUILDING SECTION

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10/23/25
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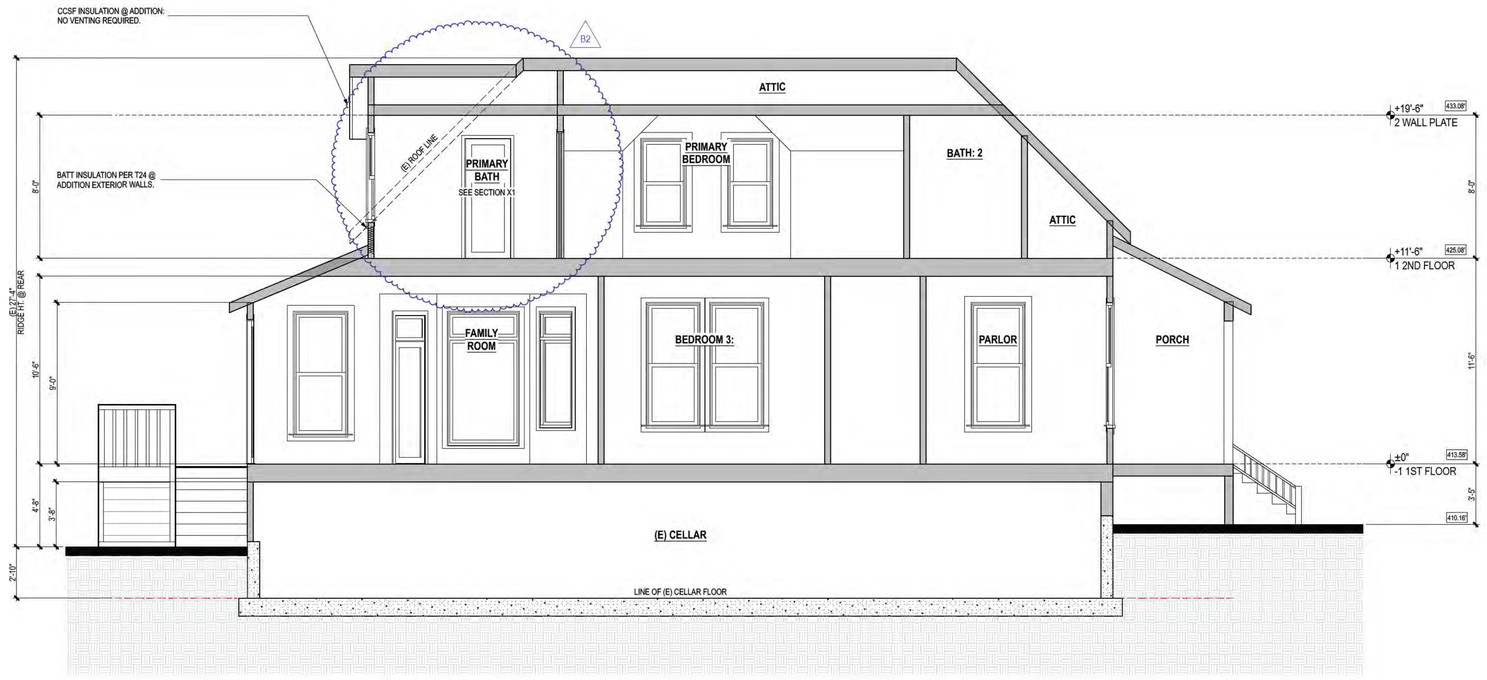
P1 12/09/24

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

SECTIONS

A4.1



Y2. BUILDING SECTION

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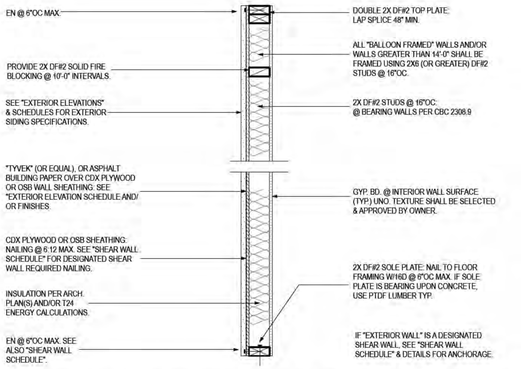
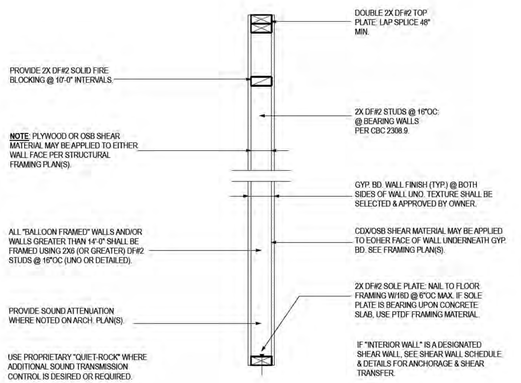
SECTIONS

A4.2



WALL BASE: A MIN. 0.019-INCH (0.5 MM) (26 GA). CORROSION-RESISTANT WEEP SCREED OR PLASTIC WEEP SCREED, WITH A MIN. VERTICAL ATTACHMENT FLANGE OF 3-1/2 INCHES (89 MM) SHALL BE PROVIDED @ OR BELOW THE FOUNDATION PLATE LINE ON EXTERIOR STUD WALLS IN ACCORDANCE WITH ASTM C926. THE WEEP SCREED SHALL BE PLACED A MIN. OF 4 INCHES (102 MM) ABOVE THE EARTH OR 2 INCHES (51 MM) ABOVE PAVED AREAS & SHALL BE OF A TYPE THAT WILL ALLOW TRAPPED WATER TO DRAIN TO THE EXTERIOR OF THE BUILDING. THE WEATHER-RESISTANT BARRIER SHALL LAP THE ATTACHMENT FLANGE. THE EXTERIOR LATH SHALL COVER & TERMINATE ON THE ATTACHMENT FLANGE OF THE WEEP SCREED.

W1 WALL: TYP. EXTERIOR WALL ASSEMBLY



W3 WALL: TYP. INTERIOR WALL ASSEMBLY

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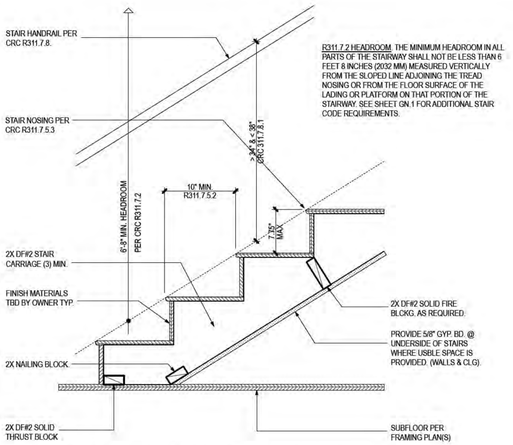
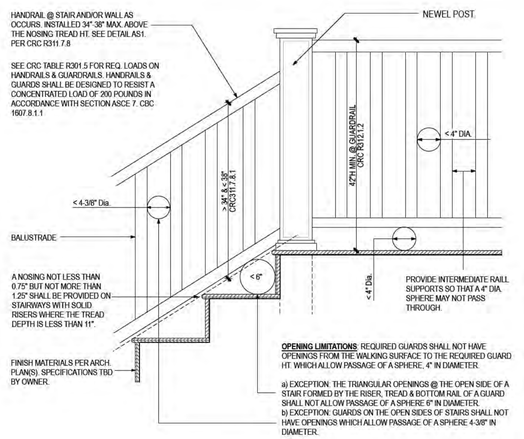
WALL DETAILS

D.1



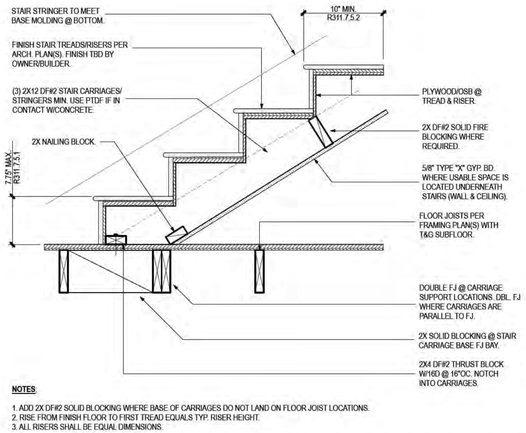
AS1 WOOD STAIR FRAMING - CODE REQ.

DETAIL IS INFORMATIONAL ONLY: NOT REPRESENTATIONAL OF ACTUAL FINISHES TO BE USED.



AS2 WOOD STAIR FRAMING - CODE REQ.

DETAIL IS INFORMATIONAL ONLY: NOT REPRESENTATIONAL OF ACTUAL FINISHES TO BE USED.

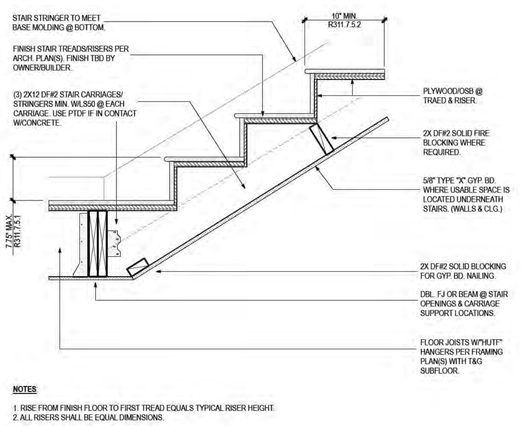


NOTES:

1. ADD 2X DF#2 SOLID BLOCKING WHERE BASE OF CARRIAGES DO NOT LAND ON FLOOR JOIST LOCATIONS.
2. RISE FROM FINISH FLOOR TO FIRST TREAD EQUALS TYP. RISER HEIGHT.
3. ALL RISERS SHALL BE EQUAL DIMENSIONS.

AS3 WOOD STAIR FRAMING @ CARRIAGE/STRINGER

BOTTOM OF CARRIAGE @ LOWER FLOOR



NOTES:

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

AS4 WOOD STAIR FRAMING @ CARRIAGE/STRINGER

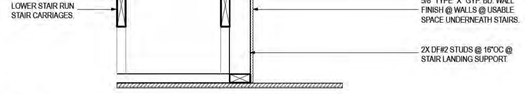
BOTTOM OF CARRIAGE @ INTERMEDIATE LEVEL.

NOTES:

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

AS5 WOOD STAIR FRAMING @ CARRIAGE/STRINGER

TOP OF CARRIAGE @ TOP LEVEL.

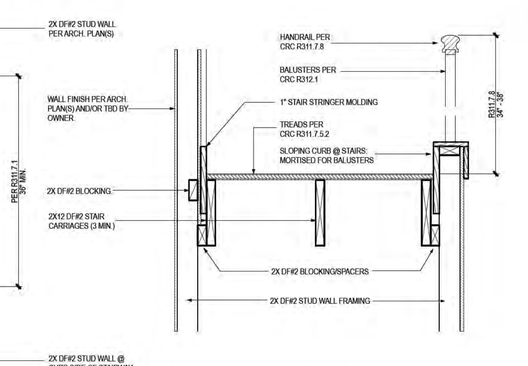


NOTES:

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

AS6 WOOD STAIR FRAMING @ LANDING

BOTTOM OF CARRIAGE/STRIINGER @ LAND NG



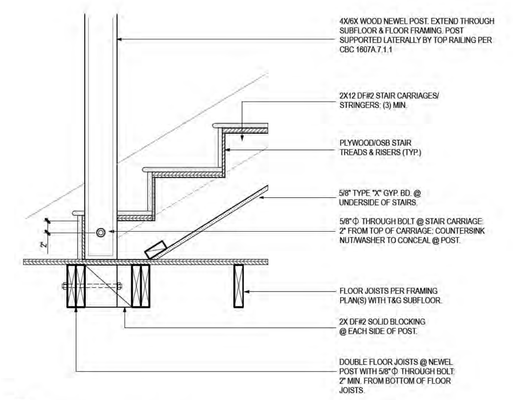
PLAN VIEW

SECTION A:

NOTES:

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

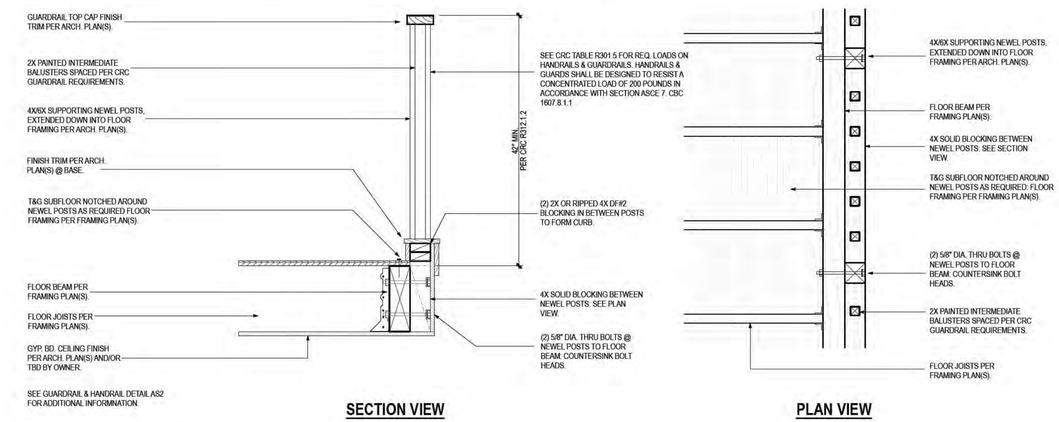
AS7 WOOD STAIR FRAMING @ RAILIING W/CURB



NOTES:

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

AS10 WOOD STAIR FRAMING @ NEWEL POST



SECTION VIEW

PLAN VIEW

AS11 WOOD STAIR @ "OPEN" GUARDRAIL @ 2ND LEVEL FLOOR

OPEN BALUSTRADE APPLICATION: CURB OPTIONAL.

STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

638 UNIVERSITY AVE
LOS GATOS
CALIFORNIA
95032

t 408.292.3252
f 253.399.1125

RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

A.P.N. 510-14-037

4/2/25
BUILDING SUBMITTAL SET

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

STAIR DETAILS

D.2

DOOR & WINDOW GENERAL NOTES:

PER CAL FORNIA RES DENTIAL CODE (CRC) SECTIONS R308, R310, R311(EXCEPTS), R312(EXCERPTS) & R609.
SEE "GENERAL FLOOR PLAN NOTES" @ SHEETS GN.1 THROUGH GN.3 FOR OPENINGS LOCATED N WALLS SEPARATING DWELLINGS AND GARAGES AND OTHER NFORMATION/REQU REMENTS NOT CONTA NED N THESE NOTES.

SECTION R308: GLAZING

R308.1 IDENTIFICATION. EXCEPT AS NDICATED N SECTION R308.1.1 EACH PANE OF GLAZ NG NSTALLED IN HAZARDOUS LOCATIONS AS DEFINED N SECTION R308.4 SHALL BE PROV DED WITH A MANUFACTURER'S DESIGNATION SPEC FYING WHO APPL ED THE DESIGNATION, DESIGNAT NG THE TYPE OF GLASS AND THE SAFETY GLAZ NG STANDARD WITH WHICH IT COMPL ES, WHICH IS VIS BLE IN THE FINAL INSTALLATION. THE DESIGNATION SHALL BE AC D ETCHED, SAND- BLASTED, CERAMIC-FIRED, LASER ETCHED, EMBOSSED, OR BE OF A TYPE WHICH ONCE APPL ED CANNOT BE REMOVED WITHOUT BEING DESTROYED. A LABEL SHALL BE PERMITTED N L EU OF THE MANUFACTURER'S DESIGNATION.
EXCEPTIONS:
1. *FOR OTHER THAN TEMPERED GLASS, MANUFACTURER'S DESIGNATIONS ARE NOT REQUIRED PROVIDED THE BUILDING OFFICIAL APPROVES THE USE OF A CERTIFICATE, AFFIDAVIT OR OTHER EVIDENCE CONFIRMING COMPLIANCE WITH THIS CODE.*
2. *TEMPERED SPANDREL GLASS IS PERMITTED TO BE IDENTIFIED BY THE MANUFACTURER WITH A REMOVABLE PAPER DESIGNATION*

R308.1.1 IDENTIFICATION OF MULTIPLE ASSEMBLIES. MULTI-PANE ASSEMBL ES HAVING INDIVIDUAL PANES NOT EXCEED NG 1 SQUARE FOOT (0.09 M2) IN EXPOSED AREA SHALL HAVE AT LEAST ONE PANE IN THE ASSEMBLY IDENTIF ED N ACCORDANCE WITH SECTION R308.1. ALL OTHER PANES IN THE ASSEMBLY SHALL BE LABELED "CPSC 16 CFR 1201" OR "ANSI Z97.1" AS APPROPRIATE.

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

R308.2.1 WIRED GLASS PROHIBITED. WIRED GLASS WITH W RE EXPOSED ON LONGITUDINAL EDGES SHALL NOT BE USED N JALOUSIES OR LOUVERED WINDOWS.

R308.3 HUMAN IMPACT LOADS. INDIVIDUAL GLAZED AREAS, NCLUD NG GLASS M RRORS N HAZARDOUS LOCATIONS SUCH AS THOSE INDICATED AS DEF NED IN SECTION R308.4, SHALL PASS THE TEST REQUIREMENTS OF SECTION R308.3.1.
EXCEPTIONS:
1. *LOUVERED WINDOWS AND JALOUSIES SHALL COMPLY WITH SECTION R308.2.*
2. *MIRRORS AND OTHER GLASS PANELS MOUNTED OR HUNG ON A SURFACE THAT PROVIDES A CONTINUOUS BACKING SUPPORT.*
3. *GLASS UNIT MASONRY COMPLYING WITH SECTION R610.*

R308.3.1 IMPACT TEST. WHERE REQUIRED BY OTHER SECTIONS OF THE CODE, GLAZ NG SHALL BE TESTED IN ACCORDANCE WITH CPSC 16 CFR 1201. GLAZ NG SHALL COMPLY WITH THE TEST CRITERIA FOR CATEGORY II UNLESS OTHERWISE NDICATED IN TABLE R308.3.1(1). *EXCEPTION: GLAZING NOT IN DOORS OR ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS AND SHOWERS SHALL BE PERMITTED TO BE TESTED IN ACCORDANCE WITH ANSI Z97.1. GLAZING SHALL COMPLY WITH THE TEST CRITERIA FOR CLASS A UNLESS INDICATED IN TABLE R308.3.1(2).*

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

R308.4.1 GLAZING IN DOORS. GLAZ NG N ALL FIXED AND OPERABLE PANELS OF SWINGING, SL DING AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION.
EXCEPTIONS:
1. *GLAZED OPENINGS OF A SIZE THROUGH WHICH A 3 INCH DIAMETER (76 MM) SPHERE IS UNABLE TO PASS.*
2. *DECORATIVE GLAZING.*

R308.4.2 GLAZING ADJACENT DOORS. GLAZ NG IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) ABOVE THE FLOOR OR WALKING SURFACE AND IT MEETS EITHER OF THE FOLLOWING CONDITIONS:
1. WHERE THE GLAZING IS WITH N 24 INCHES (610 MM) OF EITHER S DE OF THE DOOR N THE PLANE OF THE DOOR N A CLOSED POSITION.
2. WHERE THE GLAZING IS ON A WALL PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSED POSITION AND WITHIN 24 NCHES (610 MM) OF THE HINGE SIDE OF AN N-SWINGING DOOR.

EXCEPTIONS:
1. *DECORATIVE GLAZING.*
2. *WHEN THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND THE GLAZING.*
3. *WHERE ACCESS THROUGH THE DOOR IS TO A CLOSET OR STORAGE AREA 3 FEET (914 MM) OR LESS IN DEPTH. GLAZING IN THIS APPLICATION SHALL COMPLY WITH SECTION R308.4.3.*
4. *GLAZING THAT IS ADJACENT TO THE FIXED PANEL OF PATIO DOORS.*

R308.4.3 GLAZING IN WINDOWS. GLAZING N AN NDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS SHALL BE CONSIDERED A HAZARDOUS LOCATION:
1. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET (0.836 M2);
2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 NCHES (457 MM) ABOVE THE FLOOR;
3. THE TOP EDGE OF THE GLAZING IS MORE THAN 36 INCHES (914 MM) ABOVE THE FLOOR; AND
4. ONE OR MORE WALKING SURFACES ARE WITH N 36 NCHES (914 MM), MEASURED HORIZONTALLY AND N A STRAIGHT L NE, OF THE GLAZ NG.

EXCEPTIONS:
1. *DECORATIVE GLAZING.*
2. *WHEN A HORIZONTAL RAIL IS INSTALLED ON THE ACCESSIBLE SIDE(S) OF THE GLAZING 34 TO 38 INCHES (864 TO 965 MM) ABOVE THE WALKING SURFACE. THE RAIL SHALL BE CAPABLE OF WITHSTANDING A HORIZONTAL LOAD OF 50 POUNDS PER LINEAR FOOT (730 N/M) WITHOUT CONTACTING THE GLASS AND BE A MINIMUM OF 1-1/2 INCHES (38 MM) IN CROSS SECTIONAL HEIGHT.*
3. ***OUTBOARD PANES IN INSULATING GLASS UNITS AND OTHER MULTIPLE GLAZED PANELS WHEN THE BOTTOM EDGE OF THE GLASS IS 25 FEET (7620 MM) OR MORE ABOVE GRADE, A ROOF, WALKING SURFACES OR OTHER HORIZONTAL [WITHIN 45 DEGREES (0.79 RAD) OF HORIZONTAL] SURFACE ADJACENT TO THE GLASS EXTERIOR.***

R308.4.4 GLAZING IN GUARDS AND RAILINGS. GLAZ NG N GUARDS AND RA LINGS, INCLUD NG STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-F LL PANELS, REGARDLESS OF AREA OR HEIGHT ABOVE A WALK NG SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION.

R308.4.5 GLAZING AND WET SURFACES. GLAZING N WALLS, ENCLOSURES OR FENCES CONTAIN NG OR ADJACENT TO HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND NDOOR OR OUTDOOR SWIMM NG POOLS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZ NG IS LESS THAN 60 NCHES (1524 MM) MEASURED VERTICALLY ABOVE ANY STAND NG OR WALKING SURFACE SHALL BE CONS DERED A HAZARDOUS LOCATION. THIS SHALL APPLY TO SINGLE GLAZ NG AND ALL PANES N MULT PLE GLAZ NG.
__EXCEPTION: GLAZING THAT IS MORE THAN 60 INCHES (1524 MM), MEASURED HORIZONTALLY FROM THE WATER'S EDGE OF A BATHTUB, HOT TUB, SPA, WHIRLPOOL OR SWIMMING POOL OR FROM THE EDGE OF A SHOWER, SAUNA OR STEAM ROOM.__

R308.4.6 GLAZING ADJACENT STAIRS AND RAMPS. GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36 INCHES (914 MM) ABOVE THE PLANE OF THE ADJACENT WALK NG SURFACE OF STA RWAYS, LAND NGS BETWEEN FLIGHTS OF STAIRS AND RAMPS SHALL BE CONSIDERED A HAZARDOUS LOCATION.
EXCEPTIONS:
1. ***WHEN A RAIL IS INSTALLED ON THE ACCESSIBLE SIDE(S) OF THE GLAZING 34 TO 38 INCHES (864 TO 965 MM) ABOVE THE WALKING SURFACE.THE RAIL SHALL BE CAPABLE OF WITHSTANDING A HORIZONTAL LOAD OF 50 POUNDS PER LINEAR FOOT (730 N/M) WITHOUT CONTACTING THE GLASS AND BE A MINIMUM OF 1-1/2 INCHES (38 MM) IN CROSS SECTIONAL HEIGHT.***
2. ***GLAZING 36 INCHES (914 MM) OR MORE MEASURED HORIZONTALLY FROM THE WALKING SURFACE.***

R308.4.7 GLAZING ADJACENT TO THE BOTTOM STAIR LANDING. GLAZ NG ADJACENT TO THE LAND NG AT THE BOTTOM OF A STA RWAY WHERE THE GLAZING IS LESS THAN 36 INCHES (914 MM) ABOVE THE LAND NG AND WITHIN A 60- NCH (1524 MM) HORIZONTAL ARC LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOS NG SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.
__EXCEPTION: THE GLAZING IS PROTECTED BY A GUARD COMPLYING WITH SECTION R312 AND THE PLANE OF THE GLASS IS MORE THAN 18 INCHES (457 MM) FROM THE GUARD.__

R308.5 SITE BUILT WINDOWS. SITE BUILT W NDOWS SHALL COMPLY WITH SECTION 2404 OF THE CALIFORNIA BU LDING CODE.

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

R308.6.1 DEFINITIONS. THE FOLLOWING TERMS ARE DEFINED IN CHAPTER 2:
__SKYLIGHT, UNIT__
__SKYLIGHTS AND SLOPED GLAZING.__
__TUBULAR DAYLIGHT NG DEVICE (TDD).__

R308.6.2 MATERIALS. THE FOLLOWING TYPES OF GLAZ NG SHALL BE PERMITTED TO BE USED:
1. LAM NATED GLASS WITH A MIN MUM 0.015- NCH (0 38 MM) POLYVINYL BUTYRAL NTERLAYER FOR GLASS PANES 16 SQUARE FEET (1.5 M2) OR LESS N AREA LOCATED SUCH THAT THE HIGHEST POINT OF THE GLASS IS NOT MORE THAN 12 FEET (3658 MM) ABOVE A WALK NG SURFACE OR OTHER ACCESSIBLE AREA; FOR HIGHER OR LARGER SIZES, THE MIN MUM NTERLAYER THICKNESS SHALL BE 0.030 NCH (0.76 MM).
2. FULLY TEMPERED GLASS.
3. HEAT-STRENGTHENED GLASS.
4. W RED GLASS.
5. APPROVED RIGID PLASTICS.

R308.6.3 SCREENS, GENERAL. FOR FULLY TEMPERED OR HEAT-STRENGTHENED GLASS, A BROKEN GLASS RETENTION SCREEN MEETING THE REQU REMENTS OF SECTION R308.6.7 SHALL BE INSTALLED BELOW THE FULL AREA OF THE GLASS, EXCEPT FOR FULLY TEMPERED GLASS THAT MEETS CONDITION 1 OR 2 LISTED N SECTION R308.6 5.

R308.6.4 SCREENS WITH MULTIPLE GLAZING. WHERE ARE THE INBOARD PA N IS FULLY TEMPERED, HEAT-STRENGTHENED, OR W RE GLASS, A BROKEN GLASS RETENTION SCREEN MEET NG THE REQU REMENTS OF SECTION R308.6.7 SHALL BE NSTALLED BELOW THE FULL AREA OF THE GLASS, EXCEPT FOR CONDITION 1 OR 2 LISTED N SECTION R308.6 5. OTHER PANES IN THE MULT PLE GLAZ NG SHALL BE OF ANY TYPE LISTED N SECTION R308.6 2.

R308.6.5 SCREENS NOT REQUIRED. SCREENS SHALL NOT BE REQUIRED WHERE LAMINATED GLASS COMPLY NG WITH ITEM 1 OF SECTION R308.6.2 IS USED AS SINGLE GLAZ NG OR THE NBOARD PANE IN MULTIPLE GLAZING. SCREENS SHALL NOT BE REQUIRED WERE FULLY TEMPERED GLASS IS USED AS SINGLE GLAZING OR THE NBOARD PANE N MULTIPLE GLAZING AND EITHER OF THE FOLLOW NG CONDITIONS IS MET.
1. GLASS AREA 16 SQUARE FEET (1.49 M2) OR LESS. HIGHEST PO NT OF GLASS NOT MORE THAN 12 FEET (3658 MM) ABOVE A WALKING SURFACE OR OTHER ACCESSIBLE AREA, NOM NAL GLASS THICKNESS NOT MORE THAN 3/16 INCH (4.8 MM), AND (FOR MULTIPLE GLAZ NG ONLY) THE OTHER PANE OR PANES FULLY TEMPERED, LAM NATED OR WIRED GLASS.
2. GLASS AREA GREATER THAN 16 SQUARE FEET (1.49 M2). GLASS SLOPED 30 DEGREES (0 52 RAD) OR LESS FROM VERTICAL, AND HIGHEST POINT OF GLASS NOT MORE THAN 10 FEET (3048 MM) ABOVE A WALK NG SURFACE OR OTHER ACCESSIBLE AREA.

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

R308.6.7 SCREEN CHARACTERISTICS. THE SCREEN AND IT'S FASTEN NGS SHALL: BE CAPABLE OF SUPPORT NG TWICE THE WEIGHT OF THE GLAZING; BE FIRMLY AND SUBSTANTIALLY FASTENED TO THE FRAM NG MEMBERS; BE NSTALLED WITHIN 4 INCHES (102 MM) OF THE GLASS; AND HAVE A MESH OPEN NG OF NOT GREATER THAN 1 INCH X 1 INCH (25 MM X 25 MM).

R308.6.8 CURBS FOR SKYLIGHTS. ALL UNIT SKYLIGHTS NSTALLED N A ROOF WITH A PITCH FLATTER THAN THREE UNITS VERTICAL IN 12 UNITS HORIZONTAL (25-PERCENT SLOPE) SHALL BE MOUNTED ON A CURB EXTEND NG AT LEAST 4 NCHES (102 MM) ABOVE THE PLANE OF THE ROOF UNLESS OTHERWISE SPECIF ED N THE MANUFACTURER'S NSTALLATION NSTRUCTIONS.

R308.6.9 TESTING AND LABELING. UNIT SKYLIGHTS AND TUBULAR DAYLIGHT NG DEVICES SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, AND BEAR A LABEL DENTIFY NG MANUFACTURER, PERFORMANCE GRADE RAT NG AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF AAMA/WDMA/CSA 101/I.S 21A440.

SECTION R310: EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 EMERGENCY ESCAPE AND RESCUE OPENING REQUIRED. BASEMENTS, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE NOT LESS THAN ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPEN NG. WHERE BASEMENTS CONTAIN ONE OR MORE SLEEP NG ROOMS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE REQU RED IN EACH SLEEPING ROOM. EMERGENCY ESCAPE AND RESCUE OPEN NGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY OR TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY.
EXCEPTIONS: (SFM)
1. *__BASEMENT WITH A CEILING, HEIGHT OF LESS THAN 80 INCHES (2032 MM) SHALL NOT BE REQUIRED TO HAVE EMERGENCY ESCAPE AND RESCUE OPENINGS.__*
2. *__EMERGENCY ESCAPE AND RESCUE OPENINGS ARE NOT REQUIRED FROM BASEMENT OR SLEEPING ROOMS THAT HAVE AN EXIT DOOR OR EXIT ACCESS DOOR THAT OPENS DIRECTLY INTO A PUBLIC WAY, OR TO A YARD, COURT OR EXTERIOR EGRESS BALCONY THAT OPENS TO A PUBLIC WAY.__*
3. *__BASEMENTS WITHOUT HABITABLE SPACES AND HAVING NOT MORE THAN 200 SQUARE FEET (18.6 M2) IN FLOOR AREA SHALL NOT BE REQUIRED TO HAVE EMERGENCY ESCAPE AND RESCUE OPENINGS.__*
4. *__STORM SHELTERS ARE NOT REQUIRED TO COMPLY WITH THIS SECTION WHERE THE SHELTER IS CONSTRUCTED IN ACCORDANCE WITH ICC 500.__*
5. *__WHERE THE DWELLING UNIT OR TOWNHOUSE UNIT IS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION R313, SLEEPING ROOMS IN BASEMENTS SHALL NOT BE REQUIRED TO HAVE EMERGENCY ESCAPE AND RESCUE OPENINGS PROVIDED THAT THE BASEMENT HAS ONE OF THE FOLLOWING:__*
   __5.1 ONE MEANS OF EGRESS COMPLYING WITH SECTION R311 AND ONE EMERGENCY ESCAPE AND RESCUE OPENING.__
   __5.2 TWO MEANS OF EGRESS COMPLYING WITH SECTION R311.__

R310.1.1 OPERATIONAL CONSTRAINTS AND OPENING CONTROL DEVICES. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE MA NTA NED FREE OF ANY OBSTRUCTIONS OTHER THAN THOSE ALLOWED BY THIS SECTION AND SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE. WINDOW OPEN NG CONTROL DEVICES AND FALL PREVENTION DEVICE IS COMPLY NG WITH ASTM F2090 SHALL BE PERMITTED FOR USE ON WINDOWS SERVING AS A REQUIRED EMERGENCY ESCAPE AND RESCUE OPEN NG AND SHE'LL BE NOT MORE THAN 70 INCHES (178 CM) ABOVE THE FINISHED FLOOR. THE RELEASE MECHANISM SHALL BE MA NTAINED OPERABLE AT ALL TIMES. SUCH BARS, GRILLES, GRATES, OR ANY SIMILAR DEVICES SHALL BE EQUIPPED WITH AN APPROVED EXTERIOR RELEASE DEVICE FOR USE BY THE F RE DEPARTMENT, ONLY WHEN REQUIRED BY THE AUTHORITY HAV NG JURISDICTION. WHERE SECURITY BARS (BURGLAR BARS) ARE INSTALLED ON EMERGENCY EGRESS AND RESCUE WINDOWS OR DOORS, ON OR AFTER JULY 1, 2000, SUCH DEVICES SHALL COMPLY WITH CALIFORNIA BUILD NG STANDARDS CODE, PART 12, CHAPTER 12-3 AND OTHER APPLICABLE PROVISIONS OF THIS CODE.

R310.2 EMERGENCY ESCAPE AND RESCUE OPENINGS. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A M NIMUM D MENSIONS IN ACCORDANCE WITH SECTIONS R310 2.1 THROUGH R310.2.4.

R310.2.1 MINIMUM OPENING AREA. EMERGENCY AND ESCAPE RESCUE OPEN NGS SHALL HAVE A NET CLEAR OPEN NG OF NOT LESS THAN 5.7 SQUARE FEET (0 530 M2).
__EXCEPTION: THE MINIMUM NET CLEAR OPENING FOR GRADE FLOOR EMERGENCY ESCAPE, AND RESCUE OPENINGS SHALL BE 5 SQUARE FEET (0.465 M2)__

R310.2.2 MINIMUM DIMENSIONS. THE MIN MUM NET CLEAR OPENING HEIGHT D MENSION SHALL BE 24 INCHES (610 MM). THE M NIMUM NET CLEAR OPENING WITH D MENSION SHALL BE 20 NCHES (508 MM). THE NET CLEAR OPEN NG DIMENSIONS SHALL BE THE RESULT OF NORMAL OPERATION OF THE OPENING.

R310.2.3 MAXIMUM HEIGHT FROM FLOOR. EMERGENCY ESCAPE, AND RESCUE OPENINGS SHALL HAVE THE BOTTOM OF THE CLEAR OPEN NG NOT GREATER THAN 44 NCHES (1118 MM) MEASURED FROM THE FLOOR.

R310.2.4 EMERGENCY ESCAPE AND RESCUE OPENINGS UNDER DECKS, PORCHES AND CANTILEVERS. EMERGENCY ESCAPE AND RESCUE OPEN NGS NSTALLED UNDER DECKS, PORCHES OR CANTILEVERS SHALL BE FULLY OPENABLE AND PROVIDE A PATH NOT LESS THAN 36 NCHES. (914 MM) N HEIGHT AND 36 NCHES (914 MM) IN W DTH TO A YARD OR COURT.

R310.3 EMERGENCY ESCAPE AND RESCUE DOORS. WHERE A DOOR IS PROV DED AS THE REQUIRED EMERGENCY ESCAPE AND RESCUE OPEN NG, IT SHALL BE A SIDE-HINGED DOOR OR A SL DER.

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

R310.4.1 MINIMUM SIZE. THE HORIZONTAL AREA OF THE AREA WELL SHALL BE NOT LESS THAN 9 SQUARE FEET (0 9 M2), WITH A HORIZONTAL PROJECTION AND WIDTH OF NOT LESS THAN 36 NCHES (914 MM). THE SIZE OF THE AREA WELL SHALL ALLOW THE EMERGENCY ESCAPE AND RESCUE OPEN NG TO BE FULLY OPENED.
__EXCEPTION: THE LADDER OR STEPS REQUIRED BY SECTION R310.4.2 SHALL BE PERMITTED TO ENCROACH NOT MORE THAN 6 INCHES. (152 MM) INTO THE REQUIRED DIMENSIONS OF THE AREA WELL.__

R310.4.2 LADDER AND STEPS. AREA WELLS WITH A VERTICAL DEPTH GREATER THAN 44 INCHES (1118 MM) SHALL BE EQU PPED WITH AN APPROVED, PERMANENTLY AFFIXED LADDER OR STEPS. THE LADDER OR STEPS SHALL NOT BE OBSTRUCTED BY THE EMERGENCY ESCAPE AND RESCUE OPENING WHERE THE W NDOW OR DOOR IS IN THE OPEN POSITION. LADDERS OR STEPS REQU RED BY THIS SECTION SHALL NOT BE REQUIRED TO COMPLY WITH SECTION R311.7.

R310.4.2.1 LADDERS. LADDERS AND RUNGS SHALL HAVE AN INSIDE WIDTH OF NOT LESS THAN 12 NCHES (305 MM), SHELL PROJECT, NOT LESS THAN 3 INCHES (76 MM) FROM THE WALL AND SHELBY SPACED NOT MORE THAN 18 INCHES (457 MM) ON CENTER VERTICALLY FOR THE FULL HEIGHT OF THE AREA WELL.

R310.4.2.2 STEPS. STEPS SHALL HAVE AN NSIDE WIDTH OF NOT LESS THAN 12 NCHES (305 MM), A MIN MUM TREAD DEPTH OF 5 INCHES (127 MM) AND A MAX MUM RISER HEIGHT OF 18 NCHES (457 MM) FOR THE FULL HEIGHT OF THE AREA WELL.

R310.4.3 DRAINAGE. AREA WELLS SHALL BE DESIGNED FOR PROPER DRA NAGE BY CONNECT NG TO THE BUILD NG'S FOUNDATION DRA NAGE SYSTEM REQUIRED BY SECTION R405.1.
__EXCEPTION: A DRAINAGE SYSTEM FOR AREA WELLS IS NOT REQUIRED WHERE THE FOUNDATION IS ON WELL DRAINED SOIL OR SAND GRAVEL MIXTURE SOILS IN ACCORDANCE WITH THE UNITED SOILS CLASSIFICATION SYSTEM, GROUP I SOILS, AS DETAILED IN TABLE R405.1.__

R310.4.4 BARS, GRILLES, COVERS AND SCREENS. WHERE BARS, GR LLES, COVERS, SCREENS OR SIMILAR DEVICES ARE PLACED OVER EMERGENCY ESCAPE AND RESCUE OPEN NGS, BULKHEAD ENCLOSURES OR AREA WELLS THAT SERVE SUCH OPEN NGS, THE M NIMUM NET CLEAR OPENING SIZE SHALL COMPLY WITH SECTIONS R310 2 THROUGH R310 2.2 AND R310.4.1. SUCH DEVICES SHALL BE RELEASABLE OR REMOVABLE FROM THE NS DE WITHOUT THE USE OF A KEY OR TOOL OR FORCE GREATER THAN THAT REQUIRED FOR THE NORMAL OPERATION OF THE ESCAPE AND RESCUE OPEN NG. THE RELEASE MECHANISM SHALL BE MA NTA NED OPERABLE AT ALL T MES. SUCH BARS, GR LLES, GRATES, OR ANY S M LAR DEVICES SHALL BE EQUIPPED WITH AN APPROVED EXTERIOR RELEASE DEVICE FOR USE BY THE FIRE DEPARTMENT, ONLY WHEN REQU RED BY THE AUTHORITY HAV NG JURISDICTION. WHERE SECURITY BARS (BURGLAR BARS) ARE INSTALLED ON EMERGENCY EGRESS AND RESCUE WINDOWS OR DOORS, ON OR AFTER JULY 1, 2000, SUCH DEVICES SHALL COMPLY WITH CAL FORNIA BUILD NG STANDARDS CODE, PART 12, CHAPTER 12-3 AND OTHER APPLICABLE PROVISIONS OF THIS CODE.

R310.5 REPLACEMENT WINDOWS FOR EMERGENCY ESCAPE AND RESCUE OPENINGS. REPLACEMENT W NDOWS INSTALLED IN BUILD NGS MEETING THE SCOPE OF THIS CODE SHALL BE EXEMPT FROM SECTIONS R310.2, AND R310.4.4, PROV DED THAT THE REPLACEMENT W NDOW MEETS THE FOLLOW NG CONDITIONS:
1. THE REPLACEMENT WINDOW IS THE MANUFACTURER'S LARGEST STANDARD SIZE W NDOW THAT WILL FIT WITH N THE EXIST NG FRAME OR EXISTING ROUGH OPEN NG. THE REPLACEMENT WINDOW IS OF THE SAME OPERAT NG STYLE AS THE EXISTING WINDOW OR A STYLE THAT PROVIDES FOR AN EQUAL OR GREATER W NDOW OPENING EARLIER THAN THE EXIST NG WINDOW.
2. THE REPLACEMENT WINDOW IS NOT PART OF A CHANGE OF OCCUPANCY.

R310.6 DWELLING ADDITIONS. WHERE DWELLING ADDITIONS CONTA N SLEEP NG ROOMS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE PROV DED IN EACH NEW SLEEP NG ROOM. WHERE DWELL NG ADDITIONS HAVE BASEMENTS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE PROVIDED IN THE NEW BASEMENT.
EXCEPTIONS:
1. ***AN EMERGENCY ESCAPE AND RESCUE OPENING IS NOT REQUIRED IN A NEW BASEMENT THAT CONTAINS A SLEEPING ROOM WITH AN EMERGENCY ESCAPE AND RESCUE OPENING.***
2. ***AN EMERGENCY ESCAPE AND RESCUE OPENING IS NOT REQUIRED IN A NEW BASEMENT WHERE THERE IS AN EMERGENCY ESCAPE AND RESCUE OPENING IN AN EXISTING BASEMENT THAT IS ACCESSIBLE FROM THE NEW BASEMENT.***
3. ***AN OPERABLE WINDOW COMPLYING WITH SECTION R310.7.1 SHALL BE ACCEPTABLE AS AN EMERGENCY ESCAPE AND RESCUE OPENING.***

R310.7 ALTERATIONS OR REPAIRS OF EXISTING BASEMENTS. NEW SLEEP NG ROOMS CREATED IN AN EXISTING BASEMENT SHALL BE PROV DED WITH EMERGENCY ESCAPE AND RESCUE OPEN NGS N ACCORDANCE WITH SECTION R310.1. OTHER THAN NEW SLEEP NG ROOMS WHERE AN EXISTING BASEMENT UNDERGO ALTERATIONS OR REPA RS, AN EMERGENCY ESCAPE AND RESCUE OPENING IS NOT REQUIRED.
__EXCEPTION: AN OPERABLE WINDOW COMPLYING WITH SECTION R310.7.1 SHALL BE ACCEPTABLE AS AN EMERGENCY ESCAPE AND RESCUE OPENING.__

R310.7.1 EXISTING EMERGENCY ESCAPE AND RESCUE OPENINGS. WHERE A CHANGE OF OCCUPANCY WOULD REQUIRE AN EMERGENCY ESCAPE AND RESCUE OPENING N ACCORDANCE WITH SECTION R310.1, OPERABLE W NDOWS SERVING AS THE EMERGENCY ESCAPE AND RESCUE OPEN NG SHALL COMPLY WITH THE FOLLOWING:
1. AN EXIST NG OPERABLE W NDOW SHALL PROV DE A M NIMUM NET CLEAR OPEN NG OF 4 SQUARE FEET (0.38 M2) WITH A M NIMUM NET CLEAR HEIGHT OPENING OF 22 INCHES (559 MM) AND A MIN MUM NET CLEAR OPENING W DTH OF 20 INCHES (508 MM).
2. A REPLACEMENT W NDOW, WHERE SUCH W NDOW COMPLIES WITH BOTH OF THE FOLLOWING:
   2.1 THE REPLACEMENT W NDOW MEETS THE SIZE REQUIREMENTS N ITEM 1.
   2.2 THE REPLACEMENT WINDOW IS THE MANUFACTURER'S LARGEST STANDARD SIZE W NDOW THAT W LL FIT WITH N THE EXISTING FRAME OR EXISTING ROUGH OPENING. THE REPLACEMENT WINDOW SHALL BE PERMITTED TO BE OF THE SAME OPERATING STYLE AS THE EXIST NG WINDOW OR A STYLE THAT PROV DES FOR AN EQUAL OR GREATER WINDOW OPEN NG AREA THAN THE EXISTING W NDOW.

SECTION R311: MEANS OF EGRESS

R311.1 MEANS OF EGRESS. DWELLINGS SHALL BE PROV DED WITH A MEANS OF EGRESS N ACCORDANCE WITH THIS SECTION. THE MEANS OF EGRESS SHALL PROV DE A CONT NUOUS AND UNOBSTRUCTED PATH OF VERTICAL AND HORIZONTAL EGRESS TRAVEL FROM ALL PORTIONS OF THE DWELLING TO THE REQUIRED EGRESS DOOR WITHOUT REQUIR NG TRAVEL THROUGH A GARAGE. THE REQU RED EGRESS DOOR SHALL OPEN DIRECTLY NTO A PUBLIC WAY OR TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY.

R311.2 EGRESS DOOR. NOT LESS THAN ONE EGRESS DOOR SHALL BE PROV DED FOR EACH DWELL NG UNIT. THE EGRESS DOOR SHALL BE S DE-H NGED, AND SHALL PROVIDE A CLEAR W DTH OF NOT LESS THAN 32 INCHES (813 MM) WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES (1 57 RAD). THE CLEAR HEIGHT OF THE DOOR OPENING SHALL BE NOT LESS THAN 78 NCHES (1981 MM) N HEIGHT MEASURED FROM THE TOP OF THE THRESHOLD TO THE BOTTOM OF THE STOP. OTHER DOORS SHALL NOT BE REQUIRED TO COMPLY WITH THESE MINIMUM DIMENSIONS. EGRESS DOORS SHALL BE READILY OPENABLE FROM NS DE THE DWELLING WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

R311.3 FLOORS AND LANDINGS AT EXTERIOR DOORS. THERE SHALL BE A LAND NG OR FLOOR ON EACH S DE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LAND NG SHALL NOT BE LESS THAN THE DOOR SERVED. EVERY LANDING SHALL HAVE A MIN MUM DIMENSION OF 36 NCHES (914 MM) MEASURED IN THE D RECTION OF TRAVEL. EXTERIOR LAND NGS SHALL BE PERMITTED TO HAVE A SLOPE NOT TO EXCEED 1/4 UNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT).
__EXCEPTION: EXTERIOR BALCONIES LESS THAN 60 SQUARE FEET (5.6 M2) AND ONLY ACCESSIBLE FROM A DOOR ARE PERMITTED TO HAVE A LANDING LESS THAN 36 INCHES (914 MM) MEASURED IN THE DIRECTION OF TRAVEL.__

R311.3.1 FLOOR ELEVATIONS AT THE REQUIRED EGRESS DOORS. LANDINGS OR F NISHED FLOORS AT THE REQUIRED EGRESS DOOR SHALL NOT BE MORE THAN 1-1/2 INCHES (38 MM) LOWER THAN THE TOP OF THE THRESHOLD.
__EXCEPTION: THE LANDING OR FLOOR ON THE EXTERIOR SIDE SHALL NOT BE MORE THAN 7-3/4 INCHES (196 MM) BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING OR FLOOR.__
WHERE EXTERIOR LANDINGS OR FLOORS SERVING THE REQUIRED EGRESS DOOR ARE NOT AT GRADE, THEY SHALL BE PROV DED WITH ACCESS TO GRADE BY MEANS OF A RAMP IN ACCORDANCE WITH SECTION R311.8 OR A STAIRWAY IN ACCORDANCE WITH SECTION R311.7.

R311.3.2 FLOOR ELEVATIONS FOR OTHER EXTERIOR DOORS. DOORS OTHER THAN THE REQUIRED EGRESS DOOR SHALL BE PROVIDED WITH LAND NGS OR FLOORS NOT MORE THAN 7-3/4 NCHES (196 MM) BELOW THE TOP OF THE THRESHOLD.
__EXCEPTION: A TOP LANDING IS NOT REQUIRED WHERE A STAIRWAY OF NOT MORE THAN TWO RISERS IS LOCATED ON THE EXTERIOR SIDE OF THE DOOR, PROVIDED THAT THE DOOR DOES NOT SWING OVER THE STAIRWAY.__

R311.3.3 STORM AND SCREEN DOORS. STORM AND SCREEN DOORS SHALL BE PERMITTED TO SW NG OVER ALL EXTERIOR STA RS AND LANDINGS.

SECTION R609: EXTERIOR WINDOWS AND DOORS

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

R609.2 PERFORMANCE. EXTERIOR WINDOWS AND DOORS SHALL BE DESIGNED TO RESIST THE DESIGN WIND LOADS SPEC F ED IN TABLE R301.2(2) ADJUSTED FOR HEIGHT AND EXPOSURE N ACCORDANCE WITH TABLE R301 2(3) OR DETERM NED N ACCORDANCE WITH ASCE 7 US NG THE ALLOWABLE STRESS DESIGN LOAD COMBINATIONS OF ASCE 7. DESIGN WIND LOADS FOR EXTERIOR GLAZ NG NOT PART OF A LABELED ASSEMBLY SHALL BE PERMITTED TO BE DETERM NED N ACCORDANCE WITH CHAPTER 24 OF THE CALIFORNIA BU LDING CODE.

R609.3 TESTING AND LABELING. EXTERIOR W NDOWS AND SL DING DOORS SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, AND BEAR A LABEL IDENT FYING MANUFACTURER, PERFORMANCE CHARACTERISTICS AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH AAMA/WDMA/CSA 101/I.S.2/A440. EXTERIOR SIDE-HINGED DOORS SHALL BE TESTED AND LABELED AS CONFORM NG TO AAMA/WDMA/CSA 101/I.S 2/A440 OR AMD 100, OR COMPLY WITH SECTION R609.5.
__EXCEPTION: DECORATIVE GLAZED OPENINGS.__

R609.3.1 COMPARATIVE ANALYSIS. STRUCTURAL WIND LOAD DESIGN PRESSURES FOR W NDOW AND DOOR UNITS DIFFERENT THAN THE SIZE TESTED IN ACCORDANCE WITH SECTION R609.3 SHALL BE PERMITTED TO BE D FFERENT THAN THE DESIGN VALUE OF THE TESTED UNIT WHERE DETERMINED IN ACCORDANCE WITH ONE OF THE FOLLOWING COMPARATIVE ANALYSIS METHODS:
1. STRUCTURAL WIND LOAD DESIGN PRESSURES FOR W NDOW AND DOOR UNITS SMALLER THAN THE SIZE TESTED IN ACCORDANCE WITH SECTION R609 3 SHALL BE PERMITTED TO BE HIGHER THAN THE DESIGN VALUE OF THE TESTED UNIT PROVIDED SUCH HIGHER PRESSURES ARE DETERMINED BY ACCEPTED ENGINEERING ANALYSIS. COMPONENTS OF THE SMALLER UNIT SHALL BE THE SAME AS THOSE OF THE TESTED UNIT. WHERE SUCH CALCULATED DESIGN PRESSURES ARE USED, THEY SHALL BE VAL DATED BY AN ADDITIONAL TEST OF THE W NDOW OR DOOR UNIT HAVING THE HIGHEST ALLOW- ABLE DESIGN PRESSURE.
2. N ACCORDANCE WITH WDMA I.S.11.

R609.4 GARAGE DOORS. GARAGE DOORS SHALL BE TESTED N ACCORDANCE WITH EITHER ASTM E330 OR ANSI/DASMA 108, AND SHALL MEET PASS/FA L CRITERIA OF ANSI/DASMA 108.

R609.4.1 GARAGE DOOR LABELING. GARAGE DOORS SHALL BE LABELED WITH A PERMANENT LABEL PROV DED BY THE GARAGE DOOR MANUFACTURER. THE LABEL SHALL DENTIFY THE GARAGE DOOR MANUFACTURER, THE GARAGE DOOR MODEL/SER ES NUMBER, THE POSITIVE AND NEGATIVE DESIGNED WIND PRESSURE RAT NG, THE INSTALLATION INSTRUCTION DRAWING REFERENCE NUMBER, AND THE APPLICABLE TEST STANDARD.

R609.5 OTHER EXTERIOR WINDOW AND DOOR ASSEMBLIES. EXTERIOR W NDOWS AND DOOR ASSEMBL ES NOT INCLUDED WITHIN THE SCOPE OF SECTION R609 3 OR R609.4 SHALL BE TESTED IN ACCORDANCE WITH ASTM E330. GLASS IN ASSEMBLIES COVERED BY THIS EXCEPTION SHALL COMPLY WITH SECTION R308.5.

R609.6 WIND-BORNE DEBRIS PROTECTION. PROTECTION OF EXTERIOR W NDOWS AND GLASS DOORS N BUILDINGS LOCATED IN W ND-BORNE DEBRIS REGIONS SHALL BE IN ACCORDANCE WITH SECTION R301.2.1.2.

R609.6.1 FENESTRATION TESTING AND LABELING. FENESTRATION SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, LISTED BY AN APPROVED ENTITY, AND BEAR A LABEL DENTIFYING MANUFACTURER, PERFORMANCE CHARACTERISTICS, AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH THE REQU REMENTS OF THE FOLLOW NG SPECIFICATION(S):
1. ASTM E1886 AND ASTM E1996; OR 2. AAMA506.

R609.6.2 IMPACT PROTECTIVE SYSTEMS TESTING AND LABELING. MPACT PROTECTIVE SYSTEMS SHALL BE TESTED FOR IMPACT RESISTANCE BY AN APPROVED NDEPENDENT LABORATORY FOR COMPLIANCE WITH ASTM E1886 AND ASTM E1996. IMPACT PROTECTIVE SYSTEMS SHALL BE TESTED FOR DESIGNED WIND PRESSURE BY AN APPROVED INDEPENDENT LABORATORY FOR COMPLIANCE WITH ASTM E330. REQUIRED DESIGNED W ND PRESSURES SHALL BE DETERM NED IN ACCORDANCE WITH TABLE R301 2.1 (1), ADJUSTED FOR HEIGHT AND EXPOSURE N ACCORDANCE WITH TABLE R301.2.1.(2) OR DETERMINED IN ACCORDANCE WITH ASCE 7. FOR THE PURPOSE OF THIS SECTION, DESIGN, W ND PRESSURE IS DETERMINED N ACCORDANCE WITH ASCE 7 ARE PERMITTED TO BE MULT PLIED BY 0.6. IMPACT PROTECTIVE SYSTEMS, BEAR A LABEL, IDENT FY NG THE MANUFACTURER, PERFORMANCE CHARACTERISTICS, AND AN APPROVED NSPECTION AGENCY. IMPACT PROTECTIVE SYSTEMS, SHE'LL HAVE A PERMANENT LABEL, PROV DING TRACEAB LITY TO THE MANUFACTURER, PRODUCT DESIGNATION, AND PERFORMANCE CHARACTERISTICS. THE PERMANENT LABEL SHALL BE AC D ETCHED, SANDBLASTED, CERAMIC FIRED, LASER ETCHED, EMBOSSED, OR A TYPE THAT, ONCE APPL ED, CANNOT BE REMOVED WITHOUT BEING DESTROYED.

R609.7 ANCHORAGE METHODS. THE METHODS CITED N THIS SECTION APPLY ONLY TO ANCHORAGE OF WINDOW AND GLASS DOOR ASSEMBLIES TO THE MA N FORCE-RESISTING SYSTEM.

R609.7.1 ANCHORING REQUIREMENTS. W NDOW AND GLASS DOOR ASSEMBLIES SHALL BE ANCHORED IN ACCORDANCE WITH THE PUBLISHED MANUFACTURER'S RECOMMENDATIONS TO ACH EVE THE DESIGN PRESSURE SPECIFIED. SUBSTITUTE ANCHORING SYSTEMS USED FOR SUBSTRATES NOT SPEC F ED BY THE FENESTRATION MANUFACTURER SHALL PROV DE EQUAL OR GREATER ANCHORING PERFORMANCE AS DEMONSTRATED BY ACCEPTED ENGINEERING PRACTICE.

R609.7.2 ANCHORAGE DETAILS. PRODUCTS SHALL BE ANCHORED N ACCORDANCE WITH THE MIN MUM REQU REMENTS ILLUSTRATED N FIGURES R609.7.2(1), R609.7 2(2), R609.7.2(3), R609.7.2(4), R609.7 2(5), R609.7 2(6), R609.7.2(7) AND R609.7 2(8).

R609.7.2.1 MASONRY, CONCRETE OR OTHER STRUCTURAL SUBSTRATE. WHERE THE WOOD SH M OR BUCK THICKNESS IS LESS THAN 1-1/2 INCHES (38 MM), W NDOW AND GLASS DOOR ASSEMBLIES SHALL BE ANCHORED THROUGH THE JAMB, OR BY JAMB CLIP AND ANCHORS SHALL BE EMBEDDED DIRECTLY NTO THE MASONRY, CONCRETE OR OTHER SUBSTANTIAL SUBSTRATE MATERIAL. ANCHORS SHALL ADEQUATELY TRANSFER LOAD FROM THE W NDOW OR DOOR FRAME INTO THE ROUGH OPENING SUBSTRATE [SEE FIGURES R609.7 2(1) AND R6097 2(2)].
WHERE THE WOOD SHIM OR BUCK THICKNESS IS NCHES (38 MM) OR MORE, THE BUCK IS SECURELY FASTENED TO THE MASONRY, CONCRETE OR OTHER SUBSTANTIAL SUBSTRATE, AND THE BUCK EXTENDS BEYOND THE INTERIOR FACE OF THE W NDOW OR DOOR FRAME, WINDOW AND GLASS DOOR ASSEMBL ES SHALL BE ANCHORED THROUGH THE JAMB, OR BY JAMB CL P, OR THROUGH THE FLANGE TO THE SECURED WOOD BUCK. ANCHORS SHALL BE EMBEDDED NTO THE SECURED WOOD BUCK TO ADEQUATELY TRANSFER LOAD FROM THE WINDOW OR DOOR FRAME ASSEMBLY [SEE FIGURES R609.7.2(3), R6097.2(4) AND R609.7 2(5)].

R609.7.2.2 WOOD OR OTHER APPROVED FRAMING MATERIAL. WHERE THE FRAM NG MATERIAL IS WOOD OR OTHER APPROVED FRAMING MATERIAL, WINDOW AND GLASS DOOR ASSEMBL ES SHALL BE ANCHORED THROUGH THE FRAME, OR BY FRAME CL P, OR THROUGH THE FLANGE. ANCHORS SHALL BE EMBEDDED INTO THE FRAME CONSTRUCTION TO ADEQUATELY TRANSFER LOAD [SEE FIGURES R609.7 2(6), R609.7 2(7) AND R609.7.2(8)].

R609.8 MULLIONS. MULLIONS SHALL BE TESTED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH AAMA 450, OR BE ENGINEERED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. MULLIONS TESTED AS STAND-ALONE UNITS OR QUAL F ED BY ENGINEERING SHALL USE PERFORMANCE CRITERIA CITED IN SECTIONS R609.8.1, R609.8.2 AND R609.8.3. MULLIONS QUAL F ED BY AN ACTUAL TEST OF AN ENTIRE ASSEMBLY SHALL COMPLY WITH SECTIONS R609.8.1 AND R609.8 3.

R609.8.1 LOAD TRANSFER. MULLIONS SHALL BE DESIGNED TO TRANSFER THE DESIGN PRESSURE LOADS APPL ED BY THE W NDOW AND DOOR ASSEMBLIES TO THE ROUGH OPENING SUBSTRATE.

R609.8.2 DEFLECTION. MULLIONS SHALL BE CAPABLE OF RESISTING THE DESIGN PRESSURE LOADS APPLIED BY THE WINDOW AND DOOR ASSEMBL ES TO BE SUPPORTED WITHOUT DEFLECTING MORE THAN L/175, WHERE L IS THE SPAN OF THE MULLION IN INCHES.

R609.8.3 STRUCTURAL SAFETY FACTOR. MULLIONS SHALL BE CAPABLE OF RESISTING A LOAD OF 1.5 T MES THE DESIGN PRESSURE LOADS APPL ED BY THE W NDOW AND DOOR ASSEMBLIES TO BE SUPPORTED WITHOUT EXCEED NG THE APPROPRIATE MATERIAL STRESS LEVELS. IF TESTED BY AN APPROVED LABORATORY, THE 1 5 TIMES THE DESIGN PRESSURE LOAD SHALL BE SUSTAINED FOR 10 SECONDS, AND THE PERMANENT DEFORMATION SHALL NOT EXCEED 0.4 PERCENT OF THE MULLION SPAN AFTER THE 1 5 TIMES DESIGN PRESSURE LOAD IS REMOVED.

MISCELLANEOUS DOOR & WINDOW NOTES:

1. __ROUGH OPENINGS:__ ALL DOOR AND WINDOW SIZES INDICATED ON "DOOR & W NDOW SCHEDULES" ARE GENERIC. VER FY THE ACTUAL REQUIRED FRAMED ROUGH OPEN NGS WITH THE OWNER'S SELECTED DOOR/W NDOW MANUFACTURERS' PRODUCT INSTALLATION INSTRUCTIONS AND SPECIFICATIONS. CROSS REFERENCE ALL W NDOW SIZES WITH REQU RED SHEAR WALL W DTHS ON THE FRAM NG PLAN(S) FOR VERIFICATION OF ALLOWABLE W NDOW W DTHS. ALL DOOR & W NDOW SIZES (R.O.) NOTED ARE NDICATED N FEET/ NCHES. (E: 4050 = 4'-0" X 5'-0"). SIZES MAY VARY BASED ON MANUFACTURER SELECTION.
2. __HEADER HEIGHT:__ UNLESS OTHERWISE NOTED, DOOR AND WINDOW HEADER HEIGHTS SHALL BE AS FOLLOWS BASED ON A TYPICAL 3" THICK DOUBLE TOP PLATE & A NOM NAL 12"± HEADER DEPTH OR SIZED HEADER WITH CRIPPLE STUDS: NOTIFY PROJECT STRUCTURAL ENGINEER AND DESIGNER OF ALL DISCREPANC ES FOR ALTERNATIVE HEADER INSTALLATIONS, CONFIGURATIONS, SIZING ETC... PRIOR TO ORDERING PRODUCT.
   a. ± 81" WHERE THE STUD WALL HEIGHT IS 8'-0" TALL. DIMENSION MAY VARY BASED ON SIZE & SPEC F ED HEADER DESIGNATION. VERIFY WITH PRODUCT ROUGH OPENING SPEC FICATIONS PRIOR TO FRAM NG.
   b. FOR ALL STUD WALL HEIGHTS OVER 8'-0" TALL, SEE EXTERIOR ELEVATIONS AND/OR VERIFY SELECTED PRODUCT'S ROUGH OPENING(S) PRIOR TO FRAM NG.
3. __PRODUCT SELECTION:__ ALL DOOR AND W NDOW MANUFACTURERS AND PRODUCT F NISHES, CLADD NG AND/OR NTEGRAL ITEMS AND MOLDINGS SHALL BE SELECTED AND APPROVED BY CL ENT/HOMEOWNER. BRITT-ROWE SHALL NOT BE RESPONS BLE FOR MODIFICATIONS AND/OR CHANGES TO SCHEDULE SPEC F ED "GENERIC" ROUGH OPEN NGS RELATING TO F NAL MANUFACTURER'S PRODUCT SPECIFICATIONS. VERIFY ALL PRODUCT ROUGH OPEN NGS WITH SPEC FIED FRAM NG AND SHEAR WALL REQUIREMENTS. NOT FY STRUCTURAL ENGINEER OF RECORD FOR ALL DISCREPANC ES PRIOR TO ORDERING OF UNITS.
4. __PLAN & SCHEDULE IDENTIFICATION:__ W NDOWS AND DOORS EQU PPED WITH TEMPERED GLAZING PER SECTION R308.4 ARE IDENT F ED ON THE FLOOR PLAN WITH A "T" SYMBOL AND ARE NOTED ON THE W NDOW AND DOOR SCHEDULES TO BE EQU PPED WITH TEMPERED GLAZ NG. WINDOWS REQUIRED TO MEET EMERGENCY AND RESCUE REQU REMENTS OF SECTION R310 ARE NOTED ON THE FLOOR PLAN AND WINDOW SCHEDULE WITH AN "EG" SYMBOL.
5. __REMODEL CONSTRUCTION:__ WHERE EXISTING W NDOWS ARE PLANNED FOR SAME SIZE REPLACEMENT, VERIFY ALL EXISTING W NDOW SIZES AND ROUGH OPENINGS PRIOR TO ORDER NG NEW REPLACEMENT UNITS TO ENSURE PROPER SIZ NG & INSTALLATION. IT IS SUGGESTED AND RECOMMENDED THE SELECTED MANUFACTURER'S SALES REPRESENTATIVE VISIT THE SITE TO VERIFY AND CONF RM REPLACEMENT W NDOW SIZES AND/OR PRODUCT SPECIFICATIONS REQU RED.
6. __ENERGY EFFICIENCY:__ ALL WINDOWS AND DOORS CONTAIN NG GLAZ NG SHALL BE PROVIDED WITH DUAL PANE, LOW "E" GLAZING AND SHALL MEET ALL REQU RED FENESTRATION & U-FACTOR SPECIFICATIONS AS REQUIRED BY THE STATE OF CAL FORNIA TITLE 24 ENERGY CALCULATIONS COMPLIMENTARY TO THIS PLAN SET AS APPLICABLE. SEE T24 CALCULATIONS (AS APPLICABLE) FOR MINIMUM REQUIRED U-FACTOR & SHGC-FACTOR.

PLAN NOTATION	NOTE	PLAN NOTATION	NOTE
AW1	SINGLE AWNING WINDOW	FR3	TRIPLE FRENCH DOOR (SWING)
AW2	DOUBLE AWNING WINDOW	FR4	QUADRUPLE FRENCH DOOR (SWING)
B30	30° BAY WINDOW	G1	SINGLE FIXED GEOMETRIC WINDOW
B45	45° BAY WINDOW	G2	DOUBLE FIXED GEOMETRIC WINDOW

PLAN NOTATION	NOTE	PLAN NOTATION	NOTE
B90	90° BAY WINDOW	R1	MULTI FIXED/OPERABLE WINDOW
BW1	BOW WINDOW	SH1	SINGLE SINGLE HUNG WINDOW
CS1	SINGLE CASEMENT WINDOW	SH2	DOUBLE SINGLE HUNG WINDOW
CS2	DOUBLE CASEMENT WINDOW	SH3	TRIPLE SINGLE HUNG WINDOW
CS3	TRIPLE CASEMENT WINDOW	SL2	DOUBLE SLIDING WINDOW (HORIZ.)
DH1	SINGLE DOUBLE HUNG WINDOW	SL3	TRIPLE SLIDING WINDOW (HORIZ.)
DH2	DOUBLE DOUBLE HUNG WINDOW	SLD2	DOUBLE SLIDING FRENCH DOOR
DH3	TRIPLE DOUBLE HUNG WINDOW	SLD3	TRIPLE SLIDING FRENCH DOOR
F1	SINGLE FIXED PICTURE WINDOW	SLD4	QUADRUPLE SLIDING FRENCH DOOR
F2	DOUBLE FIXED PICTURE WINDOW	SP3	CUSTOM FOLDING/SLIDING DOOR
F3	TRIPLE FIXED PICTURE WINDOW	SP4	CUSTOM FOLDING/SLIDING DOOR
FR2	DOUBLE FRENCH DOOR (SWING)	SP5	CUSTOM FOLDING/SLIDING DOOR

STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

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4/2/25
BUILDING SUBMITTAL SET

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

DOOR/WINDOW NOTES

DW.1

FIRE DEPARTMENT
SANTA CLARA COUNTY
14700 Winchester Blvd., Los Gatos, CA. 95032-1818
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STANDARD DETAILS & SPECIFICATIONS	Spec No	SI-7
	Rev. Date	04/30/09
SUBJECT: Construction Site Fire Safety	Eff. Date	12/17/02
	Approved By	
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SCOPE

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

REQUIREMENTS

I. Fire Protection Plan

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

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

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

II. General Safety Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Exceptions: 1. Materials that are staged for installation on a floor level.

2. When approved by the Fire Department, materials may be stored in parking garages of Type I construction if the automatic fire sprinkler system is in service and vertical openings are protected.

III. Fire Protection Systems

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

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

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

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

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

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

IV. Means of Egress Requirements

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

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

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

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

V. Area Separation Walls

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

VI. Special Operation Requirements

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

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

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

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

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

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

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

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

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

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

VII. Hazardous Materials

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

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

(a) Heating elements (other than integral heater-container units) shall be located at least 6 feet from any LP-Gas container.
(b) Integral heater-container units specifically designed for the attachment of the heater to the container, or to a supporting standard attached to the container, may be used provided they are designed and installed so as to prevent direct or radiant heat application to the LP-Gas container.
(c) Blower and radiant type units shall not be directed toward any LP-Gas container within 20 feet.
(d) Heat producing equipment shall be installed with clearance to the combustibles in accordance with the manufacturer's installation instructions.
(e) Cylinders shall comply with DOT cylinder specifications and shall be secured in an upright position.
(f) Regulators shall be approved for use with LP-Gas. Fittings shall be designed for at least 250 psig service pressure.
(g) Hose shall be designed for a working pressure of at least 350 psig (unless limited to 5 psig) and shall be a maximum of 6 feet in length.
(h) Portable heaters shall be equipped with an approved automatic device to shut off the flow of gas to the main burner and to the pilot in the event of flame extinguishment or combustion failure. Portable heaters with an input of more than 50,000 Btu/hr shall be equipped with either a pilot that must be proved before the main burner can be turned on or an approved electronic ignition system.

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

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

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

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

C. Compressed Gases

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

STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

638 UNIVERSITY AVE
LOS GATOS
CALIFORNIA
95032

t 408.292.3252
f 253.399.1125

RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

A.P.N. 510-14-037

4/2/25
BUILDING SUBMITTAL SET

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

SCCFD JOB SAFETY

F. 1

GOVERNING CODES All work shall conform to the following codes & standards

a) 2022 California Building Code (CBC) Title 24, Part 2 (Based on 2021 IBC)
b) 2022 California Residential Code (CRC) Title 24, Part 2.5 (Based on 2021 IRC)
c) 2022 California Electric Code (CEC) Title 24, Part 3 (Based on 2020 NEC)
d) 2022 California Mechanical Code (CMC) Title 24, Part 4 (Based on 2021 UMC)
e) 2022 California Plumbing Code (CPC) Title 24, Part 5 (Based on 2021 UPC)
f) 2022 California Energy Code Title 24, Part 6 (CA Building Standards Commission)
g) 2022 California Fire Code (CFC) Title 24, Part 9 (Based on 2021 IFC)
h) 2022 CalGreen Building Code Title 24, Part 11 (CA Building Standards Commission)

In addition to the codes referenced above all work shall conform to all local ordinances and codes as applicable Cross reference all code numbers and verify consistency as required If all of the appropriate permits are not obtained Britt/Rowe & all project consultants shall not be held responsible for any and all work performed

NOTE: See Foundation Plan Framing Plan(s) & structural notes for structural design layout structural details material specifications and code requirements

CRC CHAPTER 1: SCOPE AND APPLICATION

SECTION R105: PERMITS

R105.1 Required. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be performed, shall first make application to the building official and obtain the required permit.
R105.2 Work exempt from permit. Permits shall not be required for the following. Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.
Building
1. Other than storm shelters, one-story, detached accessory structures, provided that the floor area does not exceed 120 square feet (11.15 m2). It is permissible that these structures still be regulated by Section 710A, despite exemption from permit.
2. Fences not over 7 feet (2134 mm) high.
3. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge.
4. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons (18 927 L) and the ratio of height to diameter or width does not exceed 2 to 1.
5. Sidewalks and driveways.
6. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
7. Prefabricated swimming pools that are less than 24 inches (610 mm) deep.
8. Swings and other playground equipment.
9. Window awnings supported by an exterior wall which do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.
10. Decks not exceeding 200 square feet (18.58 m2) in area, that are not more than 30 inches (762 mm) above grade at any point, are not attached to a dwelling and do not serve the exit door required by Section R311.4.

SECTION R110: CERTIFICATE OF OCCUPANCY

R110.1 Use and change of occupancy. A building or structure shall not be used or occupied in whole, or in part, and a change of occupancy of a building, structure or portion thereof shall not be made, until the building official has issued a certificate of occupancy, therefore as provided herein. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code, or other ordinances of the jurisdiction. Certificates presuming to give authority to violate or cancel the provisions of this code, or other ordinances of the jurisdiction shall not be valid.
Exceptions:
1 *Certificates of occupancy are not required for work exempt from permits under Section R105 2*
2 *Accessory buildings or structures*
R110.2 Change in use. Changes in the character or use of an existing structure shall not be made except as specified in Chapter 11 of the California Fire Code and California Existing Building Code.
R110.3 Certificate issued. After the building official inspects the building or structure and finds no violations of the provisions of this code or other laws that are enforced by the department, the building official shall issue a certificate of occupancy containing the following
1. The permit number.
2. The address of the structure.
3. The name and address of the owner or the owner's authorized agent.
4. A description of that portion of the structure for which the certificate is issued.
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code.
6. The name of the building official.
7. The edition of the code under which the permit was issued.
8. Where an automatic sprinkler system is provided and whether the sprinkler system is required.
9. Any special stipulations and conditions of the building permit.

SECTION R202: DEFINITIONS See CRC R202 for additional definitions not listed.

Accessory Dwelling Unit and attached or detached residential dwelling unit that provides complete independent living facilities for one or more persons and is located on a lot with a proposed or existing primary residence. Accessory dwelling units shall include permanent, provisions for living, sleeping, eating, cooking and sanitation on the same parcel as the single-family or multi family dwelling is or will be situated. (See Government Code Section 65852.2)
Accessory Structure A structure that is accessory to and incidental to that of the dwelling(s) and that is located on the same lot.
Addition An extension or increase in floor area, number of stories, or height of a building or structure.
Alteration Any construction, retrofit, or renovation to an existing structure, other than repair or addition that requires a permit. Also, a change in a building, electrical, gas, mechanical or plumbing system, that involves an extension, addition, or change to the arrangement, type or purpose of the original installation that requires a permit.
Attic The unfinished space between the ceiling assembly of the top story and the roof assembly.
Attic, Habitable A finished or unfinished habitable space within an attic.
Basement A story that is not a story above grade plane, (see "Story above grade plane").
Building Any one-or two-family dwelling or townhouse, or portion thereof, used or intended to be used for human habitation, for living, sleeping, cooking, or eating purposes, or any combination thereof, or any accessory structure. (See CRC Section R202 for "Exceptions")
Building, Existing Existing building is a building erected prior to the adoption of this code, or one for which a legal building permit has been issued.
Ceiling Height The clear vertical distance from the finished floor to the finished ceiling.
Dwelling Any building that contains on or two dwelling units used, intended, or designed to be built, used, rented, leased, let or hired out to be occupied, or that are occupied for living purposes.
Dwelling Unit A single unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.
Grade The finished ground level adjoining the building at all exterior walls.
Habitable Space A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.
Height, Building The vertical distance from grade plane to the average height of the highest roof surface.
Height, Story The vertical distance from top to top of two successive tiers of beams or finished floor surfaces; and, for the topmost story, from the top of the floor finish to the top of the ceiling joists or, where there is not a ceiling, to the top of the roof rafters.
Living Space Space within a dwelling unit utilized for living, sleeping, eating, cooking, bathing, washing and sanitation purposes.
Structure That which is built or constructed.

SECTION R302: FIRE RESISTANT CONSTRUCTION

R302.1 Exterior walls. Construction, projections, openings and penetrations of exterior walls of dwellings and accessory buildings shall comply with Table R302.1(1); or dwellings and accessory buildings equipped throughout with an automatic sprinkler system installed in accordance with Section R313 shall comply with Table R302.1(2).
Exceptions
1 *Walls projections openings or penetrations in walls perpendicular to the line used to determine the fire separation distance*
2 *Walls of dwellings and accessory structures located on the same lot*
3 *Detached tool sheds and storage sheds playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the lot Projections beyond the exterior wall shall not extend over the lot line*
4 *Detached garages accessory to a dwelling located within 2 feet (610 mm) of a lot line are permitted to have roof eave projections not exceeding 4 inches (102 mm)*
5 *Foundation vents installed in compliance with this code are permitted*
R302.5 Dwelling/garage opening/penetration protection. Openings and penetrations through the walls or ceilings separating the dwelling from the garage shall be in accordance with Sections R302.5.1 through R302.5.3.
R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1-3/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1-3/8 inches (35 mm) thick, or 20-minute fire-rated doors. Doors shall be self-latching and equipped with a self-closing or automatic closing device.

Exception: Where the residence and the private garage are protected by an automatic residential fire sprinkler system in accordance with Sections R309 6 and R313 other door openings between the private garage and the residence need only be self closing and self latching This exception shall not apply to rooms used for sleeping purposes
R302.5.2 Duct penetration. Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gauge (0.48mm) sheet steel or other approved material and shall have no openings into the garage.
R302.5.3 Other penetrations. Penetrations through the separation required in Section R302.6 shall be protected as required by Section R302.11, Item 4.
R302.6 Dwelling/garage and/or carport fire separation. The garage and/or carport shall be separated as required by Table R302.6. Openings in garage walls shall comply with Section R302.5. Attachment of gypsum board shall comply with Table R702.3.5. The wall separation provisions of Table R302.6 shall not apply to garage walls that are perpendicular to the adjacent dwelling unit wall. A separation is not required between the dwelling unit and a carport, provided the carport is entirely open on two or more sides and there are not enclosed areas above.
R302.7 Under stair protection. Enclosed accessible space under stairs shall have walls, under-stair surface and any soffits protected on the enclosed side with 1/2 inch (12.7 mm) gypsum board.
R302.11 Fire blocking. In combustible construction, fire-blocking shall be provided to cut off all concealed draft openings (both vertical and horizontal) and to form an effective barrier between stories, and between a top story and the roof space. Fire blocking shall be provided in wood-frame construction in the following locations
1. In concealed spaces of stud walls and partitions, including furred spaces and parallel rows of studs or staggered studs, as follows
1.1. Vertically at the ceiling and floor levels.
1.2. Horizontally at intervals not exceeding 10 feet (3048 mm).
2. At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
3. In concealed spaces between stair stringers at the top and bottom of the run. Enclosed spaces under stairs shall comply with Section R302.7.
4. At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion. The material filling this annular space shall not be required to meet the ASTM E 136 requirements.
5. For the fire blocking of chimneys and fireplaces, see Section R1003.19.
6. Fire blocking of cornices of a two-family dwelling is required at the line of dwelling unit separation.
R302.12 Draft stopping. In combustible construction where there is usable space both above and below the concealed space of a floor/ceiling assembly, draft stops shall be installed so that the area of the concealed space does not exceed 1,000 square feet (92.9 m2). Draft stopping shall divide the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draft stopping shall be provided in floor/ceiling assemblies under the following circumstances
1. Ceiling is suspended under the floor framing.
2. Floor framing is constructed of truss-type open-web or perforated members.
R302.13 Fire protection of floors. Floor assemblies that are not required elsewhere in this code to be fire-resistance rated, shall be provided with a 1/2 inch (12.7 mm) gypsum wall board membrane, 5/8 inch (16 mm) wood structural panel membrane, or equivalent on the underside of the floor framing member. Penetrations or openings for ducts, vents, electrical outlets, lighting, devices, luminaries, wires, speakers, drainage, piping and similar openings or penetrations shall be permitted.
Exceptions
1 *Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Section R313 NFPA 13D or other approved equivalent sprinkler system*
2 *Floor assemblies located directly over a crawl space not intended for storage or fuel fired appliances*
3 *Portions of floor assemblies shall be permitted to be unprotected where complying with the following:*
3 1 The aggregate area of the unprotected portions does not exceed 80 square feet (7 4 m2) per story
3 2 Fire blocking in accordance with Section R302 11 1 is installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly
4 *Wood floor assemblies using dimension lumber or structural composite lumber equal to or greater than 2 inch by 10 inch (50 8 mm by 254 mm) nominal dimension or other approved floor assemblies demonstrating equivalent fire performance*
R302.14 Combustible insulation clearance. Combustible insulation shall be separated not less than 3 inches (76 mm) from recessed luminaries, fan motors and other heat-producing devices.
Exception: Where heat producing devices are listed for lesser clearances combustible insulation complying with the listing requirements shall be separated in accordance with the conditions stipulated in the listing Recessed luminaries installed in the building thermal envelope shall meet or exceed the requirements of Section N1102 4 5 of this code

SECTION R303: LIGHT, VENTILATION AND HEATING

R303.1 Habitable rooms. Habitable rooms shall have an aggregate glazing area of not less than 8 percent of the floor area of such rooms. Natural ventilation shall be through windows, skylights, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The openable area to the outdoors shall be not less than 4 percent of the floor area being ventilated.
Exceptions
1 *For habitable rooms other than kitchens the glazed areas need not be open at all where the opening is not required by Section R310 and a whole house mechanical ventilation system or a mechanical ventilation system capable of producing 0 35 air changes per hour in the habitable rooms is installed in accordance with the California Mechanical Code*
2 *For kitchens the glazed areas need not be openable where the opening is not required by Section R310 and a local exhaust system is installed in accordance with the California Mechanical Code*
3 *The glazed areas need not be installed in rooms where Exception 1 is satisfied and artificial light is provided that is capable of producing an average illumination of 6 foot candles (65 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level*
4 *Use of sunroom and patio covers as defined in Section R202 shall be permitted for natural ventilation if in excess of 40 percent of the exterior sunroom walls are open or are enclosed only by insect screening*
5 *The windows doors louvers and other approved closable openings not required by Section R310 may open into a passive solar energy collector for ventilation required by the section The area of ventilation openings to the outside of the passive solar energy collector shall be increased to compensate for the openings required by the interior space*
6 *Glazed openings may open into a passive solar energy collector provided the area of exterior glazed opening(s) into the passive solar energy collector is increased to compensate for the area required by the interior space*
R303.2 Adjoining rooms. For the purpose of determining light and ventilation requirements, any room shall be considered as a portion of an adjoining room when at least one-half of the area of the common wall is open and unobstructed and provides an opening of not less than one-tenth of the floor area of the interior room but not less than 25 square feet (2.3 m2).
Exception Openings required for light and/or ventilation shall be permitted to open into a sunroom with thermal isolation or a patio cover, provided that there is an openable area between the adjoining room and the sunroom or patio cover of not less than one-tenth of the floor area of the interior room but not less than 20 square feet (2 m2). The minimum openable area to the outdoors shall be based upon the total floor area being ventilated.
R303.3 Bathrooms. Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.3 m2), one-half of which must be openable.
Exception The glazed areas shall not be required where artificial light and a local exhaust system are provided The minimum local exhaust rates shall be 50 cubic feet per minute (25 L/s) for intermittent ventilation or 20 cubic feet per minute (10 L/s) for continuous ventilation in accordance with the California Mechanical Code Chapter 4 Exhaust air from the space shall be exhausted directly to the outdoors
R303.3.1 Bathroom exhaust fans. Each bathroom containing a bathtub, shower or tub/shower combination shall be mechanically ventilated for purposes of humidity control in accordance with the California Mechanical Code, Chapter 4; and the California Green Building Standards Code, Chapter 4, Division 4.5.
Note: Window operation is not a permissible method of providing bathroom exhaust for humidity control
R303.4 Ventilation. Ventilation air rates shall be in compliance with the California Mechanical Code.
R303.5 Opening location. Outdoor intake and exhaust openings shall be located in accordance with Sections R303.5.1 and R303.5.2.
R303.5.1 Intake openings. Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet (3048 mm) from any hazardous or noxious contaminant, such as vents, chimneys, plumbing vents, streets, alleys, parking lots and loading docks. For the purpose of this section, the exhaust from dwelling unit toilet rooms, bathrooms and kitchens shall not be considered as hazardous or noxious.
Exceptions
1 *The 10 foot (3048mm) separation is not required where the intake opening is located 3 foot (914 mm) or greater below the contaminant source*
2 *Vents and chimneys serving fuel burning appliances shall be terminated in accordance with the applicable provisions of the California Mechanical Code*
3. *Clothes dryer exhaust ducts shall be terminated in accordance with the California Mechanical Code*
R303.5.2 Exhaust openings. Exhaust air shall not be directed onto walkways.
R303.6 Outside opening protection. Air exhaust and intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles having a minimum opening size of 1/4 inch (6 mm) and a maximum opening size of 1/2 inch (13 mm), in any dimension. Openings shall be protected against local weather conditions. Outdoor air exhaust and intake openings shall meet the provisions for exterior wall opening protectives in accordance with this code.
R303.7 Interior stairway illumination. Interior stairways shall be provided with an artificial light source to illuminate the landings and treads. The light source shall be capable of illuminating treads and landings to levels of not less than 1 foot-candle (11 lux) as measured at the center of treads and landings. There shall be a wall switch at each floor level to control the light source where the stairway has six or more risers.
Exception: A switch is not required where remote central or automatic control of lighting is provided
R303.8 Exterior stairway illumination Exterior stairways shall be provided with an artificial light source located at the top landing of the stairway. Exterior stairways providing access to a basement from the outdoor grade level shall be provided with an artificial light source located at the bottom landing of the stairway.

R303.9 Required heating. Where the winter design temperature in Table R301.2(1) is below 60°F (16°C), every dwelling unit shall be provided with heating facilities capable of maintaining a room temperature of not less than 68°F (20°C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in habitable rooms at the design temperature. The installation of one or more portable space heaters shall not be used to achieve compliance with this section.
Note: See Section R301 1 1 1 for limited density owner built rural dwellings

SECTION R304: MINIMUM ROOM AREAS

R304.1 Minimum area. Habitable rooms shall have a floor area of not less than 70 square feet (6.5 m2).
Exception: Kitchens
R304.2 Minimum dimensions. Habitable rooms shall not be less than 7 feet (2134 mm) in any horizontal dimension.
Exceptions
1 *Kitchens*
2 *Limited density owner built rural dwellings See Section R301 1 1 1*
R304.3 Height effect on room area. Portions of a room with a sloping ceiling measuring less than 5 feet (1524 mm) or a furred ceiling measuring less than 7 feet (2134 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required habitable area for that room.

SECTION R305: CEILING HEIGHT

R305.1 Minimum height. Habitable space, hallways and portions of basements containing these spaces shall have a ceiling height of not less than 7 feet (2134 mm). Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6 feet 8 inches (2032 mm).
Exceptions:
1 *For rooms with sloped ceilings the required floor area of the room shall have a ceiling height of not less than 5 feet (1524 mm) and not less than 50 percent of the required floor area shall have a ceiling height of not less than 7 feet (2134 mm)*
2 *The ceiling height above bathroom and toilet room fixtures shall be such that the fixture is capable of being used for its intended purpose A shower or tub equipped with a shower head shall have a ceiling height of not less than 6 feet 8 inches (2032 mm) above an area of not less than 30 inches (762 mm) by 30 inches (762 mm) at the shower head*
3 *Beams girders ducts or other obstructions in basements containing habitable space shall be permitted to project to within 6 feet 4 inches (1931 mm) of the finished floor*
4 *Beams in gardeners spaced apart not less than 36 inches (914 mm) in the clear finished with shower project not more than 78 inches (1981 mm) from the finished floor*
R305.1.1 Basements. Portions of basements that do not contain habitable space or hallways shall have a ceiling height of not less than 6 feet 8 inches (2032 mm).
Exception At beams girders ducts or other obstructions the ceiling height shall be not less than 6 feet 4 inches (1931 mm) from the finished floor

SECTION R306: SANITATION

R306.1 Toilet facilities. Every dwelling unit shall be provided with a water closet, lavatory, and a bathtub or shower.
R306.2 Kitchen. Each dwelling unit shall be provided with a kitchen area and every kitchen area shall be provided with a sink.
R306.3 Sewage disposal. All plumbing fixtures shall be connected to a sanitary sewer or to an approved private sewage disposal system.
R306.4 Water supply to fixtures. All plumbing fixtures shall be connected to an approved water supply. Kitchen sinks, lavatories, bathtubs, showers, bidets, laundry tubs and washing machine outlets shall be provided with hot and cold water.

SECTION R307: TOILET, BATH AND SHOWER SPACES

R307.1 Space required. Fixtures shall be spaced in accordance with the California Plumbing Code
R307.2 Bathtub and shower spaces. Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a non-absorbent surface. Such wall surfaces shall extend to a height of not less than 6 feet (1829 mm) above the floor.

SECTION R308: GLAZING

R308.1 Identification. Except as indicated in Section R308.1.1 each pane of glazing installed in hazardous locations as defined in Section R308.4 shall be provided with a manufacturer's designation specifying who applied the designation, designating the type of glass and the safety glazing standard with which it complies, which is visible in the final installation. The designation shall be acid etched, sand- blasted, ceramic-fired, laser etched, embossed, or be of a type which once applied cannot be removed without being destroyed. A label shall be permitted in lieu of the manufacturer's designation.
Exceptions:
1 *For other than tempered glass manufacturer's designations are not required provided the building official approves the use of a certificate affidavit or other evidence confirming compliance with this code*
2 *Tempered spandrel glass is permitted to be identified by the manufacturer with a removable paper designation*

R308.1.1 Identification of multiple assemblies. Multi-pane assemblies having individual panes not exceeding 1 square foot (0.09 m2) in exposed area shall have at least one pane in the assembly identified in accordance with Section R308.1. All other panes in the assembly shall be labeled "CPSC 16 CFR 1201" or "ANSI Z97.1" as appropriate.
R308.2 Louvered windows or jalousies. Regular, float, wired or patterned glass in jalousies and louvered windows shall be no thinner than nominal 3/16 inch (5 mm) and no longer than 48 inches (1219 mm). Exposed glass edges shall be smooth.
R308.2.1 Wired glass prohibited. Wired glass with wire exposed on longitudinal edges shall not be used in jalousies or louvered windows.
R308.3 Human impact loads. Individual glazed areas, including glass mirrors in hazardous locations such as those indicated as defined in Section R308.4, shall pass the test requirements of Section R308.3.1.
Exceptions
1. *Louvered windows and jalousies shall comply with Section R308.2*
2. *Mirrors and other glass panels mounted or hung on a surface that provides a continuous backing support.*
3. *Glass unit masonry complying with Section R610.*
R308.3.1 Impact test. Where required by other sections of the code glazing shall be tested in accordance with CPSC 16 CFR 1201. Glazing shall comply with the test criteria for Category II unless otherwise indicated in Table R308.3.1(1).
Exception Glazing not in doors or enclosures for hot tubs whirlpools saunas steam rooms bathtubs and showers shall be permitted to be tested in accordance with ANSI Z97.1. Glazing shall comply with the test criteria for Class A unless indicated in Table R308.3.1(2).
R308.4 Hazardous locations. The locations specified in Sections R308.4.1 through R308.4.7 shall be considered specific hazardous locations for the purposes of glazing.
R308.4.1 Glazing in doors. Glazing in all fixed and operable panels of swinging, sliding and bifold doors shall be considered a hazardous location.
Exceptions
1. *Glazed openings of a size through which a 3 inch diameter (76 mm) sphere is unable to pass.*
2. *Decorative glazing.*
R308.4.2 Glazing adjacent doors. Glazing in an individual fixed or operable panel adjacent to a door shall be considered to be a hazardous location where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the floor or walking surface and it meets either of the following conditions
1. Where the glazing is within 24 inches (610 mm) of either side of the door in the plane of the door in a closed position
2. Where the glazing is on a wall perpendicular to the plane of the door in a closed position and within 24 inches (610 mm) of the hinge side of an in-swinging door.
Exceptions
1. *Decorative glazing.*
2. *When there is an intervening wall or other permanent barrier between the door and the glazing.*
3. *Where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth. Glazing in this application shall comply with section R308.4.3.*
4. *Glazing that is adjacent to the fixed panel of patio doors.*
R308.4.3 Glazing in windows. Glazing in an individual fixed or operable panel that meets all of the following conditions shall be considered a hazardous location
1. The exposed area of an individual pane is larger than 9 square feet (0.836 m2);
2. The bottom edge of the glazing is less than 18 inches (457 mm) above the floor;
3. The top edge of the glazing is more than 36 inches (914 mm) above the floor; and
4. One or more walking surfaces are within 36 inches (914 mm), measured horizontally and in a straight line, of the glazing.
Exceptions
1. *Decorative glazing.*
2. *When a horizontal rail is installed on the accessible side(s) of the glazing 34 to 38 inches (864 to 965 mm) above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot (730 N/m) without contacting the glass and be a minimum of 1-1/2 inches (38 mm) in cross sectional height.*
3. *Outboard panes in insulating glass units and other multiple glazed panels where the bottom edge of the glass is 25 feet (7620 mm) or more above grade a roof walking surfaces or other horizontal [within 45 degrees (0.79 rad) of horizontal] surface adjacent to the glass exterior.*
R308.4.4 Glazing in guards and railings. Glazing in guards and railings, including structural baluster panels and nonstructural in-fill panels, regardless of area or height above a walking surface shall be considered a hazardous location.
R308.4.5 Glazing and wet surfaces. Glazing in walls, enclosures or fences containing or adjacent to hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers and indoor or outdoor swimming pools where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) measured vertically above any standing or walking surface shall be considered a hazardous location. This shall apply to single glazing and all panes in multiple glazing.
Exception Glazing that is more than 60 inches (1524 mm) measured horizontally from the waters edge of a bathtub hot tub spa whirlpool or swimming pool or from the edge of a shower sauna or steam room.
R308.4.6 Glazing adjacent stairs and ramps. Glazing where the bottom exposed edge of the glazing is less than 36 inches (914 mm) above the plane of the adjacent walking surface of stairways, landings between flights of stairs and ramps shall be considered a hazardous location.
Exceptions
1 *When a rail is installed on the accessible side(s) of the glazing 34 to 38 inches (864 to 965 mm) above the walking surface The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot (730 N/m) without contacting the glass and be a minimum of 1 1/2 inches (38 mm) in cross sectional height*
2 *Glazing 36 inches (914 mm) or more measured horizontally from the walking surface*
R308.4.7 Glazing Adjacent to the bottom stair landing. Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches (914 mm) above the landing and within a 60-inch (1524 mm) horizontal arc less than 180 degrees from the bottom tread nosing shall be considered to be a hazardous location.
Exception: The glazing is protected by a guard complying with Section R312 and the plane of the glass is more than 18 inches (457 mm) from the guard.
R308.5 Site built windows. Site built windows shall comply with Section 2404 of the California Building Code
R308.6 Skylights and sloped glazing. Skylights and sloped glazing shall comply with the following sections.
R308.6.1 Definitions. The following terms are defined in Chapter 2
SKYLIGHT, UNIT
SKYLIGHTS AND SLOPED GLAZING.
TUBULAR DAYLIGHTING DEVICE (TDD)
R308.6.2 Materials. The following types of glazing shall be permitted to be used
1. Laminated glass with a minimum 0.015-inch (0.38 mm) polyvinyl butyral interlayer for glass panes 16 square feet (1.5 m2) or less in area located such that the highest point of the glass is not more than 12 feet (3658 mm) above a walking surface or other accessible area; for higher or larger sizes, the minimum interlayer thickness shall be 0.030 inch (0.76 mm).
2. Fully tempered glass.
3. Heat-strengthened glass.
4. Wired glass.
5. Approved rigid plastics.
R308.6.3 Screens, general. For fully tempered or heat-strengthened glass, a broken glass retention screen meeting the requirements of Section R308.6.7 shall be installed below the full area of the glass, except for fully tempered glass that meets Condition 1 or 2 listed in Section R308.6.5.
R308.6.4 Screens with multiple glazing. Where the inboard pain is fully tempered, heat-strengthened, or wire glass, a broken glass retention screen meeting the requirements of Section R308.6.7 shall be installed below the full area of the glass, except for Condition 1 or 2 listed in Section R308.6.5. Other panes in the multiple glazing shall be of any type listed in Section R308.6.2.
R308.6.5 Screens not required. Screens shall not be required where laminated glass complying with Item 1 of Section R308.6.2 is used as single glazing or the inboard pane in multiple glazing. Screens shall not be required where fully tempered glass is used as single glazing or the inboard pane in multiple glazing and either of the following conditions is met.
1. Glass area 16 square feet (1.49 m2) or less. Highest point of glass not more than 12 feet (3658 mm) above a walking surface or other accessible area, nominal glass thickness not more than 3/16 inch (4.8 mm), and (for multiple glazing only) the other pane or panes fully tempered, laminated or wired glass.
2. Glass area greater than 16 square feet (1.49 m2). Glass sloped 30 degrees (0.52 rad) or less from vertical, and highest point of glass not more than 10 feet (3048 mm) above a walking surface or other accessible area.
R308.6.6 Glass in greenhouses. Any glazing material is permitted to be installed without screening in the sloped areas of greenhouses, provided the greenhouse height at the ridge does not exceed 20 feet (6096 mm) above grade.
R308.6.7 Screen characteristics. The screen and its fastenings shall be capable of supporting twice the weight of the glazing; be firmly and substantially fastened to the framing members; be installed within 4 inches (102 mm) of the glass; and have a mesh opening of not greater than 1 inch x 1 inch (25 mm x 25 mm).
R308.6.8 Curbs for skylights. All unit skylights installed in a roof with a pitch flatter than three units vertical in 12 units horizontal (25-percent slope) shall be mounted on a curb extending at least 4 inches (102 mm) above the plane of the roof unless otherwise specified in the manufacturer's installation instructions.
R308.6.9 Testing and labeling. Unit skylights and tubular day lighting devices shall be tested by an approved independent laboratory, and bear a label identifying manufacturer, performance grade rating and approved inspection agency to indicate compliance with the requirements of *AAMA/WDMA/CSA 101/I S 2/A440.*

SECTION R309: GARAGES AND CARPORTS

R309.1 Floor surface. Garage floor surfaces shall be of approved non-combustible material. The area of floor used for parking of automobiles or other vehicles shall be sloped to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway.
R309.2 Carports. Carports shall be open on at least two sides. Carport floor surfaces shall be of approved non-combustible material. Carports not open on at least two sides shall be considered a garage and shall comply with the provisions of this section for garages. The area of floor used for parking of automobiles or other vehicles shall be sloped to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway.
Exception: Asphalt surfaces shall be permitted at ground level in carports
R309.3 Flood hazard areas. Garages and carports located in flood hazard areas as established by Table R301.2 shall be constructed in accordance with Section R322.

R309.4 Automatic garage door openers. Automatic garage door openers, if provided, shall be listed and labeled in accordance with UL 325. *See Health and Safety Code Sections 19890 and 19891 for additional provisions for residential garage door openers*
R309.5 Fire sprinklers location on property Private garages shall be protected by fire sprinklers where the garage wall has been designed based on Table R302.1(2), Footnote a. Sprinklers in garages shall be connected to an automatic sprinkler system that complies with Section R313. Garage sprinklers shall be residential sprinklers or quick-response sprinklers, designed to provide a density of 0.05 gpm/ft2. Garage doors shall not be considered obstructions with respect to sprinkler placement.
R309.6 Fire sprinklers attached garages, and carports with habitable space above. Attached garages, and carports with habitable space above shall be protected by fire sprinklers in accordance with this section and Section R313. Protection shall be provided in accordance with one of the following
1. Residential sprinklers installed in accordance with their listing.
2. Extended coverage sprinklers discharging water not less than their listed flow rate for Light Hazard in accordance with NFPA 13.
3. Quick-response spray sprinklers at light hazard spacing in accordance with NFPA 13 designed to discharge at 0.05 gpm/ft2 density (minimum).
The system demand shall be permitted to be limited to the number of sprinklers in the compartment but shall not exceed two sprinklers for hydraulic calculation purposes. Garage doors shall not be considered obstructions and shall be permitted to be ignored for placement and calculation of sprinklers.
Exception: An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing carports and/or garages that do not have an automatic residential fire sprinkler system installed in accordance with this Section
R309.7 Extension garage door springs. Every extension garage door spring sold or offered for sale, whether new or used as a replacement, or installed in any garage or carport which is accessory to a dwelling covered by this code, shall conform to the requirements for garage door springs located in Section 1210 of the California Building Code.
R309.8 Electric vehicle (EV) charging infrastructure. Newly constructed one and two family dwellings and townhouses with attached private garages shall comply with EV infrastructure requirements in accordance with the California Green Building Standards Code, Chapter 4, Division 4.1.

SECTION R310: EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 Emergency escape and rescue opening required. Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.
Exceptions: (SFM)
1 *Basement with a ceiling height of less than 80 inches (2032 mm) shall not be required to have emergency escape and rescue openings*
2 *Emergency escape and rescue openings are not required from basement or sleeping rooms that have an exit door or exit access door that opens directly into a public way or to a yard court or exterior egress balcony that opens to a public way*
3 *Basements without habitable spaces and having not more than 200 square feet (18 6 m2) in floor area shall not be required to have emergency escape and rescue openings*
4 *Storm shelters are not required to comply with this section where the shelter is constructed in accordance with ICC 500*
5 *Where the dwelling unit or townhouse unit is equipped with an automatic sprinkler system installed in accordance with Section R313 sleeping rooms in basements shall not be required to have emergency escape and rescue openings provided that the basement has one of the following:*
5 1 One means of egress complying with Section R311 and one emergency escape and rescue opening
5 2 Two means of egress complying with Section R311
R310.1.1 Operational constraints and opening control devices. Emergency escape and rescue openings shall be maintained free of any obstructions other than those allowed by this section and shall be operational from the inside of the room without the use of keys, tools or special knowledge. Window opening control devices and fall prevention devices complying with ASTM F2090 shall be permitted for use on windows serving as a required emergency escape and rescue opening and she'll be not more than 70 inches (178 cm) above the finished floor. The release mechanism shall be maintained operable at all times. Such bars, grilles, grates, or any similar devices shall be equipped with an approved exterior release device for use by the fire department, only when required by the authority having jurisdiction. Where security bars (burglar bars) are installed on emergency egress and rescue windows or doors, on or after July 1, 2000, such devices shall comply with California Building Standards Code, Part 12, Chapter 12-3 and other applicable provisions of this code.
R310.2 Emergency escape and rescue openings. Emergency escape and rescue openings shall have a minimum dimensions in accordance with Sections R310.2.1 through R310.2.4.
R310.2.1 Minimum opening area. Emergency and escape rescue openings shall have a net clear opening of not less than 5.7 square feet (0.530 m2).
Exception: The minimum net clear opening for grade floor emergency escape and rescue openings shall be 5 square feet (0 465 m2)
R310.2.2 Minimum dimensions. The minimum net clear opening height dimension shall be 24 inches (610 mm). The minimum net clear opening with dimension shall be 20 inches (508 mm). The net clear opening dimensions shall be the result of normal operation of the opening.

R310.2.3 Maximum height from floor. Emergency escape, and rescue openings shall have the bottom of the clear opening not greater than 44 inches (1118 mm) measured from the floor.
R310.2.4 Emergency escape and rescue openings under decks, porches and cantilevers. Emergency escape and rescue openings installed under decks, porches or cantilevers shall be fully openable and provide a path not less than 36 inches. (914 mm) in height and 36 inches (914 mm) in width to a yard or court.
R310.3 Emergency escape and rescue doors. Where a door is provided as the required emergency escape and rescue opening, it shall be a side-hinged door or a slider.
R310.4 Area wells. An emergency escape and rescue opening where the bottom of the clear opening is below the adjacent grade shall be provided with an area well in accordance with Sections R310.4.1 through R310.4.4.
R310.4.1 Minimum size. The horizontal area of the area well shall be not less than 9 square feet (0.9 m2), with a horizontal projection and width of not less than 36 inches (914 mm). The size of the area well shall allow the emergency escape and rescue opening to be fully opened.
Exception: The ladder or steps required by Section R310 4 2 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the area wel
R310.4.2 Ladder and steps. Area Wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with an approved, permanently affixed ladder or steps. The ladder or steps shall not be obstructed by the emergency escape and rescue opening where the window or door is in the open position. Ladders or steps required by this section shall not be required to comply with Section R311.7.
R310.4.2.1 Ladders. Ladders and rungs shall have an inside width of not less than 12 inches (305 mm), Shell project, not less than 3 inches (76 mm) from the wall and Shelby spaced not more than 18 inches (457 mm) on center vertically for the full height of the area well.
R310.4.2.2 Steps. Steps shall have an inside width of not less than 12 inches (305 mm), a minimum tread depth of 5 inches (127 mm) and a maximum riser height of 18 inches (457 mm) for the full height of the area well.
R310.4.3 Drainage. Area Wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1.
Exception: A drainage system for area wells is not required where the foundation is on well drained soil or sand gravel mixture soils in accordance with the United Soils Classification System Group I Soils as detailed in Table R405 1
R310.4.4 Bars, grilles, covers and screens. Where bars, grilles, covers, screens or similar devices are placed over emergency escape and rescue openings, bulkhead enclosures or area wells that serve such openings, the minimum net clear opening size shall comply with Sections R310.2 through R310.2.2 and R310.4.1. Such devices shall be releasable or removable from the inside without the use of a key or tool or force greater than that required for the normal operation of the escape and rescue opening. The release mechanism shall be maintained operable at all times. Such bars, grilles, grates, or any similar devices shall be equipped with an approved exterior release device for use by the fire department, only when required by the authority having jurisdiction. Where security bars (burglar bars) are installed on emergency egress and rescue windows or doors, on or after July 1, 2000, such devices shall comply with California Building Standards Code, Part 12, Chapter 12-3 and other applicable provisions of this code.
R310.5 Replacement windows for emergency escape and rescue openings. Replacement windows installed in buildings meeting the scope of this code shall be exempt from Sections R310.2, and R310.4.4, provided that the replacement window meets the following conditions
1. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window is of the same operating style as the existing window or a style that provides for an equal or greater window opening earlier than the existing window.
2. The replacement window is not part of a change of occupancy.
R310.6 Dwelling additions. Where dwelling additions contain sleeping rooms, an emergency escape and rescue opening shall be provided in each new sleeping room. Where dwelling additions have basements, an emergency escape and rescue opening shall be provided in the new basement.
Exceptions
1 *An emergency escape and rescue opening is not required in a new basement that contains a sleeping room with an emergency escape and rescue opening*
2 *An emergency escape and rescue opening is not required in a new basement where there is an emergency escape and rescue opening in an existing basement that is accessible from the new basement*
3 *An operable window complying with Section R310 7 1 shall be acceptable as an emergency escape and rescue opening*
R310.7 Alterations or repairs of existing basements. New sleeping rooms created in an existing basement shall be provided with emergency escape and rescue openings in accordance with Section R310.1. Other than new sleeping rooms where an existing basement undergo alterations or repairs, an emergency escape and rescue opening is not required.
Exception An operable window complying with Section R310 7 1 shall be acceptable as an emergency escape and rescue opening
R310.7.1 Existing emergency escape and rescue openings. Where a change of occupancy would require an emergency escape and rescue opening in accordance with Section R310.1, operable windows serving as the emergency escape and rescue opening shall comply with the following
1. An existing operable window shall provide a minimum net clear opening of 4 square feet (0.38 m2) with a minimum net clear height opening of 22 inches (559 mm) and a minimum net clear opening width of 20 inches (508 mm).
2. A replacement window, where such window complies with both of the following
2.1 The replacement window meets the size requirements in Item 1.
2.2 The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.

SECTION R311: MEANS OF EGRESS

R311.1 Means of egress. Dwellings shall be provided with a means of egress in accordance with this section. The means of egress shall provide a continuous and unobstructed path of vertical and horizontal egress travel from all portions of the dwelling to the required egress door without requiring travel through a garage. The required egress door shall open directly into a public way or to a yard or court that opens to a public way.
R311.2 Egress Door. Not less than one egress door shall be provided for each dwelling unit. The egress door shall be side-hinged, and shall provide a clear width of not less than 32 inches (813 mm) where measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). The clear height of the door opening shall be not less than 78 inches (1981 mm) in height measured from the top of the threshold to the bottom of the stop. Other doors shall not be required to comply with these minimum dimensions. Egress doors shall be readily openable from inside the dwelling without the use of a key or special knowledge or effort.
R311.3 Floors and landings at exterior doors. There shall be a landing or floor on each side of each exterior door. The width of each landing shall not be less than the door served. Every landing shall have a minimum dimension of 36 inches (914 mm) measured in the direction of travel. Exterior landings shall be permitted to have a slope not to exceed 1/4 unit vertical in 12 units horizontal (2-percent).
Exception: Exterior balconies less than 60 square feet (5 6 m2) and only accessible from a door are permitted to have a landing less than 36 inches (914 mm) measured in the direction of travel
R311.3.1 Floor elevations at the required egress doors. Landings or finished floors at the required egress door shall not be more than 1-1/2 inches (38 mm) lower than the top of the threshold.
Exception: The landing or floor on the exterior side shall not be more than 7 3/4 inches (196 mm) below the top of the threshold provided the door does not swing over the landing or floor
Where exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.
R311.3.2 Floor elevations for other exterior doors. Doors other than the required egress door shall be provided with landings or floors not more than 7-3/4 inches (196 mm) below the top of the threshold.
Exception: A top landing is not required where a stairway of not more than two risers is located on the exterior side of the door provided that the door does not swing over the stairway
R311.3.3 Storm and screen doors. Storm and screen doors shall be permitted to swing over all exterior stairs and landings.
R311.4 Vertical Egress. Egress from habitable levels including habitable attics and basements not provided with an egress door in accordance with Section R311.2 shall be by one or more ramps in accordance with Section R311.8 or one or more stairways in accordance with Section R311.7 or both. For habitable levels or basements located more than one story above or more than one story below an egress door, the maximum travel distance from any occupied point to a stairway or ramp that provides egress from such habitable level or basement, shall not exceed 50 feet (15240 mm).
R311.5 Construction.
R311.5.1 Attachment. Exterior landings, decks, balconies, stairs and similar facilities shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal.
R311.6 Hallways. The minimum width of a hallway shall be not less than 3 feet (914 mm).
R311.7 Stairways. Where are required by this code or provided, stairways shall comply with this section.
Exceptions:
1 *Stairways not within or serving a building porch or deck*
2 *Stairways leading to non habitable attics*
3 *Stairways leading to crawlspaces*
R311.7.1 Width. Stairways shall not be less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4.5 inches (114 mm) on either side of the stairway and the minimum clear width of the stairway at and below the handrail height, including treads and landings, shall not be less than 31-1/2 inches (787 mm) where a handrail is installed on one side and 27 inches (698 mm) where handrails are provided on both sides.
Exception: The width of spiral stairways shall be in accordance with Section R311 7 10 1
R311.7.2 Headroom. The minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.
Exceptions:
1 *Where the nosing of treads at the side of a flight extend under the edge of a floor opening through which the stair passes the floor opening shall be allowed to project horizontally into the required headroom a maximum of 4 3/4 inches (121 mm)*
2 *The headroom for spiral stairways shall be in accordance with Section R311 7 10 1*

R311.7.3 Vertical rise. A flight of stairs shall not have a vertical rise greater than 12 feet 7 inches (3835 mm) between floor levels or landings.
R311.7.4 Walk line. The walk-line across winder treads and landings shall be concentric to the turn and parallel to the direction of travel entering and exiting the turn. The walk-line shall be located 12 inches (305 mm) from the inside of the turn. The 12-inch (305 mm) dimension shall be measured from the widest point of the clear stair width at the walking surface. Where winders are adjacent within a flight, the point of the widest clear stair width of the adjacent winders shall be used.
R311.7.5 Stair Treads and Risers. Stair treads and risers shall meet the requirements of this section. For the purposes of this section, dimensions and dimensioned surfaces shall be exclusive of carpets, rugs or runners.
R311.7.5.1 Risers. The riser height shall be not more than 7-3/4 inches (196 mm). The riser height shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Risers shall be vertical or sloped from the underside of the nosing of the tread above at an angle not more than 30 degrees (0.51 rad) from the vertical. Open risers are permitted provided that the openings located more than 30 inches (762 mm), as measured vertically, to the floor or grade below do not permit the passage of a 4 inch diameter (102 mm) sphere.
Exceptions:
1 *The opening between adjacent treads is not limited on spiral stairways*
2. *The riser height of spiral stairways shall be in accordance with Section R311 7 10 1*
R311.7.5.2 Treads. The tread depth shall be not less than 10 inches (254 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).
R311.7.5.2.1 Winder treads. Winder treads shall have a minimum tread depth of 10 inches (254 mm) measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walk line. Winder treads shall have a minimum tread depth of 6 inches (152 mm) at any point within the clear width of the stair. Within any flight of stairs, the largest winder tread depth at the walk line shall not exceed the smallest winder tread by more than 3/8 inch (9.5 mm). Consistently shaped winders at the walk line shall be allowed within the same flight of stairs as rectangular treads and do not have to be within 3/8 inch (9.5 mm) of the rectangular tread depth.
Exception: The tread depth at spiral stairways shall be in accordance with Section R311 7 10 1
R311.7.5.3 Nosing. The radius of curvature at the nosing shall be not greater than 9/16 inch (14 mm). A nosing projection not less than 3/4 inch (19 mm) and not more than 1-1/4 inches (32 mm) shall be provided on stairways with solid risers. The greatest nosing projection shall not exceed the smallest nosing projection by more than 3/8 inch (9.5 mm) between two stories, including the nosing at the level of floors and landings. Beveling of nosing shall not exceed 1/2 inch (12.7 mm).
Exception: A nosing projection is not required where the tread depth is not less than 11 inches (279 mm)
R311.7.5.4 Exterior wood/plastic composite stair treads. Plastic composite exterior stair treads shall comply with the provisions of this section and Section R507.3.
R311.7.6 Landings for stairways. There shall be a floor or landing at the top and bottom of each stairway. The minimum width perpendicular to the direction of travel shall be no less than the width of the flight served. Landings of shapes other than square or rectangular shall be permitted provided the depth at the walk line and the total area is not less than that of a quarter circle with a radius equal to the required landing width. Where the stairway has a straight run, the minimum depth in the direction of travel shall be not less than 36 inches (914 mm).
Exception: A floor or landing is not required at the top of an interior flight of stairs including stairs in an enclosed garage provided a door does not swing over the stairs
R311.7.7 Stairway walking surface. The walking surface of treads and landings of stairways shall be sloped not steeper than 1 unit vertical in 48 units horizontal (2-percent slope).
Exception: where the surface of a landing is required elsewhere in the code to drain surface water the walking surface of the landing shall be sloped not steeper than 1 unit vertical in 20 units horizontal (5 percent slope) in the direction of travel
R311.7.8 Handrails. Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers.
R311.7.8.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).
Exceptions
1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread.
2. When handrail fittings or bendings are used to provide continuous transition between flights, transitions at winder treads, the transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height.
R311.7.8.2 Continuity. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned toward a wall, guard walking surface continuous to itself, or terminate to a post.
Exceptions:
1 *Handrails shall be permitted to be interrupted by a newel post at the turn*
2. *A volute turn out or starting easing shall be allowed to terminate over the lowest tread and over the top landing*

R311.7.8.3 Grip size. All required handrails shall be of one of the following types or provide equivalent graspability.
1. Type I Handrails with a circular cross section shall have an outside diameter of at least 1-1/4 inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6-1/4 inches (160 mm) with a maximum cross section of dimension of 2-1/4 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).
2. Type II. Handrails with a perimeter greater than 6-1/4 inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3/4 inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least 3/8 inch (10 mm) to a level that is not less than 1-3/4 inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1-1/4 inches (32 mm) to a maximum of 2-3/4 inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).
R311.7.8.4 Exterior wood/plastic composite handrails. Plastic composite exterior handrails shall comply with the requirements of Section R507.3.
R311.7.9 Illumination. Stairways shall be provided with illumination in accordance with Section R303.7.
R311.7.10 Special Stairways. Spiral stairways and bulkhead enclosure stairways shall comply with all requirements of Section R311.7 except as specified below.
R311.7.10.1 Spiral stairways. Spiral stairways are permitted, provided that the clear width at and below the handrail is not less than 26 inches (660 mm) and the walk line radius is not greater than inches (622 mm). Each tread shall have a depth of not less than 6-3/4 inches (171 mm) at the walk line. All treads shall be identical, and the rise shall be not more than 9-1/2 inches (241 mm). Headroom shall be not less than 6 feet 6 inches (1982 mm).
R311.7.10.2 Bulkhead enclosure stairways. Stairways serving bulkhead enclosures, not part of the required building egress, providing access from the out- side grade level to the basement shall be exempt from the requirements of Sections R311.3 and R311.7 where the maximum height from the basement finished floor level to grade adjacent to the stairway does not exceed 8 feet (2438 mm) and the grade level opening to the stairway is covered by a bulkhead enclosure with hinged doors or other approved means.
R311.7.11 Alternating tread devices. Alternating tread devices shall not be used as an element of a means of egress. Alternating tread devices shall be permitted provided that the required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at and below the handrails shall be not less than 20 inches (508 mm).
R311.7.11.1 Treads of alternating tread devices. Alternating tread devices shall have a tread depth of not less than 5 inches (127 mm), a projected tread depth of not less than 8-1/2 inches (216 mm), a tread width of not less than 7 inches (178 mm) and a riser height of not more than 9-1/2 inches (241 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projections of adjacent treads. The riser height shall be measured vertically between the leading edges of adjacent treads. The riser height and tread depth provided shall result in an angle of ascent from the horizontal of between 50 and 70 degrees (0.87 and 1.22 rad). The initial tread of the device shall begin at the same elevation as the platform, landing or floor surface.
R311.7.11.2 Handrails of alternating tread devices. Handrails shall be provided on both sides of alternating tread devices and shall comply with Sections R311.7.8.2 to R311.7.8.4. Handrail height shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).
R311.7.12 Ships ladders. Ships ladders shall not be used as an element of a means of egress. Ships ladders shall be permitted provided that a required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at and below the handrails shall be not less than 20 inches.
R311.7.12.1 Treads of ships ladders. Treads shall have a depth of not less than 5 inches (127 mm). The tread shall be projected such that the total of the tread depth plus the nosing projection is not less than 8-1/2 inches (216 mm). The riser height shall be not more than 9-1/2 inches (241 mm).
R311.7.12.2 Handrails of ships ladders. Handrails shall be provided on both sides of ships ladders and shall comply with Sections R311.7.8.2 to R311.7.8.4. Handrail height shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).
R311.8 Ramps. Where required by this code or provided, ramps shall comply with the section.
Exception: Ramps not within or serving a building porch or deck
R311.8.1 Maximum Slope. Ramps serving the egress door required by Section R311.2 shall have a slope of not more than 1 unit vertical in 12 units horizontal (8.3 percent slope). All other ramps shall have a maximum slope of 1 unit vertical in 8 units horizontal (12.5 percent).
Exception: Where it is technically infeasible to comply because of site constraints ramps shall have a slope of not more than 1 unit vertical in 8 units horizontal (12 5 percent)
R311.8.2 Landings required. A minimum 3 foot by 3 foot (914 mm by 914 mm) landing shall be provided
1. At the top and bottom of ramps.
2. Where doors open onto ramps.
3. Where ramps change direction.
R311.8.3 Handrails required. Handrails shall be provided on at least one side of all ramps exceeding a slope of one unit vertical in 12 units horizontal (8.33-percent slope).

R311.8.3.1 Height. Handrail height, measured above the finished surface of the ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).
R311.8.3.2 Grip size. Handrails on ramps shall comply with Section R311.7.8.3.
R311.8.3.3 Continuity. Handrails where required on ramps shall be continuous for the full length of the ramp. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1-1/2 inches (38 mm) between the wall and the handrails.

SECTION R312: GUARDS AND WINDOW FALL PROTECTION

R312.1 Guards. Guards shall be provided in accordance with Sections R312.1.1 through R312.1.4.
R312.1.1 Where required. Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.
R312.1.2 Height. Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 42 inches (1067 mm) in height as measured vertically above the adjacent walking surface or the line connecting the leading edges of the treads.
Exceptions
1 *Guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads*
2. *Where the top of the guard also serves as a handrail on the open sides of stairs the top of the guard shall not be less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads*
R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height which allow passage of a sphere 4 inches (102 mm) in diameter.
Exceptions
1 *The triangular openings at the open side of stair formed by the riser tread and bottom rail of a guard shall not allow passage of a sphere 6 inches (153 mm) in diameter*
2 *Guards on the open sides of stairs shall not have openings which allow passage of a sphere 4 3/8 inches (111 mm) in diameter*
R312.1.4 Exterior wood/plastic composite guards. Plastic composite exterior guards shall comply with the requirements of Section R317.4.
R312.2 Window fall protection. Window fall protection shall be provided in accordance with Sections R312.2.1 and R312.2.2.
R312.2.1 Window opening height. In dwelling units, where the bottom of the clear opening of an operable window opening is located less than 24 inches (610 mm) above the finished floor, and greater than 72 inches (1829 mm) above the finished grade or other surface below on the exterior of the building, the operable window shall comply with one of the following
1. Operable windows with openings that will not allow a 4 inch-diameter (102 mm) sphere to pass through the opening where the opening is in its largest opened position.
2. Operable windows are provided with window opening control devices or fall prevention devices that comply with a ASTM F2090.
R312.2.2 Emergency escape and rescue openings. Where in operable window serves as an emergency escape and rescue opening, a window opening control device or fall prevention device after operation to release the control device or fall prevention device allowing the window to fully open, shall not reduce the net clear opening area of the window unit to less than the area required by Sections R310.2.1 and R310.2.2.

SECTION R313: AUTOMATIC FIRE SPRINKLER SYSTEMS

R313.2 One and two family dwellings automatic fire systems. An automatic residential fire sprinkler system shall be installed in one and two family dwellings.
Exceptions:
1 *An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential sprinkler system*
2 *Accessory Dwelling Unit provided that all of the following are met:*
2 1 The unit meets the definition of an Accessory Dwelling Unit as defined in the Government Code Section 65852 2
2 2 The existing primary residence does not have automatic fire sprinklers
2 3 The accessory detached dwelling unit does not exceed 1200 square feet in size
2 4 The unit is on the same lot as the primary residence
R313.2.1 Design and Installation. Automatic residential fire sprinkler systems shall be designed and installed in accordance with Section R313.3 or NFPA 13D.
R313.3 Dwelling unit fire sprinkler systems.
R313.3.1 General. The design and installation of residential fire sprinkler systems shall be in accordance with NFPA 13D or Section R313.3, which shall be considered equivalent to NFPA 13D. Partial residential sprinkler systems shall be permitted to be installed only in buildings not required to be equipped with a residential sprinkler system. Section R313.3 shall apply to stand-alone and multipurpose wet-pipe sprinkler systems that do not include the use of antifreeze. A multipurpose fire sprinkler system shall supply domestic water to both fire sprinklers and plumbing fixtures. A stand-alone sprinkler system shall be separate and independent from the water distribution system.

R313.3.1.1 Back flow protection. A back-flow flow preventer shall not be required to separate a stand-alone sprinkler system from the water distribution system.
R313.3.1.2 Required sprinkler locations. Sprinklers shall be installed to protect all areas of a dwelling unit.
Exceptions:
1 *Attics crawl spaces and normally unoccupied concealed spaces that do not contain fuel fired appliances do not require sprinklers In attics crawl spaces and normally unoccupied concealed spaces that contain fuel fired equipment a sprinkler shall be installed above the equipment; however sprinklers shall not be required in the remainder of the space*
2 *Clothes closets linen closets and pantries not exceeding 24 square feet (2 2 m2) in area with the smallest dimension not greater than 3 feet (915 mm) and having wall and ceiling surfaces of gypsum board*
3 *Bathrooms not more than 55 square feet (5 1 m2) in area*
4 *Detached garages; carports with no habitable space above; open attached porches; unheated entry areas such as mud rooms that are adjacent to an exterior and similar areas*
R313.3.2 Sprinklers. Sprinklers shall be new listed residential sprinklers and shall be installed in accordance with the sprinkler manufacturer's installation instructions.

SECTION R314: SMOKE ALARMS

R314.1 General. Smoke alarms shall comply with NFPA 72 and Section R314.
R314.1.1 Listings. Smoke alarms shall be listed in accordance with UL 217. Combination smoke and carbon monoxide alarms shall be listed in accordance with UL 217 and UL 2034. Systems and components shall be California State Fire Marshal listed and approved in accordance with California Code of Regulations, Title 19, Division 1 for the purpose for which they are installed.
R314.2 Where required. Smoke alarms shall be provided in accordance with this section.
R314.2.1 New construction. Smoke alarms shall be provided in dwelling units.
R314.2.2 Alterations, repairs and additions. Where alterations, repairs or additions requiring a permit occur, or where one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings.
Exception: See Section R314 6
R314.3 Location. Smoke alarms shall be installed in the following locations
1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics and not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
4. Not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower, unless this would prevent placement of a smoke alarm required by the section.
5. In the hallway and in the room open to the hallway in dwelling units where the ceiling height of a room open to a hallway serving bedrooms exceeds that of the hallway by 24 inches (610 mm) or more.
R314.3.1 Installation near cooking appliances. *See Section R314 3 3 for specific location requirements*
R314.3.2 Smoke alarms. *Smoke alarms shall be tested and maintained in accordance with the manufacturer's instructions Smoke alarms that no longer function shall be replaced*
R314.3.3 Specific locations requirements. *Extract from NFPA 72 Section 29 8 3 4 Specific Location Requirements This extract has been provided by NFPA as amended by the Office of the State Fire Marshal and adopted by reference as follows:*
29.8.3.4 Specific locations requirements The installation of smoke alarms and smoke detectors shall comply with the following requirements:
(1) Smoke alarms and smoke detectors shall not be located where ambient conditions including humidity and temperature are outside the limits specified by the manufacturer's published instructions
(2) Smoke alarms and smoke detectors shall not be located within unfinished attics or garages or in other spaces where temperatures can fall below 40°F (4°C) or exceed 100°F (38°C) Where the mounting surface could become considerably warmer or cooler than the room such as a poorly insulated ceiling below an unfinished attic or an exterior wall smoke alarms and smoke detectors shall be mounted on an inside wall
(3) Smoke alarms or smoke detectors shall be installed a minimum of 20 feet horizontal distance from a permanently installed cooking appliance
Exception: Ionization smoke alarms with an alarm silencing switch or Photoelectric smoke alarms shall be permitted to be installed 10 feet (3 m) or greater from a permanently installed cooking appliance Photoelectric smoke alarms shall be permitted to be installed greater than 6 feet (1 8 m) from a permanently installed cooking appliance where the kitchen or cooking area and adjacent spaces have no clear interior partitions and the 10 ft distances would prohibit the placement of a smoke alarm or smoke detector required by other sections of the code Smoke alarms listed for use in close proximity to a permanently installed cooking appliance

(4) Installation near bathrooms Smoke alarms shall be installed not less than a 3 foot (0 91 m) horizontal distance from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by other sections of the code
(5) Smoke alarms and smoke detectors shall not be installed within a 36 in (910 mm) horizontal path from the supply registers of a forced air heating or cooling system and shall be installed outside of the direct airflow from those registers
(6) Smoke alarms and smoke detectors shall not be installed within a 36 in (910 mm) horizontal path from the tip of the blade of a ceiling suspended (paddle fan)
(7) Where stairs lead to other occupied levels a smoke alarm or smoke detector shall be located so that smoke rising in the stairway cannot be prevented from reaching the smoke alarm or smoke detector by an intervening door or obstruction
(8) For stairways leading up from a basement smoke alarms or smoke detectors shall be located on the basement ceiling near the entry to the stairs
(9) For tray shaped ceilings (coffered ceilings) smoke alarms and smoke detectors shall be installed on the highest portion of the ceiling or on the sloped portion of the ceiling within 12 in (300 mm) vertically down from the highest point
(10) Smoke alarms and detectors installed in rooms with joists or beams shall comply with the requirements of 17 7 3 2 4
(11) Heat alarms and detectors installed in rooms with joists or beams shall comply with the requirements of 17 6 3 For additional requirements or clarification see NFPA 72
R314.4 Interconnection. *Where more than one smoke alarm is required to be installed within an individual dwelling or sleeping unit the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed*
Exceptions:
1 *Interconnection is not required in buildings that are not undergoing alterations repairs or construction of any kind*
2 *Smoke alarms in existing areas are not required to be interconnected where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure unless there is an attic crawl space or basement available which could provide access for interconnection without the removal of interior finishes*
3 *Smoke alarms are not required to be interconnected where repairs or alterations are limited to the exterior surfaces of dwellings such as the replacement of roofing or siding or the addition or replacement of windows or doors or the addition of a porch or deck*
4 *Smoke alarms are not required to be interconnected when work is limited to the installation alteration or repairs of plumbing or mechanical systems or the installation alteration or repair of electrical systems which do not result in the removal of interior wall or ceiling finishes exposing the structure*
R314.5 Combination alarms. Combination smoke and carbon monoxide alarms shall be permitted to be used in lieu of smoke alarms. Systems and components shall be California State Fire Marshal listed and approved in accordance with California Code of Regulations, Title 19, Division 1 for the purpose for which they are installed.
R314.6 Power source. Smoke alarms shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than required for over-current protection.
Exceptions
1 *Smoke alarms are permitted to be solely battery operated in existing buildings where no construction is taking place*
2 *Smoke alarms are permitted to be solely battery operated in buildings that are not served from a commercial power source*
3 *Smoke alarms are permitted to be solely battery operated in existing areas of buildings undergoing alterations or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure unless there is an attic crawl space or basement available which could provide access for building wiring without the removal of interior finishes*
4 *Smoke alarms are permitted to be solely battery operated where repairs or alterations are limited to the exterior surfaces of dwellings such as the replacement of roofing or siding or the addition or replacement of windows or doors or the addition of a porch or deck*
5 *Smoke alarms are permitted to be solely battery operated when work is limited to the installation alteration or repairs of plumbing or mechanical systems or the installation alteration or repair of electrical systems which do not result in the removal of interior wall or ceiling finishes exposing the structure*
R314.7 Fire alarm systems. Fire alarm systems shall be permitted to be used in lieu of smoke alarms and shall comply with Sections R314.7.1 through R314.7.4.
R314.7.1 General. Fire alarm systems shall comply with the provisions of this code and the household fire warning equipment provisions of NFPA 72. Smoke detectors shall be listed in accordance with UL 268. *Systems and components shall be California State Fire Marshal listed and approved in accordance with California Code of Regulations Title 19 Division 1 for the purpose for which they are installed*
R314.7.2 Location. Smoke detectors shall be installed in the locations specified in Section R314.3.
R314.7.3 Permanent fixture. Where a household fire alarm system is installed, it shall become a permanent fixture of the occupancy, owned by the homeowner.

R314.7.4 Combination detectors. Combination smoke and carbon monoxide detectors shall be permitted to be installed in fire alarm systems in lieu of smoke detectors, provided that they are listed in accordance with UL 268 and UL 2075.
R314.8 Existing Group R 3 occupancies.
R314.8.1 Existing buildings housing Group R-3 occupancies established prior to the effective date of these regulations may have their use continued if they conform or are made to conform to provisions of these regulations to the extent that reasonable and adequate life safety against the hazards of fire, panic and explosion is substantially provided. Additional means of egress, the installation of automatic sprinkler systems, automatic fire alarm system or other life safety measures may be required to provide reasonable and adequate safety.
Note It is the intent of this section that existing occupancy need not mandatorily conform with the requirements for new construction. Reasonable judgment in the application of requirements must be exercised by the enforcing agency.
R314.8.2 For purposes of clarification Health and Safety Code Section 13113.7 is repeated.
a) Except as otherwise provided in this section, a smoke detector, approved and listed by the State Fire Marshal pursuant to Section 13114, shall be installed, in accordance with the manufacturer's instructions in each dwelling intended for human occupancy within the earliest applicable time period as follows
1. For all dwelling units intended for human occupancy, upon the owner's application on or after January 1, 1985, for a permit for alterations, repairs, or additions, exceeding one thousand dollars ($1,000).
2. For all other dwelling units intended for human occupancy on or after January 1, 1987.

SECTION R315: CARBON MONOXIDE ALARMS

R315.1 General. Carbon monoxide alarms shall comply with Section R315.
R315.1.1 Listings. Carbon monoxide alarms shall be listed in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217.
No person shall install, market, distribute, offer for sale, or sell any carbon monoxide device in the State of California unless the device and instructions have been approved and listed by the Office of the State Fire Marshal.
R315.2 Where required. Carbon monoxide alarms shall be provided in accordance with Sections R315.2.1 and R315.2.2. Pursuant to Health and Safety Code Section 17926, carbon monoxide detectors shall be installed in all existing dwelling units as required in this section.
R315.2.1 Existing buildings and new construction For existing buildings and new construction, carbon monoxide alarms shall be provided in dwelling units where either or both of the following conditions exist.
1. The dwelling unit contains a fuel-fired appliance or fireplace.
2. The dwelling unit has an attached garage with an opening that communicates with the dwelling unit.
R315.2.2 Alterations, repairs and additions. Where an addition is made to an existing dwelling, or a fuel-burning heater, appliance, or fireplace is added to an existing dwelling, not previously required to be provided with carbon monoxide alarms, new carbon monoxide alarms shall be installed in accordance with Section R315.
Exceptions:
1 *Work involving the exterior surfaces of dwellings such as the replacement of roofing or siding or the addition or replacement of windows or doors or the addition of a porch or deck*
2 *Installation alteration or repairs of plumbing systems*
3 *Installation alteration or repairs of mechanical systems that are not fuel fired*
R315.3 Location. Carbon monoxide alarms in dwelling units shall be installed and maintained in accordance with the manufacturer's published instructions in the following locations
1. Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
2. On every occupiable level of a dwelling unit, including basements.
3. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.
R315.4 Combination alarms. Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.
Combination carbon monoxide/smoke alarms shall comply with Section R315 and all requirements for listing and approval by the Office of the State Fire Marshal for smoke alarms
R315.5 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for over-current protection.
Exceptions
1 *Carbon monoxide alarms shall be permitted to be battery operated where installed in buildings without commercial power*
2 *Carbon monoxide alarms installed in accordance with Section R315 2 2 shall be permitted to be battery powered*
3 *Carbon monoxide alarms in Group R occupancies shall be permitted to receive their primary power from other power sources recognized for use by NFPA 72*
4 *Carbon monoxide alarms in Group R occupancies shall be permitted to be battery powered or plug in with a battery backup in existing buildings built prior to January 1 2011 under any of the following conditions:*
4 1 No construction is taking place

4 2 Repairs or alterations do not result in the removal of interior wall and ceiling finishes exposing the structure in areas/spaces where carbon monoxide alarms are required
4 3 Repairs or alterations are limited to the exterior surfaces of dwellings such as the replacement of roofing or siding or the addition or replacement of windows or doors or the addition of a porch or deck
4 4 Work is limited to the installation alteration or repair of plumbing mechanical or electrical systems which do not result in the removal of interior wall or ceiling finishes exposing the structure in areas/spaces where carbon monoxide alarms are required
R315.6 Carbon monoxide detection systems. Carbon monoxide detection systems shall be permitted to be used in lieu of carbon monoxide alarms and shall comply with Sections R315.6.1 through R315.6.4.
R315.6.1 General. Household carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with UL 2075.
R315.6.2 Location. Carbon monoxide detectors shall be installed and maintained in the locations specified in Section R315.3 or NFPA 72.
R315.6.3 Permanent fixture. Where a household carbon monoxide detection system is installed, it shall become a permanent fixture of the occupancy and owned by the homeowner.
R315.6.4 Combination detectors. Combination carbon monoxide and smoke detectors shall be permitted to be installed in carbon monoxide detection systems in lieu of carbon monoxide detectors, provided that they are listed in accordance with UL 2075 and UL 268.4. *Combination carbon monoxide/smoke detectors shall comply with all requirements for listing and approval by the Office of the State Fire Marshal for smoke alarms*
R315.7 Interconnection. Where more than one carbon monoxide alarm is required to be installed within a dwelling unit or within a sleeping unit in Group R occupancies, the alarms shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.
Exception: Interconnection is not required in existing buildings built prior to January 1 2011 under any of the following conditions:
1 *Physical interconnection is not required where listed wireless alarms are installed and all alarms sound upon activation of one alarm*
2 *No construction is taking place*
3 *Repairs or alterations do not result in the removal of interior wall and ceiling finishes exposing the structure in areas/spaces where carbon monoxide alarms are required*
4 *Repairs or alterations are limited to the exterior surfaces of dwellings such as the replacement of roofing or siding or the addition or replacement of windows or doors or the addition of a porch or deck*
5 *Work is limited to the installation alteration or repairs of plumbing mechanical or electrical systems which do not result in the removal of interior wall or ceiling finishes exposing the structure in areas/spaces where carbon monoxide alarms are required*

SECTION R317: PROTECTION OF WOOD AND WOOD BASED PRODUCTS AGAINST DECAY

R317.1 Location required. Protection of wood and wood based products from decay shall be provided in the following locations by the use of naturally durable wood or wood that is preservative-treated in accordance with AWPA U1
1. In crawl spaces or un-excavated areas located within the periphery of the building foundation, wood joists or the bottom of a wood structural floor where closer than 18 inches (457 mm) to exposed ground, wood girders where closer than 12 inches (305 mm) to exposed ground, and wood columns where closer than 8 inches (204 mm) to exposed ground.
2. Wood framing members including columns, that rest directly on concrete or masonry exterior foundation walls, and are less than 8 inches (203 mm) from the exposed ground.
3. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated from such slab by an impervious moisture barrier.
4. The ends of wood girders entering exterior masonry or concrete walls having clearances of less than 1/2 inch (12.7 mm) on tops, sides and ends.
5. Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6 inches (152 mm) from the ground or less than 2 inches (51 mm) measured vertically from concrete steps, porch slabs, patio slabs, and similar horizontal surfaces exposed to the weather.
6. Wood structural members supporting moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier.
7. Wood furring strips or other wood framing members attached directly to the interior of exterior masonry walls or concrete walls below grade except where an approved vapor retarder is applied between the wall and the furring strips or framing members.
8. Portions of wood structural members that form the structural support of buildings, balconies, porches or similar permanent building appurtenances where those members are exposed to the weather, without adequate protection from a roof, eave, overhang, or other covering, that would prevent moisture or water accumulation on the surface or at joints between members.
Exception: Sawn lumber used in buildings located in a geographical region where experience has demonstrated that climatic conditions preclude the need to use naturally durable or preservative treated wood where the structure is exposed to the weather
9. Wood columns in contact with basement floor slabs unless supported by concrete piers or metal pedestals projecting not less than 1 inch (25 mm) above the concrete floor and separated from the concrete pier by an impervious moisture barrier.
R317.1.1 Field treatment. Field-cut ends, notches and drilled holes of preservative-treated wood shall be treated in the field in accordance with AWPA M4.

R317.1.2 Ground contact. All wood in contact with the ground, embedded in concrete in direct contact with the ground or embedded in concrete exposed to the weather that supports permanent structures intended for human occupancy shall be approved pressure preservative treated wood suitable for ground contact use, except untreated wood may be used where entirely below groundwater level or continuously submerged in fresh water.
R317.1.3 Geographical areas. In geographical areas where experience has demonstrated a specific need, approved naturally durable or pressure-preservative- treated wood shall be used for those portions of wood members that form the structural supports of buildings, balconies, porches or similar permanent building appurtenances when those members are exposed to the weather without adequate protection from a roof, eave, overhang or other covering that would prevent moisture or water accumulation on the surface or at joints between members. Depending on local experience, such members may include
1. Horizontal members such as girders, joists and decking.
2. Vertical members such as posts, poles and columns.
3. Both horizontal and vertical members.
R317.1.4 Wood columns. Wood columns shall be approved wood of natural decay resistance or approved pressure-preservative-treated wood.
Exceptions:
1 *Columns exposed to the weather or in basements when supported by concrete piers or metal pedestals projecting 1 inch (25 4 mm) above a concrete floor or 6 inches (152 mm) above exposed earth and the earth is covered by an approved impervious moisture barrier*
2 *Columns in enclosed crawl spaces or un excavated areas located within the periphery of the building when supported by a concrete pier or metal pedestal at a height more than 8 inches (203 mm) from exposed earth and the earth is covered by an impervious moisture barrier*
3 *Deck posts supported by concrete piers or metal pedestals projecting not less than 1 inch (25 mm) above a concrete floor or 6 inches (152 mm) above exposed earth*
R317.3 Fasteners and Connectors in Contact With Preservative Treated and Fire Retardant Treated Wood. Fasteners, including nuts and washers, and connectors in contact with preservative-treated wood and fire-retardant-treated wood shall be in accordance with this section. The coating weights for zinc-coated fasteners shall be in accordance with ASTM A153. Stainless steel driven fasteners shall be in accordance with the material requirements of ASTM F1667.
R317.3.1 Fasteners for Preservative Treated Wood. Fasteners, including nuts and washers, for preservative-treated wood shall be of hot-dipped, zinc-coated galvanized steel, stainless steel, silicon bronze or copper. Coat- ing types and weights for connectors in contact with preservative-treated wood shall be in accordance with the connector manufacturer's recommendations. In the absence of manufacturer's recommendations, a minimum of ASTM A 653 type G185 zinc-coated galvanized steel, or equivalent, shall be used.
Exceptions:
1 *One half inch diameter (12 7 mm) or greater steel bolts*
2 *Fasteners other than nails and timber rivets shall be permitted to be of mechanically deposited zinc coated steel with coating weights in accordance with ASTM B 695 Class 55 minimum*
3 *Plain carbon steel fasteners in SBX/DOT and zinc borate preservative treated wood in an interior dry environment shall be permitted*
R317.3.3 Fasteners for fire retardant treated wood used in exterior applications or wet or damp locations. *Fasteners including nuts and washers for fire retardant treated wood used in exterior applications or wet or damp locations shall be of hot dipped zinc coated galvanized steel stainless steel silicon bronze or copper Fasteners other than nails and timber rivets shall be permitted to be of mechanically deposited zinc coated steel with coating weights in accordance with ASTM B695 Class 55 minimum*

SECTION R318: PROTECTION AGAINST SUBTERRANEAN TERMITES

R318.1 Subterranean termite control methods. In areas subject to damage from termites as indicated by Table R301.2(1), methods of protection shall be one of the following methods or a combination of these methods
1. Chemical Termiticide treatment in accordance with Section R318.2.
2. Termite baiting system installed and maintained according to the label.
3. Pressure-preservative-treated wood in accordance with the provisions of Section R317.1.
4. Naturally durable termite-resistant wood.
5. Physical barriers in accordance with Section R318.3 and used in locations as specified in Section R317.1
6. Cold-formed steel framing in accordance with Sections R505.2.1 and R603.2.1.

SECTION R319: SITE ADDRESS

R319.1 Address identification. Buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) in height with a stroke width of not less than 0.5 inch (12.7 mm). Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

SECTION R324: SOLAR ENERGY SYSTEM

R324.1 General. Solar energy systems shall comply with the provisions of this section.
R324.2 Solar thermal systems. Solar thermal systems shall be designed and installed in accordance with the California Plumbing Code and the California Fire Code.
R324.3 Photovoltaic systems. Photovoltaic (PV) systems shall be designed and installed in accordance with Sections R324.3.1 through R324.7.1 and the manufacturer's installation instructions. The electrical portion of solar PV systems shall be designed and installed in accordance with the California Electrical Code.
R324.3.1 Equipment listings. Photovoltaic panels and modules shall be listed and labeled in accordance with UL 1703 or with both UL 61730-1 and UL 61730-2. Inverters shall be listed and labeled in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction. Mounting systems, listed and labeled in accordance with UL 2703 shall be installed in accordance with the manufacturer's installation instructions and their listings.
R324.4 Roof top mounted photovoltaic systems. Roof-top mounted photovoltaic panel systems installed on or above the roof covering shall be designed and installed in accordance with Section R907
R324.4.1 Roof live load. Roof structures that provide support for photovoltaic panel systems shall be designed for applicable roof live load. The design of roof structures need not include roof live load in the areas covered by photovoltaic panel systems. Portions of roof structures not covered by photovoltaic panels shall be designed for roof live load. Roof structures that provide support for photo- voltaic panel systems shall be designed for live load, Lr, for the load case where the photovoltaic panel system is not present.
R324.5 Building integrated photovoltaic systems. Building-integrated photovoltaic systems (BIPV) that serve as roof coverings shall be designed and installed in accordance with Section R905.
R324.5.1 Photovoltaic shingles. Photovoltaic shingles shall comply with Section R905.16.
R324.5.2 Fire classification. Building integrated photovoltaic systems shall have a fire classification in accordance with Section R902.3.
R324.5.3 BIPV roof panels. BIPV roof panels shall comply with Section R905.17.
R324.6 Roof access and pathways. Roof access, pathways and spacing requirements shall be provided in accordance with Sections R324.6.1 through R324.6.2.1. Access and minimum spacing shall be required to provide emergency access to the roof, to provide pathways to specific areas of the roof, provide for smoke ventilation opportunity areas, and to provide emergency egress from the roof.
Exceptions:
1 *Detached non habitable structures including but not limited to detached garages parking shade structures carports solar trellises and similar structures shall not be required to provide roof access*
2 *Roof access pathways and setbacks need not be provided where the enforcing agency has determined that rooftop operations will not be employed*
3 *These requirements shall not apply to roofs with slopes of 2 units vertical in 12 units horizontal (17 percent slope) or less*
4 *BIPV Systems listed in accordance with Section 690 12(B)(2) of the California Electrical Code where the removal or cutting away of portions of the BIPV system during fire fighting operations has been determined to not expose a fire fighter to electrical shock hazards*
R324.6.1 Pathways. Not fewer than two pathways on separate roof planes from the lowest roof edge to ridge and not less than 36 inches (914 mm) wide, shall be provided on all buildings. Not fewer than one pathway shall be provided on the street or driveway side of the roof. For each roof plane with a photovoltaic array, a pathway not less than 36 inches wide (914 mm) shall be provided from the lowest roof edge to ridge on the same roof plane as the photovoltaic array, on an adjacent roof plane, or straddling the same and adjacent roof planes. Pathways shall be over areas, capable of supporting fire fighters accessing the roof. Pathways shall be located in areas with minimal obstructions, such as vent pipes, conduit, or mechanical equipment.
R324.6.2 Setback at ridge. For photovoltaic arrays occupying, not more than 33 percent of the plan view total roof area, not less than an 18 inch (457 mm) clear setback is required on both sides of a horizontal ridge. For photovoltaic arrays occupying more than 33 percent of the plan view total roof area, not less than a 36 inch (914 mm) clear setback is required on both sides of a horizontal ridge.
R324.6.3 Emergency escape and rescue openings. Panels and modules installed on dwellings shall not be placed on the portion of a roof that is below an emergency escape and rescue opening. A pathway not less than 36 inches (914 mm) wide shall be provided to the emergency escape and rescue opening. See exception.
R324.7 Ground mounted photovoltaic systems. Ground mound into photovoltaic systems Shelby designed and installed in accordance with Section R301.

SECTION 326: HABITABLE ATTICS

R326.1 General. Habitable attics shall comply with Sections R326.2 and R326.3.
R326.2 Minimum dimensions. A habitable attic shall have a floor area in accordance with Section R304 and a ceiling height in accordance with Section R305.
R326.3 Story above grade plane. A habitable attic shall be considered a story above grade plane. See exceptions.
R326.4 Means of egress. The means of egress for habitable attics shall comply with the applicable provisions of Section R311.

SECTION R334: CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

R334.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with the *California Green Building Standards Code Chapter 4 Division 4 4.*

SECTION R338: ELECTRIC VEHICLE

R338.1 Electric vehicle. An automotive-type vehicle for highway use, such as passenger automobiles, buses, trucks, vans and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array or other source of electric current. For the purpose of this chapter, electric motorcycles and similar type vehicles and off-road self-propelled electric vehicles such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats and the like, are not included.
R338.2 Charging. In any building or interior area used for charging electric vehicles, electrical equipment shall be installed in accordance with *the California Electrical Code.*
R338.3 Ventilation. Mechanical exhaust ventilation, when required by *the California Electrical Code* shall be provided at a rate as required by Article 625 or as required by Section 1203 of *the California Building Code* whichever is greater. The ventilation system shall include both the supply and exhaust equipment and shall be permanently installed and located to intake supply air from the outdoors, and vent the exhaust directly to the outdoors without conducting the exhaust air through other spaces within the building.
Exception: Positive pressure ventilation systems shall only be allowed in buildings or areas that have been designed and approved for that application
R338.4 Electrical interface. The electrical supply circuit to electrically powered mechanical ventilation equipment shall be interlocked with the recharging equipment used to supply the vehicle(s) being charged, and shall remain energized during the entire charging cycle. Electric vehicle recharging equipment shall be marked or labeled in accordance with the California Electrical Code.
Exceptions
1 *Exhaust ventilation shall not be required in areas with an approved engineered ventilation system which maintains a hydrogen gas concentration at less than 25 percent of the lower flammability limit*
2 *Mechanical exhaust ventilation for hydrogen shall not be required where the charging equipment utilized is installed and listed for indoor charging of electric vehicles without ventilation*

SECTION R340: POLLUTANT CONTROL

R340.1 Finish material pollutant control. Finish materials including adhesives, sealants, caulks, paints and coatings, aerosol paints and coatings, carpet systems, carpet cushion, carpet adhesive, resilient flooring systems and composite wood products shall meet the volatile organic compound (VOC) emission limits in accordance with the California Green Building Standards Code. Chapter 4, Division 4.5.

CHAPTER 4: FOUNDATIONS: (Also see structural notes)

SECTION R408: UNDERFLOOR SPACE

R408.1 Moisture control. The under-floor space between the bottom of the floor joists and the earth under any building (except space occupied by a basement) shall comply with Section R408.2 or R408.3.
R408.2 Openings for under floor ventilation. Ventilation openings through foundation or exterior walls surrounding the underfloor space shall be provided in accordance with the section. The minimum net area of ventilation openings shall not be less than 1 square foot (0.0929 m2) for each 150 square feet (14 m2) of underfloor space area. One ventilation opening shall be within 3 feet (915 mm) of each external corner of the underfloor space. Ventilation openings shall be covered for their height and width with any of the following materials provided that the least dimension of the covering shall not exceed 1/4 inch (6.4 mm), and operational louvers are permitted
1. Perforated sheet metal plates not less than 0.070 inch (1.8 mm) thick.
2. Expanded sheet metal plates not less than 0.047 inch (1.2 mm) thick.
3. Cast-iron grill or
4. Extruded load-bearing brick vents.
5. Hardware cloth of 0.035 inch (0.89 mm) wire or heavier.
6. Corrosion-resistant wire mesh, with the least dimension being 1/4" inch (3.2 mm) thick.
Exceptions:
1 *The total area of ventilation openings shall be permitted to be reduced to 1/1500 of the underfloor area where the ground surface is covered with an approved Class 1 vapor retarder material*
2 *Where are the ground surface is covered with an approved Class 1 vapor retarder material ventilation openings are not required to be within 3 feet (915 mm) of each external corner of the under floor space provided that the openings are place to provide cross ventilation of the space*
R408.3 Unvented Crawl Space. For unvented underfloor spaces, the following items shall be provided
1. Exposed earth is covered with a continuous Class 1 vapor retarder. Joints of the vapor retarder shall overlap by 6 inches (152 mm) and shall be sealed or taped. The edges of the vapor retarder shall extend at least 6 inches (152 mm) up the stem wall and shall be attached and sealed to the stem wall or insulation; and
2. One of the following shall be provided for the underfloor space
2.1 Continuously operated mechanical exhaust ventilation at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m2) of crawl space floor area, including an air pathway to the common area (such as a duct or transfer grille).
2.2 Conditioned air supply sized to deliver at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m2) of under-floor area, including a return air pathway to the common area (such as a duct or transfer grille). Crawl space perimeter walls shall be insulated in accordance with the minimum insulation requirements established in the California Energy Code. Crawl space insulation shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and then vertically and/or horizontally for at least an additional 24 inches (610 mm).
2.3. Plenum in structures complying with *the California Mechanical Code*, if underfloor space is used as a plenum.
2.4 Dehumidification sized in accordance with manufacturer's specifications.
R408.4 Access. Access shall be provided to all underfloor spaces. Access openings through the floor shall be a minimum of 18 inches by 24 inches (457 mm by 610 mm). Openings through a perimeter wall shall be not less than 16 inches by 24 inches (407 mm by 610 mm). When any portion of the through-wall access is below grade, an areaway not less than 16 inches by 24 inches (407 mm by 610 mm) shall be provided. The bottom of the areaway shall be below the threshold of the access opening. Through wall access openings shall not be located under a door to the residence. See the *California Mechanical Code* for access requirements where mechanical equipment is located under floors.
R408.5 Removal of Debris. The under-floor grade shall be cleaned of all vegetation and organic material. All wood forms used for placing concrete shall be removed before a building is occupied or used for any purpose. All construction materials shall be removed before a building is occupied or used for any purpose.
R408.6 Finished Grade. The finished grade of underfloor surface may be located at the bottom of the footings; however, where there is evidence that the groundwater table can rise to within 6 inches (152 mm) of the finished floor at the building perimeter or where there is evidence that the surface water does not readily drain from the building site, the grade in the underfloor space shall be as high as the outside finished grade, unless an approved drainage system is provided.
R408.7 Flood resistance. For buildings located in flood hazard areas as established in Table R301.2(1)
1. Walls enclosing the underfloor space shall be provided with flood openings in accordance with Section R322.2.2
2. The finished ground level of the underfloor space shall be equal to or higher than the outside finished ground level on at least one side.
Exception Underfloor spaces that meet the requirements of FEMA/FIA TB11 1
R408.8 Underfloor vapor retarder. Climate Zones 1A, 2A and 3A below the warm humid line, a continuous Class 1 or 2 vapor retarder shall be provided on the exposed face of air permeable insulation installed between the floor joists and exposed to the grade in the underfloor space. The vapor retarder shall have a maximum water vapor permeance of 1.5 perms when tested in accordance with Procedure B of ASTM E96.
Exception: the vapor retarder shall not be required in unvented crawl spaces constructed in accordance with Section R408 3

SECTION R609: EXTERIOR WINDOWS AND DOORS

R609.1 General. This section prescribes performance and construction requirements for exterior windows and doors installed in walls. Windows and doors shall be installed in accordance with the fenestration manufacturer's written instructions. Window and door openings shall be flashed in accordance with Section R703.4. Written installation instructions shall be provided by the fenestration manufacturer for each window or door.
R609.2 Performance. Exterior windows and doors shall be designed to resist the design wind loads specified in Table R301.2(2) adjusted for height and exposure in accordance with Table R301.2(3) or determined in accordance with ASCE 7 using the allowable stress design load combinations of ASCE 7. Design wind loads for exterior glazing not part of a labeled assembly shall be permitted to be determined in accordance with Chapter 24 of the California Building Code.
R609.3 Testing and labeling. Exterior windows and sliding doors shall be tested by an approved independent laboratory, and bear a label identifying manufacturer, performance characteristics and approved inspection agency to indicate compliance with AAMAAVDMA/CSA 101/I.S.2/A440. Exterior side-hinged doors shall be tested and labeled as conforming to AAMA/WDMA/CSA 101/I.S.2/A440 or AMD 100, or comply with Section R609.5.
Exception: Decorative glazed openings
R609.3.1 Comparative analysis. Structural wind load design pressures for window and door units different than the size tested in accordance with Section R609.3 shall be permitted to be different than the design value of the tested unit where determined in accordance with one of the following comparative analysis methods
1. Structural wind load design pressures for window and door units smaller than the size tested in accordance with Section R609.3 shall be permitted to be higher than the design value of the tested unit provided such higher pressures are determined by accepted engineering analysis. Components of the smaller unit shall be the same as those of the tested unit. Where such calculated design pressures are used, they shall be validated by an additional test of the window or door unit having the highest allow- able design pressure.
2. In accordance with WDMAI.S.11.
R609.4 Garage doors. Garage doors shall be tested in accordance with either ASTM E330 or ANSI/DASMA 108, and shall meet pass/fail criteria of ANSI/DASMA 108.
R609.4.1 Garage door labeling. Garage doors shall be labeled with a permanent label provided by the garage door manufacturer. The label shall identify the garage door manufacturer, the garage door model/series number, the positive and negative designed wind pressure rating, the installation instruction drawing reference number, and the applicable test standard.

R609.5 Other exterior window and door assemblies. Exterior windows and door assemblies not included within the scope of Section R609.3 or R609.4 shall be tested in accordance with ASTM E330. Glass in assemblies covered by this exception shall comply with Section R308.5.
R609.6 Wind borne debris protection. Protection of exterior windows and glass doors in buildings located in wind-borne debris regions shall be in accordance with Section R301.2.1.2.
R609.6.1 Fenestration testing and labeling. Fenestration shall be tested by an approved independent laboratory, listed by an approved entity, and bear a label identifying manufacturer, performance characteristics, and approved inspection agency to indicate compliance with the requirements of the following specification(s)
1. ASTM E1886 and ASTM E1996; or 2. AAMA506.
R609.6.2 Impact protective systems testing and labeling. Impact protective systems shall be tested for impact resistance by an approved independent laboratory for compliance with ASTM E1886 and ASTM E1996. Impact protective systems shall be tested for designed wind pressure by an approved independent laboratory for compliance with ASTM E330. Required designed wind pressures shall be determined in accordance with Table R301.2.1.(1), adjusted for height and exposure in accordance with Table R301.2.1.(2) or determined in accordance with ASCE 7. For the purpose of this section, design, wind pressure is determined in accordance with ASCE 7 are permitted to be multiplied by 0.6. Impact protective systems, bear a label, identifying the manufacturer, performance characteristics, and an approved inspection agency. Impact protective systems, she'll have a permanent label, providing traceability to the manufacturer, product designation, and performance characteristics. The permanent label shall be acid etched, sandblasted, ceramic fired, laser etched, embossed, or a type that, once applied, cannot be removed without being destroyed.
R609.7 Anchorage methods. The methods cited in this section apply only to anchorage of window and glass door assemblies to the main force-resisting system.
R609.7.1 Anchoring requirements. Window and glass door assemblies shall be anchored in accordance with the published manufacturer's recommendations to achieve the design pressure specified. Substitute anchoring systems used for substrates not specified by the fenestration manufacturer shall provide equal or greater anchoring performance as demonstrated by accepted engineering practice.
R609.7.2 Anchorage details. Products shall be anchored in accordance with the minimum requirements illustrated in Figures R609.7.2(1), R609.7.2(2), R609.7.2(3), R609.7.2(4), R609.7.2(5), R609.7.2(6), R609.7.2(7) and R609.7.2(8).
R609.7.2.1 Masonry, concrete or other structural substrate. Where the wood shim or buck thickness is less than 1-1/2 inches (38 mm), window and glass door assemblies shall be anchored through the jamb, or by jamb clip and anchors shall be embedded directly into the masonry, concrete or other substantial substrate material. Anchors shall adequately transfer load from the window or door frame into the rough opening substrate [see Figures R609.7.2(1) and R6097.2(2)].
Where the wood shim or buck thickness is inches (38 mm) or more, the buck is securely fastened to the masonry, concrete or other substantial substrate, and the buck extends beyond the interior face of the window or door frame, window and glass door assemblies shall be anchored through the jamb, or by jamb clip, or through the flange to the secured wood buck. Anchors shall be embedded into the secured wood buck to adequately transfer load from the window or door frame assembly [see Figures R609.7.2(3), R6097.2(4) and R609.7.2(5)].
R609.7.2.2 Wood or other approved framing material. Where the framing material is wood or other approved framing material, window and glass door assemblies shall be anchored through the frame, or by frame clip, or through the flange. Anchors shall be embedded into the frame construction to adequately transfer load [see Figures R609.7.2(6), R609.7.2(7) and R609.7.2(8)].
R609.8 Mullions. Mullions shall be tested by an approved testing laboratory in accordance with AAMA 450, or be engineered in accordance with accepted engineering practice. Mullions tested as stand-alone units or qualified by engineering shall use performance criteria cited in Sections R609.8.1, R609.8.2 and R609.8.3. Mullions qualified by an actual test of an entire assembly shall comply with Sections R609.8.1 and R609.8.3.
R609.8.1 Load transfer. Mullions shall be designed to transfer the design pressure loads applied by the window and door assemblies to the rough opening substrate.
R609.8.2 Deflection. Mullions shall be capable of resisting the design pressure loads applied by the window and door assemblies to be supported without deflecting more than L/175, where L is the span of the mullion in inches.
R609.8.3 Structural safety factor. Mullions shall be capable of resisting a load of 1.5 times the design pressure loads applied by the window and door assemblies to be supported without exceeding the appropriate material stress levels. If tested by an approved laboratory, the 1.5 times the design pressure load shall be sustained for 10 seconds, and the permanent deformation shall not exceed 0.4 percent of the mullion span after the 1.5 times design pressure load is removed.

CHAPTER 7: WALL COVERING

SECTION R701: GENERAL

R701.1 Application. The provisions of this chapter shall control the design and construction of the interior and exterior wall covering for all buildings.
R701.2 Installation. Products sensitive to adverse weather shall not be installed until adequate weather protection for the installation is provided. Exterior sheathing shall be dry before applying exterior cover.

SECTION R702: INTERIOR COVERING

R702.1 General. Interior coverings or wall finishes shall be installed in accordance with this chapter and Table R702.1(1), Table R702.1(2), Table R702.1(3) and Table R702.3.5. Interior masonry veneer shall comply with the requirements of Section R703.7.1 for support and Section R703.7.4 for anchorage, except an airspace is not required. Interior finishes and materials shall conform to the flame spread and smoke-development requirements of Section R302.9.
R702.2 Interior plaster.
R702.2.1 Gypsum plaster. Gypsum plaster materials shall conform to ASTM C5, C22, C28, C35, C59, C61, C587, C631, C847, C933, C1032 and C1047, and shall be installed or applied in compliance with ASTM C843 and C844. Gypsum lath or gypsum base for veneer plaster shall conform to ASTM C1396. Plaster shall be not less than three coats where applied over metal lath and not less than two coats where applied over other bases permitted by this section, except that veneer plaster shall be applied in one coat not to exceed 3/16 inch (4.76 mm) thickness, provided the total thickness is in accordance with Table R702.1(1).
R702.3 Gypsum board and gypsum panel products.
R702.3.1 Materials. Gypsum board and gypsum panel product materials and accessories shall conform to ASTM C22, C475, C514, C1002, C1047, C1177, C1178, C1278, C1396 or C658 and shall be installed in accordance with the provisions of this section. Adhesives for the installation of gypsum board and gypsum panel products shall conform to ASTM C557.
R702.3.2 Wood framing. Wood framing supporting gypsum board and gypsum panel products shall be not less than 2 inches (51 mm) nominal thickness in the least dimension except that wood furring strips not less than 1 inch by 2 inch (25 mm by 51 mm) nominal dimension shall be permitted to be used over solid backing or framing spaced not more than 24 inches (610 mm) on center.
R702.3.3 Cold formed steel framing. Cold-formed steel framing supporting gypsum board and gypsum panel products shall be not less than 1-1/4 inches (32 mm) wide in the least dimension. Non load-bearing cold-formed steel framing shall comply with AISI S220 and ASTM C645, Section 10. Load-bearing cold-formed steel framing shall comply with AISI S200 and ASTM C955, Section 8.
R702.3.5 Application. Supports and fasteners used to attach gypsum board and gypsum panel products shall comply with Table R702.3.5. Gypsum sheathing shall be attached to exterior walls in accordance with Table R602.3(1). Gypsum board and gypsum panel products shall be applied at right angles or parallel to framing members. All edges and ends of gypsum board and gypsum panel products shall occur on the framing members, except those edges and ends that are perpendicular to the framing members. Interior gypsum board shall not be installed where it is directly exposed to the weather or to water.
R702.3.5.1 Screw fastening. Screws for attaching gypsum board and gypsum panel products to wood framing shall be Type W or Type S in accordance with ASTM C1 002 and shall penetrate the wood not less than inch (15.9 mm). Gypsum board and gypsum panel products shall be attached to cold-formed steel framing with minimum No. 6 screws. Screws for attaching gypsum board and gypsum panel products to cold-formed steel framing less than 0.033 inch (1 mm) thick shall be Type S in accordance with ASTM C1 002 or bugle head style in accordance with ASTM C1513 and shall penetrate the steel not less than 3/8 inch (9.5 mm). Screws for attaching gypsum board and gypsum panel products to cold- formed steel framing 0.033 inch to 0.112 inch (1 mm to 3 mm) thick shall be in accordance with ASTM C954 or bugle head style in accordance with ASTM C1513. Screws for attaching gypsum board and gypsum panel products to structural insulated panels shall penetrate the wood structural panel facing not less than 7/16 inch (11.1 mm).
R702.3.6 Horizontal gypsum board diaphragm ceilings. Gypsum board and gypsum panel products shall be permitted on wood joists to create a horizontal diaphragm in accordance with Table R702.3.6. Gypsum board and gypsum panel products shall be installed perpendicular to ceiling framing members. End joints of adjacent courses of board and panels shall not occur on the same joist. The maximum allowable diaphragm proportions shall be 1-1/2 1 between shear resisting elements. Rotation or cantilever conditions shall not be permitted. Gypsum board or gypsum panel products shall not be used in diaphragm ceilings to resist lateral forces imposed by masonry or concrete construction. Perimeter edges shall be blocked using wood members not less than 2 inch by 6 inch (5 mm by 152 mm) nominal dimension. Blocking material shall be installed flat over the top plate of the wall to provide a nailing surface not less than 2 inches (51 mm) in width for the attachment of the gypsum board or gypsum panel product.
R702.3.7 Water resistant gypsum backing board. Gypsum board used as the base or backer for adhesive application of ceramic tile or other required nonabsorbent finish material shall conform to ASTM C1396, C1178 or C1278. Use of water-resistant gypsum backing board shall be permitted on ceilings. Water-resistant gypsum board shall not be installed over a Class I or II vapor retarder in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.
R702.3.7.1 Limitations. Water-resistant gypsum backing board shall not be used where there will be direct exposure to water, or in areas subject to continuous high humidity.
R702.4 Ceramic tile.
R702.4.1 General. Ceramic tile surfaces shall be installed in accordance with ANSI A108.1, A108.4, A108.5, A108.6, A108.11, A118.1, A118.3, A136.1 and A137.1.
R702.4.2 Backer boards. Materials used as backers for wall tile in tub and shower areas and wall panels in shower areas shall be of materials listed in Table R702.4.2, and installed in accordance with the manufacturer's recommendations.
R702.5 Other finishes. Wood veneer paneling and hardboard paneling shall be placed on wood or cold-formed steel framing spaced not more than 16 inches (406 mm) on center. Wood veneer and hard board paneling less than 1/4 inch (6 mm) nominal thickness shall not have less than a 3/8 inch (10 mm) gypsum board or gypsum panel product backer. Wood veneer paneling not less than 1/4 inch (6 mm) nominal thickness shall conform to ANSI/HPVA HP-1. Hardboard paneling shall conform to CPA/ANSI A135.5.
R702.6 Wood shakes and shingles. Wood shakes and shingles shall conform to CSSB Grading Rules for Wood Shakes and Shingles and shall be permitted to be installed directly to the studs with maximum 24 inches (610 mm) on-center spacing.
R702.6.1 Attachment. Nails, staples or glue are permitted for attaching shakes or shingles to the wall, and attachment of the shakes or shingles directly to the surface shall be permitted provided the fasteners are appropriate for the type of wall surface material. Where nails or staples are used, two fasteners shall be provided and shall be placed so that they are covered by the course above.
R702.6.2 Furring strips. Where furring strips are used, they shall be 1 inch by 2 inches or 1 inch by 3 inches (25 mm by 51 mm or 25 mm by 76 mm), spaced a distance on center equal to the desired exposure, and shall be attached to the wall by nailing through other wall material into the studs.

SECTION R703: EXTERIOR COVERING

R703.1 General. Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing as described in Section R703.4.
Exception: Log walls designed and constructed in accordance with the provisions of ICC 400
R703.1.1 Water resistance. The exterior wall envelope shall be designed and constructed in a manner that prevents the accumulation of water within the wall assembly by providing a water-resistant barrier behind the exterior veneer as required by Section R703.2 and a means of draining to the exterior water that enters the assembly. Protection against condensation in the exterior wall assembly shall be provided in accordance with the California Energy Code.
Exceptions:
1 *A weather resistant exterior wall envelope shall not be required over concrete or masonry walls designed in accordance with Chapter 6 and flashed in accordance with Section R703 4 or R703 8*
2 *Compliance with the requirements for a means of drainage and the requirements of Sections R703 2 and R703 4 shall not be required for an exterior wall envelope that has been demonstrated to resist wind driven rain through testing of the exterior wall envelope including joints penetrations and intersections with dissimilar materials in accordance with ASTM E331 under the following conditions:*
2 1 Exterior wall envelope test assemblies shall include at least one opening one control joint one wall/eave interface and one wall sill All tested openings and penetrations shall be representative of the intended end use configuration
2 2 Exterior wall envelope test assemblies shall be at least 4 feet by 8 feet (1219 mm by 2438 mm) in size
2 3 Exterior wall assemblies shall be tested at a minimum differential pressure of 6 24 pounds per square foot (299 Pa)
2 4 Exterior wall envelope assemblies shall be subjected to the minimum test exposure for a minimum of 2 hours
The exterior wall envelope design shall be considered to resist wind-driven rain where the results of testing indicate that water did not penetrate control joints in the exterior wall envelope, joints at the perimeter of openings penetration or intersections of terminations with dissimilar materials.
R703.1.2 Wind resistance. Wall coverings, backing materials and their attachments shall be capable of resisting wind loads in accordance with Tables R301.2(2) and R301.2(3). Wind-pressure resistance of the siding and backing materials shall be determined by ASTM E330 or other applicable standard test methods. Where wind-pressure resistance is determined by design analysis, data from approved design standards and analysis conforming to generally accepted engineering practice shall be used to evaluate the siding and backing material and its fastening. All applicable failure modes including bending rupture of siding, fastener withdrawal and fastener head pull-through shall be considered in the testing or design analysis. Where the wall covering and the backing material resist wind load as an assembly, use of the design capacity of the assembly shall be permitted.
R703.2 Water resistive barrier. Not fewer than one layer of water-resistant barrier shall be applied over studs or sheathing of all exterior walls with flashing as indicated in Section R703.4, in such a manner as to provide a continuous water resistant barrier behind the exterior wall veneer. The water-resistant barrier material shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to meet the requirements of the exterior wall envelope as described in Section R703.1. Water-resistive barrier materials shall comply with one of the following
1. No. 15 felt complying with ASTM D226, Type 1.
2. ASTM E2556, Type 1 or 2.
3. ASTM E331 in accordance with Section R703.1.1.
4. Other approved materials in accordance with the manufacturer's installation instructions.
- No. 15 asphalt felt in water-resistant barriers complying with ASTM E2556 shall be applied horizontally, with the upper layer lapped over the lower layer, not less than 2 inches (51 mm), and where joints occur shall be lapped no less than 6 inches (152 mm).
R703.3 Nominal thickness and attachments. The nominal thickness and attachment of exterior wall coverings shall be in accordance with Table R703.3(1), the wall covering mate- rial requirements of this section, and the wall covering manufacturer's installation instructions. Cladding attachment over foam sheathing shall comply with the additional requirements and limitations of Sections R703.15 through R703.17. Nominal material thicknesses in Table R703.3(1) are based on a maximum stud spacing of 16 inches (406 mm) on center. Where specified by the siding manufacturer's instructions and supported by a test report or other documentation, attachment to studs with greater spacing is permitted. Fasteners for exterior wall coverings attached to wood framing shall be in accordance with Section R703.3.2 and Table R703.3(1). Exterior wall coverings shall be attached to cold-formed steel light frame construction in accordance with the cladding manufacturer's installation instructions, the requirements of

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4/2/25
BUILDING SUBMITTAL SET

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

CRC NOTES

GN.1

Table R703.3(1) using screw fasteners substituted for the nails specified in accordance with Table R703.3(2), or an approved design.

R703.3.2 Fasteners. Exterior wall coverings shall be securely fastened with aluminum, galvanized, stainless steel or rust-preventative coated nails or staples in accordance with Table R703.3(1) or with other approved corrosion-resistant fasteners in accordance with the wall covering manufacturer's installation instructions. Nails and staples shall comply with ASTM F1667. Nails shall be T-head, modified round head, or round head with smooth or deformed shanks. Staples shall have a minimum crown width of 7/16 inch (11.1 mm) outside diameter and be manufactured of minimum 16-gage wire. Where fiberboard, gypsum, or foam plastic sheathing backing is used, nails or staples shall be driven into the studs. Where wood or wood structural panel sheathing is used, fasteners shall be driven into studs unless otherwise permitted to be driven into sheathing in accordance with either the siding manufacturer's installation instructions or Table R703.3.2.

R703.3.3 Minimum fastener length and penetration. Fasteners shall have the greater of the minimum length specified in Table R703.3(1) or as required to provide a minimum penetration into framing as follows

1. Fasteners for horizontal aluminum siding, steel siding, particleboard panel siding, wood structural panel siding in accordance with ANSI/APA-PRP 210, fiber-cement panel siding and fiber-cement lap siding installed over foam plastic sheathing shall penetrate not less than 1-1/2 inches (38 mm) into framing or shall be in accordance with the manufacturer's installation instructions.
2. Fasteners for hardboard panel and lap siding shall penetrate not less than 1-1/2 inches (38 mm) into framing.
3. Fasteners for vinyl siding and insulated vinyl siding installed over wood or wood structural panel sheathing shall penetrate not less than 1-1/4 inches (32 mm) into sheathing and framing combined. Vinyl siding and insulated vinyl siding shall be permitted to be installed with fasteners penetrating into or through wood or wood structural sheathing of minimum thickness as specified by the manufacturer's instructions or test report, with or without penetration into the framing. Where the fastener penetrates fully through the sheathing, the end of the fastener shall extend not less than 1/4 inch (6.4 mm) beyond the opposite face of the sheathing. Fasteners for vinyl siding and insulated vinyl siding installed over foam plastic sheathing shall be in accordance with Section R703.11.2. Fasteners for vinyl siding and insulated vinyl siding installed over fiberboard or gypsum sheathing shall penetrate not less than 1-1/4 inches (32 mm) into framing.
4. Fasteners for vertical or horizontal wood siding shall penetrate not less than 1-1/2 inches (38 mm) into studs, studs and wood sheathing combined, or blocking.
5. Fasteners for siding material installed over foam plastic sheathing shall have sufficient length to accommodate foam plastic sheathing thickness and to penetrate framing or sheathing and framing combined, as specified in Items 1 through 4.

R703.4 Flashing. Approved corrosion-resistant flashing shall be applied shingle-fashion in a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. Self-adhered membranes used as flashing shall comply with AAMA 711. Fluid-applied membranes used as flashing in exterior walls shall comply with AAMA 714. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at the following locations

1. Exterior window and door openings. Flashing at exterior window and door openings shall be installed in accordance with Section R703.4.1.
2. At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings.
3. Under and at the ends of masonry, wood or metal copings and sills.
4. Continuously above all projecting wood trim.
5. Where exterior porches, decks or stairs attach to a wall or floor assembly of wood-frame construction.
6. At wall and roof intersections.
7. At built-in gutters.

R703.4.1 Flashing installation at exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to a water-resistant barrier complying with section R703.2 for subsequent drainage. Air sealing shall be installed around all window and door openings on the interior side of the rough opening gap. Mechanically attached flexible flashings shall comply with AAMA 712. Flashing at exterior window and door openings shall be installed in accordance with one or more of the following

1. The fenestration manufacturer's installation and flashing instructions, or for applications not addressed in the fenestration manufacturer's instructions, in accordance with the flashing manufacturer's instructions. Where are flashing instructions or details are not provided, pan flashing shall be installed at the sill of the exterior window and door openings. Penn flashing shall be sealed or sloped in such a manner as to direct water to the surface of the exterior wall finish or to the water-resistant barrier for subsequent drainage. Openings using pan flashing shall incorporate flashing or protection at the heads and sides.
2. In accordance with the flashing design or method of a registered design professional.
3. In accordance with other approved methods.

R703.5 Wood, hardboard and wood structural panel siding. Wood, hardboard, and wood structural panel siding shall be installed in accordance with this section and Table R703.3(1). Hardboard siding shall comply with CPA/ANSI A135.6. Hardboard siding used as architectural trim shall comply with CPA/ANSI A 135.7.

R703.5.1 Vertical wood siding. Wood siding applied vertically shall be nailed to horizontal nailing strips or blocking set not more than 24 inches (610 mm) on center.

R703.5.2 Panel siding. 3/8 inch (9.5 mm) wood structural panel siding shall not be applied directly to studs spaced more than 16 inches (406 mm) on center where long dimension is parallel to studs. Wood structural panel siding 7/16 inch (11.1 mm) or thinner shall not be applied directly to studs spaced more than 24 inches (610 mm) on center. The stud spacing shall not exceed the panel span rating provided by the manufacturer unless the panels are installed with the face grain perpendicular to the studs or over sheathing approved for that stud spacing. Joints in wood, hardboard or wood structural panel siding shall be made as follows unless otherwise approved. Vertical joints in panel siding shall occur over framing members, unless wood or wood structural panel sheathing is used, and shall be shiplapped or covered with a batten. Horizontal joints in panel siding shall be lapped not less than 1 inch (25 mm) or shall be shiplapped or flashed with Z-flashing and occur over solid blocking, wood or wood structural panel sheathing.

R703.5.3 Horizontal wood siding. Horizontal lap siding shall be installed in accordance with the manufacturer's recommendations. Where there are no recommendations the siding shall be lapped not less than 1 inch (25 mm), or 1/2 inch (12.7 mm) if rabbeted, and shall have the ends caulked, covered with a batten or sealed and installed over a strip of flashing.

R703.6 Wood shakes and shingles. Wood shakes and shingles shall conform to CSSB Grading Rules for Wood Shakes and Shingles.

R703.6.1 Application. Wood shakes or shingles shall be applied either single course or double course over nominal 1/2 inch (12.7 mm) wood-based sheathing or to furring strips over 1/2 inch (12.7 mm) nominal non-wood sheathing. A water-resistive barrier shall be provided over all sheathing, with horizontal overlaps in the membrane of not less than 2 inches (51 mm) and vertical overlaps of not less than 6 inches (152 mm). Where horizontal furring strips are used, they shall be 1 inch by 3 inches or 1 inch by 4 inches (25 mm by 76 mm or 25 mm by 102 mm) and shall be fastened to the studs with minimum 7d or 8d box nails and shall be spaced a distance on center equal to the actual weather exposure of the shakes or shingles, not to exceed the maximum exposure specified in Table R703.6.1. When installing shakes or shingles over a non-permeable water-resistive barrier, furring strips shall be placed first vertically over the barrier and in addition, horizontal furring strips shall be fastened to the vertical furring strips prior to attaching the shakes or shingles to the horizontal furring strips. The spacing between adjacent shingles to allow for expansion shall be 1/8 inch (3.2 mm) to 1/4 inch (6.4 mm) apart, and between adjacent 4 shakes shall be 3/8 inch (9.5 mm) to 1/2 inch (12.7 mm) apart. The offset spacing between joints in adjacent courses shall be not less than 1-1/2 inches (38 mm).

R703.6.2 Weather exposure. The maximum weather exposure for shakes and shingles shall not exceed that specified in Table 703.6.1.

R703.6.3 Attachment. Wood shakes or shingles shall be installed according to this chapter and the manufacturer's instructions. Each shake or shingle shall be held in place by two stainless steel Type 304, Type 316 or hot-dipped zinc-coated galvanized corrosion-resistant box nails in accordance with Table R703.6.3(1) or R703.6.3(2). The hot-dipped zinc-coated galvanizing shall conform to minimum standard ASTM A153D, 1.0 ounce per square foot. Alternatively, 16-gage stainless steel Type 304 or Type 316 staples with crown widths inch (11 mm) minimum, inch (19 mm) maximum, shall be used and the crown of the staple shall be placed parallel with the butt of the shake or the shingle. In single-course application, the fasteners shall be concealed by the course above and shall be driven approximately 1 inch (25 mm) above the butt line of the succeeding course and 3/4 inch (19 mm) from the edge. In double-course applications, the exposed shake or shingle shall be face-nailed with two fasteners, driven approximately 2 inches (51 mm) above the butt line and 3/4 inch (19 mm) from each edge. Fasteners installed within 15 miles (24 km) of salt water coastal areas shall be stainless steel Type 316. Fasteners for fire-retardant-treated shakes or shingles in accordance with Section R902 or pressure-impregnated-preservative-treated shakes or shingles in accordance with AWPAU1 shall be stainless steel Type 316. The fasteners shall penetrate the sheathing or furring strips by not less than 1/2 inch (13 mm) and shall not be overdriven. Fasteners for untreated (natural) and treated products shall comply with ASTM F1667.

R703.6.4 Bottom courses. The bottom courses shall be doubled.

R703.7 Exterior plaster (stucco). Installation of these materials shall be in compliance with ASTM C926, ASTM C1063 and the provisions of this code.

R703.7.1 Lath. Lath and lath attachments shall be of corrosion-resistant materials in accordance with ASTM C1063. Expanded metal, welded wire, or woven wire lath shall be attached to wood framing members or furring. Where are the exterior plaster is serving as wall bracing in accordance with Table R602.10.4, the lath shall be attached directly to framing. The lath shall be attached with 1-1/2 inch long (38 mm), 11-gauge nails having a 7/16 inch (11.1 mm) head, or 7/8 inch long (22.2 mm), 16-gauge staples, spaced not more than 7 inches (178 mm) on center along framing members or furring and not more than 24 inches (610 mm) on center between framing members or furring, or as otherwise approved. Additional fastening between wood framing members shall not be prohibited. Lath attachments to cold formed steel framing, masonry, stone, or concrete substrates shall be in accordance with ASTM C1063. Where lath is installed directly over foam sheathing, lath connections shall also be in accordance with Section R703.15, R703.16 or R703.17. Where lath is attached to furring shall be in accordance with Section R703.15, or R703.16 or R703.17.

Exception: Lath is not required over masonry cast in place concrete precast concrete or stone substrates prepared in accordance with ASTM C1063

R703.7.2 Plaster. Plastering with cement plaster shall be in accordance with ASTM C926. Cement materials shall be in accordance with one of the following

1. Masonry cement conforming to ASTM C91, Type M, S, or N.
2. Portland cement conforming to ASTM C150, Type I, II or III.
3. Blended hydraulic cement conforming to ASTM C595, Type IP, IS (< 70), IL, or IT (< 70).
4. Hydraulic cement conforming to ASTM C1157, Type GU, HE, MS, HS, or MH.
5. Plastic (stucco) cement conforming to ASTM C1328.

Plaster shall be not less than three coats where applied over metal lath or wire lath, and shall be not less than two coats where applied over masonry, concrete, pressure-preservative-treated wood or decay-resistant wood as specified in Section R317.1 or gypsum backing. If the plaster surface is completely covered by veneer or other facing material, or is completely concealed, plaster application need only two coats provided the total thickness is as set forth in Table R702.1(1). On wood-frame construction with an on-grade floor slab system, exterior plaster, shall be applied to cover, but not extend below, lath, paper, and screed. The proportion of aggregate to cementitious materials shall be as set forth in Table R702.1(3).

R703.7.2.1 Weep screeds. A minimum 0.019-inch (0.5 mm) (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed, with a minimum vertical attachment flange of 3-1/2 inches (89 mm) shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C926. The weep screed shall be placed not less than 4 inches (102 mm) above the earth or 2 inches (51 mm) above paved areas and shall be of a type that will a low trapped water to drain to the exterior of the building. The weather-resistant barrier shall lap the attachment flange. The exterior lath shall cover and terminate on the attachment flange of the weep screed.

R703.7.3 Water resistive barriers. Water-resistant barriers shall be installed as required in Section R703.2 and, where applied over wood-based sheathing, shall comply with Section R703.7.3.1 or R703.7.3.2.

R703.7.3.1 Dry climates. In Dry (B) climate zones indicated in figure N1101.7, water-resistant barriers shall comply with one of the following

1. The water-resistant barrier, shall be two layers of 10-minute Grade D paper, or have a water-resistance equal to or greater than two layers of a water-resistant barrier complying with ASTM E2556, Type 1. The individual layers shall be installed independently such that each layer provides a separate continuous plane. Flashing installed in accordance with Section R703.4 and intended to drain to the water-resistant barrier shall be directed between the layers.
2. In addition to complying with Section R703.7.3.1, Item 2, drainage on the exterior of the water-resistant barrier shall have a drainage efficiency of not less than 90 percent, as measured in accordance with ASTM E2273 or Annex A2 of ASTM E2925.

R703.7.3.2 Moist and marine climates. In the Moist (A) or Marine (C) climate zones indicated in figure N1101.7, water-resistant barriers shall comply with one of the following

1. In addition to complying with Section R703.7.3.1, a space or drainage material not less than 3/16 inch (5 mm) in depth shall be added to the exterior side of the water-resistive barrier.
2. In addition to complying with Section R703.7.3.1, Item 2, drainage on the exterior of the water-resistive barrier shall have a drainage efficiency of not less than 90 percent, as measured in accordance with ASTM E2273 or Annex A2 of ASTM E2925.

R703.7.4 Application. Each coat shall be kept in a moist condition for at least 48 hours prior to application of the next coat.
Exception: Applications installed in accordance with ASTM C926

R703.7.5 Curing. The finish coat for two-coat cement plaster shall not be applied sooner than seven days after application of the first coat. For three-coat cement plaster, the second coat shall not be applied sooner than 48 hours after application of the first coat. The finish coat for three-coat cement plaster shall not be applied sooner than seven days after application of the second coat.

R703.10 Fiber cement siding

R703.10.1 Panel siding. Fiber-cement panels shall comply with the requirements of ASTM C1186, Type A, minimum Grade II or ISO 8336, Category A, minimum Class 2. Panels shall be installed with the long dimension either parallel or perpendicular to framing. Vertical and horizontal joints shall occur over framing members and shall be protected with caulking, or with battens or flashing, or be vertical or horizontal shiplap, or otherwise designed to comply with Section R703.1. Panel siding shall be installed with fasteners in accordance with Table R703.3(1) or the approved manufacturer's instructions.

R703.10.2 Lap siding. Fiber-cement lap siding having a maximum width of 12 inches (305 mm) shall comply with the requirements of ASTM C1186, Type A, minimum Grade II or ISO 8336, Category A, minimum Class 2. Lap shall be designed to comply with Section R703.1. Lap siding courses shall be installed with the fastener heads exposed or concealed, in accordance with Table R703.3(1) or approved manufacturer's instructions.

R703.12 Adhered masonry veneer installation. Adhered masonry veneer shall comply with the requirements of Section R703.7.3 and the requirements in Sections 12.1 and 12.3 of TMS 402/ACI 530/ASCE 5. Adhered masonry veneer shall be installed in accordance with Section R703.7.1, Article 3.3C of TMS 602/ACI 530.1/ASCE 6 or the manufacturer's instructions.

R703.12.1 Clearances. On exterior stud walls, adhered masonry veneer shall be installed

1. Minimum of 4 inches (102mm) above the earth;
2. Minimum of 2 inches (51 mm) above paved areas; or
3. Minimum of 1/2 inch (12.7 mm) above exterior walking surfaces that are supported by the same foundation that supports the exterior wall.

R703.12.2 Flashing at foundation. A corrosion-resistant screed or flashing of a minimum 0.019-inch (0.48 mm) or 26-gage galvanized or plastic with a minimum vertical attachment flange of 3-1/2 inches (89 mm) shall be installed to extend a minimum of 1 inch (25 mm) below the foundation plate line on exterior stud walls in accordance with Section R703.4.

R703.12.3 Water resistive barrier. A water-resistive barrier shall be installed as required by Section R703.2 and shall comply with the requirements of Section R703.7.3. The water-resistive barrier shall lap over the exterior of the attachment flange of the screed or flashing provided in accordance with Section R703.12.2.

CHAPTER 8: ROOF-CEILING CONSTRUCTION

SECTION R801: GENERAL

R801.3 Roof drainage. In areas where expansive or collapsible soils are known to exist, all dwellings shall have a controlled method of water disposal from roofs that will collect and discharge roof drainage to the ground surface not less than 5 feet (1524 mm) from foundation walls or to an approved drainage system.

SECTION R802: WOOD ROOF FRAMING (See Structural Plans & Notes)

SECTION R803: ROOF SHEATHING (See Structural Plans & Notes)

SECTION R805: CEILING FINISHES

R805.1 Ceiling installation. Ceilings shall be installed in accordance with the requirements for interior wall finishes as provided in Section R702.1 through R702.6.

SECTION R806: ROOF VENTILATION

R806.1 Ventilation required. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth or similar material with openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7. Required ventilation openings shall open directly to the outside air.

R806.2 Minimum vent area. The minimum net free ventilating area shall be 1/150 of the area of the vented space.
Exception The minimum net free ventilation area shall be 1/300 of the vented space provided one or more of the following conditions are met:

1. In Climate Zones 6, 7 and 8, a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.
2. Not less than 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located not more than 3 feet (914 mm) below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet (914 mm) below the ridge or highest point of the space shall be permitted.

R806.3 Vent and insulation clearance. Where eave or cornice vents are installed, insulation shall not block the free flow of air. Not less than a 1 inch (25 mm) space shall be provided between the insulation and the roof sheathing and at the location of the vent.

R806.4 Installation and weather protection. Ventilators shall be installed in accordance with manufacturer's instructions. Installation of ventilators in roof systems shall be in accordance with the requirements of Section R903. Installation of ventilators in wall systems shall be in accordance with the requirements of Section R703.1.

R806.5 Unvented attic and unvented enclosed rafter assemblies. Unvented attics and unvented enclosed roof framing assemblies created by ceilings that are applied directly to the underside of the roof framing members and structural roof sheathing applied directly to the top of the roof framing members/rafters, shall be permitted where all the following conditions are met

1. The unvented attic space is completely within the building thermal envelope.
2. No interior Class I vapor retarders are installed on the ceiling side (attic floor) of the unvented attic assembly or on the ceiling side of the unvented enclosed roof framing assembly.
3. Where wood shingles or shakes are used, a minimum 1/4 inch (6.4 mm) vented airspace separates the shingles or shakes and the roofing underlayment above the structural sheathing.
4. In California Climate Zones 5, 6, 7 and 8, any air-impermeable insulation shall be a Class II vapor retarder, or shall have a Class II vapor retarder coating or covering in direct contact with the underside of the insulation.
5. Insulation shall comply with Item 5.3 and either Item 5.1 or 5.2

5.1. Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing. No insulation shall be required when roof tiles, wood shingles or wood shakes, or any other roofing system using battens and no continuous underlayment is installed. A continuous underlayment shall be considered to exist if sheathing, roofing paper or any continuous layer having a perm rate of no more than one perm under the dry cup method is present.

5.1 Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.

5.1.1 Where only air-impermeable insulation is provided, it shall be applied in direct contact with the underside of the structural roof sheathing.

5.1.2. Where air-permeable insulation is provided inside the building thermal envelope, it shall be installed in accordance with Section 5.1. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the R-values in Table R806.5 for condensation control.

5.1.3. Where both air-impermeable and air-permeable insulation are provided, the air-impermeable insulation shall be applied in direct contact with the under-side of the structural roof sheathing and shall be in accordance with the R-values in Table R806.5 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

5.1.4. Alternatively, sufficient rigid board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.

5.2 In Climate Zones 1, 2 and 3, air permeable insulation installed in unvented attics shall meet the following requirements

5.2.1 An approved vapor diffusion port shall be installed not more than 12 inches (305 mm) from the highest point of the roof, measured vertically from the highest point of the roof to the lower edge of the port.

5.2.2 The port area shall be greater than or equal to 1:600 of the ceiling area. Where there are multiple parts in the attic, the sum of the port areas shall be greater than or equal to the area requirement.

5.2.3 The vapor-permeable membrane in the vapor diffusion port shall have a vapor permeance rating of greater than or equal to 20 perms, when tested in accordance with Procedure A of ASTM E96.

5.2.4 The vapor diffusion port shall serve as an air barrier between the attic in the exterior of the building.

5.2.5 The vapor diffusion port shall protect the attic against the entrance of rain and snow.

5.2.6 Framing members and blocking shall not block the free flow of water vapor to the port. Not less than a 2 inch (51 mm) Space shall be provided between any blocking in the roof sheathing. Air-permeable insulation shall be permitted within that space.

5.2.7 The roof slope shall be greater than or equal to 3:12 (vertical/horizontal).

5.2.8 Where only air-permeable insulation is used, it shall be installed directly below the structural roof sheathing, on top of the attic floor, or on top of the ceiling.

5.2.9 Air-impermeable insulation where used in conjunction with air-permeable insulation, shall be directly above or below the structural roof sheathing and is not required to meet the R-value in Table R806.5.

5.2.10 Where air-permeable insulation is used and is installed directly below the roof structural sheathing, air shall be supplied at a flow rate greater than or equal to 50 cfm (23.6 L/s) per 1,000 square feet (93 m2) of ceiling. The air shall be supplied from ductwork providing supply air to the occupiable space when the conditioning system is operating. Alternatively, the air shall be supplied by a supply fan when they conditioning system is operating. (See exceptions).

SECTION R807: ATTIC ACCESS

R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that have a vertical height of 30 inches (762 mm) or greater over an area of not less than 30 square feet (2.8 m2). The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members. The rough-framed opening shall be not less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other readily accessible location. Where located in a wall, the opening shall be not less than 22 inches wide by 30 inches high (559 mm wide by 762 mm high). Where the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See the California Mechanical Code for access requirements where mechanical equipment is located in attics.

CHAPTER 9: ROOF ASSEMBLIES

SECTION R901: GENERAL

R901.1 Scope. The provisions of this chapter shall govern the design, materials, construction and quality of roof assemblies.

SECTION R902: FIRE CLASSIFICATION

R902.1 Roofing covering materials. Roofs shall be covered with materials as set forth in Sections R904 and R905. A minimum Class A, B or C roofing shall be installed in areas designated by this section or where the edge of the roof is less than 3 feet (914 mm) from a lot line. Class A, B and C roofing required by this section to be listed shall be tested in accordance with UL 790 or ASTM E108.

Exceptions

1. *Class A roof assemblies include those with coverings of brick masonry and exposed concrete roof deck*
2. *Class A roof assemblies include ferrous or copper shingles or sheets metal sheets and shingles clay or concrete roof tile or slate installed on non combustible decks*
3. *Class A roof assemblies include minimum 16 ounces per square foot copper sheets installed over combustible decks*
4. *Class A roof assemblies include slate installed over underlayment over combustible decks*

R902.1.1 Roof coverings within very high fire hazard severity zones. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class A.
Exception The requirements shall not apply in any jurisdiction that adopts the model ordinance approved by the State Fire Marshal pursuant to Section 51189 of the Government Code or an ordinance that substantially conforms to the model ordinance and transmits a copy to the State Fire Marshal

R902.1.2 Roof coverings in other areas. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class C.

902.1.3 Roofing requirements a Wildland urban interface fire area. Roofing requirements for structures located in a wildland-urban interface fire area shall also comply with Section R337.5.

R902.2 Fire retardant treated shingles and shakes. Fire-retardant-treated wood shakes and shingles are wood shakes and shingles complying with UBC Standard 15-3 or 15-4 which are impregnated by the full-cell vacuum-pressure process with fire-retardant chemicals, and which have been qualified by UBC Standard 15-2 for use on Class A, B or C roofs. Fire-retardant-treated wood shakes and shingles shall comply with ICC-ES EG107 and with the weathering requirements contained in Health and Safety Code Section 13132.7(j). Each bundle shall bear labels from an ICBO accredited quality control agency identifying their roof-covering classification and indicating their compliance with ICC-ES EG107 and with the weathering requirements contained in Health and Safety Code Section 13132.7(j).
Health and Safety Code Section 13132.7(j) No wood roof covering materials shall be sold or applied in this state unless both of the following conditions are met

1. The materials have been approved and listed by the State Fire Marshal as complying with the requirements of this section.
2. The materials have passed at least five years of the 10-year natural weathering test. The 10-year natural weathering test required by this subdivision shall be conducted in accordance with Standard 15-2 of the 1994 edition of the Uniform Building Code at a testing facility recognized by the State Fire Marshal.

R902.3 Building integrated photovoltaic product. Building-integrated photovoltaic products (BIPV) products installed as the roof covering shall be tested, listed and labeled for fire classification in accordance with UL 7103 [SFM] Section R902.1 through R902.1.3. Class A, B or C BIPV products shall be installed where the edge of the roof is less than 3 feet (914 mm) from a lot line.

R902.4 Rooftop mounted photovoltaic panels systems. Rooftop-mounted photovoltaic (PV) panel systems installed on or above the roof covering shall be tested, listed and identified with a fire classification in accordance with UL 2703. Listed systems shall be installed in accordance with the manufacturer's installation instructions and their listing. Class A, B, or C photovoltaic panels systems and modules shall be installed in jurisdictions designated by law as requiring their use or where the edge of the roof is less than 3 feet (914 mm) from a lot line.

SECTION R903: WEATHER PROTECTION

R903.1 General. Roof decks shall be covered with approved roof coverings secured to the building or structure in accordance with the provisions of this chapter. Roof assemblies shall be designed and installed in accordance with this code and the approved manufacturer's instructions such that the roof assembly shall serve to protect the building or structure.

R903.2 Flashing. Flashings shall be installed in a manner that prevents moisture from entering the wall and roof through joints in copings, through moisture permeable materials and at intersections with parapet walls and other penetrations through the roof plane.

R903.2.1 Locations. Flashings shall be installed at wall and roof intersections, wherever there is a change in roof slope or direction and around roof openings. A flashing shall be installed to divert the water away from where the eave of a sloped roof intersects a vertical sidewall. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019 inch (0.5 mm) (No. 26 galvanized sheet).

R903.2.2 Crickets and saddles. A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches (762 mm) wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.
Exception Unit skylights installed in accordance with Section R308 6 and flashed in accordance with the manufacturer's instructions shall be permitted to be installed without a cricket or saddle

R903.3 Coping. Parapet walls shall be properly coped with noncombustible, weatherproof materials of a width not less than the thickness of the parapet wall.

R903.4 Roof drainage. Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof.

R903.4.1 Secondary (emergency overflow) drains or scuppers. Where roof drains are required, secondary emergency overflow roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. Overflow drains having the same size as the roof drains shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening height of 4 inches (102 mm) shall be installed in the adjacent parapet walls with the inlet flow located 2 inches(51 mm) above the low point of the roof served. The installation and sizing of overflow drains, leaders and conductors shall comply with the California Plumbing Code.

SECTION R904: MATERIALS

R904.1 Scope. The requirements set forth in this section shall apply to the application of roof covering materials specified herein. Roof assemblies shall be applied in accordance with this chapter and the manufacturer's installation instructions. Installation of roof assemblies shall comply with the applicable provisions of Section R905.

R904.2 Compatibility of materials. Roof assemblies shall be of materials that are compatible with each other and with the building or structure to which the materials are applied.

R904.3 Material specifications and physical characteristics. Roof covering materials shall conform to the applicable standards listed in this chapter.

R904.4 Product identification. Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels required. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.

SECTION R905: REQUIREMENTS FOR ROOF COVERINGS

R905.1 Roof covering application. Roof coverings shall be applied in accordance with the applicable provisions of this section and the manufacturer's installation instructions. Unless otherwise specified in this section, roof coverings shall be installed to resist the component and cladding loads specified in Table R301.2(2), adjusted for height and exposure in accordance with Table R301.2(3).

R905.1.1 Underlayment. Underlayment for asphalt shingles, clay and concrete tile, metal roof shingles, mineral-surfaced roll roofing, slate and slate-type shingles, wood shingles, wood shakes and metal roof panels shall conform to the applicable standards listed in this chapter. Underlayment materials required to comply with ASTM D226, D1970, D4869 and D6757 shall bear a label indicating compliance to the standard designation and, if applicable, type classification indicated in Table R905.1.1(1). Underlayment shall be applied in accordance with Table R905.1.1(2). Underlayment shall be attached in accordance with Table R905.1.1(3).

Exceptions

1. *As an alternative self adhering polymer modified bitumen underlayment bearing a label indicating compliance with ASTM D1970 and installed in accordance with both the underlayment manufacturer's and roof covering manufacturer's instructions for the deck material roof ventilation configuration and climate exposure for the roof covering to be installed shall be permitted*
2. *As an alternative a minimum 4 inch wide (102 mm) strip of self adhering polymer modified bitumen membrane bearing a label indicating compliance with ASTM D1970 installed in accordance with the manufacturer's instructions for the deck material shall be applied over all joints in the roof decking An approved underlayment complying with Table R905 1 1(1) for the applicable roof covering for areas where wind design is not required in accordance with figure are 301 2 1 1 shall be applied over the entire roof over the 4 inch wide (102 mm) membrane strips Underlayment shall be applied in accordance with table are 905 1 1(2) using the application requirements for areas where when design is not required in accordance with figure R301 2 1 1 Underlayment shall be attached in accordance with Table R905 1 1(3)*

R905.2 Asphalt shingles. The installation of asphalt shingles shall comply with the provisions of this section.

R905.2.1 Sheathing requirements. Asphalt shingles shall be fastened to solidly sheathed decks.

R905.2.2 Slope. Asphalt shingles shall be used only on roof slopes of two units vertical in 12 units horizontal (2:12) or greater. For roof slopes from two units vertical in 12 units horizontal (2:12) up to four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section R905.1.1.

R905.2.3 Underlayment. Underlayment shall comply with Section R905.1.1.

R905.2.4 Asphalt shingles. Asphalt shingles shall comply with ASTM D3462.

R905.2.4.1 Wind resistance of asphalt shingles. Asphalt shingles shall be tested in accordance with ASTM D7158. Asphalt shingles shall meet the classification requirements of Table R905.2.4.1 for the appropriate ultimate design wind speed. Asphalt shingle packaging shall bear a label to indicate compliance with ASTM D7158 and the required classification in Table R905.2.4.1.
Exception Asphalt shingles not included in the scope of ASTM D7158 shall be tested and labeled to indicate compliance with ASTM D3161 and the required classification in Table R905 2 4 1

R905.2.5 Fasteners. Fasteners for asphalt shingles shall be galvanized steel, stainless steel, aluminum or copper roofing nails, minimum 12-gage [0.105 inch (3 mm)] shank with a minimum 3/8 inch-diameter (9.5 mm) head, complying with ASTM F1667, of a length to penetrate through the roofing materials and not less than 3/4 inch (19.1 mm) into the roof sheathing. Where the roof sheathing is less than 3/4 inch (19.1 mm) thick, the fasteners shall penetrate through the sheathing.

R905.2.6 Attachment. Asphalt shingles shall have the minimum number of fasteners required by the manufacturer, but no less than four fasteners per strip shingle or two fasteners per individual shingle. Where the roof slope exceeds 21 units vertical in 12 units horizontal 21:12 (175-percent slope), shingles shall be installed as required by the manufacturer.

R905.2.7 Ice barrier. Where required, ice barriers shall comply with Section R905.1.2.

R905.2.8 Flashing. Flashing for asphalt shingles shall comply with this section.

R905.2.8.1 Base and cap flashing. Base and cap flashing shall be installed in accordance with manufacturer's instructions. Base flashing shall be of either corrosion-resistant metal of minimum nominal 0.019-inch (0.5 mm) thickness or mineral-surfaced roll roofing weighing not less than 77 pounds per 100 square feet (4 kg/m2). Cap flashing shall be corrosion-resistant metal of minimum nominal 0.019-inch (0.5 mm) thickness.

R905.2.8.2 Valleys. Valley linings shall be installed in accordance with the manufacturer's instructions before applying shingles. Valley linings of the following types shall be permitted

1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be not less than 24 inches (610 mm) wide and of any of the corrosion-resistant metals in Table R905.2.8.2.
2. For open valleys, valley lining of two plies of mineral-surfaced roll roofing, complying with ASTM D3909 or ASTM D6380 Class M, shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer not less than 36 inches (914 mm) wide.
3. For closed valleys (valley covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D6380 and not less than 36 inches wide (914 mm) or valley lining as described in Item 1 or 2 shall be permitted. Self-adhering polymer modified bitumen underlay- ment complying with ASTM D1970 shall be permitted in lieu of the lining material.

R905.2.8.3 Sidewall flashing. Base flashing against a vertical sidewall shall be continuous or step flashing and shall be not less than 4 inches (102 mm) in height and 4 inches (102 mm) in width and shall direct water away from the vertical sidewall onto the roof or into the gutter. Where siding is provided on the vertical side- wall, the vertical leg of the flashing shall be continuous under the siding. Where anchored masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and counterflashing shall be provided in accordance with Section R703.7.2.2. Where exterior plaster or adhered masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and Section R703.6.3.

R905.2.8.4 Other flashing. Flashing against a vertical front wall, as well as soil stack, vent pipe and chimney flashing, shall be applied in accordance with the asphalt shingle manufacturer's printed instructions.

R905.2.8.5 Drip edge. A drip edge shall be provided at eaves and rake edges of shingle roofs. Adjacent segments of drip edge shall be overlapped not less than 2 inches (5 mm). Drip edges shall extend not less than 1/4 inch (6.44 mm) below the roof sheathing and extend up back onto the roof deck not less than 2 inches (51 mm). Drip edges shall be mechanically fastened to the roof deck at not more than 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5. Underlayment shall be installed over the drip edge along eaves and under the drip edge along rake edges.

R905.3 Clay and concrete tile. The installation of clay and concrete tile shall comply with the provisions of this section.

R905.3.1 Deck requirements. Concrete and clay tile shall be installed only over solid sheathing.
Exception: Spaced lumber sheathing in accordance with Section R803 1 shall be permitted in Seismic Design Categories A B and C

R905.3.2 Deck slope. Clay and concrete roof tile shall be installed on roof slopes of two and one-half units vertical in 12 units horizontal (2½:12) or greater. For roof slopes from two and one-half units vertical in 12 units horizontal (2½:12) to four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section R905.3.3.

R905.3.3 Underlayment. Underlayment shall comply with Section R905.1.1

R905.3.4 Clay tile. Clay roof tile shall comply with ASTM C1167.

R905.3.5 Concrete tile. Concrete roof tile shall comply with ASTM C1492.

R905.3.6 Fasteners. Nails shall be corrosion resistant and not less than 11 gauge [0.120 inch (3 mm)], 5/16 inch (11 mm) head, and of sufficient length to penetrate the deck not less than 3/4 inch (19 mm) or through the thickness of the deck, whichever is less. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2 mm). Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.

R905.3.7 Application. Tile shall be applied in accordance with this chapter and the manufacturer's installation instructions, based on the following

1. Climatic conditions.
2. Roof slope.
3. Underlayment system.
4. Type of tile being installed.

Clay and concrete roof tiles shall be fastened in accordance with this section and the manufacturer's installation instructions. Perimeter tiles shall be fastened with not less than one fastener per tile. Tiles with installed weight less than 9 pounds per square foot (0.4 kg/m2) require not less than one fastener per tile regardless of roof slope. Clay and concrete roof tile attachment shall be in accordance with the manufacturer's installation instructions where applied in areas where the ultimate design wind speed exceeds 130 miles per hour (58 m/s) and on buildings where the roof is located more than 40 feet (12192 mm) above grade. In areas subject to snow, not less than two fasteners per tile are required. In other areas, clay and concrete roof tiles shall be attached in accordance with Table R905.3.7.

R905.3.8 Flashing. At the juncture of roof vertical surfaces, flashing and counter flashing shall be provided in accordance with this chapter and the manufacturer's installation instructions and, where of metal, shall be not less than 0.019 inch (0.5 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal. The valley flashing shall extend not less than 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) in height at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25-percent slope) and greater, valley flashing shall have a 36 inch wide (914 mm) underlayment of one layer of Type 1 underlayment running the full length of the valley, in addition to other required underlayment. In areas where the average daily temperature in January is 25 °F (-4°C) or less, metal valley flashing underlayment shall be solid-cemented to the roofing underlayment for slopes less than seven units vertical in 12 units horizontal (58-percent slope) or be of self- adhering polymer modified bitumen sheet.

R905.6 Slate shingles. The installation of slate shingles shall comply with the provisions of this section.

R905.6.1 Deck requirements. Slate shingles shall be fastened to solidly sheathed roofs.

R905.6.2 Deck slope. Slate shingles shall be used only on slopes of four units vertical in 12 units horizontal (33-percent slope) or greater.

R905.6.3 Underlayment. Underlayment shall comply with Section R905.1.1.

R905.6.3.1 Ice barrier. Where required, ice barriers shall comply with Section R905.1.2.

R905.6.4 Material standards. Slate shingles shall comply with ASTM C406.

R905.6.5 Application. Minimum head lap for slate shingles shall be in accordance with Table R905.6.5. Slate shingles shall be secured to the roof with two fasteners per slate. Slate shingles shall be installed in accordance with this chapter and the manufacturer's instructions.

R905.6.6 Flashing. Flashing and counter flashing shall be made with sheet metal. Valley flashing shall be not less than 15 inches (381 mm) wide. Valley and flashing metal shall be a minimum uncoated thickness of 0.0179 inch (0.5 mm) zinc coated G90. Chimneys, stucco or brick walls shall have not less than two plies of felt for a cap flashing consisting of a 4 inch wide (102 mm) strip of felt set in plastic cement and extending 1 inch (25 mm) above the first felt and a top coating of plastic cement. The felt shall extend over the base flashing 2 inches (51 mm).

R905.7 Wood shingles. The installation of wood shingles shall comply with the provisions of this section.

R905.7.1 Deck requirements. Wood shingles shall be installed on solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall be not less than 1 inch by 4 inch (25 mm by 102 mm) nominal dimensions and shall be spaced on centers equal to the weather exposure to coincide with the placement of fasteners.

R905.7.1.1 Solid sheathing required. In areas where the average daily temperature in January is 25°F (-4°C) or less, solid sheathing is required on that portion of the roof requiring the application of an ice barrier.

R905.7.2 Deck slope. Wood shingles shall be installed on slopes of three units vertical in 12 units horizontal (25-percent slope) or greater.

R905.7.3 Underlayment. Underlayment shall comply with Section R905.1.1

R905.7.3.1 Ice barrier. Where required, ice barriers shall comply with Section R905.1.2.

R905.7.4 Material standards. Wood shingles shall be of naturally durable wood and comply with the requirements of Table R905.7.4.

R905.7.5 Application. Wood shingles shall be installed in accordance with this chapter and the manufacturer's instructions. Wood shingles shall be laid with a side lap not less than 1-1/2 inches (38 mm) between joints in courses, and two joints shall not be in direct alignment in any three adjacent courses. Spacing between shingles shall be not less than 1/4 inch to 3/8 inch (6.4 mm to 9.5 mm). Weather exposure for wood shingles shall not exceed those set in Table R905.7.5(1). Fasteners for untreated (naturally durable) wood shingles shall be box nails in accordance with Table R905.7.5(2). Nails shall be stainless steel Type 304 or 316 or hot-dipped galvanized with a coating weight of ASTM A153 Class D (1.0 oz/ft2). Alternatively, two 16-gage stainless steel Type 304 or 316 staples with crown widths inch (11.1 mm) minimum, 3/4 inch (19.1 mm) maximum, shall be used. Fasteners installed within 15 miles (24 km) of salt water coastal areas shall be stainless steel Type 316. Fasteners for fire-retardant-treated shingles in accordance with Section R902 or pressure-impregnated-preservative-treated shingles of naturally durable wood in accordance with AWPA U1 shall be stainless steel Type 316. All fasteners shall have a minimum penetration into the sheathing of 3/4 inch (19.1 mm). For sheathing less than 3/4 inch in (19.1 mm) thickness, each fastener shall penetrate through the sheathing. Wood shingles shall be attached to the roof with two fasteners per shingle, positioned in accordance with the manufacturer's installation instructions. Fastener packaging shall bear a label indicating the appropriate grade material or coating weight.

R905.7.6 Valley flashing. Roof flashing shall be not less than No. 26 gage [0.019 inches (0.5 mm)] corrosion-resistant sheet metal and shall extend 10 inches (254 mm) from the centerline each way for roofs having slopes less than 12 units vertical in 12 units horizontal 100-percent slope), and 7 inches (178 mm) from the centerline each way for slopes of 12 units vertical in 12 units horizontal and greater. Sections of flashing shall have an end lap of not less than 4 inches (102 mm).

R905.7.7 Label required. Each bundle of shingles shall be identified by a label of an approved grading or inspection bureau or agency.

R905.8 Wood shakes. The installation of wood shakes shall comply with the provisions of this section.

R905.8.1 Deck requirements. Wood shakes shall be used only on solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall be not less than 1 inch by 4 inch (25 mm by 102 mm) nominal dimensions and shall be spaced on centers equal to the weather exposure to coincide with the placement of fasteners. Where 1 inch by 4 inch (25 mm by 102 mm) spaced sheathing is installed at 10 inches (254 mm) on center, additional 1 inch by 4 inch (25 mm by 102 mm) boards shall be installed between the sheathing boards.

R905.8.1.1 Solid sheathing required. In areas where the average daily temperature in January is 25°F (-4°C) or less, solid sheathing is required on that portion of the roof requiring an ice barrier.

R905.8.2 Deck slope. Wood shakes shall only be used on slopes of three units vertical in 12 units horizontal (25-percent slope) or greater.

R905.8.3 Underlayment. Underlayment shall comply with Section R905.1.1.

R905.8.3.1 Ice barrier. Where required, ice barriers shall comply with Section R905.1.2.

R905.8.4 Interlayment. Interlayment shall comply with ASTM D226, Type I.

R905.8.5 Material standards. Wood shakes shall comply with the requirements of Table R905.8.5.

R905.8.6 Application. Wood shakes shall be installed in accordance with this chapter and the manufacturer's installation instructions. Wood shakes shall be laid with a side lap not less than 1 1-1/2 inches (38 mm) between joints in adjacent courses. Spacing between shakes in the same course shall be 3/8 inch to 5/8 inch (9.5 mm to 15.9 mm) including taper sawn shakes. Weather exposures for wood shakes shall not exceed those set in Table R905.8.6. Fasteners for untreated (naturally durable) wood shakes shall be box nails in accordance with Table R905.7.5(2). Nails shall be stainless steel Type 304, or Type 316 or hot-dipped with a coating weight of ASTM A153 Class D (1.0 oz/ft2). Alternatively, two 16-gage Type 304 or Type 316 stainless steel staples, with crown widths inch (11.1 mm) minimum, 3/4 inch (19.1 mm) maximum, shall be used. Fasteners installed within 15 miles (24 km) of salt water coastal areas shall be stainless steel Type 316. Wood shakes shall be attached to the roof with two fasteners per shake positioned in accordance with the manufacturer's installation instructions. Fasteners for fire-retardant-treated (as defined in Section R902) shakes or pressure-impregnated-preservative-treated shakes of naturally durable wood in accordance with AWPA U1 shall be stainless steel Type 316. All fasteners shall have a minimum penetration into the sheathing of 3/4 inch (19.1 mm). Where the sheathing is less than 3/4 inch (19.1 mm) thick, each fastener shall penetrate through the sheathing. Fastener packaging shall bear a label indicating the appropriate grade material or coating weight.

R905.8.7 Shake placement. The starter course at the eaves shall be doubled and the bottom layer shall be either 15 inch (381 mm), 18 inch (457 mm) or 24 inch (610 mm) wood shakes or wood shingles. 15 inch (381 mm) or 18 inch (457 mm) wood shakes shall be permitted to be used for the final course at the ridge. Shakes shall be interlaid with 18 inch wide (457 mm) strips of not less than No. 30 felt shingled between each course in such a manner that no felt is exposed to the weather by positioning the lower edge of each felt strip above the butt end of the shake it covers a distance equal to twice the weather exposure.

R905.8.8 Valley flashing. Roof valley flashing shall be not less than No. 26 gage [0.019 inch (0.5 mm)] corrosion-resistant sheet metal and shall extend not less than 11 inches (279 mm) from the centerline each way. Sections of flashing shall have an end lap of not less than 4 inches (102 mm).

R905.8.9 Label required. Each bundle of shakes shall be identified by a label of an approved grading or inspection bureau or agency.

R905.9 Built up roofs. The installation of built-up roofs shall comply with the provisions of this section.

R905.9.1 Slope. Built-up roofs shall have a design slope of not less than one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage, except for coal-tar built-up roofs, which shall have a design slope of a minimum one-eighth unit vertical in 12 units horizontal (1-percent slope).

R905.9.2 Material standards. Built-up roof covering materials shall comply with the standards in Table R905.9.2 or UL 55A.

R905.9.3 Application. Built-up roofs shall be installed in accordance with this chapter and the manufacturer's instructions.

R905.10 Metal roof panels. The installation of metal roof panels shall comply with the provisions of this section.

R905.10.1 Deck requirements. Metal roof panel roof coverings shall be applied to solid or spaced sheathing, except where the roof covering is specifically designed to be applied to spaced supports.

R905.10.2 Slope. Minimum slopes for metal roof panels shall comply with the following

1. The minimum slope for lapped, non soldered-seam metal roofs without applied lap sealant shall be three units vertical in 12 units horizontal (25-percent slope).
2. The minimum slope for lapped, non soldered-seam metal roofs with applied lap sealant shall be one-half unit vertical in 12 units horizontal (4-percent slope). Lap sealants shall be applied in accordance with the approved manufacturer's installation instructions.
3. The minimum slope for standing-seam roof systems shall be one-quarter unit vertical in 12 units horizontal (2-percent slope).

R905.10.3 Material standards. Metal-sheet roof covering systems that incorporate supporting structural members shall be designed in accordance with *the California Building Code*. Metal-sheet roof coverings installed over structural decking shall comply with Table R905.10.3(1). The materials used for metal-sheet roof coverings shall be naturally corrosion resistant or provided with corrosion resistance in accordance with the standards and minimum thicknesses shown in Table R905.10.3(2).

R905.10.4 Attachment. Metal roof panels shall be secured to the supports in accordance with this chapter and the manufacturer's installation instructions. In the absence of manufacturer's installation instructions, the following fasteners shall be used

1. Galvanized fasteners shall be used for steel roofs.
2. Copper, brass, bronze, copper alloy and 300 series stainless steel fasteners shall be used for copper roofs.
3. Stainless steel fasteners are acceptable for metal roofs.

R905.10.5 Underlayment. Underlayment shall comply with Section R905.1.1.

R905.11 Modified bitumen roofing. The installation of modified bitumen roofing shall comply with the provisions of this section.

R905.11.1 Slope. Modified bitumen membrane roofs shall have a design slope of not less than one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage.

R905.11.2 Material standards. Modified bitumen roof coverings shall comply with the standards in Table R905.11.2.

R905.11.3 Application. Modified bitumen roofs shall be installed in accordance with this chapter and the manufacturer's instructions.

R905.16 Photovoltaic shingles. The installation of photovoltaic shingles shall comply with the provisions of this section. Section R324 and the California Electrical Code.

R905.16.1 Deck requirements. Photovoltaic shingles shall be applied to a solid or closely-fitted deck, except where the roof covering is specifically designed to be applied over spaced sheathing.

R905.16.2 Deck slope. Photovoltaic shingles shall be used only on roof slopes of two units vertical in 12 units horizontal (2:12) or greater.

R905.16.3 Underlayment. Underlayment shall comply with Section R905.1.1.

R905.16.3.1 Ice barrier. Where required, ice barriers shall comply with Section R905.1.2.

R905.16.4 Material standards. Photovoltaic shingles shall be listed in labeled in accordance with UL 7103 or with both UL 61730-1 and UL 61730-2.

R905.16.5 Attachment. Photovoltaic shingles shall be attached in accordance with the manufacturer's installation instructions.

R905.16.6 Wind resistance. Photovoltaic shingles shall comply with the classification requirements of Table R905.16.6 for the appropriate maximum basic wind speed.

SECTION R906: ROOF INSULATION

R906.1 General. Where above-deck thermal insulation is installed, such insulation shall be covered with an approved roof covering and shall comply with NFPA 276 or UL1256.

R906.2 Material standards. Above deck thermal insulation board shall comply with the standards in Table R906.2.

SECTION R907: ROOFTOP-MOUNTED PHOTOVOLTAIC SYSTEMS

R907.1 Rooftop mounted photovoltaic (PV) panel systems. Rooftop-mounted photovoltaic panels or modules shall be installed in accordance with this section. Section R324 and the California Electrical Code.

R907.2 Fire classification. Rooftop-mounted photovoltaic panels systems shall have the fire classification as required by Section R902.4.

R907.3 Installation. Rooftop-mounted photovoltaic panels system shall be installed in accordance with the manufacturer's installation instructions.

R907.4 Photovoltaic panels and modules. Photovoltaic panels systems mounted on top of a roof shall be listed and labeled in accordance with UL 2703 and shall be installed in accordance with the manufacturer's installation instructions.

R907.5 Fire safety provisions for photovoltaic panel system. Solar, photovoltaic panels systems installed upon a roof, or as an integral part of a roof assembly shall comply with the requirements of this code, and the California Fire Code.

SECTION R908: RE-ROOFING

R908.1 General. Materials and methods of application used for re-covering or replacing an existing roof covering shall comply with the requirements of Chapter 9.

Exceptions

1. *Re roofing shall not be required to meet the minimum design slope requirement of one quarter unit vertical in 12 units horizontal (2 percent slope) in Section R905 for roofs that provide positive roof drainage*
2. *For roofs that provide positive drainage re covering or replacing an existing roof covering shall not require the secondary (emergency overflow) drains or scuppers of Section R903 4 1 to be added to an existing roof*

R908.2 Structural and construction loads. The structural roof components shall be capable of supporting the roof covering system and the material and equipment loads that will be encountered during installation of the roof covering system.

R908.3 Roof replacement. Roof replacement shall include the removal of existing layers of roof coverings down to the roof deck.
Exception Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section R905

R908.3.1 Roof re cover. The installation of a new roof covering over an existing roof covering shall be permitted where any of the following conditions occur

1. Where the new roof covering is installed in accordance with the roof covering manufacturer's approved instructions
2. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.
3. Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs where applied in accordance with Section R908.4.
4. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.

R908.3.1.1 A roof re cover shall not be permitted where any of the following conditions occur

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
2. Where the existing roof covering is slate, clay, cement or asbestos-cement tile.
3. Where the existing roof has two or more applications of any type of roof covering.

R908.4 Roof re covering. Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other approved materials securely fastened in place.

R908.5 Reinstallation of materials. Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Any existing flashings, edgings, outlets, vents or similar devices that are a part of the assembly shall be replaced where rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled.

R908.6 Flashings. Flashings shall be reconstructed in accordance with approved manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.

CHAPTER 10: CHIMNEYS AND FIREPLACES

SECTION R1004: FACTORY BUILT FIREPLACES

R1004.1 General. Factory-built fireplaces shall be listed and labeled and shall be installed in accordance with the conditions of the listing. Factory-built fireplaces shall be tested in accordance with UL 127.

R1004.1.1 Factory built wood burning fireplaces. Factory-built wood burning fireplaces shall be qualified at the U.S. EPA's Voluntary Fireplace Program Phase 2 emissions level and be in accordance with *the California Green Building Standards Code*, Chapter 4, Division 4.5.

R1004.2 Hearth extensions. Hearth extensions of approved factory-built fireplaces shall be installed in accordance with the listing of the fireplace. The hearth extension shall be readily distinguishable from the surrounding floor area. Listed and labeled hearth extensions shall comply with UL 1618.

R1004.3 Decorative shrouds. Decorative shrouds shall not be installed at the termination of chimneys for factory-built fireplaces except where the shrouds are listed and labeled for use with the specific factory-built fireplace system and installed in accordance with the manufacturer's instructions.

R1004.5 Gasketed fireplace doors. A gasketed fireplace door shall not be installed on a factory-built fireplace except where the fireplace system has been specifically tested, listed and labeled for such use in accordance with UL 127.

SECTION R1005: FACTORY-BUILT CHIMNEYS

R1005.1 Listing. Factory-built chimneys shall be listed and labeled and shall be installed and terminated in accordance with the manufacturer's instructions.

R1005.2 Decorative shrouds. Decorative shrouds shall not be installed at the termination of factory-built chimneys except where the shrouds are listed and labeled for use with the specific factory-built chimney system and installed in accordance with the manufacturer's instructions.

R1005.3 Solid fuel appliances. Factory-built chimneys installed in dwelling units with solid-fuel-burning appliances shall comply with the Type HT requirements of UL 103 and shall be marked "Type HT and "Residential Type and Building Heating Appliance Chimney."
Exception Chimneys for use with open combustion chamber fireplaces shall comply with the requirements of UL 103 and shall be marked "Residential Type and Building Heating Appliance Chimney"
Chimneys for use with open combustion chamber appliances installed in buildings other than dwelling units shall comply with the requirements of UL 103 and shall be marked "Building Heating Appliance Chimney" or "Residential Type and Building Heating Appliance Chimney"

R1005.4 Factory built fireplaces. Chimneys for use with factory-built fireplaces shall comply with the requirements of UL 127.

R1005.5 Support. Where factory-built chimneys are sup- ported by structural members, such as joists and rafters, those members shall be designed to support the additional load.

R1005.6 Medium heat appliances. Factory-built chimneys for medium-heat appliances producing flue gases having a temperature above 1,000°F (538°C), measured at the entrance to the chimney, shall comply with UL 959.

R1005.7 Factory built chimney offsets. Where a factory-built chimney assembly incorporates offsets, no part of the chimney shall be at an angle of more than 30 degrees (0.52 rad) from vertical at any point in the assembly and the chimney assembly shall not include more than four elbows.

SECTION R1006: EXTERIOR AIR SUPPLY

R1006.1 Exterior air. Factory-built or masonry fireplaces covered in this chapter shall be equipped with an exterior air supply to ensure proper fuel combustion unless the room is mechanically ventilated and controlled so that the indoor pressure is neutral or positive.

R1006.1.1 Factory built fireplaces. Exterior combustion air ducts for factory-built fireplaces shall be a listed component of the fireplace and shall he installed in accordance with the fireplace manufacturer's instructions.

R1006.1.2 Masonry fireplaces. Listed combustion air ducts for masonry fireplaces shall be installed in accordance with the terms of their listing in the manufacturer's instructions.

R1006.2 Exterior air intake. The exterior air intake shall he capable of supplying all combustion air from the exterior of the dwelling or from spaces within the dwelling ventilated with outdoor air such as non-mechanically ventilated crawl or attic spaces. The exterior air intake shall not be located within the garage or basement of the dwelling. The exterior air intake, for other than listed factory-built fireplaces, shall not be located at an elevation higher than the firebox. The exterior air intake shall be covered with a corrosion-resistant screen of 1/4 inch (6.4 mm) mesh.

R1006.3 Clearance. Unlisted combustion air ducts shall be installed with a minimum 1 inch (25 mm) clearance to combustibles for all parts of the duct within 5 feet (1524 mm) of the duct outlet.

R1006.4 Passageway. The combustion air passageway shall be not less than 6 square inches (3870 mm2) and not more than 55 square inches (0.035 m2), except that combustion air systems for listed fireplaces shall be constructed in accordance with the fireplace manufacturer's instructions.

R1006.5 Outlet. The exterior air outlet shall be located in the back or side of the firebox chamber or shall be located outside of the firebox, at the level of the hearth and not greater than 24 inches (610 mm) from the firebox opening. The outlet shall be closable and designed to prevent burning material from dropping into concealed combustible spaces.

STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

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LOS GATOS,
CA 95030

A.P.N. 510-14-037

4/2/25
BUILDING SUBMITTAL SET

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

CRC NOTES

GN.2

B1

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

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

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

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

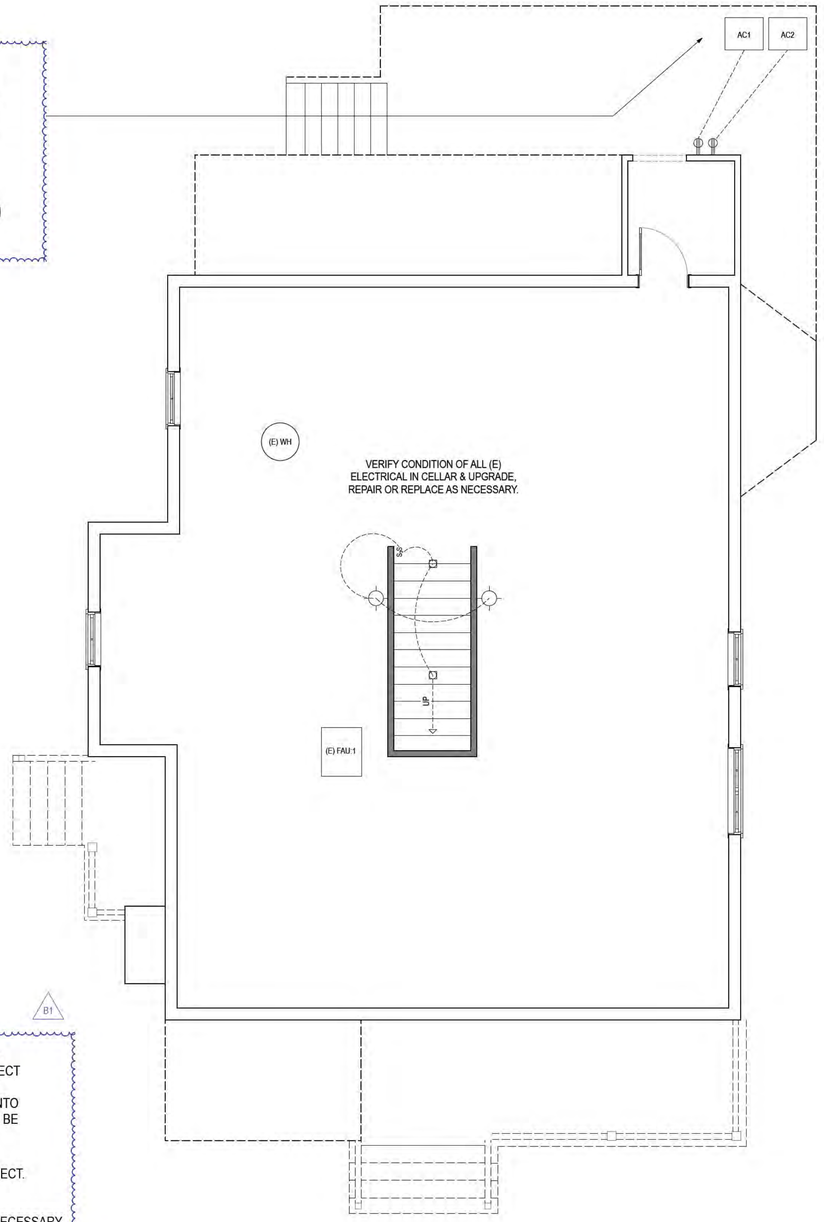
EXCEPTION: A WORKING PLATFORM NEED NOT BE PROVIDED WHERE THE FURNACE IS CAPABLE OF BEING SERVICED FROM THE REQUIRED ACCESS OPENING. THE FURNACE SERVICE SIDE SHALL NOT EXCEED 12 INCHES (305 MM) FROM THE ACCESS OPENING.

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

ATTIC/CS INSTALLED FAU/AC:

ME LEGEND

ELECTRICAL & MECHANICAL LEGEND	
GAS — GAS CONNECTION, PROVIDE SHUTOFF VALVE OUTSIDE FIREBOX AND WITHIN 6-FEET OF UNIT	ETHERNET LINE CONNECTION (CAT 6)
F — SUPPLY REGISTER: F = FLOOR, C = CEILING, HW = HIGH WALL, LW = LOW WALL	VERTICAL LED LIGHT IN CABINET
SUPPLY REGISTER TOE SPACE	UNDER CABINET PUCK LIGHT
INTEGRAL EXHAUST FAN + LIGHT COMBO., PROVIDE SEPARATE SWITCH CONTROLS, HUMIDISTAT CONTROLLED	SURFACE MOUNTED LIGHT FIXTURE
EXHAUST FAN W/ TIMER SWITCH (HUMIDISTAT CONTROLLED)	WALL MOUNTED LIGHT FIXTURE, INTERIOR
ENERGY STAR RATED WHOLE HOUSE FAN, MANUAL SWITCH MUST BE LABELED, ADDITION LESS THAN 1,000 SF, FAN NOT REQ'D	WP — WALL MOUNTED LIGHT FIXTURE, EXTERIOR
C.A.R. — COLD AIR RETURN IN WALL	RECESSED LIGHT FIXTURE HIGH EFFICACY OR LED
C.A.R. — COLD AIR RETURN IN CEILING	WP — RECESSED CAN LIGHT FIXTURE WET-PROOF (AIRTIGHT+ RATED FOR WET LOCATIONS)
T — THERMOSTAT	A — RECESSED ART FIXTURE
VAC — CENTRAL AIR VACUUM SYSTEM	RECESSED LIGHTS @ RISERS
OUTLET, DUPLEX	R — RECESSED LIGHTS @ COLUMNS
OUTLET, 220 VOLT	OUTDOOR FLOOD LIGHTS
OUTLET, 4-PLEX	CABINET LED LIGHT STRIP
GFCI — OUTLET, WATER PROOF, GROUND-FAULT CIRCUIT INTERRUPTER	CABLE LIGHT
WP GFCI — OUTLET, GROUND-FAULT CIRCUIT INTERRUPTER W/ WATER PROOF COVER	STRING LIGHT
FLR — FLOOR OUTLET W/ COVER PLATE	LED — SURFACE MOUNTED LED LIGHT PANEL
EAVE — EAVE OUTLET	CEILING FAN
WT — OUTLET, WINDOW TREATMENTS	TV — CABLE TELEVISION / SATELLITE CONNECTION
S 1 — SWITCH, SINGLE POLE VS = VACANCY SENSOR, T = TIMER	SD — SMOKE DETECTOR W/ BATTERY BACK-UP (AC-DC AND INTERCONNECTED)
S 13 — SWITCH, 3-WAY POLE VS = VACANCY SENSOR	CM — CARBON MONOXIDE DETECTOR W/ BATTERY BACK-UP (AC-DC & INTERCONNECTED)
DIMMER POLE SWITCH VS = VACANCY SENSOR	CHIME — DOOR BUZZER, BELL OR CHIME SHALL BE HARD WIRED @ PRIMARY RESIDENCE
TELEPHONE/DATA LINE CONNECTION	



B1

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

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

NORTH
37° 13' 44" N
121° 59' 03" W

PROPOSED CELLAR ELECTRICAL PLAN

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

(E) 2X DF STUD WALL TO REMAIN

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

STUDIO THREE DESIGN

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B1 05/15/25
B2 10/08/25

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RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

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

CELLAR ELECTRICAL

ME.1

ME LEGEND

ELECTRICAL & MECHANICAL LEGEND	
GAS — GAS CONNECTION, PROVIDE SHUTOFF VALVE OUTSIDE, FIREBOX AND WITHIN 6-FEET OF UNIT	ETHERNET LINE CONNECTION (CAT 6)
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SUPPLY REGISTER TOE SPACE	UNDER CABINET PUCK LIGHT
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EXHAUST FAN W/ TIMER SWITCH (HUMIDISTAT CONTROLLED)	WALL MOUNTED LIGHT FIXTURE, INTERIOR
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S — SWITCH, SINGLE POLE VS = VACANCY SENSOR, T = TIMER	SD — SMOKE DETECTOR W/ BATTERY BACK-UP (AC-DC AND INTERCONNECTED)
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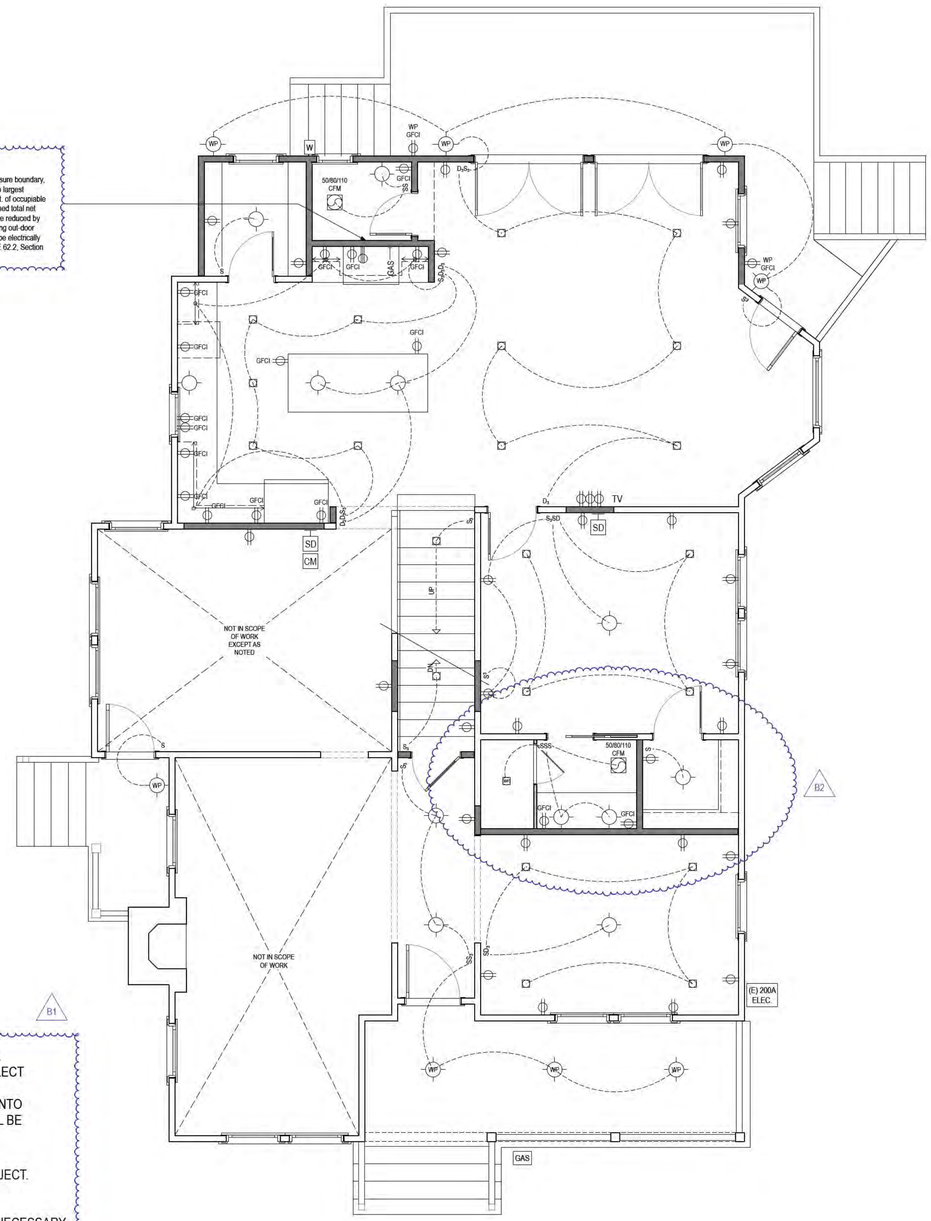
D — DIMMER POLE SWITCH VS = VACANCY SENSOR	CHIME — DOOR BUZZER, BELL OR CHIME SHALL BE HARD WIRED @ PRIMARY RESIDENCE
TELEPHONE/DATA LINE CONNECTION	

B1

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



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7. SEE SHEET ME.4 FOR CA ELECTRICAL CODE NOTES.
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121° 59' 03" W

PROPOSED 1ST LEVEL ELECTRICAL PLAN

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1/4" = 1'-0"

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10/23/25
BUILDING SUBMITTAL SET

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

1ST FLOOR ELECTRICAL

ME.2

B1

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

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

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

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

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

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

ATTIC/CS INSTALLED FAU/AC:

ME LEGEND

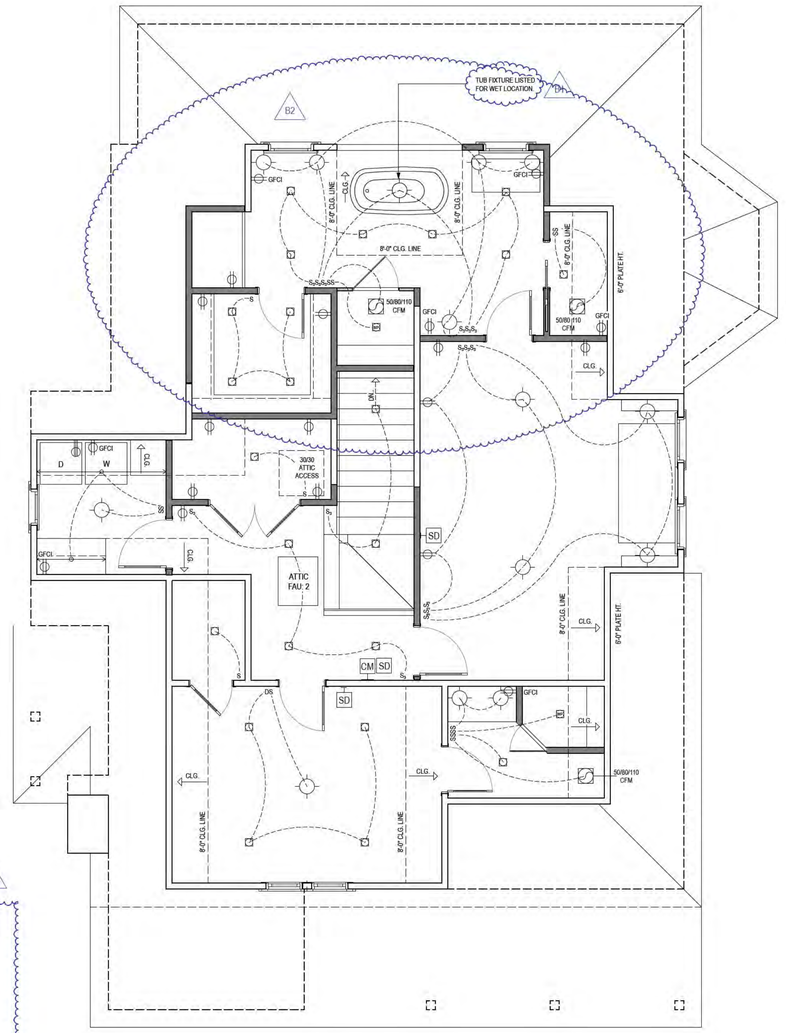
ELECTRICAL & MECHANICAL LEGEND

GAS — GAS CONNECTION, PROVIDE SHUTOFF VALVE OUTSIDE FIREBOX AND WITHIN 6-FEET OF UNIT	ETHERNET LINE CONNECTION (CAT 6)
F SUPPLY REGISTER F = FLOOR, C = CEILING, HW = HIGH WALL, LW = LOW WALL	VERTICAL LED LIGHT IN CABINET
SUPPLY REGISTER TOE SPACE	UNDER CABINET PUCK LIGHT
INTEGRAL EXHAUST FAN + LIGHT COMBO., PROVIDE SEPARATE SWITCH CONTROLS. HUMIDISTAT CONTROLLED	SURFACE MOUNTED LIGHT FIXTURE
EXHAUST FAN W/ TIMER SWITCH (HUMIDISTAT CONTROLLED)	WALL MOUNTED LIGHT FIXTURE, INTERIOR
ENERGY STAR RATED WHOLE HOUSE FAN. MANUAL SWITCH MUST BE LABELED. ADDITION LESS THAN 1,000 SF. FAN NOT REQ'D.	WALL MOUNTED LIGHT FIXTURE, EXTERIOR
C.A.R. COLD AIR RETURN IN WALL	RECESSED LIGHT FIXTURE HIGH EFFICACY OR LED
C.A.R. COLD AIR RETURN IN CEILING	RECESSED CAN LIGHT FIXTURE WET-PROOF (AIRTIGHT+ RATED FOR WET LOCATIONS)
T THERMOSTAT	RECESSED ART FIXTURE
VAC CENTRAL AIR VACUUM SYSTEM	RECESSED LIGHTS @ RISERS
OUTLET, DUPLEX	RECESSED LIGHTS @ COLUMNS
OUTLET, 220 VOLT	OUTDOOR FLOOD LIGHTS
OUTLET, 4-PLEX	CABINET LED LIGHT STRIP
GFCI OUTLET, WATER PROOF, GROUND-FAULT CIRCUIT INTERRUPTER	CABLE LIGHT
WP GFCI OUTLET, GROUND-FAULT CIRCUIT INTERRUPTER W/ WATER PROOF COVER	STRING LIGHT
FLR FLOOR OUTLET W/ COVER PLATE	LED SURFACE MOUNTED LED LIGHT PANEL
EAVE EAVE OUTLET	CEILING FAN
WT OUTLET, WINDOW TREATMENTS	TV CABLE TELEVISION / SATELLITE CONNECTION
S SWITCH, SINGLE POLE VS = VACANCY SENSOR, T = TIMER	SD SMOKE DETECTOR W/ BATTERY BACK-UP (AC-DC AND INTERCONNECTED)
S3 SWITCH, 3-WAY POLE VS = VACANCY SENSOR	CM CARBON MONOXIDE DETECTOR W/ BATTERY BACK-UP (AC-DC & INTERCONNECTED)
D DIMMER POLE SWITCH VS = VACANCY SENSOR	CHIME DOOR BUZZER, BELL OR CHIME SHALL BE HARD WIRED @ PRIMARY RESIDENCE
TELEPHONE/DATA LINE CONNECTION	

B1

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

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



NORTH

37° 13' 44" N
121° 59' 04" W

PROPOSED 2ND LEVEL ELECTRICAL PLAN

0 2' 4' 8'

1/4" = 1'-0"

(E) 2X DF STUD WALL TO REMAIN

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

STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

638 UNIVERSITY AVE
LOS GATOS
CALIFORNIA
95032

t 408.292.3252
f 253.399.1125

B1 05/15/25
B2 10/08/25

RESIDENCE
328 BACHMAN AVENUE.
LOS GATOS,
CA 95030

A.P.N. 510-14-037

10/23/25
BUILDING SUBMITTAL SET

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

2ND FLOOR ELECTRICAL

ME.3

2022 CALIFORNIA ELECTRICAL CODE

For a complete description of any and all electrical code requirements, it is strongly recommended for a copy of the California Electrical Code to be readily available for review and reference at all times during construction.

ARTICLE 210: BRANCH CIRCUITS *(See complete Article for additional information)*

210.1 Scope. This article provides the general requirements for branch circuits.

210.3 Other Articles for Specific Purpose Branch Circuits. Table 210.3 lists references for specific equipment and applications not located in Chapter 5, 6 and 7, that amend or supplement the requirements of this article.

210.4 Multi wire Branch Circuits.

(A) General. Branch circuits recognized by this article shall be permitted as multi-wire circuits. A multi-wire circuit shall be permitted to be considered as multiple circuits. All conductors of a multi-wire branch circuit shall originate from the same panel board or similar distribution equipment. Informational Note No. 1: A three phase, 4-wire, wye-connected power system used to supply power to non-linear loads, may receive late that the power system design a low for the zero b lity of high harmonic currents on the neutral conductor. Informational Note No. 2: See 300.13(B) for continuity of grounded conductors in multi-wire circuits.

(B) Disconnecting Means. Each multi-wire branch circuit shall be provided with a means that e ft simultaneously disconnect all ungrounded conductors at the point where the branch circuit originates. Informational Note: See 240.15(B) for information on the use of single-pole circuit breakers as the disconnecting means.

(C) Line to Neutral Loads. Multi-wire branch circuits shall supply only line to neutral loads.
Exception No. 1 A multi-wire branch circuit that supplies only one utilization equipment.
Exception No. 2 Where all ungrounded conductors of the multi-wire branch circuit are opened simultaneous y by the branch c rcu t overcurrent dev ce.

(D) Grounded Conductor. The ungrounded and grounded conductors of each multi-wire branch circuit shall be grouped in accordance with 200.4(B).

210.5 Identification for Branch Circuits.

(A) Grounded Conductor. Grounded conductor of a branch circuit shall be identified in accordance with 200.6

(B) Equipment Grounding Conductor. The equipment grounding conductor shall be identified in accordance with 250.119.

(C) Identification of Ungrounded Conductors. Ungrounded conductors shall be identified in accordance with 210.5(C) 1 or 2, as applicable.

210.8 Branch Circuit Voltage Limitations. The nominal voltage of branch circuits shall not exceed the values permitted by 210.6 (A) through (E).

(A) Dwellings Units. In dwelling units and guest rooms or guest suites of hotels, motels, and sim lar occupancies, the voltage shall not exceed 120 volts, nominal, between conductors that supply the terminals of the following:

(1) Cord-and-plug-connected loads 1440 volt-amperes, nominal, or less than 1440 hp.

(2) 120 Volts Between Conductors. Circuits not exceeding 120 volts, nominal, between conductors shall be permitted to supply the following

(1) The terminals of lamp holders applied within their voltage ratings.

(2) Auxiliary equipment of electric discharge lamps. Informational Note See 410.137 for aux l ary equipment limitations..

(3) Cord-and-plug-connected or permanently connected utilization equipment

(C) 277 Volts to Ground. Circuits exceeding 120 volts, nominal, between conductors but not exceeding 277 volts, nominal, to ground shall be permitted to supply cord-and-plug connected or permanently connected utilization equipment, or the following

(1) Electric discharge luminaires with integral ballasts.

(2) LED luminaires with LED drivers between the branch circuit and the lamp holders.

(3) Incandescent, or LED luminaires equipped with medium-base or smaller screw shell lamp holders, where the lamp holders are supplied at 120 volts or less from the output of a step-down aut o-transformer, LED driver, or other type of power supply that is an integral part of the luminaire, comprised of the luminaire, individual lamp, and enclosure. Note 410.90 for requirements regarding the connection of screw shell lamp holders to ground n conductors.

(4) Luminaires equipped with mogul-base screw shell lamp holders.

(5) Luminaires, equipped with lamp holders other than the screw shell type, when used within their voltage ratings of their lamp holders.

(6) Luminaires without lamp holders. Informational Note: Luminaires with no screw shell lamp holders are commonly known as luminaires without lamp holders.

(7) Auxiliary equipment of electric-discharge or LED type lamps. Informational Note See 410.137 for aux liary equipment lim tations.

(8) Luminaires converted with listed retrofit kits, incorporating inte-gral, LED, light sources, or excepting LED lamps that also conforms with 210.6(C)(1), (C)(2), (C)(3), (C)(4), or (C)(5).

(9) IC festive Ground-Fau l Current Path. Electrical equipment and wiring and other electrica ly conductive material likely to become energized shall be installed in a manner that creates a low-impedance circuit facilitating the operation of overcurrent device or ground detector for high-impedance grounded systems. It shall be capable of safely carrying the maximum current that is likely to be imposed on it when a first ground fault occurs. Either an equipment grounding conductor or the structure of the building shall be permitted to be used as part of the fault path. The earth shall not be considered as an effective ground-fault current path.

250.6 Connection of Grounding Electrode Conductor

(A) Permitted Methods.

(1) Listed pressure connectors

(2) Terminal bars

(3) Pressure connectors listed as grounding and bonding equipment

(4) Exothermic welding process

(5) Machine screw-type fastenersthat engage not less than two threads or are secured with a nut

(6) Thread-forming machine screws that engage not less than two threads in the enclosure

(7) Connections that are part of a listed assembly

(8) Other listed means

250.52 Grounding Electrode Types

(A) Metal Underground Water Pipe.

(1) Metal Underground Water Pipe. A metal underground water pipe in direct contact with earth for 3.0m (10 ft.) or more (including any metal well casing bonded to the pipe) and electrically continuous (or made electrically continuous by bonding around insulating joints or insulating pipe) to the points of connection of the grounding, electrode conductor, and the bonding conductor(s) or jumper(s), f installed.

(2) Metal In-ground Support Structure(s). One or more metal in ground support structure(s) in direct contact with the earth vertically for 3m (10 ft.) or more, w th or without concrete encasement. If multiple metal in-ground support structures are bonded together at a building or at a structure, it shall be permissible to bond only one into the grounding electrode system. Informational Note: Metal in-ground support structures include, but are not limited to, pi lings, casings, and other structural metal.

(B) Concrete-Encased Electrode. A concrete-encased electrode that is at least 6.0m (20 ft.) of bare or zinc galvanized or other electrically conductive coated steel reinforcing bars or rods of not less than 13mm (½ in.) in diameter, consisting of one continuous length within that portion of the concrete footing that is in direct contact with the earth, or vertically installed rebar, rod, or pipe that is not less than 6.0m (20 ft.) in length and that is encased by at least 50 mm (2 in.) of concrete and that is located horizontally within the bottom 1.5m (5 ft.) of a concrete-encased electrode. Where the steel reinforcing bars are smaller than 13mm (½ in.) in diameter, or where multiple bars are used, they shall be permitted to be bonded together by the usual steel tie wires, exothermic welding, welding or other effective means to create a 6.0m (20 ft.) or greater length; or

(2) Bare copper conductor not sma ler than 4 AWG. Metallic components shall be encased by at a least 0o mm (2 in.) of concrete and shall be located within and near the bottom of a concrete foundation or footing that is in direct contact with the earth or within vertical foundations or structural members that are in direct contact with the earth. If multiple concrete-encased electrodes are present at a building or structure, 1 shal l be permiss ble to bond only one into the grounding electrode system.

(C) Ground Ring. A ground ring encircling the building or structure, in direct contact with the earth, consisting of at least 6.0m (20 ft.) of bare copper conductor not sma ler than 2 AWG.

(D) Rod and Pipe Electrodes. Rod and pipe electrodes sha l not be less than 2.44m (8 ft.) in length and sha l consist of the following materials:

(1) Stainless steel electrodes of grade not less than 300 metric designation 21 Grade nom 316, and, unless listed, shal l have the outer surface galvanized or otherwise metal-coated for corrosion protection.

(2) Rod-type grounding electrodes of stainless steel and copper or zinc coated steel shall be at least 15.87 mm (5/8 in.) in diameter, unless listed.

(E) Other Listed Electrodes. Other listed grounding electrodes shall be permitted.

(F) Plate Electrodes. Each plate electrode shall expose not less than 0.160m2 (1 ft2) of surfaces to exterior soil. Electrodes of bare or conductively coated iron or steel plates shall be at least 6.4mm (¼ in.) in thickness. Solid, uncoated electrodes of nonferrous metal sha l be at least 1.5mm (0.06 in.) in thickness.

(G) Other Local Metal Underground Systems or Structures. Other local metal underground systems or structures such as piping systems, underground tanks, and underground metal well casings that are not bonded to a metal water pipe.

ARTICLE 400: WIRING METHODS *(See complete Article for additional information)*

300.1 Scope.

(A) All Wiring Installations. This article covers general requirements for wiring methods and materials for all wiring installations unless modified by other in Chapter 3.

(B) Integral Parts of Equipment. The provisions of this article are not intended to apply to the conductors that form an integral part of equipment, such as motors, controllers, motor control centers, or factory assembled control equipment or listed utilization equipment.

(C) Metric Designators and Trade Sizes. Metric designators and trade sizes for conduit, tubing, and associated fittings and accessories shall be as designated in Table 300.1(C).

ARTICLE 404: SWITCHES *(See complete Article for additional information)*

I. Installation

404.1 Scope. This article covers all sw itches, switching devices, and circuit-breakers used as switches, operating at 1000 volts and below, unless specifically referenced elsewhere in this Code for higher voltages.

404.2 Switch Connections.

(A) Three Way and Four Way Switches. Three-way and four-way switches shall be wired so that a l switching is done only in the ungrounded circuit conductor. Where in metal raceways or metal-armored cables, wiring between switches and outlets with single-pole switches shall be in accordance with 300.20(A). Switches shall be connected as follows:

(1) Connections. Switches or circuit breakers shall not disconnect the grounded conductor of a circuit. *Exception: A no ish or circuit breaker shall be permitted to disconnect a grounded circuit conductor where it is designed so the grounded conductor cannot be disconnected until all the ungrounded conductors of the circuit have been d isconnected.*

(2) Switches Controlling Lighting Loads. The grounded circuit conductor for the controlled lighting circuit shall be provided at switch locations where such a conductor is required by 404.2(C). Switches controlling lighting loads shall be permitted to be located in the grounded circuit conductor path as permitted in 404.2(C) for the purpose of providing power to lighting loads. Where multiple sw itch locations control, the same lighting load such that the entire flow area of the room or space is visible from the single or combined switch locations, the grounded circuit conductor shall be routed to only one switch box unless otherwise permitted in the Code. *Exception: Where the outlet box size where the outlet box size w ere not l ess than the volume requirements of 314.16 and the conductor sha l not be permitted to be ta ken and with a sw itch with a n ovuhpath of the l ighting load. Where the outlet box is designed for the receptac e a marked "GFCI Protected" and "No Equipment Ground" in accordance w th 406.4(D)(2)(a) (D)(2)(b) or (D) (2)(c) as applicab e.*

(3) Any-For-I Circuit-Interrupter Protection. If a receptacle outlet is located in any area specified in 210.12(A), (B), or (C) to provide power for a countertop surface, the following shall apply:

(1) A listed outlet branch-circuit type arc-fault circuit-interrupter receptacle

(2) A receptacle protected by a listed outlet branch-circuit type arc-fault circuit-interrupter type receptacle

(3) A receptacle protected by a listed combination type arc-fault circuit-interrupter type circuit breaker

(B) Tamper-Resistant Receptacles. Listed tamper-resistant receptacles shall be provided where replacements are made at receptacle outlets that are required to be tamper-resistant elsewhere in this Code.

(C) Weather-Resistant Receptacles. Weather-resistant receptacles shall be provided where replacements are made at receptacle outlets that are required to be weather-resistant elsewhere in this Code.

(D) Controlled Receptacles. Automatica ly ivento ted receptacles shall be replaced with equivalently controlled receptacles, if the receptacle is required to be controlled by an automatic control device elsewhere in this Code. Informational Note: See 406.3(E) for replacement of receptacles in existing boxes, as required by 406.4(D).

406.5 Receptacle Mounting. Receptacles shall be mounted in identified boxes or assemb ies. The boxes or assemblies shall be securely fastened in place unless otherwise permitted elsewhere in this Code. The provisions of this section shall not prohibit replacements to a box shall be of the type provided with a listed receptacle, or shall be machine screws having 32 threads per inch. or part of a listed assembly or systems, in accordance with the manufacturer's instructions.

(A) Boxes That Are Set Back. Receptacles mounted in boxes that are set back from the finished surface as perm tted in 314.20 shall be installed such that the mounting yoke or strap of the receptacle is kept flush with or proj ected from the finished surface.

(B) Boxes That Are Flush. Receptacles mounted in boxes that are flush with the finished surface or project therefrom shall be installed such that the mounting yoke or strap of the receptacle is flush with the finished surface.

(C) Receptacles Mounted on Covers. Receptacles mounted to and supported by a cover shall be held rigidly against the cover by more than one screw or shall be a device assembly or box cover listed and identified for securing by a single screw.

(D) Position of Receptacle Faces. After installation, receptacle faces shall be flush with or project from faceplates of insulating material and shall project a minimum of 0.4 mm (0.015 in.) from metal faceplates. Exception: Listed k is or assemblies encompassing receptacles and nonmetal c faceplates that cover the receptacle face, where the plate cannot be installed on any other receptacle, shal l be permitted.

(E) Receptacles Facing the Floor. Receptacles facing the floor. Receptacles, unless listed as receptacle assemb ies for countertop applications shall not be installed in a face-up position in countertops or similar work surfaces. Where receptacle assemb ies for countertop applica tions are required to provide ground-fault circuit- interrupter protection for personnel in accordance with 210.8, such assemblies shall be permitted to be listed as GFCI receptacle assemblies for countertop applications.

(F) Receptacles in Countertops. Receptacle assemblies for installation in countertop surfaces shall be listed for countertop applications. Where receptacle assemblies for countertop applications are required to provide ground-fault circuit-interrupter protection for personnel in accordance with 210.8, such assemblies shall be permitted to be listed as GFCI receptacle assemblies for countertop applications.

(G) Receptacle Orientation.

Exception No. 1 Receptacles mounted on portable and vehicle-mounted generators in accordance with 250.34, Exception No. 2 Replacement receptacles as permitted by 406.4(D).

(2) Receptacle Replacements. Replacement of receptacles sha l comply with 406.4(D)(1) through (D)(3), as applicable. Arc-fau l circuit-interrupter type and ground-fault circuit-interrupter type receptacles sha l be installed in a readily accessible location.

(1) Grounding-Type Receptacles. Where a grounding means exists in the receptacle enclosure or an equipment grounding conductor is required to be installed in accordance with 250.130(C), grounding-type receptacles shall be used and shall be connected to the equipment grounding conductor in accordance with 406.4(C) or 250.130(C).

(2) Non-Grounding-Type Receptacles. Where attachment to an equipment grounding conductor does not exist in the receptacle enclosure, the installation shall comply with 406.4(D)(2)(a), (D)(2)(b), or (D)(2)(c).

(a) A non-grounding-type receptacle(s) sha l be replaced with a grounding-type receptacle(s) where supplied through a ground-fault circuit interrupter. Grounding-type receptacles supplied through the ground-fault circuit-interrupter receptacles. These receptacles shall be marked "No Equipment Ground." An equipment grounding conductor shall not be connected to these ground-fault circuit-interrupter receptacles.

(b) Ground-Fault Circuit Interrupter-Protection. Ground-fault circuit-interrupter protected receptacles shall be provided where replacements are made at receptacles that are supplied from a grounding type receptacle and are located as specified by this Code. *Exception: Where the outlet box size where the outlet box size w ere not l ess than the volume requirements of the GFCI receptacle. the receptacle shall be permitted to be rep laced with a sim ilar receptacle. Where the outlet box size is not sufficient to allow installation of a GFCI receptacle, the receptacle shall be permitted to be replaced with a receptacle protected by a listed combination type arc-fault circuit-interrupter type circuit breaker.*

(c) Arc-Fau l Circuit-Interrupter Protection. Where replacements are made at receptacle outlets that are supplied by a branch circuit that is required by 210.12 to be protected by a listed combination type arc-fault circuit-interrupter type circuit breaker, a receptacle protected by a listed combination type arc-fault circuit-interrupter type circuit breaker shall be provided.

(3) Tamper-Resistant Receptacles. Listed tamper-resistant receptacles shall be provided where replacements are made at receptacles that are required to be tamper-resistant elsewhere in this Code.

406.6 Receptacle Faceplates (Cover Plates). Receptacle faceplates shall be installed so as to completely cover the opening and seat snugly against the mounting surface.

406.8 Non-interchangeability. Receptacles, cord connectors, and attachment plugs shall be constructed such that receptacles or cord connectors do not accept an attachment plug with a different voltage or current rating from that for which the device is intended. However, a 20-ampere T-slot receptacle or cord connector shall be permitted to accept a 15-ampere attachment plug of the same vo tage rating. Nonlocking-type receptacles and connectors shall not accept locking-type attachment plugs.

406.9 Receptacles in Damp or Wet Locations.

(A) Damp Locations. A receptacle inside but outdoors in a location protected from the weather or in other damp locations shall have an enclosure for the receptacle that is weatherproof when the receptacle is covered (attachment plug cap not inserted and receptacle covers closed). An installation suitable for wet locations shall also be considered suitable for damp locations. A receptacle shall be considered to be in a location protected from the weather where located under roofed open porches, canopies, marquees, and the like that afford it protection from the weather, but subject to conditions such as wind and rain. 15, 20 and 250 volt non-locking receptacles sha l be a rated weather-resistant type.

(B) Wet Locations.

(1) 15 and 20 Ampere Receptacles in a Wet Location. 15 and 20 ampere, 125 and 250 volt receptacles installed in a wet location shall have an enclosure that is weatherproof whether or not the attachment plug cap is inserted. A listed outdoor hood installed for this purpose shall be listed and shall be identified as "wete-rsuka". All 15 and 20 ampere, 125 and 250-volt non-locking-type receptacles shall be listed weather-resistant type.

Exception: Single receptacles rated 20 amperes or less and single receptacles rated 50 amperes or less shall be permitted to be installed in a wet location where the product intended to be plugged into it is not attended whi le in use. (e.g., portable tools) shall have an enclosure that is weatherproof when the attachment plug is removed.

(2) Other Receptacles. All other receptacles sha l be listed weather-resistant type with 406.4(B)(2)(a) or (B)(2)(b).

(a) A receptacle installed in a wet location, where the product intended to be plugged into it is not attended whi le in use. shall have an enclosure that is weatherproof w th the attachment plug cap inserted or removed.

(b) A receptacle installed in a wet location where the product intended to be plugged into it will be attended while in use (e.g., portable tools) shall have an enclosure that is weatherproof when the attachment plug is inserted.

(C) Bathtub and Shower Space. Receptacles shall not be installed within a zone measured 900mm (3 ft.) Horizontally and 2.5m. (8 ft.) Vertically from the top of the bathtub rim or shower stall threshold. The cited zone is all encompassing and does not include the space directly over the tub or shower stall.

(D) Protection for Floor Receptacles. Standpipes of floor receptacles sha l allow floor-cleaning equipment to be operated w thout damage to receptacles.

(E) Flush Mounting with Faceplate. The enclosure for a receptacle installed in an outlet box flush-mounted in a finished surface shall be made weatherproof by means of a weatherproof faceplate assembly that provides a watertight connection between the plate and the finished surface.

406.11 Connecting Receptacle Grounding Terminal to Box. The connection of the receptacle grounding terminal shall comply with 250.146.

406.12 Tamper-Resistant Receptacles. All 15- and 20 ampere, 125- and 250-volt non-locking-type receptacles in the areas specified in 406.12(1) through (5) shall be listed tamper-resistant receptacles.

Dwelling units, including attached and detached garages and accessory buildings to deed ing un ts, and common areas of multi family dwe lings specified in 210.52 and 550.13.

ARTICLE 410: LUMINAIRES, LAMP-HOLDERS, and LAMPS *(See complete Article for additional information)*

410.1 Scope. This article covers luminaires, portable luminaires, lamp-holders, pendants, incandescent filament lamps, and lamps, electric-discharge lamps, decorative lighting products, lighting accessories for temporary seasonal and holiday use., andsimilar fes ible lighting products, and the wiring and equipment forming part of such products and lighting installations.

410.8 Listing Required. All luminaires, lamp-holders and retrofit kits shall be listed.

410.10 Luminaires Considered Equipment. Luminaires, lamp-holders, and retrofit kits shall be considered to be equipment for the purposes of installation in a luminaire in accordance with the installation instructions, the retrofitted luminaire shall not be considered a rewired luminaire.

410.16 Inspection. Luminaires shall be inspected after installation to ensure that luminaire conductors are free from short circuits and conductors can be inspected without requiring the disconnection of any part of the wiring unless the luminaires are connected by attachment plugs and receptacles.

410.90 Luminaires in Specific Locations.

(A) Wet and Damp Locations. Luminaires installed in wet or damp locations shall be installed such that water cannot enter or accumulate in wiring compartments, lamp-holders, or other electrical parts. All luminaires installed in wet locations shall be marked. "Suitable for Wet Locations". or "Suitable for Damp Locations."

(B) Corrosive Locations. Luminaires insta led in corrosive locations sha l be of a type suitable for such locations:

(1) In Dvelts or Hoods. Luminaires shall be permitted to be installed in commercial cooking hoods where all of the following conditions are met

(1) The luminaire shall be listed for use within commercial cooking hoods and installed such that the temperature limits of the materials used are not exceeded.

(2) The luminaire shall be constructed so that all exhaust vapors, grease, oil, or cooking vapors are excluded from the lamp and wiring compartment. Diffusers shall be resistant to thermal shock.

(3) Parts of the luminaire exposed within the hood shall be corrosion resistant or protected against corrosion, and the surface shall be smooth so as not to collect deposits and be free from crevices.

(4) Wiring methods and materials supplying the luminaire(s) shall not be exposed within the cooking hood.

(D) Bathtub and Shower Areas. A luminaire installed in a bathtub or shower area shall be marked as to the following requirements

(1) No parts of cord connected luminaires, chain, cable, or cord-suspended luminaires, lighting track, pendants, or ceiling-suspended (paddle) fans shall be located within a zone measured 900mm (3 feet) horizontally and 2.5m (8 ft.) vertically from the top of the bathtub rim or shower stall threshold. This zone is all-encompassing and includes the space directly over the tub or shower stall.

(2) Luminaires located within the above zone, where subject to shower spray shall be marked suitable for wet locations.

(3) Luminaires located above a shower threshold shall be marked for damp locations, or marked as suitable for wet locations. Luminaires located where subject to shower spray shall be marked suitable for wet locations.

(F) Luminaires Installed as or Under Roof Decking. Luminaires installed in exposed or concealed locations under metal-corrugated sheet roof decking sha l be installed and supported so there is not less than 50mm (1-1/2 in.) measured from the bottom surface of the roof decking to the top of the luminaire.

410.11 Luminaires in Ducts, Hollow Spaces, and Plenums. Luminaires shall be constructed, installed, or equipped with shades or guards so that combustible material is not subjected to temperatures in excess of 90°C (194°F).

410.12 Luminaires over Combustible Material. Lamp-holders insta led over highly combustible material shall be of the unmodified type. Unless an individual switch is provided for each lamp-holder, lamp-holders sha l be located at least 2.5 m (8 ft.) above the floor or shall be located or guarded so that the lamps cannot be readily removed or damaged.

410.16 Luminaires in Clothes Closets.

(A) Luminaire Types Permitted. Only luminaires of the following types shall be permitted in a clothes closet:

(1) Surface-mounted or recessed incandescent or LED luminaires with completely enclosed light sources

(2) Surface-mounted or recessed fluorescent luminaires.

(3) Surface-mounted fluorescent or LED luminaires identified as suitable for installation in thin the clothes closet storage space.

(B) Luminaire Types Not Permitted. Incandescent luminaires with open or partially enclosed lamps and pendant luminaires or lamp-holders shall not be permitted.

(C) Location. The minimum clearance between luminaires installed in clothes closets and the nearest point of a clothes closet storage space sha l be as fo lows:

(1) 300mm (12 in.) for surface mounted incandescent or LED luminaires with a completely enclosed light source installed on the wall above the door or on the ceiling.

(2) 150mm (6 in.) for surface mounted fluorescent luminaires installed on the wall above the door or the ceiling.

(3) 150mm (6 in.) for recessed incandescent or LED luminaires with a completely enclosed light source installed on the wall or on the ceiling.

(4) 150mm (6 in.) for recessed fluorescent luminaires installed in the wall or on the ceiling.

(5) Surface-mounted fluorescent or LED luminaires shall be permitted to be installed within the clothes closet storage space where identified for this use.

410.30 Supports.

(A) General. Luminaires and lamp-holders shall be securely supported. A luminaire that weighs more than 3 kg (8 lb) or exceeds 400 mm (16 in.) in any dimension shall not be supported by the screw shell of a lamp-holder.

410.36 Means of Support.

(A) Luminaires Supported by Outlet Boxes. Luminaires shall be permitted to be supported by outlet boxes or fittings installed as required by 314.23. The insta llation sha l comply with the following requirements

(1) The outlet box or fitting shall comply with 314.27(A)(1) and 314.27(A)(2).

(2) Luminaires shall be pere tted to tat suspension in accordance with 314.27(E).

(3) Outlet boxes complying with 314.27(D) shall be considered lighting outlets as required by 210.70(A), (B), and (C).

(B) Suspended Ceilings. Framing members of suspended ceiling systems used to support luminaires shall be securely fastened to each other and shall be securely attached to the building structure at appropriate intervals. Luminaires shall be securely fastened to the ceil ing framing member(s) by mechanical means such as bolts, screws, or rivets. Listed clips identified for use w th the type of ceiling framing member(s) and luminaire(s) sha l also be permitted.

410.48 Luminaire Wiring General. Wiring ob or within luminaires shall be neatly arranged and shall not be exposed to physical damage. Excess wiring shall be avoided. Conductors shall be arranged so that they are not subjected to temperatures above those for which they are rated.

410.74 Luminaire Rating.

(A) Marking. All luminaires sha l be marked with the maximum lamp wattage or electrical rating, manufacturer's name, trademark, or other suitable means of identification. Luminaires supplied by branch circuits rated higher than 60°C (140°F) sha l be marked for use with the minimum supply wire temperature rating on the luminaire and shipping carton or equivalent.

(B) Ballast Marking. The electrical rating shall include the voltage, current, and wattage that identifies the current rating of the unit, including the ballast, transformer, LED driver, power supply, or autotransformer.

410.116 General. Luminaires installed in recessed locations in walls or ceilings, including suspended ceilings, sha l comply with 410.115 through 410.122.

410.118 Luminaire Materials.

(A) Combustible Material. Luminaires shall be installed so that adjacent combustible material will not be subjected to temperatures in excess of 90°C (194°F).

(B) Fire Resistant Construction. Where a luminaire is recessed in fire-resistant material in a building of fire-resistant construction, a temperature higher than 90°C (194°F) but not higher than 150°C (302°F) shall be considered acceptable if the luminaire is plainly marked for that service.

(C) Recessed Incandescent Luminaires. Incandescent luminaires shall have thermal protection and shall be identified as thermo ly protected.

Exception No. 1 Thermal protection shall not be required in a recessed luminaire identified for use and installed in poured concrete.

Exception No. 2 Thermal protection shall not be required in recessed incandescent luminaires in dwe lings that have thermal performance ofwindow-tiled are equiva ent to a thermo ly protected luminaire and are identified as inherently protected.

410.115 Clearance and Installation.

(A) Clearance.

(1) Non-Type IC. A recessed luminaire that is not identified for contact with insulation shall have all recessed parts spaced not less than 13 mm (1/2 in.) from combustible materials. The points of support and the trim finishing off the opening in the in ing, wall, or other finished surface shall be permitted to be in contact with combustible materials.

(2) Type IC. A recessed luminaire that is ident fied for contact with insulation, Type IC, sha l be permitted to be in contact with combustible materials. Insulation shall not be placed over luminaires or recessed parts, parts of support, wiring compartments, or the finishing or the opening in the building structure.

(B) Installation. Thermal insulation shall not be insta ied above a recessed luminaire or within 75mm (3 in.) of the recessed luminaire's enclosure, wiring compartment, ballast, transformer, LED driver, or power supply unless the luminaire's is identified as Type IC for insulation contact.

ARTICLE 422: APPLIANCES *(See complete Article for additional information)*

422.1 Scope. This article covers electrical appliances used in any occupancy.

422.3 Other Articles.

The requirements of Article 430 shall apply to the installation of motor-operated appliances, and the requirements of Article 440 shall apply to the installation of appliances containing a hermetic refrigerant motor-compressor(s), except as specifica ly amended in this article.

422.4 Live Parts.

Appliances shall have no live parts normally exposed to contact other than those parts functioning as open- resistance heating elements, such as the heating element of a toaster, which are necessarily exposed.

422.5 Ground Fault Circuit Interrupter (GFCI) Protection for Personnel.

(A) General. Appliances identified in 422.5(A)(1) through (A)(7) rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase, shall be provided with Class A GFCI protection for personnel. Multiple Class A GGCI protective devices shall be permitted but shall not be required.

Part II Installation

422.10 Branch Circuit. This section spec fies the requirements for branch circuits capable of carrying appliance current, without overloading under the conditions specified

(A) Individual Branch Circuits. The ampacities of branch-circuit conductors shall not be less than the marked rating of the appliance or the marked rating of an appliance having combined loads. The ampacities of branch-circuit conductors four supplying two or more appliances or two or more outlets for appliances shall not be less than the sum of the marked rating for an appliance that is a continuous load, and 100 percent of the marked rating of the highest rated appliance, shall not be less than 125 percent of the marked rating, or not less than 100 percent of the marked rating if the branch-circuit device and its assembly are listed for continuous loading at 100 percent of a t ts rating. Branch circuits and branch-circuit conductors for household ranges and cooking appliances shall be permitted to be in accordance with Table 220.55 and shall be sized 81 accordance with 215.10(A) (5).

(B) Branch Circuits Supplying Two or More Loads. For branch circuits supplying appliance and other loads, the rating shall be determined in accordance with 210.23.

422.11 Overcurrent Protection. Appliances shall be protected against over-current in accordance with 422.11(A) through (G) and 422.12.

422.16 Flexible Cords:

(A) General. Flexible cord shall be permitted as follows:

(1) To connect appliances to facilitate their frequent interchange, or to prevent the transmission of noise or vibration, or

(2) To be beto the removal or disconnection of appliances that are fastened in place, where the fastening means and mechanical connections are specifically designed to permit ready removal for maintenance or repair and the appliance is intended or ident fied for flexible cord connection.

(B) Specific Appliances.

(1) Electrically Operated In-Sink Waste Disposers. Electrically operated in-sink waste disposers shall be permitted to be cord-and-plug-connected with a flexible cord identified as suitable in the installation instructions of the appliance manufacturer, and shall comply with the following conditions:

(1) The length of the cord shall not be less than 450mm (18 in.) and not over 900mm (36 in.).

(2) Receptacles Shelby bonded to protect against physical damage to the flexible cord.

(3) The receptacle shall be accessible.

(4) The flexible cord shall have an equipment-grounding conductor and be terminated with a grounding type attachment plug. See Exception.

(2) Built in Dishwashers and Trash Compactors. Built-in dishwashers and trash compactors shall be permi tted to be cord-and-plug-connected w th a flexible cord identified as suitable for the purpose in the installation instructions of the appliance manufacturer where all of the following conditions are met

(1) Where the length of the cord shall be not less than 0.9m to 1.2m (3 ft. to 4 ft.) measured from the face of the appliance plug to the front face of the rear of the appliance.

(2) For a built-in dishwasher, the length of the cord shall be 0.9m to 2.0m (3 ft. to 6.5 ft.) Measured from the face of the attachment plug to the s ide of the rear of the app liance.

(3) Receptacles shall be located to avoid physical damage to the flexible cord.

(4) The receptacle for a trash compactor shall be located in the space occupied by the appliance or adjacent thereto.

(5) The receptacle for a built-in dishwasher shall be located in the space adjacent to the space occupied by the dishwasher. Where the flexible cord passes through an opening, it shall be protected against damaged by a bushing, grommet, or other approved means.

(6) The receptacle shall be accessible.

(7) The flexible cord shall have an equipment-grounding conductor and be terminated with a grounding type attachment plug.

(3) Wall-Mounted Ovens and Counter-Mounted Cooking Units. Wall-mounted ovens and counter- mounted cooking units complete w th provisions for mounting and for making electrical connections shall be permitted to be permanently connected or cord-and-plug-connected with a flexible cord identified as suitable for the purpose in the installation instructions of the appliance manufacture. A separable connector or a plug and receptacle combination in the supply line to an oven or cooking unit shall be identified for the temperature of the space in which it is located.

(4) Range Hoods and Microwave Oven/Range Hood Combinations. Range hoods and over the range microwave ovens shall be permitted to be cord-and-plug-connected with a flexible cord identified as suitable for the purpose and identified as suitable for use on range hoods in the installation instructions of the appliance manufacturer, where all of the fo lowing conditions are met

(1) The length of the cord is not less than 450mm (18 in.) and not over 900mm (36 in.).

(2) Receptacles are located to avoid physical damage to the flexible cord.

(3) The receptacle is supplied by an individual branch circuit.

(4) The receptacle is accessible.

(5) The flex ble cord shall have any equipment-grounding conductor and be terminated with a grounding-type attachment plug.

422.17 Protection of Combustible Material. Each electrically heated appliance that is intended by size, weight, and service to be located in a fixed position shall be placed so as to provide ample protection between the appliance and adjacent combustible material.

422.18 Support of Ceiling Suspended (Paddle) Fans. Ceiling-suspended (paddle) fans sha l be supported independently of an outlet box or by one of the following:

(1) A listed outlet box or listed outlet box system identified for the use and installed in accordance with 314.27(C).

(2) A listed outlet box system, a listed braking support and mounting receptacle, and a compatible factory installed attachment fitting designed for support identified for the use and installed in accordance with 314.27(C).

ARTICLE 440: AIR-CONDITIONING and REFRIGERATION EQUIPMENT *(See complete Article for additional information)*

440.1 Scope. This article applies to electric motor-driven air-conditioning and refrigerating equipment and to the branch circuits and controllers for such equipment. It supplements or modifies the general requirements of this Code. Equipment for room air conditioning, hermetic refrigerant motor-compressors and for any air-conditioning or refrigerating equipment that IS supplied from a branch circuit that supp ies a hermetic refrigerant motor-compressor.

ARTICLE 690: SOLAR PHOTOVOLTAIC SYSTEMS *(See complete Article for additional information & requirements)*

690.1 Scope.

This article applies to solar PV systems, other than those covered by Article 691, including the array circuit(s), inverter(s), and controllers for such systems. The system is covered by this article, include those interactive with other electric power production sources, or stand-alone, or both. These PV systems may have AC or DC output for utilization.

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CA ELECTRICAL CODE

ME.4

2022 CALIFORNIA ENERGY CODE REQUIREMENTS:

For a complete description of any and all energy code requirements, it is strongly recommended for a copy of the California Code of Regulations (Title 24, Part 6) to be ready available for review and reference at all times during construction.

SECTION 110.0: SYSTEMS AND EQUIPMENT - GENERAL

Sections 110.1 through 110.12 specify requirements for manufacturing, construction and installation of certain systems, equipment, appliances and building components that are installed in buildings within the scope of Section 100.0(a).
NOTE The requirements of Sections 110.0 through 110.12 apply to newly constructed buildings. Sections 141.0 and 150.2 specify which requirements of Sections 110.1 through 110.12 also apply to additions and alterations to existing buildings.
(a) **General Requirements.** Systems, equipment, appliances and building components shall only be installed in a building within the scope of Section 100.0(a) regulated by Part 6 only if
1. The manufacturer has certified that the system, equipment, appliances or building component complies with the applicable manufacturing provisions of Sections 110.1 through 110.11; and
2. The system, equipment, appliance or building component complies with all applicable installation provisions of Sections 110.1 through 110.12.
(b) **Certification Requirements for Manufactured Systems, Equipment, Appliances and Building Components.**
1. Appliances that are within the scope of Section 1601 of the Appliance Efficiency Regulations shall only be installed if they have been certified to the Energy Commission by the manufacturer, pursuant to the provisions of Title 20 California Code of Regulations, Section 1606; or
2. Systems, equipment, appliances and building components that are required by Part 6 or the Reference Appendices to be certified to the Energy Commission, which are not appliances that are within the scope of Section 1601 of the Appliance Efficiency Regulations, shall only be installed if they are certified by the manufacturer in a declaration, executed under penalty of perjury under the laws of the State of California, that
A. all the information provided pursuant to the certification is true, complete, accurate and in compliance with all applicable requirements of Part 6; and
B. the equipment, product, or device was tested using the test procedure specified in Part 6 if applicable
3. The certification status of any system, equipment, appliance or building component shall be confirmed only by reference to
A. A directory published or approved by the Commission; or
B. A copy of the application for certification from the manufacturer and the letter of acceptance from the Commission staff; or
C. Written confirmation from the publisher of a Commission-approved directory that a device has been certified; or
D. A Commission-approved label on the device.
Note Part 6 does not require a builder, designer, owner, operator, or enforcing agency to test any certified device to determine its compliance with minimum specifications or efficiencies adopted by the Commission.

SECTION 110.1: MANDATORY REQUIREMENTS FOR APPLIANCES

(a) Any appliance regulated by the Appliance Efficiency Regulations, Title 20 California Code of Regulations, Section 1601 et seq., may be installed only if the appliance fully complies with Section 1608(a) of those regulations.
(b) Except for those circumstances described in Section 110.1(c), conformance with efficiency levels required to comply with Part 6 mandatory, prescriptive and performance standards shall be verified utilizing data from either
1. The Energy Commission's database of certified appliances maintained pursuant to Title 20 California Code of Regulations Section 1606, and which is available at www.energy.ca.gov/appliances/database/; or
2. An equivalent directory published by a federal agency; or
3. An approved trade association directory as defined in Title 20 California Code of Regulations Section 1606(h).
(c) Conformance with efficiency levels required to comply with Part 6 mandatory, prescriptive and performance standards shall be demonstrated either by default to the mandatory efficiency levels specified in Part 6 or by following procedures approved by the Commission pursuant to Section 10-109 of Title 24, Part 1, when
1. Data to verify conformance with efficiency levels required to comply with Part 6 mandatory, prescriptive and performance standards is not available pursuant to subdivision (b); or
2. Field verification and diagnostic testing is required for compliance with Part 6 and the Energy Commission has not approved a field verification and diagnostic test protocol that is applicable to the appliance; or
3. The appliance meets the requirements of Section 110.1(a) but has been site-modified in a way that affects its performance; or
4. The U.S. Department of Energy has approved a waiver from federal test procedures, pursuant to 10 CFR Section 430.27 or Section 431.401 and that waiver fails to specify how the efficiency of the system shall be determined.

SECTION 110.2: MANDATORY REQUIREMENTS FOR SPACE-CONDITIONING EQUIPMENT

Certification by manufacturers. Any space-conditioning equipment listed in this section may be installed only if the manufacturer has certified to the Commission that the equipment complies with all the applicable requirements of this section.
(a) Efficiency. Efficiency. Equipment shall meet the applicable efficiency requirements in Tables 110.2-A through 110.2-K, subject to the following <u>See Exceptions 1, 2 & 3 to Section 110.2(a)</u>

1. If more than one efficiency standard is listed for any equipment in Tables 110.2-A through 110.2-K, the equipment shall meet all the applicable standards that are listed; and
2. If more than one test method is listed in Tables 110.2-A through 110.2-K, the equipment shall comply with the applicable efficiency standard when tested with each listed test method; and
3. Where equipment serves more than one function, it shall comply with the efficiency standards applicable to each function; and
4. Where a requirement is for equipment rated at its "maximum rated capacity" or "minimum rated capacity," the capacity shall be as provided for and allowed by the controls, during steady-state operation.
(b) **Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters shall have controls <u>See Exceptions 1 & 2 Section 110.2(b)</u>
1. That prevent supplementary heater operation when the heating load can be met by the heat pump alone; and
2. In which the cut-on temperature for compression heat- ing is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
(c) **Thermostats.** All unitary heating or cooling systems not controlled by a central energy management control system (EMCS) shall have a setback thermostat.
1. **Setback capabilities.** All thermostats shall have a clock mechanism that allows the building occupant to program the temperature set points for at least four periods within 24 hours. Thermostats for heat pumps shall meet the requirements of Section 110.2(b).
<u>Exception to Section 110.2(c)</u> Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves, room air conditioners and room air-conditioner heat pumps.

SECTION 110.3: MANDATORY REQUIREMENTS FOR SERVICE WATER-HEATING SYSTEMS AND EQUIPMENT:

(a) **Certification by Manufacturers.** Any service water-heating system or equipment may be installed only if the manufacturer has certified that the system or equipment complies with all of the requirements of this subsection for that system or equipment.
1. Temperature controls for service water-heating systems. Service water-heating, systems shall be equipped with automatic temperature controls capable of adjustment from the lowest to the highest acceptable temperature settings for the intended use a listed in Table 3, Chapter 50 of the ASHRAE Handbook, HVAC Applications Volume or Table 613.1 of the California Plumbing Code for healthcare facilities.
<u>Exception to Section 110.3(a)1</u> Residential occupancies.
(b) **Efficiency.** Equipment shall meet the applicable requirements of the Appliance Efficiency Regulations as required by Section 110.1, subject to the following
1. If more than one standard is listed in the Appliance Efficiency Regulations, the equipment shall meet all the standards listed; and
2. If more than one test method is listed in the Appliance Efficiency Regulation, the equipment shall comply with the applicable standard when tested with each test method; and
3. Where equipment can serve more than one function, such a both heating and cooling, or both space heating and water heating, it shall comply with all the requirement applicable to each function; and
4. Where a requirement is for equipment rated at it "maximum rated capacity" or "minimum rated capacity," the capacity shall be as provided for and allowed by the control, during steady-state operation.
(c) **Installation.** Any service water-heating system or equipment may be installed only if the system or equipment complies with all of the applicable requirements of this sub-section for the system or equipment.
1. **Outlet temperature controls.** On systems that have a total capacity greater than 167,000 Btu/hr, outlets that require higher than service water temperatures as listed in the ASHRAE Handbook, Applications Volume, shall have separate remote heaters, heat exchangers or boosters to supply the outlet with the higher temperature.
<u>Exception to Section 110.3(c)1</u> Systems covered by California Plumbing Code Section 613 shall instead follow the requirements of that section.
2. **Controls for hot water distribution systems.** Service hot water systems with circulating pumps or with electrical heat trace systems shall be capable of automatically turning off the system.
3. **Insulation.** Unfired service water heater storage tanks and backup tanks for solar water-heating systems shall have
A. External insulation with an installed R-Value of at least R-3.5; or
B. Internal and external insulation with a combined R-Value of at least R-16; or
C. The heat loss of the tank surface based on an 80°F water-air temperature difference shall be less than 6.5 Btu per hour per square foot.

SECTION 110.6: MANDATORY REQUIREMENTS FOR FENESTRATION PRODUCTS AND EXTERIOR DOORS

(a) **Certification of fenestration products and exterior doors other than field fabricated.** Any fenestration product and exterior door, other than field fabricated fenestration products and field-fabricated exterior doors, may be installed only if the manufacturer has certified to the Commission, or if an independent certifying organization approved by the Commission has certified, that the product complies with all of the applicable requirements of this subsection.
1. **Air Leakage.** Air leakage. Manufactured fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 cfm/ft2 of window area, 0.3 cfm/ft2 of door area for residential doors, 0.3 cfm/ft2 of door area for nonresidential single doors (swinging and sliding), and 1.0 cfm/ft2 for nonresidential double doors (swinging), when tested according to NFRC-400 or ASTM E283 at a pressure differential of 75 pascals (or 1.57 pounds/ft2), incorporated herein by reference.
Notes to Section 110.6(a)1
- Pet doors must meet 0.3 cfm/ft2 when tested according to ASTM E283 at 75 pascals (or 1.57 pounds per square foot).
- AAMA/WDMA/CSA101/I.S.2/A440-2011 specification is equivalent to ASTM E283 at a pressure differential of 75 pascals (or 1.57 pounds per square foot) satisfies the air leakage certification requirements of this section.
<u>Exception to Section 110.6(a)1</u> Field-fabricated fenestration and field-fabricated exterior doors.
2. **U Factor.** The fenestration product's U-factor shall be rated in accordance with NFRC 100, or use the applicable default U-factor set forth in Table 110.6-A.
<u>Exception 1 to Section 110.6(a)2</u> If the fenestration product is a skylight in a building covered by the nonresidential standards with less than 200 square feet of skylight area the default U-Factor may be calculated as set forth in Reference Nonresidential Appendix NA6.
<u>Exception 2 to Section 110.6(a)2</u> If the fenestration product is an alteration consisting of any area replacement of glass in a skylight product in a building covered by the nonresidential standards the default U-Factor may be calculated as set forth in Reference Nonresidential Appendix NA6.
3. **Solar Heat Coefficient SHGC.** The fenestration product's SHGC shall be rated in accordance with NFRC 200, or use the applicable default SHGC set forth in Table 110.6-B.
<u>Exception 1 to Section 110.6(a)3</u> If the fenestration product is a skylight or is a vertical site-built fenestration product in a building covered by the nonresidential standards with less than 1,000 square feet of site built fenestration the default SHGC may be calculated as set forth in Reference Non-residential Appendix NA6.
<u>Exception 2 to Section 110.6(a)3</u> If the fenestration product is an alteration consisting of any area replacement of glass in a skylight product or in a vertical site-built fenestration product in a building covered by the nonresidential standards the default SHGC may be calculated as set forth in Reference Nonresidential Appendix NA6.
4. **Visible Transmittance.** The fenestration product's VT shall be rated in accordance with NFRC 200 or ASTM E 972. For tubular daylighting devices VT shall be rated using NFRC 203.
<u>Exception 1 to Section 110.6(a)4</u> If the fenestration product is a skylight in a building covered by the nonresidential standards with less than 200 square feet of skylight area the default VT may be calculated as set forth in Reference Nonresidential Appendix NA6.
<u>Exception 2 to Section 110.6(a)4</u> If the fenestration product is an alteration consisting of any area replacement of glass in a skylight product in a building covered by the nonresidential standards the default VT may be calculated as set forth in Reference Nonresidential Appendix NA6.
5. **Labeling.** Fenestration products and exterior doors shall
A. Have a temporary label for manufactured fenestration products and exterior doors or a label certificate when the component modeling approach (CMA) is used and for site-built fenestration meeting the requirements of Section 10-111(a)1. The temporary label shall not be removed before inspection by the enforcement agency; and
B. Have a permanent label or label certificate when the component modeling approach (CMA) is used and for site-built fenestration meeting the requirements of Section 10-111(a)2 if the product is rated using NFRC procedures.
6. **Fenestration Acceptance Requirements.** Before an occupancy permit is granted site-built fenestration products in other than single family buildings shall be certified as meeting the Acceptance Requirements for Code Compliance, as specified in the Reference Nonresidential Appendix NA7 to ensure that site-built fenestration meets Standards requirements, including a matching label certificate for product(s) installed and be readily accessible at the project location. A certificate of acceptance certifying that the fenestration product meets the acceptance requirements shall be completed, signed and submitted to the enforcement agency.
<u>Exception to Section 110.6(a)</u> Fenestration products removed and reinstalled as part of a building alteration or addition.
(b) **Installation of Field Fabricated Fenestration and Exterior Doors.** Field-fabricated fenestration and field-fabricated exterior doors may be installed only if the compliance documentation has demonstrated compliance for the installation using U-factors from Table 110.6-A and SHGC values from Table 110.6-B. Field-fabricated fenestration and field-fabricated exterior doors shall be caulked between the fenestration products or exterior door and the building, and shall be weatherstripped.
<u>Exception to Section 110.6(b)</u> Unframed doors and fire doors need not be weatherstripped or caulked.

SECTION 110.7: MANDATORY REQUIREMENTS TO LIMIT AIR LEAKAGE

All joints, penetrations and other openings in the building envelope that are potential sources of air leakage shall be caulked, equipped with a gasket, weather-stripped or otherwise sealed to limit infiltration and exfiltration.

SECTION 110.8: MANDATORY REQUIREMENTS FOR INSULATION, ROOFING PRODUCTS AND RADIANT BARRIERS

(a) **Insulation certification by manufacturers.** All insulation shall be certified by Department of Consumer Affairs, Bureau of Household Goods and Services that the insulation conductive thermal performance is approved pursuant to the California Code of Regulations, Title 24, Part 12, Chapters 12-13, Article 3, "Standards for Insulating Material."
(b) **Installation of urea formaldehyde foam insulation.** Urea formaldehyde foam insulation may be applied or installed only if
1. It is installed in exterior side walls; and
2. A 4-mil-thick plastic polyethylene vapor retarder or equivalent plastic sheathing vapor retarder is installed between the urea formaldehyde foam insulation and the interior space in all applications.
(c) **Flame spread rating of insulation.** All insulating material shall be installed in compliance with the flame-spread rating and smoke density requirements of the CBC.
(d) **Installation of insulation in existing buildings.** Insulation installed in an existing attic, or on an existing duct or water heater, shall comply with the applicable requirements of subsections 1, 2 and 3 below. If a contractor installs the insulation, the contractor shall certify to the customer, in writing, that the insulation meets the applicable requirements of subsections 1, 2 and 3 below.
1. <u>Attics.</u> If insulation is installed in the existing attic of a low-rise residential building, the R-value of the total amount of insulation (after addition of insulation to the amount, if any, already in the attic) shall meet the requirements of Section 150.0(a) for single-family buildings and Section 180.2(a)1 for multi-family buildings three habitable stories or fewer.
<u>Exception to Section 110.8(d)</u> Where the accessible space in the attic is not large enough to accommodate the required R-value the entire accessible space shall be filled with insulation provided such installation does not violate Section 1202.2 of Title 24 Part 2 or Section 806 of Title 24 Part 2.5.
2. <u>Water heaters.</u> If external insulation is installed on an existing unfired water storage tank or on an existing back-up tank for solar water-heating system, it shall have an R-value of at least R-3.5, or the heat loss of the tank surface based on an 80°F water-air temperature difference shall be less than 6.5 Btu per hour per square foot.
3. <u>Ducts.</u> If insulation is installed on an existing space- conditioning duct, it shall comply with Section 605.0 of the CMC.

SECTION 110.9: MANDATORY FOR LIGHTING CONTROL DEVICES AND SYSTEMS, BALLASTS AND LUMINAIRE

(a) **All lighting control devices and systems and all light sources** subject to the requirements of Section 110.9 shall meet the following requirements
1. Shall be installed only if the lighting control device or light source with all of the applicable requirements of Section 110.9.
2. Lighting controls may be individual devices or systems consisting of two or more components.
(b) **All lighting controls.** Lighting controls listed in Section 110.9(b) shall comply with the requirements listed below; and all components of the system considered together as installed shall meet all applicable requirements for the application for which they are installed as required in Sections 130.0 through 130.5, Sections 140.6 through 140.8, Section 141.0, and Section 150.0(k).
1. **Time Switch Lighting Controls.** All controls that provide time-switch functionality, including all automatic and astronomical time-switch controls, shall have program backup capabilities that prevent the loss of the device's schedule for at least 7 days, and the device's date and time for at least 72 hours if power is interrupted. In addition
A. N/A
B. Astronomical time-switch controls shall
i) Have sunrise and sunset prediction accuracy within plus-or-minus 15 minutes and time-keeping accuracy within 5 minutes per year;
ii) Be capable of displaying the date, current time, sunrise time, sunset time, and switching times for each step during programming.
iii) Be capable of automatically adjusting for daylight savings time; and
iv) Have the ability to independently offset the on and off for each channel by at least 90 minutes before and after sunrise or sunset.
C. Multilevel time-switch controls shall include at least two separately programmable steps per zone.
D. Time-switch controls installed outdoors shall have setback functions that allow the lighting on each controlled channel to be switched or dimmed to lower levels. The set back functions shall be capable of being programmed by the user for at least one specific time of day.
2. **Daylighting Controls.**
A. Automatically return to its most recent time delay settings within 60 minutes of the last received input who left in calibration mode;
B. Have a set point control that easily distinguishes settings to within 10 percent of full-scale adjustment;
C. Provide a linear response within 5 percent accuracy over the range of illuminance measured by the light sensor; and
D. Be capable of being calibrated in a manner that the person initiating the calibration is remote from the sensor that is physically separated from where the calibration adjustments are being made.
3. **Dimmers.** Controls that provide dimming functionality shall
A. Be capable of reducing lighting power consumption by a minima of 65 percent when at its lowest setting.
B. Provide reduced flicker operation, meaning that directly controlled light sources shall be provided electrical power such that the light output has an amplitude modulation of less than 30 percent for frequencies less than 200Hz without causing premature lamp failure;
C. Provide an off setting that produces zero lumen output; and
D. For wall box dimmers associated switches designed for use in three way circuits, be capable of turning lights off, and on to the level set by the dimmer if the lights are off.
4. **Occupancy Sensing Controls.** Occupant sensing controls include occupant sensors, motion sensors and vacancy sensor controls, including those with a partial-ON or partial-OFF function. Occupant sensing controls shall
A. Be capable of automatically turning the controlled lights in the area either off or down no more than 20 minutes after the area has been vacated;
B. For manual-on controls, have a grace period of no less than 15 seconds and no more than 30 seconds to turn on lighting automatically after the sensor has timed out; and
C. Provide a visible status signal that indicates that the device is operating properly, or that it has failed or malfunctioned. The visible status signal may have an override that turns of the signal.
<u>Exception to Section 110.9(b)4</u> Occupant sensing control systems may consist of a combination of single or multilevel occupant motion or vacancy sensor controls provided that components installed to comply with manual-on requirements shall not be capable of conversion by occupants from manual-on to automatic-on functionality.
5. **Part night outdoor lighting controls**, as defined in Section 100.1, shall meet all of the following requirements
A. Have sunrise and sunset prediction accuracy within +/- 15 minutes, using both light sensing and time measurement; and
B. Have the ability to reduce or turn off outdoor luminaire power at night as required in Section 130.2(c); and
C. Shall be programmable to reduce or turn off outdoor luminaire power at any time as determined by the user. Time-based scheduling control is allowed to be relative to both sunset and sunrise, and to the midpoint between sunset and sunrise.
6. **Sensors used to detect occupants.** Sensors that are used by occupant sensing controls to detect occupants shall meet the following requirements
A. Sensors shall not incorporate switches or mechanical devices that allow the sensor to be disabled without changing the settings of the control.
B. Sensors that utilize ultrasonic radiation for detection of occupants shall
i. Comply with 21 C.F.R. part 1002.12;
i. not emit audible sound; and
ii. not emit ultrasound in excess of the decibel levels shown in Table 110.9A measured no more than 5 feet from the source, on axis.
C. Sensors that utilize microwave radiation for detection of occupants shall
i. comply with 47 C.F.R. parts 2 and 15; and
i. not emit radiation in excess of 1 milliwatt per square centimeter measured no more than 5 centimeters from the emission surface of the device.
7. **Indicator lights.** Indicator lights integral to lighting controls shall consume no more than 1 watt of power per indicator light.

SECTION 110.10: MANDATORY REQUIREMENTS FOR SOLAR READINESS:

1. **Single family residences.** Single-family residences located in subdivisions with ten or more single-family residences and where is the application for a tentative subdivision map for the residences has been deemed complete or approved by the enforcement agency, which do not have a photovoltaic system installed, shall comply with the requirements of Sections 110.10(b) through 110.10(e).
(b) Solar Zone
1. Minimum solar zone area. The solar zone shall have a minimum total area as described below. The solar zone shall comply with access, pathway, smoke ventilation and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area shall be comprised of areas that have no dimension less than five feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet.
A. Single-family residences. The solar zone shall be located on the roof or overhang of the building and have a total area no less than 250 square feet.
<u>Exception 1 to Section 110.10(b)1A</u> Single-family residences with a permanently installed domestic solar water-heating system meeting the installation criteria specified in the Reference Residential Appendix RA4 and with a minimum solar savings fraction of 0.50.
<u>Exception 2 to Section 110.10(b)1A</u> Single-family residences with three habitable stories or more and with a total floor area less than or equal to 2000 square feet and having a solar zone total area no less than 150 square feet.
<u>Exception 3 to Section 110.10(b)1A</u> Single-family residences located in the Wildland Urban Interface Fire Area as defined in Title 24, Part 2 and having a whole house fan and having a solar zone total area no less than 100 square feet.
<u>Exception 4 to Section 110.10(b)1A</u> Buildings with a designated solar zone area that is no less than 50 percent of the potential solar zone area. The potential solar zone area is the total area of any low-sloped roofs where the annual solar access is 70 percent or greater and any steep-sloped roofs oriented between 90 degrees and 300 degrees of true north where the annual solar access is 70 percent or greater. Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.
<u>Exception 5 to Section 110.10(b)1A</u> Single-family residences having a solar zone total area no less than 150 square feet and where all thermostats are demand responsive controls and comply with Section 110.12(a) and are capable of receiving and responding to demand response signals prior to granting of an occupancy permit by the enforcing agency.
<u>Exception 6 to Section 110.10(b)1A</u> Single-family residences meeting the following conditions
A. All thermostats are demand responsive controls that comply with a section 110.12(a) and are capable of receiving and responding to demand response signals prior to granting of an occupancy permit by the enforcing agency.
B. Comply with one of the following measures
i. Install a dishwasher that meets or exceeds the Energy Star Program requirements with a refrigerator that meets or exceeds the Energy Star Program requirements a whole house fan driven by and electronically commutated motor or an SAE J1772 Level 2 Electric Vehicle Supply Equipment (EVSE or EV charger) with a minimum of 40 amperes or
ii. Install a home automation system capable of at a minimum controlling the appliances and lighting of the dwelling and responding to demand response signals or
iii. Install alternative plumbing piping to permit the discharge from the clothes washer and all showers and bathtubs to be used for an irrigation system in compliance with the California Plumbing Code and any applicable local ordinances or
iv. Install a rainwater catchment system designed to comply with the California Plumbing Code and any applicable local ordinances and that uses rainwater flowing from at least 65 percent of the available roof area.

SECTION 150.0: MANDATORY FEATURES AND DEVICES

Single-family residential buildings shall comply with the applicable requirements of Sections 150(a) through 150.0(v).
Note The requirements of Sections 150.0(a) through 150.0(r) apply to newly constructed buildings. Sections 150.2(a) and 150.2(b) specify which requirements of Sections 150.0(a) through 150.0(r) also apply to additions or alterations.
(a) **Roof deck, ceiling and rafter roof insulation.** The opaque portions of roof decks separating attic spaces from ambient air, and ceilings or roof rafter roofs separating conditioned spaces from unconditioned spaces or ambient air, shall meet the requirements of Items 1 through 4 below
1. In Climate Zones 4 and 8 through 16, roof decks in newly constructed attic systems shall be insulated to achieve an area-weighted average, U-factor not exceeding U-0.184.
<u>Exception to Section 150.0(a)1</u>
i. The space-conditioning system air handler and ducts are located entirely in conditioned space below the ceiling separating the occupiable space from the attic or
ii. The space-conditioning system air handler is located in unconditioned space and has 12 linear feet or less of supply duct including the length of the air handler and the plenum located in unconditioned space with all other portions of supply ducts located in conditioned space below the ceiling separating the occupiable space from the attic.
2. Ceilings and rafter roofs shall be insulated to achieve an area-weighted average U-factor not exceeding U-0.043 or shall be insulated between wood-framing members with insulation resulting in an installed thermal resistance of R-22 or greater for the insulation alone. Four vented attics, the mandatory insulation shall be installed at the ceiling level; for unvented attics, the mandatory insulation shall be placed at either ceiling or roof level; and
<u>Exception to Section 150.0(a)2</u> Ceilings and rafter roofs in an alteration shall be insulated to achieve an area-weighted average U-factor not exceeding 0.054 or shall be insulated between wood-framing members with insulation resulting in and installed thermal resistance of R-19 or greater.
3. Attic access doors shall have permanently attached insulation using adhesive or mechanical fasteners. The attic access. She by gasketed to prevent air leakage; and
4. Insulation shall be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration as specified in Section 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.
(b) **Loose Fill Insulation.** When loose-fill insulation is installed, the minimum in installed weight per square foot shall conform with the insulation manufacturer's installed design weight per square foot at the manufacturer's labeled R-Value.
(c) **Wall Insulation.** Opaque portions of above grade walls separating conditioned spaces from unconditioned spaces or ambient air shall meet the requirements
1. 2 x 4 inch framing shall have an overall assembly U-factor not exceeding U-0.102.
<u>Exception to Section 150.0(c)1</u> Existing walls a ready insulated to a U-factor not exceeding U-0.110 or already insulated between framing members with insulation having an installed thermal resistance of R-11 or greater.
2. 2 x 6 inch or greater framing shall have an overall assembly U-factor not exceeding U-0.071.
3. Opaque non-framed assemblies shall have an overall assembly U-factor not exceeding U-0.102.
4. Bay or bow window roofs and floors shall be insulated to meet the wall insulation requirements of Table 150.1-A or B.
5. Masonry walls shall be insulated to meet the wall insulation requirements of Table 150.1-A or B.
6. In wood framed assemblies, compliance with U-factors may be demonstrated by installing wall insulation with an R-value of 13 in 2x4 assemblies, and 20 in 2x6 assemblies.
(d) **Raised Floor Insulation.** Raised floors separating conditioned space from unconditioned space or ambient air shall have an overall assembly U-factor not exceeding U-0.037. In a wood framed assembly, compliance with the U-factor may be demonstrated by installing insulation with an R-value of 19 or greater.
<u>Exception to Section 150.0(d)</u> A building with a controlled ventilation or unvented crawl space may omit raised floor insulation if all of the following are met
i) The foundation walls are insulated to meet the wall insulation minimums as shown in Table150.1-A or B; and
ii) A Class I or II vapor retarder is placed over the entire floor of the crawl space; and
iii) Vents between the crawlspace and outside air are fitted with automatically operated louvers that are temperature actuated; and
iv) The requirements in Reference Residential Appendix RA4.5.1.
(e) **Installation of fireplaces, decorative gas appliances and gas logs.** If a masonry or factory-built fireplace is installed, it shall comply with Section 110.5, Section 4.503 of Part II and shall have the following
1. Closable metal or glass doors covering the entire opening of the firebox; and
2. A combustion air intake to draw air from the outside of the building, which is at least 6 square inches in area and is equipped with a readily accessible operable and tight-fitting damper or combustion-air control device; and
<u>Exception to Section 150.0(e)1B</u> An outside combustion-air intake is not required if the fireplace will be installed over concrete slab flooring and the fireplace will not be located on an exterior wall.
3. A flue damper with a readily accessible control.
<u>Exception to Section 150.0(e)1C</u> When a gas log, log lighter or decorative gas appliance is in installed in a fireplace the flue damper shall be blocked open if required by the CMC or the manufacturer's installation instructions.
2. Continuous burning pilot lights and the use of indoor air for cooling a firebox jacket, when that indoor air is vented to the outside of the building, are prohibited.
(f) **Slab edge insulation.** Material used for slab edge insulation shall meet the following minimum specifications
1. Water absorption rate for the insulation material alone without facings no greater than 0.3 percent when tested in accordance with Test Method A -24-Hour-Immersion of ASTM C272.
2. Water vapor permeance no greater than 2.0 perm/inch when tested in accordance with ASTM E96.
3. Concrete slab perimeter insulation shall be protected from physical damage and ultraviolet light deterioration.
4. Insulation for a heated slab floor shall meet the requirements of Section 110.8(g).
(g) **Vapor retarder.**
1. In Climate Zones 1-16, the earth floor of unvented crawl space shall be covered with a Class I or Class II vapor retarder. This requirement shall also apply to controlled ventilation crawl space for buildings complying with the Exception to Section 150.0(d).
2. In Climate Zones 14 and 16, a Class I or Class II vapor retarder shall be installed on the conditioned space side of all insulation in all exterior walls, vented attics and unvented attics with air-permeable insulation.
(h) **Space conditioning equipment.**
1. Building cooling and heating loads. Building heating and cooling loads shall be determined using a method based on any one of the following
A. The ASHRAE Handbook, Equipment Volume, Application Volume and Fundamental Volume; or
B. The SMACNA Residential Comfort System Installation Standard Manual; or
C. The ACCA Manual J.
The cooling and heating loads are two of the criteria that shall be used for equipment sizing and selection. **Note** Heating systems are required to have a minimum heating capacity adequate to meet the minimum requirements of the CBC. The furnace output capacity and other specifications are published in the Commissions directory of certified equipment or other directories approved by the Commission.
2. Design conditions. For the purpose of sizing the space conditioning (HVAC) system, the indoor design temperatures shall be 68°F for heating and 75°F for cooling. Outdoor design conditions shall be selected from Reference Joint Appendix JA2, which is based on data from the ASHRAE Climatic Data for Region X. The outdoor design temperature for heating shall be no lower than the Heating Winter Median of Extreme values. The outdoor design temperature for cooling shall be no greater than the 1.0 percent Cooling Dry Bulb and Mean Coincident Wet Bulb values.
3. Outdoor condensing units.
A. Clearances. Installed air conditioner and heat pump outdoor condensing units shall have a clearance of at least five (5) feet (1.5 meters) from the outlet of any dryer vent.
B. Liquid line drier. Installed air conditioner and heat pump systems shall be equipped with liquid line filter driers if required, as specified by manufacturer' instructions.
4. Central forced air-heating furnaces.
A. Temperature rise. Central forced-air heating furnace installations shall be configured to operate in conformance with the furnace manufacturer's maximum inlet-to-outlet temperature rise specifications.
( ) **Thermostats.** All heating or cooling systems, including heat pumps, not controlled by a central energy management control system (EMCS) shall have a setback thermostat, as specified in Section 110.2(c).
( ) **Insulation for piping and tanks.**
1. Water piping, solar water-heating system piping and space conditioning, system line insulation thickness and conductivity. Piping shall be insulated as follows
A. All domestic hot water piping shall be insulated as specified in Section 609.11 of the California Plumbing Code.
B. Piping for space-conditioning systems, solar water-heating system collector loop, and distribution piping for steam and hydronic heating systems shall meet the requirements of Section 120.3(c).
<u>Exception 1 to Section 150.0(j)1</u> Factory-installed piping within space-conditioning equipment certified under Section 110.1 or 110.2.
<u>Exception 2 to Section 150.0(j)1</u> Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Piping that penetrates metal framing shall use grommets plugs wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall butt securely against all framing members.
<u>Exception 3 to Section 150.0(j)1</u> Piping installed in interior or exterior walls shall not be required to have pipe insulation if all of the requirements are met for compliance with quality insulation installation (QII) as specified in the Reference Residential Appendix RA3.5.
<u>Exception 4 to Section 150.0(j)1</u> Piping surrounded with a minimum of 1 inch of wall insulation 2 inches of crawlspace insulation or 4 inches of attic insulation shall not be required to have pipe insulation.
2. Insulation Protection. Pipe insulation shall meet the insulation protection requirements of Section 120.3(b)
(k) **Residential Lighting.**
1. Luminaire Requirements.
A. **Luminaire efficacy.** All installed luminaries shall meet the requirements in Table 150.0-A.
<u>Exception 1 to Section 150.0(k)1A</u> Integrated device lighting. Lighting integrated to exhaust fans kitchen range hoods bath vanity mirrors and garage door openers.
<u>Exception 2 to Section 150.0(k)1A</u> Navigation lighting such as night lights step lights and path lights less than 5 watts.
<u>Exception 3 to Section 150.0(k)1A</u> Cabinet lighting. Lighting internal to drawers cabinetry and linen closets with an efficacy of 45 lumens per watt or greater.
B. **Screw based luminaires.** Screw-based luminaires shall contain lamps that comply with Reference Joint Appendix JA8.
C. **Recessed downlight luminaries in ceilings.** Luminaires recessed into ceilings shall meet all of the following requirements
i. Shall not contain screw base lamp sockets; and
i. Have a label that certifies the luminaire is airtight with air leakage less than 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283. An exhaust fan housing with integral light shall not be required to be certified airtight; and
ii. Be sealed with a gasket or caulk between the luminaire housing and ceiling, and have all air leak paths between conditioned and unconditioned spaces sealed with a gasket or caulk, or be installed per manufacturer's instructions to maintain airtightness between the luminaire housing and ceiling; and
iv. Meet the clearance and installation requirements of California Electrical Code Section 410.116 for recessed luminaires.
<u>Exception to Section 150.0(k)1Cii and iii</u> Recessed luminaires marked for use in fire-rated installations extruded into ceiling space and recessed luminaires installed in non-insulated ceilings.
D. **Light sources in enclosed or recessed luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, shall not be installed in enclosed or recessed luminaires.
E. **Blank electrical boxes.** The number of electrical boxes that are more than 5 feet above the finished floor, and do not contain a luminaire or other device shall be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, low-voltage wiring, or fan speed control.
2. **Indoor lighting controls.**
A. Lighting shall have readily accessible wall-mounted controls that allow the lighting to be manually turn ON and OFF.
<u>Exception to Section 150.0(k)2A</u> Ceiling fans may provide control of integrated lighting via a remote control.
B. No controls shall bypass a dimmer, occupant sensor, or vacancy sensor function where that dimmer or sensor has been installed to comply with Section 150.0(k).
C. Lighting controls, shall comply with the applicable requirements of section 110.9.
D. An energy management control system (EMCS) or a multi-scene programmable control may be used to comply with dimming, occupancy and lighting control requirements in Section 150.0(k)2 if it provides the functionality of the specified controls in accordance with Section 110.9, and the physical controls specified in section 150.0(k)2A.
E. **Automatic off controls**
i. In bathrooms, garages, laundry, rooms, utility rooms and walk-in closets, at least one installed luminaire shall be controlled by an occupancy or vacancy sensor providing automatic-off functionality.
i. For lighting internal to drawers in cabinetry with opaque fronts or doors, controls that turn the light off when the drawer or door is closed shall be provided.
F. **Dimming controls.** Lighting, in habitable spaces, including but not limited to living rooms, dining rooms, kitchens and bedrooms, shall have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces shall comply with NEMA SSL 7A.
<u>Exception 1 to Section 150.0(k)2F</u> Ceiling fans may provide control of integrated lighting via a remote control.
<u>Exception 2 to Section 150.0(k)2F</u> Luminaires connected to a circuit with controlled lighting power less than 20 watts or controlled by an occupancy or vacancy sensor providing automatic-off functionality.
<u>Exception 3 to Section 150.0(k)2F</u> Navigation lighting such as night lights step lights and path lights less than 5 watts and lighting internal to drawers and cabinetry with opaque fronts or doors or with automatic-off controls.
G. **Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. The following shall be controlled separately from ceiling-installed lighting such that one can be turned on without turning on the other
i. Under-cabinet lighting.
ii. Under shelf lighting.
iii. Interior lighting of display cabinets.
iv. Switched outlets.
3. **Residential outdoor lighting.** In addition to meeting the requirements of Section 150.0(k)1A, luminaires providing residential outdoor lighting shall meet the following requirements, as applicable
A. For single-family residential buildings, outdoor lighting permanently mounted to a residential building or to other buildings on the same lot shall meet the requirement in Item i and the requirements in either Item ii or Item iii
i. Controlled by a manual ON and OFF switch that permits the automatic actions of items ii or iii below; and
ii. Controlled by a photocell and either a motion sensor or automatic time switch control; or
iii. Controlled by an astronomical time clock control. Controls that override to ON shall not be allowed unless the override automatically returns the automatic control to its normal operation within 6 hours. An energy management control system that provides the specific lighting control functionality and complies with all requirements applicable to the specified controls may be used to meet these requirements.
4. **Internally illuminated address signs.** Internally illuminated address signs shall either
A. Comply with Section 140.8; or
B. Consume no more than 5 watts of power.
(l) **Reserved.**
(m) **Air distribution and ventilation system ducts, plenums and fans.**
1. **CMC Compliance.**
A. All air-distribution system ducts and plenums, including but not limited to, mechanical closets and air-handler boxes, shall meet the requirements of the CMC Sections 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible, 3rd Edition incorporated herein by reference.
B. Portions of supply-air and return-air ducts and plenums of space heating or cooling systems shall be insulated in accordance with either subsection i or ii below
i. Ducts shall have a minimum installed level of R-6.0, or
<u>Exception to Section 150.0(m)1Bi</u> Portions of the duct system located in conditioned space below the ceiling separating the occupiable space from the attic are not required to be insulated if all of the following conditions are met
a. The non-insulated portion of the duct system is located entirely inside the building's thermal envelope as confirmed by visual inspection.
b. At all locations were non-insulated portions of the duct system penetrate into unconditioned space the penetration shall be draft stopped compliant with CFC Section 703.1 and 704.1 and air-sealed to the construction materials that are penetrated using materials compliant with CMC Section E502.4.2 to prevent air infiltration into the cavity. All connections in unconditioned space are insulated to a minimum of R-6.0 as confirmed by visual inspection.
ii. Ducts do not require insulation when the duct system is located entirely in conditioned space as confirmed through field verification and diagnostic testing in accordance with Reference Residential Appendix RA3.1.4.3.8.
C. Connections of metal ducts and the inner core of flexible ducts shall be mechanically fastened.
D. Openings shall be sealed with mastic, tape or other duct-closure system that meets the applicable requirements of UL181, UL181A or UL181B or aerosol sealant that meets the requirements of UL723. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mesh or tape shall be used.
E. Building cavities, support platforms for air handlers and plenums designed or constructed with materials other than sealed sheet metal, duct board, or flexible duct shall not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts.
<u>Exception to Section 150.0(m)1</u> Ducts and fans integral to a wood heater or fireplace.
4. **Duct insulation R value ratings.** All duct insulation product R-values shall be based on insulation only (excluding air films, vapor retarder or other duct components) and tested C-values at 70°F mean temperature at the installed thickness, in accordance with ASTM C518 or ASTM C177, incorporated herein by reference, and certified pursuant to Section 110.8.
5. **Duct insulation thickness.** The installed thickness of duct insulation used to determine its R-value, shall be determined as follows
A. For duct board, duct liner, and factory-made rigid ducts, not normally subjected to compression, the nominal insulation thickness shall be used.
B. For duct wrap, installed thickness shall be assumed to be 75 percent (25 percent compression) of nominal inside diameter by two.
C. For factory-made flexible air ducts, the installed thickness shall be determined by dividing the difference between the actual outside diameter and nominal inside diameter by two.
9. **Protection of insulation.** Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance and wind, but not limited to the following. Insulation exposed to weather shall be suitable for outdoor service, e.g., protected by aluminum, sheet metal, painted canvas or plastic cover. Cellular foam insulation shall be protected as above or painted with a coating that is water retarded and provides shielding from solar radiation that can cause degradation of the material.
11. **Duct system sealing and leakage testing.** When space-conditioning systems utilize forced air duct systems to supply conditioned air to an occupiable space, the ducts shall be sealed as confirmed through field verification and diagnostic testing in accordance with all applicable procedures specified in Reference Residential Appendix RA3.1, and conforming to one of the following Subsections A, B, or C as applicable. Air handler airflow and duct leakage rate compliance targets shall be determined according to methods specified in Reference Residential Appendix R3.1.4.2.
12. **Air filtration.**
A. System types specified in subsections i, ii, and iii shall be provided with air filters in accordance with Sections 150.0(m)12B, 150.0(m)12C, and 150.0(m)12D. System types specified in subsection i shall also comply with Section 150.0(m)12E.
i. Mechanical space-conditioning systems that supply air to an occupiable space through ductwork exceeding 10 feet (3 m) in length.
ii. Mechanical supply-only ventilation systems and make-up air systems that provide outside air to an occupiable space.
iii. The supply side of mechanical balanced ventilation systems, including heat recovery ventilation systems, and energy recovery ventilation systems that provide outside air to an occupiable space.
<u>Exception to Section 150.0(m)12A</u> Evaporative coolers are exempt from the air infiltration requirements in Section 150.0(m)12.
C. Air filter efficiency. The system shall be provided with air filter(s) having designated efficiency equal to or greater than MERV 13 when tested on accordance with ASHRAE Standard 52.2, or a particle size efficiency rating equal to or greater than 50 percent in the 0.30-1.0 um range when tested in accordance with AHRI Standard 680.
(n) **Water heating system.**
1. Systems using gas or propane water heaters to serve individual dwelling units shall designate a space at least 2.5 feet by 2.5 feet wide and 7 feet tall suitable for the future installation of a heat pump water heater. (HPWH) by meeting either A or B below. All electrical components shall be installed in accordance with the California Electrical Code.
A. If the designated space is within 3 feet from the water heater, then this special include the following
i. A dedicated 125 volt, 20 amp electrical receptacle that is connected to the electrical panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within 3 feet from the water heater and accessible to the water heater with no obstructions; and
ii. Both ends of the unused conductor shall be labeled with the word "spare" and be electrically isolated; and
iii. A reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit in A above and labeled with the words "Future 240V use"; and
iv. A condensate drain that is no more than 2 inches higher than the base of the installed water heater and allows natural draining without pump assistance.
B. If the designated space is more than 3 feet from the water heater, then this special include the following
i. A dedicated 240 volt branch circuit shall be installed within 3 feet from the designated space. The branch circuit shall be rated at 30 amps minimum. The blank cover She by identified as "240V ready; and
ii. The main electrical service panel shall have a reserve space to allow for the installation of a double pole circuit breaker for a future HPWH installation. The reserve space shall be permanently marked as "For Future 240V use; and
iii. Either a dedicated cold water supply, or the cold water supply shall pass through the designated HPWH location just before reaching the gas or propane water heater; and
iv. The hot water supply pipe coming out of the gas or propane water heater shall be routed first through the designated HPWH location before serving any fixtures; and
v. The hot and cold piping at the designated HPWH location shall be exposed and readily accessible for future installation of an HPWH; and
vi. A condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance.
2. Water heating recirculation loops serving multiple dwelling units shall meet the requirements of Section 110.3(c)4.
3. Solar water-heating systems and collectors shall be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.
4. Instantaneous water heaters with an input rating greater than 6.8 kBTU/hr (2kW) shall meet the requirements of Section 110.3(c)6.
(o) **Requirements for ventilation and indoor air quality.** All dwelling units shall meet the requirements of ASHRAE Standard 62.2. Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in Section 150.0(o)1 below. All dwelling units shell comply with Section 150.0(o)2 below.
<u>Exception to Section 150.0(o)</u> The following sections of ASHRAE Standard 62.2 shall not be required for compliance Section 4.1.1 Section 4.1.2 Section 4.1.4 Section 4.3 Section 4.6 Section 5 Section 6.1.1 Section 6.5.2 and Normative Appendix A.
1. Amendments to ASHRAE 62.2 requirements.
A. **Window operation.** Window operation is not a permissible method of providing the dwelling unit ventilation airflow specified in Section 150.0(o)1C below.
B. **Central fan integrated (CFI) ventilation systems.** CFI ventilation systems shall meet the following requirements.
i. Continuous operation prohibition. Continuous operation of a dwelling unit's central forced air system air handler's used in CFI ventilation systems is not a permissible method of providing the whole-dwelling unit ventilation airflow required in Section 150.0(o)1C.
ii. Outdoor air damper(s). A motorized damper(s) shall be installed on the connected ventilation duct(s) of CFI systems that prevents all airflow into or out of the space-conditioning duct system when the damper(s) is closed.
iii. Damper control. The required motorized damper(s) shall be controlled to be in an open position when outdoor air ventilation is required for compliance, and shall be in the closed position when ventilation air is not required. The damper(s) shall be closed whenever the space-conditioning system air handling unit is not operating. If the outdoor airflow for the CFI ventilation system is fan-powered, then the outdoor air fan shall not operate when they required motorized damper(s) on the outdoor air ventilation duct(s) is closed.
iv. Variable ventilation. CFI ventilation systems shall incorporate controls that track outdoor air ventilation run time, and either open or close the required motorized damper(s) depending on whether or not outdoor air ventilation is required for compliance with Section 150.0(o)1C. During periods when comfort conditioning is not called for by the space-conditioning thermostat, the CFI ventilation system controls shall operate the space-conditioning system central fan and outdoor air damper(s) when necessary to ensure compliance with the minimum outdoor air ventilation required by Section 150.0(o) in accordance with applicable variable mechanical ventilation methods specified an ASHRAE 62.2, Section 4.5.
C. **Whole dwelling unit mechanical ventilation for single family detached and townhouses.** Single-family, detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces shall have mechanical ventilation airflow as specified in Subsections. i, ii, and iii.
D. **Air filtration.** Air filtration shall conform to the specifications in Section 150.0(m)12. Compliance with ASHRAE 62.2, Sections 6.7 (Minimum Filtration) and 6.7.1 (Filter Pressure Drop) shall not be required.
E. **Reserved.**
F. **Reserved.**
G. **Local mechanical exhaust.** A local mechanical exhaust system shall be installed in each kitchen and bathroom. Systems shall be rated for airflow in accordance with ASHRAE 62.2, Section 7.1.
i. Non-enclosed kitchens shall have a demand-controlled mechanical exhaust system meeting the requirements of Section 150.0(o)1Giii.
ii. Enclosed kitchens and all bathrooms shall have either one of the following alternatives a or b
a. A demand-controlled mechanical exhaust system meeting the requirements of Section 150.0(o)1Giii.
b. A continuous mechanical exhaust system meeting the requirements of Section 150.0(o)1Giv.
iii. Demand-controlled mechanical exhaust. A local mechanical exhaust system shall be designed to be operated as needed.
a. Control and operation. Demand-controlled mechanical exhaust systems shall be provided with at least one of the following controls
1. A readily accessible occupant-controlled ON/OFF control.
2. An automatic control that does not impede occupant ON control.
b. Ventilation rate and capture efficiency. The system shall meet or exceed either the minimum airflow in accordance with Table 150.0-E, or the minimum capture efficiency in accordance with Table 150.0-E, and table 150.0-G. Capture efficiency rating shall be determined in accordance with ASTM E3087 and listed in a product directory approved by the Energy Commission.
iv. Continuous mechanical exhaust. A mechanical exhaust system shall be installed to operate continuously. The system may be part of a balanced mechanical ventilation system.
a. Control and operation. A manual ON-OFF control shall be provided for each continuous mechanical exhaust system. The system shall be designed to operate during all occupiable hours. The ON-OFF control shall be accessible to the dwelling unit occupant.
b. Ventilation rate. The minimum delivered ventilation shall be at least the amount indicated in Table 150.0-F during each hour of operation.
v. Airflow measurement of local mechanical exhaust by the system installer. The airflow required by Section 150.0(o)1G is the quantity of indoor air exhausted by the ventilation system as installed in the dwelling unit. When the vented range hood utilizes a capture efficiency rating to demonstrate compliance with Section 150.0(o)1G iib, the airflow listed in the approve directory corresponding to the compliant capture efficiency rating point shall be met by the installed system. The as-installed airflow shall be verified by the system installer to ensure compliance by use of either subsection a or b below
a. The system installer shell measure the airflow by using a flow hood, flow grid or other airflow measuring device at the mechanical ventilation fan's inlet terminals/grilles or outlet terminals/grilles in accordance with the procedures in Reference Residential Appendix, RA3.7.
b. As an alternative to performing an airflow measurement of the system as installed in the dwelling unit, compliance may be demonstrated by installing an exhaust fan and duct system that conforms to the specifications of Table 150.0-H. Visual inspection, shell verify, the installed system conforms to the requirements of Table 150.0-H. When using Table 150.0-H for demonstrating compliance, the airflow rating shall be greater than or equal to the value required by Section 150.0(o)1G at a static pressure greater than or equal to 0.25 in. of water (62.5 Pa). When a vented range hood utilizes a capture efficiency rating to demonstrate compliance with Section 150.0(o)G iib, a static pressure greater than or equal to 0.25 in. of water at the rating point shall not be required, and the airflow listed in the approved rectory corresponding to the complaint capture efficiency rating point shall be applied to Table 150.0-H. for determining compliance. Use of table 150.0-H is limited to ventilation systems that conform to all of the following three specifications
1. Total duct length is less than or equal to 25 feet (8 m),
2. Duct system has no more than three elbows, and
3. Duct system has exterior termination fitting with a hydraulic diameter greater than or equal to the minimum duct diameter and not less than a hydraulic diameter of the fan outlet.
vi. Sound ratings for local mechanical exhaust. Local mechanical exhaust systems shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2 at no less than minimum airflow rate required by Section 150.0(o)1G.
<u>Exception to Section 150.0(o)1Gvi</u> Kitchen range hoods may be rated for sound at no less than 100 cfm at a static pressure determined at working speed as specified in HVI 916 Section 7.2.
H. Airflow measurement of whole-dwelling unit ventilation. The airflow required by Section 150.0(o)1C is the quantity of outdoor ventilation air supplied or indoor air exhausted by the mechanical ventilation system as installed and shall be measured by using a flow hood, flow grid or other airflow measuring device at the mechanical ventilation fan's inlet terminals/grilles or outlet terminals/grilles in accordance with procedures in Reference Residential Appendix RA3.7. Balanced mechanical ventilation system airflow shall be the average of the supply fan and the exhaust fan flows.
I. Sound ratings for whole-house dwelling unit ventilation systems. Whole-dwelling unit ventilation systems shall be rated for sound in accordance with section 7.2 of ASHRAE 62.2 no less than the minimum airflow rate required by section 150.0(o)1C.
J. Label for whole-dwelling unit ventilation system on-off control. Compliance with ASHRAE 62.2, Section 4.4 (Control and Operation) shall require manual ON-OFF control switches associated with whole-dwelling unit ventilation systems to have a label clearly displaying the following text, or equivalent text "This switch controls the indoor air quality ventilation for the home. Leave switch in the 'on' position at all times unless the outdoor air quality is very poor."
K. Combustion air and compensating outdoor or make-up air.
i. All dwelling units, shell conformed to the applicable requirements, specified in California Mechanical Code, Chapter 7, Combustion Air.
ii. All dwelling units shell conform to the requirements in ASHRAE 62.2, Section 6.4. Combustion and Solid-Fuel-Burning Appliances.
2. **Field verification and diagnostic testing.**
A. Whole-dwelling unit verification airflow performance. The whole-dwelling unit ventilation airflow required by Section 150.0(o)1C shall be confirmed through field verification and diagnostic testing in accordance with the applicable procedures specified in Reference Residential Appendix RA3.7. Balanced mechanical ventilation, system airflow shall be the average of the supply fan and exhaust fan flows. Ventilation airflow of systems with multiple operating modes shall be tested in all modes designed to comply with the required of insulation airflows.
B. Kitchen local mechanical exhaust-vented range hoods. Vented range hoods installed to comply with local mechanical exhaust requirements, specified in section 150.0(o)1G shall be field verified in accordance with procedures in Reference Residential Appendix RA3.7.4.3 to confirm the model is rated by HVI or AHAM to comply with the following requirements
i. The minimum ventilation air flow rate, as specified by Section 150.0(o)1G, or alternatively the minimum capture efficiency as specified by Section 150.0(o)1G.
ii. The maximum sound rating as specified in section 150.0(o)1Gvi.
C. Heat recovery ventilation (HRV) and energy recovery ventilation (ERV) system fan efficacy. Systems with heat or energy recovery serving a single dwelling unit she'll have a fan efficacy of ≤ 1.0 W/cfm as confirmed by HERS field verification in accordance with Reference Appendix RA3.7.4.4.
(q) **Fenestration products.** Fenestration separating conditioned space from unconditioned space or outdoors shall meet the requirements of either Item 1 or 2 below
1. Fenestration, including skylight products, must have a maximum U-factor of 0.45.
<u>Exception 1 to Section 150.0(q)1</u> Up to 10 square feet of fenestration area or 0.5 percent of the condition of floor area whichever is greater is exempt from the maximum U-factor requirement.
<u>Exception 2 to Section 150.0(q)1</u> For dual-glazed greenhouse or garden windows up to 30 square feet of fenestration area is exempt from the maximum U-factor requirement.
2. The area-weighted average U-factor of all fenestration, including skylight products shall not exceed 0.45.
(r) Solar ready buildings. Shall meet the requirements of Section 110.10 applicable to the building project.
(s) Energy storage systems (ESS) ready. All single-family residences that include one or two dwelling units shall meet the following. All electrical components shall be installed in accordance with the California Electrical Code.
1. At least one of the following shall be provided
A. ESS ready interconnection equipment with a minimum back up capacity of 60 amps and a minimum of 4 ESS-supplied branch circuits, or
B. A dedicated raceway from the main service to a panel board (sub-panel) that supplies the branch circuits in Section 150.0(s)2. All branch circuits are permitted to be supplied by the main service panel prior to the installation of an ESS. The trade size of the raceway shall be not less than 1 inch. The panel board that supplies, the branch circuits (sub-panel) must be labeled "Sub-panel shall include all backed-up load circuits".
2. A minimum of four branch circuits shall be identified and have their source of supply collected at a single panel board suitable to be supplied by the ESS. At least one circuit shall supply the refrigerator, one lighting circuit shall be located near the primary egress, and at least one circuit shall supply a sleeping room receptacle outlet.
3. The main panel board shall have a minimum busbar rating of 225 amps.
4. Sufficient space shall be reserved to allow future installation of a system isolation equipment/transfer switch within 3 feet of the main panel board. Raceways shall be installed between the panel board in the system isolation equipment/transfer switch location to allow the connection of back up power source.
(t) Heat pump space heater ready. Systems using gas or propane furnace to serve individual dwelling units shall include the following
1. A dedicated to 40 volt branch circuit wiring shall be installed within 3 feet from the furnace and accessible to the furnace with no obstructions. The branch circuit conductors shall be rated at 30 amps minimum. The blank cover shall be identified as "240V ready". All electrical components shall be installed in accordance with the California Electrical Code.
2. The main electrical service panel shall have a reserve space to allow for the installation of a double pole circuit breaker for a future heat pump space heater installation. The reserve space shall be permanently marked as "For Future 240V use".
(u) Electric cooktop ready. Systems using gas or propane cooktop to serve individual dwelling units shall include the following
1. A dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the cooktop and accessible to the cooktop with no obstructions. The branch circuit conductors shall be rated at 50 amps minimum. The blank cover Shelby identified as "240V ready". All electrical components shall be installed in accordance with the California Electrical Code.
2. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric cooktop installation. The reserved space shall be permanently marked as "For Future 240V use".
(v) Electric clothes dryer ready. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units shall include the following
1. A dedicated 240 volt branch circuit shall be installed within 3 feet from the clothes dryer location and accessible to the clothes dryer with no obstructions. The branch circuit conductors shall be rated at 30 amps minimum. The blank cover She by identified as "240V ready". All electrical components shall be installed in accordance with the California Electrical Code.
2. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric clothes dryer installation. The reserved space shall be permanently marked as "For Future 240V use".

SECTION 150.1: PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES FOR SINGLE-FAMILY RESIDENTIAL BUILDINGS

(a) Basic Requirements. Single-family residential buildings shall meet all of the following
1. The applicable requirements of Sections 110.0 through 110.10.
2. The applicable requirements of Section 150.0 (mandatory features).
3. Either the performance standards or the prescriptive standards set forth in this section for the climate zone in which the building is located. Climate zones are shown in Reference Joint Appendix JA2 -Weather/Climate Data.
<u>Exception to Section 150.1(a)3</u> If a single conglomerate subdivision or tract falls in more than one climate zone all buildings in the subdivision or tract may be designed to meet the performance or prescriptive standards for the climate zone that contains 50 percent or more of the dwelling units.
Note The Commission periodically updates, publishes, and makes available to interested persons and local enforcement agencies precise descriptions of the climate zones, which is available in Reference Joint Appendix JA2-Weather/Climate Data.
Note The requirements of Sections 150.0(a) through 150.0(r) apply to newly constructed buildings. Sections 150.2(a) and 150.2(b) specify which requirements of Sections 150.1(a) through 150.1(c) that apply to additions or alterations.
(b) Performance standards. A building complies with the performance standard if the energy consumption calculated for the proposed design building is no greater than the energy budget calculated for the standard design building using Commission-certified compliance software as specified by the Alternative Calculation Methods Approval Manual.
1. The Energy Budget for newly constructed buildings is expressed in terms of the Energy Design Ratings, which are based on source energy and time-dependent valuation (TDV) energy. The Energy Design Rating 1 (EDR1) is based on source energy. The Energy Design Rating 2 (EDR2), is based on TDV energy and has two components, the Energy Efficiency Design Rating, and the Solar Electric Generation and Demand Flexibility Design Rating. The total Energy Design Rating shall account for both the Energy Efficiency Design Rating and the Solar Electric Generation and Demand Flexibility Design Rating. The proposed building shall separately comply with the Source Energy Design Rating, Energy Efficiency Design Rating and Total Energy Design Rating.
<u>Exception to Section 150.1(b)1</u> A community shared solar electric generation system or other renewable electric generation system or community shared battery storage system which provides dedicated power utility energy reduction credits or payments for energy bill reduction to the permitted building and is approved by the Energy Commission as specified in Title 24 Part 1 Section 10-115 may offset part or all of the solar electric generation system and demand flexibility Energy Design Rating required to comply with the standards as calculated according to methods established by the Commission in the Residential ACM Reference Manual.
2. Additions and alterations to existing buildings. The energy budget for additions and alterations is expressed in terms of TDV energy.
3. Compliance demonstration requirements for performance standards.
A. Certificate of compliance and application for a building permit. The application for a building permit shall include documentation pursuant to Sections 10-103(a)1 and 10-103(a)2 which demonstrates, using an approved calculation method, that the building has been designed so that its Energy Efficiency Design Rating and the total EDR meets or exceeds the standard design EDR for the applicable climate zone.
<u>Exception to Section 150.1(b)3A</u> Multiple orientation. A permit applicant may demonstrate compliance with the energy budget requirements of Section 150.1(a) and (b) for any orientation of the same building model if the documentation demonstrates that the building model with its proposed designs and features would comply in each of the four cardinal orientations.
B. Field verification. When performance of installed features, materials, components, manufactured devices and systems above the minimum specified in Section 150.1(c) is necessary for the building to comply with Section 150.1(b), or is necessary to achieve a more stringent local ordinance, field verification shall be performed in accordance with the applicable requirements in the following subsections, and the results of the verification(s) shall be documented on applicable certificates of installation pursuant to Section 10-103(a)3, and applicable certificates of verification pursuant to Section 10-103(a)5.
i. EER/EER2/SEER/SEER2/CEER/HSPF/HSPF2 Rating. When performance compliance requires installation of a space-conditioning system with a rating that is greater than the minimum rating required by Table 150.1-A or specified for the standard design, the installed system shall be field verified in accordance with the procedures specified in the applicable sections of Reference Residential Appendix RA3.4.
ii. Variable capacity heat pump (VCHP) compliance option. When performance compliance requires installation of a heat pump system that meets all the requirements of the VCHP compliance option specified in the ACM Reference Manual, the system shall be field verified in accordance with the procedures in Reference Residential Appendix, RA3.4.4.3.
iii. Low leakage air handler. When performance compliance requires installation of a low-leakage air handling unit that meets the qualifications in Reference Joint Appendix JA9, the installed air-handling unit shall be Held verified in accordance with the procedures specified in Reference Residential Appendix RA3,1.4.3.9.
iv. Reserved.
v. Heat pump-rated heating capacity. When performance compliance requires installation of a heat pump system, the heating capacity values at 47°F and 17°F shall be field verified in accordance with the procedures specified in Reference Residential Appendix RA3.4.
vi. Whole-house fan. When performance compliance requires installation of a whole-house fan, the whole-house fan ventilation airflow rate and fan efficacy shall be field verified in accordance with the procedures in Reference Residential Appendix RA3.9.
vii. Central fan ventilation cooling system. When performance compliance requires installation of a central fan ventilation cooling system, the installed system shall be field verified in accordance with the procedures in Reference Residential Appendix RA3.3.4.
viii. Building enclosure leakage. When performance compliance requires a building enclosure leakage rate that is lower than the standard design, the building enclosure shall be field verified in accordance with the procedures in Reference Residential Appendix RA3.8.
ix. Quality Insulation Installation (QII). When performance compliance requires field verification of QII, the building insulation system shall be field verified in accordance with the procedures in Reference Residential Appendix RA3.5.
(c) Prescriptive Standards/Component Packages. Buildings that comply with the prescriptive standards, Shelby designed, constructed and equipped to meet all of the requirements for the appropriate climate zone shown in the table 150.1-A. end Table 150.1-A, an NA (not allowed) means that feature is not permitted in a particular climate zone, and an NR (no requirement) means that there is no prescriptive requirement for that feature in a particular climate zone. Installed components show me the following requirements
1. **Insulation.**
A. Roof and ceiling insulation shall be installed in a ventilated attic with an R-value equal to or greater than that shown in Table 150.1-A meeting Option ii or iii below.
i. Option A Reserved.
i. Option B A minimum R-value of insulation installed between the roof rafters in contact with the roof deck and an additional layer of ceiling insulation located between the attic and the conditioned space when meeting Section 150.1(c)9A; or
ii. Option C A minimum R-value of ceiling insulation located between the attic and the conditioned space when meeting Section 150.1(c)9B.
Note Low-rise residential single family buildings with the ducts and air handler located in the conditioned space, as specified by Section 150.1(c)9B, need only comply with insulation requirements of Option C.
B. Walls.
i. Framed exterior walls shall be insulated such that the exterior wall has an assembly U-factor equal to or less than that shown in Table 150.1-A. The U-factors shown are maximum U-factors for the exterior wall assembly.
i. Mass walls above grade and below grade shall be insulated such that the wall has an assembly U-factor equal to or less than that shown in Table 150.1-A, or walls shall be insulated with continuous insulation that has an R-value equal to or greater than that shown in Table 150.1-A. "Interior" denotes continuous insulation installed on the inside surface of the wall, and "exterior" denotes continuous insulation installed on the outside surface of the wall.
ii. Other unframed exterior walls, excluding mass walls, shall meet the requirements for framed walls shown in Table 150.1-A.
C. Raised-floors shall be insulated such that the floor assembly has an assembly U-factor equal to or less than, shown in Table 150.1-A, or shall be insulated between wood framing with insulation having an R-value equal to or greater than that shown in Table 150.1-A.
<u>Exception to Section 150.1(c)1C</u> Raised-floor insulation may be omitted if the foundation walls are insulated to meet the wall insulation minimums shown in Table 150.1-A and a vapor retarder is placed over the entire floor of the crawl space and the vents are fitted with automatically operated louvers and the requirements of Reference Residential Appendix RA 4.5.1 are met.
D. Slab floor perimeter insulation shall be installed with a U-factor equal to or less than, or R-value equal to or greater than, shown in Table 150.1-A. The minimum depth of concrete-slab floor perimeter insulation shall be 16 inches or the depth of the footing of the building, whichever is less.
<u>Exception to Section 150.1(c)1</u> The insulation requirements of Table 150.1-A may also be met by ceiling roof deck wall or floor assemblies that meet the required maximum U-factors using a U-factor calculation method that considers the thermal effects of all elements of the assembly and is approved by the executive director.
E. All buildings shall comply with the quality insulation installation (QII) requirements shown in Table 150.1-A. When QII is required, insulation installation shall meet the criteria specified in Reference Appendix RA3.5.
2. **Radiant Barrier.** A radiant barrier required in Table 150.1-A, shall meet the requirements specified in Section 110.8(j), and shall meet the installation criteria specified in the Reference Residential Appendix RA4.
3. **Fenestration.**
A. Installed fenestration products, including glazed doors shall have an area-weighted average U-factor and Solar Heat Gain Coefficient (SHGC) meeting the applicable fenestration value in Table 150.1-A and shall be determined in accordance with Sections 110.6(a)2 and 110.6(a)3.
<u>Exception 1 to Section 150.1(c)3A</u> For each dwelling unit up to 3 square feet of new glazing area installed in doors and up to 3 square feet of new tubular skylights area with dual-pane diffusers shall not be required to meet the U-factor and SHGC requirements of Table 150.1-A.
<u>Exception 2 to Section 150.1(c)3A</u> For each dwelling unit up to 16 square feet of new skylight area with a maximum U-factor of 0.55 and a maximum SHGC of 0.30.
<u>Exception 3 to Section 150.1(c)3A</u> For fenestrat on containing chromogenic type glazing
i. The lower-rated labeled U-factor and SHGC shall be used with automatic controls to modulate the amount of solar gain and light transmitted into the space in multiple steps in response to daylight levels or solar intensity.
ii. Chromogenic glazing shall be considered separately from other fenestration and
iii. Area-weighted averaging with other fenestration that is not chromatic shall not be permitted and shall be determined in accordance with Section 110.6(a).
<u>Exception 4 to Section 150.1(c)3A</u> For dwelling units containing unrated site-built fenestration that meets the maximum area restriction the U-factor and SHGC can be determined in accordance with the Nonresidential Reference Appendix NA6 or use default values in Table 116-A and Table 116-B.
B. The maximum total fenestration area shall not exceed the percentage of conditioned floor area CFA as indicated in Table 150.1-A. Total fenestration includes skylights and west-facing glazing.
C. The maximum west-facing fenestration area shall not exceed the percentage of conditioned floor area as indicated in Table 150.1-A. West-facing fenestration area includes skylight tilted in any direction when the pitch is less than 1 12.
4. **Shading.** Where Table 150.1-A requires a maximum solar heat gain coefficient (SHGC), the requirements shall be met by one of the following
A. Complying with the required SHGC pursuant to Section 150.1(c)3A, or
B. An exterior operable shading louver or other exterior shading device that meets the required SHGC; or
C. A combination of Item A and B to achieve the same performance as achieved in Section 150. 1(c)3A.
D. For South-facing glazing only, optimal overhangs shall be installed so that the South-facing glazing is fully shaded at solar noon on August 21 and substantially exposed to direct sunlight at solar noon on December 21.
E. Exterior shading devices must be permanently secured with attachment or fasteners that are not intended for removal. Exception to Section 150.1(c)4E: Where the California Building Code (CBC) requires emergency egress or where compliance would conflict with health and safety regulations.
5. **Doors.** Installed swinging door products separating conditioned space from adjacent unconditioned space, but not including glazed door products, shall have an area-weighted average U-factor no greater than the applicable door value in Table 150.1-A or B and shall be determined in accordance with Sections 110.6(a)2. Glazed door products are treated as fenestration products in Sections 150.1(c)3 and 150.1(c)4.
<u>Exception to Section 150.1(c)5</u> Swinging doors between the garage and the conditioned space that are required to have fire protection are not required to meet the applicable door value in Table 150.1-A.
6. **Heating System Type.** Heating system types shall be installed as required in Table 150.1-A. for Climate Zones 3, 4, 13 and 14, the space-conditioning system shall be a heat pump, or shall meet the performance compliance requirements of Section 150.1(b)1.
<u>Exception to Section 150.1(c)6</u> A supplemental heating unit may be installed in a space served directly or indirectly by a primary heating system provided that the unit thermal capacity does not exceed 2 kW or 7,000 Btu/hr. and is controlled by a time-limiting device not exceeding 30 minutes.
7. **Space heating and space cooling.** All space heating and space cooling equipment shall comply with minimum appliance efficiency regulation as specified in Sections 110.0 through 110.2 and meet all applicable requirements of Section 150.0 and 150.1(c)7.
A. Refrigerant Charge. When refrigerant charge verification or fault indicator display is shown as required by Table 150.1-A, the system shall comply with either Table 150.1(c)7Ai or 150.1(c)7Aii
i. Air-cooled air conditioners and air-source heat pumps, including but not limited to ducted split systems, ducted packaged systems, small duct high velocity systems and mini-split systems, shall comply with Subsections a, b and c, unless the system is of a type that cannot be verified using the specified procedures
a. Have measurement access holes (MAH), installed according to the specifications in Reference Residential Appendix Section RA3.2.2.3; and
<u>Exception to Section 150.1(c)7Aia</u> Systems that cannot conform to the specifications for hole location in Reference Residential Appendix Figure RA3.2-1 shall not be required to provide holes as described in Figure RA3.2-1.
b. System airflow rate in accordance with subsections I or II shall be confirmed through field verification and diagnostic testing in accordance with all applicable procedures specified in Reference Residential Appendix Section RA3.3 or an approved alternative procedure as specified by Section RA1; and
I. For small duct high velocity systems the system airflow rate shall be greater than or equal to 250 cfm per ton; or
II. For all other air-cooled air conditioner or air-source heat pump systems, the system airflow rate shall be greater than or equal to 350 cfm per ton.
<u>Exception to Section 150.1(c)7Aib</u> Standard ducted systems without zoning dampers may comply with the minimum airflow rate by meeting the applicable requirements in Table 150.0-B or 150.0-C as confirmed by field verification and diagnostic testing in accordance with the procedures in Reference Residential Appendix Section 150.0(m)12D for the system air filter device(s) shall conform to the requirements given in Tables 150.0-B and 150.0-C.
c. The installer shall charge the system according to manufacturer's specifications. Refrigerant charge shall be verified according to one of the following options, as applicable.
<u>Exception 1 to Section 150.1(c)7Ac</u> When the outdoor temperature is less than 55°F and the installer utilizes the weigh-in charging procedure in Reference Residential Appendix Section RA3.2.3.1 to verify the refrigerant charge the installer may elect to utilize the HERS Rater verification procedure in Reference Residential Appendix Section RA3.2.3.2. If the HERS Rater verification procedure in Section RA3.2.3.2 is used for compliance the system's thermostat shall conform to the specifications in Reference Joint Appendix JA5. Ducted systems shall comply with minimum system airflow rate requirement in Section 150.1(c)7Aib.
I. The installer and rater shall perform the standard charge procedure as specified by Reference Residential Appendix Section RA3.2.2, or an approved alternative procedure as specified by Section RA1; or
II. The system shall be equipped with a fault indicator display (FID) device that meets the specifications of Reference Joint Appendix JA6. The installer shall verify the refrigerant charge and FID device in accordance with the procedures in Reference Residential Appendix Section RA3.4.2. The HERS Rater shall verify FID device in accordance with the procedures in Section RA3.4.2; or
III. The installer shall perform the weigh-in charging procedure as specified by Reference Residential Appendix Section RA3.2.3.1 provided the system is of a type that can be verified using the Section RA3.2.2 standard charge verification procedure and Section RA3.3 airflow rate verification procedure or approved alternatives in Section RA1. The HERS Rater shall verify the charge using Sections RA3.2.2 and RA3.3 or approved alternatives in Section RA1.
ii. Air-cooled air conditioners and air-source heat pumps, including but not limited to ducted split systems, ducted packaged systems, small duct high velocity systems, and mini-split systems, which are of a type that cannot comply with the requirements of Section 150.1(c)7Ai shall comply with Subsections a and b, as applicable.
I. The installer shall confirm the refrigerant charge using the weigh-in charging procedure specified in Reference Residential Appendix Section RA3.2.3.1, as verified by a HERS Rater according to the procedures specified in Reference Residential Appendix Section RA3.2.3.2.; and
II. Systems that utilize forced air ducts shall comply with the minimum system airflow rate requirement in Section 150.1(c)7Aib provided the system is of a type that can he verified using the procedures in Section RA3.3 or an approved alternative procedure in Section RAI.
<u>Exception to Section 150.1(c)7A</u> Packaged systems for which the manufacturer has verified correct system refrigerant charge prior to shipment from the factory are not required to have refrigerant charge confirmed through field verification and diagnostic testing. The installer of these packaged systems shall certify on the Certificate of Installation that the packaged system was pre-charged at the factory and has not been altered in a way that would affect the charge. Ducted systems shall comply with the minimum system airflow rate requirement in Section 150.1(c)7Aib provided that the system is of a type that can be verified using the procedure specified in Section RA3.3 or an approved alternative in Section RA1.
8. **Domestic Water Heating Systems.** Water-heating-systems shall meet the requirements of either A, B or C, or shall meet the performance compliance requirements of section 150.1(b)1. For recirculation distribution systems, only demand recirculation systems with manual on/off control as specified in the Reference Appendix RA4.4.9 shall be used
A. A single 240 volt heat pump water heater (HPWH). The storage tank shall be located in the garage or conditioned space. In addition, meet the following
i. A compact hot water distribution system that is field verified as specified in the Reference Appendix RA4.4.16 in Climate Zones 1 and 16; and
ii. A drain water heat recovery system that is field verified as specified in the Reference Appendix RA3.6.9 in Climate Zone 16.
B. A single, 240 volt HPWH that meets the requirements of NEEA Advanced Water Heater specification Tier 3 or higher. In addition, for Climate Zone 16, a drain water heat recovery system that is field verified as specified in Reference Appendix RA3.6.9 and the storage tank shall be located in the garage or conditioned space.
C. A solar water-heating system with electric back up meeting the installation criteria specified in Reference Residential Appendix RA4 and with a minimum annual solar savings fraction of 0.7.
<u>Exception 1 to Section 150.1(c)8</u> For Climate Zones 3, 4, 13 and 14 gas or propane instantaneous water heater with an input of 200,000 Btu/hr. or less and no storage tank may be installed.
NOTE the space conditioning system shall be a heat pump as specified in Section 150.1(c)6.
<u>Exception 2 to Section 150.1(c)8</u> An instantaneous electric water heater with point of use distribution as specified in RA4.4.5 may be installed for new dwelling units with a conditioned floor area of 500 square feet or less.
<u>Exception 3 to Section 150.1(c)8</u> A 120 volt HPWH may be installed in place of a 240 volt HPWH for new dwelling unit with one bedroom or fewer.
9. **Space conditioning distribution systems.** All space conditioning systems shall meet all applicable requirements of A or B below
A. High performance attics. Air handlers or ducts are allowed to be in ventilated attic spaces when the roof and ceiling insulation levels meet Option B in Table 150.1-A. Duct insulation levels shall meet the requirements in Table 150.1-A.
B. Duct and air handlers located in conditioned space. Duct systems and air handlers of HVAC systems shall be located in conditioned space, and confirmed by field verification and diagnostic testing to meet the criterion of Reference Residential Appendix Section RA3.1.4.3.8. Duct insulation shall meet the requirements in Table 150.1-A.
Note Gas heating appliances installed in conditioned space must meet the combustion air requirements of the <u>California Mechanical Code</u> Chapter 7, as applicable.
10. **Central fan integrated ventilation systems.** Central forced air system fans used to provide outside air, shall have an air-handling unit fan efficacy less than or equal to the maximum W/CFM specified in A or B. The airflow rate and fan efficacy requirements in this section shall be confirmed through field verification and diagnostic testing in accordance with all applicable procedures specified in Reference Residential Appendix RA3.3. Central fan integrated ventilation systems shall be certified to the Energy Commission as intermittent ventilation systems a specified in Reference Residential Appendix RA3.7.4.2.
A. 0.45 W/cfm for gas furnace air-handling units; or
B. 0.58 W/cfm for air-handling units that are not gas furnaces.
C. 0.62 W/cfm for small-duct high-velocity air-handling units.
<u>Exception to Section 151.0(c)10A</u> Gas furnace air-handling units manufacturer prior to July 3 2019 shall comply with a fan efficacy value less than or equal to 0.58 w/cfm as confirmed by field verification and diagnostic testing in accordance with the procedures given in Reference Residential Appendix RA3.3.
11. **Roofing products.** All roofing products shall meet the requirements of Section 110.8 and the applicable requirements of Subsection A or B
A. Single-family residential buildings with steep-sloped roofs in climate zones 10 through 15 shall have a minimum aged solar reflectance of 0.20 and a minimum thermal emittance of 0.75, or a minimum SRI of 16.
B. Single-family residential buildings with low-sloped roofs, in climate zones 13 and 15 shall have a minimum aged solar reflectance of 0.63 and a minimum thermal emittance of 0.75 or a minimum SRI of 0.75.
<u>Exception 1 to Section 150.1(c)11</u> Building integrated photovoltaic panels and building integrated solar thermal panels are exempt from the minimum requirements for aged solar reflectance and thermal emittance or SRI.
<u>Exception 2 to Section 150.1(c)11</u> Roof construction that have thermal mass over the roof membrane with a weight of at least 25 lb/ft2 are exempt from the minimum requirements for aged solar reflectance and thermal emittance or SRI.
12. **Ventilation cooling.** Single-family homes shall comply with the whole-house fan (WHF) requirements shown in Table 150.1-A. When a WHF is required, comply with Subsections A, B, and C below
A. Have installed one or more WHFs whose total air flow cfm is equal to or greater than 1.5 cfm/ft2 of conditioned floor area. Airflow cfm for WHFs shall be determined based on the airflow listed in the Home Ventilating Institute Certified Products Directory.
B. Have at least 1 square foot of attic vent free area for each 750 cfm of rated whole house fan airflow cfm, or if the manufacturer has specified a greater free vent area, the manufacturers' free vent area specifications.
<u>Exception to Section 150.1(c)12B</u> WHFs that are directly vented outside.
C. Provide homeowners who have WHFs with a one page "How to operate your whole-house fan" informational sheet.
<u>Exception to Section 150.1(c)12C</u> New dwelling units with a conditioned floor area of 500 square feet or less shall not be required to comply with the WHF requirements.
13. **HVAC system bypass ducts.** Bypass ducts that deliver conditioned supply air directly to the space conditioning system return duct airflow shall not be used.
14. **Photovoltaic Requirements.** All single-family residential buildings shall have a newly installed photovoltaic (PV) system or newly installed PV modules meeting the minimum qualification requirements specified in Joint Appendix JA11. The annual electrical output of the PV system shall be no less than the smaller of a PV system size determined using an Equation 150.1-C or the maximum PV system size that can be installed on the building's solar access roof area. (SARA).
A. SARA includes the area of the building's roof space capable of structurally, supporting a PV system, and the area of all roof space on covered parking areas, carports, and all other newly construction structures on the site that are compatible with supporting a PV system for Title, 24, Part 2, Section 1511.2.
B. SARA does NOT include
i. Any roof area that has less than 70 percent annual solar access. Annual solar access is determined by dividing the total annual solar insolation, accounting for shading obstructions, by the total annual solar insolation if the same area were unshaded by obstructions. For steep slope roofs, only shading from the existing permanent, natural or man-made obstructions that are external to the dwelling, including but not limited to trees, hills, and adjacent structures, shall be considered for annual solar access calculations. For low slope roofs, all obstructions, including those that are external to the dwelling, and obstructions that are part of the building design and elevation, features shall be considered for the annual solar access calculations.
ii. Occupied roof areas as specified by CBC Section 503.1.4.
iii. Roof area that is otherwise not available due to compliance with other building code requirements if confirmed by the Executive Director.
<u>Exception 1 to Section 150.1(c)14</u> for steep slope roof SARA shall not consider roof areas with a northerly azimuth that lies between 300 degrees and 90 degrees from true north. No PV system is required if the SARA is less than 80 contiguous square feet.
<u>Exception 2 to Section 150.1(c)14</u> No PV system is required when the minimum PV system size specified by Section 150.0(c)14 is less than 1.8 kW.
<u>Exception 3 to Section 150.1(c)14</u> Buildings with enforcement-authority-approved roof designs where the enforcement authority determines it is not possible for the PV system including panels modules and components and supports and attachments to the roof structure to meet the requirements of the American Society of Civil Engineers (ASCE) Standard 7-16 Chapter 7 Snow Loads.
<u>Exception 4 to Section 150.1(c)14</u> For buildings that are approved by the local planning department prior to January 1 2020 with mandatory conditions for approval.
a. Shading from roof designs and configurations for steep slope roof designs which are required by the mandatory conditions for approval shall be considered for the annual solar access calculations and
b. Roof areas that are not allowed by the mandatory conditions for approval to have PV's shall not be considered in determining the SARA.
<u>Exception 5 to Section 150.1(c)14</u> PV system sizes determined using equation 150.1(c) may be reduced by 25 percent if installed in conjunction with a battery storage system. The battery storage system shall meet the qualification requirements specified in Joint Appendix JA12 and have a minimum usable capacity of 7.5 kW.

SECTION 150.2: ENERGY EFFICIENCY STANDARDS FOR ADDITIONS AND ALTERATIONS TO EXISTING RESIDENTIAL BUILDINGS

(a) **Additions.** Additions to existing single-family residential buildings shall meet the requirements of Sections 110.0 through 110.9, Sections 150.0(a) through (n), (p) and (q) and either Section 150.2(a)1 or 2.
<u>Exception 1 to Section 150.2(a)</u> Additions of 300 square feet or less are exempt from the roofing requirements of Section 150.1(c)11.
<u>Exception 2 to Section 150.2(a)</u> Existing inaccessible piping shall not require insulation as defined under Section 150(j)1.
<u>Exception 3 to Section 150.2(a)</u> Space-conditioning system. When heating or cooling will be extended to an addition from the existing system(s) the existing heating and cooling equipment need not comply with Part 6. The heating system capacity must be adequate to meet the minimum requirements of CBC Section 1204.1.
<u>Exception 4 to Section 150.2(a)</u> Space-conditioning system ducts. When any length of duct is extended from an existing duct system to serve the addition the existing duct system and the extended duct shall meet the applicable requirements specified in Section 150.2(b)1Di and 150.2(b)1Dii.
<u>Exception 5 to Section 150.2(a)</u> additions 1,000 square feet or less are exempt from the ventilation cooling requirements of section 150.1(c)12.
<u>Exception 6 to Section 150.2(a)</u> Photovoltaic systems as specified in Section 150.1(c)14 are not required for additions.
<u>Exception 7 to Section 150.2(a)</u> Space-heating system. A new or replacement space-heating system serving an addition may be a heat pump or gas heating system.
1. **Prescriptive approach.** Additions to existing buildings shall meet the following additional requirements
A. Additions that are greater than 700 square feet shall meet the requirements of Section 150.1(c), with the following modifications
i. Extensions of existing wood-framed walls may retain the dimensions of the existing walls and shall install cavity insulation of R-15 in a 2x4 framing and R-19 in a 2 x 6 framing.
ii. The maximum allowed fenestration area shall be the greater of 175 square feet or 20 percent of the addition floor area, and the maximum allowed west-facing fenestration area shall be the greater of 70 square feet or the requirements of Section 150.1(c).
iii. When existing siding of a wood framed wall is not being removed or replaced, cavity insulation of R-15 in a 2x4 framing and R-21 in a 2x6 framing shall be installed and continuous insulation is not required.
iv. Additions that consist of the conversion of existing spaces from unconditioned to conditioned space shall not be required to perform the following as part of QII
a. Existing window and door headers shall not be required to be insulated.
b. Air sealing shall not be required when existing air barrier is not being removed or replaced.
B. Additions that are 700 square feet or less shall meet all the requirements of Section 150.1(c), with the following modifications
i. Roof and ceiling insulation in a ventilated attic shall meet one of the following requirements.
a. In Climate Zones 1, 2, 4, and 8 through 16, achieve an overall assembly U-factor not exceeding 0.025. In wood, framed assemblies, compliance with U-factors may be demonstrated by installing insulation with an R-value of R-38 or greater.
b. In Climate Zones 3, and 5 through 7, achieve an overall assembly U-factor not exceeding 0.031. In wood framed assemblies, compliance with U-factors may be demonstrated by installing insulation with an R-value of R-30 or greater.
ii. Radiant barriers shall be installed in Climate Zones 2-15.
iii. Extensions of existing wood-framed walls may retain the dimensions of the existing walls and shall install cavity insulation of R-15 in a 2 x 4 framing and R-21 in a 2 X 6 framing; and
iv. In Climate Zones 2, 4 and 8-15; the maximum allowed west-facing fenestration area shall not be greater than 60 square feet, and shall also comply with either a or b below
a. For additions that are 700 square feet or less but greater than 400 square feet, the maximum allowed fenestration area limit is the greater of 120 square feet or 25 percent of the conditioned floor area of the addition.
b. For additions that are 400 square feet or less, the maximum allowed fenestration area is the greater of 75 square feet or 30 percent of the conditioned floor area of the addition.
v. Quality Insulation Installation (QII) requirements of Section 150.1(c)1E do not apply.
vi. When existing siding of a wood-framed wall is not being removed or replaced, cavity insulation of R-15 in a 2x4 framing and R-21 in a 2x6 framing shall be installed and continuous insulation is not required.
<u>Exception to Section 150.2(a)1B</u> Insulation in an enclosed rafter ceiling shall meet the requirements of Section 150.0.
C. **Mechanical ventilation for indoor air quality.** Additions to existing buildings shall comply with Section 150.0(o) subject to the requirements, specified in Subsections i and ii below.
i. Whole-dwelling unit mechanical ventilation.
a. Dwelling units that meet the conditions in Subsection 1 or 2 below shall not be required to comply with the whole-dwelling unit ventilation airflow specified in Section 150.0(o)1C, 150.0(o)1E or 150(o)1F.
1. Additions to an existing dwelling unit that increase the conditioned floor area of the existing dwelling unit by less than or equal to 1,000 square feet.
2. Junior accessory dwelling units (JADU) that are additions to an existing building.
b. Additions to an existing dwelling unit that increase the conditioned floor area of the existing dwelling unit by more than 1,000 square feet shall have mechanical ventilation airflow in accordance with Section 150.0(o)1C, 150.0(o)1E or 150(o)1F as applicable. Mechanical ventilation airflow rate shall be based on the conditioned floor area of the entire dwelling unit comprised of the existing dwelling unit condition for area plus the addition condition floor area.
c. New dwelling units that are additions to an existing building shall have mechanical ventilation airflow provided in accordance with Section 150.0(o)1C, 150.0(o)1E or 150(o)1F as applicable. The mechanical ventilation air-flow rate shall be based on the condition, floor area of the new dwelling unit.
ii. Local mechanical exhaust. Additions to existing buildings, shell comply with all applicable requirement, specified in Sections 150.0(o)1G and 150.0(o)2.
D. **Water heater.** When a second water heater is installed as part of the addition, one of the following types of water heaters shall be installed
i. A single heat pump water heater. The storage tank she'll not be located outdoors, and shall be placed on an incompressible, rigid, insulated surface with a minimum thermal resistance of R-10. The water heater shall be installed with a communication interface that either meets the requirements of Section 110.12(a) or has an ANSI/CTA-2045-B communication port; or
ii. A single heat pump water heater that meets the requirements of NEEA Advanced Water Heater Specification Tier 3 or higher; or
iii. A gas or propane instantaneous water heater with an input of 200,000 Btu/hr. or less and no storage tank; or
iv. For additions that are 500 square feet or less an instantaneous electric water heater with point of use distribution as specified in RA4.4.5; or
v. A water-heating system determined by the Executive Director to use no more energy than the one specified in item i, ii, iii or iv.
2. **Performance approach.** Performance calculations shall meet the requirements of Section 150.1(a) through (c), pursuant to the applicable requirements in Items A, B and C below.
A. For additions alone. The addition complies if the addition alone meets the energy budgets as specified in Section 150.1(b).
B. Existing plus alteration plus addition. The standard design for existing plus alteration plus addition energy use is the combination of the existing building's unaltered components to remain; existing building altered components that are the more efficient, in TDV energy, of either the existing conditions or the requirements of Section 150.2(b)2; plus the proposed addition's energy use meeting the requirements of Section 150.2(a) 1. The proposed design energy use is the combination of the existing building's unaltered components to remain and the altered components' energy features, plus the proposed energy features of the addition.
<u>Exception to Section 150.2(a)2B</u> Existing structures with a minimum R-11 insulation in framed walls showing compliance with Section 150.2(a)2 are exempt from showing compliance with Section 150.0(c).
C. Mechanical ventilation for indoor air quality. Additions to existing buildings shall comply with Section 150.0(o) subject to the requirements, specified in Subsections i and ii below
i. **Whole dwelling unit mechanical ventilation.**
a. Dwelling units that meet the conditions in Subsection 1 or 2 below shall not be required to comply with the whole-dwelling unit ventilation airflow specifications in Section 150.0(o)1C, 150.0(o)1E, or 150.0(o)1F.
1. Additions to an existing dwelling unit that increase the conditioned floor area of the existing dwelling unit by less than or equal to 1,000 square feet.
2. Junior accessory dwelling units (JADU) that are additions to an existing building.
b. Additions to an existing dwelling unit that increase the conditioned floor area of the existing dwelling unit by more than 1,000 square feet shall have mechanical ventilation airflow in accordance with Section 150.0(o)1C, 150.0(o)1E or 150(o)1F as applicable. The mechanical ventilation airflow rate shall be based on the conditioned floor area of the entire dwelling unit comprised of the existing dwelling unit condition for area plus the addition condition floor area.
c. New dwelling units that are additions to an existing building shall have mechanical ventilation airflow provided in accordance with Section 150.0(o)1C, 150.0(o)1E or 150.0(o)1F as applicable. The mechanical ventilation air-flow rate shall be based on the condition, floor area of the new dwelling unit.
ii. **Local mechanical exhaust.** Additions to existing buildings, shell comply with all applicable requirement, specified in Sections 150.0(o)1G and 150.0(o)2.
(b) **Alterations.** Alterations to existing single-family residential buildings or alterations in conjunction with a change in building occupancy to a single-family residential occupancy shall meet either Item 1 or 2 below.
1. **Prescriptive approach.** The altered component and any newly installed equipment serving the alteration shall meet the applicable requirements of Sections 110.0 through 110.9 and all applicable requirements of Section 150.0(a) through (l), 150.0(m)1 through 150.0(m)10, and 150.0(o) through (q); and
A. **Added fenestration.** Alterations that add vertical fenestration and skylight area shall meet the total fenestration area and west facing fenestration area, U-factor, and solar heat gain coefficient requirements of Section 150.1(c) and Table 150.1-A.
<u>Exception 1 to Section 150.2(b)1A</u> Alterations that add fenestration area of up to 75 square feet shall not be required to meet the total fenestration area and west-facing fenestration area requirements of Section 150.1(c)3B and C.
<u>Exception 2 to Section 150.2(b)1A</u> Alterations that add up to 16 square feet of new skylight area with a maximum U-factor of 0.55 and a maximum SHGC of 0.30 area shall not be required to meet the total fenestration area and west-facing fenestration area requirements of Sections 150.1(c)3B and C.
B. **Replacement fenestration.** New manufactured fenestration products installed to replace existing fenestration products of the same total area shall meet the U-factor and Solar Heat Gain Coefficient requirements of Sections 150.1(c)3A and 150.1(c)4.
<u>Exception 1 to Section 150.2(b)1B</u> Replacement of vertical fenestration no greater than 75 square feet with a U-factor no greater than 0.40 in Climate Zones 1-16 and a SHGC value no greater than 0.35 in Climate Zones 2, 4 and 6-15.
<u>Exception 2 to Section 150.2(b)1B</u> Replaced skylights must meet a U-factor no greater than 0.55 and a SHGC value no greater than 0.30.
Note Glass replaced in an existing sash and frame or sashes replaced in an existing frame are considered repairs, provided that the replacement is at least equivalent too the original in performance.
C. Entirely new or complete replacement space-conditioning systems installed as part of an alteration shall include all the system heating or cooling equipment, including but not limited to condensing unit and cooling or heating coil for split systems; or complete replacement of a package unit; plus entirely new or replacement duct system (Section 150.2(b)1Diia); Entirely new or complete replacement space-conditioning systems shall meet the requirements of Sections 150.0(h), 150.0(i), 150.0(j)1, 150.0(j)2, 150.0(m)1 through 150.0(m)10, 150.0(m)12, 150.0(m)13, 150.1(c)7, 150.2(b)1G and Table 150.2-A.
D. **Altered duct systems duct sealing.** In all climate zones when more than 25 feet of new or replacement space-conditioning system ducts are installed, the ducts shall comply with the applicable requirements of Subsections i and ii below. Additionally, when altered ducts, air-handling units, cooling or heating coils, or plenums are located in garage spaces, the system shall comply with Subsection 150.2(b)1Diic regardless of the length of any new or replacement space-conditioning ducts installed in the garage space.
i. New ducts located in unconditioned space shall meet the applicable requirements of Sections 150.0(m)1 through 150.0(m)10, and the duct insulation requirements of Table 150.2-A, and
i. The altered duct system, regardless of location, shall be sealed as confirmed through field verification and diagnostic testing in accordance with all applicable procedures for duct sealing of altered existing duct systems as specified in the Reference Residential Appendix Section RA3.1, utilizing the leakage compliance criteria specified in Reference Residential Appendix Table RA3.1-2, and conforming to either Subsection a or b below
a. Entirely new or complete replacement duct system. If the new ducts form an entirely new or complete replacement duct system directly connected to the air handler, the duct system shall meet one of the following requirements
I. For single-family dwellings, the measured duct leakage shall be equal to or less than 5 percent of the system air handler airflow as confirmed by field verification and diagnostic testing utilizing the procedures in Reference Residential Appendix Section RA3.1.4.3.1.
II. N/A
b. Extension of an existing duct system. If the new ducts are an extension of an existing duct system, serving single-family or multi-family dwellings, the combined new and existing duct system shall meet one of the following requirements
I. The measured duct leakage shall be equal to or less than 10 percent of nominal system air handler airflow as confirmed by field verification and diagnostic testing utilizing the procedures in Reference Residential Appendix Section RA3.1.4.3.1; or
II. The measured duct leakage to outside shall be equal to or less than 7 percent of nominal system air handler airflow as confirmed by field verification and diagnostic testing utilizing the procedures in Reference Residential Appendix Section RA3.1.4.3.4; or
III. If it is not possible to meet the duct sealing requirements of either Section 1 50.2(b)1Diib1 or 150.2(b)1Diib2, then all accessible leaks shall be sealed and verified through a visual inspection and a smoke test by a certified HERS Rater utilizing the methods specified in Reference Residential Appendix Section RA3.1.4.3.5.
<u>Exception to Section 150.2(b)1Diib</u> Duct sealing. Existing duct systems that are extended which are constructed insulated or sealed with asbestos.
c. Altered ducts and duct system components in garage spaces. When new or replacement space-conditioning ducts, air-handling units, cooling or heating coils, or plenums are located in a garage space, compliance with either I or II below is required.
I. The measured system duct leakage shall be equal to or less than 6 percent of nominal system air handler airflow as determined utilizing the procedures in Reference Residential Appendix Section RA3.1.4.3.1; or
II. All accessible leak located in garage space shall be sealed and verified through a visual inspection and a smoke test by a certified HERS Rater utilizing the methods specified in Reference Residential Appendix RA3.1.4.3.5.
E. **Altered space conditioning system duct sealing.** In all climate zones, when a space-conditioning system serving a single-family or multi-family dwelling is altered by the installation or replacement of space-conditioning system equipment, including replacement of the air handler, outdoor condensing unit of a split system air conditioner or heat pump, or cooling or heating coil, the duct system that is connected to the altered space-conditioning system equipment shall be sealed, as confirmed through field verification and diagnostic testing in accordance with the applicable procedures for duct seal- ing of altered existing duct systems as specified in Reference Residential Appendix Section RA3.1, and the leakage compliance criteria specified in Subsection i, ii, or iii below. Additionally, when altered ducts, air-handling units, cooling, or heating coils, or plenums are located in garage spaces, the system shall comply with Section 150.2(b)1Diic regardless of the length of any new or replacement space-conditioning ducts installed in the garage space.
i. The measured duct leakage shall be equal to or less than 10 percent of system air handler airflow as determined utilizing the procedures in Reference Residential Appendix Section RA3.1.4.3.1; or
i. The measured duct leakage to outside shall be equal to or less than 7 percent of system air handler airflow as determined utilizing the procedures in Reference Residential Appendix Section RA3.1.4.3.4; or
ii. If it is not possible to meet the duct sealing requirements of either Section 150.2(b)1Ei or 150.2(b)1Eii, then all accessible leaks shall be sealed and verified through a visual inspection and a smoke test by a certified HERS Rater utilizing the methods specified in Reference Residential Appendix Section RA3.1.4.3.5.
<u>Exception 1 to Section 150.2(b)1E</u> Duct sealing. Duct systems that are documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Residential Appendix Section RA3.1.
<u>Exception 2 to Section 150.2(b)1E</u> Duct sealing. Duct systems with less than 40 linear feet as determined by visual inspection.
<u>Exception 3 to Section 150.2(b)1E</u> Duct sealing. Existing duct systems constructed insulated or sealed with asbestos.
F. **Altered space conditioning system mechanical cooling.** When a space-conditioning system is an air conditioner or heat pump that is altered by the installation or replacement of refrigerant-containing system components such as the compressor, condensing coil, evaporator coil, refrigerant metering device or refrigerant piping, the altered system shall comply with the following requirements
i. All thermostats associated with the system shall be replaced with setback thermostats meeting the requirements of Section 110.2(c).
i. In Climate Zones 2, 8, 9, 10, 11, 12, 13, 14 and 15, air-cooled air conditioners and air-source heat pumps, including but not limited to ducted split systems, ducted package systems, small high-velocity air systems, and mini-split systems shall comply with Subsections a and b, unless the system is of a type that cannot be verified using the specified procedures. Systems that cannot comply with the requirements of Section 150.2(b)1Fii shall comply with Section 150.2(b) 1Fiii.
<u>Exception to Section 150.2(b)1Fii</u> Entirely new or complete replacement packaged systems for which the manufacturer has verified correct system refrigerant charge prior to shipment from the factory are not required to have refrigerant charge confirmed through field verification and diagnostic testing. The installer of these packaged systems shall certify on the Certificate of Installation that the packaged system was pre-charged at the factory and has not been altered in a way that would affect the charge. Ducted systems shall comply with minimum system airflow rate requirement in Section 150.2(b)1F ia provided that the system is of a type that can be verified using the procedure specified in Section RA3.3 or an approved alternative in Section RAI.
a. Minimum system airflow rate shall comply with the applicable Subsection 1 or 2 below as confirmed through field verification and diagnostic testing in accordance with the procedures specified in Reference Residential Appendix RA3.3 or an approved alternative procedure as specified in Section RA1.
1. Small duct high-velocity systems shall demonstrate a minimum system airflow rate greater than or equal to 250 cfm per ton of nominal cooling capacity; and
2. All other air-cooled air conditioner or air-source heat pump systems shall demonstrate a minimum system airflow rate greater than or equal to 300 cfm per ton of nominal cooling capacity.
<u>Exception 1 to Section 150.2(b)1F ia</u> Systems unable to comply with the minimum airflow rate requirement shall demonstrate compliance using the procedures in Section RA3.3.3.1.5 and the system's thermostat shall conform to the specifications in Section 110.12.
<u>Exception 2 to Section 150.2(b)1F ia</u> Entirely new or complete replacement space conditioning systems as specified by Section 150.2(b)1C without zoning dampers may comply with the minimum airflow rate by meeting the applicable requirements in Table 150.0-B or 150.0-C as confirmed by field verification and diagnostic testing in accordance with the procedures in Reference Residential Appendix Sections RA3.1.4.4 and RA3.1.4.5. The design clean-filter pressure drop requirements of Section 150.0(m)12C for the system air filter device(s) shall conform to the requirements given in Tables 150.0-B and 150.0-C.
b. The installer shall charge the system accord- ing to manufacturer's specifications. Refrigerant charge shall be verified according to one of the following options, as applicable.
1. The installer and rater shall perform the standard charge verification procedure as specified in Reference Residential Appendix Section RA3.2.2, or an approved alternative procedure as specified in Section RA1; or
2. The system shall be equipped with a fault indicator display (FID) device that meets the specifications of Reference Joint Appendix JA6. The installer shall verify the refrigerant charge and FID device in accordance with the procedures in Reference Residential Appendix Section RA3.4.2. The HERS Rater shall verify FID device in accordance with the procedures in Section RA3.4.2; or
3. The installer shall perform the weigh-in charging procedure as specified by Reference Residential Appendix Section RA3.2.3.1, provided the system is of a type that can be verified using the Section RA3.2.2 standard charge verification procedure and Section RA3.3 airflow rate verification procedure or approved alternatives in Section RA1. The HERS Rater shall verify the charge using Sections RA3.2.2 and RA3.3 or approved alternatives in Section RA1.
<u>Exception to Section 150.2(b)1Fi b</u> When the outdoor temperature is less than 55 F and the installer utilizes the weigh-in charging procedure in Reference Residential Appendix Section RA3.2.3.1 to demonstrate compliance the installer may elect to utilize the HERS Rater verification procedure in Reference Residential Appendix Section RA3.2.3.2. If the HERS Rater verification procedure in Section RA3.2.3.2 is used for compliance the system's thermostat shall conform to the specifications in Section 110.12. Ducted systems shall comply with the minimum system airflow rate requirements in Section 150.2(b)1Fiia.
ii. In Climate Zones 2, 8, 9, 10, 11, 12, 13, 14 and 15, air-cooled air conditioners or air-source heat pumps, including but not limited to ducted split systems, ducted package systems, small duct high-velocity, and mini-split systems, which are of a type that cannot comply with the requirements of 150.2(b)1Fiib shall comply with subsections a and b, as applicable.
a. The installer shall confirm the refrigerant charge using the weigh-in charging procedure specified in Reference Residential Appendix Section RA3.2.3.1, as verified by a HERS Rater according to the procedures specified in Reference Residential Appendix Section RA3.2.3.2; and
b. Systems that utilize forced air ducts shall com- ply with the minimum system airflow rate requirement in Section 150.2(b)1F ia provided the system is of a type that can be verified using the procedures in Section RA3.3 or an approved alternative procedure in Section RA1.
<u>Exception to Section 150.2(b)1Fiii</u> Entirely new or complete replacement packaged systems for which the manufacturer has verified correct system refrigerant charge prior to shipment from the factory are not required to have refrigerant charge confirmed through field verification and diagnostic testing. The installer of these packaged systems shall certify on the Certificate of Installation that the packaged system was pre-charged at the factory and has not been altered in a way that would affect the charge. Ducted systems shall comply with minimum system airflow rate requirement in Section 150.2(b)1F iib provided that the system is of a type that can be verified using the procedure specified in Section RA3.3 or an approved alternative in Section RA1.
G. **Altered space conditioning system.** Altered or replacement space heating systems shall not use electric resistance as the primary heat source.
<u>Exception 1 to Section 150.2(b)1G</u> Non-ducted electric resistance space heating systems if the existing space heating system is electric resistance.
<u>Exception 2 to Section 150.2(b)1G</u> ducted electric resistance space heating systems if the existing space heating system is electrical resistance and a ducted space cooling system is not being replaced or installed.
<u>Exception 3 to Section 150.2(b)1G</u> Electric resistance space heating systems if the existing space heating system is electric resistance in the building is located in Climate Zone 7 or 15.
H. **Water heating system.** Altered or replacement service water-heating systems or components shall meet the applicable requirements below
i. **Pipe insulation.** For newly installed and existing accessible piping, the insulation requirements of Section 150.0( )1 shall be met.
i. **Distribution system.** For recirculation distribution systems serving individual dwelling units, only demand recirculation systems with manual on/off control as specified in the Reference Appendix RA4.4.9 shall be installed.
ii. **Water heating system.** The water heating system shall meet one of the following
a. A natural gas or propane water-heating system; or
b. A single heat pump water heater. The storage tank shall not be located outdoors and be placed on an incompressible, rigid insulated surface with a minimum thermal resistance of R-10. The water heater shall be installed with a communication interface that meets either the requirements of 110.12(a) or has an ANSI/CTA-2045-B communication port; or
c. For Climate Zones 1 through 15, a single heat pump water heater that meets the requirements of NEEA Advanced Water Heater Specification Tier 3 or higher. The storage tank shall not be located outdoors; or
d. If the existing water heater is an electric resistance water heater, a consumer electric water heater; or
e. A water-heating system determined by the Executive Director to use no more energy than the one specified in Item a above; or, if no, natural gas is connected to the existing water heater location, a water-heating system determined by the Executive Director to use no more energy than the one specified in Item d above.
I. **Roofs.** Replacements of the exterior surface of existing roofs, including adding new surface layer on top of the existing exterior surface, shall meet the requirements of Section 110.8 and the applicable requirements of Subsections i and ii where more than 50 percent of the roof is being replaced
i. **Steep sloped roofs.** Steep sloped roofs shall meet the following. New roofing products in Climate Zones 4 an 8 through 15 shall have a minimum aged solar reflectance of 0.20 and a minimum thermal emittance of 0.75, or a minimum SRI of 16.
<u>Exception 1 to Section 150.2(b)1Ii</u> The following shall be considered equivalent to subsection i.
a. Buildings with ceiling assemblies with a U-factor lower than or equal to 0.025 or that are insulated with at least R-38 ceiling insulation; or
b. Buildings with a radiant barrier in the attic, where the radiant barrier is not installed directly above spaced sheathing meeting requirements of Section 150.1.(c)2; or
c. In Climate Zones 2, 4, 9, 10, 12 and 14, buildings that have no ducts in the attic; or
d. Buildings with R-2 or greater continuous insulation above or below the roof deck.
<u>Exception 2 to Section 150.2(b)1Ii</u> Roof area covered by building integrated photovoltaic panels or building integrated solar thermal panels is not required to meet minimum requirements for aged solar reflectance thermal emittance or SRI.
<u>Exception 3 to Section 150.2(b)1Ii</u> Ruth constructions with a weight of at least 25 pounds per square foot are exempt from minimum requirements for aged solar reflectance and thermal emittance or SRI.
ii. **Low sloped roofs.** Low-sloped roofs shall meet the following
a. New roofing products in climate zones, four and six through 15 shall have an aged solar reflectance equal to or greater than 0.63 and a thermal emittance equal or greater then 0.75, or a minimum SRI of 75.
<u>Exception 1 to Section 150.2(b)1IIa</u> The aged solar reflectance can be met by using at the roof deck specify didn't Table 150.2-B.
<u>Exception 2 to Section 150.2(b)1IIa</u> Roof area covered by building integrated photovoltaic panels or building integrated solar thermal panels is not required to meet the minimum requirements for aged solar reflectance thermal emittance or SRI.
<u>Exception 3 to Section 150.2(b)1IIa</u> Roof constructions with a weight of at least 25 pounds per square foot are exempt from the minimum requirements for aged solar reflectance and thermal emittance or SRI.
b. Roofs shall be insulated to the levels, specified in table 150.2-C.
<u>Exception 1 to Section 150.2(b)1IIb</u> Existing roofs with R-10 or greater continuous insulation above or below the roof deck or
<u>Exception 2 to Section 150.2(b)1IIb</u> Existing roofs with an assembly U-factor of 0.056 or less or that are insulated with at least R-19 insulation between the roof rafters and in contact with the roof deck in Climate Zones 1, 2, 4 and 8 through 10. or
<u>Exception 3 to Section 150.2(b)1IIb</u> The continuous insulation requirements of Table 150.1-C may be reduced to R-4 where the following conditions are met.
i. Mechanical equipment is located on the roof and will not temporary be disconnected and lifted as part of the roof replacement and the addition of insulation required by Table 150.2-C would reduce the height from the roof surface to the top of the base flashing to less than that set forth in the manufacturer's installation instructions as per California Residential Code Section R900; or
ii. Replaced roofing abuts sidewall or parapet walls and the addition of insulation required by Table 150.2-C would reduce the height from the roof surface to the top of the base flashing to less than that set forth in manufacturer's installation instructions as per California Residential Code Section R900, provided that the following conditions apply
1. The sidewall or parapet walls are finished with an exterior cladding material other than the roof covering membrane material; and
2. The sidewall or parapet walls have exterior cleaning material that must be removed to install the new roof covering membrane to maintain the minimum base flashing height; and
3. The ratio of the replaced roof area to the linear dimension of affected side wall or parapet walls is less than 25 square foot per linear foot; or
<u>Exception 4 to Section 150.2(b)1IIb</u> The continuous insulation requirements per Table 150.2-C may be reduced where increasing the thickness of above deck insulation would reduce the flashing around an existing exterior wall opening below what is permitted by the fenestration or door manufacturer's installation instructions or registered design professional's approved flashing design as per California Residential Code Section R703.4 or by California Residential Code Section R905.2.8.3.
<u>Exception 5 to Section 150.2(b)1IIb</u> Tapered insulation with thermal resistance less than prescribed at the drains and other low points maybe used provided that the thickness of insulation is increased at the high points of the roof so that the average thermal resistance equals or exceeds the required value.
J. **Ceiling.** Vented attics shall meet the following
i. In Climate Zones 1 through 4, 6, and 8 through 16, insulation shall be installed to achieve a weighted U-factor of 0.020 or insulation installed at the ceiling level shall result in an insulated thermal resistance of R-49 or greater for the insulation alone; and
<u>Exception to Section 150.2(b)1Ji</u> In Climate Zones 1, 3 and 6 dwelling units with at least R-19 existing insulation installed at the ceiling level.
ii. In Climate Zones 2, 4, and 8 through 16, air seal all accessible areas of the ceiling plane between the attic and the conditioned space in accordance with Section 110.7; and
<u>Exception 1 to Section 150.2(b)1Jii</u> Dwelling units with at least R-19 existing insulation installed at the ceiling level.
<u>Exception 2 to Section 150.2(b)1Jii</u> Dwelling units with atmospherically vented space-heating or water-heating combustion appliances located inside the pressure boundary of the dwelling unit.
iii. In Climate Zones 1 through 4 and 8 through 16, recessed downlight luminaires in the ceiling shall be covered with insulation to the same depth as the rest of the ceiling. Luminaires not rated for insulation contact must be replaced or retrofitted with a fire proof cover that allows for insulation to be installed directly over the cover; and
<u>Exception to Section 150.2(b)1Jiii</u> In Climate Zones 1 through 4 and 8 through 10 dwelling units with at least R-19 existing insulation installed at the ceiling level with third-party verification of existing conditions.
iv. Attic ventilation shall comply with the California Building Code requirements.
<u>Exception 1 to Section 150.2(b)1J</u> Dwelling units with at least R-38 existing insulation installed at the ceiling level.
<u>Exception 2 to Section 150.2(b)1J</u> Dwelling units where the alteration would directly cause the disturbance of asbestos.
<u>Exception 3 to Section 150.2(b)1J</u> Dwelling units with knob and tube wiring located in the vented attic.
<u>Exception 4 to Section 150.2(b)1J</u> Where the accessible space in the attic is not large enough to accommodate the required R-value the entire accessible spaced shall be filled with insulation provided such insulation does not violate Section 806.3 of Title 24 Part 2.5.
<u>Exception 5 to Section 150.2(b)1J</u> Where the attic space above the altered dwelling unit is shared with other dwelling units and the requirements of Section 150.2(b)1J are not triggered for the other dwelling units.
K. **Lighting.** The altered lighting system shall meet the lighting requirements of Section 150.0(k). The altered luminaires shall meet the luminaire efficacy requirements of Section 150.0(k) and Table 150.0-A. Where existing screw-base sockets are present in ceiling-recessed luminaires, removal of these sockets is not required provided that new JA8-compliant trim kits or lamps designed for use with recessed down lights or luminaires are installed.
L. **Mechanical ventilation for indoor air quality entirely new or complete replacement ventilation systems.** Entirely new or complete replacement ventilation systems shall comply with all applicable requirements in Section 150.0(o). An entirely new or complete replacement ventilation system includes a new ventilation fan component and an entirely new duct system. An entirely new or complete replacement duct system is constructed of at least 75 percent new duct material and up to 25 percent may consist of reused parts from the dwelling unit's existing duct system, including but not limited to registers, grilles, boots, air filtration devices and duct material, if the reused parts are accessible and can be sealed to prevent leakage.
M. **Mechanical ventilation for indoor air quality altered ventilation systems.** Altered ventilation system components or newly installed ventilation equipment serving the alteration shall comply with Section 150.0(o) as applicable subject to the requirement specified in Subsections i and ii below.
i. **Whole dwelling unit mechanical ventilation.**
a. **Whole dwelling unit airflow.** If the whole-dwelling ventilation fan is altered or replaced, then one of the following Subsections 1 or 2 shall be used for compliance as applicable.
1. Dwellings that were required by previous building permit to comply with the whole-dwelling unit airflow requirements in Section 150.0(o) shall meet or exceed the whole-dwelling unit mechanical ventilation airflow specified in Section 150.0(o)1C; 150.0(o)1E or 150.0(o)1F as confirmed through field verification and diagnostic testing in accordance with the applicable procedures specified in Reference Residential Appendix RA3.7.
2. Dwellings that were not required by a previous building permit to have a whole-dwelling unit ventilation system shall not be required to comply with the whole-dwelling unit ventilation airflow specified in Section 150.0(o)1C, 150.0(o)1E or 150.0(o)1F.
b. **Replacement ventilation fans.** Whole-dwelling unit replacement ventilation fans shall be rated for airflow and sound in accordance with the requirements of ASHRAE 62.2 Sections 7.1 and 7.2. Additionally, when conformance to a specified a whole-dwelling unit airflow rate is required for compliance, the replacement fans shall be rated at no less than the airflow rate required for compliance.
c. **Air filters.** If the air filtration device for a whole-dwelling unit ventilation system is altered or replaced then one of the following Subsections 1 or 2 shall be used for compliance as applicable.
1. Dwellings that were required by a previous building permit to comply with the ventilation system air filtration requirements in Section 150.0(m)12 shall comply with the air filtration requirements in Section 150.0(m)12.
2. Dwellings that were not required by a previous building permit to comply with the ventilation system air filtration requirements in Section 150.0(m)12 shall not be required to comply with the air filtration requirements specified in Section 150.0(m)12.
ii. **Local mechanical exhaust.**
a. Bathroom local mechanical exhaust. Altered bathroom local mechanical exhaust systems shall comply with the applicable requirements specified in Section 150.0(o)1G.
b. Kitchen local mechanical exhaust. If the kitchen local ventilation fan is altered or replaced, then one of the following Subsections 1, 2 or 3 shall be used for compliance as applicable.
1. Dwellings that were required by a previous building permit to comply with the kitchen local exhaust requirements in Section 150(o)1G shall meet or exceed the applicable airflow or capture efficiency requirements in Section 150.0(o)1G.
2. Dwellings that were required by a previous building permit to install a vented kitchen range hood or other kitchen exhaust fan shall install a replacement fan that meets or exceeds the airflow required by the previous building permit, or 100 cfm, whichever is greater.
3. Dwellings that were not required to have a kitchen local ventilation exhaust system according to the conditions in either Subsection 1 or 2 above shall not be required to comply with the requirements of Section 150.0(o)1G.
c. Replacement ventilation fans. New or replacement, local mechanical exhaust fans shall be rated for airflow and sound in accordance with the requirements of ASHRAE 62.2 Section 7.1 and Title 24, Part 6 Section 150.0(o)1Gvi. Additionally, when compliance with a specified exhaust airflow rate is required, the replacement fan shall be rated at no less than the airflow rate required for compliance.
N. **Exterior doors.** Alterations that add exterior door area shall meet the U-factor requirement of Section 150.1(c)5.
2. **Performance approach.** The altered component(s) and any newly installed equipment serving the alteration shall meet the applicable requirements of Subsections A, B, and C below.
A. The altered components shall meet the applicable requirements of Sections 110.0 through 110.9, Sections 150.0(a) through ( ), Sections 150.0(m)1 through 150.0(m)10, and Sections 150.0(p) through (q). Entirely new or complete replacement mechanical ventilation systems as these terms are used in Section 150.2(b)1L, shall comply with the requirements in Section 150.2(b)1L. Altered mechanical ventilation systems shall comply with the requirements of Section 150.2(b)1M. Entirely new or complete replacement space-conditioning systems, as these terms are used in Sections, 150.2(b)1C and 150.2(b)1Diia, shall comply with the requirements of Sections 150.0(m)12 and 150.0(m)13.
B. The standard design for an altered component shall be the higher efficiency of existing conditions or the requirements stated in table 150.2-D. For components not being altered the standard design shall be based on the existing conditions. When the third-party verification option is specified as a requirement, all components proposed for alteration for which the additional credit is taken must be verified.
C. The proposed design shall be based on the actual values of the altered components.

Notes to Section 150.2(b)2
1. If an existing component must be replaced with a new component, that component is considered an altered component for the purpose of determining the standard design altered component energy budget and must meet the requirements of Section 152(b)2B.
2. The standard design shall assume the same geometry and orientation as the proposed design.
3. The "existing efficiency level" modeling rules, including situations where nameplate data are not available, are described in the Residential ACM Approval Manual.
<u>Exception 1 to Section 150.2(b)</u> Any dual- glazed greenhouse or garden window installed as part of an alteration complies with the U-factor requirements in Section 150.1(c)3.
<u>Exception 2 to Section 150.2(b)</u> Where the space in the attic or rafter area is not large enough to accommodate the required R-value the entire space shall be filled with insulation provided such installation does not violate Section 1203.2 of Title 24 Part 2.
(c) **Whole building.** Any addition or alteration may comply with the requirements of Title 24, Part 6 by meeting the requirements for the entire building.

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4/2/25
BUILDING SUBMITTAL SET

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

CA ENERGY CODE

ME.5

2022 CALIFORNIA MECHANICAL CODE:

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

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

303.0 Installation
303.1 Listed Appliances. Except as otherwise provided in the code, the installation of appliances regulated by this code shall be in accordance with the conditions of listing. The appliance installer shall leave the manufacturer's installation and operating instructions attached to the appliance. Clearances of listed appliances from combustible materials shall be as specified in the listing or on the rating plate.
303.4 Anchorage of Appliances. Appliances designed to be fixed in position shall be securely fastened in place in accordance with the manufacturer's installation instructions. Supports for appliances shall be designed and constructed to sustain vertical and horizontal loads within the stress limitations specified in the building code.
304.0 Accessibility for Service
304.1 General. All appliances shall be located with respect to building construction and other equipment so as to permit access to the appliance. Sufficient clearance shall be maintained to permit cleaning of heating surfaces; the replacement of filters, blowers, motors, burners, controls, and vent connections; the lubrication of moving parts where necessary; the adjustment and cleaning of burners and pilots; and the proper functioning of explosion vents, if provided. For attic installation, the passageway and servicing area adjacent to the appliance shall be floored. [NFPA 54:9.2.1]
Unless otherwise specified, not less than 30 inches (762 mm) in depth, width, and height of working space shall be provided.
Exception: A platform shall not be required for unit heaters or room heaters.
304.2 Sloped Roof. Where equipment or appliances that require service are installed on a roof having a slope of 4 units vertical in 12 units horizontal (33 percent slope) or more, a level platform of not less than 30 inches by 30 inches (762 mm by 762 mm) shall be provided at the service side of the equipment or appliance.
304.4 Appliances in Attics and Under-Floor Spaces. An attic or under-floor space in which an appliance is installed shall be accessible through an opening and passageway not less than the largest component of the appliance, and not less than 22 inches by 30 inches (559 mm by 762 mm).
304.4.1 Length of Passageway. Where the height of the passageway is less than 6 feet (1829 mm), the distance from the passageway access to the appliance shall not exceed 20 feet (6096 mm) measured along the centerline of the passageway. [NFPA 54:9.5.1.1]
304.4.2 Width of Passageway. The passageway shall be unobstructed and shall have solid flooring not less than 24 inches (610 mm) wide from the entrance opening to the appliance. [NFPA 54:9.5.1.2] **304.4.3 Work Platform.** A level working platform not less than 30 inches by 30 inches (762 mm by 762 mm) shall be provided in front of the service side of the appliance. [NFPA 54:9.5.2]
Exception: A working platform need not be provided where the furnace is capable of being serviced from the required access opening. The furnace service side shall not exceed 12 inches (305 mm) from the access opening.
304.4.4 Lighting and Convenience Outlet. A permanent 120V receptacle outlet and a luminaire shall be installed near the appliance. The switch controlling the luminaire shall be located at the entrance to the passageway. [NFPA 54:9.5.3]
305.0 Location.
305.1 Installation in Garages. Appliances in garages and in adjacent spaces that open to the garage and are not part of the living space of a dwelling unit shall be installed so that burners and burner-ignition devices are located not less than 18 inches (457 mm) above the floor unless listed as flammable vapor ignition resistant. [NFPA 54:9.1.10.1]
305.1.1 Physical Damage. Appliances installed in garages, warehouses, or other areas subject to mechanical damage shall be guarded against such damage by being installed behind protective barriers or by being elevated or located out of the normal path of vehicles.
305.1.2 Access from the Outside. Where appliances are installed within a garage and are enclosed in a separate enclosed space having access only from outside of the garage, such appliances shall be permitted to be installed at floor level, provided the required combustion air is taken from the exterior of the garage.[NFPA54:9.1.10.3]
306.0 Automatic Control Devices.
306.1 General. Heating appliances shall be equipped with a listed device or devices that will shut off the fuel supply to the main burner or burners in the event of pilot or ignition failure. Liquefied petroleum gas-air-burning heating appliances shall be equipped with a listed automatic device or devices that will shut off the flow of gas to the pilot in the event of ignition failure. *Exception: The listed shutoff devices shall not be required on range or cooking tops, log lighters, lights, or other open-burner manually operated appliances, or listed appliances not requiring such devices and specific industrial appliances as approved by the Authority Having Jurisdiction.* Heating appliances whose manual fuel controls are not readily accessible from the main portion of the building being heated shall be equipped with remote controls. Forced-air and gravity-type warm air furnaces shall be equipped with a listed air outlet temperature limit control that cannot be set for temperatures exceeding 250 F (121 C). Such controls shall be located in the bonnet or plenum, within 2 feet (610 mm) of the discharge side of the heating element of gravity furnaces or in accordance with the conditions of listing. Electric duct heaters shall be equipped with an approved automatic reset air outlet temperature limit control that will limit the outlet air temperature to not exceed 200 F (93 C). The electric elements of the heater shall be equipped with fusible links or a manual reset temperature limit control that will prevent outlet air temperature in excess of 250 F (121 C).
311.0 Heating or Cooling Air System.

311.1 Source. A heating or cooling air system shall be provided with return air, outside air, or both. A heating or cooling air system regulated by this code and designed to replace required ventilation shall be arranged to discharge into a conditioned space not less than the amount of outside air specified in Chapter 4.
311.5 California Energy Code Requirement for Residential Air Infiltration. In mechanically ventilated residential buildings, air filters shall be provided to clean outdoor air and return air prior to its delivery to occupied spaces where specified in California Energy Code Sections 150.0(m)12 and 160.2(b). The air filters shall comply with California Energy Code requirements for labeling, ventilation system design and installation, air filter, efficacy, and air filter pressure drop.
312.0 Plumbing Connections.
312.1 General. Water supply, sanitary drainage, and back-flow protection shall be in accordance with the California Plumbing Code.
316.0 Protection of Piping, Tubing, Materials, and Structures.
316.1 General. Piping or tubing passing under or through walls shall be protected from breakage. Piping passing through or under cinders or other corrosive materials shall be protected from external corrosion in an approved manner. Approved provisions shall be made for expansion of hot water piping. Voids around piping or tubing passing through concrete floors on the ground shall be sealed.
316.2 Installation. Piping or tubing shall be installed so that the piping, tubing, or connections will not be subject to undue strains or stresses, and provisions shall be made for expansion, contraction, and structural settlement. No piping or tubing, unless designed and listed for such use, shall be directly embedded in concrete or masonry. No structural member shall be seriously weakened or impaired by cutting, notching, or otherwise as defined in the building code.
316.3 Corrosion, Erosion, and Mechanical Damage. Piping, or tubing subject to corrosion, erosion, or mechanical damage shall be protected in an approved manner.
316.4 Protectively Coated Pipe. Protectively coated pipe or tubing shall be inspected and tested, and a visible void, damage, or imperfection to the pipe coating shall be repaired in an approved manner.
316.5 Fire-Resistant Construction. Piping, tubing, and duct system penetrations of fire-resistance-rated walls, partitions, floors, floor/ceiling assemblies, roof/ceiling assemblies, or shaft enclosures shall be protected in accordance with the requirements of the building code.
316.6 Steel Nail Plates. Plastic piping or tubing, copper or copper alloy piping or tubing, and ducts penetrating framing members to within 1 inch (25.4 mm) of the exposed framing shall be protected by steel nail plates not less than No. 18 gauge (0.0478 inches) (1.2141 mm) in thickness. The steel
nail plate shall extend along the framing member not less than 1-1/2 inches (38 mm) beyond the outside diameter of the pipe 316.7.1 or tubing. *Exception: See Section 1311.3.3.*
316.7 Sleeves. Sleeves shall be provided to protect piping through concrete and masonry walls and concrete floors. *Exception: Sleeves shall not be required where openings are drilled or bored.*

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

401.0 General.
401.1 Applicability. This chapter contains requirements for ventilation air supply, exhaust, and makeup air requirements for occupiable spaces within a building. [OSHPD 1, 1R, 2, 3, 4 & 5] See Sections 404.0 through 418.0. [SFM] Air filters shall comply with all requirements of Part 12, Title 24, Chapter 12-71, SFM Standard 12-71-1. Spaces within buildings, except those within a dwelling unit in residential occupancies where occupants are non-transient, shall comply with Section 402.0, through Section 404.0. Requirements for ventilation, air rate for dwelling units in residential occupancies, where the occupants are non-transient, shall be in accordance with Section 405.0.
401.2 Filters [BSC-CG], [DSA-SS & DSA-SS/CC]. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual in compliance with Chapter 5, Division, 5.5 of the California Green Building Standards Code. (CALGreen).
402.0 Ventilation Air. [Not permitted for OSHPD 1,2, 3 & 4]
402.1 Occupiable Spaces. Occupiable spaces listed in Table 402.1 [OSHPD 1, 1R, 2, 3, 4 & 5] and Table 4-A shall be designed to have ventilation (outdoor) air in accordance with this chapter [DSA-SS & DSA-SS/CC]. Ventilation air requirements for occupancies regulated by the California Energy Commission are found in the California Energy Code. (CEC) Ventilation air requirements for occupancies regulated by the California Energy Commission and found in the California Energy Code supersede those of the California Mechanical Code.
402.1.1 Construction Documents. The outdoor air ventilation rate and air distribution assumptions made in the design of the ventilation system shall be clearly identified on the construction documents. **402.1.2 Dwelling.** Requirements for ventilation air rate for single-family dwellings shall be in accordance with this chapter or ASHRAE 62.2.
402.2 Natural Ventilation. Natural ventilation systems shall be designed in accordance with this section and shall include mechanical ventilation systems designed in accordance with Section 403.0, Section 404.0, or both.
Exception (1): An engineered natural ventilation system where approved by the Authority Having Jurisdiction need not comply with Section 402.2.
Exception (2): The mechanical ventilation systems shall not be required where:
(a) Natural ventilation openings that comply with the requirements of Section 402.2 and are permanently open or have controls that prevent the openings from being closed during periods of expected occupancy.

(b) The zone is not served by heating or cooling equipment [ASHRAE 62.1:6.4].
402.2.1 Floor Area to Be Ventilated. *Spaces, or portions of spaces, to be naturally ventilated shall be located within a distance based on the ceiling height, as determined in accordance with Section 402.2.1.1, Section 402.2.1.2, or Section 402.2.1.3, from operable wall openings in accordance with the requirements of Section 402.2.2. For spaces with ceilings which are not parallel to the floor, the ceiling height shall be determined in accordance with Section 402.2.1.4. [ASHRAE 62.1:6.4.1]*
402.2.2 Location and Size of Openings. Spaces, or portions of spaces, to be naturally ventilated shall be permanently open to operable wall openings directly to the outdoors, the openable area of which is a minimum of 4 percent of the net occupiable floor area. Where openings are covered with louvers or otherwise obstructed, openable area shall be based on the net free unobstructed area through the opening. Where interior rooms, or portions of 402.2.3 rooms, without direct openings to the outdoors are ventilated through adjoining rooms, the opening between rooms shall be permanently unobstructed and shall have a free area of not less than 8 percent of the area of the interior room nor less than 25 square feet (2.3 m2) [ASHRAE 62.1:6.4.2]
402.3 Mechanical Ventilation. Where natural ventilation is not permitted by this section or the building code, mechanical ventilation systems shall be designed, constructed, and installed to provide a method of supply air and exhaust air. Mechanical ventilation systems shall include controls, manual or automatic, that enable the fan system to operate wherever the spaces served are occupied. The system shall be designed to maintain minimum outdoor airflow as required by Section 403.0 under any load conditions.
402.4 Outdoor Air Intake Protection. Required outdoor-air intakes shall be covered with a screen having not less than 1/4 inch (6.4 mm) openings, and shall have not more than 1/2 inch (12.7 mm) openings.
405.0 Indoor Air Quality for Residential Occupancies.
405.1 General. Rooms or occupied spaces within residential occupancies, where the occupants are non-transient, shall be designed to have mechanical ventilation and exhaust air in accordance with Section 405.2 through Section 405.5.
405.2 Ventilation Air Rate. The required mechanical ventilation outdoor air rate (*Qtot*) shall be calculated in accordance with Equation 405.2. See subsections & exception as applicable.
405.3 Bathroom Exhaust. A mechanical exhaust directly to the outdoors shall be provided in each room containing a bathtub, shower, or tub/shower combination. The fan shall run intermittently (on demand) or continuously. A readily accessible manual control designed to be operated as needed or an automatic control shall be provided for intermittent operations. [HCD 1 & HCD 2] each bathroom shall also be mechanically ventilated in accordance with Division 4.5 of the California Green Building Standards Code (CALGreen). See subsection as applicable.
405.4 Kitchen Exhaust. A mechanical exhaust directly to the outdoors shall be provided in each kitchen. The fan shall run intermittently (one demand) or continuously. A readily accessible manual control designed to be operated as needed or an automatic control shall be provided for intermittent operations.
405.4.1 Exhaust Rate. For intermittent controlled operations, the exhaust rate shell not be less than 100 ft3/min. (0.047m3/s) for range hoods or 300 ft3/min. (0.141 m3/s) for mechanical fans including downdraft appliances. For continuous operated ventilation the exhaust ratio not be less than 5 air changes per hour based on kitchen volume for enclosed kitchens.
405.5 Ventilation Openings. Occupiable spaces shall be provided with a readily accessible ventilation opening, openable to the outdoors. The opening shall not be less than 5 square feet (0.464m2) or 4 percent of the occupied floor area. The openable area shall be based on free, unobstructed area through the opening.

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

501.0 General.
501.1 Applicability. This chapter includes requirements for environmental air ducts, product-conveying systems, and commercial hoods and kitchen ventilation. Part I addresses environmental air ducts and product conveying systems. Part II addresses commercial hoods and kitchen ventilation.
502.0 Termination.
502.1 Exhaust Opening Protection. Exhaust openings terminating to the outdoors shall be covered with a corrosion-resistant screen having not less than 1/4 of an inch (6.4 mm) openings, and shall have not more than 1/2 of an inch (12.7 mm) openings. *Exception: Clothes dryers.*
502.2 Termination of Exhaust Ducts. Exhaust ducts shall terminate in accordance with Section 502.2.1 through Section 502.2.3.
502.2.1 Environmental Air Ducts. Environmental air duct exhaust shall terminate not less than 3 feet (914 mm) from a property line, 10 feet (3048 mm) from a forced air inlet, and 3 feet (914 mm) from openings into the building. The discharge of environmental exhaust ducts shall not directed onto a public walkway.
504.0 Environmental Air Ducts.
504.1 General. Where not specified in this chapter, exhaust ducts shall be constructed and installed in accordance with Chapter 6, and shall be airtight as approved by the Authority Having Jurisdiction. Environmental air ducts that have an alternate function as part of an approved smoke-control system do not require design as Class 1 product-conveying ducts. See exceptions.
504.2 Independent Exhaust Systems. Single or combined mechanical exhaust systems shall be independent of other exhaust systems.
504.3 Domestic Range. Ducts used for domestic kitchen range ventilation shall be of metal and shall have smooth interior surfaces. *Exception: Ducts for domestic kitchen downdraft grill-range ventilation installed under a concrete slab floor shall be permitted to be of approved Schedule 40 PVC provided:*
(3) The under-floor trench in which the duct is installed shall be completely backfilled with sand or gravel.
(4) Not more than 1 inch (25.4mm) of 6 inch diameter (152 mm) PVC coupling shall be permitted to protrude above the concrete floor surface.
(5) PVC pipe joints shall be solvent cemented to provide an air and grease tight duct.
(6) The duct shall terminate above grade outside the building and shall be equipped with a back-draft damper.
504.4 Clothes Dryers. A clothes dryer exhaust duct shall not be connected to a vent connector, gas vent, chimney, and shall not terminate into a crawl space, attic, or other concealed space. Exhaust ducts shall not be assembled with screws or other fastening means that extend into the duct and that are capable of catching lint, and that reduce the efficiency of the exhaust system. Exhaust ducts shall be constructed of rigid metallic material. Transition ducts used to connect the dryer to the exhaust duct shall be listed for that application or installed in accordance with the clothes dryer manufacturer's installation instructions. Clothes dryer exhaust ducts shall terminate to the outside of the building in accordance with Section 502.2.1 and shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination. Devices, such as fire or smoke dampers, that will obstruct the flow of the exhaust shall not be used. Where joining of ducts, the male end shall be inserted in the direction of airflow.
504.4.1 Provisions for Makeup Air. Makeup air shall be provided in accordance with the following:
(1) Makeup air shall be provided for Type 1 clothes dryers in accordance with the manufacturer's installation instructions. [NFPA 54:10.4.3.1]. Where a closet is designed for the installation of a clothes dryer, an opening of not less than 100 square inches (0.065 m2) for make up air shall be provided in the door or by other approved means.
(2) Provision for make up air shall be provided for Type 2 clothes dryers, with a minimum free area of not less than 1 square inch (0.0006 m2) thermal units per hour (Btu/h) (0.293 kW) total input rating of the dryer(s) installed. [NFPA 54:10.4.3.2]
504.4.2 Domestic Clothes Dryers. Where a compartment or space for a Type 1 clothes dryer is provided, not less than a 4 inch diameter (102 mm) exhaust duct of approved material shall be installed in accordance with Section 504.0. Type1 clothes dryer exhaust ducts shall be of rigid metal and shall have smooth interior surfaces. The diameter shall be not less than 4 inches nominal (100 mm) and the thickness shall be not less than 0.016 of an inch (0.406 mm).
504.4.2.1 Length Limitation. Unless otherwise permitted or required by the dryer manufacturer's instructions and approved by the Authority Having Jurisdiction, domestic dryer moisture exhaust ducts shall not exceed a total combined horizontal and vertical length of 14 feet (4267 mm), including two 90 degree (1.57rad) elbows. A length of 2 feet (610 mm) shall be deducted for each 90 degree (1.57 rad) elbow in excess of two.
504.4.2.2 Transition Ducts. Listed clothes dryer transition ducts not more than 6 feet (1829 mm) in length shall be permitted to be used to connect the Type 1 dryer to the exhaust ducts. Transition ducts and flexible clothes dryer transition ducts shall not be concealed within construction, and shall be installed in accordance with the manufacturer's installation instructions.

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

601.0 General.
601.1 Applicability. Ducts and plenums that are portions of a heating, cooling, absorption or evaporative cooling, or exhaust system shall comply with the requirements of this chapter and Chapter 5.
601.2 Sizing Requirements. Duct systems shall be sized in accordance with applicable standards in Chapter 17, or by other approved methods.
Exception: Residential duct system shall be sized in accordance with ACCA, Manuel D, ACCA Manual Zr, as applicable, or by other approved methods.
602.0 Material.
602.1 General. Materials used for duct system shall comply with Section 602.2 through Section 602.6 as applicable.
603.0 Installation of Ducts.
603.1 General. Air ducts shall be installed in accordance with this chapter and the installation instructions.
603.2 Under Floor or Crawl Space. Air ducts installed under a floor in a crawl space shall be installed in accordance with the following:
(1) Shall not prevent access to an area of the crawlspace.
(2) Where it is required to move under ducts for access to areas of the crawl space, a vertical clearance of not less than 18 inches (457 mm) shall be provided.
605.0 Insulation of Ducts.
605.1 General. Air ducts conveying air at temperatures exceeding 140 F (60 C) shall be insulated to maintain an insulation surface temperature of not more than 140 F (60 C). Factory-made air ducts and insulations intended for installation on the exterior of ducts shall be legibly printed with the name of the manufacturer, the thermal resistance (R) value at installed thickness, flame-spread index and smoke developed index of the composite material. Internal duct liners and insulation shall be installed in accordance with SMACNA HVAC Duct Construction Standards-Metal and Flexible. [OSHPD 1, 2, 3 & 4] Cold air ducts shall be insulated wherever necessary or to prevent condensation. See Exceptions.
606.1 Smoke Dampers. Smoke dampers shall comply with UL 555S, and shall be installed in accordance with the manufacturer's installation instructions where required by the building code.
606.2 Fire Dampers. Fire dampers shall comply with UL 555, and shall be installed in accordance with the manufacturer's installation instructions where required by the building code. Fire dampers shall have been tested for closure under airflow conditions and shall be labeled for both maximum airflow permitted and direction of flow. Where more than one damper is installed at a point in a single air path, the entire airflow shall be assumed to be passing through the smallest damper area. Ductwork shall be connected to damper sleeves or assemblies in accordance with the fire damper manufacturer's installation instructions.
608.0 Use of Under-Floor Space as Supply Plenum for Dwelling Units.

608.1 General. An under-floor space shall be permitted to be used as a supply plenum.
608.2 Dwelling Units. The use of under-floor space shall be limited to dwelling units not more than two stories in height. Except for the floor immediately above the under-floor plenum, supply ducts shall be provided extending from the plenum to registers on other floor levels. *Exception: In flood hazard areas, under-floor spaces shall not be used as supply plenums unless the flood opening requirements in the building code are met.*
608.3 Enclosed. Such spaces shall be cleaned of all loose combustible scrap material and shall be tightly enclosed.
608.4 Flammable Materials. The enclosing material of the under-floor space, including the sidewall insulation, shall be not more flammable than 1 inch (25.4 mm) (nominal) wood boards (flame-spread index of 200). Installation of foam plastics is regulated by the building code.
608.5 Access. Access shall be through an opening in the floor and shall be not less than 24 inches by 24 inches (610 mm by 610 mm).
608.6 Automatic Control. A furnace supplying warm air to under-floor space shall be equipped with an automatic control that will start the air-circulating fan where the air in the furnace bonnet reaches a temperature not exceeding 150 F (66 C). Such control shall be one that cannot be set to exceed 150 F (66 C).
608.7 Temperature Limit. A furnace supplying warm air to such space shall be equipped with an approved temperature limit control that will limit outlet air temperature to 200 F (93 C).
608.9 Floor Registers. Floor registers shall be designed for easy removal in order to give access for cleaning the receptacles.

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

701.0 General.
701.1 Applicability. Air for combustion, ventilation, and dilution of flue gases for appliances installed in buildings shall be obtained by application of one of the methods covered in Section 701.4 through Section 701.9.3. Where the requirements of Section 701.4 are not met, outdoor air shall be introduced in accordance with methods covered in Section 701.6 through Section 701.9.3.
Exceptions: (1) This provision shall not apply to direct-vent appliances. (2) Type1 clothes dryers that are provided with make up air in accordance with Section 504.4.1 [NFPA 54:9.3. 1.1]
701.3 Makeup Air. Where exhaust clothes dryers, and kitchen ventilation interfere with the operation of appliances, makeup air shall be provided. [NFPA 54:9.3.1.5]
701.4 Indoor Combustion Air. The required volume of indoor air shall be determined in accordance with the method in Section 701.4.1 or Section 701.4.2, that where the air infiltration rate is known to be less than 0.40 *ACH* (air change per hour), the method in Section 701.4.2 shall be used. The total required volume shall be the sum of the required volume calculated for appliances located within the space. Rooms communicating directly with the space in which the appliances are installed through openings not furnished with doors, and through combustion air openings sized and located in accordance with Section 701 are considered a part of the required volume. [NFPA54:9.3.2]
701.5 Indoor Opening Size and Location. Openings used to connect indoor spaces shall be sized and located in accordance with the following:
(1) Combining spaces on the same story. Each opening shall have a minimum free area of one square inch per 1000 Btu/h (0.002 m2/kW) of the total input rating of all appliances in the space, but not less than 100 inches (0.065 m2). One permanent opening shell commands with in 12 inches (305 mm) of the top of the enclosure, and one permanent opening shell commence within 12 inches (305 mm) of the bottom of the enclosure (see Figure 701.5). The minimum dimension of air openings shall not be less than 3 inches (76 mm)
(2) Combining spaces in different stories. The volumes of spaces in different stories shall be considered as communicating spaces where such spaces are connected by one or more permanent openings indoors or floors, having a total minimum free area of 2 square inches per 1000 Btu/h (0.004 m2/kW) of total input rating of all appliances [NFPA 54:9.3.2.3]
701.6 Outdoor Combustion Air. Outdoor combustion air shall be provided through opening(s) to the outdoors in accordance with the methods in Section 701.6.1 or Section 701.6.2. The minimum dimension of air openings shall be not less than 3 inches (76 mm). [NFPA 54:9.3.3]
701.6.1 Two Permanent Openings Method. Two permanent openings, one commencing within 12 inches (305 mm) of the top of the enclosure and one commencing) within 12 inches (305 mm) of the bottom of the enclosure, shall be provided. The openings shall communicate directly, or by ducts, with the outdoors or spaces that freely communicate with the outdoors as follows:
(1) Where directly communicating with the outdoors or where communicating to the outdoors through vertical ducts, each opening shall have a minimum free area of 1 square inch per 4000Btu/h (0.0005 m2/kW) of total input rating of appliances in the enclosure. [See Figure 701.6.1(1) and Figure 701.6.1(2)]
(2) Where communicating with the outdoors through horizontal ducts, each opening shall have a minimum free area of not less than 1 square inch per 2000 Btu/h (0.001 m2/kW) of total input rating of appliances in the enclosure. [See Figure 701.6.1(3)] [NFPA 54:9.3.3.1]
701.6.2 One Permanent Opening Method. One permanent opening, commencing within 12 inches (305 mm) of the top of the enclosure, shall be provided. The appliance shall have clearances of not less than 1 inch (25.4 mm) from the sides and back and 6 inches (152 mm) from the front of the appliance. The opening shall directly communicate with the outdoors or shall communicate through a vertical or horizontal duct to the outdoors or spaces that freely communicate with the outdoors (see Figure 701.6.2) and shall have a free area not less than the following:
(1) One square inch per 3000 Btu/h (0.0007 m2/kW) of the total input rating of appliances located in the enclosure.
(2) Not less than the sum of the areas of vent connectors in the space. [NFPA 54:9.3.3.2]

701.7 Combination Indoor and Outdoor Combustion Air.
The use of a combination of indoor and outdoor combustion air shall be in accordance with Section 701.7.1 through Section 701.7.3. (See Appendix F for example calculations) [NFPA 54:9.3.4]
701.9 Mechanical Combustion Air Supply. Where all combustion air is provided by a mechanical air supply system, the combustion air shall be supplied from outdoors at the minimum rate of not less than 0.35 cubic feet per minute per 1000 Btu/h [0.034 (m3/min)/kW] for appliances located within the space. [NFPA 54:9.3.6]
701.10 Louvers, and Screens. The required size of openings for combustion, ventilation, and dilution air shall be based on the net free area of each opening. Where the free area through a design of louver, grille, or screen is known, it shall be used in calculating the size opening required to provide the free area specified. Where the louver and grille design and free area are not known, it shall be assumed that wood louvers have 25 percent free area and metal louvers and grilles have 75 percent free area Non motorized louvers and grilles shall be fixed in the open position. [NFPA 54:9.3.7.1]
701.10.1 Minimum Screen Mesh Size. Screens shall not be smaller than 1/4 of an inch (6.4 mm) mesh. [NFPA 54:9.3.7.2]
701.10.2 Motorized Louvers. Motorized louvers shall be interlocked with the appliance so they are proven in the full open position prior to main burner ignition and during main burner operation.

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

801.0 General.
801.1 Applicability. The requirements of this govern the venting o f fuel-burning appliances.
801.2 Venting of Gas Appliances. Low-heat and medium-heat gas appliances shall be vented in accordance with this chapter. Other gas appliances shall be vented in accordance with NFPA 211 or other applicable standards.
802.0 Venting of Appliances.
802.1 Listing. Type B and Type B-W gas vents shall comply ı with UL 441, Type L gas vents shall comply with UL 641.
802.1.1 Installation. Listed vents shall be installed in accordance with this chapter and the manufacturer's installation instructions. [NFPA 54:12.2.1]
802.1.2 Prohibited Discharge. Appliance vents shall not discharge into a space enclosed by screens having openings less than 1/4 of an inch (6.4 mm) mesh.
802.3 Minimum Safe Performance. Venting systems shall be designed and constructed to convey all flue and vent gases to the outdoors. [NFPA 54:12.1]
802.3.1 Appliance Draft Requirements. A venting system shall satisfy the draft requirements of the appliance in accordance with the manufacturer's instructions. [NFPA 54:12.4.1]
802.3.2 Appliance Venting Requirements. Appliances required to be vented shall be connected to a venting system designed and installed in accordance with the provisions of Section 802.4 through Section 802.15. [NFPA 54:12.4.2]
802.3.3 Mechanical Draft Systems. Mechanical draft systems shall be listed in accordance with UL 378 and installed in accordance with both the appliance and the mechanical draft system manufacturer's installation instructions. [NFPA 54:12.4.3.1]
802.5 Masonry, Metal, and Factory-Built Chimneys. Chimneys shall be installed in accordance with Section 802.5.1 through Section 802.5.3.
802.5.1 Factory-Built Chimneys. Factory-built chimneys shall be installed in accordance with UL 103, UL 959, or UL 2561. Factory-built chimneys shall be installed in accordance with the manufacturer's installation instructions. Factory-built chimneys used to vent appliances that operate at positive vent pressure shall be listed for such application. [NFPA 54:12.6.1.1]
802.5.1.1 Decorative Shrouds. Decorative shrouds addressed in Section 802.5.4.3 shall be listed or labeled in accordance with UL 103 for factory-built residential chimneys, UL 127 for factory-built fireplaces, or UL 1482 for solid-fuel room heaters.
802.5.1.2 Listing Requirements. Factory-built chimneys shall comply with the requirements of UL 103 or UL 959. Factory-built chimneys for use with wood-burning appliances shall comply with the Type HT requirements of UL 103. [NFPA 21 1:6.1.3.1, 6.1.3.2]
802.5.2 Metal Chimneys. Metal chimneys shall be built and installed in accordance with NFPA 211, [NFPA 54:12.6.1.2]
802.5.4 Termination. A chimney for a residential-type or low-heat appliance shall extend not less than 3 feet (914 mm) above the highest point where it passes through a roof of a building and not less than 2 feet (610 mm) higher than a portion of a building within a horizontal distance of 10 feet (3048 mm). (See Figure 802.5.4) [NFPA 54:12.6.2.1]
802.5.4.1 Medium-Heat Gas Appliances. A chimney for a medium-heat appliance shall extend not less than 10 feet (3048 mm) above a portion of a building within 25 feet (7620 mm). [NFPA 54:12.6.2.2]
802.5.4.2 Chimney Height. A chimney shall extend at least 5 feet (1524 mm) above the highest connected appliance draft hood outlet or flue collar. [NFPA 54:12.6.2.3]
802.5.4.3 Decorative Shrouds. Decorative shrouds shall not be installed at the termination of factory-built chimneys except where such shrouds are listed and labeled for use with the specific factory-built chimney system and are installed in accordance with the manufacturer's installation instructions.[NFPA 54:12.6.2.4]
802.6 Gas Vents. The installation of gas vents shall meet the following requirements:
(1) Gas vents shall be installed in accordance with the manufacturer's installation instructions.
(2) A Type B-W gas vent shall have a listed capacity not less than that of the listed vented wall furnace to which it is connected.
(3) Gas vents installed within masonry chimneys shall be installed in accordance with the manufacture's installation instructions. Gas vents installed within masonry chimneys shall be identified with a permanent label installed at the point where the vent enters the chimney. The label shall contain the following language: "This gas vent is for appliances that burn gas. Do not connect to solid or liquid-fuel burning appliances, or incinerators."
(4) Screws, rivets, and other fasteners shall not penetrate the inner wall of double-wall gas vent, except at the transition from the appliance draft hood outlet, flue collar, or single-wall metal connector to a double wall vent. [NFPA 54:12.7.2]
802.6.1 Gas Vent Termination. The termination of gas vents shall comply with the following requirements:
(a) Gas vents that are 12 inches (305 mm) or less in size and located not less than 8 feet (2438 mm) from a vertical wall or similar obstruction shall terminate above the roof in accordance with Figure 802.6.1 and Table 802.6.1.
(b) Gas vents that are over 12 inches (305 mm) in size or are located less than 8 feet (2438 mm) from a vertical wall or similar obstruction shall terminate not less than 2 feet (610 mm) above the highest point where they pass through the roof and not less than 2 feet (610 mm) above a portion of a building within 10 feet (3048 mm) horizontally.
(c) Industrial appliances provided in Section 802.2.5.
(d) Direct-vent systems as provided in Section 802.2.6.
(e) Appliance with integral vents as provided in Section 802.2.7.
(f) Mechanical draft systems as provided in Section 802.3.3 through Section 802.3.3.5.
(g) Ventilating hoods and exhaust systems as provided in Section 802.3.4.
802.6.3 Gas Vents Serving Appliances on More than One Floor. A common vent shall be permitted in multi-story installations to vent Category I appliances located on more than one floor level, provided the venting system is designed and installed in accordance with approved engineering methods. For the purpose of this section, crawl spaces, basements, and attics shall be considered as floor levels. [NFPA 54-12:12.7.4.1]
802.6.4 Support of Gas Vents. Gas vents shall be supported and spaced in accordance with the manufacturer's installation instructions. [NFPA 54:12.7.5]

CHAPTER 9 INSTALLATION OF SPECIFIC APPLIANCES (See entire Chapter for additional information)

901.0 General.
901.1 Applicability. This chapter addresses requirements for the design, construction, and installation of specific appliances. In addition to the requirements of this chapter, appliances shall comply with the general requirements of Chapter 3.
904.0 Central Heating Boilers and Furnaces.
904.1 Location. Central heating furnace and low-pressure boiler installations in bedrooms or bathrooms shall comply with one of the following:
(1) Central heating furnaces and low-pressure boilers shall be permitted to be installed in a closet located in the bedroom or bathroom, provided the closet is equipped with a listed, gasketed door assembly and a listed, self-closing device. The self-closing door assembly shall comply with the requirements of Section 904.1.1. The door assembly shall be installed with a threshold and bottom door seal and shall comply with the requ rements of Section 904.1.2. Combustion air for such installations shall be obtained from the outdoors. The closet shall be for the exclusive use of the central heating furnace or low-pressure boiler.
(2) Central heating furnaces and low-pressure boilers shall be of the direct-vent [NFPA 54:10.3.1(2)]
904.1.1 Self-Closing Doors. Self-closing doors shall swing easily and freely, and shall be equipped with a self-closing device to cause the door to close and latch each time it is opened. The closing mechanism shall not have a hold-open feature.
904.1.2 Gasketing. Gasketing on doors or frames shall be furnished only in accordance with the published listings of the door, frame, or gasketing material manufacturer. [NFPA 80:6.4.8]
Exception: Where acceptable to the Authority Having Jurisdiction, gasketing of noncombustible or limited-combustible material (see NFPA 220) shall be permitted to be applied to the provided closing and latching of the door are not inhibited.
904.2 Clearance. Central heating furnaces and low-pressure boilers shall be provided with clearances in accordance with Section 904.2.1 through Section 904.2.7.
904.2.1 Listed Units. Listed central heating furnaces and low-pressure boilers shall be installed with clearances in accordance with the terms of their listings and the manufacturer's installation instructions. [NFPA 54-12:10.3.2.1]
904.2.2 Unlisted Units. Unlisted central-heating furnaces and low pressure boilers shall be installed with clearances from combustible material not less than those specified in Table 904.2. [NFPA 54:10.3.2.2]
904.2.3 Listed and Unlisted Units. Listed and unlisted central heating furnaces and low-pressure boilers shall be permitted to be installed with reduced clearances to combustible material provided that the combustible material or appliance is protected in accordance with Table 303.10.1 and Figure 303.10.1(1) through Figure 303. 10.1(3), and such reduction is allowed by the manufacturer's installation instructions. [NFPA 54:10.3.2.3]
904.2.4 Front Clearance. Front clearance shall be sufficient for servicing the burner and the furnace or boiler. [NFPA 54:10.3.2.4]
904.2.5 Adjacent to Plaster. Where the furnace plenum is adjacent to plaster on metal lath or noncombustible material attached to combustible material, the clearance shall be measured to the surface of the plaster or other noncombustible finish where the clearance specified is 2 inches (51 mm) or less. [NFPA 54:10.3.2.5]
904.2.6 Interference. The clearance to these appliances shall not interfere with combustion air, draft hood clearance and relief, and accessibility for servicing. [NFPA 54:10.3.2.6]
904.2.7 Central Heating Furnaces. Central heating furnaces other than those listed in Section 603.13.2 or Section 603.13.3 shall have clearances from the supply ducts of not less than 18 inches (457 mm) from the furnace plenum for the first 3 feet (914 mm), then 6 inches (152 mm) for the next 3 feet (914 mm) and 1 inch (25.4 mm) beyond 6 feet (1829 mm). [NFPA 54:10.3.2.9]

904.3 Assembly and Installation. A central-heating boiler or furnace shall be installed in accordance with the manufacturer's installation instructions in one of the following manners:
(1) On a floor of noncombustible construction with noncombustible flooring and surface finish and with no combustible material against the underside thereof.
(2) On fire-resistive slabs or arches having no combustible material against the underside thereof.
Exceptions:
(1) Appliances listed for installation on a combustible floor.
(2) Installation on a floor protected in an approved manner. [NFPA 54:10.3.3]
904.3.1 Under-Floor Installation. Furnaces installed in and under-floor area of the building shall be in accordance with the Section 904.3.1.1 through Section 904.3.1.3.
904.9 Furnace (Upright and Horizontal). Upright furnaces shall be permitted to be installed in an attic, furred, or underfloor space exceeding 5 feet (1524 mm) in height, provided the required listings and furnace and duct clearances are observed. Horizontal furnaces shall be permitted to be installed in an attic, furred, or under-floor space, provided the required listings and furnace and duct clearances are observed.
904.10 Solid-Fuel Furnaces. Factory-built solid-fuel furnaces shall comply with UL 391 and shall be installed in accordance with the manufacturer's installation instructions.
904.13 Electric Central Furnaces. Electric central heating furnaces shall comply with UL 1995 or UL 60335-2-40 and shall be installed in accordance with the manufacturer's installation instructions.
908.0 Clothes Dryers.
908.1 Electric Clothes Dryers. Commercial electric clothes dryers shall comply with UL 1240 and installed in accordance with the manufacturer's installation instructions. Residential and coin-operated electric clothes dryers shall comply with UL 2158 and installed in accordance with the manufacturer's installation instructions.
908.2 Gas-Fired Clothes Dryers. Gas-fired clothes dryers shall comply with Section 908.2.1 through Section 908.2.3.
912.0 Gas Fireplaces, Vented.
912.1 Reserved.
912.2 Installation. The installation of vented gas fireplaces shall comply with the following requirements:
(1) (HCD1 & HCD2) Any newly installed gas fireplace shall be a direct-vent sealed-combustion type.
(2) Listed vented gas fireplaces shall be installed in accordance with their listing and the manufacturer's installation instructions and where installed in or attached to combustible material shall be specifically listed for such installation.
(3) Unlisted vented gas fireplaces shall not be installed in or attached to combustible material. They shall have a clearance at the sides and rear of not less than 18 inches (457 mm). Combustible floors under unlisted vented gas fireplaces shall be protected in an approved maimer. Unlisted appliances of other than the direct-vent type shall be equipped with a draft hood and shall be vented in accordance with Section 802.0. Appliances that use metal, asbestos, or ceramic material to direct radiation to the front of the appliance shall have a clearance of 36 inches (914 mm) in front and, where constructed with a double back of metal or ceramic, shall be installed with a clearance of not less than 18 inches (457 mm) at the sides and 12 inches (305 mm) at the rear.
(4) Panels, grilles, and access doors that are required to be removed for normal servicing operations shall not be attached to the building.
(5) Direct-vent gas fireplaces shall be installed with the vent-air intake terminal in the outdoors and in accordance with the manufacturer's installation instructions.
912.3 Combustion and Circulating Air. Combustion and circulating air shall be provided in accordance with Section 701.0. [NFPA 54:10.7.3]
913.0 Factory-Built Fireplaces and Fireplace Stoves.
913.1 Factory-Built Fireplaces. Factory-built fireplaces shall comply with UL 127 and installed in accordance with the manufacturer's installation instructions.
913.1.1 Gasketed Fireplace Doors. A gasketed fireplace door shall not be installed on a factory-built fireplace, except where the fireplace system has been tested in accordance with UL 127.
913.2 Fireplace Stoves. Fireplace stoves shall comply with UL 737 and installed in accordance with the manufacturer's installation instructions.
913.3 Fireplace Accessories. Heat exchangers, glass doors assemblies, combustion air vents, and termination caps shall comply with UL 907 and installed in accordance with the manufacturer's installation instructions.
920.0 Household Cooking Appliances.
920.1 Electric Household Cooking Appliances. Electric household cooking appliances designed for permanent installations shall be installed in accordance with the manufacturer's installation instructions. Household electric ranges shall comply with UL 858.
921.2 Gas-Fired Household Cooking Appliances. Gas-fired household cooking appliances shall comply with Section 921.3 though Section 921.4.4.
920.3 Floor-Mounted Units. Floor mounted units shall be installed in accordance with Section 921.3.1 and Section 921.3.2.
920.3.1 Clearance from Combustible Material. The clearances specified as follows shall not interfere with combustion air, accessibility for operation, and servicing:
(1) Listed floor-mounted household cooking appliances, where installed on combustible floors, shall be set on their own bases or and shall be installed in accordance with their listing and the manufacturer's installation instructions.
(2) Listed household cooking appliances with listed gas room heater sections shall be installed so that the warm air discharge side shall have a clearance of not less than 18 inches (457 mm) from adjacent combustible material. A clearance of not less than 36 inches (914 mm) shall be provided between the top of the heater section and the bottom of cabinets.
(3) Listed household cooking appliances that include a solid or liquid fuel-burning section shall be spaced from combustible material and otherwise installed in accordance with their listing and the manufacturer's installation instructions for the supplementary fuel section of the appliance.
(4) Unlisted floor-mounted household cooking appliances shall be installed with not less than 6 inches (152 mm) clearance at the back and sides to combustible material. Combustible floors under unlisted appliances shall be protected in an approved manner. [NFPA 54:10.15.1.1]
920.3.2 Vertical Clearance Above Cooking Top. Household cooking appliances shall have a vertical clearance above the cooking top of not less than 30 inches (762 mm) to combustible material or metal cabinets. A minimum clearance of 24 inches (610 mm) is permitted where one of the following is installed:
(1) The underside of the combustible material or metal cabinet above the cooking top is protected with not less than1/4 of an inch (6.4 mm) insulating millboard covered with sheet metal not less than 0.0122 of an inch (0.3099 mm) thick.
(2) A metal ventilating hood of sheet metal not less than 0.0122 of an inch (0.3099 mm) thick is installed above the cooking top with a clearance of not less than 1/4 of an inch (6.4 mm) between the hood and the underside of the combustible material or metal cabinet, and the hood is as wide as the appliance and is centered over the appliance.
(3) A listed cooking appliance or microwave oven installed over a listed appliance shall be in accordance with the terms of the upper appliance's listing and the manufacturer's installation instructions. Microwave ovens shall comply with UL 923.
920.4 Built-In Units. Built-in units shall be installed in accordance with Section 921.4.1 through Section 921.4.4.
920.4.1 Installation. Listed built-in household cooking appliances shall be installed in accordance with their listing and the manufacturer's installation instructions. The installation shall not interfere with combustion air, accessibility for operation, and servicing. Unlisted built-in household cooking appliances shall not be installed in or adjacent to combustible material. [NFPA54:10.15.2.1]
920.4.2 Vertical Clearance. Built-in top (or surface) cooking appliances shall have a vertical clearance above the cooking top of not less than 30 inches (762 mm) to combustible material or metal cabinets. A clearance of not less than 24 inches (610 mm) is permitted where one of the following is installed:
(1) The underside of the combustible material or metal cabinet above the cooking top is protected with not less than 1/4 of an inch (6.4 mm) insulating millboard covered with sheet metal not less than 0.0122 of an inch (0.3099 mm) thick.
(2) A metal ventilating hood of sheet metal not less than 0.0122 of an inch (0.3099 mm) thick is installed above the cooking top with a clearance of not less than 1/4 of an inch (6.4 mm) between the hood and the underside of the combustible material or metal cabinet and the hood not less than the width of the appliance and is centered over the appliance.
(3) A listed appliance or microwave oven installed over a listed cooking appliance shall be in accordance with the terms of the upper appliance listing and the manufacturer's installation instructions. [NFPA 54:10.15.2.2]
920.4.3 Level Installation. Built-in household cooking appliances shall be installed so that the cooking top, broiler pan, or oven racks are level. [NFPA 54:10.15.2.4]
928.0 Refrigerators.
928.1 Clearance. Refrigerators shall be provided with clearances for ventilation at the top and back in accordance with the manufacturer's instructions. Where such instructions are not available, not less than 2 inches (51 mm) shall be provided between the back of the refrigerator and the wall and not less than 12 inches (305 mm) above the top. [NFPA 54: 10.22.1]

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CA MECH. CODE

ME.6

2022 CALIFORNIA PLUMBING CODE:

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

CHAPTER 3: GENERAL REGULATIONS (See entire Chapter for additional information)

301.0 Materials - Standards and Alternates.
301.2 Minimum Standards. Pipe, pipe fittings, traps, fixtures, material, and devices used in a plumbing system shall be listed or labeled (third-party certified) by a listing agency (accredited conformity assessment body) and shall comply with the approved applicable recognized standards referenced in this code, and shall be free from defects. Unless otherwise provided for in this code, materials, fixtures, or devices used or entering into the construction of plumbing systems, or parts thereof, shall be submitted to the Authority Having Jurisdiction for approval.
301.2.1 Marking. Each length of pipe and each pipe fitting, trap, fixture, material, and device used in a plumbing system shall have cast, stamped, or indelibly marked on it the manufacturer's mark or name, which shall readily identify the manufacturer to the end user of the product. Where required by the approved standard that applies, the product shall be marked with the weight and the quality of the product. Materials and devices used or entering into the construction of plumbing and drainage systems, or parts thereof, shall be marked and identified in a manner satisfactory to the Authority Having Jurisdiction. Such marking shall be done by the manufacturer. Field markings shall not be acceptable.
Exception: Markings shall not be required on nipples created from cutting and threading of approved pipe.
301.2.2 Standards. Standards listed or referred to in this chapter or other chapters cover materials that will conform to the requirements of this code, where used in accordance with the limitations imposed in this or other chapters thereof and their listing. Where a standard covers materials of various grades, weights, quality, or configurations, the portion of the listed standard that is applicable shall be used. Design and materials for special conditions or materials not provided for herein shall be permitted to be used by special permission of the Authority Having Jurisdiction after the Authority Having Jurisdiction has been satisfied as to their adequacy. A list of plumbing standards that appear in specific sections of this code is referenced in Table 1701.1. Standards referenced in Table 1701.1 shall be applied as indicated in the applicable referenced section. A list of additional approve standards, publications, practices, and guides that are not referenced in specific sections of this code appear in table 1701.2. An IAPMO installation Standard is referenced in Appendix I for the convenience of the users of this code. It is not considered as a part of this code, and less formally adopted as such by the Authority Having Jurisdiction.
303.0 Disposal of Liquid Waste.
303.1 General. It shall be unlawful for a person to cause, suffer or permit the disposal of sewage, human excrement, or other liquid wastes, in a place or manner, except through and by means of an approved drainage system, installed and maintained in accordance with the provisions of this code.
304.0 Connections to Plumbing System Required.
304.1 General. Plumbing fixtures, drains, appurtenances, and appliances, used to receive or discharge liquid wastes or sewage, shall be connected properly to the drainage system of the building or premises, in accordance with the requirements of this code.
305.0 Damage to Drainage System or Public Sewer.
305.1 Unlawful Practices. It shall be unlawful for a person to deposit, by any means whatsoever, into a plumbing fixture, floor drain, interceptor, sump, receptor, or device, which is connected to a drainage system, public sewer, private sewer, septic tank, or cesspool, any ashes, cinders, solids, rags, inflammable, poisonous, or explosive liquids or gases, oils, grease, or any other thing whatsoever that is capable of causing damage to the drainage system or public sewer.
307.0 Location.
307.1 System. Except as otherwise provided in this code, no plumbing system, drainage system, building sewer, private sewage disposal system, or parts thereof shall be located in a lot other than the lot that is the site of the building, structure, or premises served by such facilities.

CHAPTER 4 PLUMBING FIXTURES and FIXTURE SETTINGS (See entire Chapter for additional information)

401.2 Quality of Fixtures. Plumbing fixtures shall be constructed of dense, durable, non-absorbent materials and shall have smooth, impervious surfaces, free from unnecessary concealed fouling surfaces. Except as permitted elsewhere in this code, fixtures shall comply with the quality and design of nationally recognized applicable standards referenced in Table 1701.1.
402.1 Cleaning. Plumbing fixtures shall be installed in a manner to afford easy access for repairs and cleaning. Pipes from fixtures shall be run to the nearest wall.
402.2 Joints. Where a fixture comes in contact with the wall or floor, the joint between the fixture and the wall or floor shall be made watertight.
402.3 Securing Fixtures. Floor-outlet or floor-mounted fixtures shall be rigidly secured to the drainage connection and to the floor, where so designed, by screws or bolts of copper, copper alloy, or other equally corrosion-resistant material.
402.4 Wall-Hung Fixtures. Wall-hung fixtures shall be rigidly supported by metal supporting members so that no strain is transmitted to the connections. Flush tanks and similar appurtenances shall be secured by approved non-corrosive screws or bolts.
402.5 Setting. Fixtures shall be set level and in proper alignment with reference to adjacent walls. No water closet or bidet shall be set closer than 15 inches (381 mm) from its center to a side wall or obstruction nor closer than 30 inches (762 mm) center to center to a similar fixture. The clear space in front of a water closet, lavatory, or bidet shall be not less than 24 inches (610 mm). No urinal shall be set closer than 12 inches (305 mm) from its center to a side wall or partition nor closer than 24 inches (610 mm) center to center.
Exception: The installation of paper dispensers or accessibility grab bars shall not be considered obstructions.
402.7 Supply Fittings. The supply lines and fittings for every plumbing fixture shall be so installed as to prevent back-flow in accordance with Chapter 6.
402.8 Installation. Fixtures shall be installed in accordance with the manufacturer's installation instructions.
402.9 Design and Installation of Plumbing Fixtures. Plumbing fixtures shall be installed such that fixture fittings shall be in accordance with the back-flow prevention requirements of ASMEA112.18. 1/CSAB125.1. These requirements shall not be compromised by the designated fixture fitting mounting surface.
402.11 Future Fixtures. Where provisions are made for the future installation of fixtures, those provided for shall be (considered in determining the required sizes of drain and water supply piping. Construction for future installations shall be terminated with a plugged fitting or fittings. Where the plugged fitting is at the point where the trap of a fixture is installed, the plumbing system for such fixture shall be complete and be in accordance with the plumbing requirements of this code.
404.0 Waste Fittings and Overflows.
404.1 Waste Fittings. Waste fittings shell comply with ASME A112.1.8.2/CSA B125.2, ASTM F409 or Table 701.2 for above ground drainage piping and fittings.
404.2 Overflows. Where a fixture is provided with an overflow, the waste shall be so arranged that the standing water in the fixture shall not rise in the overflow where the stopper is closed or remain in the overflow where the fixture is empty. The overflow pipe from a fixture shall be connected on the house or inlet side of the fixture trap, except that overflow on flush tanks shall be permitted to discharge into the water closets or urinals served by them, but it shall be unlawful to connect such overflows with any other part of the drainage system.
407.0 Lavatories.
407.1 Application. Lavatories shall comply with ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4, ASME A112.19.12, CSA B45.5/IAPMO Z124, CSA B45.8/IAMPO Z403, CSA B45.8/IAPMO Z401 or CSA B45.12/IAMPO Z402.
407.2 Water Consumption. The maximum water flow rate of faucets shall comply with Section 407.2.1 through Section 407.2.2.1.
407.2.1 Maximum Flow Rate. The maximum flow rate for public lavatory faucets shall not exceed 0.5 gpm at 60 psi (1.9 L/m at 414 kPa).
407.2.1.1 Kitchen Faucets, [HCD 1] The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons (6.81 L) per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons (8.32 L) per minute at 60psi, and must default to a maximum flow rate of 1.8 gallons (6.81 L) per minute at 60 psi. Note: Where faucets meeting the maximum flow rate of 1.8 gpm (6.81 L) are unavailable, aerators or other means may be used to achieve reduction.
407.2.1.2 Residential Lavatory Faucets, [HCD 1] The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons (4.54 L) per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons (3.03 L) per minute at 20 psi.
407.5 Waste Outlet. Lavatories shall have a waste outlet and fixture tailpiece not less than 1-1/4 inches (32 mm) in diameter. Continuous wastes and fixture tailpieces shall be constructed from the materials specified in Section 701.4. Waste outlets shall be provided with an approved stopper or strainer.
407.6 Overflow. Overflows shall be installed in accordance with Section 404.1.
408.0 Showers.
408.1 Application. Manufactured shower receptors and shower bases shall comply with ASME A112.19. 1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4, CSA B45.12/IAPMO Z402, or CSA B45.5/IAPMO Z124. Prefabricated shower enclosures shall comply with IAPMO IGC154.
408.2 Water Consumption. [HCD 1] Shower-heads shall have a maximum flow rate of 1.8 gallons (6.81 L) per minute measured at 80 psi and must comply with Division 4.3 of the California Green Building Standards Code (CALGreen).
408.2.1 Single Shower-head, [BSC-CG] [DSA-SS & DSA-SS/CC] Shower-heads shall have a maximum flow rate of not more than 1.8 gallons (6.81 L) per minute at 80 psi. Shower-heads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Shower-heads in compliance with Chapter 5, Division 5.3. of the California Green Building Standards Code (CALGreen).
408.2.2 Multiple Shower-heads Serving One Shower, [BSC-CG] [DSA-SS & DSA-SS/CC] When a shower is served by more than one shower-head, the combined flow rate of all shower-heads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons (6.81 L) per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time in compliance with Chapter 5, Division 5.3. of the California Green Building Standards Code (CALGreen). Note: A hand-held shower shall be considered a shower-head.
408.3 Individual Shower and Tub-Shower Combination Control Valves. Showers and tub-shower combinations shall be provided with individual control valves of the pressure balance, thermostatic, or combination pressure balance/thermostatic mixing valve type that provide scald and thermal shock protection for the rated flow rate of the installed shower head. These valves shall be installed at the point of use and in and comply with ASSE 1016/ASME A112.1016/CSA B125.16 or ASME A112.18.1/CSA B125.1.
408.3.1 Gang Showers. Where gang showers are supplied with a single temperature-controlled water supply pipe, it shall be controlled by a mixing valve that complies with ASSE 1069.
408.3.2 Temperature Limiting. The maximum water temperature discharging from an individual shower head shall be limited to 120 F (49 C) by one of the following methods:
(1) A shower or tub shower combination valve conforming to ASSE 1016/ASME A112.1016/CSA B125.16 where either:
(a) The valve is field-adjusted to the required, maximum temperature, or
(b) The handle position, stop, or temperature limiting control is set in accordance with the manufacturer's instructions to the required maximum temperature.
(2) For gang showers supplied by a single water supply pipe, a mixing valve that conforms to ASSE 1069 that is field-adjusted to the required maximum temperature.
(3) A limiting device conforming to either ASSE 1070/ASME A112.1070/CSA B125.70 or CSA B125.3.
(4) A water heater conforming to ASSE 1084.
(5) Temperature actuated, flow reduction, device conforming to ASSE 1062.
408.4 Waste Outlet. Showers shall have a waste outlet and fixture tailpiece not less than 2 inches (50 mm) in diameter. Fixture tailpieces shall be constructed from the materials specified in Section 701 .2 for drainage piping. Strainers serving shower drains shall have a waterway at least equivalent to the area of the tailpiece.
408.5 Finished Curb or Threshold. Where a shower receptor has a finished dam, curb, or threshold it shall be not less than 1 inch (25.4 mm) lower than the sides and back of such receptor. In no case shall a dam or threshold be less than 2 inches (5 mm) or exceeding 9 inches (229 mm) in depth where measured from the top of the dam or threshold to the top of the drain. Each such receptor shall be provided with an integral nailing flange to be located where the receptor meets the vertical surface of the finished interior of the shower compartment. The flange shall be watertight and extend vertically not less than 1 inch (25.4 mm) above the top of the sides of the receptor. The finished floor of the receptor shall slope uniformly from the sides towards the drain not less than 1/4 inch per foot (20.8 mm/m), nor more than 1/2 inch per foot (41.8 mm/m). Thresholds shall be of sufficient width to accommodate a minimum 22 inch (559 mm) door. Shower doors shall open so as to maintain not less than a 22 inch (559 mm) unobstructed opening for egress. The immediate adjoining space to showers without thresholds shall be considered a wet loca-tion and shall comply with the requirements of the California Building, California Residential and California Electrical Codes.
408.6 Shower Compartments. Shower compartments, regardless of shape, shall have a minimum finished interior of 1024 square inches (0.6606 m2) and shall also be capable of encompassing a 30 inch (762 mm) circle. The minimum required area and dimensions shall be measured at a height equal to the top of the threshold and at a point tangent to its centerline. The area and dimensions shall be maintained to a point of not less than 70 inches (1778 mm) above the shower drain outlet with no protrusions other than the fixture valve or shower head, soap dishes, shelves, and safety grab bars, or rails. Fold-down seals in accessible shower stalls shall be permitted to protrude into the 30 inch (762 mm) circle.
Exceptions:
(1) Showers that are designed to comply with Chapter 11A of the California Building Code.
(2) The minimum required area and dimension shall not apply for a shower receptor having overall. dimensions of not less than 30 inches (762 mm) in width and 60 inches (1524 mm) in length.
409.0 Bathtubs and Whirlpool Bathtubs.
409.1 Application. Bathtubs shall comply with ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4, or CSA B45.5/IAPMO Z124. Whirlpool bathtubs shall comply with ASME A112.19.7/CSA B45.10. Pressure sealed doors within a bathtub or whirlpool bathtub enclosure shall comply with ASME A112.19.15.
409.2 Waste Outlet. Bathtubs and whirlpool bathtubs shall have a waste outlet and fixture tailpiece not less than 1-1/2 inches (40 mm) in diameter. Fixture tailpieces shall be constructed from the materials specified in Section 701.2 for drainage piping. Waste outlets shall be provided with an approved stopper or strainer.
409.3 Overflow. Overflows shall be installed in accordance with Section 404.1.
409.4 Limitation of Hot Water Temperature in Bathtubs and Whirlpool Bathtubs. The maximum hot water temperature discharging from the bathtub and whirlpool bathtub filler shall be limited to 120 F (49 C). The maximum temperature shall be regulated by one of the following means:
(1) A limiting device conforming to either ASSE 1070/ASME A112.1070/CSA B125.70 or CSA B125.3.
(2) A water heater conforming to ASSE 1084.
409.5 Back-flow Protection. The water supply to a bathtub and whirlpool bathtub filler valve shall be protected by an air gap or in accordance with Section 417.0.
409.6 Installation and Access. Bathtubs and whirlpool bathtubs shall be installed in accordance with the manufacturer's installation instructions. Access openings shall be of size and opening to permit the removal and replacement of the circulation pump. Whirlpool pump access located in the crawl space shall be located not more than 20 feet (6096 mm) from an access door, trap door, or crawl hole. The circulation pump shall be located above the crown weir of the trap. The pump and the circulation piping shall be self-draining to minimize water retention. Suction fittings on whirlpool bathtubs shall be listed in accordance with ASME A112.19.7/CSAB45.10.
409.6.1 Flexible PVC Hoses and Tubing. Flexible PVC hoses and tubing intended to be used on whirlpool bathtub water circulation systems or pneumatic systems shall be in accordance with IAPMO Z1033.
410.0 Bidets.
410.1 Application. Bidets shall comply with ASME A112.19.2/CSA B45.1 or ASME A112.19.3/CSA B45.4.
410.2 Back-flow Protection. The water supply to the bidet shall be protected by an air gap or in accordance with Section 603.3.2, Section 603.3.5, or Section 603.3.6.
410.3 Limitation of Water Temperature in Bidets. The maximum hot water temperature discharging from a bidet shall be limited to 110 F (43 C). The maximum temperature shall be regulated by one of the following means:
(1) A limiting device conforming to either ASSE 1070/ASME A112.1070/CSA B125.70 or CSA B125.3.
(2) A water heater conforming to ASSE 1084.
411.0 Water Closets.
411.1 Application. Water closets shall comply with ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4, or CSA B45.5/IAPMO Z124. Water closet bowls for public use shall be of the elongated type. In nurseries, schools, and other similar places where plumbing fixtures are provided for the use of children less than 6 years of age, water closets shall be of a size and height suitable for children's use.
411.2 Water Consumption. The effective flush volume of all water closets shall not exceed 1.28 gallons (4.8 L) per flush when tested in accordance with ASME A112.19. 2/CSA B45.1.
411.2.1 Dual Flush Water Closets. Dual flush water closets shall comply with ASME A112.19.14. The effective flush volume for dual flush water closets shall be defined as the composite, average flush volume of two reduced flushes and one full flush.
411.2.2 Performance. [HCD 1 & HCD 2] Water closets installed shall meet or exceed the minimum performance criteria developed for certification of high-efficiency toilets under the Water Sense program sponsored by the U.S. Environmental Protection Agency (EPA).
411.2.3 Flushometer Valve Activated Water Closets. Flushometer valve activated water closets shall have a maximum flush volume of 1.6 gallons (6.0 Lpf) of water per flush in accordance with ASME A112.19.2/CSAB45.1
411.2.3.1 Flushometer Valve Activated Water Closets. [BSC-CG] [DSA-SS & DSA-SS/CC] Flushometer valve activated water closets shall have a maximum flush volume of 1.28 gallons (4.8 Lpf per flush in accordance with ASME A112.19.2/CSA B45.1.
411.2.4 Water Closets. [BSC-CG] [DSA-SS & DSA-SS/CC] The effective flush volume of all water closets shall not exceed 1.28 gallons (4.8 L) per flush. Tank-type water closets shall he certified to the performance criteria of the U.S. EPA Water Sense Specification for Tank-Type Toilets in compliance with Chapter 5, Division 5.3. of the California Green Building Standards Code (CAL-Green).
411.3 Water Closet Seats. Water closet seats shall be properly sized for the water closet bowl type, and shall be of smooth, non-absorbent material. Seats, for public use, shall be of the elongated type and either of the open front type or have an automatic seat cover dispenser. Plastic seats shall comply with IAPMO Z124.5.
413.0 Flushing Devices.
413.1 Where Required. Each water closet, urinal, clinical sink, or other plumbing fixture that depends on trap siphonage to discharge its waste contents shall be provided with a flushometer valve, flushometer tank, or flush tank designed and installed so as to supply water in sufficient quantity and rate of flow to flush the contents of the fixture to which it is connected, to cleanse the fixture, and to refill the fixture trap, without excessive water use. Flushing devices shall comply with the anti- siphon requirements in accordance with Section 603.5.
413.2 Flushometer Valves. Flushometer valves and tanks shall comply with ASSE 1037 or CSA B125.3, and shall be installed in accordance with Section 603.5.1. No manually controlled flushometer valve shall be used to flush more than one urinal, and each such urinal flushometer valve shall be an approved, self-closing type discharging a predetermined quantity of water. Flushometers shall be installed so that they will be accessible for repair. Flushometer valves shall not be used where the water pressure is insufficient to properly operate them. Where the valve is operated, it shall complete the cycle of operation automatically, opening fully, and closing positively under the line water pressure. Each flushometer shall be provided with a means for regulating the flow through it. [OSPHD 1,2, 3 & 4] Sensor operated flush valves shall he capable of functioning during loss of normal power.
413.3 Flush Tanks. Flush tanks for manual flushing shall be equipped with a flush valve in accordance with ASME A112.19.5/CSAB45.15 or CSAB125.3, and an anti-siphon fill valve (ballcock) that is in accordance with ASSE 1002 or CSA B125.3 and installed in accordance with Section 603,5.2.
413.4 Water Supply for Flush Tanks. An adequate quantity of water shall be provided to flush and clean the fixture served. The water supply for flushing tanks and flushometer tanks equipped for manual flushing shall be controlled by a float valve or other automatic device designed to refill the tank after each discharge and to completely shut off the water flow to the tank where the tank is filled to operational capacity. Provision shall be made to automatically supply water to the fixture so as to refill the trap seal after each flushing.
413.5 Overflows in Flush Tanks. Flush tanks shall be provided with overflows discharging into the water closet or urinal connected thereto. Overflows supplied as original parts with the fixture shall be of sufficient size to prevent tank flooding at the maximum rate at which the tank is supplied with water under normal operating conditions and where installed in accordance with the manufacturer's installation instructions.
414.0 Dishwashing Machines.
414.1 Application. Domestic dishwashing machines shall comply with UL 749. Commercial dishwashing machines shall comply with NSF 3 and UL 921.
414.2 Back-flow Protection. The water supply connection to a commercial dishwashing machine shall be protected by an air gap or a back-flow prevention device in accordance with Section 603.3.2, Section 603.3.5, Section 603.3.6, or ASSE 1004.
414.3 Drainage Connection. Domestic dishwashing 415.0 machines shall discharge indirectly through an air gap fitting 415.1 in accordance with Section 807.3 into a waste receptor, a wye branch fitting on the tailpiece of a kitchen sink, or dishwasher I connection of a food waste disposer. Commercial dishwashing machines shall discharge indirectly through an air gap or direct connection in accordance with Section 704.3 with floor drain protection.
417.0 Faucets and Fixture Fittings.
417.1 Application. Faucets and fixture fittings shall comply with ASME A112.18.1/CSA B125.1. Fixture fittings covered under the scope of NSF 61 shall be in accordance with the requirements of NSF 61.
417.1.2 Wash Fountains, [BSC-CG] [DSA-SS & DSA-SS/CC] Wash fountains shall have a maximum flow rate of not more than 1.8 gallons (6.8 L) per minute/20 [rim space (inches) at 60 psi in compliance with Chapter 5, Division 5.3 of the California Green Building Standards Code (CALGreen).
417.1.2 Metering Faucets for Wash Fountains, [BSC-CG][DSA-SS&DSA-SS/CC] Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons (0.76 L) per cycle/20 [rim space (inches) at 60 psi] in compliance with Chapter 5, Division 5.3 of the California Green Building Standards Code (CALGreen).
417.2 Deck Mounted Bath/Shower Valves. Deck mounted bath/shower transfer valves with integral back-flow protection shall comply with ASME A112.18.1/CSA B125.1. This shall include handheld showers and other bathing appliances mounted on the deck of bathtubs or other bathing appliances that incorporate a hose or pull out feature.
417.3 Handheld Showers. Handheld showers shall comply with ASME A112.18.1/CSA B125.1. Handheld showers with integral back-flow protection shall comply with ASME A112.18.1/CSA B125.1 or shall have a back-flow prevention device that is in accordance with ASME A112.18.3 or ASSE 1014.
417.4 Faucets and Fixture Fittings with Hose Connected Outlets. Faucets and fixture fittings with pull out spout shall comply with ASME A112.18.1/CSA B125.1. Faucets and fixture with pull out spouts with integral back-flow protection shall comply with ASME A112.18.1/CSA B125.1 shall have a back-flow preventer device that is in accordance with ASME A112.18.3.
417.5 Separate Controls for Hot and Cold Water. Where two separate handles control the hot and cold water, the left-hand control of the faucet where facing the fixture fitting outlet shall control the hot water. Faucets and diverters shall be connected to the water distribution system so that hot water corresponds to the left side of the fixture fitting. Single-handle mixing valves installed in showers and tub-shower combinations shall have the flow of hot water correspond to the markings on the fixture fitting.
418.0 Floor Drains.
418.1 Application. Floor drains shall comply with ASME A112.3.1,ASMEA112.6.3, or CSAB79.
418.2 Strainer. Floor drains shall be considered plumbing fixtures, and each such drain shall be provided with an approved-type strainer having a waterway equivalent to the area of the tailpiece. Floor drains shall be of an approved type and shall provide a watertight joint in the floor.
419.0 Food Waste Disposers.
419.1 Application.Food waste disposal units shall comply with UL 430. Residential food waste disposers shall also comply with ASSE 1008.1
419.2 Drainage Connection. Approved wye or other directional-type branch fittings shall be installed in continuous wastes connecting or receiving the discharge from a food waste disposer. No dishwasher drain shall be connected to a sink tailpiece, continuous waste, or trap on the discharge side of a food waste disposer.
419.3 Water Supply. A cold water supply shall be provided for food waste disposers. Such connection to the water supply shall be protected by an air gap or back-flow prevention device in accordance with Section 603.2.
420.0 Sinks.
420.1 Application. Sinks shall comply with ASME A112.19.1/CSA B45.2,ASME A112.19.2/CSA B45.1 ASME A112.19.3/CSA B45.4, CSA B45.5/IAPMO Z124, CSA B45.8/IAPMO Z403, or CSA B45.12/IAPMO Z402. Moveable sink systems shall comply with ASME A112.19.12. Sync, assemblies with automatic soap, dispensers, faucets, or hand dryers shall comply with IAPMO IGC 127.
420.2 Water Consumption. Sink faucets shall have a maximum flow rate of not more than 2.2 gpm at 60 psi (8.3 L/m at 414 kPa) in accordance with ASME A112.18.1/CSAB125.1.
Exceptions: (1) Clinical sinks (2) Laundry trays (3) Service sinks.
420.2.1 Kitchen Faucets. [BSC-CG] [DSA-SS & DSA-SS/CC] Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons (6.8 L) per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons (8.3 L) per minute at 60psi, and must default to a maximum flow rate of 1.8 gallons (6.8 L) per minute at 60 psi in compliance with Chapter 5, Division 5.3 of the California Green Building Standards Code (CALGreen).
420.4 Waste Outlet. Kitchen and laundry sinks shall have a waste outlet and fixture tailpiece not less than 1-1/2 inches (40 mm) in diameter. Service sinks shall have a waste outlet and fixture tailpiece not less than 2 inches (50 mm) in diameter. Fixture tailpieces shall be constructed from the materials specified in Section 701.2 for drainage piping. Waste outlets shall be provided with an approved strainer.

CHAPTER 5 WATER HEATERS (See entire Chapter for additional information)

501.1 Applicability. The regulations of this chapter shall govern the construction, location, and installation of fuel-burning and other types of water heaters heating potable water, together with chimneys, vents, and their connectors. The minimum capacity for storage water heaters shall be in accordance with the first hour rating listed in Table 501.1(1). No water heater shall be hereinafter installed that does not comply with the manufacturer's installation instructions and the type and model of each size thereof approved by the Authority Having Jurisdiction. A list of accepted water heater appliance standards are referenced in Table 501.1(2). Listed appliances shall be installed in accordance with the manufacturer's installation instructions. Unlisted water heaters shall be permitted in accordance with Section 504.3.2.
504.1 Location. Water heater installations in bedrooms and bathrooms shall be in accordance with one of the following [NFPA 54:10.27.1]:
(1) Water heater shall be of the direct-vent type. [NFPA 54:10.27.1(2)]
(2) Fuel-burning water heaters shall be permitted to be installed in a closet located in the bedroom or bathroom provided the closet is equipped with a listed, gasketed door assembly and a listed self-closing device. The self-closing door assembly shall meet the requirements of Section 504.1.1. The door assembly shall be installed with a threshold and bottom door seal and shall meet the requirements of Section 504.1.2. Combustion air for such installations shall be obtained from the outdoors in accordance with Section 506.4. The closet shall be for the exclusive use of the water heater.
504.1.1 Self-Closing Doors. Self-closing doors shall swing easily and freely and shall be equipped with a self-closing device to cause the door to close and latch each time it is opened. The closing mechanism shall not have a hold-open feature. [NFPA 80:6.1.4.2]
504.1.2 Gasketing. Gasketing on gasketcd doors or frames shall be furnished in accordance with the published listings of the door, frame, or gasketing material manufacturer. [NFPA 80:6.4.8]
Exception: Where acceptable to the Authority Having Jurisdiction, gasketing of non-combustible or limited combustible material shall be permitted to be applied to the frame, provided closing and latching of the door are not inhibited.
504.2 Vent. Water heaters of other than the direct-vent type shall be located as close as practical to the chimney or gas vent.
504.3 Clearance. The clearance requirements for water heaters shall comply with Section 504.3.1 or Section 504.3.2.
504.3.1 Listed Water Heaters. The clearances shall not be such as to interfere with combustion air, draft hood clearance and relief, and accessibility far servicing. Listed water heaters shall be installed in accordance with their listings and the manufacturer's installation instructions. [NFPA 54:10.28.2.1]
504.3.2 Unlisted Water Heaters. Unlisted water heaters shall be installed with a clearance of 12 inches (305 mm) on all sides and rear. Combustible floors under unlisted water heaters shall be protected in an approved manner. [NFPA 54:10.28.2.2].
504.4 Pressure-Limiting Devices. A water heater installation shall be provided with overpressure protection by means of an approved, listed device ins alled in accordance with the terms of its listing and the manufacturer's installation instructions. [NFPA 54:10.28.3].
504.5 Temperature-Limiting Devices. A water heater installation or a hot water storage vessel installation shall be provided with over temperature protection by means of an approved, listed device installed in accordance with the terms of its listing and the manufacturer's installation instructions. [NFPA 54:10.28.4].
504.6 Temperature, Pressure, and Vacuum Relief Devices. Temperature, pressure, and vacuum relief devices or combinations thereof, and automatic gas shutoff devices, shall be installed in accordance with the terms of their listings and the manufacturer's installation instructions. A shutoff valve shall not be placed between the relief valve and the water heater or on discharge pipes between such valves and the atmosphere. The hourly British thermal units (Btu) (kW•h) discharge capacity or the rated steam relief capacity of the device shall be not less than the input rating of the water heater.
506.0 Air for Combustion and Ventilation.
506.1 General. Air for combustion, ventilation, and dilution of flue gases for appliances installed in buildings shall be obtained by application of one of the methods covered in Section 506.2 through Section 506.7.3. Where the requirements I of Section 506.2 are not met, outdoor air shall be introduced I in accordance with methods covered in Section 506.4 through Section 506.7.3.
Exception: This provision shall not apply to direct-vent appliances. [NFPA 54:9.3.1.1]
506.2 Indoor Combustion Air. The required volume of indoor air shall be determined in accordance with Section 506.2.1 or Section 506.2.2 except that where the air infiltration rate is known to be less than 0.40 *ACH* (air change per hour), Section 506.2.2 shall be used. The total required volume shall be the sum of the required volume calculated for appliances located within the space. Rooms communicating directly with the space in which the appliances are installed through openings not furnished with doors, and through combustion air openings sized and located in accordance with Section 506.3 are considered a part of the required volume [NFPA 54:9.3.2]
506.3 Indoor Opening Size and Location. Openings used to connect indoor spaces shall be sized and located in accordance with the following:
(1) Combining spaces on the same story. Each opening shall have a free area of not less than 1 square inch per 1000 Btu/h (0.002 mVkW) of the total input rating of appliances in the space, but not less than 100 square inches (0.065 m2). One permanent opening shall commence within 12 inches (305 mm) of the top of the enclosure and one permanent opening shall commence within 12 inches (305 mm) of the bottom of the enclosure (see Figure 506.3). The minimum dimension of air openings shall be not less than 3 inches (76 mm).
(2) Combining spaces in different stories. The volumes of spaces in different stories shall be considered as communicating spaces where such spaces are connected by one or more permanent openings in doors or floors having a total minimum free area of 2 square inches per 1000 Btu/h (0.004 m2/kW) of total input rating of all appliances. [NFPA 54:9.3.2.3]
506.4 Outdoor Combustion Air. Outdoor combustion air shall be provided through opening(s) to the outdoors in accordance with methods in Section 506.4., or Section 506.4.2. The minimum dimension of air openings shall be not less than 3 inches (76 mm). [NFPA 54:9.3.3].
506.4.1 Two Permanent Openings Method. Two permanent openings, one commencing within 12 inches (305 mm) of the top and one commencing within 2 inches (305 mm) of the bottom of the enclosure shall be provided. The openings shall communicate directly, or by ducts, with the outdoors or spaces that freely communicate with the outdoors as follows:
(1) Where directly communicating with the outdoors or where communicating to the outdoors through vertical ducts, each opening shall have a free area of not less than 1 square inch per 4000 Btu/h (0.0005 m2/kW) of total input rating of appliances in the enclosure. [See Figure 506.4(1) and Figure 506.4(2)]
(2) Where communicating with the outdoors through horizontal ducts, each opening shall have a free area of not less than 1 square inch per 2000 Btu/h (0.001 m2/kW) of total input rating of appliances in the enclosure. [See Figure 506.4(3)] [NFPA 54:9.3.3.1]
506.4.2 One Permanent Opening Method. One permanent opening, commencing within 12 inches (305 mm) of the top of the enclosure, shall be provided. The appliance shall have clearances of not less than 1 inch(25.4mm) from the sides and back and 6 inches (152 mm) from the front of the appliance. The opening shall directly communicate with the outdoors or shall communicate through a vertical or horizontal duct to the outdoors or spaces that freely communicate with the outdoors (see Figure 506.4.2) and shall have a free area not less than the following:
(1) One square inch per 3000 Btu/h (0.0007 m2/kW) of the total input rating of appliances located in the enclosure, and
(2) Not less than the sum of the areas of vent connectors in the space. [NFPA 54:9.3.3.2]
507.0 Appliance and Equipment Installation Requirements.
507.1 Dielectric Insulator. The Authority Having Jurisdiction shall have the authority to require the use of an approved dielectric insulator on the water piping connections of water heaters and related water heating appliances.
507.2 Seismic Provisions. Water heaters shall be anchored or strapped to resist horizontal displacement due to earthquake motion. Strapping shall be at points within the upper one third (1/3) and lower one-third (1/3) of its vertical dimensions. At the lower point, a minimum distance of four (4) inches (102mm) shall be maintained above the controls with the strapping. *Note: [HCD 1 & HCD 2] Reference Health and Safety Code Section 19211(a) which addresses new, replacement, and existing water heaters.*
Note: The applicable subsection ofHealth and Safety Code Section 19211(a) which addresses new, replacement, and existing water heaters is repeated here for clarity and reads as follows: Section 19211(a) Notwithstanding Section 19100, all new and replacement water heaters, and all existing residential water heaters shall be braced, anchored, or strapped to resist falling or horizontal displacement due to earthquake motion. At a minimum, any water heater shall be secured in accordance with the California Plumbing Code, or modifications made thereto by a city, county, or city and county pursuant to Section 17958.5.
507.3 Support of Appliances. Appliances and equipment shall be furnished either with load-distributing bases or with an approved number of supports to prevent damage to either the building structure or the appliance and the equipment. [NFPA 54:9.1.8.1]
507.4 Ground Support. A water heater supported from the ground shall rest on level concrete or other approved base extending not less than 3 inches (76 mm) above the adjoining ground level.
507.5 Drainage Pan. Where a water heater is located in an attic, in or on an attic-ceiling assembly, floor-ceiling assembly, or floor-subfloor assembly where damage results from a leaking water heater, a watertight pan of corrosion-resistant materials shall be installed beneath the water heater with not less than 3/4 of an inch (20 mm) diameter drain to an approved location. Such pan shall be not less than 1-1/2 inches (38 mm) in depth.
507.13 Installation in Garages. Appliances in garages and in adjacent spaces that open to the garage and are not part of the living space of a dwelling unit shall be installed so that burners and burner-ignition devices are located not less than 18 inches (457 mm) above the floor unless listed as flammable vapor ignition resistant. [NFPA 54:9.1.10.1]
507.13.1 Physical Damage. Appliance sin stalled in garages, warehouses, or other areas subject to mechanical damage shall be guarded against such damage by being installed behind protective barriers or by being elevated or located out of the normal path of vehicles.
507.13.2 Access from the Outside. Access from the Outside. Where appliances are installed within a garage and are enclosed in a separate enclosed space having access only from outside of the garage, such appliances shall be permitted to be installed at floor level, provided the required combustion air is taken from the exterior of the garage. [NFPA 54:9.1.10.3]
508.4 Appliances in Attics and Under-Floor Spaces. All attic or under-floor space in which an appliance is installed shall be accessible through an opening and passageway not less than as large as the largest component of the appliance, and not less than 22 inches by 30 inches (559 mm by 762 mm).
508.4.1 Length of Passageway. Where the height of the passageway is less than 6 feet (1829 mm), the distance from the passageway access to the appliance shall not exceed 20 feet (6096 mm) measured along the centerline of the passageway. [NFPA 54:9.5.1.1]
508.4.2 Width of Passageway. The passageway shall be unobstructed and shall have solid flooring not less than 24 inches (610 mm) wide from the entrance opening to the appliance. [NFPA 54:9.5.1]
508.4.3 Work Platform. A level working platform not less than 30 inches (762 mm) by 30 inches (762 mm) shall be provided in front of the service side of the appliance. [NFPA 54:9.5.2]
508.4.4 Lighting and Convenience Outlet. A permanent 120-volt receptacle outlet and a lighting fixture shall be installed near the appliance. The switch controlling the lighting fixture shall be located at the entrance to the passageway. [NFPA 54:9.5.3]
509.0 Venting of Appliances.
509.1 Listing. Type B and Type B-W gas vents shall comply with UL 441 and Type L gas vents shall comply with UL 641.
509.1.1 Installation. Listed vents shall be installed in accordance with this chapter and the manufacturer's installation instructions. [NFPA 54:12.2.1]
509.1.2 Prohibited Discharge. Appliance vents shall not discharge into a space enclosed by screens having openings less than 1/4 of an inch (6.4 mm) mesh.
509.2 Connection to Venting Systems. Except as permitted in Section 509.2.1 through Section 509.2.5, appliances shall be connected to venting systems. [NFPA 54:12.3.1]
509.5 Masonry, Metal, and Factory-Built Chimneys. Chimneys shall be installed in accordance with Section 509.5.1 through Section 509.5.3.
509.5.1 Factory-Built Chimneys. Factory-built chimneys shall be listed in accordance with UL 103, UL 959, or UL 2561. Factory-built chimneys shall be installed in accordance with the manufacturer's installation instructions. Factory-built chimneys used to vent appliances that operate at positive vent pressure shall be listed for such application. [NFPA 54:12.6.1.1]
509.5.1.1 Decorative Shrouds. Decorative shrouds addressed in Section 509.5.4.3 shall be listed or labeled in accordance with UL 103 for factory-built residential chimneys.
509.5.4 Termination. A chimney for a residential-type or low-heat appliance shall extend not less than 3 feet (914 mm) above the highest point where it passes through a roof of a building and not less than 2 feet (610 mm) higher than any portion of a building within a horizontal distance of 10 feet (3048 mm). [NFPA 54: 12.6.1.] (See Figure 509.5.4)
509.5.4.1 Medium-Heat Gas Appliances. A chimney for a medium-heat appliance shall extend not less than 10 feet (3048 mm) above a portion of a building within 25 feet (7620 mm). [NFPA 54:12.6.2.2]
509.5.4.2 Chimney Height. A chimney shall extend at least 5 feet (1524 mm) above the highest connected appliance draft hood outlet or flue collar. [NFPA 54:12.6.2.3]
509.5.4.3 Decorative Shrouds. Decorative shrouds shall not be installed at the termination of factory-built chimneys except where such shrouds are listed and labeled for use with the specific factory-built chimney system and are installed in accordance with the manufacturer's installation instructions. [NFPA 54:12.6.2.4]
509.6 Gas Vents. Gas vents shall be installed in accordance with the manufacturer's installation instructions. [NFPA 54:12.7.1(1)]

CHAPTER 6 WATER SUPPLY and DISTRIBUTION (See entire Chapter for additional information)

601.0 General.
601.1 Applicability. This chapter shall govern the materials, design, and installation of water supply systems, including methods and devices used for back-flow prevention.
601.2 Water Supply and Flushing. Each plumbing fixture shall be provided with an adequate supply of potable running water pipe thereto in an approved manner so arranged as to flush and keep it clean and sanitary condition without danger of back-flow or cross connection. Water closet and urinals shall be flushed using an approved flush tank or flushometer valve.
601.2.1 Hot and Cold Water Required.In occupancies where plumbing fixtures are installed for private use, hot water shall be required for bathing, washing, laundry, cooking purposes, dishwashing or maintenance. In occupancies where plumbing fixtures are installed for public use, hot water shall be required for bathing and washing purposes. This requirement shall not supersede the requirements for individual temperature control limitations for public lavatories and public and private bidets, bathtubs, whirlpool bathtubs, and shower control valves.
604.0 Materials.
604.1 Pipe, Tube, and Fittings. Pipe, tube, fittings, solvent cements, thread sealants, solders, and flux used in potable water systems intended to supply drinking water shall be in accordance with the requirements of NSF 61. Where fittings and valves are made from copper alloys containing more than 15 percent zinc by weight, and are used in plastic piping systems, they shall be resistant to dezincification and stress corrosion cracking in accordance with NSF 14. Materials used in the water supply system, except valves and similar devices, shall be of a like material, except where otherwise approved by the Authority Having Jurisdiction. Materials for building water piping and building supply piping shall comply with the applicable standards referenced in Table 604.1.
612.0 Residential Fire Sprinkler Systems.
612.1 General. Residential sprinkler systems shall be installed in compliance with the California Residential Code, or the California Fire code.

CHAPTER 7 SANITARY DRAINAGE (See entire Chapter for additional information)

701.0 Materials.
701.1 Applicability. This chapter shall govern the materials, design, and installation of sanitary drainage systems and building sewers.
701.2 Drainage Piping. Materials for drainage piping shall be in accordance with one of the referenced standards in Table 701.2 except that:
(1) No galvanized wrought-iron or galvanized steel pipe shall be used underground and shall be kept not less than 6 inches (152 mm) aboveground.
(2) ABS and PVC DWV piping installations shall be installed in accordance with applicable standards referenced in Table 701.2 and the fire stop protection requirements in the California Building Code. Except for individual single-family dwelling units, materials exposed within ducts or plenums shall have a flame-spread index of not more than 25 and a smoke-developed index of not more than 50, where tested in accordance with ASTM E84 or UL 723. Plastic piping installed in plenums shall be tested in accordance with all requirements of ASTM E84 or UL 723. Mounting methods, supports and sample sizes of materials for testing that are not specified in ASTM E84 or UL 723 shall be prohibited.
(3) No vitrified clay pipe or fittings shall be used above-ground or where pressurized by a pump or ejector. They shall be kept not less than 12 inches (305 mm) below ground.
(4) Copper or copper alloy tube for drainage and vent piping shall have a weight of not less than that of copper or copper alloy drainage tube type DWV.
(5) Stainless steel 304 pipe and fittings shall not be installed underground and shall be kept not less than 6 inches (152 mm) aboveground.
(6) Cast-iron soil pipe and fittings shall be listed and tested in accordance with standards referenced in Table 1701.1. Such pipe and fittings shall be marked with the country of origin and identification of the original manufacturer in addition to markings required by referenced standards.
708.0 Grade of Horizontal Drainage Piping.
708.1 General. Horizontal drainage piping shall he run in practical alignment and a uniform slope of not less than 1/4 inch per foot (20.8 mm/m) or 2 percent toward the point of disposal provided that, where it is impractical due to the depth of the street sewer, to the structural features, or to the arrangement of a building or structure to obtain a slope of 1/4 inch per foot (20.8 mm/m) or 2 percent, such pipe or piping 4 inches (100 mm) or larger in diameter shall be permitted to have a slope of not less than 1/8 inch per foot (10.4 mm/m) or 1 percent, where first approved by the Authority Having Jurisdiction.
709.0 Gravity Drainage Required.
709.1 General. Where practicable, plumbing fixtures shall be drained to the public sewer or private sewage disposal system by gravity.
710.0 of Fixtures Located Below the Next Upstream Manhole or Below the Main Sewer Level.
710.1 Back-flow Protection. Fixtures installed on a floor level that is lower than the next upstream manhole cover of the public or private sewer shall be protected from back-flow of sewage by installing an approved type of backwater valve. Fixtures on such floor level that are not below the next upstream manhole cover shall not be required to be protected by a backwater valve. Fixtures on floor levels above such elevation shall not discharge through the back-water valve. Clean-outs for drains that pass through a back-water valve shall be clearly identified with a permanent label stating "backwater valve downstream".
710.2 Sewage Discharge. Drainage piping serving fixtures that are located below the crown level of the main sewer shall discharge into an approved watertight sump or receiving tank, so located as to receive the sewage or wastes by gravity. From such sump or receiving tank, the sewage or other liquid wastes shall be lifted and discharged into the building drain or building sewer by approved ejectors, pumps, or other efficient approved mechanical devices.
710.3 Sewage Ejector and Pumps. A sewage ejector or sewage pump receiving the discharge of water closets or urinals:
(1) Shall have a discharge capacity of not less than 20 fpm (1.26L/s).
(2) In single dwelling units, the ejector or pump shall be capable of passing a 1-1/2 inch (38 mm) diameter solid ball, and the discharge piping of each ejector or pump shall have a backwater valve and gate valve, and be not less than 2 inches (50 mm) in diameter.
(3) In other than single-dwelling units, the ejector or pump shall be capable of passing a 2 inch (51 mm) diameter solid ball, and the discharge piping of each ejector or pump shall have a backwater valve and gate valve, and be not less than 3 inches (80 mm) in diameter.
713.0 Sewer Required.
713.1 Where Required. A building in which plumbing fixtures are installed and premises having drainage piping thereon shall have a connection to a public or private sewer, except as provided in Section 713.2, and Section 713.4.
713.2 Private Sewage Disposal System. Where no public sewer intended to serve a lot or premises is available in a thoroughfare or right of way abutting such lot or premises, drainage piping from a building or works shall be connected to an approved private sewage disposal system.
719.0 Clean-outs.
719.1 Locations. Clean-outs shall be placed inside the building near the connection between the building drain and the building sewer or installed outside the building at the lower end of the building drain and extended to grade. Additional building sewer clean-outs shall be installed at intervals not to exceed 100 feet (30480 mm) in straight runs and for each aggregate horizontal change in direction exceeding 135 degrees (2.36 rad).
719.2 No Additional Clean-outs. Where a building sewer or a branch thereof docs not exceed 10 feet (3048 mm) in length and is a straight-line projection from a building drain that is provided with a clean-out, no clean-out will be required at its point of connection to the building drain.
719.3 Building Sewer Clean-outs. Required building sewer clean-outs shall be extended to grade and shall be in accordance with the appropriate sections of Section 707.0. for construction. and materials. Where building sewers are located under buildings, the clean-out requirements of Section 707.0 shall apply.

CHAPTER 8 INDIRECT WASTES (See entire Chapter for additional information)

801.0 General.
801.1 Applicability. This chapter shall govern the materials, design, and installation of indirect waste piping, receptors, and connections; and provisions for discharge and disposal of condensate wastes, chemical wastes, industrial wastes, and clear water wastes.
801.2 Air or Air Break Required. Indirect waste piping shall discharge into the building drainage system through an air gap or air break as set forth in this code. Where a drainage air gap is required by this code, the minimum vertical distance as measured from the lowest point of the indirect waste pipe or the fixture outlet to the flood-level rim of the receptor shall be not less than 1 inch (25.4 mm)
807.3 Domestic Dishwashing Machine. No domestic dish-washing machine shall be directly connected to a drainage system or food waste disposer without the use of an approved dishwasher air gap fitting on the discharge side of the dishwashing machine. Listed air gaps shall be installed with the flood-level (FL) marking at or above the flood level of the sink or drainboard, whichever is higher.

CHAPTER 9 VENTS (See entire Chapter for additional information)

901.0 General. This chapter shall govern the materials, design, and installation of plumbing vent systems.
901.1 Applicability. This chapter shall govern the materials, design, and installation of plumbing vent systems.
901.2 Vents Required. Each plumbing fixture trap, except as otherwise provided in this code, shall be protected against siphonage and back-pressure, and air circulation shall be ensured throughout all parts of the drainage system by means of vent pipes installed in accordance with the requirements of this chapter and as otherwise required by this code.
909.0 Special for Island Fixtures.
909.1 General. for island sinks and similar equipment shall be roughed in above the floor and shall be permitted to be vented by extending the vent as high as possible, but not less than the drainboard and then returning it downward and connecting it to the horizontal sink drain immediately downstream from the vertical fixture drain. The return vent shall be connected to the horizontal drain through a wye-branch fitting and shall in addition, be provided with a foot vent taken off the vertical fixture vent by means of a wye branch immediately below the floor and extending to the nearest partition and then through the roof to the open or shall be permitted to be connected to other vents at a point not less than 6 inches (152 mm) above the flood-level rim of the fixtures served. Drainage fittings shall be used on the vent below the floor level, and a slope of not less than 1/4 inch per foot (20.8 mm/m) back to the drain shall be maintained. The return bend used under the drainboard shall be a one piece fitting or an assembly of a 45 degree (0.79 rad), a 90 degree (1.57 rad), and a 45 degree (0.79 rad) elbow in the order named. Pipe sizing shall be as elsewhere required in this code. The island sink drain, upstream of the returned vent, shall serve no other fixtures. An accessible clean-out shall be installed in the vertical portion of the foot vent.

CHAPTER 10 TRAPS and INTERCEPTORS (See entire Chapter for additional information)

1001.0 General.
1001.1 Applicability. This chapter shall govern the materials, design, and installation of traps and interceptors.
1001.2 Where Required Each plumbing fixture, shall be separately trapped by an approved type of liquid seal trap. This section shall not apply to fixtures with integral traps. Not more than one trap shall be permitted on a trap arm. Food waste disposers installed with a set of restaurant, commercial, or industrial sinks shall be connected to a separate trap. Each domestic clothes washer and each laundry tub shall be connected to a separate and independent trap, except that a trap serving a laundry tub shall be permitted to also receive the waste from a clothes washer set adjacent thereto. The vertical distance between a fixture outlet and the trap weir shall be as short as practicable, but in no case shall the tailpiece from a fixture exceed 24 inches (610 mm) in length. One trap shall be permitted to serve a set of not more than three single compartment sinks or laundry tubs of the same depth or three lavatories immediately adjacent 1002.0 to each other and in the same room where the waste outlets are not more than 30 inches (762 mm) apart and the trap is centrally located where three compartments are installed.

CHAPTER 11 STORM DRAINAGE (See entire Chapter for additional information)

1101.0 General.
1101.1 Applicability. This chapter shall govern the materials, design, and installation of storm water drainage systems.
1101.2 Where Required. Roofs, paved areas, yards, courts, courtyards, vent shafts, light wells, or similar areas having rainwater, shall be drained into a separate storm sewer system, or into a combined sewer system where a separate storm sewer system is not available, or to some other place of disposal satisfactory to the Authority Having Jurisdiction. In the case of one and two family dwellings, storm water shall be permitted to be discharged on flat areas, such as streets or lawns, so long as the storm water shall flow away from the building and away from adjoining property, and shall not create a nuisance.

CHAPTER 12 FUEL GAS PIPING (See entire Chapter for additional information)

1201.0 General.
1201.1 Applicability. The regulations of this chapter shall govern the installation of fuel gas piping in or in connection with a building, structure or within the property lines of premises up to 5 pounds-force per square inch (psi) (34 kPa), other than service pipe. Fuel oil piping systems shall be installed in accordance with NFPA 31.
1208.0 Gas Piping System Design, Materials, and Components.
1208.1 Installation of Piping System. Where required by the Authority Having Jurisdiction, a piping sketch or plan shall be prepared before proceeding with the installation. This plan shall show the proposed location of piping, the size of different branches, the various load demands, and the location of the point of delivery. [NFPA 54:5.1.1]
1208.4 Sizing of Gas Piping Systems. Gas piping systems shall be of such size and so installed as to provide a supply of gas to meet the maximum demand and supply gas to each appliance inlet at not less than the minimum supply pressure required by the appliance. [NFPA 54:5.4.1]

STUDIO THREE DESIGN

INTERIORS
REMODELS +
ADDITIONS
NEW CONSTRUCTION

638 UNIVERSITY AVE
LOS GATOS
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RESIDENCE
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LOS GATOS,
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A.P.N. 510-14-037

4/2/25
BUILDING SUBMITTAL SET

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

CA PLUMBING CODE

P. 1

B1

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

BASEMENT CONSTRUCTION SHORING/SEQUENCING:

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

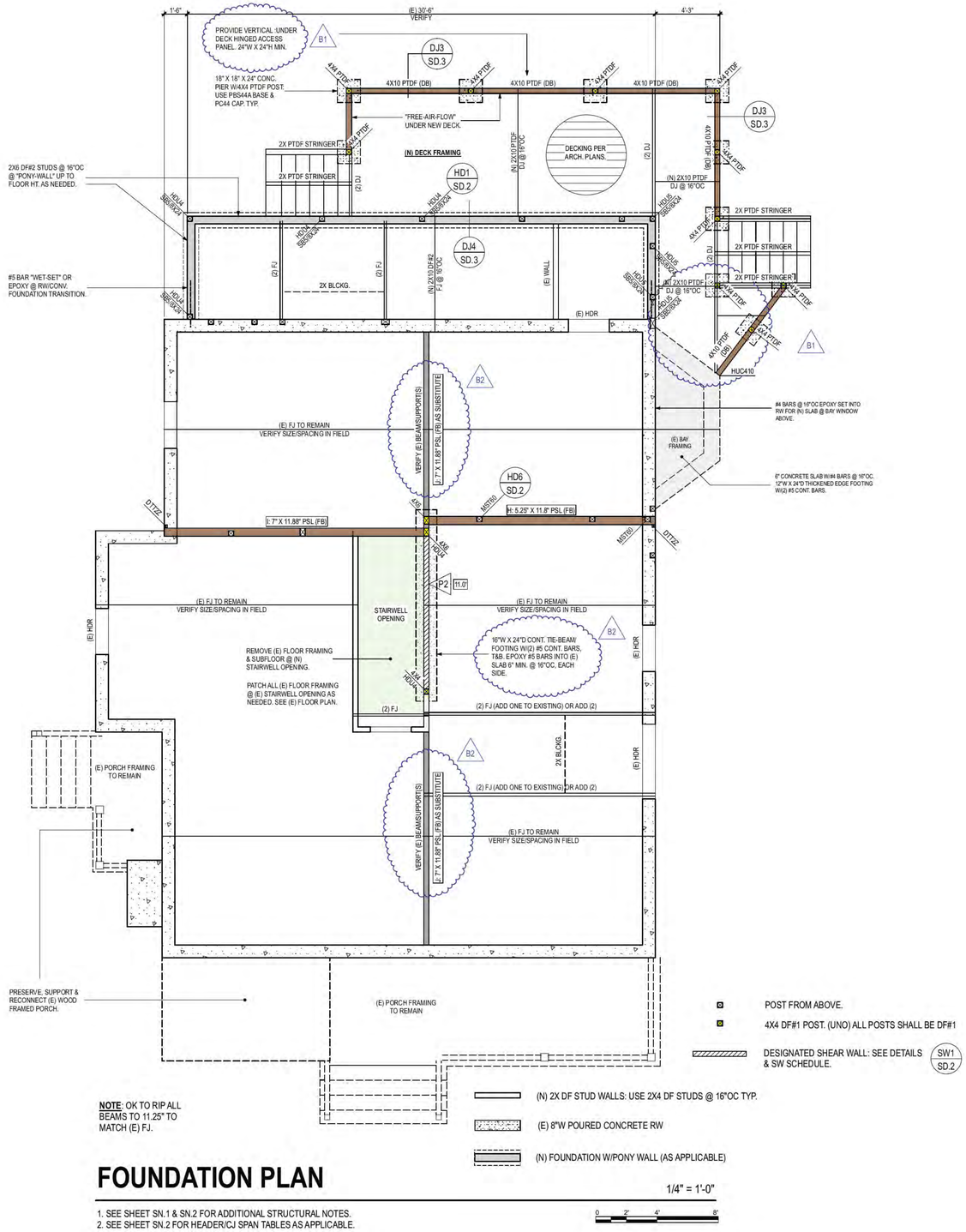
UNDERFLOOR VENTILATION CALCS (CRC R408)

	(N) UNDERFLOOR AREA @ 1/150	
AREA OF ACCESSIBLE UNDERFLOOR TO BE VENTILATED	N/A: BASEMENT/CELLAR BELOW	
AREA/150 PER CRC R408.2 UNDERFLOOR VENTILATION REQUIRED.		
NUMBER OF VENTS REQUIRED (6ÇK 14.5ÖVENT = .60 SF)		
TOTAL VENTILATION PROVIDED		

FOUNDATION/FLOOR FRAMING NOTES

TYPE & SIZE	CONVENTIONAL SPREAD FOOTING & STEM WALL: (160ØW X 24ØD FTG. W/80ØV STEM WALL) POURED CONCRETE RETAINING WALL: 100ØW @ STRUCTURE, 80ØW @ LIGHT-WELLS
CONCRETE	COMPRESSIVE STRENGTH (FØC) OF 2500 PSI @ 28 DAYS (UNO)
REINFORCING	SEE DETAILS PROVIDED AND NOTES BELOW.
MUD SILL	2X OR 3X PTDF: (SEE SHEAR WALL SCHEDULE & DETAILS)
MUD SILL ANCHORAGE	5/8ØDIA. X 12Ø(HDG) AB @ 48ØOC (UNO) SEE SHEAR WALL SCHEDULE & NOTES BELOW

1. SOIL ENGINEER AND/OR STRUCTURAL ENGINEER SHALL BE RETAINED TO PROVIDE TESTING, OBSERVATION AND/OR SPECIAL INSPECTION SERVICES AS REQUIRED DURING THE GRADING & FOUNDATION CONSTRUCTION PHASES OF THE PROJECT (AS APPLICABLE). ALL REPORTS SHALL BE SUBMITTED IN WRITING TO THE ENFORCING AGENCY FOR REVIEW AND APPROVAL.
2. **THE GENERAL CONTRACTOR SHALL INVESTIGATE THE (E) FOUNDATION (AS APPLICABLE) TO CONFIRM THAT THE EXISTING TYPE OF FOUNDATION MATCHES THE PROPOSED FOUNDATION SHOWN ON THE APPROVED PLANS. THE GENERAL CONTRACTOR SHALL NOTIFY THE PROJECT ARCHITECT/DESIGNER & STRUCTURAL ENGINEER OF RECORD, PRIOR TO THE COMMENCEMENT OF ANY WORK, OF ANY & ALL DISCREPANCIES INCLUDING, BUT NOT LIMITED TO, EXISTENCE OF DRILLED PIERS, GRADE BEAMS, SLABS WITH PRE-OR POST TENSIONED CABLES, OR ANYTHING ELSE NOT SHOWN ON THE APPROVED PLANS. THE GENERAL CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY & LIABILITY FOR ANY & ALL DAMAGES THAT MAY OCCUR FROM THE FAILURE OF PROVIDING THIS NOTIFICATION.**
3. THE GENERAL CONTRACTOR SHALL VERIFY TYPE AND CONSTRUCTION OF ALL EXISTING CONCRETE SLABS PRIOR TO PERFORMING ANY SAW-CUTTING OR SLAB MODIFICATION.
4. ALL STEEL REINFORCING SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING OF CONCRETE.
5. ALL METAL FASTENERS AND/OR ANCHORS THAT ARE IN CONTACT WITH PTDF LUMBER OR EXPOSED TO WEATHER SHALL BE ØHOT DIPPED GALVANIZEDØ(HDG) METAL OR STAINLESS STEEL (SS).
6. WET SET ANCHOR BOLTS: PROVIDE 5/8ØDIAMETER X 12Ø@ 48ØOC MAXIMUM SPACING W/ 2.29ØÇK 3ØÇK 3ØWASHERS PER CBC 2305.3.11. SEE SHEAR WALL SCHEDULE FOR ANCHOR BOLT SPACING @ DESIGNATED SHEAR WALL LINES.
7. RETROFIT ANCHOR BOLTS: 5/8ØOR 7/8ØDIAMETER THREADED RODS AS NOTED ON FOUNDATION PLAN W/ 2.29ØÇK 3Ø X 3ØWASHERS PER CBC 2305.3.11. ANCHORS SET INTO EXISTING CONCRETE SHALL BE PROVIDED WITH ØSIMPSON SET-XPØEPOXY (ICC-ESR 2508).
8. PROTECTION FOR WOOD & WOOD BASED PRODUCTS AGAINST DECAY SHALL BE IN COMPLIANCE WITH CRC R317.
9. DOUBLE ALL FLOOR JOISTS/FRAMING MEMBERS UNDER BEARING WALLS ABOVE, PARALLEL TO JOIST DIRECTION.
10. DOUBLE ALL FLOOR JOISTS/FRAMING MEMBERS @ PERIMETER OF FLOOR DIAPHRAGM OPENINGS & SIDE EDGES OF FLOOR CANTILEVERS.
11. VERIFY LOCATIONS OF CONCENTRATED POINT LOADS FROM ABOVE & VERIFY/PROVIDE CONCRETE FOOTING/ ISOLATED PIER AS APPLICABLE.
12. PROVIDE 4X/6X DF#1 SOLID COMPRESSION BLOCKING IN FLOOR ASSEMBLY UNDER ALL CONCENTRATED POINT



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

FOUNDATION PLAN

1/4" = 1'-0"

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

REVISIONS:	#
05/15/25	B1
10/15/25	B2

CW

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ARCHITECTURAL DESIGN BY:

STUDIO THREE DESIGN

RESIDENCE

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

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

10/21/2025

PROFESSIONAL STAMP

S.1

SHEAR WALL SCHEDULE

TYPE	SHEAR MATERIAL	SHEAR WALL NAILING	SHEAR WALL TRANSFER	SOLE PLATE NAILING	ANCHOR BOLTS @ (E) 2X PTDF MUD SILL	ANCHOR BOLTS @ (N) 3X PTDF MUD SILL	HOLD DOWN TYPE
P1	3/8"CDX PLYWD. OR 15/32"OSB	8D @ 6"/6"C (EDGE) 8D @ 12"/6"C (FIELD)	A35, RBC OR LTP4 CLIPS @ 24"/6"C	16D @ 6"/6"C	5/8"Ø/A. X 12"Ø/AB @ 16"/6"C	5/8"Ø/A. X 12"Ø/XB @ 32"/6"C	HDU2 MST37
P2	3/8"CDX PLYWD. OR 15/32"OSB	8D @ 3"/6"C (EDGE) 8D @ 12"/6"C (FIELD)	A35, RBC OR LTP4 CLIPS @ 16"/6"C	16D @ 3"/6"C	5/8"Ø/A. X 12"Ø/AB @ 12"/6"C	5/8"Ø/A. X 12"Ø/AB @ 16"/6"C	HDU4 MST48/MST60
P3	1/2"CDX PLYWD. OR 19/32"OSB	10D @ 3"/6"C (EDGE) 10D @ 12"/6"C (FIELD)	A35, RBC OR LTP4 CLIPS @ 6"/6"C	5/8"Ø/A. X 5"Ø/LAG SCREW @ 6"/6"C	NOT PERMITTED	5/8"Ø/A. X 12"Ø/AB @ 12"/6"C	HDU5/HDU8 MST60

SHEAR WALL SCHEDULE NOTES:

1. SEE FOUNDATION PLAN(S) & FRAMING PLAN(S) FOR LOCATIONS, SIZE & ANCHORAGE OF HOLD DOWNS.
2. ALL HARDWARE SHALL BE MANUFACTURED BY ©SIMPSON STRONG TIE COMPANY INC.©OR EQUAL (UNO). REVIEW THE LATEST CATALOG PRIOR TO INSTALLATION FOR ANY SPECIAL REQUIREMENTS, INSTALLATION, PROCEDURES ALTERNATIVE OPTIONS, ETC.É USE COMMON NAILS TYP. (BOX NAILS PROHIBITED)
3. INSTALL 5/8"Ø/A. X 12"Ø/ANCHOR BOLTS @ 48"Ø/C MAXIMUM SPACING @ ALL NON-SHEAR WALLS. FOLLOW THIS SCHEDULE FOR ANCHOR BOLT SPACING WHERE SHEAR WALLS ARE DESIGNATED ON FRAMING PLAN(S). ALL ANCHOR BOLTS SHALL HAVE A 7"Ø/MIN EMBEDDMENT INTO CONCRETE. USE 2.29"Ø/X 3"Ø/X 3"Ø/SQUARE WASHERS (TYP.) OR SIMPSON EQUIVALENT PROPRIETARY PRODUCT. ALL MUD SILLS SHALL HAVE (2) ANCHOR BOLTS PER PIECE MINIMUM & (1) ANCHOR BOLT WITHIN 12"Ø/FROM EACH END & NO CLOSER THAN 6"Ø/FROM EACH END OF THE MUD SILL.
4. FOR NEW CONSTRUCTION, ALL ANCHOR BOLTS SHALL BE INSTALLED ON 3X PTDF MUD SILL OR EQUAL.
5. USE ©SIMPSON©DESIGNATED ANCHOR/HD BOLTS OR ENGINEER OF RECORD APPROVED ANCHORS/THREADED RODS WITH NUT/WASHER/NUT @ ALL HOLD DOWN LOCATIONS SHOWN ON FOUNDATION & FRAMING PLAN(S).
6. ALL HOLD DOWN AND ANCHOR BOLTS SHALL BE SECURELY TIED IN PLACE PRIOR TO FOUNDATION STEEL INSPECTION. USE ©SIMPSON ANCHOR MATE©BOLT HOLDERS OR PROPRIETARY TEMPLATES AS APPLICABLE.
7. ALL ANCHOR BOLTS (WET SET AND RETROFIT) & OTHER HARDWARE IN DIRECT CONTACT WITH PTDF LUMBER SHALL BE HOT DIPPED GALVANIZED (HDG) OR STAINLESS STEEL (SS).
8. USE 4X/6X DF#1 POSTS @ ALL SHEAR WALL ENDS PER FRAMING PLAN(S) & USE (2)-2X (STITCH NAILED PER CBC NAILING TABLE) OR 3X DF STUDS @ ALL INTERMEDIATE ABUTTING SHEAR PANEL VERTICAL JOINTS. STAGGER EDGE NAILING @ JOINT PER WALL TYPE @ SW SCHEDULE.
9. USE (2)-2X (STITCH NAILED PER CBC NAILING TABLE), OR 3X DF STUDS @ 16"Ø/C @ SHEAR WALLS WHERE SHEAR MATERIAL IS APPLIED TO BOTH SIDES OF THE WALL. USE 4X/6X DF#1 POSTS @ INTERMEDIATE ABUTTING PANEL VERTICAL JOINTS. STAGGER EDGE NAILING @ JOINT, SPACING PER WALL TYPE @ SW SCHEDULE. STAGGER ABUTTING PANEL EDGES @ MULTI-STORY APPLICATIONS.
10. USE ONE PIECE PLYWOOD PANELS @ SHEAR WALLS 48"Ø/WIDE OR LESS IN WIDTH. ALL SHEAR WALLS SHALL BE 24"Ø/WIDE MINIMUM. USE FULL HEIGHT SHEAR WALL PANELS WHERE POSSIBLE. WHERE CUT, MINIMUM PANEL HEIGHT SHALL BE 12"Ø/PROVIDE 3X DF SOLID BLOCKING W/EDGE NAILING PER WALL TYPE @ SW SCHEDULE @ ALL HORIZONTAL PANEL JOINTS.
11. **ALL INTERIOR SHEAR WALL PANELS SHALL BE EXTENDED TO THE FULL HEIGHT OF THE ROOF. PROVIDE RR & EN (TYP.) SEE APPLICABLE DETAILS AS PROVIDED.**
12. KEEP 1"Ø/CLEAR BETWEEN ALL PLYWOOD PANEL EDGES (TYP.)
13. OSB WALL SHEATHING MAY BE SUBSTITUTED FOR CDX PLYWOOD UPON ENGINEER OF RECORD'Ø APPROVAL AND/OR SPECIFICATION.
14. SEE APPLICABLE SHEAR WALL DETAILS @ ØSDØSHEETS AS PROVIDED.

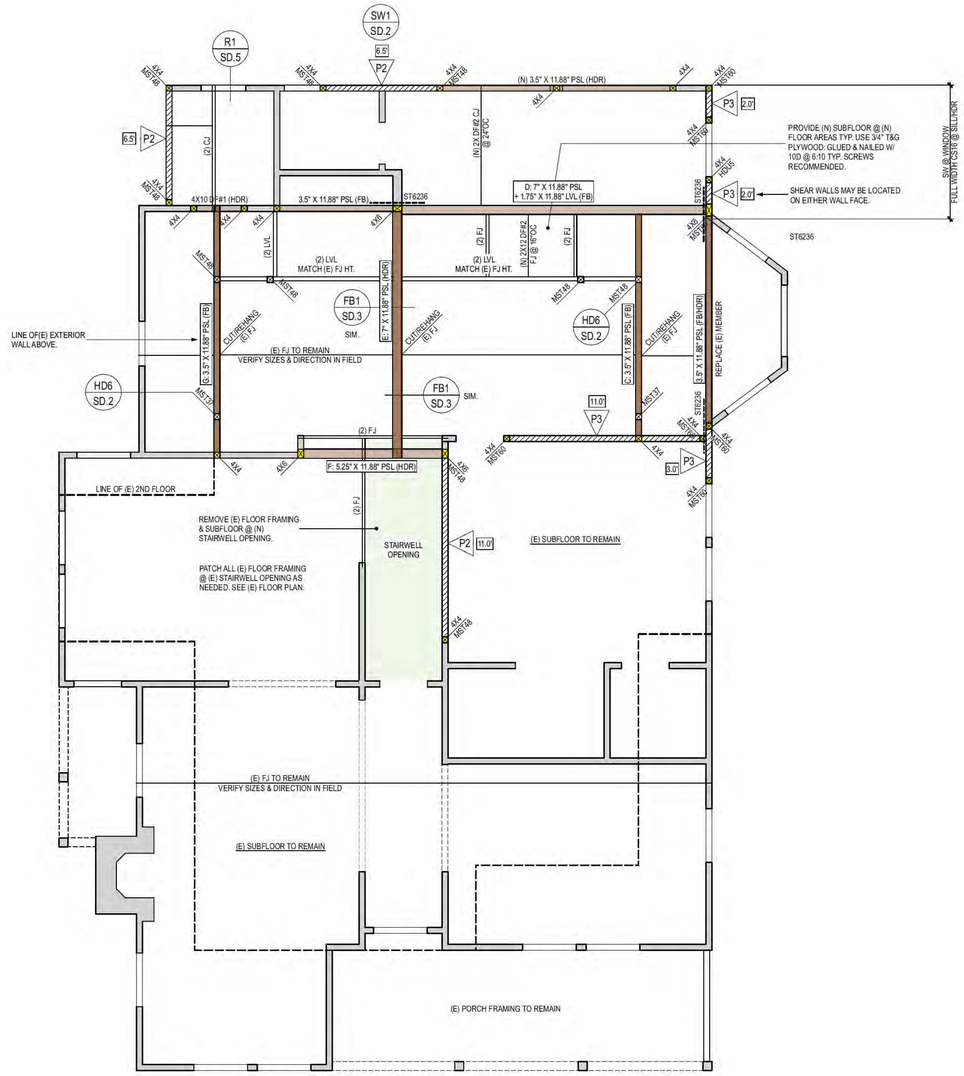
B2

BEAM SCHEDULE:

SYM.	DESCRIPTION	GRADE	SUPPORTS/CONNECTORS LEFT/TOP	CENTER	RIGHT/BOTTOM	POST BASE
A	OMIT					
B	OMIT					
C	3.5Ø X 11.88" PSL (FLOOR BEAM) RIP TO 11.25Ø	2.0E	BEAM D: HU412TF		4X4: ST6236	BC4O
D	7Ø X 11.88Ø PSL (FLOOR BEAM) RIP TO 11.25ØW/1.75Ø X 11.88ØLVL	2.0E/1.9E	4X6/BEAM E: HGLT9	OR OTHER SIM.	4X8: ST6236	BC46O/BC48O
E	7Ø X 11.88" PSL (FLOOR BEAM) RIP TO 11.25Ø	2.0E	4X6: ST6236		BEAM F: (1) TS22	BC46O
F	5.25Ø X 11.88ØPSL (HDR)	2.0E	4X6: ST6236		4X6: ST6236	(2) A35
G	3.5Ø X 11.88ØPSL (FLOOR BEAM) RIP TO 11.25Ø	2.0E	4X HDR: (1) TS22		4X4: ST6236	BC4O
H	5.25Ø X 11.88ØPSL (FLOOR BEAM) RIP TO 11.25Ø	2.0E	4X6: ST6236		RW: DTT2Z	CBSQ46
I	7Ø X 11.88" PSL (FLOOR BEAM) RIP TO 11.25Ø	2.0E	RW: DTT2Z		4X6: ST6236	HDU
J	7Ø X 11.88" PSL (FLOOR BEAM) RIP TO 11.25Ø(REPLACE EXISTING)	2.0E	4X/RW: ST6236/DTT2Z		4X/RW: ST6236/DTT2Z	BCO

NOTES:

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



POST FROM ABOVE.

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

DESIGNATED SHEAR WALL: SEE DETAILS & SW SCHEDULE. (SW1 / SD.2)

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

2ND LEVEL FLOOR FRAMING PLAN

1/4" = 1'-0"

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

REVISIONS:	#
10/15/25	B2

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ARCHITECTURAL DESIGN BY:
STUDIO THREE DESIGN

RESIDENCE
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LOS GATOS, CA 95030

DRAWING:	SAVED:	SCALE:	DRAWN BY:
2ND FLR FRAMING	10/21/25	AS NOTED	MAR

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

10/21/2025
PROFESSIONAL STAMP

S.2

SHEAR WALL SCHEDULE

TYPE	SHEAR MATERIAL	SHEAR WALL NAILING	SHEAR WALL TRANSFER	SOLE PLATE NAILING	ANCHOR BOLTS @ (E) 2X PTDF MUD SILL	ANCHOR BOLTS @ (N) 3X PTDF MUD SILL	HOLD DOWN TYPE
P1	3/8"CDX PLYWD. OR 15/32"OSB	8D @ 6"OC (EDGE) 8D @ 12"OC (FIELD)	A35, RBC OR LTP4 CLIPS @ 24"OC	16D @ 6"OC	5/8"DIA. X 12"AB @ 16"OC	5/8"DIA. X 12"AB @ 32"OC	HDU2
							MST37
P2	3/8"CDX PLYWD. OR 15/32"OSB	8D @ 3"OC (EDGE) 8D @ 12"OC (FIELD)	A35, RBC OR LTP4 CLIPS @ 16"OC	16D @ 3"OC	5/8"DIA. X 12"AB @ 12"OC	5/8"DIA. X 12"AB @ 16"OC	HDU4
							MST48/MST60
P3	1/2"CDX PLYWD. OR 19/32"OSB	10D @ 3"OC (EDGE) 10D @ 12"OC (FIELD)	A35, RBC OR LTP4 CLIPS @ 6"OC	5/8"DIA. X 5"LAG SCREW @ 6"OC	NOT PERMITTED	5/8"DIA. X 12"AB @ 12"OC	HDU5/HDU8
							MST60

SHEAR WALL SCHEDULE NOTES:

1. SEE FOUNDATION PLAN(S) & FRAMING PLAN(S) FOR LOCATIONS, SIZE & ANCHORAGE OF HOLD DOWNS.
2. ALL HARDWARE SHALL BE MANUFACTURED BY SIMPSON STRONG TIE COMPANY INC.OR EQUAL (UNO). REVIEW THE LATEST CATALOG PRIOR TO INSTALLATION FOR ANY SPECIAL REQUIREMENTS, INSTALLATION, PROCEDURES ALTERNATIVE OPTIONS, ETC.E
3. INSTALL 5/8"DIA. X 12"ANCHOR BOLTS @ 48"OC MAXIMUM SPACING @ ALL NON-SHEAR WALLS. FOLLOW THIS SCHEDULE FOR ANCHOR BOLT SPACING WHERE SHEAR WALLS ARE DESIGNATED ON FRAMING PLAN(S). ALL ANCHOR BOLTS SHALL HAVE A 7"MIN EMBEDMENT INTO CONCRETE. USE 2.29"OX 3"OX 3"OSQUARE WASHERS (TYP.) OR SIMPSON EQUIVALENT PROPRIETARY PRODUCT. ALL MUD SILLS SHALL HAVE (2) ANCHOR BOLTS PER PIECE MINIMUM & (1) ANCHOR BOLT WITHIN 12"OFROM EACH END & NO CLOSER THAN 6"OFROM EACH END OF THE MUD SILL.
4. FOR NEW CONSTRUCTION, ALL ANCHOR BOLTS SHALL BE INSTALLED ON 3X PTDF MUD SILL OR EQUAL.
5. USE SIMPSONODESIGNATED ANCHOR/HD BOLTS OR ENGINEER OF RECORD APPROVED ANCHORS/THREADED RODS WITH NUT/WASHER/NUT @ ALL HOLD DOWN LOCATIONS SHOWN ON FOUNDATION & FRAMING PLAN(S).
6. ALL HOLD DOWN AND ANCHOR BOLTS SHALL BE SECURELY TIED IN PLACE PRIOR TO FOUNDATION STEEL INSPECTION. USE SIMPSON ANCHOR MATEOBOLT HOLDERS OR PROPRIETARY TEMPLATES AS APPLICABLE.
7. ALL ANCHOR BOLTS (WET SET AND RETROFIT) & OTHER HARDWARE IN DIRECT CONTACT WITH PTDF LUMBER SHALL BE HOT DIPPED GALVANIZED (HDG) OR STAINLESS STEEL (SS).
8. USE 4X/6X DF#1 POSTS @ ALL SHEAR WALL ENDS PER FRAMING PLAN(S) & USE (2)-2X (STITCH NAILED PER CBC NAILING TABLE) OR 3X DF STUDS @ ALL INTERMEDIATE ABUTTING SHEAR PANEL VERTICAL JOINTS. STAGGER EDGE NAILING @ JOINT PER WALL TYPE @ SW SCHEDULE.
9. USE (2)-2X (STITCH NAILED PER CBC NAILING TABLE), OR 3X DF STUDS @ 16"OC @ SHEAR WALLS WHERE SHEAR MATERIAL IS APPLIED TO BOTH SIDES OF THE WALL. USE 4X/6X DF#1 POSTS @ INTERMEDIATE ABUTTING PANEL VERTICAL JOINTS. STAGGER EDGE NAILING @ JOINT, SPACING PER WALL TYPE @ SW SCHEDULE. STAGGER ABUTTING PANEL EDGES @ MULTI-STORY APPLICATIONS.
10. USE ONE PIECE PLYWOOD PANELS @ SHEAR WALLS 48"WIDE OR LESS IN WIDTH. ALL SHEAR WALLS SHALL BE 24"WIDE MINIMUM. USE FULL HEIGHT SHEAR WALL PANELS WHERE POSSIBLE. WHERE CUT, MINIMUM PANEL HEIGHT SHALL BE 12"PROVIDE 3X DF SOLID BLOCKING W/EDGE NAILING PER WALL TYPE @ SW SCHEDULE @ ALL HORIZONTAL PANEL JOINTS.
11. **ALL INTERIOR SHEAR WALL PANELS SHALL BE EXTENDED TO THE FULL HEIGHT OF THE ROOF. PROVIDE RR & EN (TYP.) SEE APPLICABLE DETAILS AS PROVIDED.**
12. KEEP 1/16"OCLEAR BETWEEN ALL PLYWOOD PANEL EDGES (TYP.)
13. OSB WALL SHEATHING MAY BE SUBSTITUTED FOR CDX PLYWOOD UPON ENGINEER OF RECORDS APPROVAL AND/OR SPECIFICATION.
14. SEE APPLICABLE SHEAR WALL DETAILS @ SDOSHEETS AS PROVIDED.

1

B2

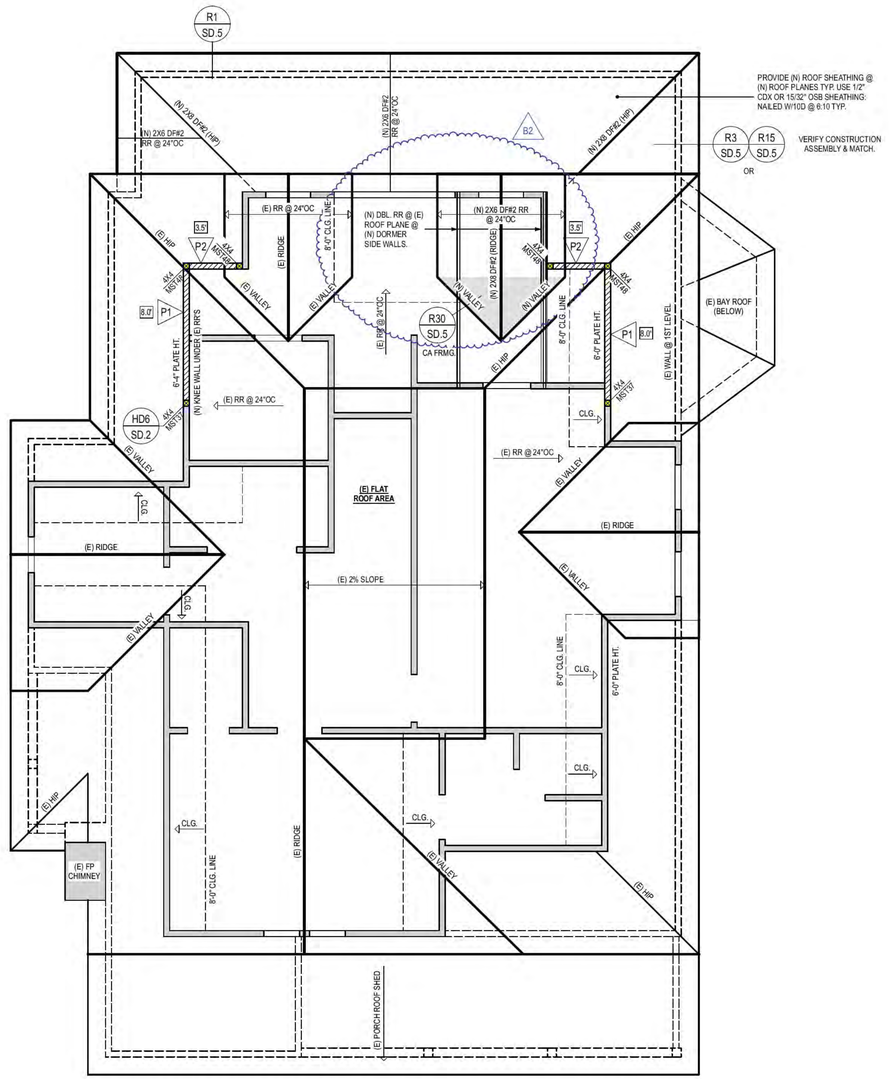
BEAM SCHEDULE:

SYM.	DESCRIPTION	GRADE	SUPPORTS/CONNECTORS LEFT/TOP	CENTER	RIGHT/BOTTOM	POST BASE
A	OMIT					
B	OMIT					
C	3.5"X 11.88" PSL (FLOOR BEAM) RIP TO 11.25"	2.0E	BEAM D: HU412TF		4X4: ST6236	BC4O
D	7"X 11.88"PSL (FLOOR BEAM) RIP TO 11.25"W/1.75"X 11.88"LVL	2.0E/1.9E	4X6/BEAM E: HGLT9	OR OTHER SIM.	4X8: ST6236	BC46O/BC48O
E	7"X 11.88" PSL (FLOOR BEAM) RIP TO 11.25"	2.0E	4X6: ST6236		BEAM F: (1) TS22	BC46O
F	5.25"X 11.88"PSL (HDR)	2.0E	4X6: ST6236		4X6: ST6236	(2) A35
G	3.5"X 11.88"PSL (FLOOR BEAM) RIP TO 11.25"	2.0E	4X HDR. (1) TS22		4X4: ST6236	BC4O
H	5.25"X 11.88"PSL (FLOOR BEAM) RIP TO 11.25"	2.0E	4X6: ST6236		RW: DTT2Z	CBSQ46
I	7"X 11.88" PSL (FLOOR BEAM) RIP TO 11.25"	2.0E	RW: DTT2Z		4X6: ST6236	HDU
J	7"X 11.88" PSL (FLOOR BEAM) RIP TO 11.25"(REPLACE EXISTING)	2.0E	4X/RW: ST6236/DTT2Z		4X/RW: ST6236/DTT2Z	BCO

NOTES:

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

1



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

DESIGNATED SHEAR WALL: SEE DETAILS & SW SCHEDULE. SW1 / SD.2

ROOF FRAMING PLAN

1/4" = 1'-0"

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

0 2' 4' 8'

REVISIONS:	#
10/15/25	B2

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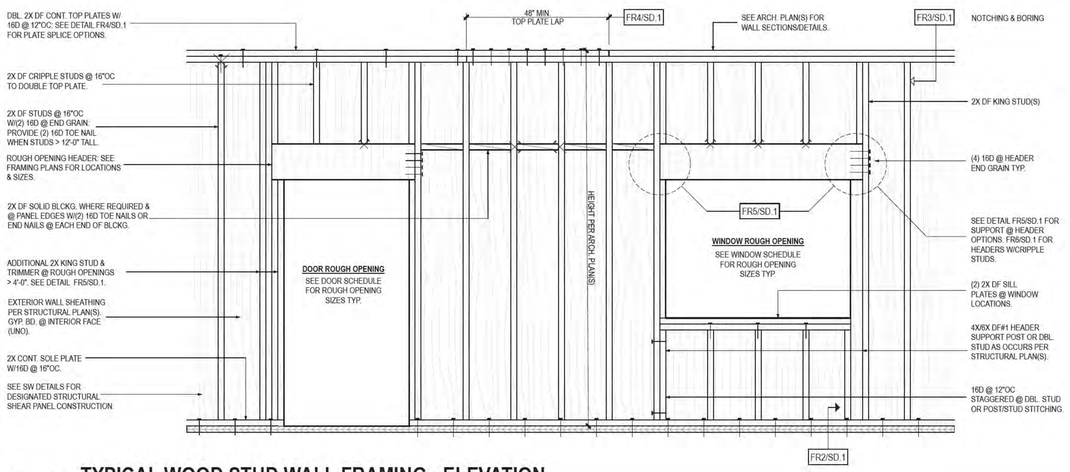
ROOF FRAMING PLAN	10/21/25	AS NOTED	MAR

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

10/21/2025

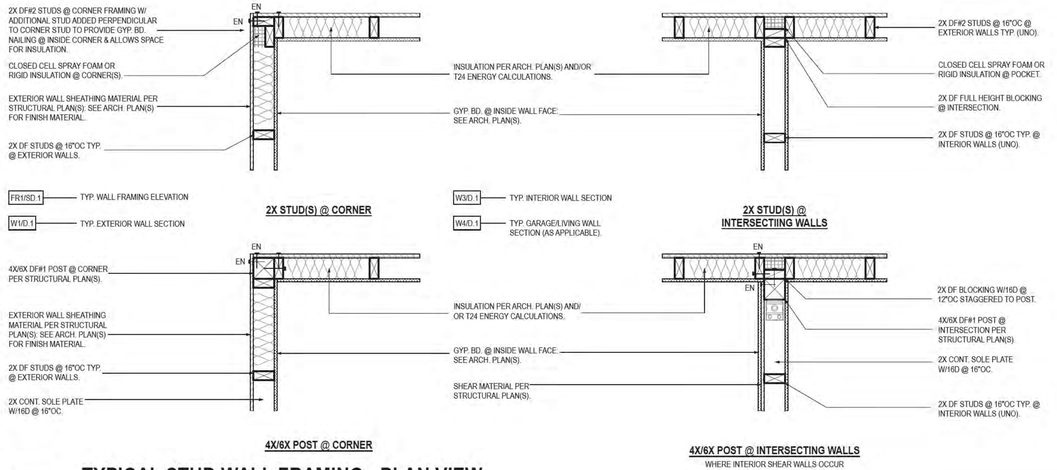
PROFESSIONAL STAMP

S.3



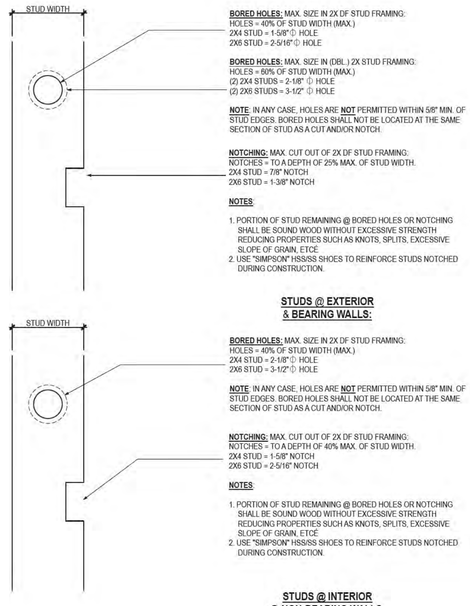
FR1 TYPICAL WOOD STUD WALL FRAMING - ELEVATION

SEE CBC TABLE 2304.10.2 FOR NA L NG REQUIREMENTS NOT NOTED ON THIS DRAWING.



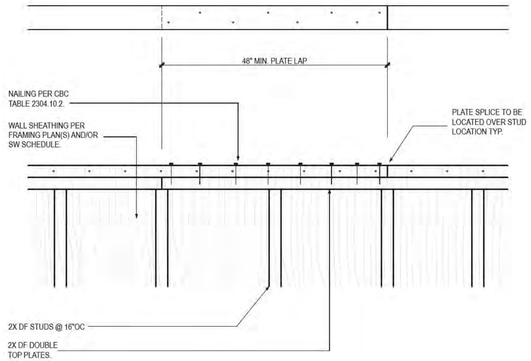
FR2 TYPICAL STUD WALL FRAMING - PLAN VIEW

SEE CBC TABLE 2304.10.2 FOR NAILING REQUIREMENT NOT NOTED ON THIS DRAWING.

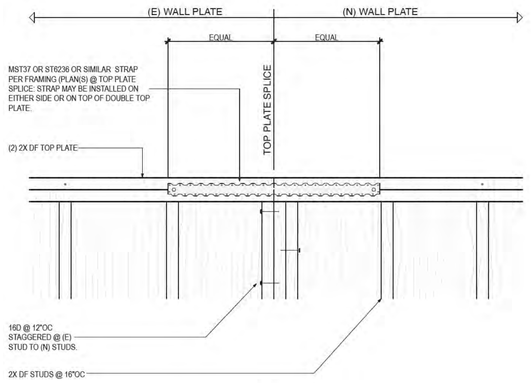


FR3 NOTCHING & BORING

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

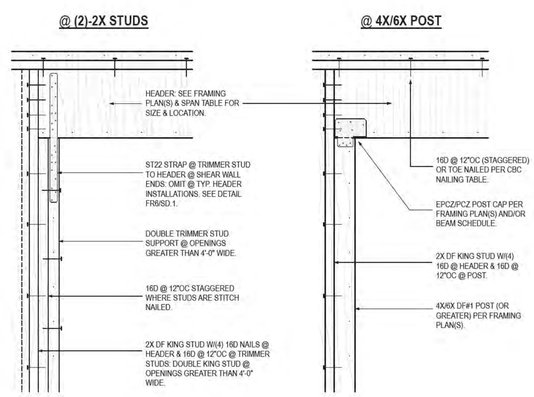


CONVENTIONAL FRAMING LAP/SPLICE



STRAP SPLICE

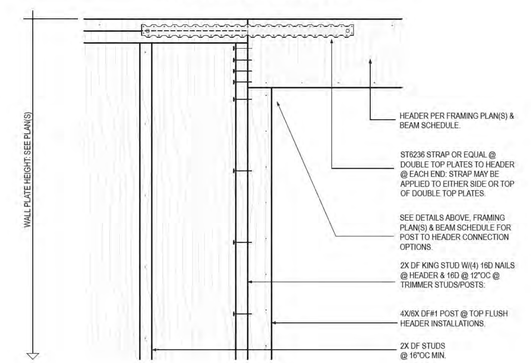
FR4 DOUBLE TOP PLATE LAP/SPLICE



NOTES:

1. USE A SINGLE TRIMMER STUD @ HEADER FOR SPANS UP TO 4'-0" IN LENGTH.
2. SEE FRAMING PLAN(S) & BEAM SCHEDULE FOR OTHER POST CAPS/CONNECTIONS THAT MAY HAVE BEEN SPECIFIED.
3. SEE BELOW FOR OPTIONAL HEADER INSTALLATION FLUSH WITH DOUBLE TOP PLATES.
4. TOE-NAIL CRIPPLE STUDS (AS OCCURS) @ HEADER (ABOVE). SEE DETAIL FR5/SD.1.
5. MIN. WALL SHEATHING NAILING: 8D @ 6"OC EDGE, 12"OC FIELD MAX. SEE SW SCHEDULE FOR SPECIFIC NAILING @ DESIGNATED STRUCTURAL SHEAR WALL PANELS.

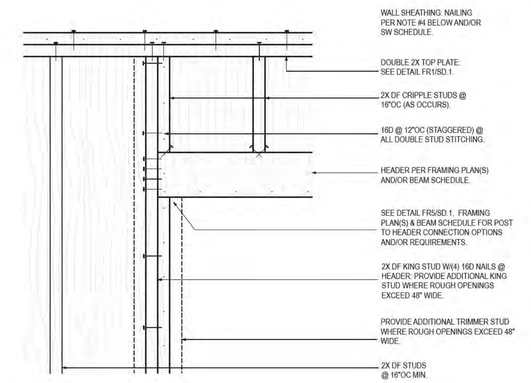
@ FLUSH HEADER APPLICATION



NOTE:

1. USE THIS OPTIONAL DETAIL WHEN ADDITIONAL HEIGHT IS NEEDED @ DOOR/WINDOW/OPENING OR WHEN ADDITIONAL HEADROOM IS DESIRED.

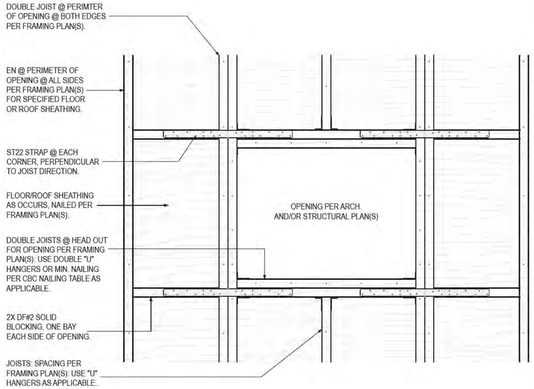
FR5 HEADER @ STUDS/POSTS



NOTES:

1. USE THIS OPTIONAL DETAIL WHEN CRIPPLE STUDS ARE NEEDED @ DOOR/WINDOW OPENINGS TO EXTEND TO DOUBLE TOP PLATE.
2. SEE DETAIL FR5/SD.1 FOR (2)-STUDS AND/OR 4X/6X POST CONNECTIONS TO HEADER.
3. USE MINIMUM NAILING REQUIREMENTS PER CBC TABLE 2304.10.2 (UNO).
4. WALL SHEATHING NAILING: 8D @ 6"OC EDGES, 12"OC FIELD MAX. SEE SW SCHEDULE FOR DESIGNATED STRUCTURAL SHEAR PANEL NAILING REQUIREMENTS.

FR6 HEADER W/CRIPPLE STUDS



NOTES:

1. OPENINGS USED FOR UNDERFLOOR/ATTIC ACCESS, SKYLIGHT OPENINGS, ETCÉ
2. FOR OPENINGS IN SHEAR WALLS(S), SEE DETAILS SW3 & SW4 AS APPLICABLE.
3. SEE ALSO STAIR/FLOOR FRAMING DETAILS FOR STAIRWELL OPENINGS @ LEVEL CHANGE(S) AS OCCURS.
4. STRAPS/BLOCKING MAY BE OMITTED @ UNDERFLOOR ACCESS OPENINGS.

FR7 OPENING @ FLOOR, CEILING AND/OR ROOF

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FRMG. DETAILS	10/21/25	AS NOTED	MAR

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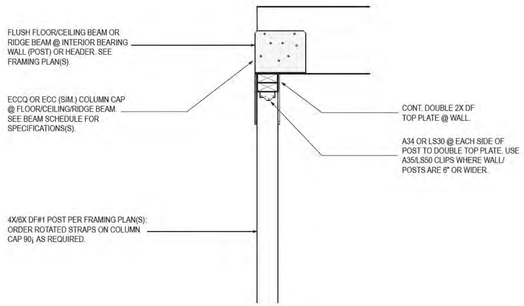
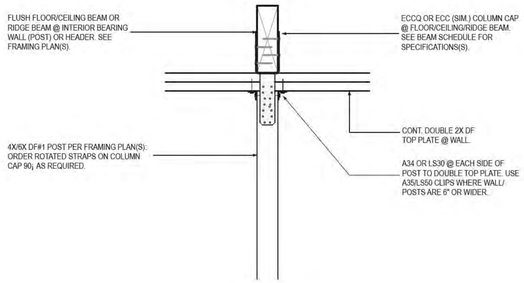
PROFESSIONAL STAMP

SD.1



ECCQ (ECC SIM.)



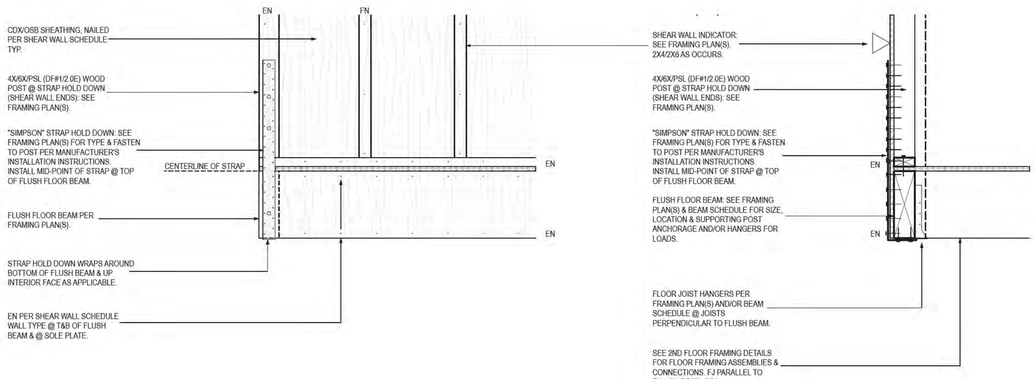
ECCQ/CCQ (END VIEW)

NOTES

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

FR8 FLUSH WOOD BEAM @ POST W/CCQ/ECCQ

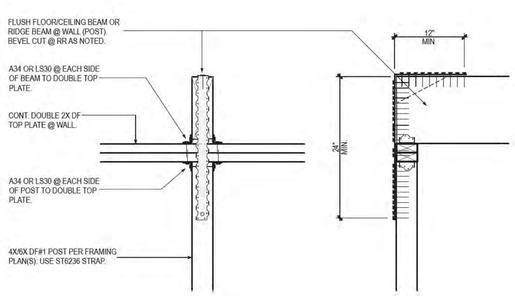
CC/ECC SIM.



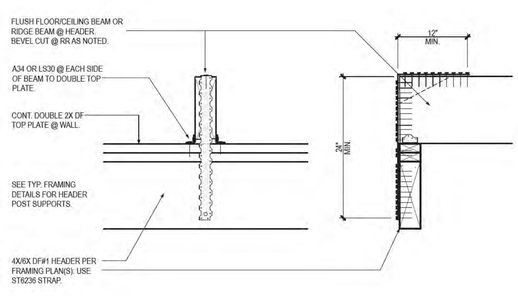
1. SEE FRAMING PLAN(S) & SHEAR WALL SCHEDULE FOR WALL TYPE, NAILING, TRANSFERS & HOLD DOWNS.
2. SEE MANUFACTURER'S SPECIFICATIONS FOR DIMENSIONS, FASTENERS & ALLOWABLE LOADS.
3. SEE DETAIL SW1 FOR TYP. SHEAR WALL ASSEMBLY.
4. WHEN INSTALLING THE STRAP O/STRUCTURAL PANEL SHEATHING, USE 2-1/2" LONG NAILS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

HD6 STRAP HOLD DOWN @ 2ND LEVEL - BEAM BELOW

SHEAR WALLS SUPPORTED BY FLOOR BEAM(S)



ST6236 @ POST (END VIEW) **ST6236 @ POST (SIDE VIEW)**

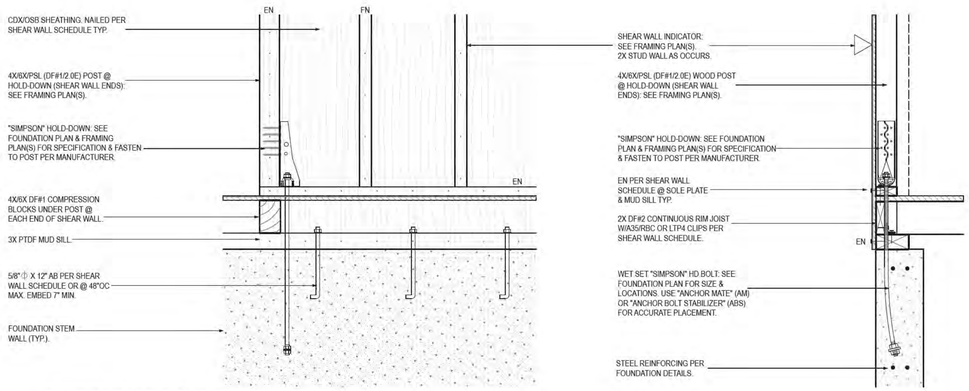


ST6236 @ HEADER (END VIEW) **ST6236 @ HEADER (SIDE VIEW)**

NOTES

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

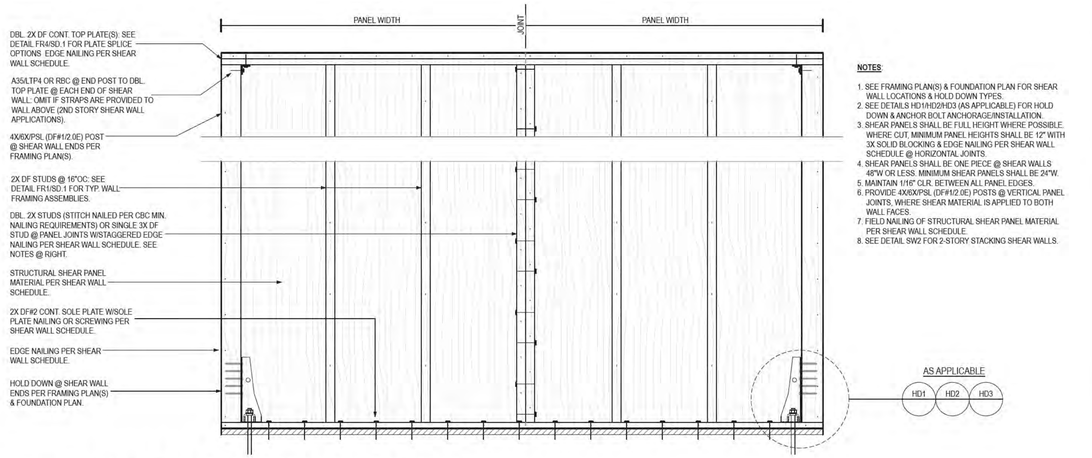
FR9 FLUSH WOOD BEAM @ POST/HEADER W/ST6236



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

HD1 HOLD DOWN @ RAISED WOOD FLOOR

"WET-SET" APPLICATION

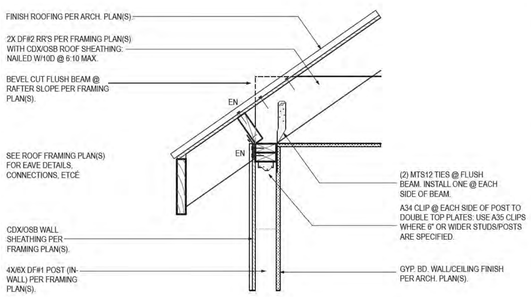


NOTES

1. SEE FRAMING PLAN(S) & FOUNDATION PLAN FOR SHEAR WALL LOCATIONS & HOLD DOWN TYPES.
2. SEE DETAILS HD1/HD2/HD3 (AS APPLICABLE) FOR HOLD DOWN & ANCHOR BOLT ANCHORAGE/INSTALLATION.
3. SHEAR PANELS SHALL BE FULL HEIGHT WHERE POSSIBLE. WHERE CUT, MINIMUM PANEL HEIGHTS SHALL BE 12" WITH 3X SOLID BLOCKING & EDGE NAILING PER SHEAR WALL SCHEDULE @ HORIZONTAL JOINTS.
4. SHEAR PANELS SHALL BE ONE PIECE @ SHEAR WALLS 48"W OR LESS. MINIMUM SHEAR PANELS SHALL BE 24"W.
5. MAINTAIN 1/16" CLR. BETWEEN ALL PANEL EDGES.
6. PROVIDE 4X/6X/PSL (DF#1/2.0E) POSTS @ VERTICAL PANEL JOINTS, WHERE SHEAR MATERIAL IS APPLIED TO BOTH WALL FACES.
7. FIELD NAILING OF STRUCTURAL SHEAR PANEL MATERIAL PER SHEAR WALL SCHEDULE.
8. SEE DETAIL SW2 FOR 2-STORY STACKING SHEAR WALLS.

SW1 SHEAR WALL: ONE-STORY SHEAR WALL

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



FLUSH BEAM (BEVEL CUT @ RR'S)

NOTES

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

FR11 FLUSH WOOD BEAM @ EAVE

BEVEL CUT @ RAFTERS W/MTS STRAP

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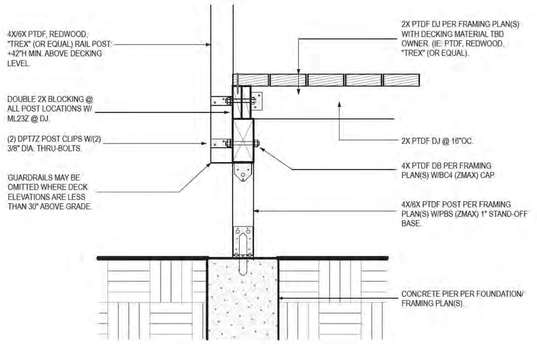
PROFESSIONAL STAMP

SD.2

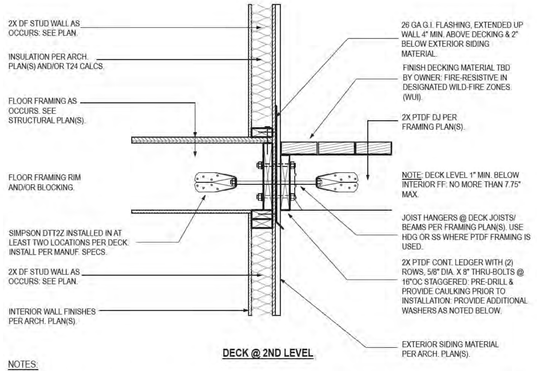


DECK @ EDGE

NOTES:

1. F DECK IS LOCATED WITHIN A DESIGNATED W LDFIRE ZONE, "WALKING SURFACE" SHALL BE OF F RE-RESISTANT COMPOSITION.
2. USE HDG, "ZMAX" OR SS FASTENERS CONNECTORS WHERE PTDF MATERIAL IS USED.

DJ3 DECK FRAMING: @ EDGE (GUARDRAIL)

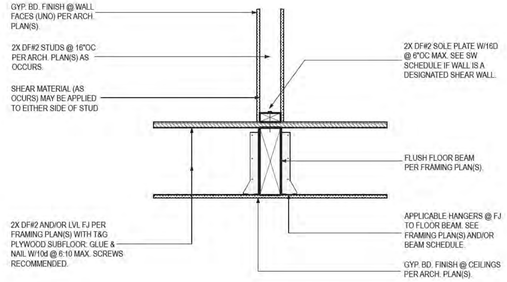


DECK @ 2ND LEVEL

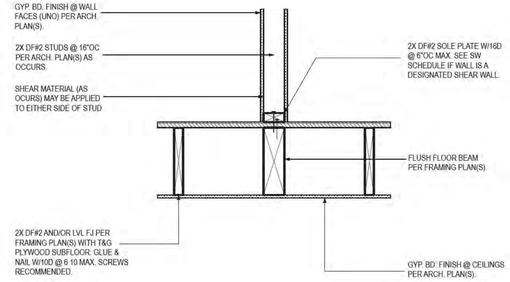
NOTES:

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

DJ4 DECK FRAMING: @ 2ND FLOOR WALL



FLOOR JOISTS PERPENDICULAR TO BEAM



FLOOR JOISTS PARALLEL TO BEAM

NOTES:

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

FB1 FLOOR BEAM: @ 2X FLOOR JOISTS

FJ PERPENDICULAR & PARALLEL TO BEAM

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DRAWN BY:	MAR

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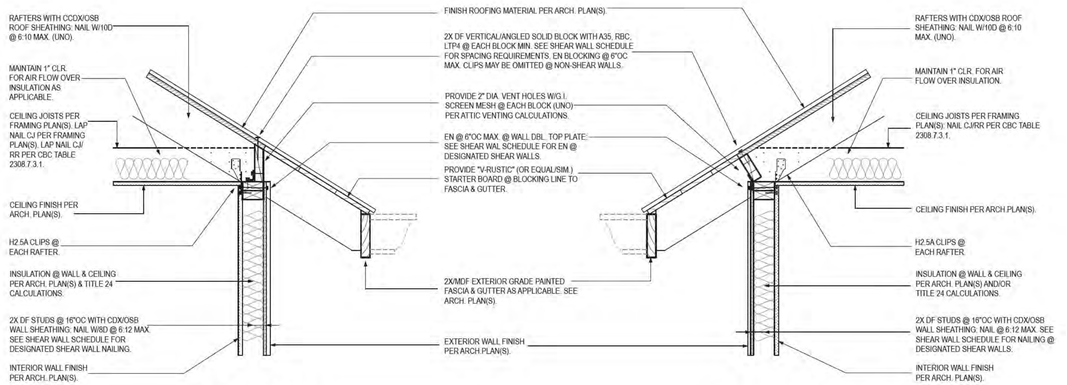
10/21/2025

PROFESSIONAL STAMP

SD.3



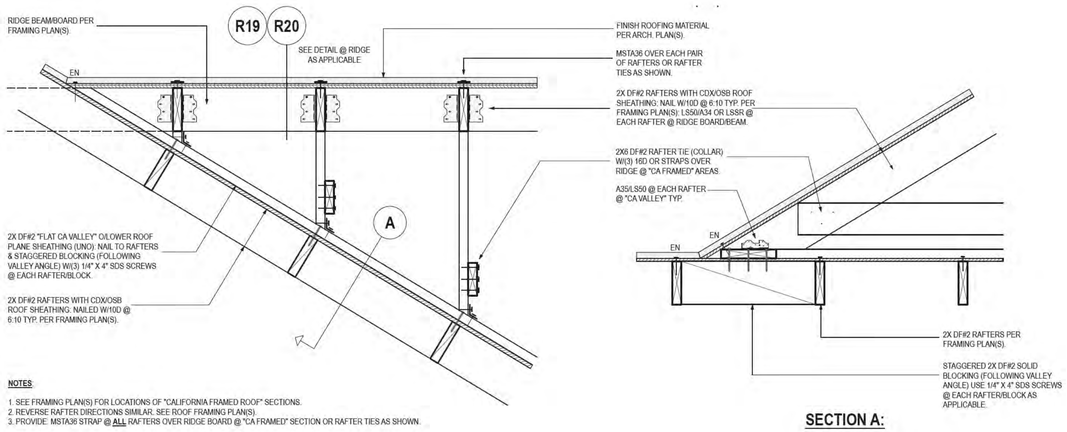
VERTICAL BLOCKING | **ANGLED BLOCKING**

NOTES:

1. SEE ROOF FRAMING PLAN(S) FOR ROOF SLOPE & OVERHANG DIMENSION(S).
2. SEE DETAIL R2 FOR EAVE @ PORCH BEAM/HEADER SIMILAR.
3. PROVIDE MINIMUM NAILING PER CBC TABLE 2304.10.2 (UNO).
4. PROVIDE MINIMUM CJ/RR LAP NAILING PER CBC TABLE 2308.7.3.1 AS IT RELATES TO RAFTER SLOPE, SPAN & SPACING.

R1 TYP. EAVE DETAIL - EXPOSED RAFTER TAILS

VERTICAL & ANGLED BLOCK NG APPLICATIONS

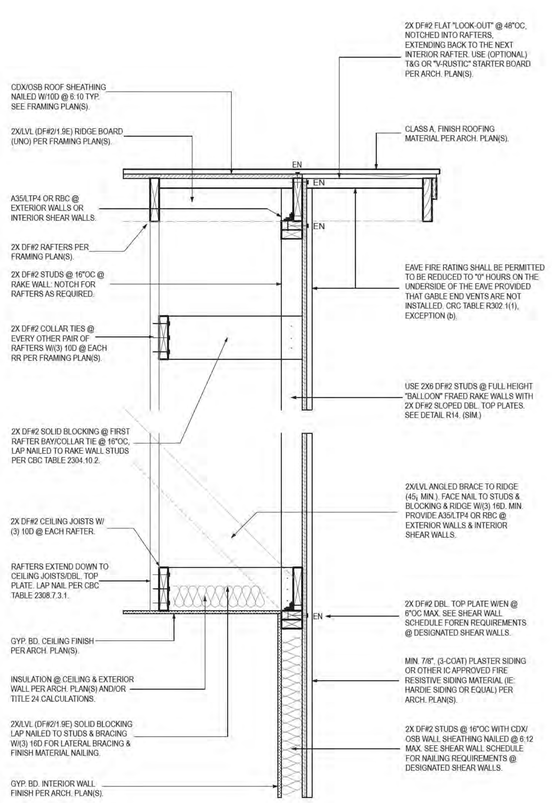


SECTION A:

NOTES:

1. SEE FRAMING PLAN(S) FOR LOCATIONS OF "CALIFORNIA FRAMED ROOF" SECTIONS.
2. REVERSE RAFTER DIRECTIONS SIMILAR, SEE ROOF FRAMING PLAN(S).
3. PROVIDE: MSTA36 STRAP @ ALL RAFTERS OVER RIDGE BOARD @ "CA FRAMED" SECTION OR RAFTER TIES AS SHOWN.

R30 CALIFORNIA "CA" ROOF FRAMING



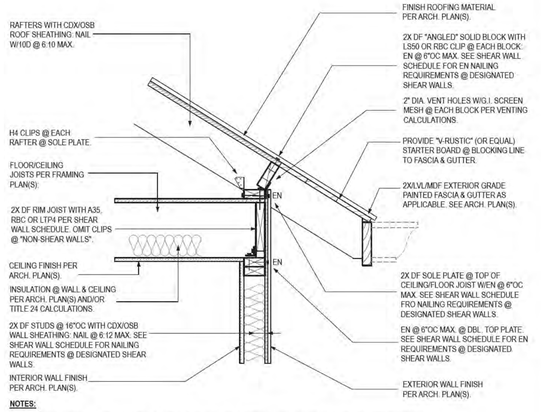
RAKE WALL@ FLAT CEILING

NOTES:

1. SEE ROOF FRAMING PLAN(S) FOR ROOF SLOPE(S).
2. PROVIDE MINIMUM NAILING PER CBC TABLE 2304.10.2 (UNO).
3. SEE CBC TABLE 721.1(2) OR GA MANUAL FOR APPROVED 1-HOUR FIRE RATED WALL ASSEMBLIES. SEE ALSO DETAIL W2.
4. SEE CRC R302.1(1), FOOTNOTE (b) FOR GABLE END RAKE WALLS SIM.
5. PROVIDE MINIMUM CJ/RR LAP NAILING PER TABLE 2308.7.3.1 AS IT RELATES TO RAFTER SLOPE, SPAN & SPACING.

R12 EAVE @ RAKE WALL: FIRE RATED

PLATFORM FRAMING APPLICATION



NOTES:

1. SEE ROOF FRAMING PLAN(S) FOR ROOF SLOPE & ARCH. PLAN(S) FOR ROOFING MATERIAL & OVERHANG DIMENSIONS.
2. SEE DETAIL R1 (SIM.) FOR ADDITIONAL INFORMATION NOT SHOWN/ILLUSTRATED HERE (SIM.).
3. SEE DETAIL R1 FOR OPTIONAL "VERTICAL" BLOCK APPLICATION.
4. PROVIDE MINIMUM NAILING PER CBC TABLE 2304.10.2 (UNO).
5. SEE DETAILS R7 & R9 FOR FIRE-RATED EAVE ASSEMBLIES.

R18 EAVE @ TOP OF FLOOR/CEILING JOIST

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STUDIO THREE DESIGN

RESIDENCE

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LOS GATOS, CA 95030

DRAWING:	STRUCTURAL DETAILS
SAVED:	10/21/25
SCALE:	AS NOTED
DRAWN BY:	MAR

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10/21/2025

PROFESSIONAL STAMP

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A. GENERAL STRUCTURAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONFIRM EXISTING CONDITIONS & REPORT ALL DISCREPANCIES AND/OR FIELD CONDITIONS WHICH ARE DIFFERENT THAN THOSE INDICATED ON THE STRUCTURAL PLANS TO THE STRUCTURAL ENGINEER OF RECORD AND ARCHITECT/DESIGNER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. ARCHITECTURAL INFORMATION SHOWN ON THE STRUCTURAL PLANS, SUCH AS FLOOR ELEVATIONS, PLATE HEIGHTS, ROOF HEIGHTS/ SLOPES, ETC... SHALL BE VERIFIED AND COMPARED TO THE ÒARCHITECTURAL DRAWINGSÓ REPORT ALL DISCREPANCIES TO BOTH THE STRUCTURAL ENGINEER OF RECORD AND THE ARCHITECT/DESIGNER.
3. STRUCTURAL DRAWINGS ARE INTENDED TO PROVIDE INFORMATION REGARDING THE STRUCTURAL FRAMING & FOUNDATION AND THEIR ELEMENTS ONLY. NON STRUCTURAL ELEMENTS SUCH AS DECORATIVE ARCHITECTURAL DETAILS, STAIR FRAMING, CONCRETE PADS, ETC... MAY NOT BE COVERED IN THE STRUCTURAL PLANS. CONTRACTORS ARE ADVISED TO REVIEW ALL OTHER PLANS IN THE CONSTRUCTION DOCUMENT SET FOR NON STRUCTURAL ITEMS WHICH MAY BE EMBEDDED IN, ATTACHED TO, OR OTHERWISE INTERFERING WITH THE STRUCTURAL ELEMENTS.
4. STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE VENTILATION OF UNDERFLOOR, JOIST AND/OR ATTIC. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR ANY CONCRETE FLAT WORK INCLUDING DRIVEWAYS, WALKWAYS, DOOR PADS AND OTHER SIMILAR ITEMS. CONTRACTORS SHALL FOLLOW THE ARCHITECTURAL PLANS AND/OR OWNERÕS SPECIFICATIONS FOR FINAL LOCATIONS, GEOMETRY & DIMENSIONS OF SUCH ITEMS.
5. ALL DRAWINGS AND SUBSEQUENT REVISIONS, IF ANY, SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. NO STRUCTURAL MEMBERS SHALL BE SUBSTITUTED, RELOCATED AND/OR OMITTED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
6. CONTRACTOR AND/OR SUBCONTRACTORS SHALL BE RESPONSIBLE FOR THE ORDER AND MEANS OF CONSTRUCTION AND ALL TEMPORARY SHORING, BRACING AND ERECTION DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL PROVIDE ALL THIRD PARTY DESIGNS (PREFABRICATED TRUSSES, STAIR RAILINGS/GUARDRAILS, ETC..) TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION TO ASSURE CONFORMANCE WITH THE STRUCTURAL DESIGN.

CBC CHAPTER 16: STRUCTURAL DESIGN

1604.1 GENERAL. BUILDING, STRUCTURES AND PARTS THEREOF SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH STRENGTH DESIGN, LOAD AND RESISTANCE FACTOR DESIGN, ALLOWABLE STRESS DESIGN, EMPIRICAL DESIGN OR CONVENTIONAL CONSTRUCTION METHODS, AS PERMITTED BY THE APPLICABLE MATERIAL CHAPTERS.

CBC CHAPTER 17: STRUCTURAL TESTS & SPECIAL INSPECTIONS

SECTION 1703: APPROVALS

1703.1 APPROVED AGENCY. AN APPROVED AGENCY SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS SPECIFIED IN SECTIONS 1703.1.1 THROUGH 1703.1.3.
1703.2 WRITTEN APPROVAL. ANY MATERIAL, APPLIANCE, EQUIPMENT, SYSTEM OR METHOD OF CONSTRUCTION MEETING THE REQUIREMENTS OF THIS CODE SHALL BE APPROVED IN WRITING AFTER SATISFACTORY COMPLETION OF THE REQUIRED TESTS AND SUBMISSION OF REQUIRED TEST REPORTS.

SECTION 1704: SPECIAL INSPECTIONS AND TESTS, CONTRACTOR RESPONSIBILITY AND STRUCTURAL OBSERVATION

1704.1 GENERAL. SPECIAL INSPECTIONS AND TESTS, STATEMENTS OF SPECIAL INSPECTIONS, RESPONSIBILITIES OF CONTRACTORS, SUBMITTALS TO THE BUILDING OFFICIAL AND STRUCTURAL OBSERVATIONS SHALL MEET THE APPLICABLE REQUIREMENTS OF THIS SECTION.
1704.2 SPECIAL INSPECTIONS AND TESTS. WHERE APPLICATION IS MADE TO THE BUILDING OFFICIAL FOR CONSTRUCTION AS SPECIFIED IN SECTIONS 105 OR 1.8.4, AS APPLICABLE, THE OWNER OR THE OWNERÕS AUTHORIZED AGENT, OTHER THAN THE CONTRACTOR, SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PROVIDE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION ON THE TYPES OF WORK SPECIFIED IN SECTION 1705 AND IDENTIFY THE APPROVED AGENCIES TO THE BUILDING OFFICIAL. THESE SPECIAL INSPECTIONS AND TESTS ARE IN ADDITION TO THE INSPECTIONS BY THE BUILDING OFFICIAL THAT ARE IDENTIFIED IN SECTION 110.
EXCEPTIONS:
1. *SPECIAL INSPECTIONS AND TESTS ARE NOT REQUIRED FOR CONSTRUCTION OF A MINOR NATURE OR AS WARRANTED BY CONDITIONS IN THE JURISDICTION AS APPROVED BY THE BUILDING OFFICIAL.*
2. *UNLESS OTHERWISE REQUIRED BY THE BUILDING OFFICIAL, SPECIAL INSPECTIONS AND TESTS ARE NOT REQUIRED FOR GROUP U OCCUPANCIES THAT ARE ACCESSORY TO A RESIDENTIAL OCCUPANCY INCLUDING, BUT NOT LIMITED TO, THOSE LISTED IN SECTION 312.1.*
3. *SPECIAL INSPECTIONS AND TESTS ARE NOT REQUIRED FOR PORTIONS OF STRUCTURES DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION PROVISIONS OF SECTION 221 1.7 OR THE CONVENTIONAL LIGHT-FRAME CONSTRUCTION PROVISIONS OF SECTION2308. [OSHPD2] NOT PERMITTED BY OSHPD.*
4. *THE CONTRACTOR IS PERMITTED TO EMPLOY THE APPROVED AGENCIES WHERE THE CONTRACTOR IS ALSO THE OWNER.*
5. *[HCD1] THE PROVISIONS OF HEALTH AND SAFETY CODE DIVISION 13, PART 6 AND THE CALIFORNIA CODE OF REGULATIONS, TITLE 25 DIVISION 1, CHAPTER 3, COMMENCING WITH SECTION 3000, SHALL APPLY TO THE CONSTRUCTION AND INSPECTION OF FACTORY-BUILT HOUSING AS DEFINED IN HEALTH AND SAFETY CODE SECTION 19971.*

1704.2.5 SPECIAL INSPECTION OF FABRICATED ITEMS. WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF A FABRICATORÕS SHOP, SPECIAL INSPECTIONS OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION.
EXCEPTIONS:
1. *SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE FABRICATOR MAINTAINS APPROVED DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND THIS CODE. APPROVAL SHALL BE BASED UPON REVIEW OF FABRICATION AND QUALITY CONTROL PROCEDURES AND PERIODIC INSPECTION OF FABRICATION PRACTICES BY THE BUILDING OFFICIAL.*
2. *SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE FABRICATOR IS REGISTERED AND APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1.*

1704.3 STATEMENT OF SPECIAL INSPECTIONS. WHERE SPECIAL INSPECTIONS OR TESTS ARE REQUIRED BY SECTION 1705, THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE SHALL PREPARE A STATEMENT OF SPECIAL INSPECTIONS IN ACCORDANCE WITH SECTION 1704.3.1 FOR SUBMITTAL BY THE APPLICANT IN ACCORDANCE WITH SECTION 1704.2.3.
EXCEPTION: THE STATEMENT OF SPECIAL INSPECTIONS IS PERMIT- TED TO BE PREPARED BY A QUALIFIED PERSON APPROVED BY THE BUILDING OFFICIAL FOR CONSTRUCTION NOT DESIGNED BY A REGISTERED DESIGN PROFESSIONAL.
1704.6 STRUCTURAL OBSERVATIONS. STRUCTURAL OBSERVATIONS SHALL BE PROVIDED FOR THOSE STRUCTURES WERE ONE OR MORE OF THE FOLLOWING CONDITIONS EXIST:
1. THE STRUCTURE IS CLASSIFIED AS RISK CATEGORY, III OR IV.
2. THE STRUCTURE IS A HIGH-RISE BUILDING. (N/A)
3. THE STRUCTURE IS ASSIGNED TO SEISMIC DESIGN CATEGORY E, AND IS GREATER THAN TWO STORIES ABOVE THE GRADE PLANE.
4. SEARCH OBSERVATION IS REQUIRED BY THE REGISTER DESIGN, PROFESSIONAL RESPONSIBLE FOR THE STRUCTURAL DESIGN.
5. SEARCH OBSERVATION IS SPECIFICALLY REQUIRED BY THE BUILDING OFFICIAL.

SECTION 1705: REQUIRED SPECIAL INSPECTIONS AND TESTS

(SEE CBC SECTIONS 1705, 1706, 1707, 1708 & 1709 FOR REQUIRED INSPECTIONS AND TESTS.)
1705.1 GENERAL. SPECIAL INSPECTIONS AND TESTS OF ELEMENTS AND NONSTRUCTURAL COMPONENTS OF BUILDINGS AND STRUCTURES SHALL MEET THE APPLICABLE REQUIREMENTS OF THIS SECTION.
1705.1.1 SPECIAL CASES. SPECIAL INSPECTIONS AND TESTS SHALL BE REQUIRED FOR PROPOSED WORK THAT IS, IN THE OPINION OF THE BUILDING OFFICIAL, UNUSUAL IN ITS NATURE, SUCH AS, BUT NOT LIMITED TO, THE FOLLOWING EXAMPLES:
1. CONSTRUCTION MATERIALS AND SYSTEMS THAT ARE ALTERNATIVES TO MATERIALS AND SYSTEMS PRESCRIBED BY THIS CODE.
2. UNUSUAL DESIGN APPLICATIONS OF MATERIALS DESCRIBED IN THIS CODE.
3. MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURERÕS INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN THIS CODE OR IN STANDARDS REFERENCED BY THIS CODE.

CBC CHAPTER 18: SOILS AND FOUNDATIONS

SECTION 1801: GENERAL

1801.1 SCOPE. THE PROVISIONS OF THIS CHAPTER SHALL APPLY TO BUILDING AND FOUNDATION SYSTEMS.
1801.2 DESIGN BASIS. ALLOWABLE BEARING PRESSURES, ALLOWABLE STRESSES AND DESIGN FORMULAS PROVIDED IN THIS CHAPTER SHALL BE USED WITH THE ALLOWABLE STRESS DESIGN LOAD COMBINATIONS SPECIFIED IN SECTION 1605.3. THE QUALITY AND DESIGN OF MATERIALS USED STRUCTURALLY IN EXCAVATIONS AND FOUNDATIONS SHALL COMPLY WITH THE REQUIREMENTS SPECIFIED IN CHAPTERS 16, 19, 21, 22 AND 23 OF THIS CODE. EXCAVATIONS AND FILLS SHALL ALSO COMPLY WITH CHAPTER 33.

SECTION 1803: GEOTECHNICAL INVESTIGATIONS

1803.1 GENERAL. GEOTECHNICAL INVESTIGATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH SECTION 1803.2 AND REPORTED IN ACCORDANCE WITH SECTION 1803.6. WHERE REQUIRED BY THE BUILDING OFFICIAL OR WHERE GEOTECHNICAL INVESTIGATIONS INVOLVE IN-SITU TESTING, LABORATORY TESTING OR ENGINEERING CALCULATIONS, SUCH INVESTIGATIONS SHALL BE CONDUCTED BY A REGISTERED DESIGN PROFESSIONAL.
1803.1.1 GENERAL AND WHERE REQUIRED FOR APPLICATIONS LISTED IN SECTION 1.8.2.1.1 REGULATED BY THE DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT. [HCD 1] FOUNDATION AND SOILS INVESTIGATIONS SHALL BE CONDUCTED IN CONFORMANCE WITH HEALTH AND SAFETY CODE SECTIONS 17953 THROUGH 17957.
1803.2 INVESTIGATIONS REQUIRED. GEOTECHNICAL INVESTIGATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH SECTIONS 1803.3 THROUGH 1803.5.
EXCEPTION: THE BUILDING OFFICIAL SHALL BE PERMITTED TO WAIVE THE REQUIREMENT FOR A GEOTECHNICAL INVESTIGATION WHERE SATISFACTORY DATA FROM ADJACENT AREAS IS AVAILABLE THAT DEMONSTRATES AN INVESTIGATION IS NOT NECESSARY FOR ANY OF THE CONDITIONS IN SECTIONS 1803.5.1 THROUGH 1803.5.6 AND SECTIONS 1803.5.10 AND 1803.5.11.
1803.3 BASIS OF INVESTIGATION. SOIL CLASSIFICATION SHALL BE BASED ON OBSERVATION AND ANY NECESSARY TESTS OF THE MATERIALS DISCLOSED BY BORINGS, TEST PITS OR OTHER SUBSURFACE EXPLORATION MADE IN APPROPRIATE LOCATIONS. ADDITIONAL STUDIES SHALL BE MADE AS NECESSARY TO EVALUATE SLOPE STABILITY, SOIL STRENGTH, POSITION AND ADEQUACY OF LOAD-BEARING SOILS, THE EFFECT OF MOISTURE VARIATION ON SOIL-BEARING CAPACITY, COMPRESSIBILITY, LIQUEFACTION AND EXPANSIVENESS.
1803.4 QUALIFIED REPRESENTATIVE. THE INVESTIGATION PROCEDURE AND APPARATUS SHALL BE IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICE. THE REGISTERED DESIGN PROFESSIONAL SHALL HAVE A FULLY QUALIFIED REPRESENTATIVE ON SITE DURING ALL BORING OR SAMPLING OPERATIONS.
1803.5 INVESTIGATED CONDITIONS. GEOTECHNICAL INVESTIGATIONS SHALL BE CONDUCTED AS INDICATED IN SECTIONS 1803.5.1 THROUGH 1803.5.12.
1803.6 REPORTING. WHERE GEOTECHNICAL INVESTIGATIONS ARE REQUIRED, A WRITTEN REPORT OF THE INVESTIGATIONS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL BY THE PERMIT APPLICANT AT THE TIME OF PERMIT APPLICATION. THIS GEOTECHNICAL REPORT SHALL INCLUDE, BUT NEED NOT BE LIMITED TO, THE FOLLOWING INFORMATION:
1. A PLOT SHOWING THE LOCATION OF THE SOIL INVESTIGATIONS.
2. A COMPLETE RECORD OF THE SOIL BORING AND PENETRATION TEST LOGS AND SOIL SAMPLES.
3. A RECORD OF THE SOIL PROFILE.
4. ELEVATION OF THE WATER TABLE, IF ENCOUNTERED.
5. RECOMMENDATIONS FOR FOUNDATION TYPE AND DESIGN CRITERIA, INCLUDING BUT NOT LIMITED TO: BEARING CAPACITY OF NATURAL OR COMPACTED SOIL; PROVISIONS TO MITIGATE THE EFFECTS OF EXPANSIVE SOILS; MITIGATION OF THE EFFECTS OF LIQUEFACTION, DIFFERENTIAL SETTLEMENT AND VARYING SOIL STRENGTH; AND THE EFFECTS OF ADJACENT LOADS.
6. EXPECTED TOTAL AND DIFFERENTIAL SETTLEMENT.
7. DEEP FOUNDATION INFORMATION IN ACCORDANCE WITH SECTION 1803.5.5.
8. SPECIAL DESIGN AND CONSTRUCTION PROVISIONS FOR FOUNDATIONS OF STRUCTURES FOUNDED ON EXPANSIVE SOILS, AS NECESSARY.
9. COMPACTED FILL MATERIAL PROPERTIES AND TESTING IN ACCORDANCE WITH SECTION 1803.5.8.
10. CONTROLLED LOW-STRENGTH MATERIAL PROPERTIES AND TESTING IN ACCORDANCE WITH SECTION 1803.5.9.
11. [OSHPD 2] THE REPORT SHALL CONSIDER THE EFFECTS OF SEISMIC HAZARD IN ACCORDANCE WITH SECTION 1803.7.

1803.7 GEO-HAZARD REPORTS. [OSHPD 2] GEO-HAZARD REPORTS SHALL BE REQUIRED FOR ALL PROPOSED CONSTRUCTION.
EXCEPTIONS:
1. *REPORTS ARE NOT REQUIRED FOR ONE-STORY, WOOD-FRAME AND LIGHT-STEEL-FRAME BUILDINGS OF TYPE V CONSTRUCTION AND 4,000 SQUARE FEET (371 M2) OR LESS IN FLOOR AREA, NOT LOCATED WITHIN EARTHQUAKE FAULT ZONES OR SEISMIC HAZARD ZONES AS SHOWN IN THE MOST RECENTLY PUBLISHED MAPS FROM THE CALIFORNIA GEOLOGICAL SURVEY (CGS). NONSTRUCTURAL, ASSOCIATED STRUCTURAL OR VOLUNTARY STRUCTURAL ALTERATIONS AND INCIDENTAL STRUCTURAL ADDITIONS OR ALTERATIONS, AND STRUCTURAL REPAIRS FOR OTHER THAN EARTHQUAKE DAMAGE.*
2. *A PREVIOUS REPORT FOR A SPECIFIC SITE MAY BE RESUBMITTED, PROVIDED THAT A REEVALUATION IS MADE AND THE REPORT IS FOUND TO BE CURRENTLY APPROPRIATE.*

THE PURPOSE OF THE GEO-HAZARD REPORT SHALL BE TO IDENTIFY GEOLOGIC AND SEISMIC CONDITIONS THAT MAY REQUIRE PROJECT MITIGATIONS. THE REPORTS SHALL CONTAIN DATA WHICH PROVIDE AN ASSESSMENT OF THE NATURE OF THE SITE AND POTENTIAL FOR EARTHQUAKE DAMAGE BASED ON APPROPRIATE INVESTIGATIONS OF THE REGIONAL AND SITE GEOLOGY, PROJECT FOUNDATION CONDITIONS AND THE POTENTIAL SEISMIC SHAKING AT THE SITE. THE REPORT SHALL BE PREPARED BY A CALIFORNIA-CERTIFIED ENGINEERING GEOLOGIST IN CONSULTATION WITH A CALIFORNIA-REGISTERED GEOTECHNICAL ENGINEER. THE PREPARATION OF THE GEO-HAZARD REPORT SHALL CONSIDER THE MOST RECENT CGS NOTE 48; CHECKLIST FOR THE REVIEW OF ENGINEERING GEOLOGY AND SEISMOLOGY REPORTS FOR CALIFORNIA PUBLIC SCHOOL, HOSPITALS, AND ESSENTIAL SERVICES BUILDINGS. IN ADDITION, THE MOST RECENT VERSION OF CGS SPECIAL PUBLICATION 42, FAULT RUPTURE HAZARD ZONES IN CALIFORNIA, SHALL BE CONSIDERED FOR PROJECT SITES PROPOSED WITHIN AN ALQUIST-PRIOLO EARTHQUAKE FAULT ZONE. THE MOST RECENT VERSION OF CGS SPECIAL PUBLICATION 117, GUIDELINES FOR EVALUATING AND MITIGATING SEISMIC HAZARDS IN CALIFORNIA, SHALL BE CONSIDERED FOR PROJECT SITES PROPOSED WITHIN A SEISMIC HAZARD ZONE. ALL CONCLUSIONS SHALL BE FULLY SUPPORTED BY SATISFACTORY DATA AND ANALYSIS.

SECTION 1804: EXCAVATION, GRADING AND FILL

1804.1 EXCAVATION NEAR FOUNDATIONS. EXCAVATION FOR ANY PURPOSE SHALL NOT REDUCE LATERAL SUPPORT FROM ANY FOUNDATION OR ADJACENT FOUNDATION WITHOUT FIRST UNDERPINNING OR PROTECTING THE FOUNDATION AGAINST DETRIMENTAL LATERAL OR VERTICAL MOVEMENT, OR BOTH IN ACCORDANCE WITH SECTION 1803.5.7.
1804.2 UNDERPINNING. WHERE UNDERPINNING IS CHOSEN TO PROVIDE THE PROTECTION OR SUPPORT OF ADJACENT STRUCTURES, THE UNDERPINNING SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH PROVISIONS OF THIS CHAPTER AND CHAPTER 33.
1804.2.1 UNDERPINNING SEQUENCING. UNDERPINNING SHALL BE INSTALLED IN A SEQUENTIAL MANNER THAT PROTECTS THE NEIGH-BORING STRUCTURE AND THE WORKING CONSTRUCTION SITE. THE SEQUENCE OF INSTALLATION SHALL BE IDENTIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.
1804.3 PLACEMENT OF BACKFILL. THE EXCAVATION OUTSIDE THE FOUNDATION SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ORGANIC MATERIAL, CONSTRUCTION DEBRIS, COBBLES AND BOULDERS OR WITH A CONTROLLED LOW-STRENGTH MATERIAL (CLSM). THE BACKFILL SHALL BE PLACED IN LIFTS AND COMPACTED IN A MANNER THAT DOES NOT DAMAGE THE FOUNDATION OR THE WATERPROOFING OR DAMP-PROOFING MATERIAL.
EXCEPTION: CLSM NEED NOT BE COMPACTED.
1804.4 SITE GRADING. THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN ONE UNIT VERTICAL IN 20 UNITS HORIZONTAL (5-PER- CENT SLOPE) FOR A MINIMUM DISTANCE OF 10 FEET (3048 MM) MEASURED PERPENDICULAR TO THE FACE OF THE WALL. IF PHYSICAL OBSTRUCTIONS OR LOT LINES PROHIBIT 10 FEET (3048 MM) OF HORIZONTAL DISTANCE, A 5-PERCENT SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATIVE METHOD OF DIVERTING WATER AWAY FROM THE FOUNDATION. SWALES USED FOR THIS PURPOSE SHALL BE SLOPED A MINIMUM OF 2 PERCENT WHERE LOCATED WITHIN 10 FEET (3048 MM) OF THE BUILDING FOUNDATION. IMPERVIOUS SURFACES WITHIN 10 FEET (3048 MM) OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2 PERCENT AWAY FROM THE BUILDING.
EXCEPTION: WHERE CLIMATIC OR SOIL CONDITIONS WARRANT, THE SLOPE OF THE GROUND AWAY FROM THE BUILDING FOUNDATION SHALL BE PERMITTED TO BE REDUCED TO NOT LESS THAN ONE UNIT VERTICAL IN 48 UNITS HORIZONTAL (2-PERCENT SLOPE).
THE PROCEDURE USED TO ESTABLISH THE FINAL GROUND LEVEL ADJACENT TO THE FOUNDATION SHALL ACCOUNT FOR ADDITIONAL SETTLEMENT OF THE BACKFILL.
1804.6 COMPACTED FILL MATERIAL. WHERE SHALLOW FOUNDATIONS WILL BEAR ON COMPACTED FILL MATERIAL, THE COMPACTED FILL SHALL COMPLY WITH THE PROVISIONS OF AN APPROVED GEOTECHNICAL REPORT, AS SET FORTH IN SECTION 1803.
EXCEPTION: COMPACTED FILL MATERIAL 12 INCHES (305 MM) IN DEPTH OR LESS NEED NOT COMPLY WITH AN APPROVED REPORT, PROVIDED THE IN-PLACE DRY DENSITY IS NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D1557. THE COMPACTION SHALL BE VERIFIED BY SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 1705.6.
1804.7 CONTROLLED LOW-STRENGTH MATERIAL (CLSM). WHERE SHALLOW FOUNDATIONS WILL BEAR ON CONTROLLED LOW-STRENGTH MATERIAL (CLSM), THE CLSM SHALL COMPLY WITH THE PROVISIONS OF AN APPROVED GEOTECHNICAL REPORT, AS SET FORTH IN SECTION 1803.

SECTION 1805: DAMP-PROOFING AND WATERPROOFING

1805.1 GENERAL. WALLS OR PORTIONS THEREOF THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE WATERPROOFED AND DAMP-PROOFED IN ACCORDANCE WITH THIS SECTION, WITH THE EXCEPTION OF THOSE SPACES CONTAINING GROUPS OTHER THAN RESIDENTIAL AND INSTITUTIONAL WHERE SUCH OMISSION IS NOT DETRIMENTAL TO THE BUILDING OR OCCUPANCY. VENTILATION FOR CRAWL SPACES SHALL COMPLY WITH SECTION 1203.4.
1805.2 DAMP-PROOFING. WHERE HYDROSTATIC PRESSURE WILL NOT OCCUR AS DETERMINED BY SECTION 1803.5.4, FLOORS AND WALLS FOR OTHER THAN WOOD FOUNDATION SYSTEMS SHALL BE DAMP-PROOFED IN ACCORDANCE WITH THIS SECTION. WOOD FOUNDATION SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AWC PWF.
1805.3 WATERPROOFING. WHERE THE GROUND-WATER INVESTIGATION REQUIRED BY SECTION 1803.5.4 INDICATES THAT A HYDROSTATIC PRESSURE CONDITION EXISTS, AND THE DESIGN DOES NOT INCLUDE A GROUND-WATER CONTROL SYSTEM AS DESCRIBED IN SECTION 1805.1.3, WALLS AND FLOORS SHALL BE WATERPROOFED IN ACCORDANCE WITH THIS SECTION.
1805.4 SUBSOIL DRAINAGE SYSTEM. WHERE A HYDROSTATIC PRESSURE CONDITION DOES NOT EXIST, DAMP-PROOFING SHALL BE PROVIDED AND A BASE SHALL BE INSTALLED UNDER THE FLOOR AND A DRAIN INSTALLED AROUND THE FOUNDATION PERIMETER. A SUBSOIL DRAINAGE SYSTEM DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTION 1805.1.3 SHALL BE DEEMED ADEQUATE FOR LOWERING THE GROUND-WATER TABLE.

SECTION 1806: PRESUMPTIVE LOAD BEARING VALUES OF SOILS

1806.1 LOAD COMBINATIONS. THE PRESUMPTIVE LOAD-BEARING VALUES PROVIDED IN TABLE 1806.2 SHALL BE USED WITH THE ALLOWABLE STRESS DESIGN LOAD COMBINATIONS SPECIFIED IN ASCE 7, SECTION 2.4 OR THE ALTERNATIVE ALLOWABLE STRESS DESIGN LOAD COMBINATIONS OF SECTION 1605.2. THE VALUES OF VERTICAL FOUNDATION PRESSURE AND LATERAL BEARING PRESSURE GIVEN IN THE TABLE 1806.2 SHALL BE PERMITTED TO BE INCREASED BY ONE-THIRD WHERE USED WITH THE ALTERNATIVE ALLOWABLE STRESS DESIGN LOAD COMBINATIONS OF SECTION 1605.2 THAT INCLUDE WIND OR EARTHQUAKE LOADS.
1806.2 PRESUMPTIVE LOAD-BEARING VALUES. THE LOAD-BEARING VALUES USED IN DESIGN FOR SUPPORTING SOILS NEAR THE SURFACE SHALL NOT EXCEED THE VALUES SPECIFIED IN TABLE 1806.2 UNLESS DATA TO SUBSTANTIATE THE USE OF HIGHER VALUES ARE SUBMITTED AND APPROVED. WHERE THE BUILDING OFFICIAL HAS REASON TO DOUBT THE CLASSIFICATION, STRENGTH OR COMPRESSIBILITY OF THE SOIL, THE REQUIREMENTS OF SECTION 1803.5.2 SHALL BE SATISFIED.
PRESUMPTIVE LOAD-BEARING VALUES SHALL APPLY TO MATERIALS WITH SIMILAR PHYSICAL CHARACTERISTICS AND DISPOSITIONS. MUD, ORGANIC SILT, ORGANIC CLAYS, PEAT OR UNPREPARED FILL SHALL NOT BE ASSUMED TO HAVE A PRESUMPTIVE LOAD-BEARING CAPACITY UNLESS DATA TO SUBSTANTIATE THE USE OF SUCH A VALUE ARE SUBMITTED.
EXCEPTION: A PRESUMPTIVE LOAD-BEARING CAPACITY SHALL BE PERMITTED TO BE USED WHERE THE BUILDING OFFICIAL DEEMS THE LOAD-BEARING CAPACITY OF MUD, ORGANIC SILT OR UNPREPARED FILL IS ADEQUATE FOR THE SUPPORT OF LIGHTWEIGHT OR TEMPORARY STRUCTURES.
1806.3 LATERAL LOAD RESISTANCE. WHERE THE PRESUMPTIVE VALUES OF TABLE 1806.2 ARE USED TO DETERMINE RESISTANCE TO LATERAL LOADS, THE CALCULATIONS SHALL BE IN ACCORDANCE WITH SECTIONS 1806.3.1 THROUGH 1806.3.4.

SECTION 1807: FOUNDATION WALLS, RETAINING WALLS AND EMBEDDED POSTS AND POLES

1807.1 FOUNDATION WALLS. FOUNDATION WALLS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTIONS 1807.1.1 THROUGH 1807.1.6. FOUNDATION WALLS SHALL BE SUPPORTED BY FOUNDATIONS DESIGNED IN ACCORDANCE WITH SECTION 1808.
1807.1.1 DESIGN LATERAL SOIL LOADS. FOUNDATION WALLS SHALL BE DESIGNED FOR THE LATERAL SOIL LOADS SET FORTH IN SECTION 1610.
1807.1.2 UNBALANCED BACKFILL HEIGHT. UNBALANCED BACKFILL HEIGHT IS THE DIFFERENCE IN HEIGHT BETWEEN THE EXTERIOR FINISH GROUND LEVEL AND THE LOWER OF THE TOP OF THE CONCRETE FOOTING THAT SUPPORTS THE FOUNDATION WALL OR THE INTERIOR FINISH GROUND LEVEL. WHERE AN INTERIOR CONCRETE SLAB ON GRADE IS PROVIDED AND IS IN CONTACT WITH THE INTERIOR SURFACE OF THE FOUNDATION WALL, THE UNBALANCED BACKFILL HEIGHT SHALL BE PERMITTED TO BE MEASURED FROM THE EXTERIOR FINISH GROUND LEVEL TO THE TOP OF THE INTERIOR CONCRETE SLAB.
1807.1.3 RUBBLE STONE FOUNDATION WALLS. FOUNDATION WALLS OF ROUGH OR RANDOM RUBBLE STONE SHALL NOT BE LESS THAN 16 INCHES (406 MM) THICK. RUBBLE STONE SHALL NOT BE USED FOR FOUNDATION WALLS OF STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F.
1807.1.5 CONCRETE AND MASONRY FOUNDATION WALLS. CONCRETE AND MASONRY FOUNDATION WALLS SHALL BE DESIGNED IN ACCORDANCE WITH CHAPTER 19 OR 21, AS APPLICABLE.
EXCEPTION: CONCRETE AND MASONRY FOUNDATION WALLS SHALL BE PERMITTED TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTION 1807.1.6.
1807.1.6 PRESCRIPTIVE DESIGN OF CONCRETE AND MASONRY FOUNDATION WALLS. CONCRETE AND MASONRY FOUNDATION WALLS THAT ARE LATERALLY SUPPORTED AT THE TOP AND BOTTOM SHALL BE PERMITTED TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THIS SECTION.
1807.1.6.1 FOUNDATION WALL THICKNESS. THE THICKNESS OF PRESCRIPTIVELY DESIGNED FOUNDATION WALLS SHALL NOT BE LESS THAN THE THICKNESS OF THE WALL SUPPORTED, EXCEPT THAT FOUNDATION WALLS OF AT LEAST 8-INCH (203 MM) NOMINAL WIDTH SHALL BE PERMITTED TO SUPPORT BRICK-VENEERED FRAME WALLS AND 10 INCH WIDE (254 MM) CAVITY WALLS PROVIDED THE REQUIREMENTS OF SECTION 1807.1.6.2 OR 1807.1.6.3 ARE MET.
1807.1.6.2 CONCRETE FOUNDATION WALLS. CONCRETE FOUNDATION WALLS SHALL COMPLY WITH THE FOLLOWING:
1. THE THICKNESS SHALL COMPLY WITH THE REQUIREMENTS OF TABLE 1807.1.6.2.
2. THE SIZE AND SPACING OF VERTICAL REINFORCEMENT SHOWN IN TABLE 1807.1.6.2 ARE BASED ON THE USE OF REINFORCEMENT WITH A MINIMUM YIELD STRENGTH OF 60,000 POUNDS PER SQUARE INCH (PSI) (414 MPA). VERTICAL REINFORCEMENT WITH A MINIMUM YIELD STRENGTH OF 40,000 PSI (276 MPA) OR 50,000 PSI (345 MPA) SHALL BE PERMITTED, PROVIDED THE SAME SIZE BAR IS USED AND THE SPACING SHOWN IN THE TABLE IS REDUCED BY MULTIPLYING THE SPACING BY 0.67 OR 0.83, RESPECTIVELY.
3. VERTICAL REINFORCEMENT, WHEN REQUIRED, SHALL BE PLACED NEAREST THE INSIDE FACE OF THE WALL A DISTANCE, D, FROM THE OUTSIDE FACE (SOIL FACE) OF THE WALL. THE DISTANCE, D, IS EQUAL TO THE WALL THICKNESS, T, MINUS 1.25 INCHES (32 MM) PLUS ONE-HALF THE BAR DIAMETER, DB, [D = T - 1.25 DB/2).THE REINFORCEMENT SHALL BE PLACED WITHIN A TOLERANCE OF ± 3/8 INCH (9.5 MM) WHERE D IS LESS THAN OR EQUAL TO 8 INCHES (203 MM) OR ± 1/2 INCH (12.7 MM) WHERE D IS GREATER THAN 8 INCHES (203 MM).
4. IN LIEU OF THE REINFORCEMENT SHOWN IN TABLE 1807.1.6.2, SMALLER REINFORCING BAR SIZES WITH CLOSER SPACINGS THAT PROVIDE AN EQUIVALENT CROSS- SECTIONAL AREA OF REINFORCEMENT PER UNIT LENGTH SHALL BE PERMITTED.
5. CONCRETE COVER FOR REINFORCEMENT MEASURED FROM THE INSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 3/4 INCH (19.1 MM). CONCRETE COVER FOR REINFORCEMENT MEASURED FROM THE OUTSIDE FACE OF THE WALL SHALL NOT HE LESS THAN 1-1/2 INCH (38 MM) FOR NO. 5 BARS AND SMALLER, AND NOT LESS THAN 2 INCHES (51 MM) FOR LARGER BARS.
6. CONCRETE SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH, FÕC OF NOT LESS THAN 2,500 PSI (17.2 MPA).
7. THE UN-FACTORED AXIAL LOAD PER LINEAR FOOT OF WALL SHALL NOT EXCEED 1.2 T FÕC WHERE T IS THE SPECIFIED WALL THICKNESS IN INCHES.

1807.2 RETAINING WALLS. RETAINING WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS 1807.2.1 THROUGH 1807.2.5.
1807.3 EMBEDDED POSTS AND POLES. DESIGNS TO RESIST BOTH AXIAL AND LATERAL LOADS EMPLOYING POSTS OR POLES AS COLUMNS EMBEDDED IN EARTH OR IN CONCRETE FOOTINGS IN EARTH SHALL BE IN ACCORDANCE WITH SECTIONS 1807.3.1 THROUGH 1807.3.3.

SECTION 1808: FOUNDATIONS

1808.1 GENERAL. FOUNDATIONS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTIONS 1808.2 THROUGH 1808.9. SHALLOW FOUNDATIONS SHALL ALSO SATISFY THE REQUIREMENTS OF SECTION 1809. DEEP FOUNDATIONS SHALL ALSO SATISFY THE REQUIREMENTS OF SECTION 1810.
1808.2 DESIGN FOR CAPACITY AND SETTLEMENT. FOUNDATIONS SHALL BE SO DESIGNED THAT THE ALLOWABLE BEARING CAPACITY OF THE SOIL IS NOT EXCEEDED, AND THAT DIFFERENTIAL SETTLEMENT IS MINIMIZED. FOUNDATIONS IN AREAS WITH EXPANSIVE SOILS SHALL BE DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 1808.6.
1808.3 DESIGN LOADS. FOUNDATIONS SHALL BE DESIGNED FOR THE MOST UNFAVORABLE EFFECTS DUE TO THE COMBINATIONS OF LOADS SPECIFIED IN SECTION 1605.2 OR 1605.3. THE DEAD LOAD IS PERMITTED TO INCLUDE THE WEIGHT OF FOUNDATIONS AND OVERLYING FILL. REDUCED LIVE LOADS, AS SPECIFIED IN SECTIONS 1607.10 AND 1607.12, SHALL BE PERMITTED TO BE USED IN THE DESIGN OF FOUNDATIONS.
1808.4 VIBRATORY LOADS. WHERE MACHINERY OPERATIONS OR OTHER VIBRATIONS ARE TRANSMITTED THROUGH THE FOUNDATION, CONSIDERATION SHALL BE GIVEN IN THE FOUNDATION DESIGN TO PREVENT DETRIMENTAL DISTURBANCES OF THE SOIL.
1808.5 SHIFTING OR MOVING SOILS. WHERE IT IS KNOWN THAT THE SHALLOW SUBSOILS ARE OF A SHIFTING OR MOVING CHARACTER, FOUNDATIONS SHALL BE CARRIED TO A SUFFICIENT DEPTH TO ENSURE STABILITY.
1808.6 DESIGN FOR EXPANSIVE SOILS. FOUNDATIONS FOR BUILDINGS AND STRUCTURES FOUNDED ON EXPANSIVE SOILS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 1808.6.1 OR 1808.6.2.
EXCEPTIONS: FOUNDATION DESIGN NEED NOT COMPLY WITH SECTION 1808.6.1 OR 1808.6.2 WHERE ONE OF THE FOLLOWING CONDITIONS IS SATISFIED:
1. *THE SOIL IS REMOVED IN ACCORDANCE WITH SECTION 1808.6.3.*
2. *THE BUILDING OFFICIAL APPROVES STABILIZATION OF THE SOIL IN ACCORDANCE WITH SECTION 1808.6.4.*

1808.7 FOUNDATIONS ON OR ADJACENT TO SLOPES. THE PLACEMENT OF BUILDINGS AND STRUCTURES ON OR ADJACENT TO SLOPES STEEPER THAN ONE UNIT VERTICAL IN THREE UNITS HORIZONTAL (33.3- PERCENT SLOPE) SHALL COMPLY WITH SECTIONS 1808.7.1 THROUGH 1808.7.5.
1808.8 CONCRETE FOUNDATIONS. THE DESIGN, MATERIALS AND CONSTRUCTION OF CONCRETE FOUNDATIONS SHALL COMPLY WITH SECTIONS 1808.8.1 THROUGH 1808.8.6 AND THE PROVISIONS OF CHAPTER 19.
EXCEPTION: WHERE CONCRETE FOOTINGS SUPPORTING WALLS OF LIGHT-FRAME CONSTRUCTION ARE DESIGNED IN ACCORDANCE WITH TABLE 1809.7, A SPECIFIC DESIGN IN ACCORDANCE WITH CHAPTER 19 IS NOT REQUIRED.
1808.8.1 CONCRETE OR GROUT STRENGTH AND MIX PROPORTIONING. CONCRETE OR GROUT IN FOUNDATIONS SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH (FÕC) NOT LESS THAN THE LARGEST APPLICABLE VALUE INDICATED IN TABLE 1808.8.1.
WHERE CONCRETE OR GROUT IS IS TO BE PUMPED, THE MIX DESIGN, INCLUDING SLUMP, SHALL BE ADJUSTED TO PRODUCE A PUMP-ABLE MIXTURE.
1808.8.2 CONCRETE COVER. THE CONCRETE COVER PROVIDED FOR PRESTRESSED AND NON-PRESTRESSED REINFORCEMENT IN FOUNDATIONS SHALL BE NO LESS THAN THE LARGEST APPLICABLE VALUE SPECIFIED IN TABLE 1808.8.2. LONGITUDINAL BARS SPACED LESS THAN 1-1/2 INCHES (38 MM) CLEAR DISTANCE APART SHALL BE CONSIDERED BUNDLED BARS FOR WHICH THE CONCRETE COVER PROVIDED SHALL ALSO BE NO LESS THAN THAT REQUIRED BY SECTION 20.8.1.3.4 OF ACI 318. CONCRETE COVER SHALL BE MEASURED FROM THE CONCRETE SURFACE TO THE OUTERMOST SURFACE OF THE STEEL TO WHICH THE COVER REQUIREMENT APPLIES. WHERE CONCRETE IS PLACED IN A TEMPORARY OR PERMANENT CASING OR A MANDREL, THE INSIDE FACE OF THE CASING OR MANDREL SHALL BE CONSIDERED THE CONCRETE SURFACE.
1808.8.3 PLACEMENT OF CONCRETE. CONCRETE SHALL BE PLACED IN SUCH A MANNER AS TO ENSURE THE EXCLUSION OF ANY FOREIGN MATTER AND TO SECURE A FULL-SIZE FOUNDATION. CONCRETE SHALL NOT BE PLACED THROUGH WATER UNLESS A TREMIE OR OTHER METHOD APPROVED BY THE BUILDING OFFICIAL IS USED. WHERE PLACED UNDER OR IN THE PRESENCE OF WATER, THE CONCRETE SHALL BE DEPOSITED BY APPROVED MEANS TO ENSURE MINIMUM SEGREGATION OF THE MIX AND NEGLIGIBLE TURBULENCE OF THE WATER. WHERE DEPOSITING CONCRETE FROM THE TOP OF A DEEP FOUNDATION ELEMENT, THE CONCRETE SHALL BE CHUTED DIRECTLY INTO SMOOTH-SIDED PIPES OR TUBES OR PLACED IN A RAPID AND CONTINUOUS OPERATION THROUGH A FUNNEL HOPPER CENTERED AT THE TOP OF THE ELEMENT.
1808.8.4 PROTECTION OF CONCRETE. CONCRETE FOUNDATIONS SHALL BE PROTECTED FROM FREEZING DURING DEPOSITING AND FOR A PERIOD OF NOT LESS THAN FIVE DAYS THEREAFTER. WATER SHALL NOT BE ALLOWED TO FLOW THROUGH THE DEPOSITED CONCRETE.
1808.8.5 FORMING OF CONCRETE. CONCRETE FOUNDATIONS ARE PERMITTED TO BE CAST AGAINST THE EARTH WHERE, IN THE OPINION OF THE BUILDING OFFICIAL, SOIL CONDITIONS DO NOT REQUIRE FORMWORK. WHERE FORMWORK IS REQUIRED, IT SHALL BE IN ACCORDANCE WITH SECTION 26.10 OF ACI 318.
1808.8.6 SEISMIC REQUIREMENTS. SEE SECTION 1905 FOR ADDITIONAL REQUIREMENTS FOR FOUNDATIONS OF STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F. FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E OR F, PROVISIONS OF SECTION 18.13 OF ACI 318 SHALL APPLY WHERE NOT IN CONFLICT WITH THE PROVISIONS OF SECTIONS 1808 THROUGH 1810.
EXCEPTIONS:
1. *DETACHED ONE-AND TWO-FAMILY DWELLINGS OF LIGHT-FRAME CONSTRUCTION AND TWO STORIES OR LESS ABOVE GRADE PLANE ARE NOT REQUIRED TO COMPLY WITH THE PROVISIONS OF SECTION 18.13 OF ACI 318.*
2. *SECTION 18.13.4.3(A) OF ACI 318 SHALL NOT APPLY.*

SECTION 1809: SHALLOW FOUNDATIONS

1809.1 GENERAL. SHALLOW FOUNDATIONS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTIONS 1809.2 THROUGH 1809.13.
1809.2 SUPPORTING SOILS. SHALLOW FOUNDATIONS SHALL BE BUILT ON UNDISTURBED SOIL, COMPACTED FILL MATERIAL OR CONTROLLED LOW-STRENGTH MATERIAL (CLSM). COMPACTED FILL MATERIAL SHALL BE PLACED IN ACCORDANCE WITH SECTION 1804.5. CLSM SHALL BE PLACED IN ACCORDANCE WITH SECTION 1804.6.
1809.3 STEPPED FOOTINGS. THE TOP SURFACE OF FOOTINGS SHALL BE LEVEL. THE BOTTOM SURFACE OF FOOTINGS SHALL BE PERMITTED TO HAVE A SLOPE NOT EXCEEDING ONE UNIT VERTICAL IN 10 UNITS HORIZONTAL (10-PERCENT SLOPE). FOOTINGS SHALL BE STEPPED WHERE IT IS NECESSARY TO CHANGE THE ELEVATION OF THE TOP SURFACE OF THE FOOTING OR WHERE THE SURFACE OF THE GROUND SLOPES MORE THAN ONE UNIT VERTICAL IN 10 UNITS HORIZONTAL (10-PERCENT SLOPE).
1809.4 DEPTH AND WIDTH OF FOOTINGS. THE MINIMUM DEPTH OF FOOTINGS BELOW THE UNDISTURBED GROUND SURFACE SHALL BE 12 INCHES (305 MM). WHERE APPLICABLE, THE REQUIREMENTS OF SECTION 1809.5 SHALL ALSO BE SATISFIED. THE MINIMUM WIDTH OF FOOTINGS SHALL BE 12 INCHES (305 MM).
1809.5 FROST PROTECTION. EXCEPT OR OTHERWISE PROTECTED FROM FROST, FOUNDATIONS AND OTHER PERMANENT SUPPORTS OF BUILDINGS AND STRUCTURES SHALL BE PROTECTED FROM FROST BY ONE OF THE FOLLOWING METHODS:
1. EXTENDING BELOW THE FROST LINE OF THE LOCALITY.
2. CONSTRUCTING IN ACCORDANCE WITH ASCE 32. 3.
3. ERECTING ON SOLID ROCK.

EXCEPTION: FREE-STANDING BUILDINGS MEETING ALL OF THE FOLLOWING CONDITIONS SHALL NOT BE REQUIRED TO BE PROTECTED:
1. *ASSIGNED TO RISK CATEGORY 1.*
2. *AREA OF 600 SQUARE FEET (56 M2) OR LESS FOR LIGHT-FRAME CONSTRUCTION OR 400 SQUARE FEET (37 M2) OR LESS FOR OTHER THAN LIGHT-FRAME CONSTRUCTION.*
3. *EAVE HEIGHT OF 10 FEET (3048MM) OR LESS.*

SHALLOW FOUNDATIONS SHALL NOT BEAR ON FROZEN SOIL UNLESS SUCH FROZEN CONDITION IS OF A PERMANENT CHARACTER.
1809.6 LOCATION OF FOOTINGS. FOOTINGS ON GRANULAR SOIL SHALL BE SO LOCATED THAT THE LINE DRAWN BETWEEN THE LOWER EDGES OF ADJOINING FOOTINGS SHALL NOT HAVE A SLOPE STEEPER THAN 30 DEGREES (0.52 RAD) WITH THE HORIZONTAL, UNLESS THE MATERIAL SUPPORTING THE HIGHER FOOTING IS BRACED OR RETAINED OR OTHERWISE LATERALLY SUPPORTED IN AN APPROVED MANNER OR A GREATER SLOPE HAS BEEN PROPERLY ESTABLISHED BY ENGINEERING ANALYSIS.
1809.7 PRESCRIPTIVE FOOTINGS FOR LIGHT-FRAME CONSTRUCTION. WHERE A SPECIFIC DESIGN IS NOT PROVIDED, CONCRETE OR MASONRY-UNIT FOOTINGS SUPPORTING WALLS OF LIGHT-FRAME CONSTRUCTION SHALL BE PERMITTED TO BE DESIGNED IN ACCORDANCE WITH TABLE 1809.7.
1809.8 PLAIN CONCRETE FOOTINGS. THE EDGE THICKNESS OF PLAIN CONCRETE FOOTINGS SUPPORTING WALLS OF OTHER THAN LIGHT-FRAME CONSTRUCTION SHALL NOT BE LESS THAN 8 INCHES (203 MM) WHERE PLACED ON SOIL OR ROCK.
EXCEPTION: FOR PLAIN CONCRETE FOOTINGS SUPPORTING GROUP R-3 OCCUPANCIES, THE EDGE THICKNESS IS PERMITTED TO BE 6 INCHES (152 MM), PROVIDED THAT THE FOOTING DOES NOT EXTEND BEYOND A DISTANCE GREATER THAN THE THICKNESS OF THE FOOTING ON EITHER SIDE OF THE SUPPORTED WALL.

SECTION 1810: DEEP FOUNDATIONS

1810.1 GENERAL. DEEP FOUNDATIONS SHALL BE ANALYZED, DESIGNED, DETAILED AND INSTALLED IN ACCORDANCE WITH SECTIONS 1810.1 THROUGH 1810.4.
1810.2 ANALYSIS. THE ANALYSIS OF DEEP FOUNDATIONS FOR DESIGN SHALL BE IN ACCORDANCE WITH SECTIONS 1810.2.1 THROUGH 1810.2.5.
1810.3 DESIGN AND DETAILING. DEEP FOUNDATIONS SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH SECTIONS 1810.3.1 THROUGH 1810.3.12.
1810.4 INSTALLATION. DEEP FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 1810.4. WHERE A SINGLE DEEP FOUNDATION ELEMENT COMPRISES TWO OR MORE SECTIONS OF DIFFERENT MATERIALS OR DIFFERENT TYPES SPLICED TOGETHER, EACH SECTION SHALL SATISFY THE APPLICABLE CONDITIONS OF INSTALLATION.

CBC CHAPTER 19: CONCRETE

SECTION 1901: GENERAL

1901.1 SCOPE. THE PROVISIONS OF THIS CHAPTER SHALL GOVERN THE MATERIALS, QUALITY CONTROL, DESIGN AND CONSTRUCTION OF CONCRETE USED IN STRUCTURES.
1901.2 PLAIN AND REINFORCED CONCRETE. STRUCTURAL CONCRETE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS CHAPTER AND ACI 318 AS AMENDED IN SECTION 1905 OF THIS CODE. EXCEPT FOR THE PROVISIONS OF SECTIONS 1904 AND 1907, THE DESIGN AND CONSTRUCTION OF SLABS ON GRADE SHALL NOT BE GOVERNED BY THIS CHAPTER UNLESS THEY TRANSMIT VERTICAL LOADS OR LATERAL FORCES FROM OTHER PARTS OF THE STRUCTURE TO THE SOIL.
1901.3 ANCHORING TO CONCRETE. ANCHORING TO CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318 AS AMENDED IN SECTION 1905, AND APPLIES TO CAST-IN (HEADED BOLTS, HEADED STUDS AND HOOKED J OR L BOLTS), POST-INSTALLED EXPANSION (TORQUE-CONTROLLED AND DISPLACEMENT-CONTROLLED), UNDERCUT, SCREW, AND ADHESIVE ANCHORS.
1901.4 COMPOSITE STRUCTURAL STEEL AND CONCRETE STRUCTURES. SYSTEMS OF STRUCTURAL STEEL ACTING COMPOSITELY WITH REINFORCED CONCRETE SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 2206 OF THIS CODE.
1901.6 SPECIAL INSPECTIONS AND TESTS. SPECIAL INSPECTIONS AND TESTS OF CONCRETE ELEMENTS OF BUILDINGS AND STRUCTURES AND CONCRETING OPERATIONS SHALL BE AS REQUIRED BY CHAPTER 17.

SECTION 1902: DEFINITIONS

1902.1 GENERAL. THE WORDS AND TERMS DEFINED IN ACI 318 SHALL, FOR THE PURPOSES OF THIS CHAPTER AND AS USED ELSEWHERE IN THIS CODE FOR CONCRETE CONSTRUCTION, HAVE THE MEANINGS SHOWN IN ACI 318 AS MODIFIED BY SECTION 1905.1.1.

SECTION 1903: SPECIFICATIONS FOR TESTS AND MATERIALS

1903.1 GENERAL. MATERIALS USED TO PRODUCE CONCRETE, CONCRETE ITSELF AND TESTING THEREOF SHALL COMPLY WITH THE APPLICABLE STANDARDS LISTED IN ACI 318.
EXCEPTION: THE FOLLOWING STANDARDS AS REFERENCED IN CHAPTER 35 SHALL BE PERMITTED TO BE USED.
1. *ASTM C150*
2. *ASTM C595*
3. *ASTM C1157*

1903.2 SPECIAL INSPECTIONS. WHERE REQUIRED, SPECIAL INSPECTIONS AND TESTS SHALL BE IN ACCORDANCE WITH CHAPTER 17.
1903.3 GLASS FIBER-REINFORCED CONCRETE. GLASS FIBER-REINFORCED CONCRETE (GFRC) AND THE MATERIALS USED IN SUCH CONCRETE SHALL BE IN ACCORDANCE WITH THE PCI MNL 128 STANDARD.
1903.4 FLAT WALL INSULATING CONCRETE FORM (ICF) SYSTEMS. INSULATING CONCRETE FORM MATERIAL USED FOR FORMING FIAT CONCRETE WALLS SHALL CONFORM TO ASTM E2634.

SECTION 1904: DURABILITY REQUIREMENTS

1904.1 STRUCTURAL CONCRETE. STRUCTURAL CONCRETE SHALL CONFORM TO THE DURABILITY REQUIREMENTS OF ACI 318.
EXCEPTION: FOR GROUP R-2 AND R-3 OCCUPANCIES NOT MORE THAN THREE STORIES ABOVE GRADE PLANE, THE SPECIFIED COMPRESSIVE STRENGTH, F'C, FOR CONCRETE IN BASEMENT WALLS, FOUNDATION WALLS, EXTERIOR WALLS AND OTHER VERTICAL SURFACES EXPOSED TO THE WEATHER SHALL BE NOT LESS THAN 3,000 PSI (20.7 MPA).
1904.2 NONSTRUCTURAL CONCRETE. THE REGISTERED DESIGN PROFESSIONAL SHALL ASSIGN NONSTRUCTURAL CONCRETE A FREEZE-THAW EXPOSURE CLASS, AS DEFINED IN ACI 318, BASED ON THE ANTICIPATED EXPOSURE OF NONSTRUCTURAL CONCRETE. NONSTRUCTURAL CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH, FÕC OF 2,500 PSI (17.2 MPA) FOR CLASS FO; 3,000 PSI (20.7 MPA) FOR CLASS F1; AND 3,500 PSI (24.1 MPA) FOR CLASSES F2 AND F3. NONSTRUCTURAL CONCRETE SHALL BE AIR ENTRAINED IN ACCORDANCE WITH ACI 318.

SECTION 1905: MODIFICATIONS TO ACI 318

1905.1 GENERAL. THE TEXT OF ACI 318 SHALL BE MODIFIED AS INDICATED IN SECTIONS 1905.1.1 THROUGH 1905.1.8.

SECTION 1906: FOOTINGS FOR LIGHT-FRAME CONSTRUCTION

1906.1 PLAIN CONCRETE FOOTINGS. FOR GROUP ARE THREE OCCUPANCIES AND BUILDINGS OF OTHER OCCUPANCIES LESS THAN TWO STORIES ABOVE GRADE PLAN OF LIGHT FRAME CONSTRUCTION, THE REQUIRED THICKNESS OF PLAIN CONCRETE FOOTINGS IS PERMITTED TO BE 6 INCHES (152 MM), PROVIDED THAT THE FOOTING DOES NOT EXTEND MORE THAN 4 INCHES (102 MM) ON EITHER SIDE OF THE SUPPORTED WALL.

SECTION 1907: MINIMUM SLAB PROVISIONS

1907.1 GENERAL. THE THICKNESS OF CONCRETE FLOOR SLABS SUPPORTED DIRECTLY ON THE GROUND SHALL NOT BE LESS THAN 3-1/2 INCHES (89 MM). A 6-MIL (0.006 INCH; 0.15 MM) POLYETHYLENE VAPOR RETARDER WITH JOINTS LAPPED NOT LESS THAN 6 INCHES (152 MM) SHALL BE PLACED BETWEEN THE BASE COURSE OR SUB-GRADE AND THE CONCRETE FLOOR SLAB, OR OTHER APPROVED EQUIVALENT METHODS OR MATERIALS SHALL BE USED TO RETARD VAPOR TRANSMISSION THROUGH THE FLOOR SLAB.
EXCEPTION: A VAPOR RETARDER IS NOT REQUIRED:
1. *FOR DETACHED STRUCTURES ACCESSORY TO OCCUPANCIES IN GROUP R-3, SUCH AS GARAGES, UTILITY BUILDINGS OR OTHER UNHEATED FACILITIES.*
2. *FOR UNHEATED STORAGE ROOMS HAVING AN AREA OF LESS THAN 70 SQUARE FEET (6.5 M2) AND CARPORTS ATTACHED TO OCCUPANCIES IN GROUP R-3.*
3. *FOR BUILDINGS OF OTHER OCCUPANCIES WHERE MIGRATION OF MOISTURE THROUGH THE SLAB FROM BELOW WILL NOT BE DETRIMENTAL TO THE INTENDED OCCUPANCY OF THE BUILDING.*
4. *FOR DRIVEWAYS, WALKS, PATIOS AND OTHER FLATWORK THAT WILL NOT BE ENCLOSED AT A LATER DATE.*
5. *WHERE APPROVED BASED ON LOCAL SITE CONDITIONS.*

ADDITIONAL CONCRETE AND FOUNDATION NOTES:

1. IF A SOIL REPORT IS PROVIDED, THE SOILS ENGINEER OF RECORD SHALL REVIEW GRADING & DRAINAGE PLANS, FOUNDATION PLANS, & DETAILS & PROVIDE WRITTEN DOCUMENTATION INDICATING THEIR CONFORMANCE WITH HIS/HER SOIL REPORT.
2. THE SOIL ENGINEER OF RECORD (AS APPLICABLE), SHALL BE PRESENT AT THE PROJECT SITE TO OBSERVE & INSPECT ALL EARTHWORK, GRADING, FOUNDATION EXCAVATIONS & PROVIDE WRITTEN DOCUMENTATION OF THEIR OBSERVATIONS TO THE LOCAL BUILDING OFFICIAL PRIOR TO POURING OF ANY CONCRETE FOOTING OR RETAINING WALL.
3. COMPRESSIVE STRENGTH: CONCRETE SHALL BE IN COMPLIANCE WITH CHAPTER 19 & SHALL COMPLY WITH THE DURABILITY CRITERIA PER CBC SECTION 1904. FOR CONCRETE DESIGNED & CONSTRUCTED IN ACCORDANCE WITH THE CODES NOTES ABOVE, THE COMPRESSIVE STRENGTH OF CONCRETE (FÕC) SHALL BE NOT LESS THAN 2500 PSI @ 28 DAYS.
4. REINFORCEMENT: SEE PLANS AND DETAILS FOR SPECIFIC REINFORCEMENT. LAP ALL REINFORCING BARS PER CBC BUT IN NO CASE LESS THAN 40 BAR DIAMETER. REBAR SIZES #4 & SMALLER SHALL BE GRADE 40, REBAR #5 & LARGER SHALL BE GRADE 60. ASTM 615.
5. WET SET ANCHOR BOLTS: PROVIDE ANCHORAGE OF WOOD FRAMING MEMBERS PER CBC. USE 5/8Ó DIAMETER BY 12 INCH ANCHOR BOLTS, SPACED AT 48Ó OC MAXIMUM. USE .229Ó X 3Ó X 3Ó SQUARE PLATE WASHERS AT EACH ANCHOR BOLT. SEE STRUCTURAL ENGINEER OF RECORDÕS DESIGNATED SHEAR WALL SCHEDULE FOR ANCHOR BOLT SPACING REQUIREMENTS AT IDENTIFIED BRACED WALL PANEL LINES. (SHEAR WALLS)
6. RETROFIT ANCHOR BOLTS: PROVIDE 5/8Ó/7/8Ó/1Ó OR GREATER THREADED RODS (PER FOUNDATION PLAN) WITH .229Ó X 3Ó X 3Ó SQUARE PLATE WASHERS. ANCHORS SET INTO EXISTING FOUNDATIONS/STEM WALLS WITH ÒSIMPSON SET-XPÓ EPOXY SYSTEM. (ICC-ESR 2508)
7. THREADED RODS SHALL BE A36 STEEL (UNO). IF IN CONTACT WITH PTDF LUMBER, THREADED RODS SHALL BE STAINLESS STEEL OR HOT DIPPED, ZINC COATED GALVANIZED. IF INSTALLED AS RETROFIT ANCHORS, USE ÒSIMPSONÓ EPOXY SET XP SYSTEM (ICC #2508).
8. HOLD DOWNS SHALL BE INSTALLED PER MANUFACTURERSÕ INSTALLATION INSTRUCTIONS. SEE FOUNDATION & FRAMING PLAN(S) FOR HOLD DOWN TYPE & LOCATIONS. DO NOT SCALE OFF OF STRUCTURAL PLANS. COORDINATE THEIR LOCATION WITH DIMENSIONS PROVIDED ON ARCHITECTURAL PLANS.
9. ALL SPECIFIED RETROFIT HOLD DOWNS SHALL REQUIRE A SPECIAL INSPECTION PER CBC CHAPTER 17.

CBC CHAPTER 21: MASONRY

SECTION 2101: GENERAL

2101.1 SCOPE. THIS CHAPTER SHALL GOVERN THE MATERIALS, DESIGN, CONSTRUCTION AND QUALITY OF MASONRY.
2101.2 DESIGN METHODS. MASONRY SHALL COMPLY WITH THE PROVISIONS OF TMS 402/ACI 530/ASCE 5 OR TMS 403 AS WELL AS APPLICABLE REQUIREMENTS OF THIS CHAPTER.
2101.3 SPECIAL INSPECTION. THE SPECIAL INSPECTION OF MASONRY SHALL HE AS DEFINED IN CHAPTER 17, OR AN ITEMIZED TESTING AND INSPECTION PROGRAM SHALL HE PROVIDED THAT MEETS OR EXCEEDS THE REQUIREMENTS OF CHAPTER 17.

SECTION 2103: MASONRY CONSTRUCTION MATERIALS

2103.1 MASONRY UNITS. CONCRETE MASONRY UNITS, CLAY OR SHALE MASONRY UNITS, STONE MASONRY UNITS, GLASS UNIT MASONRY AND AAC MASONRY UNITS SHALL COMPLY WITH ARTICLE 2.3 OF TMS 602. ARCHITECTURAL CAST STONE SHALL CONFORM TO ASTM C1364 AND TMS 504. ADHERED MANUFACTURED STONE MASONRY VENEER UNITS SHALL CONFORM TO ASTM C1670 [OSHPD 1R, 2B, & 5] ARCHITECTURAL CAST STONE CONSTRUCTION SHALL BE CONSIDERED AS AN ALTERNATIVE SYSTEM.
EXCEPTION: STRUCTURAL CLAY TILE FOR NONSTRUCTURAL USE IN FIREPROOFING OF STRUCTURAL MEMBERS AND IN WALL FURRING SHALL NOT BE REQUIRED TO MEET THE COMPRESSIVE STRENGTH SPECIFICATIONS. THE FIRE-RESISTANCE RATING SHALL BE DETERMINED IN ACCORDANCE WITH ASTM E119 OR UL 263 AND SHALL COMPLY WITH THE REQUIREMENTS OF TABLE 705.5.
2103.2 MORTAR. MORTAR FOR MASONRY CONSTRUCTION SHALL COMPLY WITH SECTION 2103.2.1, 2103.2.2, 2103.2.3 OR 2103.2.4.
2103.4 METAL REINFORCEMENT AND ACCESSORIES. METAL REINFORCEMENT AND ACCESSORIES SHALL CONFORM TO ARTICLE 2.4 OF TMS 602. WHERE UNIDENTIFIED REINFORCEMENT [OSHPD 1R, 2B & 5], OR BAR, REINFORCEMENT WITHOUT MILL CERTIFICATION, IS APPROVED FOR USE, NOT LESS THAN THREE TENSION AND THREE BENDING TESTS SHALL BE MADE ON REPRESENTATIVE SPECIMENS OF THE REINFORCEMENT FROM EACH SHIPMENT AND GRADE OF REINFORCING STEEL PROPOSED FOR USE IN THE WORK. [OSHPD 1R, 2B & 5], ALTERNATIVELY, THE FREQUENCY OF SAMPLING FOR UNIDENTIFIABLE REINFORCING BARS SPECIFIED IN SECTION 1910.2 CAN BE USED.

REBAR METRIC CONVERSION TABLE			
BAR SIZE	INCHES (DIAMETER)	MILLIMETER (DIAMETER)	CENTIMETER (DIAMETER)
#3	3/8Ó	9.52 MM	0.95 CM
#4	1/2Ó	12.70 MM	1.27 CM
#5	5/8Ó	15.87 MM	1.58 CM
#6	3/4Ó	19.05 MM	1.90 CM
#7	7/8Ó	22.22 MM	2.22 CM
#8	1Ó	25.40 MM	2.54 CM

CBC CHAPTER 22: STEEL

SECTION 2203: PROTECTION OF STEEL FOR STRUCTURAL PURPOSES

2203.1 GENERAL. PAINTING OF STRUCTURAL STEEL ELEMENTS SHALL BE IN ACCORDANCE WITH AISC 360. PAINTING OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS SHALL BE IN ACCORDANCE WITH SJI 100 AND SJI 200. INDIVIDUAL STRUCTURAL MEMBERS AND ASSEMBLED PANELS OF COLD-FORMED STEEL CONSTRUCTION SHALL BE PROTECTED AGAINST CORROSION IN ACCORDANCE WITH THE REQUIREMENTS CONTAINED IN AISI S100. PROTECTION OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISI S240 OR AISI S220, AS APPLICABLE.

SECTION 2204: CONNECTIONS

2204.1 WELDING. THE DETAILS OF DESIGN, WORKMANSHIP AND TECHNIQUE FOR WELDING AND QUALIFICATION OF WELDING PERSONNEL SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS LISTED IN SECTIONS 2205, 2206, 2207, 2208, 2210 AND 2211. FOR SPECIAL INSPECTION OF WELDING, SEE SECTION 1705.2.
2204.2 BOLTING. THE DESIGN, INSTALLATION AND INSPECTION OF BOLTS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 2205, 2206, 2207, 2210 AND 2211. FOR SPECIAL INSPECTION OF THE INSTALLATION OF HIGH-STRENGTH BOLTS, SEE SECTION 1705.2.
2204.3 ANCHOR RODS. ANCHOR RODS SHALL BE SET IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. THE PROTRUSION OF THE THREADED ENDS THROUGH THE CONNECTED MATERIAL SHALL FULLY ENGAGE THE THREADS OF THE NUTS BUT SHALL NOT BE GREATER THAN THE LENGTH OF THE THREADS ON THE BOLTS.

SECTION 2205: STRUCTURAL STEEL

2205.1 GENERAL. THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH AISC 360.
2205.2 SEISMIC DESIGN. WHERE REQUIRED, THE SEISMIC DESIGN, FABRICATION AND ERECTION OF BUILDINGS, STRUCTURES AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH SECTION 2205.2.1 OR 2205.2.2, AS APPLICABLE.

SECTION 2211: COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION

2211.1 GENERAL. THE DESIGN AND INSTALLATION OF STRUCTURAL AND NONSTRUCTURAL MEMBERS UTILIZED IN COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION WHERE THE SPECIFIED MINIMUM BASE STEEL THICKNESS IS NOT GREATER THAN 0.1180 INCHES (2.997 MM) SHALL BE IN ACCORDANCE WITH AISI S200 AND SECTIONS 2211.2 THROUGH 2211.7, OR AISI S220, AS APPLICABLE.

STEEL SHAPE	ASTM/GRADE	F_y	F_u
ÒWÓ (I-BEAM)	A36	36 ksi	58 ksi
ÒMÓ,ÒSÓ, ÒHPÓ, ÒCÓ, ÒMCÓ & ÒLÓ	A36	36 ksi	58 ksi
RECTANGULAR/SQUARE ÒHSSÓ	A500, GRADE B	46 ksi	58 ksi
ROUND ÒHSSÓ	A500, GRADE B	48 ksi	58 ksi
STEEL PIPE	A53, GRADE B	35 ksi	60 ksi
ALL OTHER SHAPES	A36	36 ksi	58 ksi

CBC CHAPTER 23: WOOD

SECTION 2303: MINIMUM STANDARDS AND QUALITY

2303.1 GENERAL. STRUCTURAL SAWN LUMBER; END-JOINTED LUMBER; PREFABRICATED WOOD I-JOISTS; STRUCTURAL GLUED-LAMINATED TIMBER; WOOD STRUCTURAL PANELS; FIBERBOARD SHEATHING (WHEN USED STRUCTURALLY); HARDBOARD SIDING (WHEN USED STRUCTURALLY); PARTICLEBOARD; PRESERVATIVE-TREATED WOOD; STRUCTURAL LOG MEMBERS; STRUCTURAL COMPOSITE LUMBER; ROUND TIMBER POLES AND PILES; FIRE-RETARDANT-TREATED WOOD; HARDWOOD PLYWOOD; WOOD TRUSSES; JOIST HANGERS; NAILS; AND STAPLES SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THIS SECTION.
2303.1.1 SAWN LUMBER. SAWN LUMBER USED FOR LOAD-SUPPORTING PURPOSES, INCLUDING END-JOINTED OR EDGE-GLUED LUMBER, MACHINE STRESS-RATED OR MACHINE-EVALUATED LUMBER, SHALL BE IDENTIFIED BY THE GRADE MARK OF A LUMBER GRADING OR INSPECTION AGENCY THAT HAS BEEN APPROVED BY AN ACCREDITATION BODY THAT COMPLIES WITH DOC PS 20 OR EQUIVALENT. GRADING PRACTICES AND IDENTIFICATION SHALL COMPLY WITH RULES PUBLISHED BY AN AGENCY APPROVED IN ACCORDANCE WITH THE PROCEDURES OF DOC PS 20 OR EQUIVALENT PROCEDURES.
2303.1.1.1 CERTIFICATE OF INSPECTION. IN LIEU OF A GRADE MARK ON THE MATERIAL, A CERTIFICATE OF INSPECTION AS TO SPECIES AND GRADE ISSUED BY A LUMBER GRADING OR INSPECTION AGENCY MEETING THE REQUIREMENTS OF THIS SECTION IS PERMITTED TO BE ACCEPTED FOR PRECUT, REMANUFACTURED OR ROUGH-SAWN LUMBER AND FOR SIZES LARGER THAN 3 INCHES (76 MM) NOMINAL THICKNESS.
2303.1.1.2 END-JOINTED LUMBER. APPROVED END-JOINTED LUMBER IS PERMITTED TO BE USED INTERCHANGEABLY WITH SOLID-SAWN MEMBERS OF THE SAME SPECIES AND GRADE. END-JOINTED LUMBER USED IN AN ASSEMBLY REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL HAVE THE DESIGNATION ÒHEAT RESISTANT ADHESIVEÓ OR ÒHRAÓ INCLUDED IN ITS GRADE MARK.

MUD SILL	PTDF/REDWOOD/PSL PLUS
ROOF RAFTERS	DF#2 OR BETTER
FLOOR JOISTS	DF#2 OR BETTER
CEILING JOISTS	DF#2 OR BETTER

MUD SILL	PTDF/REDWOOD/PSL PLUS
4X BEAMS	DF#1 OR BETTER
6X BEAMS/LARGER	DF#1 OR BETTER
STUDS (2X4/3X4)	DF#2 OR BETTER
STUDS (2X6/LARGER)	DF#2 OR BETTER
STUDS (BALLOON FRAMED WALLS)	2X6 DF#2 OR BETTER
POSTS (4x4/LARGER)	DF#1 OR BETTER
POSTS (6X6/LARGER)	DF#1 OR BETTER

2303.1.2 PREFABRICATED WOOD I-JOISTS. STRUCTURAL CAPACITIES AND DESIGN PROVISIONS FOR PREFABRICATED WOOD I-JOISTS SHALL BE ESTABLISHED AND MONITORED IN ACCORDANCE WITH ASTM D5055. PARALLAM, MICRO-LAM, TJI JOISTS, ETC... SHALL BE SPECIFIED ON DRAWINGS & INSTALLED PER MANUFACTURERSÕ/STRUCTURAL ENGINEERÕS SPECIFICATIONS AND/OR DETAILS. ICC ESR-1153 & 1387.
2303.1.3 STRUCTURAL GLUED-LAMINATED TIMBER. GLUED-LAMINATED TIMBERS SHALL BE MANUFACTURED AND IDENTIFIED AS REQUIRED IN ANSI/AITC A 190.1 AND ASTM D 3737. STRUCTURAL ENGINEER SHALL SPECIFY SIZES/GRADES ON PLANS. (UNO), GLU-LAM MEMBERS SHALL MEET OR EXCEED THE FOLLOWING STRESS VALUES:

BENDING (FB)	2400 PSI
HORIZONTAL SHEAR (FV)	165 PSI
TENSION (FT)	1150 PSI
COMPRESSION (FC)	1650 PSI
BEARING STRESS	450 PSI
MODULUS OF ELASTICITY	1800 KSI

2303.1.4 STRUCTURAL GLUED CROSS-LAMINATED TIMBER. CROSS-LAMINATED TIMBERS SHALL BE MANUFACTURED AND IDENTIFIED IN ACCORDANCE WITH ANSI/APA PRG 320.
2303.1.5 WOOD STRUCTURAL PANELS. WOOD STRUCTURAL PANELS, WHEN USED STRUCTURALLY (INCLUDING THOSE USED FOR SIDING, ROOF AND WALL SHEATHING, SUB-FLOORING, DIAPHRAGMS AND BUILT-UP MEMBERS), SHALL CONFORM TO THE REQUIREMENTS FOR THEIR TYPE IN DOC PS 1, DOC PS 2 OR ANSI/APA PRP 210. EACH PANEL OR MEMBER SHALL BE IDENTIFIED FOR GRADE, BOND CLASSIFICATION, AND PERFORMANCE CATEGORY BY THE TRADEMARKS OF AN APPROVED TESTING AND GRADING AGENCY. THE PERFORMANCE CATEGORY VALUE SHALL BE USED AS THE "NOMINAL PANEL THICKNESS" OR "PANEL THICKNESS" WHENEVER REFERENCED IN THIS CODE. WOOD STRUCTURAL PANEL COMPONENTS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE APPLICABLE STANDARDS LISTED IN SECTION 2306.1 AND IDENTIFIED BY THE TRADEMARKS OF AN APPROVED TESTING AND INSPECTION AGENCY INDICATING CONFORMANCE TO THE APPLICABLE STANDARD. IN ADDITION, WOOD STRUCTURAL PANELS WHEN PERMANENTLY EXPOSED IN OUTDOOR APPLICATIONS SHALL BE OF EXTERIOR TYPE, EXCEPT THAT WOOD STRUCTURAL PANEL ROOF SHEATHING EXPOSED TO THE OUTDOORS ON THE UNDERSIDE IS PERMITTED TO BE EXPOSURE 1 TYPE. MINIMUM SIZES ARE AS FOLLOWS:

FLOOR SHEATHING:	3/4Ó T&G (48/24) OR 23/32Ó T&G OSB
WALL SHEATHING:	3/8Ó MIN. CDX (16/0) OR 15/32Ó OSB
ROOF SHEATHING:	1/2Ó MIN. CDX (24/0) OR 19/32Ó OSB

2303.1.6 FIBERBOARD. FIBERBOARD FOR ITS VARIOUS USES SHALL CONFORM TO ASTM C208. FIBERBOARD SHEATHING, WHEN USED STRUCTURALLY, SHALL BE IDENTIFIED BY AN APPROVED AGENCY AS CONFORMING TO ASTM C208.
2303.1.7 HARDBOARD. HARDBOARD SIDING USED STRUCTURALLY SHALL BE IDENTIFIED BY AN APPROVED AGENCY CONFORMING TO CPA/ANSI AOS.6. HARDBOARD UNDERLAYMENT SHALL MEET THE STRENGTH REQUIREMENTS OF 7/32 INCH (5.6 MM) OR 1/4 INCH (6.4 MM) SERVICE CLASS HARDBOARD PLANED OR SANDED ON ONE SIDE TO A UNIFORM THICKNESS OF NOT LESS THAN 0.200 INCH (5.1 MM). PRE-FINISHED HARDBOARD PANELING SHALL MEET THE REQUIREMENTS OF CPA/ANSI AOS.5. OTHER BASIC HARDBOARD PRODUCTS SHALL MEET THE REQUIREMENTS OF CPA/ANSI A05.4. HARDBOARD PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2303.1.8 PARTICLEBOARD. PARTICLEBOARD SHALL CONFORM TO ANSI A208.1. PARTICLEBOARD SHALL BE IDENTIFIED BY THE GRADE MARK OR CERTIFICATE OF INSPECTION ISSUED BY AN APPROVED AGENCY. PARTICLEBOARD SHALL NOT BE UTILIZED FOR APPLICATIONS OTHER THAN INDICATED IN THIS SECTION UNLESS THE PARTICLEBOARD COMPLIES WITH THE PROVISIONS OF SECTION 2306.3.
2303.1.9 PRESERVATIVE-TREATED WOOD. LUMBER, TIMBER, PLYWOOD, PILES AND POLES SUPPORTING PERMANENT STRUCTURES REQUIRED BY SECTION 2304.12 TO BE PRESERVATIVE TREATED SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE AWPA STANDARD U1 AND M4 FOR THE SPECIES, PRODUCT, PRESERVATIVE AND END USE. PRESERVATIVES SHALL BE LISTED IN SECTION 4 OF AWPA U1. LUMBER AND PLYWOOD USED IN WOOD FOUNDATIONS SHALL CONFORM TO CHAPTER 18.
2303.1.10 STRUCTURAL COMPOSITE LUMBER. STRUCTURAL CAPACITIES FOR STRUCTURAL COMPOSITE LUMBER SHALL BE ESTABLISHED AND MONITORED IN ACCORDANCE WITH ASTM D5456.
2303.1.11 STRUCTURAL LOG MEMBERS. STRESS GRADING OF STRUCTURAL LOG MEMBERS OF NON-RECTANGULAR SHAPE, AS TYPICALLY USED IN LOG BUILDINGS, SHALL BE IN ACCORDANCE WITH ASTM D3957. SUCH STRUCTURAL LOG MEMBERS SHALL BE IDENTIFIED BY THE GRADE MARK OF AN APPROVED LUMBER GRADING OR INSPECTION AGENCY. IN LIEU OF A GRADE MARK ON THE MATERIAL, A CERTIFICATE OF INSPECTION AS TO SPECIES AND GRADE ISSUED BY A LUMBER GRADING OR INSPECTION AGENCY MEETING THE REQUIREMENTS OF THIS SECTION SHALL BE PERMITTED.
2303.1.12 ROUND TIMBER POLES AND PILES. ROUND TIMBER POLES AND PILES SHALL COMPLY WITH ASTM D3200 AND ASTM D25, RESPECTIVELY.
2303.1.13 ENGINEERED WOOD RIM BOARD. ENGINEERED WOOD RIM BOARDS SHALL CONFORM TO ANSI/APA PRR 410 OR SHALL BE EVALUATED IN ACCORDANCE WITH ASTM D7672. STRUCTURAL CAPACITIES SHALL BE IN ACCORDANCE WITH ANSI/ APA PRR 410 OR ESTABLISHED IN ACCORDANCE WITH ASTM D7672. RIM BOARDS CONFORMING TO ANSI/APA PRR 410 SHALL BE MARKED IN ACCORDANCE WITH THAT STANDARD.
2303.2 FIRE-RETARDANT-TREATED WOOD. FIRE-RETARDANT-TREATED WOOD IS ANY WOOD PRODUCT WHICH, WHEN IMPREGNATED WITH CHEMICALS BY A PRESSURE PROCESS OR OTHER MEANS DURING MANUFACTURE, SHALL HAVE, WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL 723, A LISTED FLAME SPREAD INDEX OF 25 OR LESS. ADDITIONALLY, THE ASTM E84 OR UL 723 TEST SHALL BE CONTINUED FOR A 20-MINUTE PERIOD AND THE FLAME FRONT SHALL NOT PROGRESS MORE THAN 10-1/2 FEET. (3200 MM) BEYOND THE CENTERLINE OF THE BURNERS AT ANY TIME DURING THE TEST.
2303.3 HARDWOOD AND PLYWOOD. HARDWOOD AND DECORATIVE PLYWOOD SHALL BE MANUFACTURED AND IDENTIFIED AS REQUIRED IN HPVA HP-1.
2303.4 TRUSSES. WOOD TRUSSES SHALL COMPLY WITH SECTIONS 2303.4.1 THROUGH 2303.4.7.
2303.4.1 DESIGN. WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THIS CODE AND ACCEPTED ENGINEERING PRACTICE. MEMBERS ARE PERMITTED TO BE JOINED BY NAILS, GLUE, BOLTS, TIMBER CONNECTORS, METAL CONNECTOR PLATES OR OTHER APPROVED FRAMING DEVICES.
2303.4.2 TRUSS PLACEMENT DIAGRAM. THE TRUSS MANUFACTURER SHALL PROVIDE A TRUSS PLACEMENT DIAGRAM THAT IDENTIFIES THE PROPOSED LOCATION FOR EACH INDIVIDUALLY DESIGNATED TRUSS AND REFERENCES THE CORRESPONDING TRUSS DESIGN DRAW- ING. THE TRUSS PLACEMENT DIAGRAM SHALL BE PROVIDED AS PART OF THE TRUSS SUBMITTAL PACKAGE, AND WITH THE SHIPMENT OF TRUSSES DELIVERED TO THE JOB SITE. TRUSS PLACEMENT DIAGRAMS THAT SERVE ONLY AS A GUIDE FOR INSTALLATION AND DO NOT DEVIATE FROM THE PERMIT SUBMITTAL DRAWINGS SHALL NOT BE REQUIRED TO BEAR THE SEAL OR SIGNATURE OF THE TRUSS DESIGNER.
2303.4.3 TRUSS SUBMITTAL PACKAGE. THE TRUSS SUBMITTAL PACKAGE PROVIDED BY THE TRUSS MANUFACTURER SHALL CONSIST OF EACH INDIVIDUAL TRUSS DESIGN DRAWING, THE TRUSS PLACEMENT DIAGRAM, THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING METHOD AND DETAILS AND ANY OTHER STRUCTURAL DETAILS GERMANE TO THE TRUSSES, AND, AS APPLICABLE, THE COVER/TRUSS INDEX SHEET.
NOTE: THE STRUCTURAL ENGINEER OF RECORD SHALL BE PROVIDED THE OPPORTUNITY TO REVIEW THE INDIVIDUAL TRUSS DESIGNS AND THE TRUSS PLACEMENT DIAGRAM PRIOR TO FABRICATION AND/OR INSTALLATION.

SECTION 2304: GENERAL CONSTRUCTION REQUIREMENTS

2304.1 GENERAL. THE PROVISIONS OF THIS SECTION APPLY TO DESIGN METHODS SPECIFIED IN SECTION 2301.2.
2304.2 SIZE OF STRUCTURAL MEMBERS. COMPUTATIONS TO DETER- MINE THE REQUIRED SIZES OF MEMBERS SHALL BE BASED ON THE NET DIMENSIONS (ACTUAL AND NOT NOMINAL SIZES.
2304.3 WALL FRAMING. THE FRAMING OF EXTERIOR AND INTERIOR WALLS SHALL BE IN ACCORDANCE WITH THE PROVISIONS SPECIFIED IN SECTION 2308 UNLESS A SPECIFIC DESIGN IS FURNISHED.
2304.3.1 BOTTOM PLATES. STUDS SHALL HAVE FULL BEARING ON A 2-INCH THICK (ACTUAL 1-1/2 INCH, 38 MM) OR LARGER PLATE OR SILL HAVING A WIDTH AT LEAST EQUAL TO THE WIDTH OF THE STUDS.
2304.3.2 FRAMING OVER OPENINGS. HEADERS, DOUBLE JOISTS, TRUSSES OR OTHER APPROVED ASSEMBLIES THAT ARE OF ADEQUATE SIZE TO TRANSFER LOADS TO THE VERTICAL MEMBERS SHALL BE PROVIDED OVER WINDOW AND DOOR OPENINGS IN LOAD-BEARING WALLS AND PARTITIONS.
2304.4 FLOOR AND ROOF FRAMING. THE FRAMING OF WOOD- JOISTED FLOORS AND WOOD FRAMED ROOFS SHALL BE IN ACCORDANCE WITH THE PROVISIONS SPECIFIED IN SECTION 2308 UNLESS A SPECIFIC DESIGN IS FURNISHED.
2304.5 FRAMING AROUND FLUES AND CHIMNEYS. COMBUSTIBLE FRAMING SHALL BE A MINIMUM OF 2 INCHES (51 MM), BUT SHALL NOT BE LESS THAN THE DISTANCE SPECIFIED IN SECTIONS 2111 AND 2113 AND THE CALIFORNIA MECHANICAL CODE, FROM FLUES, CHIMNEYS AND FIREPLACES, AND 6 INCHES (152 MM) AWAY FROM FLUE OPENINGS.
2304.6 EXTERIOR WALL SHEATHING. WALL SHEATHING ON THE OUTSIDE OF EXTERIOR WALLS, INCLUDING GABLES, AND THE CONNECTION OF THE SHEATHING TO FRAMING SHALL BE DESIGNED IN ACCORDANCE WITH THE GENERAL PROVISIONS OF THIS CODE AND SHALL BE CAPABLE OF RESISTING WIND PRESSURES IN ACCORDANCE WITH SECTION 1609.
2304.8 FLOOR AND ROOF SHEATHING. STRUCTURAL FLOOR SHEATHING AND STRUCTURAL ROOF SHEATHING SHALL COMPLY WITH SECTIONS 2304.8.1 AND 2304.8.2, RESPECTIVELY.
2304.9 LUMBER DECKING. LUMBER DECKING SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE GENERAL PROVISIONS OF THIS CODE AND SECTIONS 2304.9.1 THROUGH 2 304.9.5.3. OTHER LUMBER DECKING PATTERNS AND CONNECTION DESIGNS SHALL BE SUBSTANTIATED THROUGH ENGINEERING ANALYSIS.
2304.10 CONNECTORS AND FASTENERS. CONNECTORS IN FASTENERS SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF SECTIONS 2304.10.1 THROUGH 2304.10.8.
2304.10.1 CONNECTION FIRE RESISTIVE RATING. FIRE RESISTANCE RATINGS FOR CONNECTIONS IN TYPE IV-A, IV-B, OR IV-C CONSTRUCTION SHALL BE DETERMINED BY ONE OF THE FOLLOWING:
1. TESTING IN ACCORDANCE WITH SECTION 703.2 WHERE THE CONNECTION IS PART OF THE FIRE RESISTANCE TEST.
2. ENGINEERING ANALYSIS THAT DEMONSTRATES THAT THE TEMPERATURE RISE AT ANY PORTION OF THE CONNECTION IS LIMITED TO AN AVERAGE TEMPERATURE RISE OF 200¡ F (139¡ C), AND THE MAXIMUM TEMPERATURE RISE OF 325¡ F (181¡ C), FOR A TIME CORRESPONDING TO THE REQUIRED FIRE-RESISTANCE RATING OF THE STRUCTURAL ELEMENT BEING CONNECTED. FOR THE PURPOSE OF THIS ANALYSIS, THE CONNECTION INCLUDES CONNECTORS, FASTENERS, AND PORTIONS OF WOOD MEMBERS INCLUDED IN THE STRUCTURAL DESIGN OF THE CONNECTION.

2304.10.2 FASTENER REQUIREMENTS. CONNECTIONS FOR WOOD MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH THE APPROPRIATE METHODOLOGY IN SECTION 2302.1. THE NUMBER AND SIZE OF FASTENERS CONNECTING WOULD MEMBERS SHALL BE NOT LESS THAN SET FORTH IN TABLE 2304.10.2.
2304.10.3 SHEATHING FASTENERS. SHEATHING NAILS OR OTHER APPROVED SHEATHING CONNECTORS SHALL BE DRIVEN SO THAT THEIR HEAD OR CROWN IS FLUSH WITH THE SURFACE OF THE SHEATHING.
2304.10.4 JOIST HANGERS AND FRAMING ANCHORS. CONNECTIONS DEPENDING ON JOIST HANGERS OR FRAMING ANCHORS, TIES AND OTHER MECHANICAL FASTENINGS, NOT OTHERWISE COVERED, ARE PERMITTED WHERE APPROVED. THE VERTICAL LOAD-BEARING CAPACITY, TORSIONAL MOMENT CAPACITY, AND DEFLECTION CHARACTERISTICS OF JOIST HANGERS SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D7147.
2304.10.5 OTHER FASTENERS. CLIPS, STAPLES, GLUES, AND OTHER APPROVED METHODS OF FASTENING ARE PERMITTED WERE APPROVED.
2304.10.6 FASTENERS AND CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED AND FIRE-RETARDANT-TREATED WOOD. FASTENERS, INCLUDING NUTS AND WASHERS, AND CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED AND FIRE-RETARDANT-TREATED WOOD SHALL BE IN ACCORDANCE WITH SECTIONS TO 304.10.6.1 THROUGH 2304.10.6.4. THE COATING WEIGHT FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A153. STAINLESS STEEL DRIVEN FASTENERS SHALL BE IN ACCORDANCE WITH THE MATERIAL REQUIREMENTS OF ASTM F1667.

TABLE 2304.10.2 FASTENING SCHEDULE (THE FOLLOWING ARE MINIMUM REQUIREMENTS UNO)

ROOF		
1. BLOCKING BETWEEN CEILING JOISTS RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	(4) 8D BOX (2-1/2Ó X 0.13Ó) OR (3) 8D COMMON (2-1/2Ó X 0.13Ó) OR (3) 10D BOX (3Ó X 0.18Ó) OR (3) 3Ó X 0.13Ó NAILS OR (3) 3Ó-4 GAUGE STAPLES 7/16Ó CROWN	EACH END TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE TO RAFTER OR TRUSS	(2) 8D COMMON (2-1/2Ó X 0.13Ó) (3) 3Ó X 0.13Ó NAILS (3) 3Ó-4 GAUGE STAPLES	EACH END TOENAIL
	(2) 16D COMMON (3-1/2Ó X 0.162Ó) (3) 3Ó X 0.13Ó NAILS	END NAIL
FLAT BLOCKING TO TRUSS AND WEB FILLER	16D COMMON (3-1/2Ó X 0.162Ó) @ 6Ó OC 3Ó X 0.13Ó NAILS @ 6Ó OC 3Ó X 14GAUGE STAPLES @ 6Ó OC	FACE NAIL
2. CEILING JOISTS TO TOP PLATE	(4) 8D BOX (2-1/2Ó X 0.13Ó) OR (3) 8D COMMON (2-1/2Ó X 0.13Ó) OR (3) 10D BOX (3Ó X 0.18Ó) OR (3) 3Ó X 0.13Ó NAILS OR (3) 3Ó-4 GAUGE STAPLES 7/16Ó CROWN	EACH JOIST TOENAIL
3. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITION (NO THRUST) SEE SECTION 2308.7.3.1 TABLE 2308.7.3.1	(3) 16D COMMON (3-1/2Ó X 0.162Ó) OR (4) 10D BOX (3Ó X 0.18Ó) OR (4) 3Ó X 0.13Ó NAILS OR (4) 3Ó-4 GAUGE STAPLES 7/16Ó CROWN	FACE NAIL
4. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT) SEE SECTION 2308.7.3.1 TABLE 2308.7.3.1	PER TABLE 2308.7.3.1	FACE NAIL
5. COLLAR TIE TO RAFTER	(3) 10D COMMON (3-1/2Ó X 0.18Ó) OR (4) 10D BOX (3Ó X 0.18Ó) OR (4) 3Ó X 0.13Ó NAILS OR (4) 3Ó-4 GAUGE STAPLES 7/16Ó CROWN	FACE NAIL
6. RAFTER OR ROOF TRUSS TO TOP PLATE SEE SECTION 2308.7.5 TABLE 2308.7.5	(3) 10D COMMON (3Ó X 0.18Ó) OR (3) 16D BOX (3-1/2Ó X 0.135Ó) OR (4) 10D BOX (3Ó X 0.18Ó) OR (4) 3Ó X 0.13Ó NAILS (4) 3Ó-4 GAUGE STAPLES 7/16Ó CROWN	(2) TOENAILS ON ONE SIDE AND 1 TOENAIL ON OPPOSITE SIDE OF RAFTER OR TRUSS
7. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS OR ROOF RAFTER TO 2 INCH RIDGE BEAM	(2) 16D COMMON (3-1/2Ó X 0.162Ó) OR (3) 16D BOX (3-1/2Ó X 0.135Ó) OR (3) 10D BOX (3-1/2Ó X 0.128Ó) OR (3) 3Ó X 0.13Ó NAILS OR (3) 3Ó-4 GAUGE STAPLES 7/16Ó CROWN	END NAIL
	(3) 10D COMMON (3-1/2Ó X 0.148Ó) OR (4) 16D BOX (3-1/2Ó X 0.135Ó) OR (4) 10D BOX (3-1/2Ó X 0.128Ó) OR (4) 3Ó X 0.131Ó NAILS OR (4) 3Ó-4 GAUGE STAPLES 7/16Ó CROWN	TOENAIL
Wall		
8. STUD TO STUD (NOT AT BRACED WALL PANELS)	16D COMMON (3-1/2Ó X 0.162Ó)	24Ó OC FACE NAIL
	10D BOX (3-1/2Ó X 0.128Ó) OR 3Ó X 0.131Ó NAILS OR 3Ó-4 GAUGE STAPLES 7/16Ó CROWN	16Ó OC FACE NAIL
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (@ BRACED WALL PANELS)	16D BOX (3-1/2Ó X 0.135Ó) OR 3Ó X 0.131Ó NAILS OR (3) 3Ó-4 GAUGE STAPLES 7/16Ó CROWN	12Ó OC FACE NAIL
	16D BOX	12Ó OC FACE NAIL
	(3) 3Ó X 0.131Ó NAILS	12Ó OC FACE NAIL
10. BUILT-UP HEADER (2Ó TO 2Ó HEADER)	16D COMMON (3-1/2Ó X 0.162Ó)	16Ó OC EACH EDGE FACE NAIL
	16D BOX (3-1/2Ó X 0.135Ó)	12Ó OC EACH EDGE FACE NAIL
11. CONTINUOUS HEADER TO STUD	(4) 8D COMMON (2-1/2Ó X 0.131Ó) OR (4) 10D BOX (3Ó X 0.128Ó) OR (5) 8D BOX (2-1/2Ó X 0.113Ó)	TOENAIL
12. TOP PLATE TO TOP PLATE	16D COMMON (3-1/2Ó X 0.162Ó)	16Ó OC FACE NAIL
	10D BOX (3Ó X 0.128Ó) OR 3Ó X 0.131Ó NAILS OR 3Ó X 4 GAUGE STAPLES 7/16Ó CROWN	12Ó OC FACE NAIL
13. TOP PLATE TO TOP PLATE AT END JOINTS	(8) 16D COMMON (3-1/2Ó X 0.162Ó) OR (12) 16D BOX (3-1/2Ó X 0.135Ó) (12) 10D BOX (3Ó X 0.128Ó) OR (12) 3Ó X 0.131Ó NAILS OR (12) 3Ó 4 GAUGE STAPLES 7/16Ó CROWN	EACH SIDE OF END JOINT FACE NAIL (MINIMUM 24Ó LAP SPLICE LENGTH EACH SIDE OF END JOINT)
14. BOTTOM PLATE TO JOIST RIM JOIST BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16D COMMON (3-1/2Ó X 0.162Ó)	16Ó OC FACE NAIL
	16D BOX (3-1/2Ó X 0.135Ó) OR 3Ó X 0.131Ó NAILS OR 3Ó 4 GAUGE STAPLES 7/16Ó CROWN	12Ó OC FACE NAIL
15. BOTTOM PLATE TO JOIST RIM JOIST BAND JOIST OR BLOCKING AT BRACED WALL PANELS	(2) 16D COMMON (3-1/2Ó X 0.162Ó) OR (3) 16D BOX (3-1/2Ó X 0.135Ó) OR (4) 3Ó X 0.131Ó NAILS OR (4) 3Ó 4 GAUGE STAPLES 7/16Ó CROWN	16Ó OC FACE NAIL
16. STUD TO TOP PLATE OR BOTTOM PLATE	(3) 16D BOX (3-1/2Ó X 0.135Ó) (4) 8D COMMON (2-1/2Ó X 0.131Ó) OR (4) 10D BOX (3Ó X 0.128Ó) OR (4) 3Ó X 0.131Ó NAILS OR (4) 3Ó 4 GAUGE STAPLES 7/16Ó CROWN	TOENAIL
	(2) 16D COMMON (3-1/2Ó X 0.162Ó) OR (3) 16D BOX (3-1/2Ó X 0.135Ó) OR (3) 3Ó X 0.131Ó NAILS OR (3) 3Ó 4 GAUGE STAPLES 7/16Ó CROWN	END NAIL
17. TOP PLATES LAPS AT CORNERS AND INTERSECTIONS	(2) 16D COMMON (3-1/2Ó X 0.162Ó) OR (3) 10D BOX (3-1/2Ó X 0.128Ó) OR (3) 3Ó X 0.131Ó NAILS OR (3) 3Ó 4 GAUGE STAPLES 7/16Ó CROWN	FACE NAIL
18. 1Ó BRACE TO EACH STUD AND PLATE	(3) 8D BOX (2-1/2Ó X 0.113Ó) OR (2) 8D COMMON (2-1/2Ó X 0.131Ó) OR (2) 10D BOX (3Ó X 0.128Ó) OR (2) 3Ó X 0.131Ó NAILS OR (2) 3Ó 4 GAUGE STAPLES 7/16Ó CROWN	FACE NAIL
19. 1Ó X 6Ó SHEATHING TO EACH BEARING	(3) 8D BOX (2-1/2Ó X 0.113Ó) OR (2) 8D COMMON (2-1/2Ó X 0.131Ó) OR (2) 10D BOX (3Ó X 0.128Ó) OR (2) 1-3/4Ó 16 GAUGE STAPLES 1Ó CROWN	FACE NAIL
20. 1Ó X 8Ó AND WIDER SHEATHING TO EACH BEARING	(3) 8D BOX (2-1/2Ó X 0.113Ó) OR (3) 8D COMMON (2-1/2Ó X 0.131Ó) OR (3) 10D BOX (3Ó X 0.128Ó) OR (3) 1-3/4Ó 16 GAUGE STAPLES 1Ó CROWN	FACE NAIL
	WIDER THAN 1Ó X 8Ó (4) 8D BOX (2-1/2Ó X 0.113Ó) OR (3) 8D COMMON (2-1/2Ó X 0.131Ó) OR (3) 10D BOX (3Ó X 0.128Ó) OR (4) 1-3/4Ó 16 GAUGE STAPLES 1Ó CROWN	
FLOOR		
21. JOIST TO SILL TOP PLATE OR GIRDER	(4) 8D BOX (2-1/2Ó X 0.113Ó) OR (3) 8D COMMON (2-1/2Ó X 0.131Ó) OR (3) 10D BOX (3Ó X 0.128Ó) OR (3) 3Ó X 0.131Ó NAILS OR (3) 3Ó 4 GAUGE STAPLES 7/16Ó CROWN	TOENAIL
22. RIM JOIST BAND JOIST OR BLOCKING TO TOP PLATE SILL OR OTHER FRAMING BELOW	8D BOX (2-1/2Ó X 0.113Ó)	4Ó OC TOENAIL
	8D COMMON (2-1/2Ó X 0.131Ó) OR 10D BOX (3Ó X 0.128Ó) OR 3Ó X 0.131Ó NAILS OR 3Ó 4 GAUGE STAPLES 7/16Ó CROWN	6Ó OC TOENAIL
23. 1Ó X 6Ó SUBFLOOR OR LESS TO EACH JOIST	(3) 8D BOX (2-1/2Ó X 0.113Ó) OR (2) 8D COMMON (2-1/2Ó X 0.131Ó) OR (3) 10D BOX (3Ó X 0.128Ó) OR (3) 3Ó X 0.131Ó NAILS OR (2) 1-3/4Ó 16 GAUGE STAPLES 1Ó CROWN	FACE NAIL
24. 2Ó SUBFLOOR TO JOIST OR GIRDER	(3) 16D BOX (3-1/2Ó X 0.135Ó) OR (2) 16D COMMON (3-1/2Ó X 0.162Ó)	EACH BEARING FACE NAIL
25. 2Ó PLANKS (PLANK & BEAM - FLOOR & ROOF)	(3) 16D BOX (3-1/2Ó X 0.135Ó) OR (2) 16D COMMON (3-1/2Ó X 0.162Ó)	EACH BEARING FACE NAIL
26. BUILT-UP GIRDERS & BEAMS, 2Ó LUMBER LAYERS	20D COMMON (4Ó X 0.192Ó)	32Ó OC FACE NAIL @ T&B STAGGERED ON OPPOSITE SIDES
	10D BOX (3Ó X 0.128Ó) OR 3Ó X 0.131Ó NAILS OR 3Ó X 4 GAUGE STAPLES 7/16Ó CROWN	24Ó OC FACE NAIL @ T&B STAGGERED ON OPPOSITE SIDES
	AND (2) 20D COMMON (4Ó X 0.192Ó) OR (3) 10D BOX (3Ó X 0.128Ó) OR (3) 3Ó X 0.131Ó NAILS OR 3Ó X 4 GAUGE STAPLES 7/16Ó CROWN	ENDS AND @ EACH SPLICE FACE NAIL
27. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	(3) 16D COMMON (3-1/2Ó X 0.162Ó) OR (4) 16D BOX (3-1/2Ó X 0.135Ó) OR (4) 10D BOX (3Ó X 0.128Ó) OR (4) 3Ó X 0.131Ó NAILS OR (4) 3Ó X 4 GAUGE STAPLES 7/16Ó CROWN	EACH JOIST OR RAFTER FACE NAIL
28. JOIST TO BAND JOIST OR RIM JOIST	(3) 16D COMMON (3-1/2Ó X 0.162Ó) OR (4) 10D BOX (3Ó X 0.128Ó) OR (4) 3Ó X 0.131Ó NAILS OR (4) 3Ó X 4 GAUGE STAPLES 7/16Ó CROWN	END NAIL
29. BRIDGING OR BLOCKING TO JOIST RAFTER OR TRUSS	(2) 8D COMMON (2-1/2Ó X 0.131Ó) OR (2) 10D BOX (3Ó X 0.128Ó) OR (2) 3Ó X 0.131Ó NAILS OR (2) 3Ó 4 GAUGE STAPLES 7/16Ó CROWN	EACH END TOENAIL
WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF & INTERIOR WALL SHEATHING TO FRAMING. (UNLESS OTHERWISE SPECIFIED ON SHEAR WALL SCHEDULE OR PLANS) (A)		
	6D COMMON OR DEFORMED (2Ó X 0.113Ó) OR 2-3/8Ó X 0.113Ó NAIL (SUBFLOOR & WALL)	6Ó OC EDGE 12Ó OC FIELD

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DRAWN BY:	MAR

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30. 3/8Ó - /2Ó	8D BOX OR DEFORMED (2-1/2Ó X 0131Ó X 0281 HEAD (ROOF) OR RSRS-01 (2-3 8Ó X 0113Ó) NAIL (ROOF)	6Ó EDGE 12Ó FIELD
	1-3/4Ó 6 GAUGE 7/16Ó CROWN (SUBFLOOR & WALL)	4Ó EDGE 8Ó FIELD
	2-3/8Ó X 0266Ó HEAD NAIL (ROOF)	3Ó EDGE 3Ó FIELD
	1-3/4Ó 6 GAUGE 7/16Ó CROWN (ROOF)	3Ó EDGE 3Ó FIELD
31 19/32Ó - 3/4Ó	8D COMMON (2-1/2Ó X 0131Ó) OR DEFORMED (2Ó X 0.113Ó) (SUBFLOOR & WALL)	6Ó EDGE 12Ó FIELD
	8D COMMON OR DEFORMED (2-1/2Ó X 0131Ó X 0281Ó HEAD (ROOF) OR RSRS-01 (2-3/8Ó X 0113Ó) NAIL (ROOF)	4Ó EDGE 6Ó FIELD
	2-3/8Ó X 0113Ó X 0266Ó HEAD NAIL OR 2Ó 6 GAUGE STAPLE 7/16Ó CROWN	4Ó EDGE 8Ó FIELD
32 7/8Ó - -1/4Ó	10D COMMON (3Ó X 0148Ó) OR DEFORMED (2-1/2Ó X 0.131Ó X 0281Ó HEAD)	6Ó EDGE 12Ó FIELD

(a) *NAILS SPACED AT 6 INCHES AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING. UNLESS OTHERWISE PROHIBITED BY THE STRUCTURAL ENGINEER OF RECORD, SEE SPECIFIC SHEAR WALL SCHEDULE NOTES.*

2304.10.6.1 FASTENERS AND CONNECTORS FOR PRESERVATIVE-TREATED WOOD. FASTENERS, INCLUDING NUTS AND WASHERS, IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. FASTENERS OTHER THAN NAILS, TIMBER RIVETS, WOOD SCREWS AND LAG SCREWS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC- COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B695, CLASS 55 MINIMUM. CONNECTORS THAT ARE USED IN EXTERIOR APPLICATIONS AND IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL HAVE COATING TYPES AND WEIGHTS IN ACCORDANCE WITH THE TREATED WOOD OR CONNECTOR MANUFACTURERÕS RECOMMENDATIONS. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS, A MINIMUM OF ASTM A653, TYPE G185 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED.

EXCEPTION: PLAIN CARBON STEEL FASTENERS, INCLUDING NUTS AND WASHERS, IN SBX/DOT AND ZINC BORATE PRESERVATIVE-TREATED WOOD IN AN INTERIOR, DRY ENVIRONMENT SHALL BE PERMITTED.

2304.10.6.2 FASTENINGS FOR WOOD FOUNDATIONS. FASTENINGS, INCLUDING NUTS AND WASHERS, FOR WOOD FOUNDATIONS SHALL BE AS REQUIRED IN AWC PWF.

2304.10.6.3 FASTENERS FOR FIRE-RETARDANT-TREATED WOOD USED IN EXTERIOR APPLICATIONS OR WET OR DAMP LOCATIONS. FASTENERS, INCLUDING NUTS AND WASHERS, FOR FIRE-RETARDANT-TREATED WOOD USED IN EXTERIOR APPLICATIONS OR WET OR DAMP LOCATIONS SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. FASTENERS OTHER THAN NAILS, TIMBER RIVETS, WOOD SCREWS AND LAG SCREWS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B695, CLASS 55 MINIMUM.

2304.10.6.4 FASTENERS FOR FIRE-RETARDANT-TREATED WOOD USED IN INTERIOR APPLICATIONS. FASTENERS, INCLUDING NUTS AND WASHERS, FOR FIRE-RETARDANT-TREATED WOOD USED IN INTERIOR LOCATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURERÕS RECOMMENDATIONS. IN THE ABSENCE OF MANUFACTURERÕS RECOMMENDATIONS, SECTION 2304.10.5.3 SHALL APPLY.

2304.10.7 LOAD PATH. WHERE WALL FRAMING MEMBERS ARE NOT CONTINUOUS FROM THE FOUNDATION SILL TO THE ROOF, THE MEMBERS SHALL BE SECURED TO ENSURE A CONTINUOUS LOAD PATH. WHERE REQUIRED, SHEET METAL CLAMPS, TIES OR CLIPS SHALL BE FORMED OF GALVANIZED STEEL OR OTHER APPROVED CORROSION-RESISTANT MATERIAL NOT LESS THAN 0.0329-INCH (0.836 MM) BASE METAL THICKNESS.

2304.10.8 FRAMING REQUIREMENTS. WOOD COLUMNS AND POSTS SHALL BE FRAMED TO PROVIDE FULL END BEARING. ALTERNATIVELY, COLUMN-AND-POST END CONNECTIONS SHALL BE DESIGNED TO RESIST THE FULL COMPRESSIVE LOADS, NEGLECTING END-BEARING CAPACITY. COLUMN-AND-POST END CONNECTIONS SHALL BE FASTENED TO RESIST LATERAL AND NET INDUCED UPLIFT FORCES.

2304.12 PROTECTION AGAINST DECAY AND TERMITES. WOOD SHALL BE PROTECTED FROM DECAY AND TERMITES IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTIONS 2304.12.1 THROUGH 2304.12.7.

2304.12.1 LOCATIONS REQUIRING WATER-BORNE PRESERVATIVES OR NATURALLY DURABLE WOOD. WOOD USED ABOVE GROUND IN THE LOCATIONS SPECIFIED IN SECTIONS 2304.12.1.1 THROUGH 2304.12.1.5, 2304.12.3 AND 2304.12.5 SHALL BE NATURALLY DURABLE WOOD OR PRESERVATIVE-TREATED WOOD USING WATER-BORNE PRESERVATIVES, IN ACCORDANCE WITH AWPA U FOR ABOVE-GROUND USE.

2304.12.1.1 JOISTS, GIRDERS AND SUBFLOOR. WOOD JOISTS OR WOOD STRUCTURAL FLOORS THAT ARE CLOSER THAN 18 INCHES (457 MM) OR WOOD GIRDERS THAT ARE CLOSER THAN 12 INCHES (305 MM) TO THE EXPOSED GROUND IN CRAWL SPACES OR UN-EXCAVATED AREAS LOCATED WITHIN THE PERIMETER OF THE BUILDING FOUNDATION SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.

2304.12.1.2 WOOD SUPPORTED BY EXTERIOR FOUNDATION WALLS. WOOD FRAMING MEMBERS, INCLUDING WOOD SHEATHING, THAT ARE IN CONTACT WITH EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8 INCHES (203 MM) FROM EXPOSED EARTH SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.

EXCEPTION: [DSA SS AND OSHPD 1 2 & 4] AT EXTERIOR WALLS WHERE THE EARTH IS PAVED WITH AN ASPHALT OR CONCRETE SLAB AT LEAST 18 INCHES (457 MM) WIDE AND DRAINING AWAY FROM THE BUILDING, THE BOTTOM OF SILLS ARE PERMITTED TO BE 6 INCHES (152 MM) ABOVE THE TOP OF SUCH SLAB. OTHER EQUIVALENT MEANS OF TERMITE AND DECAY PROTECTION MAY BE ACCEPTED BY THE ENFORCEMENT AGENCY.

2304.12.1.3 EXTERIOR WALLS BELOW GRADE. WOOD FRAMING MEMBERS AND FURRING STRIPS IN DIRECT CONTACT WITH THE INTERIOR OF EXTERIOR MASONRY OR CONCRETE WALLS BELOW GRADE SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.

2304.12.1.4 SLEEPERS AND SILLS. SLEEPERS AND SILLS ON A CONCRETE OR MASONRY SLAB THAT IS IN DIRECT CONTACT WITH EARTH SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE- TREATED WOOD.

2304.12.1.4.1 ADDITIONAL REQUIREMENTS. [DSA-SS AND OSHPD 1, 2 & 4] STUD WALLS OR PARTITIONS AT SHOWER OR TOILET ROOMS WITH MORE THAN TWO PLUMBING FIXTURES, EXCLUDING FLOOR DRAINS, AND STUD WALLS ADJACENT TO UNROOFED PAVED AREAS SHALL REST ON A CONCRETE CURB EXTENDING AT LEAST 6 INCHES (152 MM) ABOVE FINISHED FLOOR OR PAVEMENT LEVEL.

2304.12.1.5 WOOD SIDING. CLEARANCE BETWEEN WOOD SIDING AND EARTH ON THE EXTERIOR OF A BUILDING SHALL NOT BE LESS THAN 6 INCHES (152 MM) OR LESS THAN 2 INCHES (51 MM) VERTICAL FROM CONCRETE STEPS, PORCH SLABS, PATIO SLABS AND SIMILAR HORIZONTAL SURFACES EXPOSED TO THE WEATHER EXCEPT WHERE SIDING, SHEATHING AND WALL FRAMING ARE OF NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.

2304.12.2 OTHER LOCATIONS. WOOD USED IN THE LOCATIONS SPECIFIED IN SECTIONS 2304.12.2.1 THROUGH 2304.12.2.8 SHALL BE NATURALLY DURABLE WOOD OR PRESERVATIVE-TREATED WOOD IN ACCORDANCE WITH AWPA U1. PRESERVATIVE-TREATED WOOD USED IN INTERIOR LOCATIONS SHALL BE PROTECTED WITH TWO COATS OF URETHANE, SHELLAC, LATEX EPOXY OR VARNISH UNLESS WATER-BORNE PRESERVATIVES ARE USED. PRIOR TO APPLICATION OF THE PROTECTIVE FINISH, THE WOOD SHALL BE DRIED IN ACCORDANCE WITH THE MANUFACTURERÕS RECOMMENDATIONS.

2304.12.2.1 GIRDER ENDS. THE ENDS OF WOOD GIRDERS ENTERING EXTERIOR MASONRY OR CONCRETE WALLS SHALL BE PROVIDED WITH A 1/2 INCH (12.7 MM) AIRSPACE ON TOP, SIDES AND END, UNLESS NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD IS USED.

2304.12.2.2 POSTS OR COLUMNS. POSTS OR COLUMNS SUP- PORTING PERMANENT STRUCTURES AND SUPPORTED BY A CONCRETE OR MASONRY SLAB OR FOOTING THAT IS IN DIRECT CONTACT WITH THE EARTH SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.

EXCEPTION: POSTS OR COLUMNS THAT ARE NOT EXPOSED TO THE WEATHER, ARE SUPPORTED BY CONCRETE PIERS OR METAL PEDESTALS PROJECTED AT LEAST 1 INCH (25 MM) ABOVE THE SLAB OR DECK AND 8 INCHES (152 MM) ABOVE EXPOSED EARTH AND ARE SEPARATED BY AN IMPERVIOUS MOISTURE BARRIER.

2304.12.2.3 SUPPORTING MEMBER FOR PERMANENT APPURTENANCES. NATURALLY DURABLE OR PRESERVATIVE- TREATED WOOD SHALL BE UTILIZED FOR THOSE PORTIONS OF WOOD MEMBERS THAT FORM THE STRUCTURAL SUPPORTS OF BUILDINGS, BALCONIES, PORCHES OR SIMILAR PERMANENT BUILDING APPURTENANCES WHERE SUCH MEMBERS ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE PROTECTION FROM A ROOF, EAVE, OVERHANG OR OTHER COVERING TO PREVENT MOISTURE OR WATER ACCUMULATION ON THE SURFACE OR AT JOINTS BETWEEN MEMBERS.

EXCEPTION: SAWN LUMBER IN BUILDINGS LOCATED IN A GEOGRAPHICAL REGION WHERE EXPERIENCE HAS DEMONSTRATED THAT CLIMATIC CONDITIONS PRECLUDE THE NEED TO USE DURABLE MATERIALS WHERE THE STRUCTURE IS EXPOSED TO THE WEATHER.

2304.12.2.4 SUPPORTING MEMBERS FOR PERMEABLE FLOORS AND ROOFS. WOOD STRUCTURAL MEMBERS THAT SUPPORT MOISTURE-PERMEABLE FLOORS OR ROOFS THAT ARE EXPOSED TO THE WEATHER, SUCH AS CONCRETE OR MASONRY SLABS, SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE- TREATED WOOD UNLESS SEPARATED FROM SUCH FLOORS OR ROOFS BY AN IMPERVIOUS MOISTURE BARRIER.

2304.12.2.5 VENTILATION BENEATH BALCONY OR ELEVATED WALKING SURFACE. ENCLOSED FRAMING IN EXTERIOR BALCONIES AND ELEVATED WALKING SURFACES THAT HAVE WEATHER EXPOSED SURFACES SHALL BE PROVIDED WITH OPENINGS THAT PROVIDE A NET FREE CROSS VENTILATION AREA NOT LESS THAN 1/150 OF THE AREA OF EACH SEPARATE SPACE.

2304.12.2.6 WOOD IN CONTACT WITH THE GROUND OR FRESH WATER. WOOD USED IN CONTACT WITH EXPOSED EARTH SHALL BE NATURALLY DURABLE FOR BOTH DECAY AND TERMITE RESISTANCE OR PRESERVATIVE TREATED IN ACCORDANCE WITH AWPA U1 FOR SOIL OR FRESH WATER USE.

EXCEPTION: UNTREATED WOOD IS PERMITTED WHERE SUCH WOOD IS CONTINUOUSLY AND ENTIRELY BELOW THE GROUND-WATER LEVEL OR SUBMERGED IN FRESH WATER.

2304.12.2.6.1 POSTS OR COLUMNS. POSTS AND COLUMNS THAT ARE SUPPORTING PERMANENT STRUCTURES AND EMBEDDED IN CONCRETE THAT IS EXPOSED TO THE WEATHER OR IN DIRECT CONTACT WITH THE EARTH SHALL BE OF PRESERVATIVE-TREATED WOOD.

2304.12.2.7 TERMITE PROTECTION. IN GEOGRAPHICAL AREAS WHERE HAZARD OF TERMITE DAMAGE IS KNOWN TO BE VERY HEAVY, WOOD FLOOR FRAMING IN THE LOCATIONS SPECIFIED IN SECTION 2304.12.2.1 AND EXPOSED FRAMING OF EXTERIOR DECKS OR BALCONIES SHALL BE OF NATURALLY DURABLE SPECIES (TERMITE RESISTANT) OR PRESERVATIVE TREATED IN ACCORDANCE WITH AWPA U1 FOR THE SPECIES, PRODUCT PRESERVATIVE AND END USE OR PROVIDED WITH APPROVED METHODS OF TERMITE PROTECTION.

2304.12.2.8 WOOD USED IN RETAINING WALLS AND CRIBS. WOOD INSTALLED IN RETAINING OR CRIB WALLS SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH AWPA U1 FOR SOIL AND FRESH WATER USE.

2304.12.3 ATTIC VENTILATION. FOR ATTIC VENTILATION, SEE SECTION 1202.2.2.

2304.12.4 UNDER-FLOOR VENTILATION (CRAWL SPACE). FOR UNDER-FLOOR VENTILATION (CRAWL SPACE), SEE SECTION 1202.4.

SECTION 2305: GENERAL DESIGN REQUIREMENTS FOR LATERAL FORCE-RESISTING SYSTEMS

2305.1 GENERAL. STRUCTURES USING WOOD-FRAME SHEAR WALLS OR WOOD-FRAME DIAPHRAGMS TO RESIST WIND, SEISMIC OR OTHER LATERAL LOADS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AF&PA SDPWS AND THE APPLICABLE PROVISIONS OF SECTIONS 2305, 2306 AND 2307.

2305.1.1 OPENINGS IN SHEAR PANELS. OPENINGS IN SHEAR PANELS THAT MATERIALLY AFFECT THEIR STRENGTH SHALL BE DETAILED ON THE PLANS, AND SHALL HAVE THEIR EDGES ADEQUATELY REINFORCED TO TRANSFER ALL SHEARING STRESSES.

2305.2 DIAPHRAGM DEFLECTION. THE DEFLECTION OF WOOD-FRAME DIAPHRAGMS SHALL BE DETERMINED IN ACCORDANCE WITH AF&PA SDPWS. THE DEFLECTION OF A BLOCKED WOOD STRUCTURAL PANEL DIAPHRAGM UNIFORMLY FASTENED THROUGHOUT WITH STAPLES IS PERMITTED TO BE CALCULATED IN ACCORDANCE WITH EQUATION 23-1. IF NOT UNIFORMLY FASTENED, THE CONSTANT 0.188 (FOR SI: 1/1627) IN THE THIRD TERM SHALL BE MODIFIED BY AN APPROVED METHOD.

SECTION 2306: ALLOWABLE STRESS DESIGN

2306.1 ALLOWABLE STRESS DESIGN. THE DESIGN AND CONSTRUCTION OF WOOD ELEMENTS IN STRUCTURES USING ALLOWABLE STRESS DESIGN SHALL BE IN ACCORDANCE WITH THE APPLICABLE STANDARDS OUTLINED IN THIS SECTION:

SECTION 2307: LOAD AND RESISTANCE FACTOR DESIGN

2307.1 LOAD AND RESISTANCE FACTOR DESIGN. THE DESIGN AND CONSTRUCTION OF WOOD ELEMENTS AND STRUCTURES USING LOAD AND RESISTANCE FACTOR DESIGN SHALL BE IN ACCORDANCE WITH AWC NDS AND AWC SDPWS.

SECTION 2308: CONVENTIONAL LIGHT-FRAME CONSTRUCTION

2308.1 GENERAL. THE REQUIREMENTS OF THIS SECTION ARE INTENDED FOR CONVENTIONAL LIGHT-FRAME CONSTRUCTION. OTHER CONSTRUCTION METHODS ARE PERMITTED TO BE USED, PROVIDED A SATISFACTORY DESIGN IS SUBMITTED SHOWING COMPLIANCE WITH OTHER PROVISIONS OF THIS CODE. INTERIOR NON LOAD-BEARING PARTITIONS, CEILINGS AND CURTAIN WALLS OF CONVENTIONAL LIGHT-FRAME CONSTRUCTION ARE NOT SUBJECT TO THE LIMITATIONS OF SECTION 2308.2.

2308.1.1 PORTIONS EXCEEDING LIMITATIONS OF CONVENTIONAL LIGHT-FRAME CONSTRUCTION. WHEN PORTIONS OF A BUILDING OF OTHERWISE CONVENTIONAL LIGHT-FRAME CONSTRUCTION EXCEED THE LIMITS OF SECTION 2308.2, THOSE PORTIONS AND THE SUP-PORTING LOAD PATH SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE AND THE PROVISIONS OF THIS CODE. FOR THE PURPOSES OF THIS SECTION, THE TERM ÒPORTIONSÓ SHALL MEAN PARTS OF BUILDINGS CONTAINING VOLUME AND AREA SUCH AS A ROOM OR A SERIES OF ROOMS. THE EXTENT OF SUCH DESIGN NEED ONLY DEMONSTRATE COMPLIANCE OF THE NON-CONVENTIONAL LIGHT-FRAMED ELEMENTS WITH OTHER APPLICABLE PROVISIONS OF THIS CODE AND SHALL BE COMPATIBLE WITH THE PERFORMANCE OF THE CONVENTIONAL LIGHT-FRAMED SYSTEM.

2308.1.2 CONNECTIONS AND FASTENERS. CONNECTORS AND FASTENERS USED IN CONVENTIONAL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 2304.10.

2308.2 LIMITATIONS. BUILDINGS ARE PERMITTED TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF CONVENTIONAL LIGHT-FRAME CONSTRUCTION, SUBJECT TO THE LIMITATIONS IN SECTIONS 2308.2.1 THROUGH 2308.2.6.

2308.3 FOUNDATIONS AND FOOTINGS. FOUNDATIONS AND FOOTINGS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH CHAPTER 18. CONNECTIONS TO FOUNDATIONS AND FOOTINGS SHALL COMPLY WITH THIS SECTION.

2308.3.1 FOUNDATION PLATES OR SILLS. FOUNDATION PLATES OR SILLS RESTING ON CONCRETE OR MASONRY FOUNDATIONS SHALL COMPLY WITH SECTION 2304.3.1. FOUNDATION PLATES OR SILLS SHALL BE BOLTED OR ANCHORED TO THE FOUNDATION WITH NOT LESS THAN 1/2 INCH-DIAMETER (12.7 MM) STEEL BOLTS OR APPROVED ANCHORS SPACED TO PROVIDE EQUIVALENT ANCHORAGE AS THE STEEL BOLTS. BOLTS SHALL BE EMBEDDED AT LEAST 7 INCHES (178 MM) INTO CONCRETE OR MASONRY. BOLTS SHALL BE SPACED NOT MORE THAN 6 FEET (1829 MM) ON CENTER AND THERE SHALL BE NOT LESS THAN TWO BOLTS OR ANCHOR STRAPS PER PIECE WITH ONE BOLT OR ANCHOR STRAP LOCATED NOT MORE THAN 12 INCHES (305 MM) OR LESS THAN 4 INCHES (102 MM) FROM EACH END OF EACH PIECE. A PROPERLY SIZED NUT AND WASHER SHALL BE TIGHTENED ON EACH BOLT TO THE PLATE.

EXCEPTIONS:

1. *ALONG BRACED WALL LINES IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY E, STEEL BOLTS WITH A MINIMUM NOMINAL DIAMETER OF 5/8 INCH (15.9 MM) OR APPROVED ANCHOR STRAPS LOAD-RATED IN ACCORDANCE WITH SECTION 2304.10.3 AND SPACED TO PROVIDE EQUIVALENT ANCHORAGE SHALL BE USED.*
2. *BOLTS IN BRACED WALL LINES IN STRUCTURES OVER TWO STORIES ABOVE GRADE SHALL BE SPACED NOT MORE THAN 4 FEET (1219 MM) ON CENTER.*

2308.3.2 BRACED WALL LINE SILL PLATE ANCHORAGE IN SEISMIC DESIGN CATEGORIES D AND E. SILL PLATES ALONG BRACED WALL LINES IN BUILDINGS ASSIGNED TO SEISMIC DESIGN CATEGORY D OR E SHALL BE ANCHORED WITH ANCHOR BOLTS WITH STEEL PLATE WASHERS BETWEEN THE FOUNDATION SILL PLATE AND THE NUT, OR APPROVED ANCHOR STRAPS LOAD-RATED IN ACCORDANCE WITH SECTION 2304.10.3. SUCH WASHERS SHALL BE A MINIMUM OF 0.229 INCH BY 3 INCHES BY 3 INCHES (5.82 MM BY 76 MM BY 76 MM) IN SIZE. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 3/16 INCH (4.76 MM) LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1-3/4 INCHES (44 MM), PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT.

2308.4 FLOOR FRAMING. FLOOR FRAMING SHALL COMPLY WITH THIS SECTION.

2308.4.1 GIRDERS. GIRDERS FOR SINGLE-STORY CONSTRUCTION OR GIRDERS SUPPORTING LOADS FROM A SINGLE FLOOR SHALL BE NOT LESS THAN 4 INCHES BY 6 INCHES (102 MM BY 152 MM) FOR SPANS 6 FEET (1829 MM) OR LESS, PROVIDED THAT GIRDERS ARE SPACED NOT MORE THAN 8 FEET (2438 MM) ON CENTER. OTHER GIRDERS SHALL BE DESIGNED TO SUPPORT THE LOADS SPECIFIED IN THIS CODE. GIRDER END JOINTS SHALL OCCUR OVER SUPPORTS. WHERE A GIRDER IS SPLICED OVER A SUPPORT, AN ADEQUATE TIE SHALL BE PROVIDED. THE ENDS OF BEAMS OR GIRDERS SUPPORTED ON MASONRY OR CONCRETE SHALL NOT HAVE LESS THAN 3 INCHES (76 MM) OF BEARING.

2308.4.1.1 ALLOWABLE GIRDER SPANS. THE ALLOWABLE SPANS OF GIRDERS THAT ARE FABRICATED OF DIMENSION LUMBER SHALL NOT EXCEED THE VALUES SET FORTH IN TABLE 2308.4.1.1(1) OR 2308.4.1.1(2).

2308.4.2 FLOOR JOISTS. FLOOR JOISTS SHALL COMPLY WITH THIS SECTION.

2308.4.2.1 SPAN. SPANS FOR FLOOR JOISTS SHALL BE IN ACCORDANCE WITH TABLE 2308.4.2.1(1) OR 2308.4.2.1(2) OR THE AWC STJR.

2308.4.2.2 BEARING. THE ENDS OF EACH JOIST SHALL HAVE NOT LESS THAN 1-1/2 INCHES (38 MM) OF BEARING ON WOOD OR METAL, OR NOT LESS THAN 3 INCHES (76 MM) ON MASONRY, EXCEPT WHERE SUPPORTED ON A 1 INCH BY 4 INCH (25 MM BY 102 MM) RIBBON STRIP AND NAILED TO THE ADJOINING STUD.

2308.4.2.3 FRAMING DETAILS. JOISTS SHALL BE SUPPORTED LATERALLY AT THE ENDS AND AT EACH SUPPORT BY SOLID BLOCKING EXCEPT WHERE THE ENDS OF THE JOISTS ARE NAILED TO A HEADER, BAND OR RIM JOIST OR TO AN ADJOINING STUD OR BY OTHER MEANS. SOLID BLOCKING SHALL BE NOT LESS THAN 2 INCHES (51 MM) IN THICKNESS AND THE FULL DEPTH OF THE JOIST. JOIST FRAMING FROM OPPOSITE SIDES OF A BEAM, GIRDER OR PARTITION SHALL BE LAPPED AT LEAST 3 INCHES (76 MM) OR THE OPPOSING JOISTS SHALL BE TIED TOGETHER IN AN APPROVED MANNER. JOISTS FRAMING INTO THE SIDE OF A WOOD GIRDER SHALL BE SUPPORTED BY FRAMING ANCHORS OR ON LEDGER STRIPS NOT LESS THAN 2 INCHES BY 2 INCHES (51 MM BY 51 MM).

2308.4.2.4 NOTCHES AND HOLES. NOTCHES ON THE ENDS OF JOISTS SHALL NOT EXCEED ONE-FOURTH THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. HOLES BORED IN JOISTS SHALL NOT BE WITHIN 2 INCHES (51 MM) OF THE TOP OR BOTTOM OF THE JOIST AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOIST.

2308.4.3 ENGINEERED WOOD PRODUCTS. ENGINEERED WOOD PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERÕS RECOMMENDATIONS. CUTS, NOTCHES AND HOLES BORED IN TRUSSES, STRUCTURAL COMPOSITE LUMBER, STRUCTURAL GLUED-LAMINATED MEMBERS OR I-JOISTS ARE NOT PERMITTED EXCEPT WHERE PERMITTED BY THE MANUFACTURERÕS RECOMMENDATIONS OR WHERE THE EFFECTS OF SUCH ALTERATIONS ARE SPECIFICALLY CONSIDERED IN THE DESIGN OF THE MEMBER BY A REGISTERED DESIGN PROFESSIONAL.

2308.4.4 FRAMING AROUND OPENINGS. TRIMMER AND HEADER JOISTS SHALL BE DOUBLED, OR OF LUMBER OF EQUIVALENT CROSS SECTION, WHERE THE SPAN OF THE HEADER EXCEEDS 4 FEET (1219 MM). THE ENDS OF HEADER JOISTS MORE THAN 6 FEET (1829 MM) IN LENGTH SHALL BE SUPPORTED BY FRAMING ANCHORS OR JOIST HANGERS UNLESS BEARING ON A BEAM, PARTITION OR WALL. TAIL JOISTS OVER 12 FEET (3658 MM) IN LENGTH SHALL BE SUP- PORTED AT THE HEADER BY FRAMING ANCHORS OR ON LEDGER STRIPS NOT LESS THAN 2 INCHES BY 2 INCHES (51 MM BY 51 MM).

2308.4.5 JOISTS SUPPORTING BEARING PARTITIONS. BEARING PARTITIONS PARALLEL TO JOISTS SHALL BE SUPPORTED ON BEAMS, GIRDERS, DOUBLED JOISTS, WALLS OR OTHER BEARING PARTITIONS. BEARING PARTITIONS PERPENDICULAR TO JOISTS SHALL NOT BE OFF- SET FROM SUPPORTING GIRDERS, WALLS OR PARTITIONS MORE THAN THE JOIST DEPTH UNLESS SUCH JOISTS ARE OF SUFFICIENT SIZE TO CARRY THE ADDITIONAL LOAD.

2308.4.6 LATERAL SUPPORT. FLOOR AND CEILING FRAMING WITH A NOMINAL DEPTH-TO-THICKNESS RATIO NOT LESS THAN 5 TO 1 SHALL HAVE ONE EDGE HELD IN LINE FOR THE ENTIRE SPAN. WHERE THE NOMINAL DEPTH-TO-THICKNESS RATIO OF THE FRAMING MEMBER EXCEEDS6TO1, THERE SHALL BE ONE LINE OF BRIDGING FOR EACH 8 FEET (2438 MM) OF SPAN, UNLESS BOTH EDGES OF THE MEMBER ARE HELD IN LINE. THE BRIDGING SHALL CONSIST OF NOT LESS THAN 1-INCH BY 3-INCH (25 MM BY 76 MM) LUMBER, DOUBLE NAILED AT EACH END, OR EQUIVALENT METAL BRACING OF EQUAL RIGIDITY, FULL-DEPTH SOLID BLOCKING OR OTHER APPROVED MEANS. A LINE OF BRIDGING SHALL ALSO BE REQUIRED AT SUPPORTS WHERE EQUIVALENT LATERAL SUPPORT IS NOT OTHERWISE PROVIDED.

2308.4.7 STRUCTURAL FLOOR SHEATHING. STRUCTURAL FLOOR SHEATHING SHALL COMPLY WITH THE PROVISIONS OF SECTION 2304.8.1.

2308.4.8 UNDER-FLOOR VENTILATION. FOR UNDER-FLOOR VENTILATION, SEE SECTION 1203.4.

2308.4.9 FLOOR FRAMING SUPPORTING BRACED WALL PANELS. WHERE BRACED WALL PANELS ARE SUPPORTED BY CANTILEVERED FLOORS OR ARE SET BACK FROM THE FLOOR JOIST SUPPORT, THE FLOOR FRAMING SHALL COMPLY WITH SECTION 2308.6.7.

2308.4.10 ANCHORAGE OF EXTERIOR MEANS OF EGRESS COMPONENTS IN SEISMIC DESIGN CATEGORIES D AND E. EXTERIOR EGRESS BALCONIES, EXTERIOR STAIRWAYS AND RAMPS AND SIMILAR MEANS OF EGRESS COMPONENTS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D OR E SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE AT NOT MORE THAN 8 FEET (2438 MM) ON CENTER OR SHALL BE DESIGNED FOR LATERAL FORCES. SUCH ATTACHMENT SHALL NOT BE ACCOMPLISHED BY USE OF TOENAILS OR NAILS SUBJECT TO WITHDRAWAL.

2308.5 WALL CONSTRUCTION. WALLS OF CONVENTIONAL LIGHT-FRAME CONSTRUCTION SHALL BE IN ACCORDANCE WITH THIS SECTION.

2308.5.1 STUD SIZE, HEIGHT AND SPACING. THE SIZE, HEIGHT AND SPACING OF STUDS SHALL BE IN ACCORDANCE WITH TABLE 2308.5.1. STUDS SHALL BE CONTINUOUS FROM A SUPPORT AT THE SOLE PLATE TO A SUPPORT AT THE TOP PLATE TO RESIST LOADS PERPENDICULAR TO THE WALL. THE SUPPORT SHALL BE A FOUNDATION OR FLOOR, CEILING OR ROOF DIAPHRAGM OR SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.

EXCEPTION: JACK STUDS, TRIMMER STUDS AND CRIPPLE STUDS AT OPENINGS IN WALLS THAT COMPLY WITH TABLE 2308.4.1.1(1) OR 2308.4.1.1(2).

2308.5.2 FRAMING DETAILS. STUDS SHALL BE PLACED WITH THEIR WIDE DIMENSION PERPENDICULAR TO THE WALL. NOT LESS THAN THREE STUDS SHALL BE INSTALLED AT EACH CORNER OF AN EXTERIOR WALL.

EXCEPTIONS:

1. *IN INTERIOR NONBEARING WALLS AND PARTITIONS, STUDS ARE PERMITTED TO BE SET WITH THE LONG DIMENSION PARALLEL TO THE WALL.*
2. *AT CORNERS, TWO STUDS ARE PERMITTED, PROVIDED THAT WOOD SPACERS OR BACKUP CLEATS OF 3/8 INCH-THICK (9.5 MM) WOOD STRUCTURAL PANEL, 3/8 INCH (9.5 MM) TYPE M "EXTERIOR GLUE" PARTICLEBOARD, 1 INCH-THICK (25 MM) LUMBER OR OTHER APPROVED DEVICES THAT WILL SERVE AS AN ADEQUATE BACKING FOR THE ATTACHMENT OF FACING MATERIALS ARE USED. WHERE FIRE-RESISTANCE RATINGS OR SHEAR VALUES ARE INVOLVED, WOOD SPACERS, BACKUP CLEATS OR OTHER DEVICES SHALL NOT BE USED UNLESS SPECIFICALLY APPROVED FOR SUCH USE.*

2308.5.3 PLATES AND SILLS. STUDS SHALL HAVE PLATES AND SILLS IN ACCORDANCE WITH THIS SECTION.

2308.5.3.1 BOTTOM PLATE OR SILL. STUDS SHALL HAVE FULL BEARING ON A PLATE OR SILL. PLATES OR SILLS SHALL BE NOT LESS THAN 2 INCHES (5 1 MM) NOMINAL IN THICKNESS AND HAVE A WIDTH NOT LESS THAN THE WIDTH OF THE WALL STUDS.

2308.5.3.2 TOP PLATES. BEARING AND EXTERIOR WALL STUDS SHALL BE CAPPED WITH DOUBLE TOP PLATES INSTALLED TO PRO-VIDE OVERLAPPING AT CORNERS AND AT INTERSECTIONS WITH OTHER PARTITIONS. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET NOT LESS THAN 48 INCHES (1219 MM), AND SHALL BE NAILED IN ACCORDANCE WITH TABLE 2304.10.1. PLATES SHALL BE A NOMINAL 2 INCHES (51 MM) IN DEPTH AND HAVE A WIDTH NOT LESS THAN THE WIDTH OF THE STUDS.

EXCEPTION: A SINGLE TOP PLATE IS PERMITTED, PROVIDED THAT THE PLATE IS ADEQUATELY TIED AT CORNERS AND INTERSECTING WALLS BY NOT LESS THAN THE EQUIVALENT OF 3- INCH BY 6-INCH (76 MM BY 152 MM) BY 0.036-INCH- THICK (0.914 MM) GALVANIZED STEEL PLATE THAT IS NAILED TO EACH WALL OR SEGMENT OF WALL BY (6) 8D [2-1/2 INCH X 0.113 INCH (64 MM X 2.87 MM)] BOX NAILS OR EQUIVALENT ON EACH SIDE OF THE JOINT. FOR THE BUTT-JOINT SPLICE BETWEEN ADJACENT SINGLE TOP PLATES, NOT LESS THAN THE EQUIVALENT OF A 3 INCH BY 12 INCH (76 MM BY 304 MM) BY 0.036-INCH-THICK (0.914 MM) GALVANIZED STEEL PLATE THAT IS NAILED TO EACH WALL OR SEGMENT OF WALL BY (12) 8D [2-1/2 INCH X 0.113 INCH (64 MM BY 2.87 MM)] BOX NAILS ON EACH SIDE OF THE JOINT SHALL BE REQUIRED, PROVIDED THAT THE RAFTERS, JOISTS OR TRUSSES ARE CENTERED OVER THE STUDS WITH A TOLERANCE OF NOT MORE THAN 1 INCH (25 MM). THE TOP PLATE SHALL NOT BE REQUIRED OVER HEADERS THAT ARE IN THE SAME PLANE AND IN LINE WITH THE UPPER SURFACE OF THE ADJACENT TOP PLATES AND ARE TIED TO ADJACENT WALL SECTIONS AS REQUIRED FOR THE BUTT JOINT SPLICE BETWEEN ADJACENT SINGLE TOP PLATES. WHERE BEARING STUDS ARE SPACED AT 24-INCH (610 MM) INTERVALS, TOP PLATES ARE LESS THAN TWO 2 INCH BY 6 INCH (51 MM BY 152 MM) OR TWO 3 INCH BY 4 INCH (76 MM BY 102 MM) MEMBERS AND THE FLOOR JOISTS, FLOOR TRUSSES OR ROOF TRUSSES THAT THEY SUPPORT ARE SPACED AT MORE THAN 16 INCH (406 MM) INTERVALS, SUCH JOISTS OR TRUSSES SHALL BEAR WITHIN 5 INCHES (127 MM) OF THE STUDS BENEATH OR A THIRD PLATE SHALL BE INSTALLED.

2308.5.4 NON LOAD-BEARING WALLS AND PARTITIONS. IN NON LOAD-BEARING WALLS AND PARTITIONS, THAT ARE NOT PART OF A BRACED WALL PANEL, STUDS SHALL BE SPACED NOT MORE THAN 24 INCHES (610 MM) ON CENTER. IN INTERIOR NON LOAD-BEARING WALLS AND PARTITIONS, STUDS ARE PERMITTED TO BE SET WITH THE LONG DIMENSION PARALLEL TO THE WALL. WHERE STUDS ARE SET WITH THE LONG DIMENSIONS PARALLEL TO THE WALL, USE OF UTILITY GRADE LUMBER OR STUDS EXCEEDING 10 FEET (3048 MM) IS NOT PERMITTED. INTERIOR NON LOAD-BEARING PARTITIONS SHALL BE CAPPED WITH NOT LESS THAN A SINGLE TOP PLATE INSTALLED TO PROVIDE OVERLAPPING AT CORNERS AND AT INTERSECTIONS WITH OTHER WALLS AND PARTITIONS. THE PLATE SHALL BE CONTINUOUSLY TIED AT JOINTS BY SOLID BLOCKING NOT LESS THAN 16 INCHES (406 MM) IN LENGTH AND EQUAL IN SIZE TO THE PLATE OR BY 1/2 INCH BY 1-1/2 INCH (12.7 MM BY 38 MM) METAL TIES WITH SPLICED SECTIONS FASTENED WITH (2) 16D NAILS ON EACH SIDE OF THE JOINT.

2308.5.5 OPENINGS IN WALLS AND PARTITIONS. OPENINGS IN EXTERIOR AND INTERIOR WALLS AND PARTITIONS SHALL COMPLY WITH SECTIONS 2308.5.5.1 THROUGH 2308.5.5.3.

2308.5.5.1 OPENINGS IN EXTERIOR BEARING WALLS. HEADERS SHALL BE PROVIDED OVER EACH OPENING IN EXTERIOR BEARING WALLS. THE SIZE AND SPANS IN TABLE 2308.4.1.1(1) ARE PERMITTED TO BE USED FOR ONE-AND TWO-FAMILY DWELLINGS. HEADERS FOR OTHER BUILDINGS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 2301.2, ITEM 1 OR 2. HEADERS SHALL BE OF TWO PIECES OF NOMINAL 2 INCH (51 MM) FRAMING LUMBER SET ON EDGE AS PERMITTED BY TABLE 2308.4.1.1(1) AND NAILED TOGETHER IN ACCORDANCE WITH TABLE 2304.10.1 OR OF SOLID LUMBER OF EQUIVALENT SIZE.

WALL STUDS SHALL SUPPORT THE ENDS OF THE HEADER IN ACCORDANCE WITH TABLE 2308.4.1.1(1). EACH END OF A LINTEL OR HEADER SHALL HAVE A BEARING LENGTH OF NOT LESS THAN 1-1/2 INCHES (38 MM) FOR THE FULL WIDTH OF THE LINTEL.

2308.5.5.2 OPENINGS IN INTERIOR BEARING PARTITIONS. HEADERS SHALL BE PROVIDED OVER EACH OPENING IN INTERIOR BEARING PARTITIONS AS REQUIRED IN SECTION 2308.5.5.1. THE SPANS IN TABLE 2308.4.1.1(2) ARE PERMITTED TO BE USED. WALL STUDS SHALL SUPPORT THE ENDS OF THE HEADER IN ACCORDANCE WITH TABLE 2308.4.1.1(1) OR 2308.4.1.1(2), AS APPLICABLE.

2308.5.5.3 OPENINGS IN INTERIOR NON-BEARING PARTITIONS. OPENINGS IN NON-BEARING PARTITIONS ARE PERMITTED TO BE FRAMED WITH SINGLE STUDS AND HEADERS. EACH END OF A LINTEL OR HEADER SHALL HAVE A BEARING LENGTH OF NOT LESS THAN 1-1/2 INCHES (38 MM) FOR THE FULL WIDTH OF THE LINTEL.

2308.5.6 CRIPPLE WALLS. FOUNDATION CRIPPLE WALLS SHALL BE FRAMED OF STUDS THAT ARE NOT LESS THAN THE SIZE OF THE STUDDING ABOVE. EXTERIOR CRIPPLE WALL STUDS SHALL BE NOT LESS THAN 14 INCHES (356 MM) IN LENGTH, OR SHALL BE FRAMED OF SOLID BLOCKING. WHERE EXCEEDING 4 FEET (1219 MM) IN HEIGHT, SUCH WALLS SHALL BE FRAMED OF STUDS HAVING THE SIZE REQUIRED FOR AN ADDITIONAL STORY. SEE SECTION 2308.6.6 FOR CRIPPLE WALL BRACING.

2308.5.7 BRIDGING. UNLESS COVERED BY INTERIOR OR EXTERIOR WALL COVERINGS OR SHEATHING MEETING THE MINIMUM REQUIREMENTS OF THIS CODE, STUD PARTITIONS OR WALLS WITH STUDS HAVING A HEIGHT-TO-LEAST-THICKNESS RATIO EXCEEDING 50 SHALL HAVE BRIDGING THAT IS NOT LESS THAN 2 INCHES (51 MM) IN THICKNESS AND OF THE SAME WIDTH AS THE STUDS FITTED SNUGLY AND NAILED THERETO TO PROVIDE ADEQUATE LATERAL SUPPORT. BRIDGING SHALL BE PLACED IN EVERY STUD CAVITY AND AT A FREQUENCY SUCH THAT NO STUD SO BRACED SHALL HAVE A HEIGHT-TO-LEAST-THICKNESS RATIO EXCEEDING 50 WITH THE HEIGHT OF THE STUD MEASURED BETWEEN HORIZONTAL FRAMING AND BRIDGING OR BETWEEN BRIDGING, WHICHEVER IS GREATER.

2308.5.8 PIPES IN WALLS. STUD PARTITIONS CONTAINING PLUMBING, HEATING OR OTHER PIPES SHALL BE FRAMED AND THE JOISTS UNDERNEATH SPACED TO PROVIDE PROPER CLEARANCE FOR THE PIPING. WHERE A PARTITION CONTAINING PIPING RUNS PARALLEL TO THE FLOOR JOISTS, THE JOISTS UNDERNEATH SUCH PARTITIONS SHALL BE DOUBLED AND SPACED TO PERMIT THE PASSAGE OF PIPES AND SHALL BE BRIDGED. WHERE PLUMBING, HEATING OR OTHER PIPES ARE PLACED IN, OR PARTLY IN, A PARTITION, NECESSITATING THE CUTTING OF THE SOLES OR PLATES, A METAL TIE NOT LESS THAN 0.058 INCH (1.47 MM) (16 GALVANIZED GAGE) AND 1-1/2 INCHES (38 MM) IN WIDTH SHALL BE FASTENED TO EACH PLATE ACROSS AND TO EACH SIDE OF THE OPENING WITH NOT LESS THAN (6) 16D NAILS.

2308.5.9 CUTTING AND NOTCHING. IN EXTERIOR WALLS AND BEARING PARTITIONS, A WOOD STUD SHALL NOT BE CUT OR NOTCHED IN EXCESS OF 25 PERCENT OF ITS DEPTH. IN NONBEARING PARTITIONS THAT DO NOT SUPPORT LOADS OTHER THAN THE WEIGHT OF THE PARTITION, A STUD SHALL NOT BE CUT OR NOTCHED IN EXCESS OF 40 PERCENT OF ITS DEPTH.

2308.5.10 BORED HOLES. THE DIAMETER OF BORED HOLES IN WOOD STUDS SHALL NOT EXCEED 40 PERCENT OF THE STUD DEPTH. THE DIAMETER OF BORED HOLES IN WOOD STUDS SHALL NOT EXCEED 60 PERCENT OF THE STUD DEPTH IN NONBEARING PARTITIONS. THE DIAMETER OF BORED HOLES IN WOOD STUDS SHALL NOT EXCEED 60 PERCENT OF THE STUD DEPTH IN ANY WALL, WHERE EACH STUD IS DOUBLED, PROVIDED THAT NOT MORE THAN TWO SUCH SUCCESSIVE DOUBLED STUDS ARE SO BORED. THE EDGE OF THE BOARD WHOLE SHALL NOT BE CLOSER THAN 5/8 INCH (15.9 MM) TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF A STUD AS A CUT OR NOTCH.

2308.5.11 EXTERIOR WALL SHEATHING. EXCEPT WHERE STUCCO CONSTRUCTION THAT COMPLIES WITH SECTION 2510 IS INSTALLED, THE OUTSIDE OF EXTERIOR WALLS, INCLUDING GABLES, OF ENCLOSED BUILDINGS SHALL BE SHEATHED WITH ONE OF THE MATERIALS OF THE NOMINAL THICKNESS SPECIFIED IN TABLE 2308.5.11 WITH FASTENERS IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 2304.10 OR FASTENERS DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. ALTERNATIVELY, SHEATHING MATERIALS AND FASTENERS COMPLYING WITH SECTION 2304.6 SHALL BE PERMITTED.

2308.6 WALL BRACING. BUILDINGS SHALL BE PROVIDED WITH EXTERIOR AND INTERIOR BRACED WALL LINES AS DESCRIBED IN SECTIONS 2308.6.1 THROUGH 2308.6.10.2.

2308.7 ROOF AND CEILING FRAMING. THE FRAMING DETAILS REQUIRED IN THIS SECTION APPLY TO ROOFS HAVING A SLOPE OF NOT LESS THAN THREE UNITS VERTICAL IN 12 UNITS HORIZONTAL (25-PERCENT SLOPE). WHERE THE ROOF SLOPE IS LESS THAN THREE UNITS VERTICAL IN 12 UNITS HORIZONTAL (25-PERCENT SLOPE), MEMBERS SUPPORTING RAFTERS AND CEILING JOISTS SUCH AS RIDGE BOARD, HIPS AND VALLEYS SHALL BE DESIGNED AS BEAMS.

2308.7.1 CEILING JOIST SPANS. SPANS FOR CEILING JOISTS SHALL BE IN ACCORDANCE WITH TABLE 2308.7.1(1) OR 2308.7.1(2). FOR OTHER GRADES AND SPECIES, AND OTHER LOADING CONDITIONS, REFER TO THE AWC STJR.

2308.7.2 RAFTER SPANS. SPANS FOR RAFTERS SHALL BE IN ACCORDANCE WITH TABLE 2308.7.2(1), 2308.7.2(2), 2308.7.2(3), 2308.7.2(4), 2308.7.2(5) OR 2308.7.2(6). FOR OTHER GRADES AND SPECIES AND OTHER LOADING CONDITIONS, REFER TO THE AWC STJR. THE SPAN OF EACH RAFTER SHALL BE MEASURED ALONG THE HORIZONTAL PROJECTION OF THE RAFTER.

2308.7.3 CEILING JOIST AND RAFTER FRAMING. RAFTERS SHALL BE FRAMED DIRECTLY OPPOSITE EACH OTHER AT THE RIDGE. THERE SHALL BE A RIDGE BOARD NOT LESS THAN 1-INCH (25 MM) NOMINAL THICKNESS AT RIDGES AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER. AT VALLEYS AND HIPS, THERE SHALL BE A SINGLE VALLEY OR HIP RAFTER NOT LESS THAN 2-INCH (5 1 MM) NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER.

2308.7.3.1 CEILING JOIST AND RAFTER CONNECTIONS. CEILING JOISTS AND RAFTERS SHALL BE NAILED TO EACH OTHER AND THE ASSEMBLY SHALL BE NAILED TO THE TOP WALL PLATE IN ACCORDANCE WITH TABLES 2304.10.1 AND 2308.7.5. CEILING JOISTS SHALL BE CONTINUOUS OR SECURELY JOINED WHERE THEY MEET OVER INTERIOR PARTITIONS AND BE FASTENED TO ADJACENT RAFTERS IN ACCORDANCE WITH TABLES 2304.10.1 AND 2308.7.3.1 TO PROVIDE A CONTINUOUS RAFTER TIE ACROSS THE BUILDING WHERE SUCH JOISTS ARE PARALLEL TO THE RAFTERS. CEILING JOISTS SHALL HAVE A BEARING SURFACE OF NOT LESS THAN 1-1/2 INCHES (38 MM) ON THE TOP PLATE AT EACH END. WHERE CEILING JOISTS ARE NOT PARALLEL TO RAFTERS, AN EQUIVALENT RAFTER TIE SHALL BE INSTALLED IN A MANNER TO PROVIDE A CONTINUOUS TIE ACROSS THE BUILDING, AT A SPACING OF NOT MORE THAN 4 FEET (1219 MM) ON CENTER. THE CONNECTIONS SHALL BE IN ACCORDANCE WITH TABLES AND 2304.10.1, OR CONNECTIONS OF EQUIVALENT CAPACITIES SHALL BE PROVIDED. WHERE CEILING JOISTS OR RAFTER TIES ARE NOT PROVIDED AT THE TOP OF THE RAFTER SUPPORT WALLS, THE RIDGE FORMED BY THESE RAFTERS SHALL ALSO BE SUPPORTED BY A GIRDER CONFORMING TO SECTION 2308.8. RAFTER TIES SHALL BE SPACED NOT MORE THAN 4 FEET (1219 MM) ON CENTER.

RAFTER TIE CONNECTIONS SHALL BE BASED ON THE EQUIVALENT RAFTER SPACING IN TABLE 2308.7.3.1. RAFTER-TO-CEILING JOIST CONNECTIONS AND RAFTER TIE CONNECTIONS SHALL BE OF SUFFICIENT SIZE AND NUMBER TO PREVENT SPLITTING FROM NAILING. ROOF FRAMING MEMBER CONNECTION TO BRACED WALL LINES SHALL BE IN ACCORDANCE WITH SECTION 2308.6.7.2.

2308.7.4 NOTCHES AND HOLES. NOTCHING AT THE ENDS OF RAFTERS OR CEILING JOISTS SHALL NOT EXCEED ONE-FOURTH THE DEPTH. NOTCHES IN THE TOP OR BOTTOM OF THE RAFTER OR CEILING JOIST SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE ONE-THIRD OF THE SPAN, EXCEPT THAT A NOTCH NOT MORE THAN ONE-THIRD OF THE DEPTH IS PERMITTED IN THE TOP OF THE RAFTER OR CEILING JOIST NOT FURTHER FROM THE FACE OF THE SUPPORT THAN THE DEPTH OF THE MEMBER. HOLES BORED IN RAFTERS OR CEILING JOISTS SHALL NOT BE WITHIN 2 INCHES (51 MM) OF THE TOP AND BOTTOM AND THEIR DIAMETER SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE MEMBER.

2308.7.5 WIND UPLIFT. THE ROOF CONSTRUCTION SHALL HAVE RAFTER AND TRUSS TIES TO THE WALL BELOW. RESULTANT UPLIFT LOADS SHALL BE TRANSFERRED TO THE FOUNDATION USING A CONTINUOUS LOAD PATH. THE RAFTER OR TRUSS TO WALL CONNECTION SHALL COMPLY WITH TABLES 2304.10.1 AND 2308.7.5.

2308.7.6 FRAMING AROUND OPENINGS. TRIMMER AND HEADER RAFTERS SHALL BE DOUBLED, OR OF LUMBER OF EQUIVALENT CROSS SECTION, WHERE THE SPAN OF THE HEADER EXCEEDS 4 FEET (1219 MM). THE ENDS OF HEADER RAFTERS THAT ARE MORE THAN 6 FEET (1829 MM) IN LENGTH SHALL BE SUPPORTED BY FRAMING ANCHORS OR RAFTER HANGERS UNLESS BEARING ON A BEAM, PARTITION OR WALL.

2308.7.7 PURLINS. PURLINS TO SUPPORT ROOF LOADS ARE PERMITTED TO BE INSTALLED TO REDUCE THE SPAN OF RAFTERS WITHIN ALLOWABLE LIMITS AND SHALL BE SUPPORTED BY STRUTS TO BEARING WALLS. THE MAXIMUM SPAN OF 2-INCH BY 4-INCH (51 MM BY 102 MM) PURLINS SHALL BE 4 FEET (1219 MM). THE MAXIMUM SPAN OF THE 2-INCH BY 6-INCH (51 MM BY 152 MM) PURLIN SHALL BE 6 FEET (1829 MM), BUT IN NO CASE SHALL THE PURLIN BE SMALLER THAN THE SUPPORTED RAFTER. STRUTS SHALL BE NOT LESS THAN 2-INCH BY 4-INCH (51 MM BY 102 MM) MEMBERS. THE UNBRACED LENGTH OF STRUTS SHALL NOT EXCEED 8 FEET (2438 MM) AND THE SLOPE OF THE STRUTS SHALL BE NOT LESS THAN 45 DEGREES (0.79 RAD) FROM THE HORIZONTAL.

2308.7.8 BLOCKING. ROOF RAFTERS AND CEILING JOISTS SHALL BE SUPPORTED LATERALLY TO PREVENT ROTATION AND LATERAL DISPLACEMENT IN ACCORDANCE WITH SECTION 2308.4.6 AND CONNECTED TO BRACED WALL LINES IN ACCORDANCE WITH SECTION 2308.6.7.2.

2308.7.9 ENGINEERED WOOD PRODUCTS. PREFABRICATED WOOD I-JOISTS, STRUCTURAL GLUED-LAMINATED TIMBER AND STRUCTURAL COMPOSITE LUMBER SHALL NOT BE NOTCHED OR DRILLED EXCEPT WHERE PERMITTED BY THE MANUFACTURERÕS RECOMMENDATIONS OR WHERE THE EFFECTS OF SUCH ALTERATIONS ARE SPECIFICALLY CONSIDERED IN THE DESIGN OF THE MEMBER BY A REGISTERED DESIGN PROFESSIONAL.

2308.7.10 ROOF SHEATHING. ROOF SHEATHING SHALL BE IN ACCORDANCE WITH TABLES 2304.8(3) AND 2304.8(5) FOR WOOD STRUCTURAL PANELS, AND TABLES 2304.8(1) AND 2304.8(2) FOR LUMBER AND SHALL COMPLY WITH SECTION 2304.8.2.

2308.7.11 JOINTS. JOINTS IN LUMBER SHEATHING SHALL OCCUR OVER SUPPORTS UNLESS APPROVED END-MATCHED LUMBER IS USED, IN WHICH CASE EACH PIECE SHALL BEAR ON AT LEAST TWO SUPPORTS.

2308.7.12 ROOF PLANKING. PLANKING SHALL BE DESIGNED IN ACCORDANCE WITH THE GENERAL PROVISIONS OF THIS CODE. IN LIEU OF SUCH DESIGN, 2-INCH (51 MM) TONGUE-AND GROOVE PLANKING IS PERMITTED IN ACCORDANCE WITH TABLE 2308.7.12. JOINTS IN SUCH PLANKING ARE PERMITTED TO BE RANDOMLY SPACED, PROVIDED THE SYSTEM IS APPLIED TO NOT LESS THAN THREE CONTINUOUS SPANS, PLANKS ARE CENTER MATCHED AND END MATCHED OR SPLINED, EACH PLANK BEARS ON AT LEAST ONE SUPPORT, AND JOINTS ARE SEPARATED BY NOT LESS THAN 24 INCHES (610 MM) IN ADJACENT PIECES.

2308.7.13 WOOD TRUSSES. WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 2303.4. CONNECTION TO BRACED WALL LINES SHALL BE IN ACCORDANCE WITH SECTION 2308.6.7.2.

2308.7.14 ATTIC VENTILATION. FOR ATTIC VENTILATION, SEE SECTION 1203.2.

2308.8 DESIGN OF ELEMENTS. COMBINING OF ENGINEERED ELEMENTS OR SYSTEMS AND CONVENTIONALLY SPECIFIED ELEMENTS OR SYSTEMS SHALL BE PERMITTED SUBJECT TO THE LIMITS OF SECTIONS 2308.8.1 AND 2308.8.2.

ADDITIONAL FLOOR FRAMING NOTES:

1. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN ON THE ARCHITECTURAL DRAWING(S) & NOTIFY THE DESIGNER AND STRUCTURAL ENGINEER OF RECORD OF ANY DISCREPANCIES THAT CANNOT BE ADJUSTED IN THE FIELD. IF EXISTING CONDITIONS DIFFER FROM THAT WHICH IS SPECIFIED, THE GENERAL CONTRACTOR AND/OR SUBCONTRACTORS SHALL NOTIFY THE DESIGNER AND STRUCTURAL ENGINEER OF RECORD.
2. DOUBLE ALL FLOOR JOISTS UNDER BEARING WALL ABOVE, PARALLEL TO FLOOR JOIST DIRECTION. PROVIDE 2X/4X SOLID BLOCKING (PER FRAMING PLAN(S), PERPENDICULAR TO FLOOR JOIST DIRECTION.
3. DOUBLE ALL FLOOR FRAMING MEMBERS @ PERIMETER OF FLOOR DIAPHRAGM OPENINGS AND SIDE EDGES OF OF CANTILEVERED FLOOR FRAMING.
4. PROVIDE 4X/6X DF#1 (OR EQUAL) SOLID COMPRESSION BLOCKING IN FLOOR ASSEMBLIES UNDER ALL CONCENTRATED LOADS FROM ABOVE.
5. VERIFY ALL LOADS FROM ABOVE AND CONFIRM/VERIFY FOOTING, ISOLATED PIER LOCATIONS OR CALCULATED FRAMING ACCORDINGLY.
6. RECOMMENDED OPTION FOR SUBFLOOR FASTENING: GLUE AND USE WOOD SCREWS @ 6ÓOC EDGES AND 10ÓOC FIELD FOR A ÒSQUEAK-LESSÓ FLOOR.

FRAMING TABLE: TYPICAL HEADERS & CEILING JOISTS

ROUGH OPENING/SPAN	APPLICATION	SIZE/GRADE
SPANS UP TO 4Õ0Ó	HEADER @ 2X4 WALL (1- TRIMMER) HEADER @ 2X6 WALL (1- TRIMMER)	4X6 DF#1 6X8 DF#1
SPANS UP TO 6Õ0Ó	HEADER @ 2X4 WALL (2- TRIMMER) HEADER @ 2X6 WALL (2- TRIMMER)	4X8 DF#1 6X8 DF#1
SPANS UP TO 10Õ0Ó	HEADER @ 2X4 WALL (2- TRIMMER) HEADER @ 2X6 WALL (2- TRIMMER)	4X10 DF#1 OR 3.5Ó X 9.5Ó PSL 6X10 DF#1 OR 5.25Ó X 9.5Ó PSL
SPANS UP TO 12Õ0Ó	HEADER @ 2X4 WALL (4X4 DF#1 POST) HEADER @ 2X6 WALL (4X6 DF#1 POST)	4X12 DF#1 OR 3.5Ó X 1.88Ó PSL 6X12 DF#1 OR 5.25Ó X 1.88Ó PSL
SPANS > 12Õ0Ó	HEADER @ 2X4 WALL (4X4 DF#1 POST) HEADER @ 2X6 WALL (4X6 DF#1 POST)	SEE FRAMING PLANS FOR SIZE(S)
SPANS UP TO 12Õ10Ó	CEILING JOISTS @ 16ÓOC	2X6 DF#2
SPANS > 12Õ10Ó < 16Õ3Ó	CEILING JOISTS @ 16ÓOC	2X8 DF#2
SPANS > 16Õ3Ó < 19Õ10Ó	CEILING JOISTS @ 16ÓOC	2X10 DF#2
SPANS > 19Õ10Ó	CEILING JOISTS @ 16ÓOC	SEE FRAMING PLANS FOR SIZE(S)
SPANS UP TO 10Õ5Ó	CEILING JOISTS @ 24ÓOC	2X6 DF#2
SPANS > 10Õ5Ó < 13Õ3Ó	CEILING JOISTS @ 24ÓOC	2X8 DF#2
SPANS > 13Õ3Ó < 16Õ3Ó	CEILING JOISTS @ 24ÓOC	2X10 DF#2
SPANS > 16Õ3Ó	CEILING JOISTS @ 24ÓOC	SEE FRAMING PLANS FOR SIZE(S)
@ ALL FLAT CEILINGS	COLLAR TIES @ RR /16ÓOC = @ 64ÓOC COLLAR TIES @ RR/24ÓOC = @ 60ÓOC	2X8 DF#2

NOTES:

1. THIS TABLE APPLIES TO ALL HEADERS & CEILING JOISTS NOT SPECIFICALLY IDENTIFIED BY NUMBER OR LETTER ON THE FRAMING PLAN(S).
2. SEE TYPICAL HEADER FRAMING DETAILS FR5 & FR6 @ SHEET SD.1 FOR INSTALLATION OF HEADERS.
3. WHERE 2X RIDGE BOARDS & CEILING JOISTS ARE SPECIFIED, PROVIDE 2X COLLAR TIES @ 64Ó(60ÓOC (UNO) @ MID-HEIGHT OF RAFTERS.
4. SEE TYPICAL EAVE CONSTRUCTION DETAILS & CEILING SPLICE DETAILS FOR LAP NAILING REQUIREMENTS.
5. SEE SHEETS SN.1 & SN.2 FOR STRUCTURAL NOTES & ADDITIONAL MINIMUM NAILING REQUIREMENTS.

REVISIONS:	#

CW

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ARCHITECTURAL DESIGN BY:

STUDIO THREE DESIGN

[redacted] **RESIDENCE**

328 BACHMAN AVENUE

LOS GATOS, CA 95030

DRAWING: STRUCTURAL NOTES

SAVED: 10/21/25

SCALE: AS NOTED

DRAWN BY: MAR

10/21/2025

PROFESSIONAL STAMP

SN.2

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

GENERAL INFORMATION

01	Project Name	Bachman Ave Residence			
02	Run Title	Title 24 Analysis			
03	Project Location	328 Bachman Avenue			
04	City	Los Gatos	05	Standards Version	2022
06	Zip code	95030	07	Software Version	EnergyPro 9.4
08	Climate Zone	4	09	Front Orientation (deg/ Cardinal)	225
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Addition and/or Alteration	13	Number of Bedrooms	3
14	Addition Cond. Floor Area (ft²)	58	15	Number of Stories	2
16	Existing Cond. Floor Area (ft²)	2644	17	Fenestration Average U-factor	0.35
18	Total Cond. Floor Area (ft²)	2702	19	Glazing Percentage (%)	21.75%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Fuel Type	Natural gas	23	No Dwelling Unit:	No

COMPLIANCE RESULTS

01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	Building does not incorporate Special Features

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

ENERGY USE SUMMARY

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft² -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft² -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft² -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft² -yr)	Margin (EDR1)	Margin (EDR2)
Space Heating	0	55.22	0	50.14	0	5.08
Space Cooling	0	61.96	0	65.52	0	-3.56
IAQ Ventilation	0	0	0	0	0	0
Water Heating	0	25.66	0	25.86	0	-0.2
Self Utilization/Flexibility Credit				0		0
Efficiency Compliance Total	0	142.84	0	141.52	0	1.32
Photovoltaics		0		0		
Battery				0		
Flexibility						
Indoor Lighting	0	6.51	0	6.51		
Appl. & Cooking	0	18.43	0	18.43		
Plug Loads	0	20.98	0	20.98		
Outdoor Lighting	0	1.66	0	1.66		
TOTAL COMPLIANCE	0	190.42	0	189.1		

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

ENERGY USE INTENSITY

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

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

REQUIRED SPECIAL FEATURES

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

- NO SPECIAL FEATURES REQUIRED

HERS FEATURE SUMMARY

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

- Kitchen range hood
- Minimum Airflow
- Fan Efficacy Watts/CFM
- Duct leakage testing

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Bachman Ave Residence	2702	1	3	3	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Status
1st Floor	Conditioned	HVAC System1	1647	10.5	DHW Sys 1	Existing Unchanged

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

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Status
2nd Floor	Conditioned	HVAC System1	997	8	DHW Sys 1	Existing Unchanged
2nd Floor Addition	Conditioned	HVAC System1	58	8	DHW Sys 1	New

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Front Wall	1st Floor	R-0 Wall	225	Front	383.25	130.3	90	none	Existing	No
Left Wall	1st Floor	R-0 Wall	315	Left	577.5	96.5	90	none	Existing	No
Rear Wall	1st Floor	R-0 Wall	45	Back	383.25	138.75	90	none	Existing	No
South Wall	1st Floor	R-0 Wall	180	n/a	55.1	19.5	90	none	Existing	No
Right Wall	1st Floor	R-0 Wall	135	Right	511.3	110	90	none	Existing	No
East Wall	1st Floor	R-0 Wall	90	n/a	55.1	18.7	90	none	Existing	No
Front Wall 2	2nd Floor	R-0 Wall	225	Front	88	16	90	none	Existing	No
Left Wall 2	2nd Floor	R-0 Wall	315	Left	48	8	90	none	Existing	No
Rear Wall 2	2nd Floor	R-0 Wall	45	Back	30	12.5	90	none	Existing	No
Right Wall 2	2nd Floor	R-0 Wall	135	Right	60	25	90	none	Existing	No
Left Wall 3	2nd Floor Addition	R-15 Wall	315	Left	57	0	90	Extension	New	n/a
Rear Wall 3	2nd Floor Addition	R-15 Wall	45	Back	72	12.5	90	Extension	New	n/a
Right Wall 3	2nd Floor Addition	R-15 Wall	135	Right	32	0	90	none	New	n/a
Interior Surface	2nd Floor Addition>>2nd Floor	R-0 Wall1	n/a	n/a	10	0	n/a		New	No
Roof	1st Floor	R-19 Roof Attic	n/a	n/a	120	n/a	n/a		Existing	No

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

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Roof 2	1st Floor	R-19 Roof Attic	n/a	n/a	472	n/a	n/a		Existing	No
Roof 3	2nd Floor	R-19 Roof Attic	n/a	n/a	197	n/a	n/a		Existing	No
Roof 4	2nd Floor	R-19 Roof Attic	n/a	n/a	800	n/a	n/a		Existing	No
Roof 5	2nd Floor Addition	R-30 Roof Attic	n/a	n/a	58	n/a	n/a		New	n/a
Raised Floor	1st Floor	R-0 Floor No Crawlspace	n/a	n/a	997	n/a	n/a		Existing	No
Ceiling	1st Floor	R-0 Roof No Attic	n/a	n/a	997	n/a	n/a		Existing	No
Ceiling 2	1st Floor	R-0 Roof No Attic	n/a	n/a	58	n/a	n/a		Existing	No
Floor	1st Floor	R-0 Floor No Crawlspace1	n/a	n/a	18	n/a	n/a		Existing	No
Floor 2	1st Floor	R-0 Floor No Crawlspace1	n/a	n/a	1169	n/a	n/a		Existing	No

ATTIC

01	02	03	04	05	06	07	08	09	10
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof	Status	Verified Existing Condition
Attic 1st Floor	Attic Roof1st Floor	Ventilated	10.3784	0.1	0.85	No	No	Existing	No
Attic 2nd Floor	Attic Roof2nd Floor	Ventilated	9.62889	0.1	0.85	No	No	Existing	No
Attic 2nd Floor Addition	Attic Roof2nd Floor Addition	Ventilated	12	0.1	0.85	No	No	New	n/a

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

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
Window	Window	Front Wall	Front	225			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 2	Window	Front Wall	Front	225			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 3	Window	Front Wall	Front	225			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 4	Window	Front Wall	Front	225			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Entry Door	Window	Front Wall	Front	225			1	24.5	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Door	Window	Front Wall	Front	225			1	21.8	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 5	Window	Left Wall	Left	315			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 6	Window	Left Wall	Left	315			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 7	Window	Left Wall	Left	315			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 8	Window	Left Wall	Left	315			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 9	Window	Left Wall	Left	315			1	12.5	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No

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

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
Window 10	Window	Rear Wall	Back	45			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 11	Window	Rear Wall	Back	45			1	13.75	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 12	Window	Rear Wall	Back	45			1	8	0.35	NFRC	0.3	NFRC	Bug Screen	Altered	No
French Door	Window	Rear Wall	Back	45			1	48	0.35	NFRC	0.3	NFRC	Bug Screen	Altered	No
French Door 2	Window	Rear Wall	Back	45			1	48	0.35	NFRC	0.3	NFRC	Bug Screen	Altered	No
Window 13	Window	South Wall		180			1	19.5	0.35	NFRC	0.3	NFRC	Bug Screen	Altered	No
Relocated window	Window	Right Wall	Right	135			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 14	Window	Right Wall	Right	135			1	26	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 15	Window	Right Wall	Right	135			1	21	0.35	NFRC	0.3	NFRC	Bug Screen	Altered	No
Window 16	Window	Right Wall	Right	135			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 17	Window	Right Wall	Right	135			1	21	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Door 2	Window	East Wall		90			1	18.7	0.35	NFRC	0.3	NFRC	Bug Screen	Altered	No
Window 18	Window	Front Wall 2	Front	225			1	8	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No

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

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
Window 19	Window	Front Wall 2	Front	225			1	8	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 20	Window	Left Wall 2	Left	315			1	8	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 21	Window	Rear Wall 2	Back	45			1	12.5	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 22	Window	Right Wall 2	Right	135			1	12.5	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 23	Window	Right Wall 2	Right	135			1	12.5	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 24	Window	Rear Wall 3	Back	45			1	12.5	0.35	NFRC	0.3	NFRC	Bug Screen	New	NA

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-0 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.361	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: 3 Coat Stucco
R-15 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Exterior Finish: 3 Coat Stucco

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

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-0 Wall1	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board
Attic Roof1st Floor	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
Attic Roof2nd Floor	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
Attic Roof2nd Floor Addition	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
R-19 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-19	None / None	0.049	Over Ceiling Joists: R-9.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board
R-30 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-30	None / None	0.032	Over Ceiling Joists: R-20.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board
R-0 Floor No Crawlspace	Exterior Floors	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.24	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12

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

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-0 Floor No Crawlspace1	Interior Floors	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.196	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board
R-0 Roof No Attic	Interior Ceiling	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-0	None / None	0.202	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4 Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

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

WATER HEATING SYSTEMS

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
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)	Altered	No	

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

WATER HEATERS

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
DHW Heater 1	Gas	Residential-Duty Commercial Storage	1	75	UEF	0.59	Btu/Hr	76000	0	80	80		Altered	No

WATER HEATING - HERS VERIFICATION

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

SPACE CONDITIONING SYSTEMS

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

HVAC - HEATING UNIT TYPES

01	02	03	04	05
Name	System Type	Number of Units	Heating Efficiency	Heating Unit Brand
Heating Component 1	Central gas furnace	2	AFUE - 92	n/a

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

HVAC - COOLING UNIT TYPES

01	02	03	04	05	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 Component 1	Central split AC	2	EER/SEER	11.7	14	Not Zonal	Single Speed	Cooling Component 1-hers-cool

HVAC COOLING - HERS VERIFICATION

01	02	03	04	05	06
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEERSEER2	Verified Refrigerant Charge
Cooling Component 1-hers-cool	Required	350	Not Required	Not Required	Not Required

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Design Type	Duct Ins. R-value Supply	Duct Ins. R-value Return	Duct Location Supply	Duct Location Return	Surface Area Supply	Surface Area Return	Bypass Duct	Duct Leakage	HERS Verification	Status	Verified Existing Condition	Existing Distribution system	New Ducts >= 25 ft
Air Distribution System 1	Unconditioned attic	Non-Verified	R-8	R-8	Attic	Attic	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1-hers-dist	New	n/a		n/a

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

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
Air 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	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.4	HVAC Fan 1-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION

01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Required	0.4

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

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Nicholas Bignardi	Documentation Author Signature:
Company: FRI Energy Consultants, LLC.	Signature Date: 10/21/2025
Address: 5770 WINFIELD BLVD SPC 15	CEA/ HERS Certification Identification (If applicable):
City/State/Zip: San Jose, CA 95123	Phone: (408) 866-1620

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

Responsible Designer Name: Bess Wiersema	Responsible Designer Signature: Bess Wiersema
Company: Studio Three Design Inc.	Date Signed: 10/21/2025
Address: 638 University Avenue	License:
City/State/Zip: Los Gatos, CA 95032	Phone: 4082923252

Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). 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.

FRI Energy Consultants, LLC
5770 Winfield Blvd #15
San Jose, CA 95123
Phone: 408-866-1620

BACHMAN AVE RESIDENCE
328 BACHMAN AVENUE
LOS GATOS, CA 95030

T24-1

2022 Single-Family Residential Mandatory Requirements Summary

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

Building Envelope:

§ 110.6(a)1:	**Air Leakage**. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC 400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.
§ 110.7:	**Air Leakage**. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers**. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors**. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance**. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier**. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs
§ 150.0(a):	**Roof Deck, Ceiling and Rafter Roof Insulation**. Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation**. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	**Slab Edge Insulation**. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products**. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45.

Fireplaces, Decorative Gas Appliances, and Gas Log:

§ 110.5(e)	**Pilot Light**. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors**. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake**. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device. *
§ 150.0(e)3:	**Flue Damper**. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

Space Conditioning, Water Heating, and Plumbing System:

§ 110.0-§ 110.3:	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.
§ 110.2(a):	**HVAC Efficiency**. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	**Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

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2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters. *
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	**Liquid Line Drier**. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code.
§ 150.0(j)2:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2' higher than the base of the water heater
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher, ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼", If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	**Factory-Fabricated Duct Systems**. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems**. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper**. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test**. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

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§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *

Ventilation and Indoor Air Quality:

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

Pool and Spa Systems and Equipment:

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

Lighting:

§ 110.9:	**Lighting Controls and Components**. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings**. Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	**Light Sources in Enclosed or Recessed Luminaires**. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	**Blank Electrical Boxes**. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans**. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k). *

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§ 150.0(k)1G:	**Screw based luminaires**. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires**. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets**. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls**. Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	**Accessible Controls**. Lighting must have readily accessibe wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	**Multiple Controls**. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	**Mandatory Requirements**. Lighting controls must comply with the applicable requirements of § 110.9
§ 150.0(j)2D:	**Energy Management Control Systems**. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(j)2E:	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(j)2F:	**Dimmers**. Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(j)2K:	**Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(j)3A:	**Residential Outdoor Lighting**. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	**Internally illuminated address signs**. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles**. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

§ 110.10(a)1:	**Single-family Residences**. Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	**Minimum Solar Zone Area**. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	**Azimuth**. All sections of the solar zone located on sloped-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	**Shading**. The solar zone must not contain any obstructions; including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	**Shading**. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highes point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. *
§ 110.10(b)4:	**Structural Design Loads on Construction Documents**. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways**. The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone o the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

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2022 Single-Family Residential Mandatory Requirements Summary

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

*Exceptions may apply.

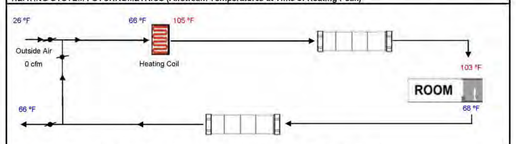
5/6/22

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

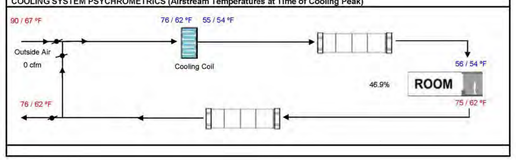
Project Name: Bachman Ave Residence — Date: 10/21/2025
System Name: HVAC System — Floor Area: 2,702

ENGINEERING CHECKS		SYSTEM LOAD	COIL COOLING PEAK CFM	COIL COOLING PEAK Sensible	COIL COOLING PEAK Latent	COIL HTG. PEAK CFM	COIL HTG. PEAK Sensible
Number of Systems	2						
Heating System							
Output per System	60,000	Total Room Loads	2,259	45,202	1,145	1,549	57,928
Total Output (Btuh)	120,000	Return Vented Lighting		0			
Output (Btuh/sqft)	44.4	Return Air Ducts		1,764			2,745
Cooling System		Return Fan		0			0
Output per System	1	Ventilation	0	0	0	0	0
Total Output (Btuh)	2	Supply Fan		0			0
Total Output (Tons)	0.0	Supply Air Ducts		1,764			2,745
Total Output (Btuh/sqft)	0.0						
Total Output (sqft/Ton)	16,212,000.0	TOTAL SYSTEM LOAD		48,729	1,145		63,418
Air System							
CFM per System	0	HVAC EQUIPMENT SELECTION					
Airflow (cfm)	0	High Efficiency Fau/AC		2	0		120,000
Airflow (cfm/sqft)	0.00						
Airflow (cfm/Ton)	0.0						
Outside Air (%)	0.0%	Total Adjusted System Output (Adjusted for Peak Design conditions)		2	0		120,000
Outside Air (cfm/sqft)	0.00						
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK		Aug 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



5/6/22

FRI Energy Consultants, LLC
5770 Winfield Blvd #15
San Jose, CA 95123
Phone: 408-866-1620

BACHMAN AVE RESIDENCE
328 BACHMAN AVENUE
LOS GATOS, CA 95030

T24-2

Historic Preservation Committee 2026 Meeting Schedule

January 28

February 25

March 25

April 22

May 27

June 24

~~July 22~~ CANCELLED Due to Summer Recess

August 26

September 23

October 28

Special November Meeting
* November 18

~~November 25~~ Cancelled due to Holiday

Special December Meeting
* December 16

~~December 23~~ Cancelled due to Holiday

Regular meetings are held on the 4th Wednesday of the month and start at 4:00 p.m. unless otherwise noted on agenda. Meetings are held in the Town Council Chambers, 110 E. Main Street.

**Special meetings may be scheduled with Committee consensus.*

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