TOWN OF LOS GATOS
PLANNING COMMISSION SPECIAL MEETING AGENDA
NOVEMBER 12, 2026
110 EAST MAIN STREET
TOWN COUNCIL CHAMBERS
7:00 PM

Kendra Burch, Chair
Jeffrey Barnett, Vice Chair
Susan Burnett, Commissioner
Adam Mayer, Commissioner
Joe Sordi, Commissioner
Rob Stump, Commissioner
Emily Thomas, Commissioner

IMPORTANT NOTICE

This is a hybrid/in-person meeting and will be held in-person at the Town Council Chambers at 110 E. Main Street and virtually through the Zoom webinar application (log-in information provided below). Members of the public may provide public comments for agenda items in-person or virtually through the Zoom webinar by following the instructions at the end of this agenda. The live stream of the meeting may be viewed on television and/or online at www.LosGatosCA.gov/TownYouTube.

To watch and participate via Zoom, please go to:

https://losgatosca-gov.zoom.us/j/88436489094?pwd=EsA5rW7LuC5mDayk1uQf1SJm1orUDw.1
Enter Passcode: 011614

MEETING CALL TO ORDER

ROLL CALL

PLEDGE OF ALLEGIANCE

VERBAL COMMUNICATIONS *(Members of the public are welcome to address the Planning Commission on any matter that is not listed on the agenda and is within the subject matter jurisdiction of the Commission. The law generally prohibits the Commission from discussing or taking action on such items. Town resources may not be used to facilitate audio or visual presentations. To ensure all agenda items are heard, this portion of the agenda is limited to 30 minutes. In the event additional speakers were not 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 no more than three (3) minutes or such time as authorized by the Chair.)*

PUBLIC HEARINGS *(Presentations during the Public Hearings portion of the agenda by appellants and applicants, including any expert or consultant assisting with the presentation, shall be limited to a total of no more than five (5) minutes for all speakers. Appellants and applicants shall be provided no more than three (3) minutes to rebut at the end of the public hearing. Visual presentations that require the use of staff resources shall be limited to appellants and applicants. Members of the public testifying at public hearings shall be limited to no more than three (3) minutes, or such time as authorized by the Chair.)*

1. Consider Appeals of a Community Development Director Decision to Approve Construction of a New Second-Story Addition to an Existing Single-Family Residence on Property Zoned R-1:8. **Located at 100 Jamie Court.** APN 527-32-038. Minor Residential Application MR-26-007. Categorically Exempt Pursuant to the California Environmental Quality Act, Section 15301: Existing Facilities. Property Owner: Jaimin K Desai. Applicant: Duong Le. Appellants: Antonio J. and Georgia M. Ricco; and Mohammed Nazemi. Project Planner: Suray Nathan.

2. Consider an Appeal of a Community Development Director Decision to Approve a Large Protected Tree Removal on Property Zoned R-1:10. **Located at 16401 Kennedy Road**. APN 532-15-036. Tree Removal Permit T25-148. Categorically Exempt Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Section 15303: New Construction, and Section 15304: Minor Alterations to Land. Property Owners: Mazen Louis. Applicant: West Valley Arborists, Inc. Appellant: Amr Abdelrazik. Project Planner: Ryan Safty.

3. Consider a Request for Approval of a Conditional Use Permit Application to Install a New 76-Foot-Tall Wireless Telecommunication Facility on Property Zoned R-M:5-12. **Located at 42 Miles Avenue.** APN 529-05-043. Categorically Exempt Pursuant to California Environmental Quality Act Guidelines Section 15303: New Construction or Conversion of Small Structures. Conditional Use Permit Application U-26-002. Applicant: Jacob Hamilton, SBA Monarch Towers III, LLC. Property Owner: Ashley Van, Pacific Gas & Electric Company. Project Planner: Samina Merchant.

4. Forward a Recommendation to the Town Council on an Ordinance Amending Chapter 29 (Zoning Regulations) of the Town Code Regarding Prohibited Uses, Definitions, and Appeals for Data Centers. The Proposed Amendments are Not Subject to CEQA Review Pursuant to CEQA, Section 15061 (b)(3), Because it can be Seen with Certainty that they will not Significantly Affect the Physical Environment in that they Add Data Centers to the List of Prohibited Uses and Make Minor Changes to Prohibited Uses, Definitions, and Appeals. Town Code Amendment Application A-26-007. **Project Location: Town Wide.** Applicant: Town of Los Gatos.

REPORT FROM THE DIRECTOR OF COMMUNITY DEVELOPMENT

SUBCOMMITTEE REPORTS / COMMISSION MATTERS

ADJOURNMENT *(Planning Commission policy is to adjourn no later than 11:30 p.m. unless a majority of the Planning Commission votes for an extension of time.)*

ADA NOTICE - In compliance with the Americans with Disabilities Act, if you require special assistance to participate in this meeting, please contact the Clerk's Office at (408) 354-6834. Please notify the Clerk's Office at least two (2) business days prior to the meeting so that reasonable arrangements can be made to ensure accessibility in compliance with 28 CFR §35.102-35.104 and related provisions.

NOTICE REGARDING SUPPLEMENTAL MATERIALS - Materials related to an item on this agenda submitted to the Commission after initial distribution of the agenda packets are available for public inspection in the Clerk's Office at Town Hall, 110 E. Main Street, Los Gatos and on the Town's website at www.losgatosca.gov. Planning Commission agendas and related materials can be viewed online at https://losgatos-ca.municodemeetings.com/.

HOW TO PARTICIPATE

The public is welcome to provide oral comments in real-time during the meeting in three ways:

1. **Zoom webinar (Online)**: Join from a PC, Mac, iPad, iPhone or Android device: Please click this URL to join: https://losgatosca-gov.zoom.us/j/88436489094?pwd=EsA5rW7LuC5mDayk1uQf1SJm1orUDw.1. Passcode: 011614. You can also type in 884 3648 9094 in the "Join a Meeting" page on the Zoom website at https://zoom.us/join and use passcode 011614.
    a. When the Chair announces the item for which you wish to speak, click the "raise hand" feature in Zoom. If you are participating by phone on the Zoom app, press *9 on your telephone keypad to raise your hand.
2. **Telephone:** Please dial 855-758-1310 US Toll-free or 408-961-3927 US. (Webinar ID: 884 3648 9094). If you are participating by calling in, press #2 on your telephone keypad to raise your hand.
3. **In-Person**: Please complete a "speaker's card" located on the back of the Chamber benches and return it to the Vice Chair before the meeting or when the Chair announces the item for which you wish to speak.

NOTES: (1) Comments will be limited to three (3) minutes or less at the Chair's discretion.
(2) If you are unable to participate in real-time, you may email planning@losgatosca.gov with the subject line "Public Comment Item #__" (insert the item number relevant to your comment).
(3) Deadlines to submit written public comments are:

- 3:00 p.m. the Friday before the Planning Commission meeting for inclusion in the agenda packet.
- 3:00 p.m. the Tuesday before the Planning Commission meeting for inclusion in an addendum.
- 11:00 a.m. on the day of the Planning Commission meeting for inclusion in a desk item.

Planning Commission meetings are broadcast Live on KCAT, Channel 15 (on Comcast) on the 2nd and 4th Wednesdays at 7:00 p.m. Live and Archived Planning Commission meetings can be viewed by going to: www.LosGatosCA.gov/TownYouTube

TOWN OF LOS GATOS
PLANNING COMMISSION
REPORT

MEETING DATE: 11/12/2026

ITEM NO: 1

DATE: November 6, 2026

TO: Planning Commission

FROM: Joel Paulson, Community Development Director

SUBJECT: Consider Appeals of a Community Development Director Decision to Approve Construction of a New Second-Story Addition to an Existing Single-Family Residence on Property Zoned R-1:8. **Located at 100 Jamie Court**. APN 527-32-038. Minor Residential Application MR-26-007. Categorically Exempt Pursuant to the California Environmental Quality Act, Section 15301: Existing Facilities. Property Owner: Jaimin K Desai. Applicant: Duong Le. Appellants: Antonio J. and Georgia M. Ricco; and Mohammed Nazemi. Project Planner: Suray Nathan.

RECOMMENDATION:

Deny the appeals of the Community Development Director's decision approving a request to construct a second-story addition to an existing single-family residence on property zoned R-1:8, located at 100 Jamie Court.

PROJECT DATA:

General Plan Designation:	Low Density Residential
Zoning Designation:	R-1:8 – Single-Family Residential (8,000 square feet minimum)
Applicable Plans & Standards:	General Plan, Residential Design Guidelines
Parcel Size:	8,800 square feet

Surrounding Area:

	Existing Land Use	General Plan	Zoning
North	Commercial	Neighborhood Commercial	C-1
South	Residential	Low Density Residential	R-1:8
East	Residential	Low Density Residential	R-1:8
West	Residential	Low Density Residential	R-1:8

PREPARED BY: Suray Nathan
Assistant Planner

Reviewed by: Planning Manager, Community Development Director, and Town Attorney

CEQA:

The project is Categorically Exempt pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15301: Existing Facilities.

FINDINGS:

- The project is Categorically Exempt pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15301: Existing Facilities.
- The project meets the objective standards of Chapter 29 of the Town Code (Zoning Regulations).
- The project is in compliance with the Residential Design Guidelines for single-family residences not located in the hillside area.

ACTION:

The decision of the Planning Commission is final unless appealed within ten days.

BACKGROUND:

The subject property is located on the south side of Jamie Court, approximately 500 feet south of Blossom Hill Road (Exhibit 1). The 8,800-square foot subject lot is currently developed with a 2,433-square foot single-story residence and an attached 520-square foot garage. Surrounding properties are developed with one- and two-story single-family residences, except for the lot directly to the north, which is zoned Neighborhood Commercial (C-1).

On April 16, 2026, the applicant submitted a Minor Residential Development application to construct a second-story addition to an existing single-family residence.

In September of 2026, story poles and signage were installed on the site. On September 15, 2026, the Town mailed the Notice of Pending Approval to the neighboring residents, notifying them that it was the intent of the Town to approve the project on September 25, 2026, and providing them with appeal rights with a deadline of 4:00 p.m., Monday, October 5, 2026. The application was approved on September 25, 2026.

On October 1, 2026, the decision of the Community Development Director was appealed to the Planning Commission by neighbors to the rear, Antonio J. and Georgia M. Ricco (Exhibit 8). On October 5, 2026, the decision of the Community Development Director was appealed to the Planning Commission by a second neighbor west of the subject property, Mohammed Nazemi (Exhibit 10). The applicant has provided a summary of their neighborhood outreach efforts and a response to each of the two appeals received (Exhibits 11 and 12).

On October 14, 2026, the applicant submitted revised plans addressing neighbor concerns. The revisions include removing the rear elevation balcony opening and relocating the proposed

west-facing bedroom window to the north elevation, facing Jamie Court (Exhibit 14).

Pursuant to Section 29.20.480 (c) of the Town Code, any interested person, as defined in Section 29.10.020, will have ten (10) days from the date of approval to file a written notice of appeal to the Planning Commission with the Community Development Director. For residential projects, an interested person is defined as "a person or entity who owns property or resides within 1,000 feet of a property for which a decision has been rendered and can demonstrate that their property will be injured by the decision." The appellants meet the requirements.

Pursuant to Town Code Section 29.20.265, the hearing for the appeals must be set for the first regular meeting of the Planning Commission more than five days after the date of filing the appeal. Due to legal noticing timelines and full agendas, the November 12, 2026, Planning Commission meeting was the first regular meeting available to consider the appeals. The Planning Commission may hear the matter anew and render a new decision on the matter.

PROJECT DESCRIPTION:

A. Location and Surrounding Neighborhood

The subject property is located on the south side of Jamie Court, approximately 500 feet south of Blossom Hill Road (Exhibit 1). Surrounding properties are developed with one and two-story single-family residences.

B. Project Summary

The applicant is proposing to expand the existing 2,433-square foot single-story residence with an 1,185-square foot second-story addition and a 38-square foot first-story addition for a total of 2,776 square feet. Additionally, the applicant proposes to dedicate 880 square feet of the existing first-floor area as an ADU (Exhibit 13, Sheet A6). Pursuant to state law, the ADU will be processed under a ministerial building permit and is not the subject of this Minor Residential application.

C. Zoning Compliance

A single-family residence is permitted in the R-1:8 zone. The project meets the objective standards of the zoning code for height, floor area, building coverage, parking, and setbacks.

DISCUSSION:

A. Minor Residential Development Application

Town Code Section 29.20.480 (2)(a) requires approval of a Minor Residential Development application for a new second-story addition to single or two-family dwellings. The applicant proposes expanding the existing 2,433-square foot, single-story residence with an 1,185-

square foot second-story addition and a 38-square foot first-story addition. The resulting two-story residence would be 2,776 square feet; the maximum allowed for the lot is 2,816 square feet (Exhibit 13). The proposed project would comply with the Town's demolition calculation and would not be considered a new residence. A summary of the floor area for the proposed residence is included in the following table.

Floor Area Summary				
	Existing SF	**Addition SF**	**Proposed SF**	**Max Allowed SF**
First Floor	2,433	38	1,591	
Second Floor	--	1,185	1,185	
Total	**2,433**	**1,223**	**2,776**	**2,816**
ADU (first floor)	**--**	880	880	

B. Neighborhood Compatibility

The immediate neighborhood consists of one and two-story traditional single-family residences, with the exception of the lot directly to the north, which is zoned C-1 and is home to the Blossom Hill Square shopping center. Based on Town and County records, the residences in the immediate neighborhood range in size from 1,400 to 4,205 square feet. The FAR ranges from 0.20 to 0.38. The proposed residence would be 2,776 square feet with a FAR of 0.32, making it the third-largest residence in the immediate neighborhood by square footage and the second-largest by FAR. Pursuant to the Town Code, the maximum allowable square footage for the 8,800-square foot lot is 2,816 square feet with a maximum FAR of 0.32. The table below reflects the current conditions of the immediate neighborhood:

Address	Zoning	Residence Floor Area	Garage Floor Area	Total Floor Area	Lot Size	Residence FAR	No. of Stories
100 Jamie Court (Ex.)	**R-1:8**	**2,433**	**520**	**2,953**	**8,800**	**0.28**	**1**
100 Jamie Court (Prop.)	**R-1:8**	**2,776**	**520**	**3,296**	**8,800**	**0.32**	**2**
104 Jamie Court	R-1:8	2,339	520	2,859	8,008	0.29	1
108 Jamie Court	R-1:8	2,339	520	2,859	8,000	0.29	1
15080 Harwood Road	R-1:8	4,205	748	4,250	10,967	0.38	2
101 Gemini Court	R-1:8	2,788	400	3,188	8,800	0.32	2
102 Gemini Court	R-1:8	2,098	440	2,538	8,800	0.24	2
16180 Harwood Road	R-1:8	3,150	519	2,789	11,240	0.28	2
16190 Harwood Road	R-1:10	2,447	659	3,106	10,300	0.24	1
101 Bacigalupi Dr	R-1:8	2,248	504	2,752	8,393	0.27	1
100 Bacigalupi Dr	R-1:8	1,400	440	1,840	7,100	0.20	1

C. Building Design

The Town's Consulting Architect reviewed the proposed residence on April 24, 2026, and provided six recommendations to ensure conformance with the Residential Design Guidelines (Exhibit 6). These are detailed below, followed by the applicant and staff's responses (Exhibit 7).

1. Simplify the second-floor plan and massing, and move entry and stair back.

   Applicant Response: We simplified the second-floor plan and massing by reducing the overall height from 26 feet to 22 feet and reconfiguring the entrance and staircase back by approximately three feet.

   Staff Response: The applicant incorporated the recommendations provided by the Consulting Architect.

2. Lower the first floor-to-second-floor height to nine feet and the second-floor to ceiling height to nine feet to be more in scale with other homes in the immediate neighborhood.

   Applicant Response: We lowered the first-floor-to-second-floor height to nine feet and the second-floor ceiling height to nine feet, as recommended, to better match the scale of other homes in the immediate neighborhood. The overall height is now 22 feet. The adjacent structure West of the proposed home is 16 feet; across the street East of the proposed home is 25 feet.

   Staff Response: The applicant incorporated the recommendations provided by the Consulting Architect.

3. Add trim to all windows to match existing.

   Applicant Response: We added wooden trim to all windows to match the existing windows.

   Staff Response: The applicant incorporated the recommendations provided by the Consulting Architect.

4. Add belly band trim on two-story walls.

   Applicant Response: We added wooden belly band trim to the two-story walls to visually separate the number of stories.

   Staff Response: The applicant incorporated the recommendations provided by the Consulting Architect.

5. Revise the balcony railing to blend with the proposed architectural style.

   Applicant Response: We revised the street-facing balcony from a glass railing to a three-foot, six-inch high wall with wooden siding, matching the exterior walls, to blend in with the proposed architectural style. The applicant also removed the rear bedroom balcony to preserve the rear neighbor's privacy.

   Staff Response: The applicant incorporated the recommendations provided by the Consulting Architect.

6. Add traditional beam and other structures at side balcony as necessary.

   Applicant Response: We added a traditional beam at the side balcony to support the large opening facing the street.

   Staff Response: The applicant incorporated the recommendations provided by the Consulting Architect.

D. Appeals to Planning Commission

The Community Development Director's approval was appealed by two separate parties. The first was submitted on October 1, 2026, by Antonio J. and Georgia M. Ricco, the property owner to the rear of the subject site at 101 Bacigalupi Drive (Exhibit 8). The appeal includes a detailed letter specifying their concerns for consideration by the Planning Commission (Exhibit 9). The second appeal was submitted on October 5, 2026, by a neighbor, Mohammed Nazemi, who lives west of the subject site at 104 Jamie Court (Exhibit 10). The applicant's response letter, which addresses each of the appellant's concerns, is attached to this report (Exhibit 11). Additionally, the applicant submitted revised plans that implement changes to the plans approved by the Community Development Director to address the appellants' concerns (Exhibit 14). A summary of the specific reasons for each appeal is provided below, followed by staff's analysis.

Appeal #1

The first appeal was submitted by the neighbors to the rear of the subject property at 101 Bacigalupi Drive. The appeal form and a detailed letter specifying their concerns are included as Exhibits 8 and 9. The applicant's response letter, which addresses the appellant's concerns, is also attached to this report (Exhibit 11).

Appellant's reason #1: Neighborhood incompatibility: Mass, scale, and character. A 3,650-square foot, two-story home is proposed in a neighborhood block of closely spaced 2,400-square foot one-story homes.

Staff response: The proposed expansion of the single-family residence complies with the Town Code requirements for floor area, height, setbacks, lot coverage, and parking. The

proposal would not be the largest home in the immediate neighborhood in terms of square footage or FAR. There are currently four two-story homes within the immediate neighborhood and three outside of it, but within the Jamie Court cul-de-sac. In response to feedback from the Consulting Architect, the applicant successfully refined the project design by reducing the overall height of the proposed second-story addition from approximately 26 feet to 22 feet and additionally reconfiguring the main entrance and staircase by setting them back approximately three feet to address massing (Exhibit 7 and Exhibit 13, Sheet A12).

Appellant's reason #2: Loss of light and sky view impacts the yard, kitchen, office, family room, and primary room at 101 Bacigalupi Drive.

Staff response: The Town Code does not include provisions or limitations regarding the preservation of open sky views. The proposed second-story addition ridge height is 22 feet above grade, approximately 4.5 feet higher than the existing single-story roofline, which complies with the maximum allowable height limit of 30 feet for the subject parcel (Exhibit 13, Sheet A12.3). The shadow study analysis demonstrates that the proposed addition will not cast any shadows on the neighboring rear residence at 101 Bacigalupi Drive on either June 21 or December 21 at the peak assessment hours of 9:00 AM, 12:00 PM, or 3:00 PM (Exhibit 13, Sheet A12.8).

Appellant's reason #3: Privacy intrusions from proposed windows and balcony will look downward into patio, family room, and dining area.

Staff response: To address and mitigate potential privacy concerns, the applicant submitted updated plans on October 14, 2026, eliminating the previously proposed rear balcony opening (Exhibit 14). However, the bedroom window on the south elevation, facing the adjacent neighbor at 101 Bacigalupi Drive, remains and is required for ingress and egress pursuant to the Building Code. The applicant proposes planting 21 bamboo trees (Bambusa textiles gracilis) along the 80-foot rear property line to provide privacy (Exhibit 13, Sheet A12). Condition number five requires that privacy screening vegetation along the 80-foot rear property line be perpetually maintained at a minimum height of 12 feet. Additionally, any dead, dying, or diseased vegetation must be replaced in kind within 30 days to ensure continuous compliance (Exhibit 3).

In an October 15, 2026, email to staff, the appellants stated that they were encouraged by the removal of the balcony opening; however, they still have concerns with the bedroom window at the rear elevation and indirect illumination from the sky.

Appeal #2

The second appeal was submitted by the neighbor who lives west of the subject site at 104 Jamie Court. The appeal form specifying their concerns is included as Exhibit 10. The applicant's response letter, which addresses the appellant's concerns, is also attached to this report (Exhibit 11).

Appellant's reason #1: The second-story bedroom window looks into both our yards and house, including the family room and bathroom. The applicant stated that they would redesign the second story to remove the bedroom window to address our privacy concerns; however, the updated plans were not submitted before the appeal deadline.

Staff response: To address privacy concerns, the applicant submitted updated plans on October 14, 2026, showing the removal of the previously proposed west-facing bedroom window and its relocation to the north elevation, facing Jamie Court. The only windows facing the west elevation are two clerestory frosted windows, with a sill height of six feet above the finished floor, for the proposed bathrooms (Exhibit 14, Sheet A11).

In an October 18, 2026 email to staff, the appellant indicated that the project changes successfully resolved their privacy concerns.

Appellant's reason #2: The scale and size of the project seem out of place in the street, especially considering the lot size.

Staff response: The proposed expansion of the single-family residence complies with the Town Code requirements for floor area, height, setbacks, lot coverage, and parking. The proposal would not be the largest home in the immediate neighborhood in terms of square footage or FAR. There are currently four two-story homes within the immediate neighborhood and three outside of it, but within the Jamie Court cul-de-sac. In response to feedback from the Consulting Architect, the applicant successfully refined the project design by reducing the overall height of the proposed second-story addition from approximately 26 feet to 22 feet and additionally reconfiguring the main entrance and staircase by setting them back approximately three feet to address massing (Exhibit 7 and Exhibit 13, Sheet A12)

E. Tree Impacts

The subject property contains five protected trees, which will remain. Additionally, the applicant proposes planting 26 bamboo trees (15-gallon size) along the rear property line and along the west property line by the proposed second-story bedroom window. Furthermore, the project will not impact any trees on adjacent properties.

F. Parking

Pursuant to Section 29.10.150 (c)(1) of the Town Code, a single-family residence requires two on-site parking spaces. An existing attached two-car garage will remain to meet the minimum required parking spaces.

G. Neighbor Outreach

The applicant conducted neighbor outreach with the surrounding neighbors regarding the proposed project. A summary of their outreach efforts is included as Exhibit 12.

PUBLIC COMMENTS:

As required by Town policy, story poles and project signage were installed on the subject property prior to the mailing of notices for the public hearing. Written notice was sent to property owners and residents within 300 feet of the subject property. Public comments received by 11:00 a.m., Friday, November 6, 2026 are included in Exhibit 15.

ENVIRONMENTAL REVIEW:

The project is Categorically Exempt pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15301: Existing Facilities.

CONCLUSION:

A. Summary

The proposed project is in compliance with the Residential Design Guidelines and Town Code regulations. Two neighbors appealed the Community Development Director's decision to the Planning Commission. The appellants' concerns relate to mass, scale, and privacy, and they contend that the proposed height will reduce sunlight and that the bedroom window will adversely affect their privacy.

B. Recommendation

For the reasons stated in this report, it is recommended that the Planning Commission deny the appeals of the Community Development Director's decision approving a request to construct a second-story addition to an existing single-family residence on property zoned R-1:8, located at 100 Jamie Court as shown in Exhibit 13 and subject to the recommended Conditions of Approval included in Exhibit 3. The applicant submitted updated plans on October 14, 2026, in response to the concerns provided in the appeals (Exhibit 14). The Planning Commission may choose to incorporate all or portions of the revised plans as additional conditions of approval.

C. Alternatives

Alternatively, the Commission can:

1. Continue the matter to a date certain with specific direction;
2. Deny the appeals and approve the Minor Residential Development application with additional and/or modified conditions of approval; or
3. Grant the appeals and deny the Minor Residential Development application.

EXHIBITS:

1. Location Map
2. Required Findings
3. Recommended Conditions of Approval
4. Letter of Justification
5. 3D Rendering
6. Consulting Architect's Report, dated April 24, 2026
7. Applicant's Response to the Consulting Architect's Report, dated August 4, 2026
8. Appeal of the Director of Community Development, received October 1, 2026
9. Appellant’s Letter to Planning Commission, received October 1, 2026
10. Appeal of the Director of Community Development, received October 5, 2026
11. Applicant’s Response to Both Appeals, received October 14, 2026
12. Summary of Applicant’s Neighborhood Outreach
13. Approved Development Plans
14. Revised Development Plans, received October 14, 2026

100 Jamie Court

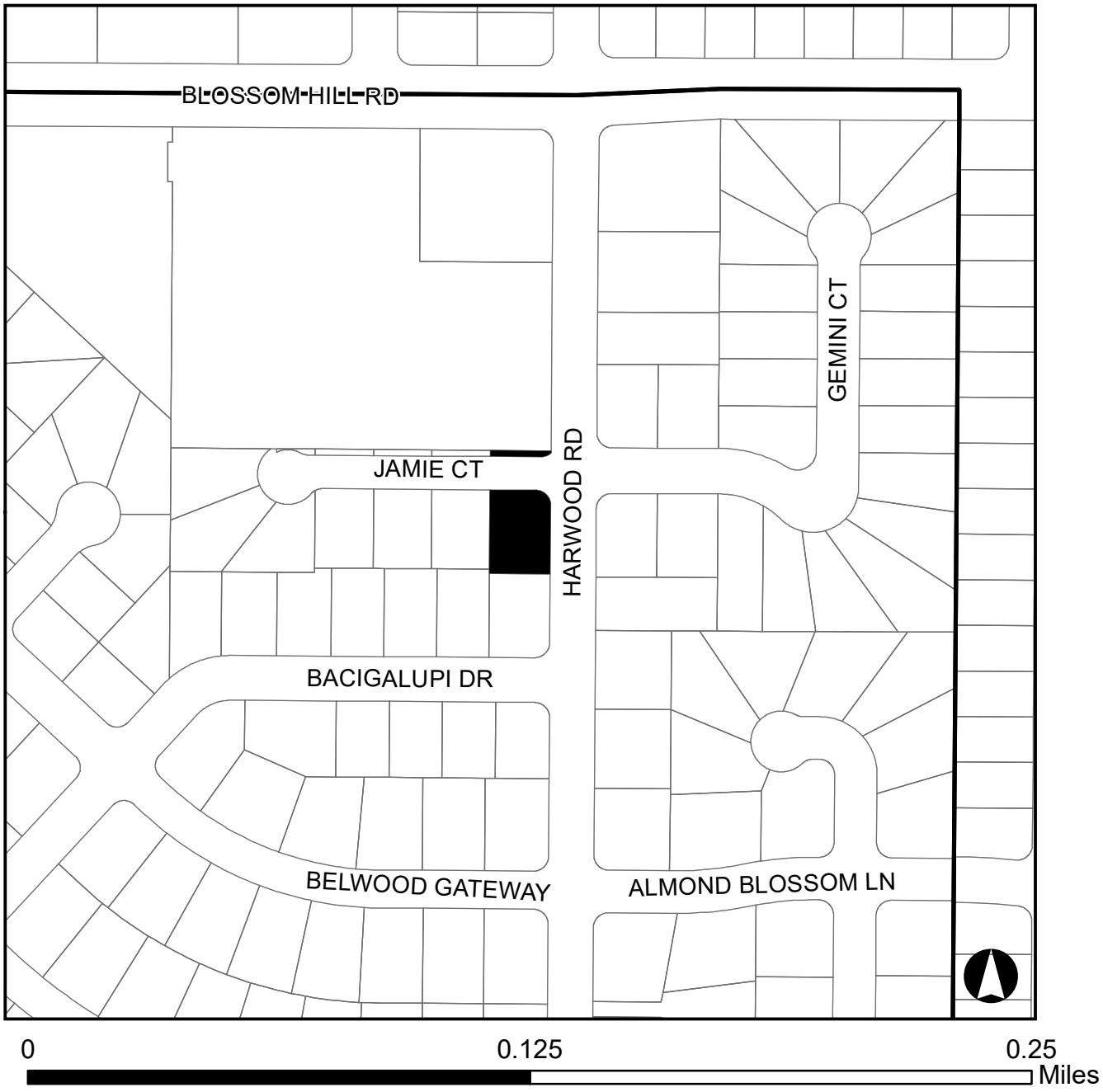


EXHIBIT 1

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PLANNING COMMISSION – *November 12, 2026*
REQUIRED FINDINGS FOR:

100 Jamie Court
Minor Residential Application MR-26-007

Consider an Appeal of a Community Development Director Decision to Approve Construction of a New Second-Story Addition to an Existing Single-Family Residence on Property Zoned R-1:8. APN 527-32-038. Categorically Exempt Pursuant to the California Environmental Quality Act, Section 15301: Existing Facilities.

Property Owners: Jaimin K Desai
Applicant: Duong Le
Appellant: Antonio J. and Georgia M. Ricco
Appellant: Mohammed Nazemi
Project Planner: Suray Nathan

FINDINGS

Required finding for CEQA:

- The project is Categorically Exempt pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15301: Existing Facilities.

Required compliance with the Zoning Regulations:

- The project meets the objective standards of Chapter 29 of the Town Code (Zoning Regulations).

Required compliance with the Residential Design Guidelines:

- The project is in compliance with the Residential Design Guidelines for single-family residences not located in hillside areas.

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PLANNING COMMISSION – *November 12, 2026*
DRAFT CONDITIONS OF APPROVAL:

100 Jamie Court
Minor Residential Application MR-26-007

Consider an Appeal of a Community Development Director Decision to Approve Construction of a New Second-Story Addition to an Existing Single-Family Residence on Property Zoned R-1:8. APN 527-32-038. Categorically Exempt Pursuant to the California Environmental Quality Act, Section 15301: Existing Facilities.

Property Owners: Jaimin K Desai
Applicant: Duong Le
Appellant: Antonio J. and Georgia M. Ricco
Appellant: Mohammed Nazemi
Project Planner: Suray Nathan

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, Development Review Committee, 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 floodlights shall be used unless it can be demonstrated that they are needed for safety or security.
4. FROSTED GLASS WINDOW: Prior to final building inspection, the second-floor south-facing bathroom window and the two second-floor west-facing clerestory windows shall be installed with obscured or frosted glass. This glazing shall be permanently maintained to ensure privacy for adjacent properties.
5. PRIVACY SCREENING VEGETATION: Privacy screening vegetation along the 80-foot rear property line shall be perpetually maintained at a minimum height of twelve (12) feet. Any dead, dying, or diseased vegetation shall be replaced in kind within thirty (30) days to ensure continuous compliance.
6. 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.
7. 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.
8. 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

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remain through all phases of construction. Include a tree protection plan with the construction plans.

9. TREE STAKING: All newly planted trees shall be double-staked using rubber tree ties.
10. FRONT YARD LANDSCAPE: Prior to issuance of a Certificate of Occupancy the front yard must be landscaped.
11. WATER EFFICIENCY LANDSCAPE ORDINANCE: The final landscape plan shall meet the Town of Los Gatos Water Conservation Ordinance or the State Water Efficient Landscape Ordinance, whichever is more restrictive. A review fee based on the current fee schedule adopted by the Town Council is required when working landscape and irrigation plans are submitted for review.
12. 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.
13. 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.
14. 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 Architecture and Site application.
15. COMPLIANCE MEMORANDUM: A memorandum shall be prepared and submitted with the building plans detailing how the Conditions of Approval will be addressed.

DRAFT

Project Description

100 Jamie Court, Los Gatos, CA 95032 Minor Residential Application MR-26-007

To: Suray R. Nathan, Assistant Planner — Town of Los Gatos Planning Division From: Jaimin K.

Desai & Khushbu S. Desai (Property Owners) Date: May 4, 2026

1. Project Overview

We are submitting this Project Description in support of our application to construct a second-story addition to our existing single-family residence at 100 Jamie Court, along with a first-floor reconfiguration that converts a portion of the existing footprint into an Accessory Dwelling Unit (ADU) under a separate ministerial permit.

100 Jamie Court has been our primary residence and we are committed to it as our long-term home. The proposed renovation is not a speculative project — it is the work we need to do to keep our family in this neighborhood for the next 20+ years. We have been deeply invested in this community: our children attend Noddin Elementary School, we have personally donated to the Los Gatos school district, and we are active in the broader Los Gatos community life.

Beyond the formal community institutions, we have built a small community of our own within this neighborhood — close, day-to-day relationships with the families on Jamie Court and the surrounding streets. Our children grew up alongside their kids, our households share meals and milestones, and our daily lives are woven into this specific block. That community is one of the central reasons we are choosing to invest in renovating this home rather than moving elsewhere.

2. Why This Renovation Is Necessary

Our family's needs have meaningfully outgrown the existing home. Three drivers shape this project: Multigenerational living and care for aging parents. Khushbu's parents live with us full-time, and as they age they need a self-contained environment with privacy, accessibility, and the dignity of their own space — while still being under the same roof so we can provide care. The ADU we are proposing on the first floor is designed specifically for this purpose: it allows our family to age in place together, which is the housing pattern California's recent ADU and multigenerational-housing policies have explicitly encouraged.

A growing family with full-time work-from-home needs. Like many households in Los Gatos, both of us regularly work from home, and our children need bedrooms and study space that the existing footprint cannot provide. The current layout forces compromises that are not sustainable for the long horizon we are planning around.

A long-term commitment to this property and community. We are not renovating to sell. We are renovating because we want this house to be the home our family lives in, ages in, and welcomes extended family in for the next two decades. Every design decision in our application is filtered through that horizon.

3. Why a Second Story (Rather than Ground-Floor-Only Expansion)

A ground-floor-only expansion is not a viable alternative for our parcel for two reasons:

R-1:8 setback constraints. The R-1:8 zoning district requires 25 ft front, 8 ft side, 15 ft street-side, and 20 ft rear setbacks. Given the existing footprint of 100 Jamie Court relative to its lot lines, the buildable ground-floor envelope cannot absorb the additional square footage needed for both the family expansion and the ADU. The setbacks effectively force any meaningful expansion to go vertical.

Preservation of outdoor space. Even if a sliver of ground-floor expansion were possible within the setbacks, doing so would substantially consume the rear yard — outdoor space that our aging parents, our children, and the household more broadly use every day. Building up rather than out is the design choice that preserves the livability of the lot.

A second-floor addition is, on this parcel, the only path that simultaneously delivers the needed interior space, accommodates the ADU for Khushbu's parents, and protects the outdoor environment that our family depends on.

4. Privacy standards and guidelines

Rather than creating a sheer two-story wall, the second floor is substantially set back from the ground-floor wall line **(30'-5" vs 20'-0")**, reducing perceived visual bulk from the adjacent properties and street.

5. Height Profile

Keeping the peak roof height at **22'-0"** provides a gentle transition between single-story and two-story structures in the immediate area. The proposed home is not the highest structure in the neighborhood. The tallest structure is across the street (102 JAMIE |2 story|) at **25’-5”**.

6. Privacy-Conscious Orientation

Pushing active second-story spaces (like the balcony) inward ensures the design respects the scale, solar access, and privacy expectations of the surrounding neighborhood context.

7. Closing

We are committed to delivering a home that fits this neighborhood, supports our multigenerational family — including the day-to-day care of Khushbu's aging parents — and reflects the long-term investment we are making in 100 Jamie Court. Our companion Letter of Justification (submitted alongside this Project Description) addresses neighborhood compatibility, height, privacy, and Residential Design Guidelines compliance in detail.

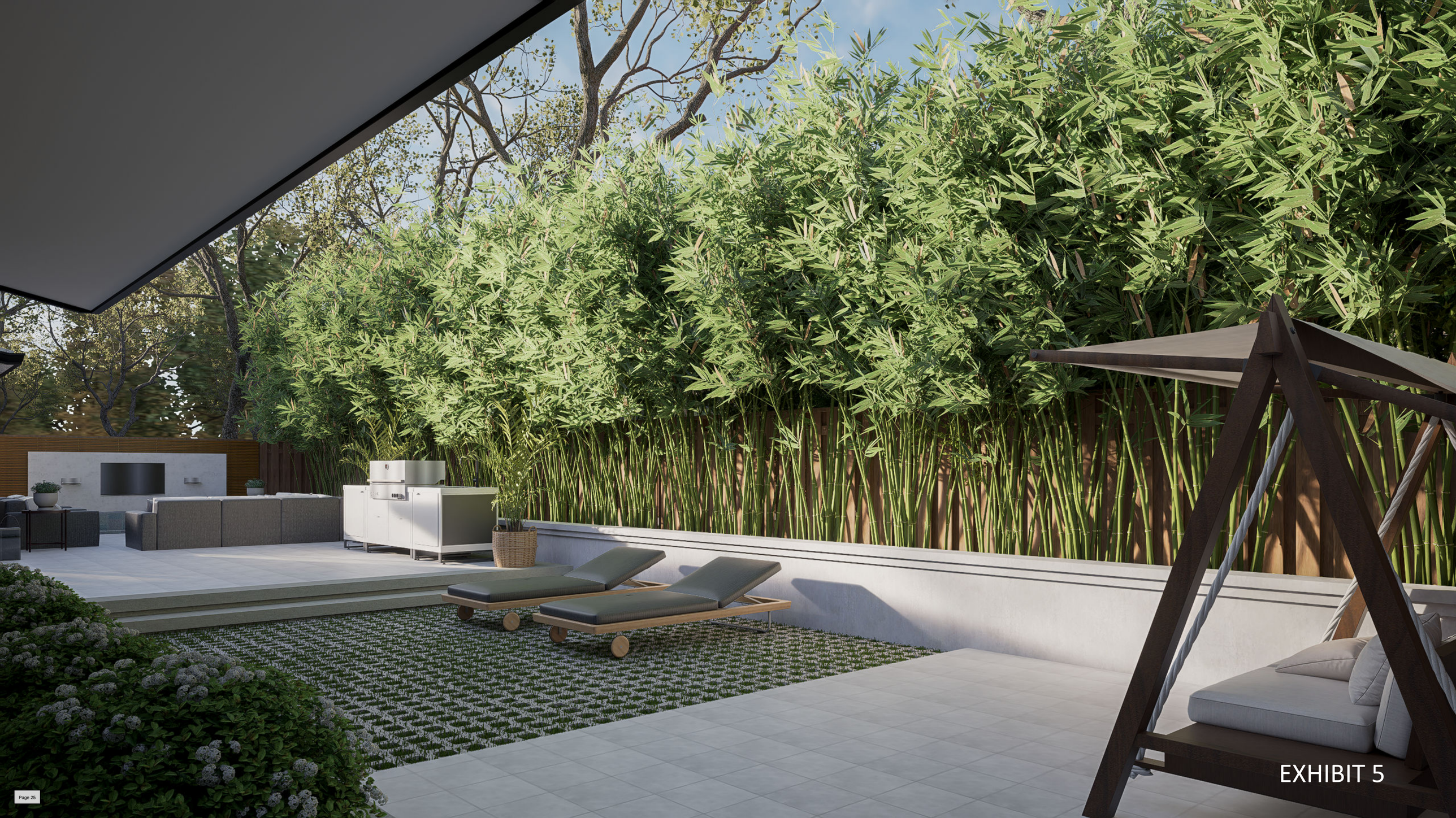
We are happy to meet with the Planning Division or the Consulting Architect to walk through any of this in person.

Thank you for your continued review of our application.

Sincerely,

Jaimin K. Desai Khushbu S. Desai Property Owners — 100 Jamie Court, Los Gatos, CA 9503

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EXHIBIT 5





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CDG
CANNON
DESIGN
GROUP

ARCHITECTURE PLANNING URBAN DESIGN

April 24, 2026

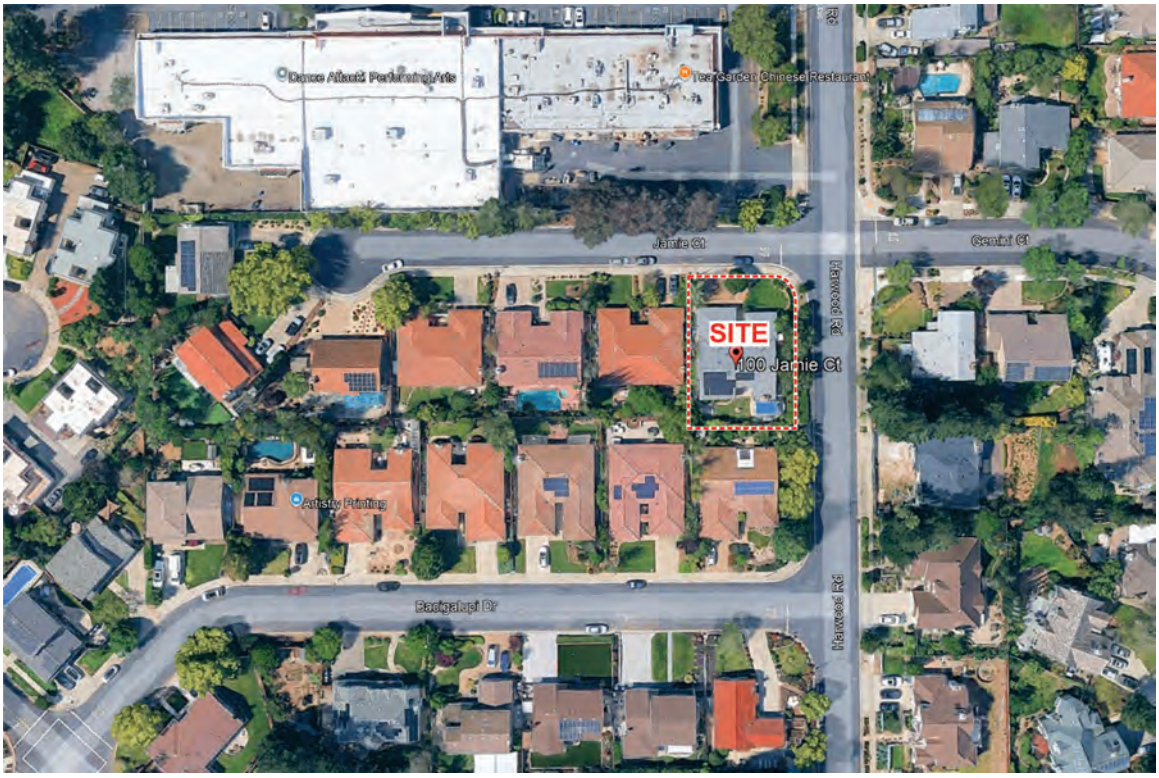
Mr. Suray Nathan
Community Development Department
Town of Los Gatos
110 E. Main Street
Los Gatos, CA 95031

RE: 100 Jamie Court

Dear Suray:

I reviewed the drawings and evaluated the neighborhood context. My comments and recommendations on the design are as follows:

NEIGHBORHOOD CONTEXT
The site is located in an established neighborhood of one story traditional homes. Photos of the site and its surrounding neighborhood are shown on the following page.



6729 FAIRFIELD DRIVE
SANTA ROSA, CA 95409

TEL: (707) 843-5747
CDGPLAN@PACBELL.NET



THE SITE



THE EXISTING HOME



House immediately to the right

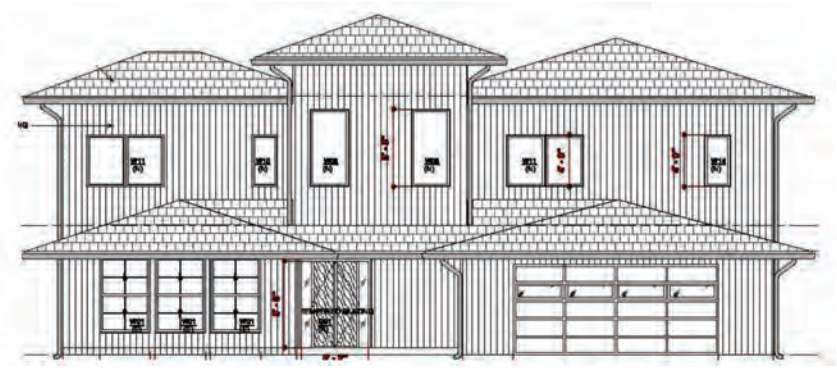


Commercial development across Jamie Court



Nearby one story homes to the right

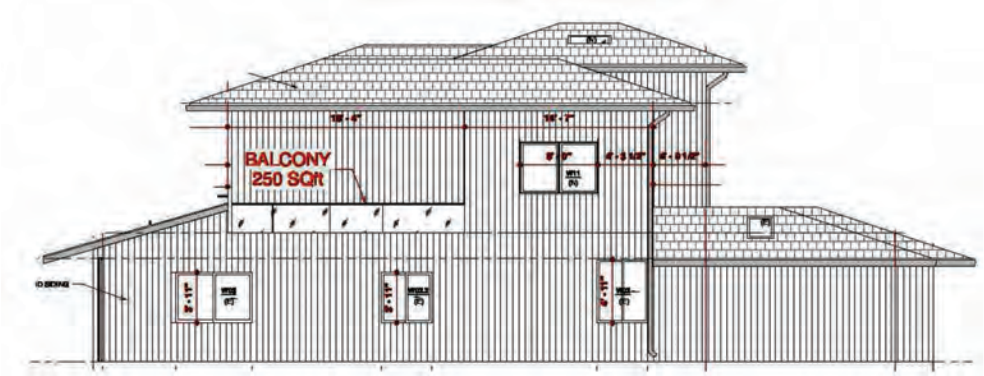
PROPOSED PROJECT



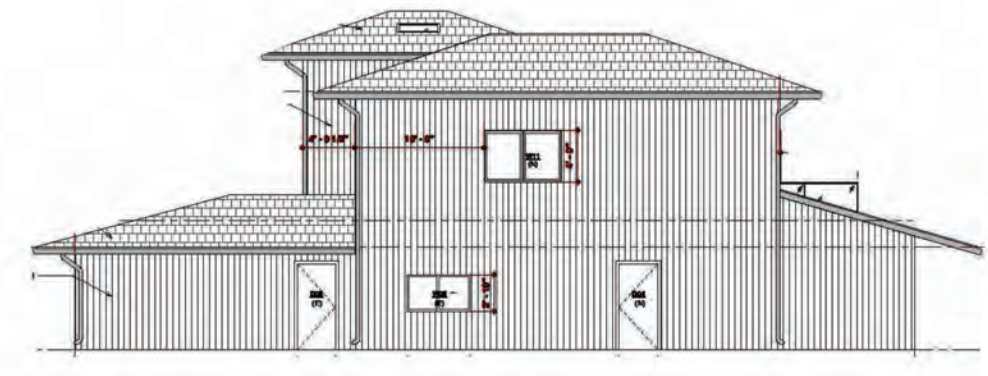
Front elevation



Rear elevation



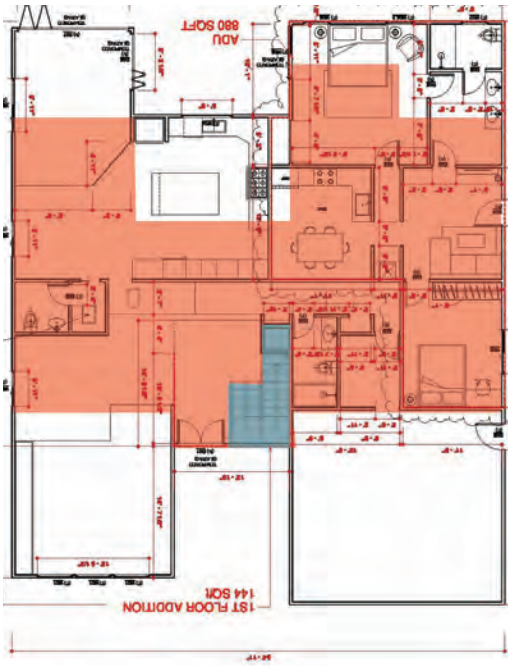
Left side elevation



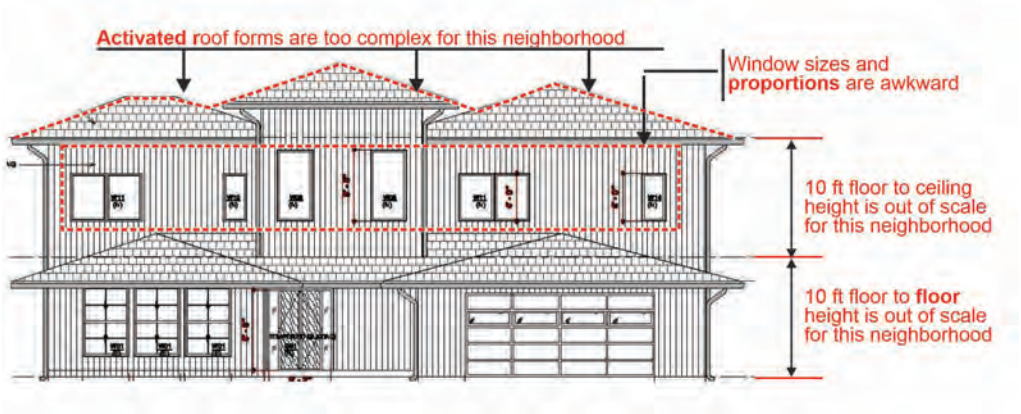
Right side elevation

ISSUES AND CONCERNS

The immediate neighborhood for this project consists primarily of one story homes. The size of the proposed second floor addition is substantial - see illustration below of second floor profile superimposed on the existing homes' footprint.



The Town of Los Gatos Residential Design Guidelines place a very high priority on neighborhood compatability and many of the individual guidelines address that issue. Overall, the proposed addition is too tall and too complex to blend with the other homes in its immediate neighborhood. It would be inconsistent with several Residential Design Guidelines.



1. The proposed addition would not be consistent with Residential Design Guidelines 2.3.1, 2.3.6, 3.3.1, 3.3.3, and 3.5.2.

2.3.1 Design two story houses in predominantly one story neighborhoods to blend with the smaller homes.

Two-story houses may not be appropriate for every neighborhood. For neighborhoods dominated by one story homes, an effort should be made to limit the house to one-story in height or to accommodated second floor space within the existing roof. If a two-story house is proposed in this type of a neighborhood, the house shall be designed to blend with the smaller homes.

2.3.6 Locate second floor mass to minimize impacts on the streetscape and adjacent neighbors

- *In one story neighborhoods, place additions at grade level behind the existing house whenever possible.*
- *Place second story mass in locations appropriate to the height of adjacent homes.*

3.3.1 Develop the house plans and elevations together

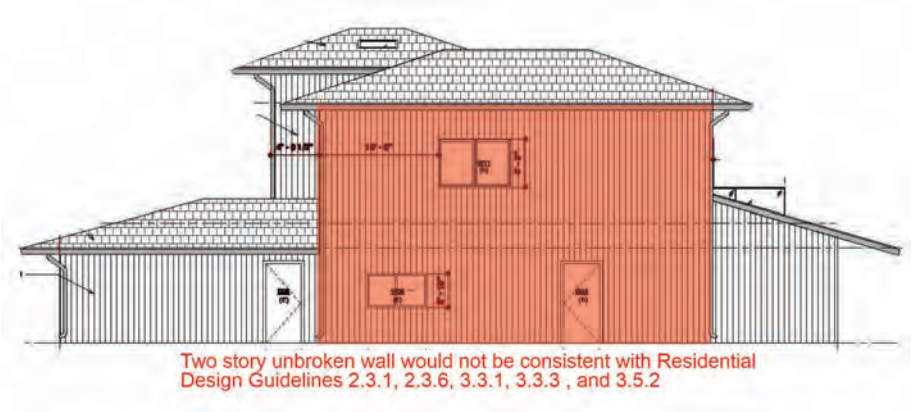
- *Avoid complex floor plans that require complicated building mass and roof forms.*
- *Work within the traditional forms of the architectural style selected. Unless the architectural style selected clearly supports substantial complexity, generally keep building massing and roof forms simple as is the norm for traditional architecture.*
- *Avoid complex second floor plans and roof forms if that is not the norm for the neighborhood.*

3.3.3 Provide visual relief for two story walls

Some techniques include:

- *Belly bands*
- *Pop outs and bay windows*
- *Material and color changes*
- *Chimneys*
- *Wide overhangs with projecting brackets*
- *Juliet balconies*
- *Window boxes and pot shelves*
- *Landscaped trellises and lattices*

- *Avoid multiple floor plan pop outs that produce multiple roof gables. … Arrange windows in patterns and groupings consistent with the architectural style and surrounding neighborhood*
  - *Many architectural styles have individual windows that are grouped into patterns of two, three or more windows. Be conscious of this fact, and organize the windows to complement the style.*



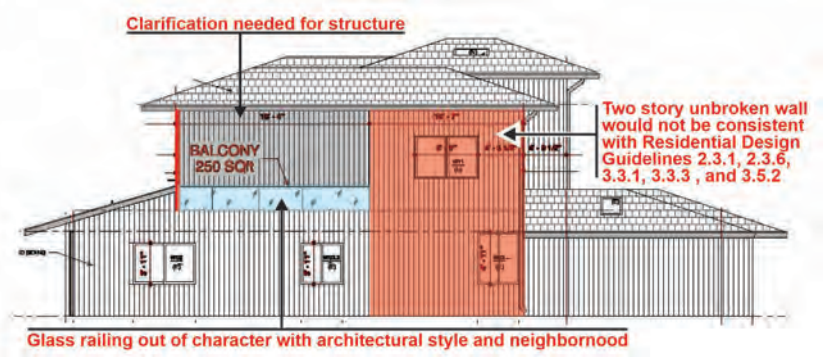
3.5.2 Avoid excessive roof form complexity

- *Avoid multiple floor plan pop outs that produce multiple roof gables. Where roof eave variation is desired, consider vertical wall extensions and dormer roofs, as shown in the example below.*

2, The proposed balconies are not well integrated into the architectural style of the home.

3. The existing house windows appear to have trim around the windows as is common in this neighborhood but the drawings so not show trim on any of the windows. They would not be consistent with Residential Design Guidelines 3.7.2 and 3.7.4.

3.7.2 Match window types and proportions to the architectural style and to the surrounding neighborhood

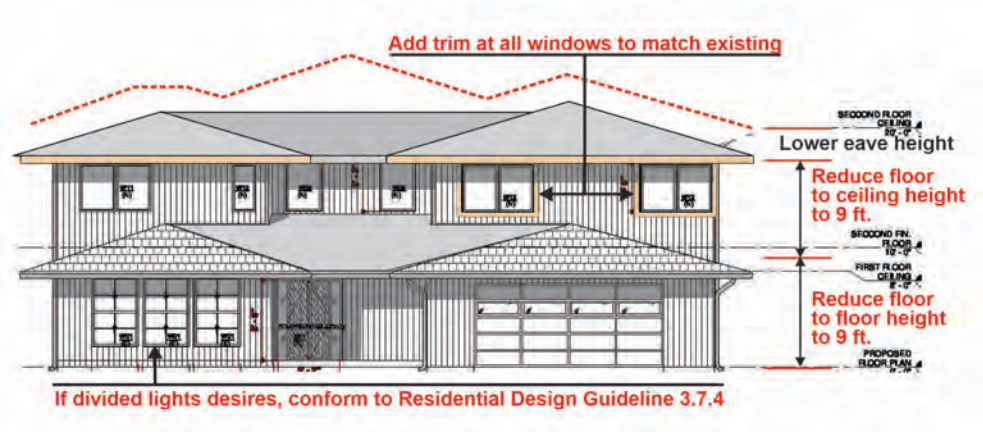


- *Select window types to complement the style of the house. Each architectural style generally has one or two window types that are traditional to the style. ...*
- *Limit the number of different window types and proportions to enhance the visual unity of the house design.*
- *For second floor additions to existing homes, match the windows on the original first floor.*

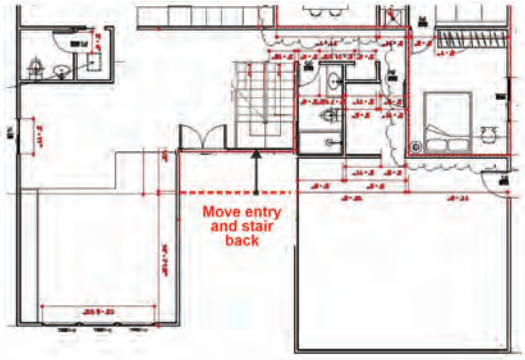
3.7.4 Design the windows with attention to matching the traditional details of the architectural style

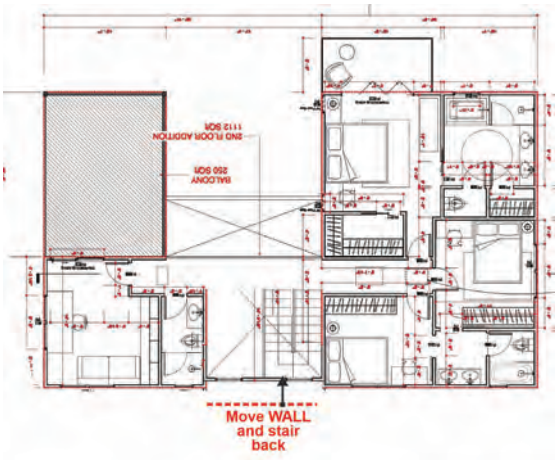
- *Most architectural styles - except Mission, Spanish Eclectic or Modern - should have wood trim around the windows. The trim width should be matched to the style, but in general, should not be less than 3 1/2 inches wide. Head trim depth should be equal to or wider than the jamb casing, but not less than one-sixth of the opening width.*
- *Projecting window sills and heads are strongly encouraged unless the architectural style would not normally have those features.*
- *Divided lights (i.e., larger window panes broken up into smaller pieces) are common in many home styles found in Los Gatos. Use either vertical or square proportions for the smaller window elements. Be consistent in the proportions (i.e., the ratio of the horizontal to the vertical dimension) of the smaller panes. Do not use snap in flat grids to simulate divided lights. Use either true divided lights or one of the newer window systems that have dimensional muntins on both the exterior and interior of the glass along with a spacer muntin between the panes of glass. Use consistently for windows on all sides of the house.*

RECOMMENDATIONS

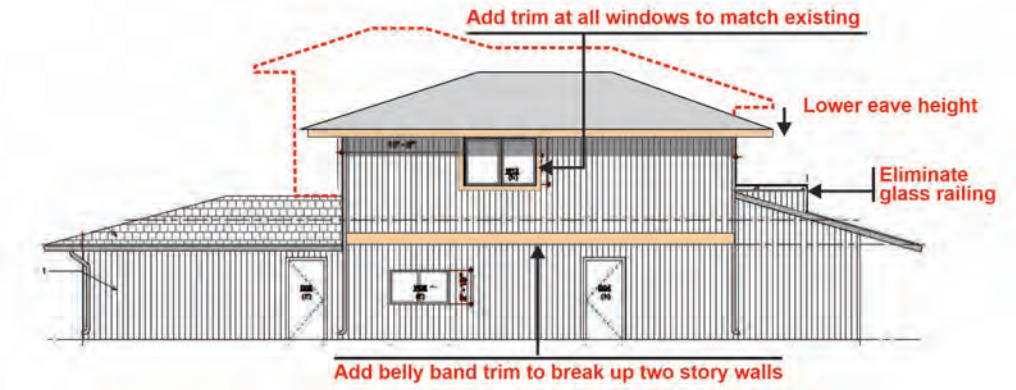


1 Simplify the second floor plan and massing and move entry and stair back.

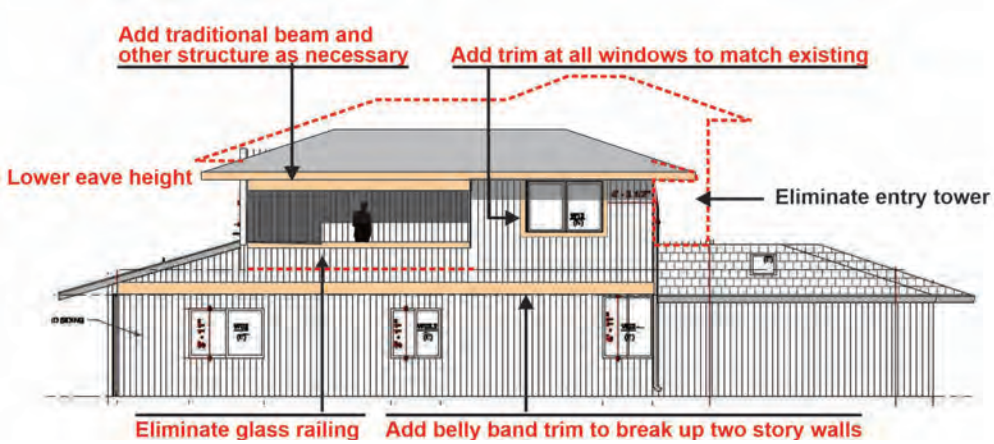




2.. Lower the first floor to second floor height to 9 feet and the second floor to ceiling height to 9 feet to be more in scale with other homes in the immediate neighborhood.



3. Add trim to all windows to match existing.



4. Add belly band trim on two story walls.
5. Revise the balcony railing to blend with the proposed architectural style.
6. Add traditional beam and other structure at side balcony as necessary.

Suray, please let me know if you have any questions or if there are any issues that I did not address.

Sincerely,
CANNON DESIGN GROUP

Larry L. Cannon

100 Jamie Court -Minor Residential Application MR-26-007

1. ARCHITECT RECOMMENDATION:
    1. Simplify the second floor plan and massing, and move entry and stair back.
    We simplified the second floor plan and massing by reducing the overall height from 26ft to 22ft, and reconfigured the entrance and staircase back by ~3 ft.
    The applicant incorporated the recommendation.
    2. Lower the first floor to second floor height to 9 feet and the second floor to ceiling height to 9 feet to be more in scale with other homes in the immediate neighborhood.
    We lowered the first floor to second floor height to 9ft and the second floor to ceiling height to 9ft as recommended to be more in scale with other homes in the immediate neighborhood.

    The overall height is now 22ft. The adjacent structure West of the proposed home is 16ft; across the street East of the proposed home is 25ft.
    The applicant incorporated the recommendation.
    3. Add trim to all windows to match existing.
    We added wooden trim to all windows to match the existing windows.
    The applicant incorporated the recommendation.
    4. Add belly band trim on two-story walls.
    We added wooden belly band trim on two-story walls to visually separate the number of stories.
    The applicant incorporated the recommendation.
    5. Revise the balcony railing to blend with the proposed architectural style.
    We revised the street-facing balcony from glass railing to a 3 ft 6 in high wall with wooden siding like the exterior walls to blend in with the proposed architectural style.

    And removed the rear bedroom balcony to preserve the rear neighbor's privacy.
    The applicant incorporated the recommendation.
    6. Add traditional beam and other structures at side balcony as necessary.
    We added a traditional beam at the side balcony to support the large opening facing the street.

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TOWN OF LOS GATOS
COMMUNITY DEVELOPMENT DEPARTMENT

110 E. Main Street
Los Gatos, CA 95030

BPD-3595

PAID
OCT 01 2026
TOWN OF LOS GATOS

APPEAL OF THE DECISION OF
DIRECTOR OF COMMUNITY DEVELOPMENT

PLEASE TYPE or PRINT NEATLY

I, the undersigned, do hereby appeal a decision of the DIRECTOR OF COMMUNITY DEVELOPMENT as follows:

DATE OF DECISION: September 25, 2026

PROJECT/APPLICATION: MR-26-007

LOCATION: 100 Jamie Court

Pursuant to the Town Code, any interested person as defined in Section 29.10.020 may appeal to the Planning Commission any decision of the Director.

Interested person means:

1. *Residential projects*. Any person or persons or entity or entities who own property or reside within 1,000 feet of a property for which a decision has been rendered, and can demonstrate that their property will be injured by the decision.
2. *Non-residential and mixed-use projects*. Any person or persons or entity or entities who can demonstrate that their property will be injured by the decision.

LIST REASONS WHY THE APPEAL SHOULD BE GRANTED:

1. Mass/Scale Incompatibility. A 3650 sq ft, 2-story home is proposed in a neighborhood block of closely spaced 2400 sq ft, 1-story homes.

2. Loss of Light and Sky View: Impacts yard and 4 rooms of [redacted] (kitchen, office, family room, primary bedroom).

3. Privacy Intrusions: Direct view from proposed balcony opening & bedroom windows downward into neighbors' family room and patio / dining area.

IMPORTANT:

1. Appeal must be filed not more than ten (10) days after the decision is rendered by the Director of Community Development. If the tenth (10th) day is a Saturday, Sunday, or Town holiday, then the appeal may be filed on the workday immediately following the tenth (10th) day. Appeals are due by 4:00 P.M. ***If an appeal is filed on a Friday, they must be submitted by 1:00 P.M.***
2. The appeal shall be set for the first regular meeting of the Planning Commission which the business of the Planning Commission will permit, more than five (5) days after the date of the filing of the appeal. The Planning Commission may hear the matter anew and render a new decision in the matter.
3. You will be notified, in writing, of the appeal date.
4. Contact the project planner to determine what material is required to be submitted for the public hearing.

RETURN APPEAL FORM TO COMMUNITY DEVELOPMENT DEPARTMENT

PRINT NAME: Antonio J. and Georgia M. Ricco

SIGNATURE: Antonio J Ricco / Georgia M Ricco

DATE: October 1, 2026

ADDRESS: [redacted]

PHONE: [redacted]

EMAIL: [redacted]

****

OFFICE USE ONLY

DATE OF PLANNING COMMISSION HEARING: _____

COMMISSION ACTION:
1. _____ DATE: _____
2. _____ DATE: _____
3. _____ DATE: _____

PLAPPEAL $ 277.00 Residential
PLAPPEAL $ 1,105.00 Commercial
PLAPPEAL $ 112.00 Tree Appeals

N:\DEV\FORMS\Planning\2026-27 Forms\Appeals\Appeal - Director

06/2026

EXHIBIT 8

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[redacted]
Los Gatos, CA 95032

September 28, 2026

To: Los Gatos Town Planning Commission
Subject: Supplementary supporting information for **Appeal** of **100 Jamie Court,** Minor Residential Application **MR-26-007**

Without disputing or doubting our neighbors' desire, rationale, and reasoning for wishing to expand their home, we object to this project on the grounds that the project plan is itself ill conceived, poorly executed, and inappropriate for the location and circumstances of their home. Had we been asked, our advice would have been to look over a period of months for a larger home in this neighborhood; turnover here has been significant in recent years, and there are often larger homes on the market. This approach would likely be more expedient and probably less expensive than a major expansion, even if a number of months of searching were required.

We first learned of the project from a neighbor, who saw it online, and noticed around this time that the residents of 100 Jamie Ct. had vacated their home; we also observed excavation around portions of their existing foundation, which we learned was yet to be permitted. Only later did we encounter our neighbors one afternoon, entirely by chance, on a walk through the neighborhood, at which point they informed us of their "small" project. Our concerns, guided by the *R-1 Residential Design Guidelines*, are as follows:

1. Neighborhood Incompatibility: Mass, Scale, and Character. The modified floor plan would place a **3650 square foot** (indoor living space) **2-story** home among a cluster of 9 single-story homes with an average living-space area of under **2400 sq. ft**. This immediate cluster of nine homes displays consistent, single-story local neighborhood character with similar overall architectural design and visual unity. Outside the immediate cluster, nearby two-story homes all feature larger lot sizes and **deeper setbacks to compensate for their greater massing and height**. The plan appears inconsistent with the Residential Design Guidelines' requirement to respect the immediate architectural context, height, and scale of surrounding homes.
2. Loss of Light and Sky View to 4 of Our Habitable Rooms and Yard. Due to the proximity of our properties, the new roofline and limited balcony/bedroom setback along our northern exposure will significantly obstruct the amount of natural light and our view of the open sky in our backyard and **in four major living spaces of our home**: the home office, family room, kitchen, and primary bedroom. The *Residential Design Guidelines* mention that there should be protection from **unreasonable natural light deprivation**.
3. Privacy Intrusions from proposed Windows and Balcony.
    a. An expanse of 2nd story, clear-glass bedroom windows, 9 ft wide x 4 ft tall, directly overlooks our patio, our outdoor dining table, the path to/from our hot tub, and provides a view directly into our family room (see photo, ***"View from INSIDE family room"***).
    b. Our neighbors' and our abutting backyards are just 20 feet from structural walls to the shared property line. With the 10-ft planned setback of the balcony and its opening's 5 ft sill height, this proximity enables an adult viewer over 5 ft 5" tall (or a curious child on a chair) to see much of our backyard and look directly into the windows of our family room. A scaled diagram, below, shows the relevant sight lines. Comparing it to a diagram

EXHIBIT 9

copied from Secn. 3.11.2 of the LGRG, further below, illustrates that the proposed development duplicates **precisely what the Guidelines state should NOT be done.**

c. Using bamboo to remedy the privacy intrusions is highly unsatisfactory, a non-permanent solution to a permanent problem. The proposed (non-invasive) species typically grows to 30 ft in height if not pruned; this would obscure our sky view and remove significant indirect lighting from 4 of our rooms (see below). Another common behavior of bamboo is to die – leaving no privacy screen. We were told by staff that either problem could be addressed by reporting a code violation. We find it a **fantastic and unrealistic assumption that a combination of our neighbors' gardeners' diligence and our own repeated calls to report code violations will provide durable, reliable privacy screen.**

4. Potential solutions. While we do not presume to know how our neighbors may wish to modify their project, our own thoughts, as well as discussions with staff (Sean and Suray), led to a couple of ideas we offer here, hoping they might lead to a more mutually agreeable plan.

   a. *Solution 1.* Initiate a comprehensive search, over the course of months, in the immediate neighborhood for a larger home that meets the growing family's needs.

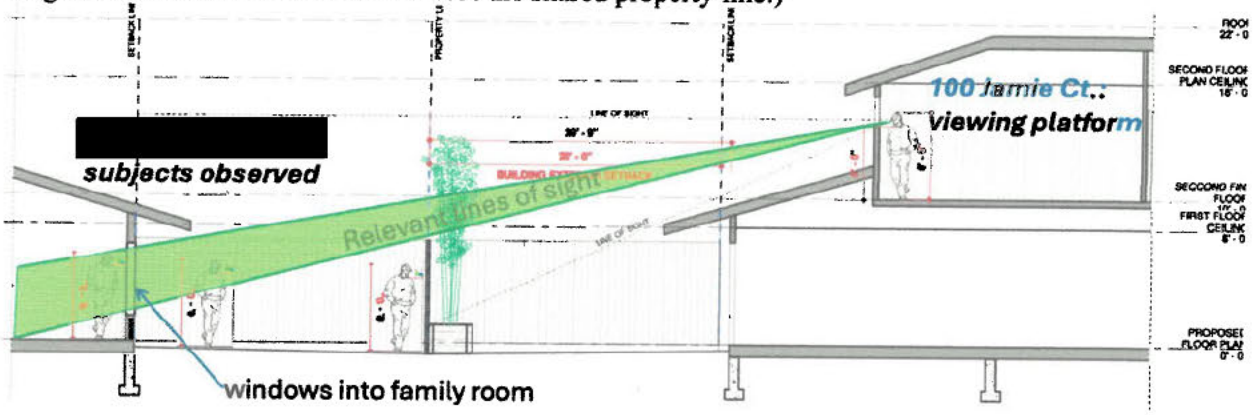
   b. *Solution 2.* Consider an architectural reconfiguration to **shift the focus** of important window areas **from the south and west** (backyard neighbors' yard and next-door neighbors' windows) **toward the north and east: there are no immediate neighbors** in those directions.

   c. *Solution 3 (Potentially in concert with Solution 2).* Increase the current 10-ft setback of the 2nd floor significantly, using space above the north-side ground-floor rooms and garage, to change the sight lines (we imagine structural enhancements could be needed to support this). Combine with a request for a code variance for a taller fence-plus-lattice: **with the larger setback, a total height of about 10 ft.** could address privacy concerns by changing sight lines without the bamboo fantasy.

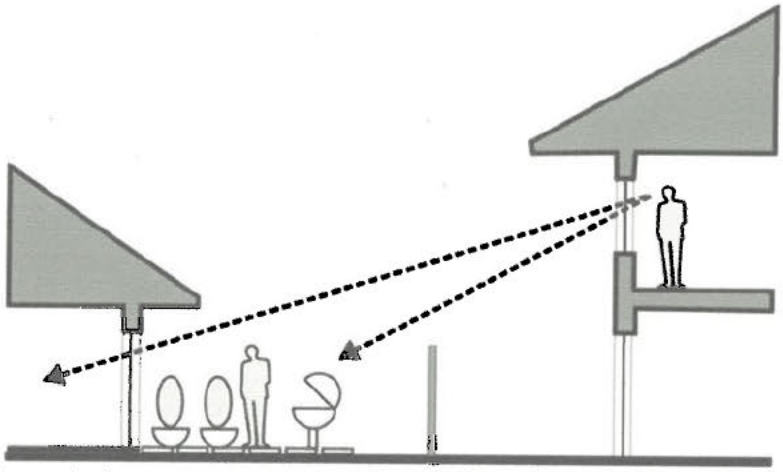
   d. *Solution 4.* If the balcony and bedroom are to retain their planned locations and limited setbacks, the south-facing balcony opening should be eliminated (note: the east-facing side is fully open). Also, the south-facing bedroom windows should be mostly moved to the east-facing wall, where they would look into the occupants' own patio, rather than that of their neighbors. Any windows still on the south wall should be clerestory to provide light without overlook.

Invitation to Members of the Planning Commission: We are aware that Planning Commission members may choose to visit the site of the project, and are happy to invite them, individually or in one or more groups, to arrange to **view the site from our backyard to best understand the implications, layout, proximity, and potential impact.** To do so, please contact us at the email or mobile phone numbers at the bottom of this memo.

SHOWN BELOW: Sight lines from 100 Jamie Ct proposed balcony currently look directly into family room of [redacted] (Diagram was scaled from the online project plans and the respective heights and distances of the homes from the shared property line.)



Drawing and caption, below, from the Los Gatos Residential Guidelines. Note similarities to our actual situation.



Avoid placing windows in locations that would look into adjacent neighbors' windows or active private yard spaces.



ABOVE: View from INSIDE the family room of [redacted], showing how the proposed balcony (to be located above chimney at right) and the proposed bedroom windows (upper left) have views directly into our home.



***ABOVE:** View from patio of [redacted] looking to the north towards existing roofline of 100 Jamie Ct., showing story poles and netting.*

Sincerely yours,

[redacted]

[redacted]

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TOWN OF LOS GATOS
COMMUNITY DEVELOPMENT DEPARTMENT

110 E. Main Street
Los Gatos, CA 95030

RECEIVED
TOWN OF LOS GATOS
OCT 05 2026
CLERK DEPARTMENT

PAID
BPD 4022
OCT 05 2026
TOWN OF LOS GATOS

APPEAL OF THE DECISION OF DIRECTOR OF COMMUNITY DEVELOPMENT

PLEASE TYPE or PRINT NEATLY

I, the undersigned, do hereby appeal a decision of the DIRECTOR OF COMMUNITY DEVELOPMENT as follows:

DATE OF DECISION: 09/25/2026

PROJECT/APPLICATION: MR-26-007

LOCATION: 100 Jamie Ct

Pursuant to the Town Code, any interested person as defined in Section 29.10.020 may appeal to the Planning Commission any decision of the Director.

Interested person means:

1. *Residential projects.* Any person or persons or entity or entities who own property or reside within 1,000 feet of a property for which a decision has been rendered, and can demonstrate that their property will be injured by the decision.
2. *Non-residential and mixed-use projects.* Any person or persons or entity or entities who can demonstrate that their property will be injured by the decision.

LIST REASONS WHY THE APPEAL SHOULD BE GRANTED:

We were given misinformation regarding the project, stating no windows would face our property from the second floor addition, which looks into both our yard and house including the family room and a bathroom. We value our privacy very much. The owners of the project are reportedly changing the design to address this; however, the documents were not provided by the appeal deadline. Additionally, the scale and size of the project seem out of place in the street, especially considering the lot size.

IMPORTANT:

1. Appeal must be filed not more than ten (10) days after the decision is rendered by the Director of Community Development. If the tenth (10th) day is a Saturday, Sunday, or Town holiday, then the appeal may be filed on the workday immediately following the tenth (10th) day. Appeals are due by 4:00 P.M. ***If an appeal is filed on a Friday, they must be submitted by 1:00 P.M.***
2. The appeal shall be set for the first regular meeting of the Planning Commission which the business of the Planning Commission will permit, more than five (5) days after the date of the filing of the appeal. The Planning Commission may hear the matter anew and render a new decision in the matter.
3. You will be notified, in writing, of the appeal date.
4. Contact the project planner to determine what material is required to be submitted for the public hearing.

RETURN APPEAL FORM TO COMMUNITY DEVELOPMENT DEPARTMENT

PRINT NAME: Mohammed Nazemi SIGNATURE: [redacted]

DATE: 10/05/2026 ADDRESS: [redacted]

PHONE: [redacted] EMAIL: [redacted]

****

OFFICE USE ONLY

DATE OF PLANNING COMMISSION HEARING: _____

COMMISSION ACTION:
1. _____ DATE: _____
2. _____ DATE: _____
3. _____ DATE: _____

PLAPPEAL $ 277.00 Residential
PLAPPEAL $ 1,105.00 Commercial
PLAPPEAL $ 112.00 Tree Appeals

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Property Owners' Response to Appeal: 100 Jamie Court, Minor Residential Application MR-26-007

Oct 5, 2026 · @Jaimin K Desai

To: Town of Los Gatos Planning Commission, c/o Suray Nathan, Assistant Planner

From: Jaimin and Khushbu Desai, owners, 100 Jamie Court

Re: Appeal of the Director's approval of MR-26-007

Dear Commissioners and Mr. Nathan,

Thank you for the opportunity to respond. We value our rear neighbors and have taken their concerns seriously throughout the review. Since we spoke with them in June 2026, the design has been refined through the Town's design review, including the Consulting Architect's recommendations: the roof was lowered about 4 feet, the balcony railing was replaced with solid walls, and a planted privacy screen was added along our shared fence.

Like our neighbors, we want a mutually agreeable plan. To that end, we are taking two further steps in response to the appeal:

1. **Remove the rear balcony window.** As the appeal's Solution 4 proposes, the opening in the balcony's rear wall facing the appellants' home will be eliminated, and that wall will be fully solid. The balcony's only opening will then face east, over our own side yard and away from their home.
2. **Build a taller fence with lattice in place of the bamboo, if the Town approves it.** The appeal's Solution 3 suggests a fence with lattice about 10 ft tall along the shared property line. We propose a fence with lattice up to about 10 ft along that line, in place of the 21 bamboo plants there. If the Town approves that height, we will build it; if not, the planted screen described in Section 4 remains.

We also explored moving the primary bedroom window to the east wall, facing our own yard, and that was our first choice. However, the roofline on that side of the bedroom makes it physically impossible to relocate a window of this size there. The screening along our shared fence addresses that window instead, as described in Section 4.

We are revising the plans to show these changes and the screening specification in Section 4, and will submit the revised sheets to the Town shortly.

Compliance with Town standards and guidance

The project complies with the applicable Town Code standards, is consistent with the Residential Design Guidelines, and includes each study the Town's review process calls for. Following that review, the Community Development Director issued a Notice of Pending Approval on September 15, 2026.

Standard or requirement	How the project complies	Where shown
R 1:8 height limit (30 ft)	22′ 5″, measured from the most restrictive grade as the Town Code requires; 30 ft height line shown on all elevations and sections	A11, A12, A13
R 1:8 setbacks (front 25 ft, sides 8 ft, street side 15 ft, rear 20 ft)	All met; required setbacks drawn on the site plans; second floor 30′ 4″ and balcony 30′ 5″ from the rear line	A5.2, A8.2, A12.7
ADU	Created within the existing first floor; processed under a separate ministerial permit, as ADU law provides	All sheets, A7.2
Consulting Architect recommendations	Plate heights lowered to 9 ft (ridge lowered about 4 ft), window trim, belly band, balcony railing replaced with solid walls, and beam added, as recommended	A11, A12
Residential Design Guidelines 2.3.1 and 2.3.6	Second story designed to blend and placed to limit impacts on neighbors (Section 2)	A12.1, A12.6
Residential Design Guidelines 2.5.2 and 3.11 (privacy)	Sight-line section prepared per these guidelines; solid balcony walls; frosted rear bathroom window; privacy screening matrix	A12.7, A12.9

Standard or requirement	How the project complies	Where shown
Shadow study	Prepared to the Town standard: June 21 and December 21 at 9 am, noon and 3 pm, with adjacent structures	A12.8
Streetscape	Prepared to the Town's submittal standard, with heights and number of stories of neighboring homes	A12.1
Story poles	Installed and certified by a licensed surveyor	Submitted Sept 11, 2026

Corrections to the record

Several measurements in the appeal differ from the submitted plans. For accuracy:

The appeal states	The plans show	Where shown
A "3650 square foot (indoor living space)" home	2,776 sf of living area in the house; the 880 sf ADU is a separate unit under a separate ministerial permit	A0, A7.2
"The 10-ft planned setback of the balcony"	30′-5″ from the shared property line, 10′ 5″ beyond the required 20 ft rear setback	A7, A12.7
"The current 10-ft setback of the 2nd floor"	The second floor is set back 30′-4″ from the shared property line, more than 10 ft beyond the required 20-ft rear setback	A8.2, A12.7
A "limited balcony/bedroom setback"	Balcony at 30′-5″; rear bedrooms at 30′-4″	A8.2, A12.7
Views through the balcony opening's "5 ft sill"	The opening will be removed; the rear balcony wall will be fully solid	Revised A12, A12.7

Our response to each point in the appeal follows.

1. Proposal that we purchase another home

The appeal's first proposed solution is that we search, "over the course of months," for a larger home in the neighborhood. Whether to improve a home or move is the owner's decision; the question before the Commission is whether this project meets the Town's zoning standards and Residential Design Guidelines. 100 Jamie Court is our long-term home, and the project, including the ground-floor ADU for family members, is designed for that. We ask that it be evaluated, as any application would be, against those standards.

2. Mass and scale

The appeal describes a 3,650 sf two-story home among 2,400 sf one-story homes.

- **Floor area.** The 3,650 sf figure includes an 880 sf ADU, created within the existing first floor and processed under a separate ministerial permit. The house itself is 2,776 sf of living area, and the first-floor footprint grows by 62 sf.
- **Design refinements during review.** Following the Consulting Architect's recommendations, we lowered the first-to-second-floor height and the second-floor plate to 9 ft each. This brought the ridge down from about 26′-2″ to 22′-0″ (22′-5″ measured from the most restrictive grade), well under the 30-ft limit. We also added window trim and a belly band, replaced the balcony railing with solid walls, and added the recommended beam.
- **Placement of the second floor.** The second floor does not cover the full first floor. Its rear wall is set back 30′-4″ from the shared property line, more than 10 ft beyond the required 20-ft rear setback, and the balcony is set back 30′-5″.
- **Context.** The streetscape (Figure 1) shows two-story homes at 102 and 106 Gemini Court at 25′-5″ and 25′-0″, both taller than our proposed 22′-5″. The appeal notes that nearby two-story homes have deeper setbacks; this project meets every R-1:8 setback, its second floor is set back 30′-4″ from the rear property line (more than 10 ft beyond the 20 ft required), and it is lower than those homes.
- **Story poles** certified by a licensed surveyor have been in place since September, so the actual height and outline can be seen on site.

Together, these changes respond to Residential Design Guidelines 2.3.1 and 2.3.6, which ask that a second story in a mostly one-story area be designed to blend with its neighbors and placed to limit impacts on them.

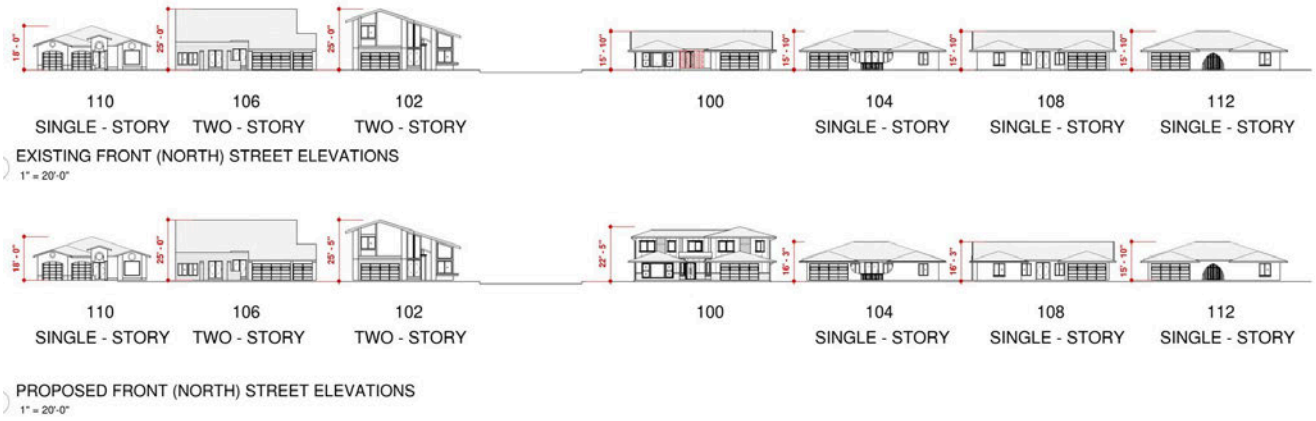


Figure 1. Sheet A12.1, existing (top) and proposed (bottom) streetscape.

3. Light and sky view

The appeal states the addition would reduce light to the yard and four rooms of the appellants' home: the kitchen, office, family room and primary bedroom.

- **Orientation.** The appellants' home is directly south of ours, and our rear elevation faces south toward it. The sun rises in the east and sets in the west, but in Los Gatos it arcs through the southern sky, and at midday it is always due south. A building therefore casts its shadow to the north for most of the day, and most strongly in winter, when the sun is lowest. Shadows from our addition fall across our own lot and toward Jamie Court, away from their home and yard.
- **The rooms named in the appeal.** Because their home is south of ours, these rooms face north, toward our property. Their home's direct sunlight comes from the south, on the opposite side from our addition, and is not affected by it.
- **Shadow study.** Sheet A12.8 follows the Town's standard: June 21 and December 21, at 9 am, noon and 3 pm, with adjacent structures shown. It shows the addition's shadow does not reach the appellants' property, including at the low winter sun of December 21. The appeal's concern about natural light deprivation under the Residential Design Guidelines is therefore not borne out: the addition casts no shadow on their home or yard (Figures 2 and 3).
- **Sky view.** The appeal places their home about 20 ft from the shared property line, and our second floor is set back 30′-4″ from it, so the two are about 50 ft apart: more than the 40 ft of separation the R-1:8 rear setbacks are designed to provide between neighboring homes. The addition is 22′-5″ tall, well under the 30-ft limit, and its hipped roof slopes away from the shared property line.

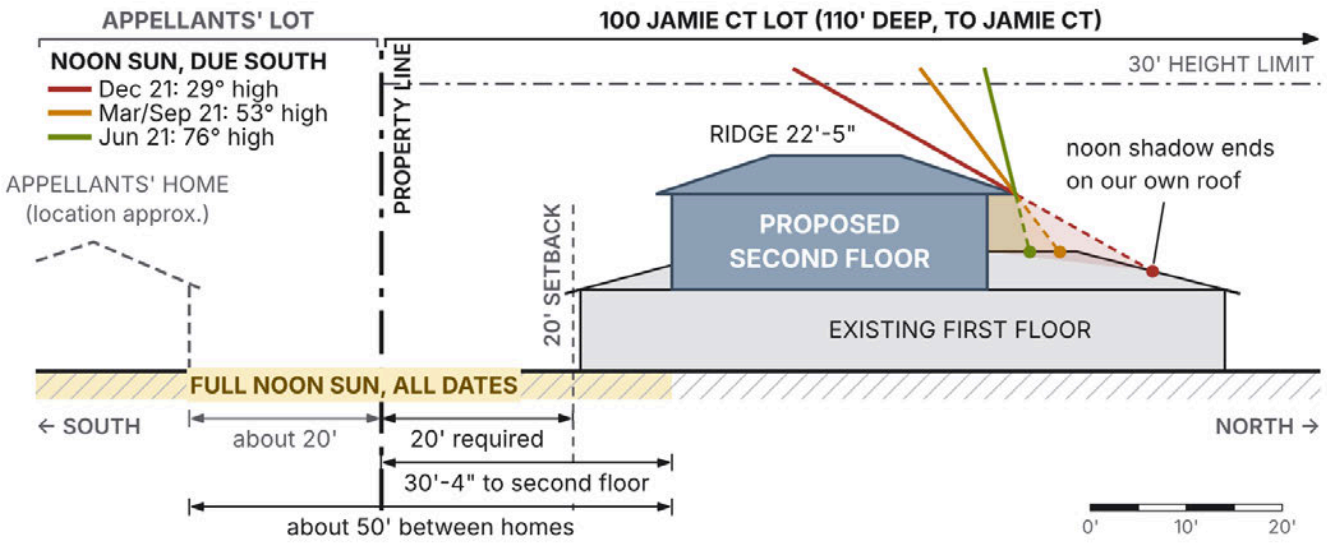


Figure 2. Section through both lots, looking west, to scale. At noon the sun is always due south, so the addition's shadow falls north. On every date, including December 21 when the sun is lowest, that shadow ends on our own first-floor roof. Everything south of the second floor, including our rear yard and the appellants' lot, is in full sun at noon. Dimensions from Sheets A8.2, A11 and A12.7; first-floor roof simplified; location of the appellants' home approximate.

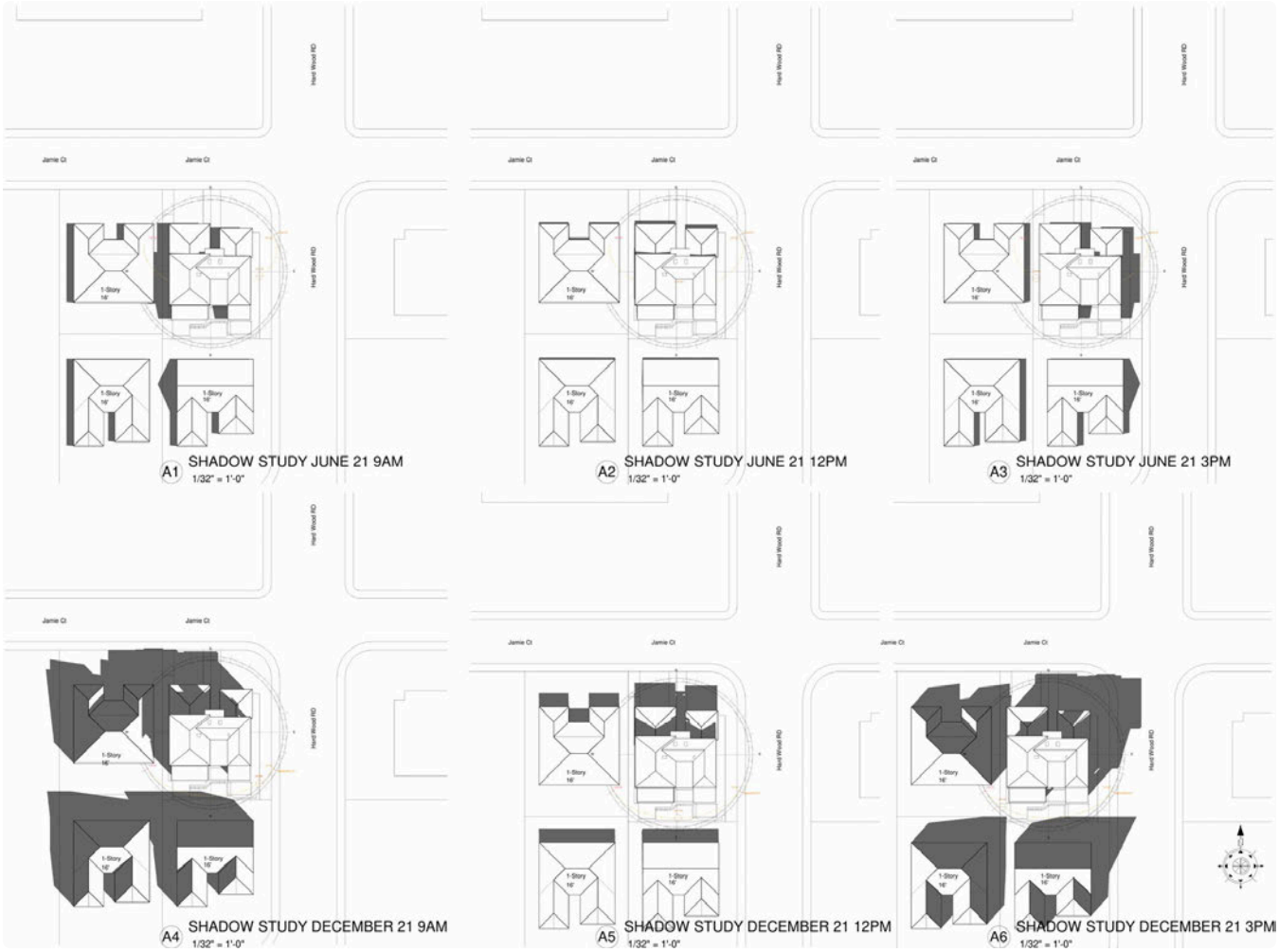


Figure 3. Sheet A12.8 shadow study, June 21 (top) and December 21 (bottom) at 9 am, noon and 3 pm. North is up; the appellants' lot is directly south of ours.

4. Privacy

The appeal is concerned about views from the balcony opening and bedroom windows toward the family room, patio, outdoor dining area and hot-tub path of the appellants' home.

Balcony. As described above, and as the appeal's Solution 4 proposes, we will remove the rear balcony window. The wall facing the appellants' home will be fully solid, with no window, glazing or opening of any kind. The appeal's sight-line diagram, and the Residential Design Guidelines 3.11.2 illustration it cites, both depend on a view through that opening; with the opening removed, that view no longer exists. The balcony's only remaining opening faces east, over our own side yard; Solution 4 notes that opening and asks only that the south-facing one be removed. See Figures 4 and 5.

Windows. The rear bedroom windows, including the primary bedroom window cited in the appeal, are set back 30′-4″ from the shared property line, about 50 ft from the appellants' home and more than the separation the R-1:8 rear setbacks provide. Screening runs along the full south fence between those windows and the appellants' yard. Using the appeal's own figure of about 20 ft from their home to the shared property line, a line of sight from standing eye level in those bedrooms down to their patio, outdoor dining area or hot-tub path passes below the top of that screening, whether the taller fence proposed above or the 12-ft planted screen, so the screening blocks those views from the day it is installed.

The appeal's other window and setback suggestions.

- **Solution 2** asks that window areas shift from the south and west toward the north and east. Facing the appellants' home, the setback and screening described above meet its privacy goal.
- **Solution 3** asks that the second floor's "current 10-ft setback" be increased. The second floor is already set back 30′-4″ from the shared property line, more than 10 ft beyond the required 20 ft. Its taller fence is the one we propose above.
- **Solution 4** asks that the south bedroom windows move to the east wall and that any remaining south windows be clerestory, "to provide light without overlook." As noted above, the roofline does not allow the primary bedroom window to move to the east wall. The same goal is met another way: the rear bathroom window is frosted, and the screening blocks the bedroom window's view down into their yard.

Taller fence. As proposed above, if the Town approves a fence with lattice up to about 10 ft along the south property line, as the appeal's Solution 3 suggests, we will build it in place of the 21 bamboo plants along that line. The 5 plants along the west fence would remain. If the Town does not approve that height, the planted screen described below remains as shown on the plans.

Planted screen. The plans include 26 Bambusa textilis 'Gracilis', a clumping, non-running bamboo: 21 along the full south fence facing the appellants' yard and 5 along the west fence (Figure 6). The specification:

- 15-gallon plants, about 12 ft tall at planting
- each row set in a continuous HDPE root barrier, 60-mil thick and 30 inches deep, fully on our side of the property line, so the roots stay in our yard
- drip irrigation
- maintained at a height of no more than 14 ft, so it screens the rear yard without growing tall enough to affect the neighbors' sky view, with any plant that does not survive replaced within one planting season

The appeal raises three concerns about the bamboo: that it could grow to 30 ft, that plants could die, and that its upkeep would depend on neighbor complaints. If the taller fence is approved, it replaces the bamboo along the shared property line, and these concerns no longer apply there. Otherwise, the specification above answers each: a maintained height limit well below 30 ft, replacement of any plant that does not survive, and a standing commitment by us as owners to maintain it. Either way, the screening supplements, rather than replaces, the permanent architectural measures: the solid balcony walls, the setbacks and the frosted bathroom window.

These measures meet Residential Design Guidelines 2.5.2 and 3.11, as documented in the sight-line section on Sheet A12.7.

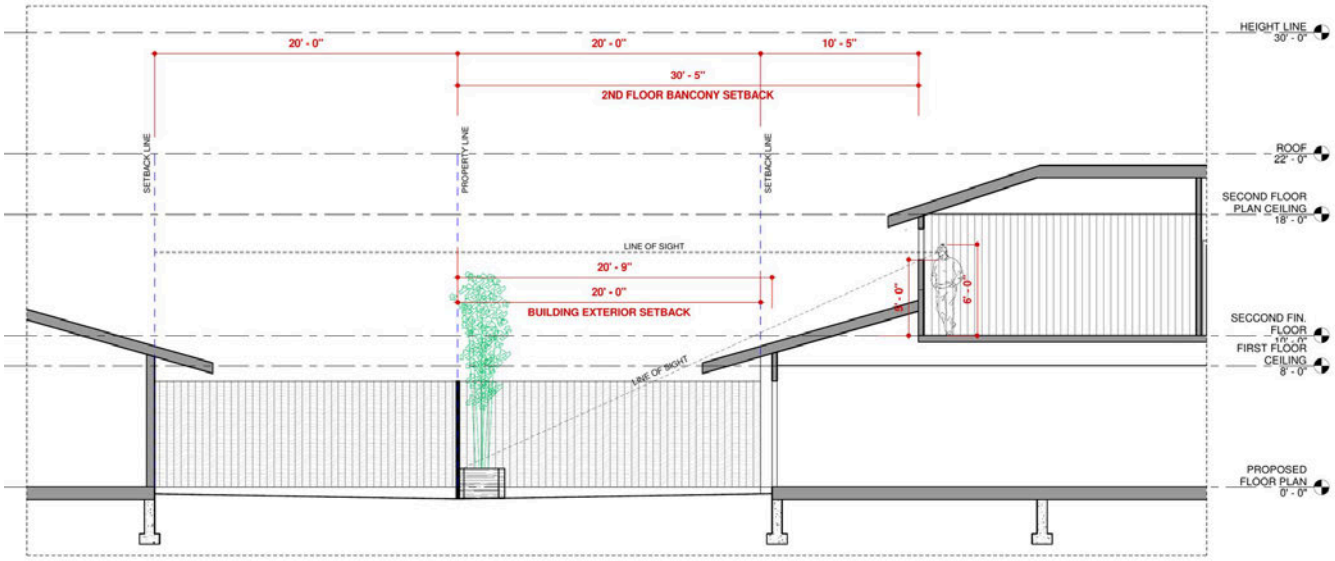


Figure 4. Sheet A12.7, sight line from the balcony toward the rear property line. As submitted September 25; the revised sheet shows the rear wall as solid.

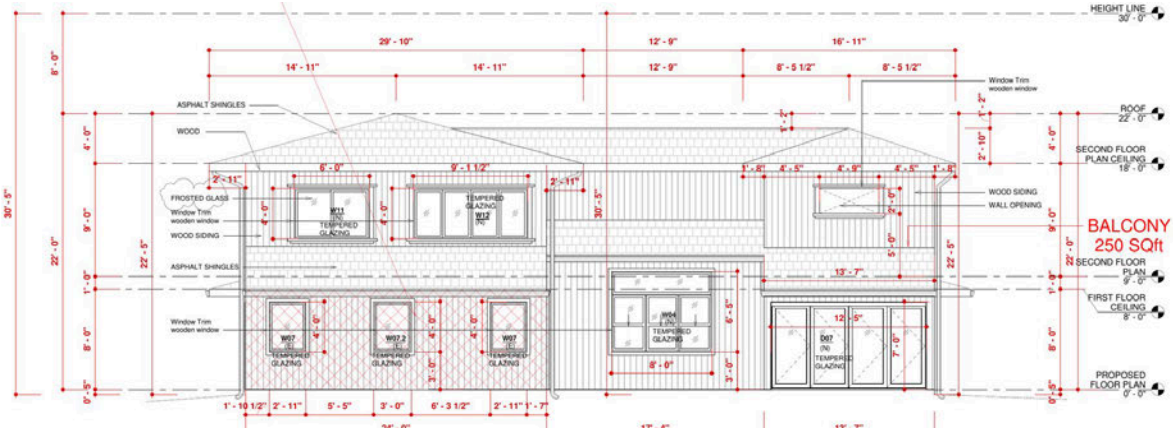


Figure 5. Sheet A12, rear (south) elevation: frosted bathroom window at left; balcony opening at right, which will be removed.

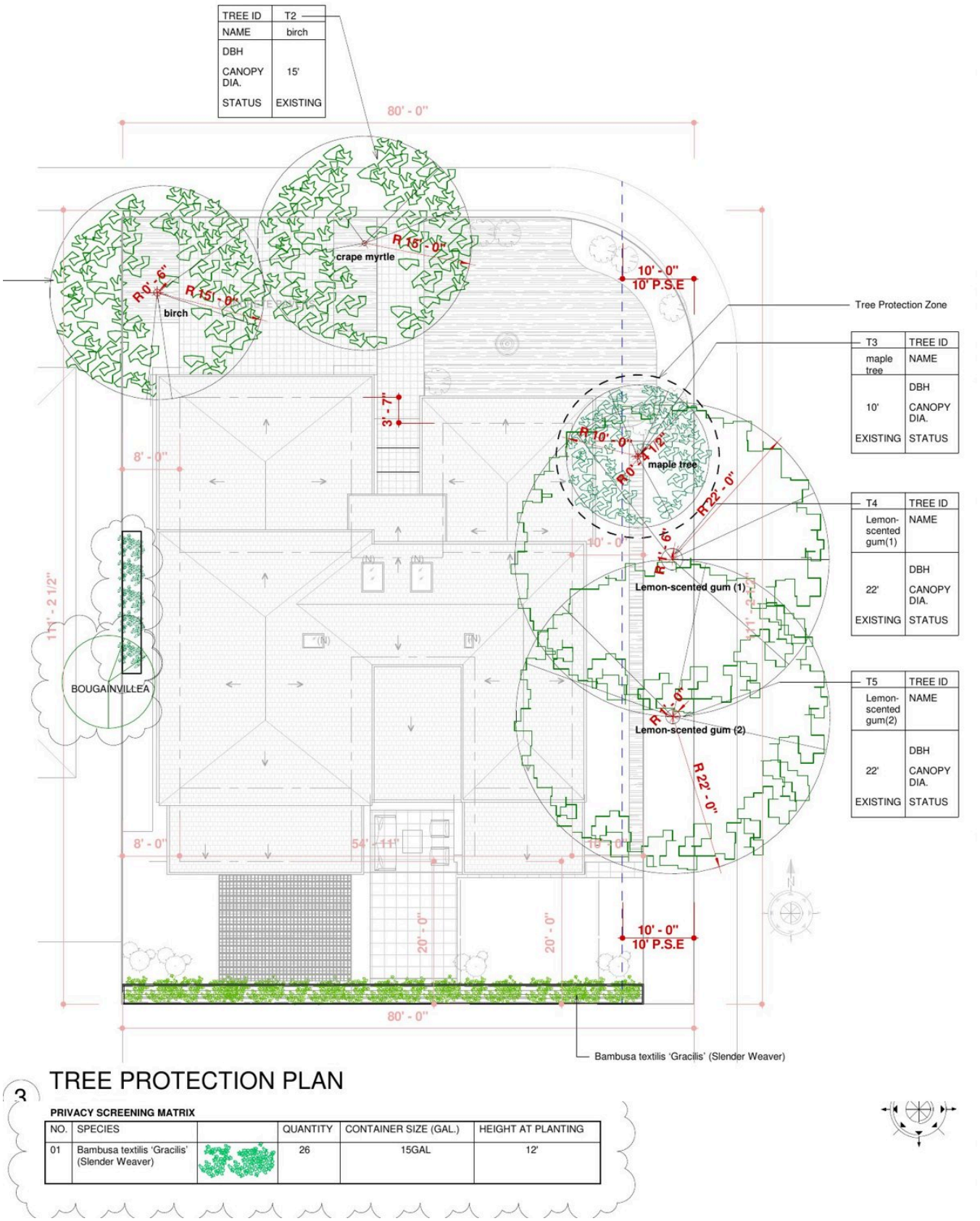


Figure 6. Sheet A12.9, screening along the south and west fences, with the screening matrix.

Requested action

We hope these revisions resolve the concerns raised without the need for a hearing. If the appeal proceeds, we respectfully ask the Planning Commission to deny it and uphold the Director's approval of MR-26-007, as shown in our revised plans, including the solid rear balcony wall described above.

We welcome Commissioners to visit the site, where surveyor-certified story poles are in place, and we remain glad to walk our neighbors through these changes.

Sincerely,

Jaimin and Khushbu Desai 100 Jamie Court, Los Gatos, CA 95032 [redacted]

Property Owners' Response to Second Appeal: 100 Jamie Court, Minor Residential Application MR-26-007

Oct 14, 2026 · @Jaimin K Desai

To: Town of Los Gatos Planning Commission, c/o Suray Nathan, Assistant Planner

From: Jaimin and Khushbu Desai, owners, 100 Jamie Court

Re: Second appeal of the Director's approval of MR-26-007 (appellants at 104 Jamie Court)

Dear Commissioners and Mr. Nathan,

Thank you for the opportunity to respond to the appeal from our neighbors at 104 Jamie Court.

We respect and value our neighbors, and we want them to be comfortable with the home we are building next to theirs. When they first shared their concern about privacy, we reached out to them directly, listened to what mattered most to them, and discussed possible solutions together. Our goal throughout has been a solution that works for both families.

Based on those conversations, we have addressed their privacy concerns by reconfiguring the second-floor bedroom layout and the window placement facing their home. The attached revised plans reflect these changes.

We hope these revisions resolve their concerns without the need for a hearing. We remain glad to walk our neighbors through the revised plans and to continue working with them as the project moves forward.

Sincerely,

Jaimin and Khushbu Desai 100 Jamie Court, Los Gatos, CA 95032 jaiminkdesai@gmail.com

Neighbor Outreach Submission

Application MR-26-007 | June 29, 2026

Property: 100 Jamie Court, Los Gatos, CA 95032
Owner: Jaimin K. and Khushbu S. Desai
Submitted to: Suray R. Nathan, Assistant Planner — Town of Los Gatos Planning Division
Outreach period: June 8 – 29, 2026

Family Context

> Our household consists of 8 family members: Jaimin, Khushbu, our children, and our parents who will be living with us permanently. This is a multigenerational family home. The addition is a necessity to accommodate our extended family under one roof — not a discretionary upgrade.
>
> *This directly addresses the neighbor concern about why additional space is needed beyond the current 4-bedroom configuration.*

Outreach Summary

The table below summarizes all neighbors on the Town's notification list and their outreach status:

Name	Address	Status
[redacted]	[redacted]	**Extremely Supportive — Formal Endorsement**
Occupant	[redacted]	**Extremely Supportive**
[redacted]	[redacted]	**Extremely Supportive**
[redacted]	[redacted]	**Extremely Supportive**
[redacted]	[redacted]	**Extremely Supportive**
[redacted]	[redacted]	**Concerns Raised**
[redacted]	[redacted]	**Extremely Supportive**
Occupant	[redacted]	**No answer, attempted**
[redacted]	[redacted]	**Out-of-area, unreachable**
[redacted]	[redacted]	**Extremely Supportive**
[redacted]	[redacted]	**No answer, multiple attempts**
[redacted]	[redacted]	**Extremely Supportive**

Neighbor Concerns — Analysis and Response

One neighbor ([redacted]) raised concerns both verbally and via formal letter. The table below categorizes each concern and summarizes how it has been addressed — or why it falls outside the scope of planning review.

Concern Raised	Type	Status / Response
"Just buy a new house instead"	**Personal opinion**	Not a planning criterion. Outside scope of Town review.
"You already have 4 bedrooms"	**Personal opinion**	Not a planning criterion. Family space needs are a private matter.
"Why didn't you plan ahead 5 years ago?"	**Personal opinion**	Not a planning criterion. Outside scope of Town review.
Children's afternoon noise	**Personal opinion**	Not a planning criterion. Unrelated to construction or design.
8 family members on small lot is too crowded	**Personal opinion**	Not a planning criterion. Family living arrangements are private. The addition is specifically designed to address the space needs of this multigenerational household.
Balcony overlooking rear backyard	**Planning concern**	ADDRESSED: Bedroom balcony removed entirely — replaced with windows. Remaining balcony enclosed with solid walls on both sides facing neighbors; open face toward main road only. Taller fence on rear boundary.
Ceiling height / sky view obstruction	**Planning concern**	ADDRESSED: Height reduced ~3-4 ft per Consulting Architect guidance. Net increase over existing ceiling height is ~2 ft. Sun path (east-west) is unaffected — backyards are north/south facing.
Second-story setback from rear boundary	**Planning concern**	EXCEEDED: Second story is 30 ft from rear boundary — 10 ft beyond the required 20 ft R-1:8 setback. Built into the design from the start. Second floor also does not cover full first-floor footprint.
Construction nuisance (temporary)	**General concern**	ACKNOWLEDGED: Will adhere to Town-permitted hours. Proactive neighbor communication planned throughout build.

Summary: Of the 8 concerns raised, 4 are personal lifestyle opinions not subject to planning review. The remaining 4 — all legitimate planning and design matters — have been proactively addressed in the current design.

---

a. Neighbors Spoken To

1. [redacted]

Date: June 2026 | Response: Extremely Supportive — Formal Written Endorsement

Expressed they would miss us during the renovation but fully support our growing family needs. Believes the updated home will be a positive addition to the neighborhood. Has offered a formal written endorsement of the project.

2. [redacted]

Date: June 2026 | Response: Extremely Supportive

Expressed warmth about our family's growing needs and full support for how the updated home will benefit the neighborhood.

3. [redacted]

Date: June 2026 | Response: Extremely Supportive

Acknowledged they would miss us during the renovation and expressed full support for the addition as a natural response to our family's needs.

4. [redacted]

Date: June 2026 | Response: Extremely Supportive

Voiced strong encouragement for the project and its benefit to both our family and the neighborhood.

5. [redacted]

Date: June 2026 | Response: Extremely Supportive

Expressed support for the addition and noted that updated housing benefits the neighborhood overall.

Common theme across all supportive neighbors:

"We will miss you while you are away renovating, but we fully support your growing family's needs and believe the updated home will make the neighborhood better."

---

6. [redacted]

Date: June 2026 | Response: Concerns Raised (formal letter also submitted to Town)

Personal / lifestyle opinions (not planning criteria):

- Suggested we consider purchasing a new home rather than adding on
- Questioned why we need additional space given our current 4-bedroom configuration
- Asked why we did not anticipate needing more space when we purchased the home 5 years ago
- Noted that our young children occasionally create noise during afternoon hours

We respect their perspective on these personal matters, though we note these fall outside the Town's planning and design criteria.

Planning concerns and our design responses:

i. Balcony privacy and second-story setback

- **Second-story footprint:** Deliberately pushed as far as possible from the shared rear property boundary. Does not fully cover the first-floor footprint — providing a natural setback that reduces visual mass and overlooking.
- **Front/road-facing balcony:** Will be enclosed on the two sides facing the neighbor's backyard. Open face oriented toward the main road only — no sightlines into any adjacent rear yard.

- **Rear balcony area:** Taller fence to be installed along the shared property line to eliminate any potential sightlines into their backyard.

ii. Ceiling height and sky view obstruction

- **Sun orientation:** Sun rises from the side road (east); backyards face each other north/south. East-west sun path is entirely unaffected by this addition.
- **Height reduction:** Per Consulting Architect guidance, overall height has been reduced from 26.5 ft to 22 ft — a reduction of 4.5 feet. This brings the profile significantly closer to the single-story neighborhood context.
- **Incremental sky view impact:** Net increase over existing ceiling top height is approximately 2 feet — the neighbor's sky view is not meaningfully different from what exists today.

iii. Construction nuisance

- **Commitment:** Will adhere strictly to Town-permitted construction hours and proactively communicate with neighbors about major work milestones.

---

b. Neighbors Not Yet Reached

Name	Address	Reason / Status
Occupant	1[redacted]	No answer after multiple attempts. Will continue to try.
[redacted]	[redacted]	No answer after multiple attempts. Will continue to try.
[redacted]	[redacted]	Owner resides out of the area. No local contact available.

Note: We will supplement this submission with results of remaining outreach once completed.

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c. Timeline of Outreach

All neighbor conversations took place between approximately June 8 and June 29, 2026. Outreach to remaining neighbors is actively ongoing as of the date of this submission.

---

d. Our Commitment to the Neighborhood

We have made every good-faith effort to speak with our neighbors. The response has been overwhelmingly positive — the large majority of neighbors are supportive and understand this reflects our growing family's genuine needs. One neighbor has volunteered a formal written endorsement.

All legitimate planning and design concerns raised have been proactively addressed in the current design. We welcome continued dialogue with both our neighbors and the Town throughout the approval process.

Respectfully submitted,

Jaimin K. and Khushbu S. Desai
100 Jamie Ct, Los Gatos, CA 95032

[redacted]

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Docusign Envelope ID: 38117549-0572-877D-808A-24523D18AA9B

100 JAMIE CT
100 JAMIE CT, LOS GATOS, CA, 95032.

PREPARED FOR: CUSTOM HOME INVESTMENT INC.

GENERAL NOTES

1. ALL DETAILS, SECTIONS, AND NOTES SHOWN ON THESE DRAWINGS ARE IN COMPLIANCE WITH THE CURRENT ADOPTED APPLICABLE CODES, INCLUDING THE 2022 CRC, CBC, CPC, CMC, CEC, ENERGY CODE, AND GREEN BUILDING STANDARDS CODE. THE PROJECT SHALL ALSO COMPLY WITH THE APPLICABLE MUNICIPAL CODE OF THE JURISDICTION CITY OF CAMPBELL.
2. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA CODE AND LOCAL OF CITY OR COUNTY CODE.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE AND ANY DISCREPANCIES SHALL BE REPORTED TO THE STRUCTURAL ENGINEER PRIOR TO THE START OF WORK. THE CONTRACTOR IS ALSO RESPONSIBLE FOR THE COORDINATION OF ALL WORK AND MATERIALS INCLUDING ONES FURNISHED BY SUBCONTRACTORS.
4. ALL OMISSIONS AND CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR THE ARCHITECTURAL SPECIFICATIONS, WHERE APPLICABLE, SHALL BE REPORTED TO THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY OF THE WORK INVOLVED.
5. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR SAFETY IN AND AROUND THE JOB SITE AND/OR ADJACENT PROPERTIES.
6. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR BRACING AND SHORING ALL EXISTING FRAMING, STRUCTURE AND PORTIONS OF THE WORK WHICH HAVE BEEN PARTIALLY COMPLETED.
7. ANY OBSERVATION VISITS TO THE JOB SITE BY THE STRUCTURAL ENGINEER OR A FIELD REPRESENTATIVE SHALL BE CONSTRUED AS NEITHER INSPECTION NOR APPROVAL OF ANY CONSTRUCTION WORK.
8. DURING AND AFTER CONSTRUCTION, THE BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS.
9. WORKING DIMENSIONS SHALL, IN NO CASE, BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THE STRUCTURAL DRAWINGS.
10.THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO THE START OF WORK, DEMOLITION, EXCAVATION AND NEW CONSTRUCTION SHALL BE DONE IN A MANNER THAT WILL NOT DAMAGE ANY EXISTING UTILITES. THESE EXISTING UTILITIES ARE NOT SHOWN ON THESE PLANS.
11.IN ORDER TO CONDUCT PROPER FIELD OBSERVATION, THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF THE VARIOUS CONSTRUCTION PHASES.
12.NO OPENINGS, NOTCHES, CHASES, ETC. SHALL BE PLACED IN COLUMNS, JOISTS, BEAMS, BEARING WALLS OR SHEARWALLS UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER WHERE DRAWINGS BY OTHERS SHOW SUCH OPENINGS.
13.THE BUILDER MUST PROVIDE THE HOMEOWNER WITH A LUMINAIRE SCHEDULE (AS REQUIRED IN TITLE 24 CALIFORNIA CODE OF REGULATIONS, PART 1, §10-103(B)) THAT INCLUDES A LIST OF LAMPS INSTALLED IN THE LUMINARIES.

PROJECT DATA

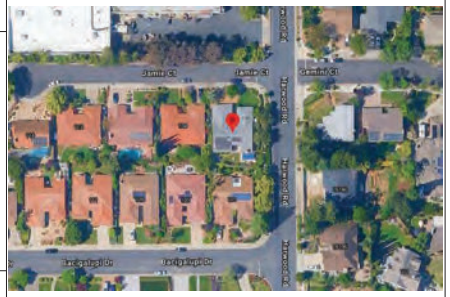
PARCEL# :	52732038
GENERAL PLAN :	Residential
ZONING :	R-1
OCCUPANCY :	R-3
BUILDING TYPE :	Dwellings
LOT AREA :	8800 sq ft
STORY :	2 Stories
Zoning:	R-1:8. Adjust accordingly

PROJECT INFORMATION

OWNER:	DESAI JAIMIN K/SHRIANANDKUMAR KHUSHBU
ADDRESS:	100 JAMIE CT, LOS GATOS, CA, 95032.
PHONE:	[redacted]
EMAIL:	
DESIGN MANAGER:	CUSTOM HOME DESIGN AND BUILD
ADDRESS:	2092 CONCOURE DR, STE 9 SAN JOSE CA 95131
PHONE:	(408) 701-7116
EMAIL:	duong@clah.us

VICINITY MAP





APPLICABLE CODES

ALL CONSTRUCTION SHALL COMPLY WITH THE TOWN OF LOS GATOS ORDINANCES
AND THE FOLLOWING CODES, INCLUDING ANY LOCAL AMENDMENTS:

2025 CALIFORNIA RESIDENTIAL CODE (CRC)

2025 CALIFORNIA BUILDING CODE (CBC)

2025 CALIFORNIA MECHANICAL CODE (CMC)

2025 CALIFORNIA ELECTRICAL CODE (CEC)

2025 CALIFORNIA PLUMBING CODE (CPC)

2025 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)

2025 CALIFORNIA ENERGY CODE

2025 LOS GATOS REACH CODE (AS APPLICABLE)

ALL APPLICABLE LOCAL ORDINANCES AND AMENDMENTS
AS ADOPTED AND ENFORCED BY THE TOWN OF LOS GATOS
IN EFFECT AT TIME OF PERMIT REVIEW

SCOPE OF WORK

ADU Conversion: Reconfigure the existing master bedroom, two guest bedrooms, and office into a ADU.

Structural Modifications: Remove the existing chimney. Replace the rear wall with a high-end bifold door system.

Roof & Ceiling Reconfiguration: Modify the kitchen roofline to adjust the slope and raise/vault the interior ceiling.

Vertical Expansion: Construct a second-story addition comprising three bedrooms, three bathrooms, a home office, and a balcony.

Circulation: Install a new internal staircase to connect the two levels.

Site Work: Professional landscape design and implementation for the backyard.

Remodel kitchen cabinet & adding cabinet to 1st floor living room

FLOOR AREA RATIO

BUILDING AREA	EXISTING S.F.	PROPOSED S.F.
GROUND FLOOR	2428	1591
SECOND FLOOR	0	1185
ATTACH GARAGE	520	520
ACCESSORY DWELLING	0	880
STOGARE	0	0
BALCONY	0	250
TOTAL	2948	4426

LOT SIZE	8800	
FLOOR AREA RATIO	2948/8800 (33,5%)	4426 (50.2%)
ADU FLOOR AREA RATIO	0/8800 (0%)	880 (10%)
LIVING FLOOR AREA RATIO	2428/8800 (27,6%)	2776 (31,5%)
LOT COVERAGE	2948/8800 (33,5%)	2991 (33.9%)
BUILDING HEIGHT	15' 10"	22' 5"

Custom Home

CUSTOM HOME
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REVISIONS	BY

DESIGN MANAGER

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

SHEET TITLE

SCALE

DATE
2026/08/20

SHEET NUMBER
A0

EXHIBIT 13

Docusign Envelope ID: 38117549-0572-877D-808A-24523D18AA9B

Sheet List	
Sheet Number	Sheet Name
A0	SHEET TITLE
A1	DRAWING INDEX
A2	EXISTING FIRST FLOOR PLAN
A3	DEMOLITION FIRST FLOOR PLAN
A4	NEW CONSTRUCTION FIRST FLOOR PLAN
A5	EXISTING ROOF PLAN
A5.2	EXISTING SITE PLAN
A6	PROPOSED FIRST FLOOR PLAN
A7	PROPOSED SECOND FLOOR PLAN
A7.2	FLOOR AREA PLANS
A8	PROPOSED ROOF PLAN
A8.2	PROPOSED SITE PLAN
A8.3	UTILITY SITE PLAN_EXISTING_PROPOSED
A9	EXISTING ELEVATIONS
A10	EXISTING ELEVATIONS
A11	PROPOSED ELEVATIONS
A12	PROPOSED ELEVATIONS
A12.1	STREETSCAPE ELEVATIONS
A12.2	SUPERIMPOSED ELEVATIONS
A12.3	SUPERIMPOSED ELEVATIONS
A12.4	SUPERIMPOSED FLOOR PLAN
A12.5	SUPERIMPOSED ROOF PLAN
A12.6	SUPERIMPOSED SECTION
A12.7	SIGHT-LINE&PRIVACY DIAGRAM-BALCONY
A12.8	SHADOW STUDY PLAN
A12.9	TREE PROTECTION PLAN
A13	BUILDING SECTION
A14	DOOR AND WINDOW SCHEDULE

Sheet List	
Sheet Number	Sheet Name
E01	PROPOSED ELECTRICAL FOOR PLAN
E02	PROPOSED ELECTRICAL FOOR PLAN
F01	2025 Single-Family Residential Mandatory Requirements Summary
F02	HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY
G01	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
G02	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Sheet List	
Sheet Number	Sheet Name
SN1.0	GENERAL NOTES

Sheet List	
Sheet Number	Sheet Name
HFX1	ANCHORAGE DETAILS - HFX PANELS
HFX2	ANCHORAGE DETAILS - HFX PANELS
HFX3	ANCHORAGE DETAILS - HFX PANELS

Sheet List	
Sheet Number	Sheet Name
S1.0	FOUNDATION PLAN
S2.0	LOW ROOF & FLOOR FRAMING PLAN
S3.0	ROOF FRAMING PLAN
SD1.0	FOUNDATION DETAIL
SD2.0	FRAMING DETAIL
SD3.0	FOUNDATION DETAIL
SD4.0	FRAMING DETAIL

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DESIGN MANAGER

JAMIE CT

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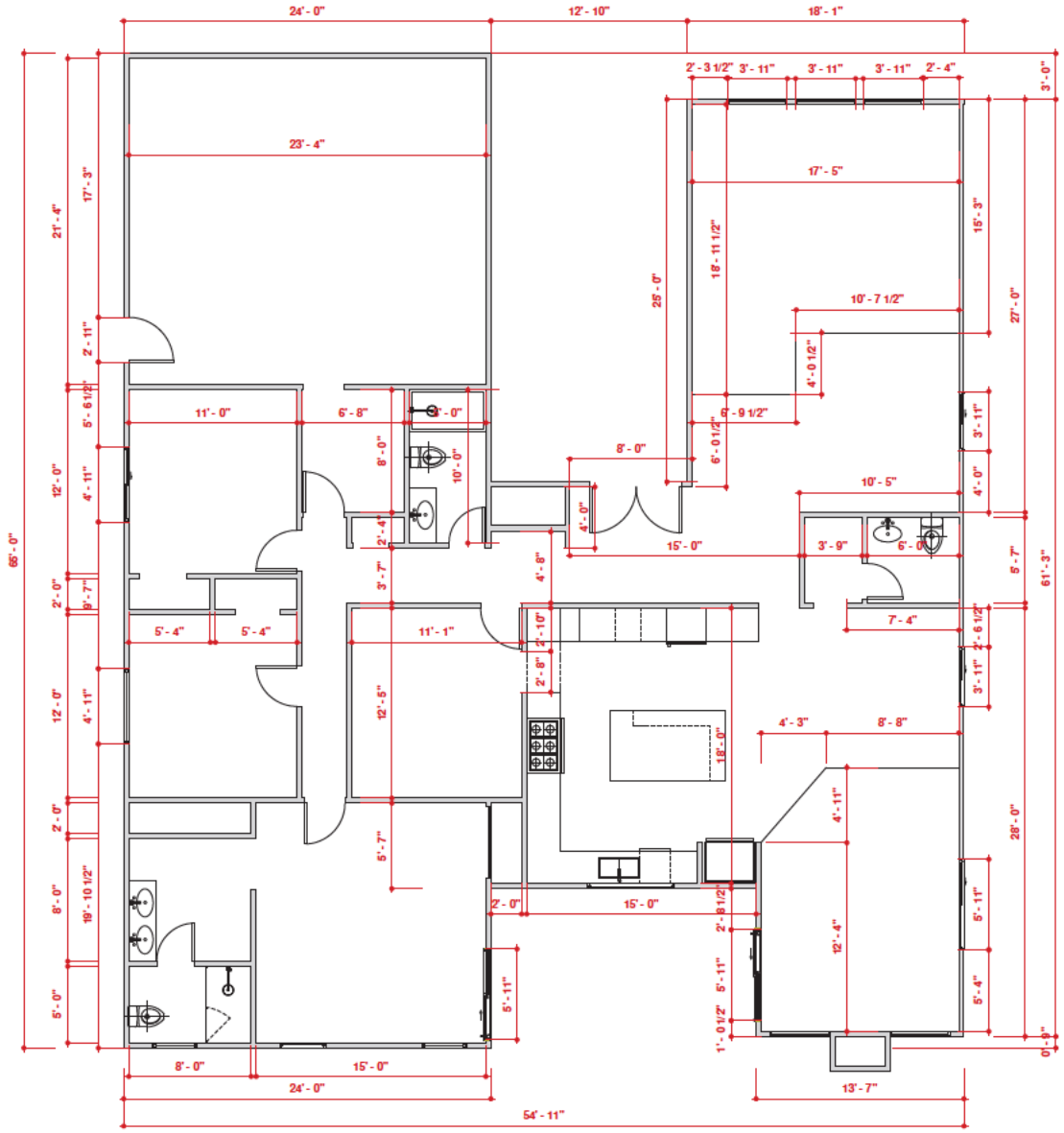
DRAWING INDEX

SCALE

DATE
2026/08/20

SHEET NUMBER
A1

Docusign Envelope ID: 3811754B-0572-577D-905A-24523D18AA9B



1 EXISTING FIRST FLOOR PLAN
1/4" = 1'-0"

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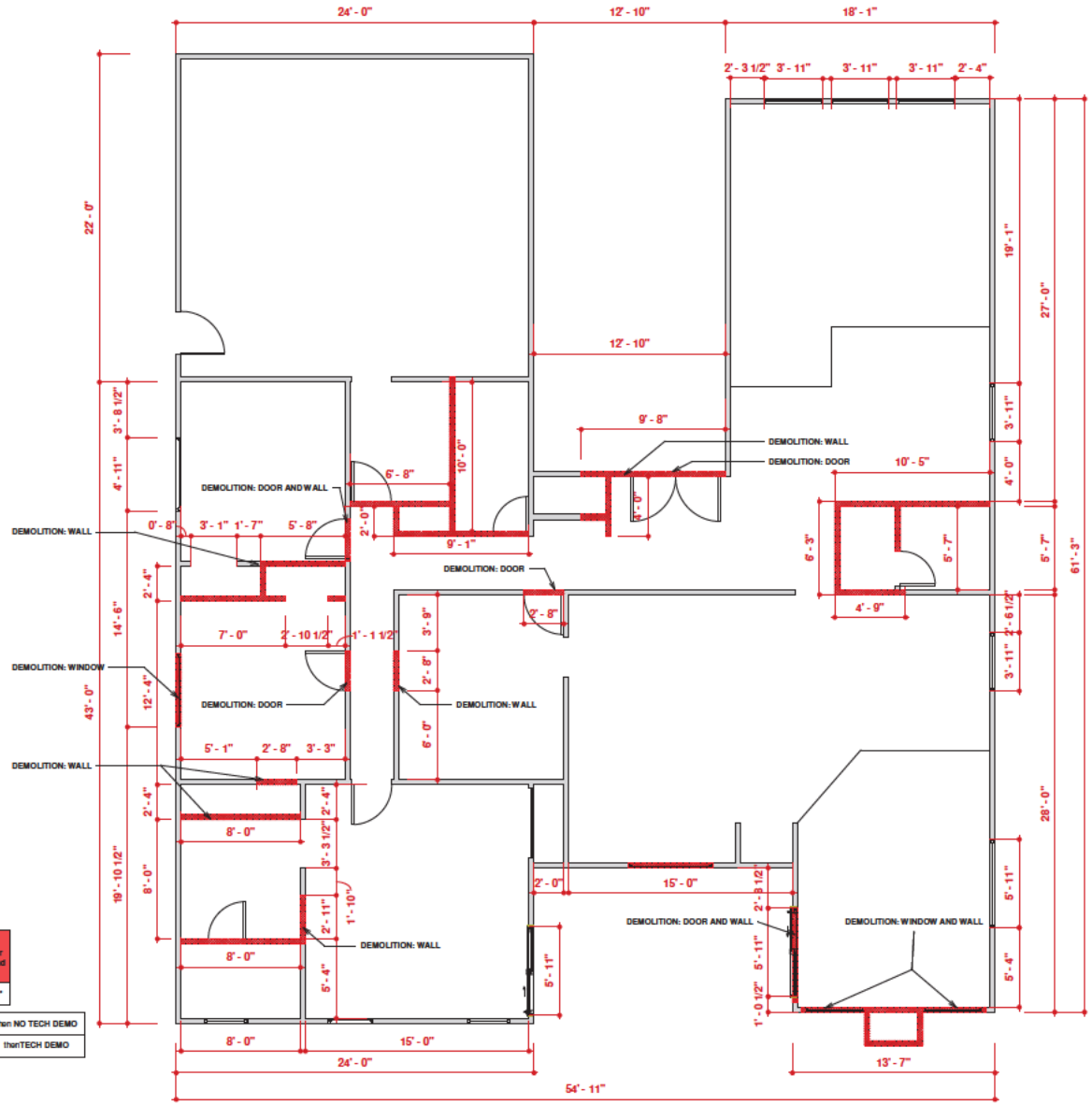
EXISTING FIRST FLOOR PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A2

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AAB8



	Existing Footprint (linear 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)
1st	577'	455' 2"	121' 10"

If	Preserved Wall Framing	is greater than	Demo'd Wall Framing	then NO TECH DEMO
If	Demo'd Wall Framing	is greater than	Preserved Wall Framing	thenTECH DEMO

Since	455' 2"	is greater than	121' 10"	, then NO TECH DEMO

EXISTING

DEMOLITION

NEW CONSTRUCTION

1 DEMOLITION FLOOR PLAN
1/4" = 1'-0"

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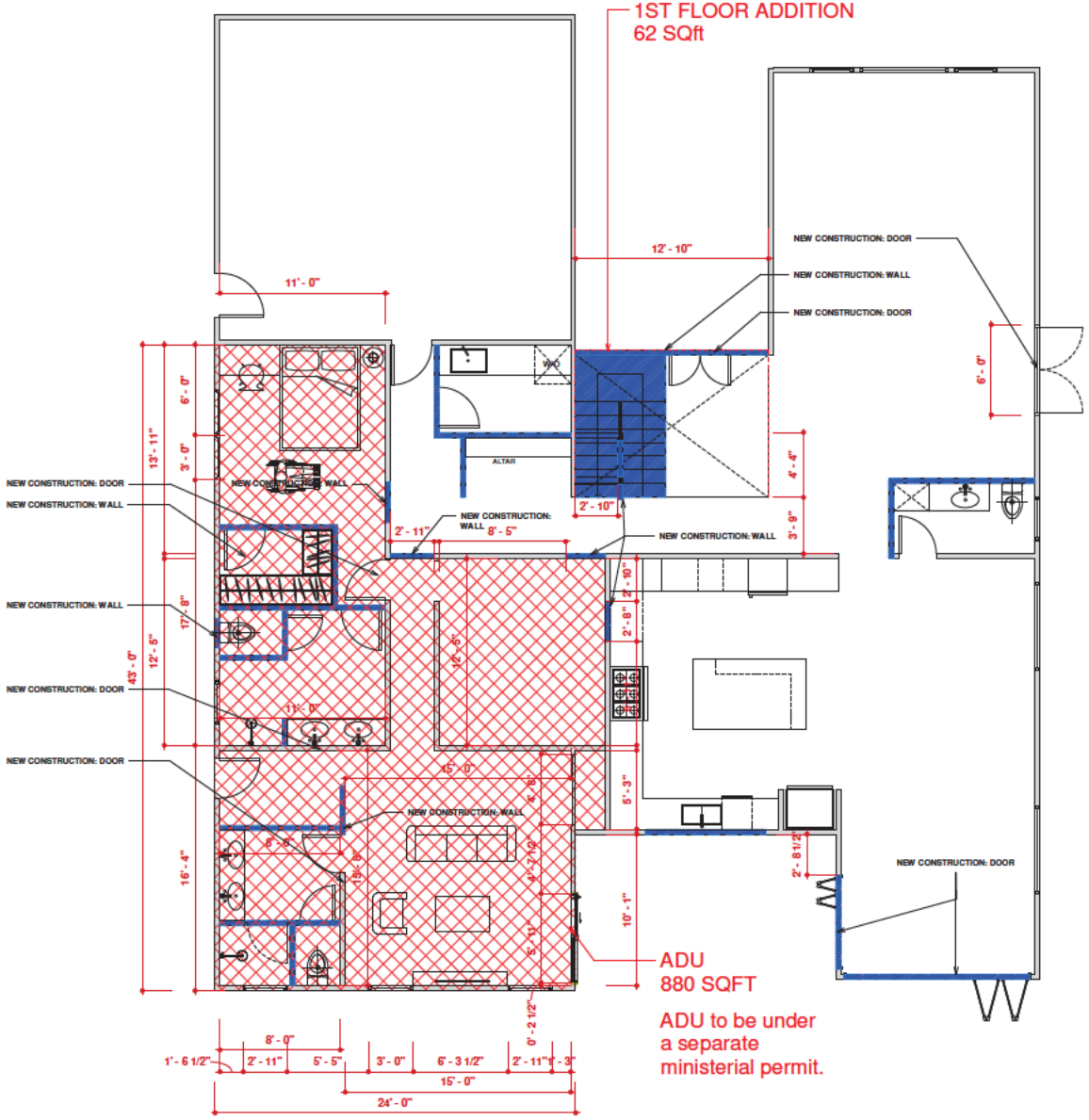
DEMOLITION FIRST FLOOR PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A3

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AA9B



EXISTING

DEMOLITION

NEW CONSTRUCTION

1 NEW CONSTRUCTION FLOOR PLAN
1/4" = 1'-0"

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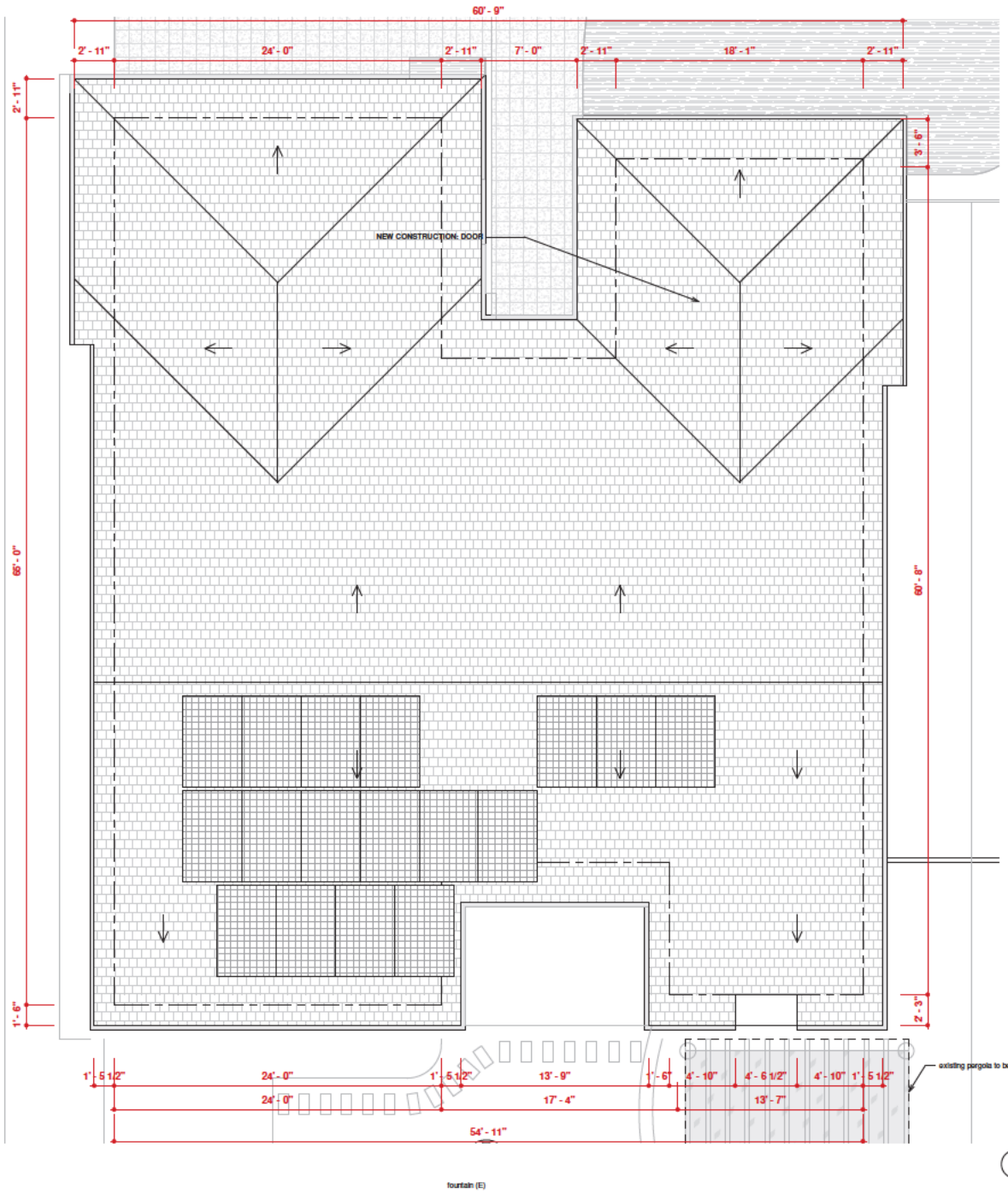
NEW CONSTRUCTION FIRST FLOOR PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A4

Docusign Envelope ID: 3811754B-2572-577D-808A-24523D18AA9B



1 EXISTING ROOF PLAN
1/4" = 1'-0"

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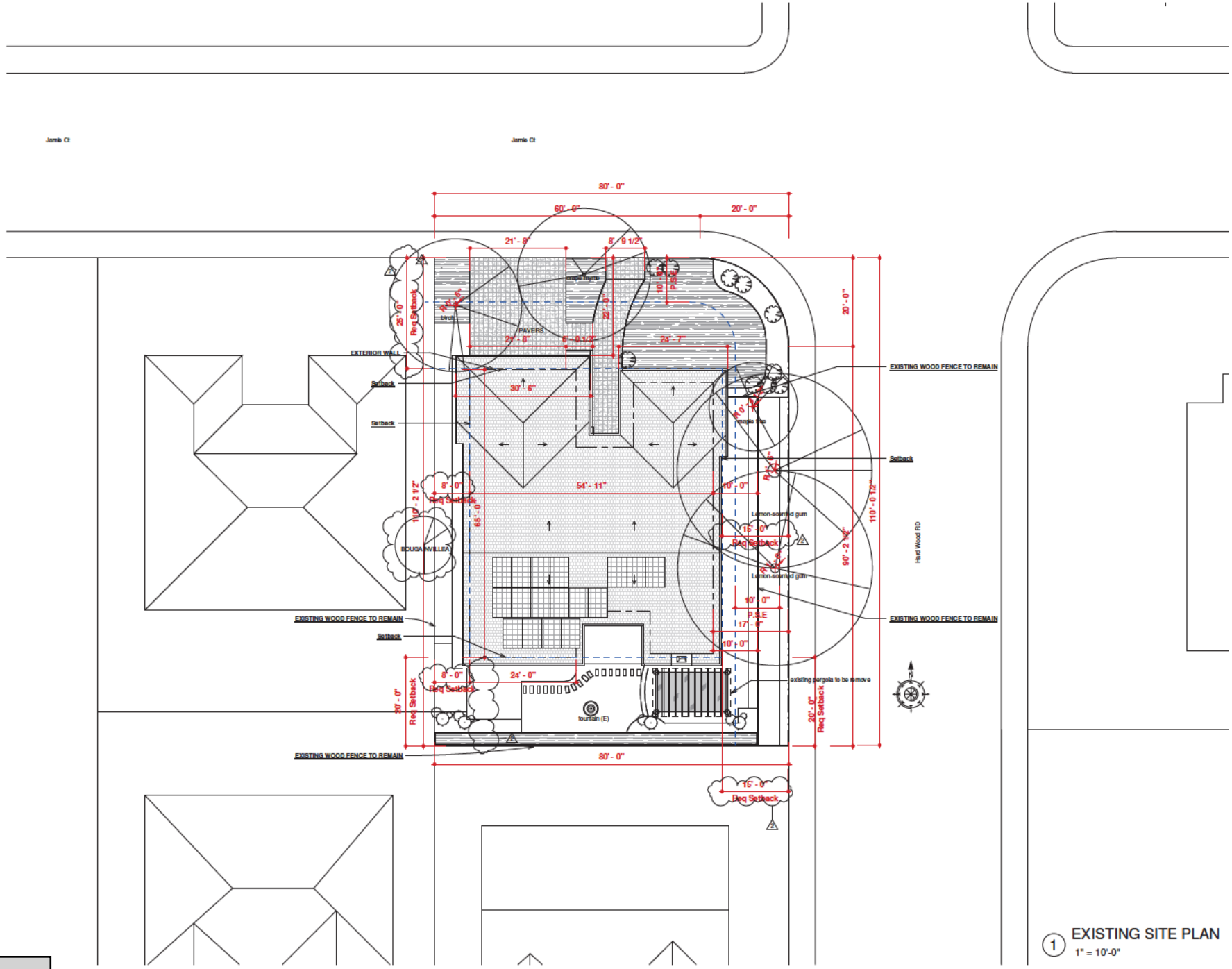
EXISTING ROOF PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A5

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AA9B



1 EXISTING SITE PLAN
1" = 10'-0"

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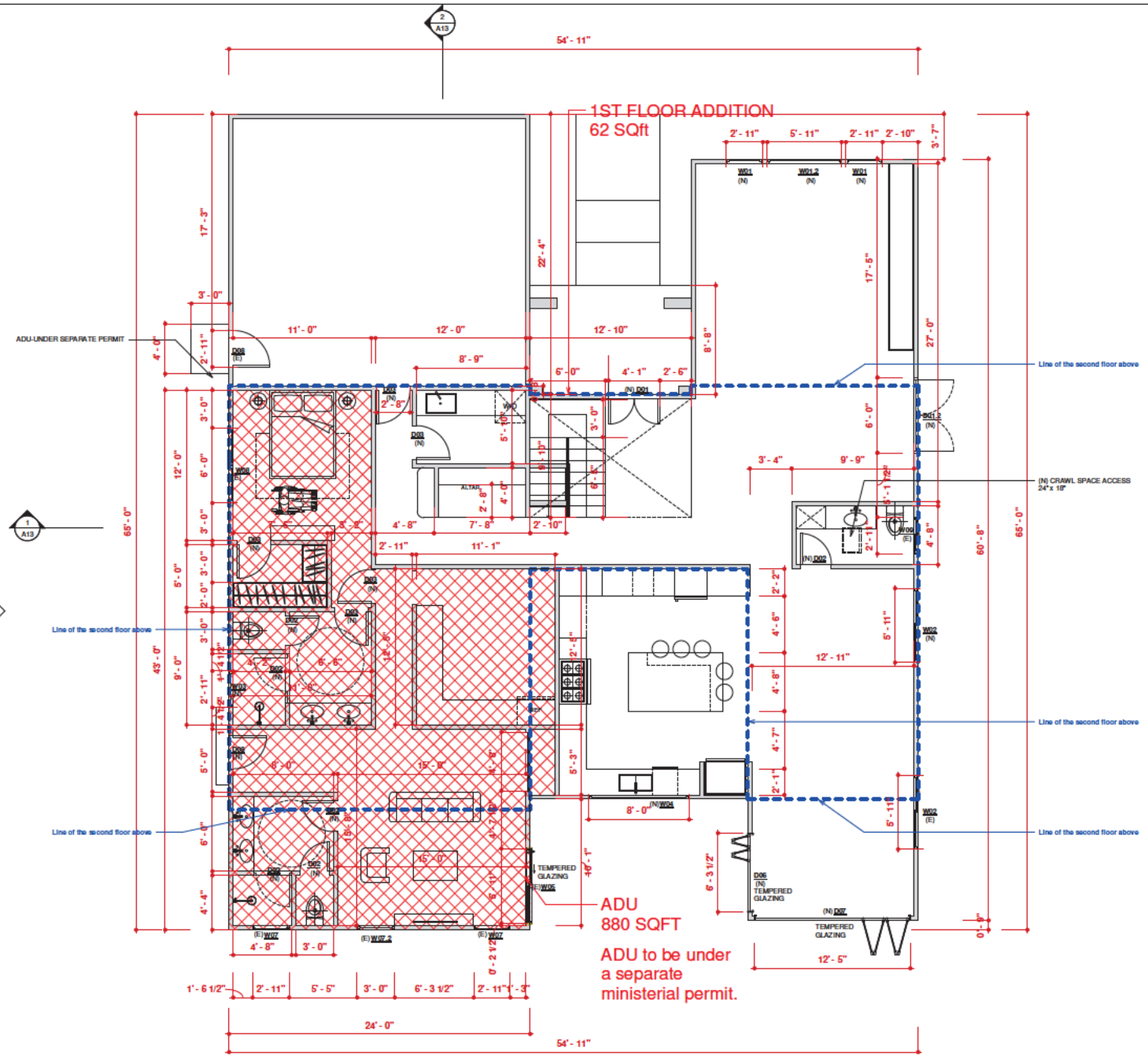
EXISTING SITE PLAN

SCALE
1" = 10'-0"

DATE
2026/09/24

SHEET NUMBER
A5.2

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AA9B



1 PROPOSED FLOOR PLAN
1/4" = 1'-0"

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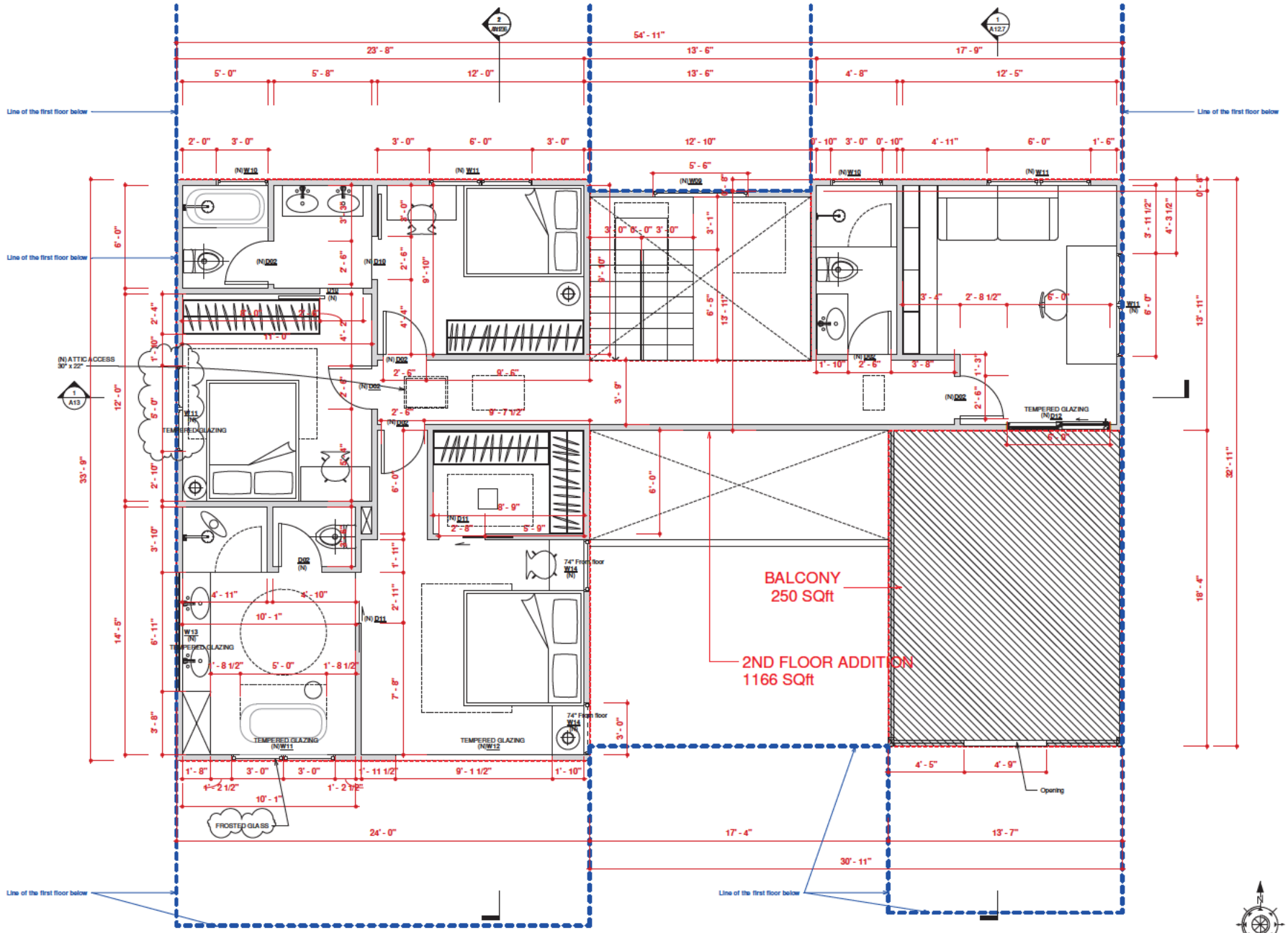
PROPOSED FIRST FLOOR PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A6

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AA9B



1 PROPOSED SECOND FLOOR PLAN
3/8" = 1'-0"

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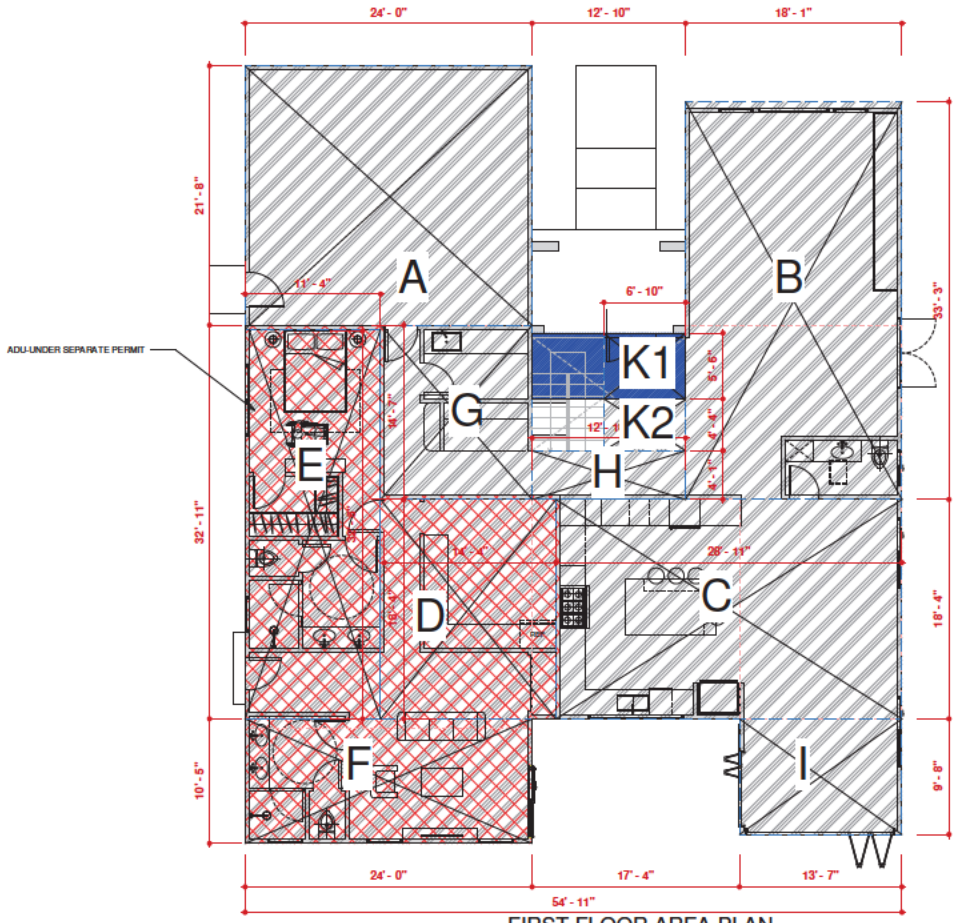
PROPOSED SECOND FLOOR PLAN

SCALE
As indicated

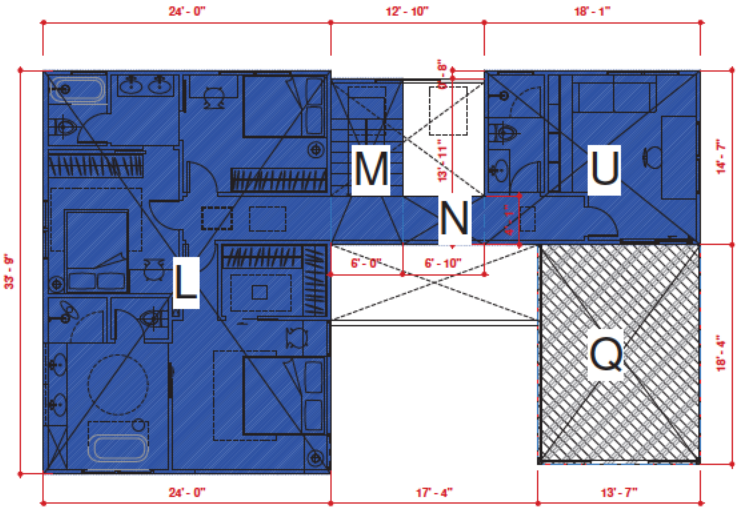
DATE
2026/09/24

SHEET NUMBER
A7

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AAB8



1 FIRST FLOOR AREA PLAN
3/16" = 1'-0"



2 SECOND FLOOR AREA PLAN
3/16" = 1'-0"

ADU				
FLOOR AREA HOUSE				
	WIDTH	HEIGHT	AREA	SF
D	14'4"	18'4"	263	SF
E	11'4"	32'5"	367	SF
F	24'	10'5"	250	SF
	FIRST FLOOR SUBTOTAL		880	SF
	FIRST FLOOR ADDITION			
	SUBTOTAL		880	SF

FLOOR AREA HOUSE				
	WIDTH	HEIGHT	AREA	SF
B	18'1"	33'3"	601.27	SF
C	28'11"	18'4"	530.14	SF
G	14'4"	14'7"	209.03	SF
H	12'10"	4'1"	52.40	SF
I	13'7"	9'8"	131.31	SF
K2	6' 10"	4' 4"	29.61	SF
	FIRST FLOOR SUBTOTAL		1,553.76	SF
	FIRST FLOOR ADDITION			
K1	6' 10"	5' 6"	37.58	SF
	SUBTOTAL		37.58	SF
	SECOND FLOOR ADDITION			
L	24'	33' 9"	810.00	SF
M	6'	13' 11"	83.50	SF
N	6' 10"	4' 1"	27.90	SF
U	18' 1"	14' 7"	263.72	SF
	SUBTOTAL		1,185.12	SF
	ADDITION SUBTOTAL		1,222.70	SF

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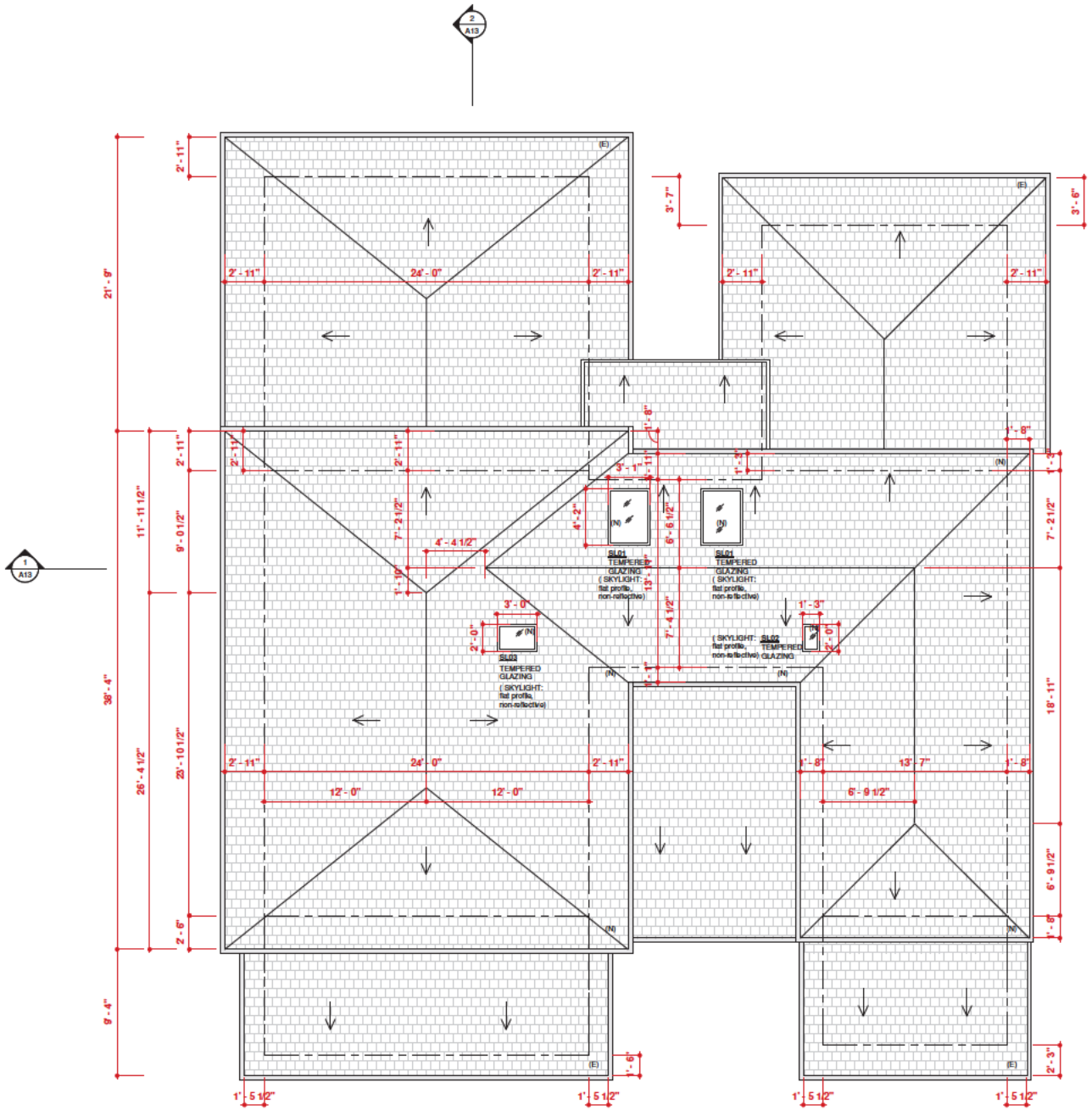
FLOOR AREA PLANS

SCALE
As Indicated

DATE
2026/09/24

SHEET NUMBER
A7.2

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AA9B



1 PROPOSED ROOF PLAN
1/4" = 1'-0"

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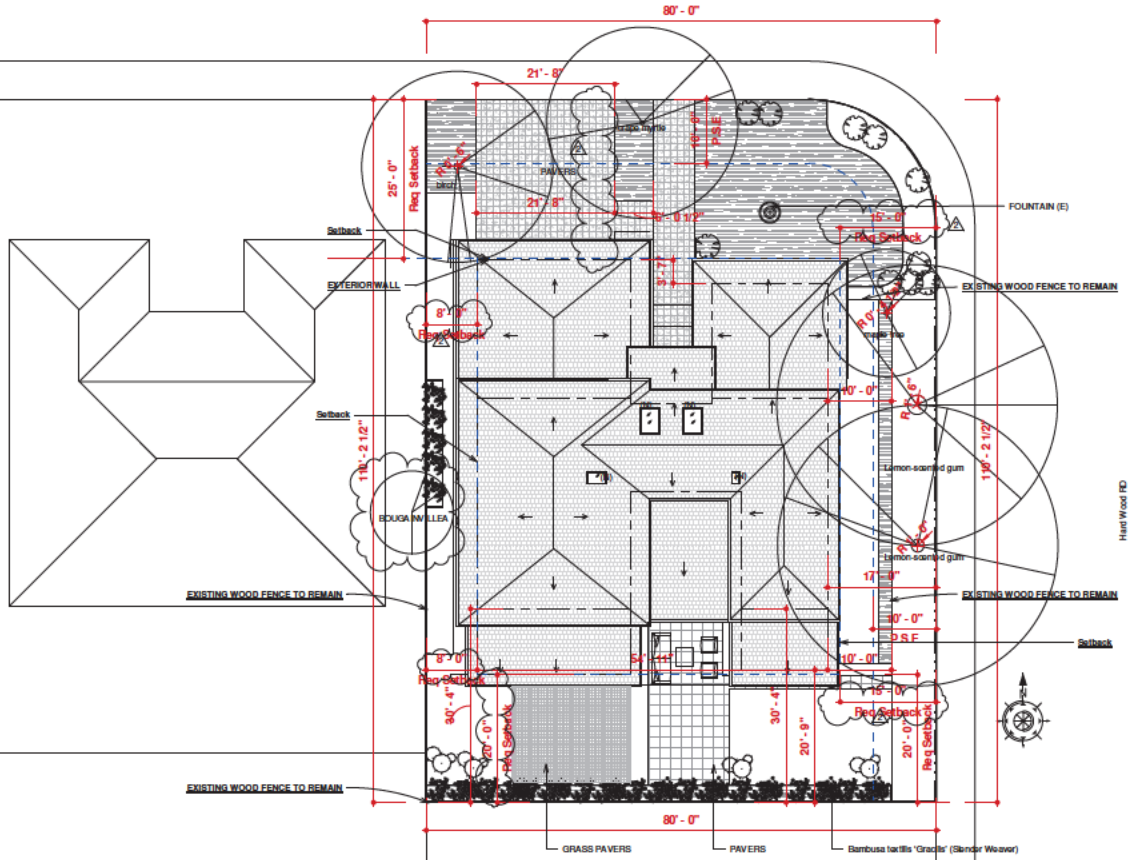
PROPOSED ROOF PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A8

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AA9B



Jamie Ct

Jamie Ct

1 PROPOSED SITE PLAN
1" = 10'-0"

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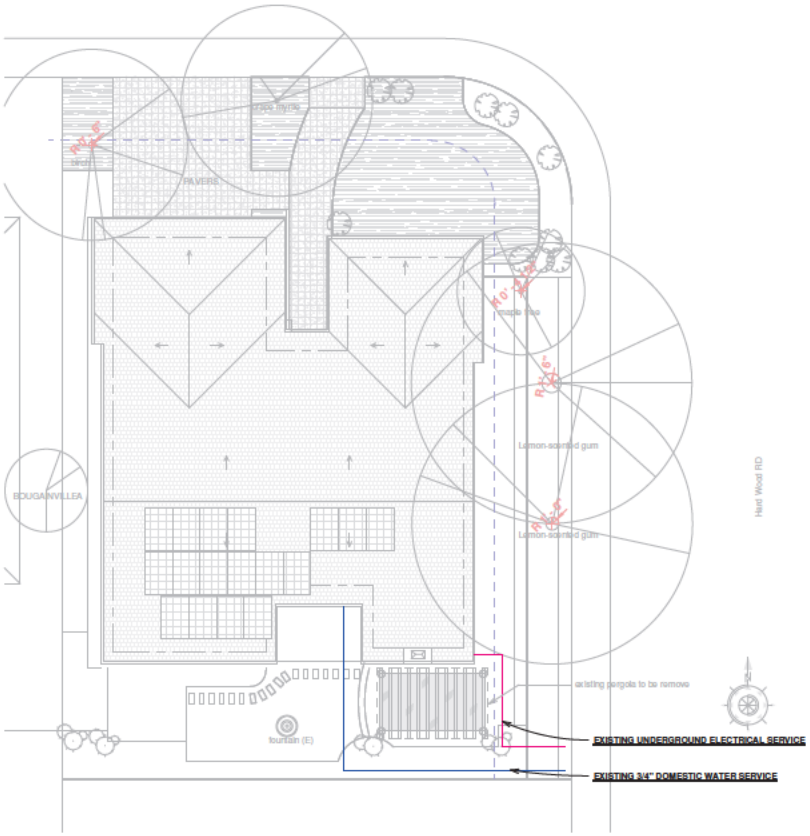
PROPOSED SITE PLAN

SCALE
1" = 10'-0"

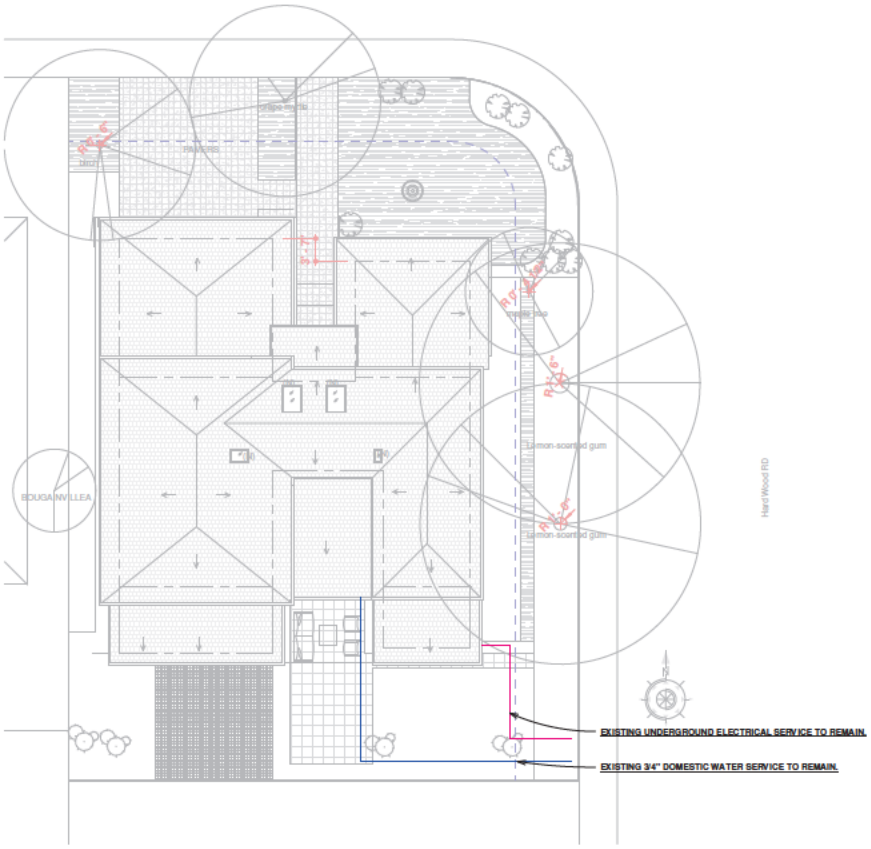
DATE
2026/09/24

SHEET NUMBER
A8.2

Docusign Envelope ID: 3811754B-2572-577D-808A-24523D18AA9B



1 UTILITY SITE PLAN – EXISTING
1" = 10'-0"



2 PROPOSED UTILITY SITE PLAN
1" = 10'-0"

CUSTOM HOME
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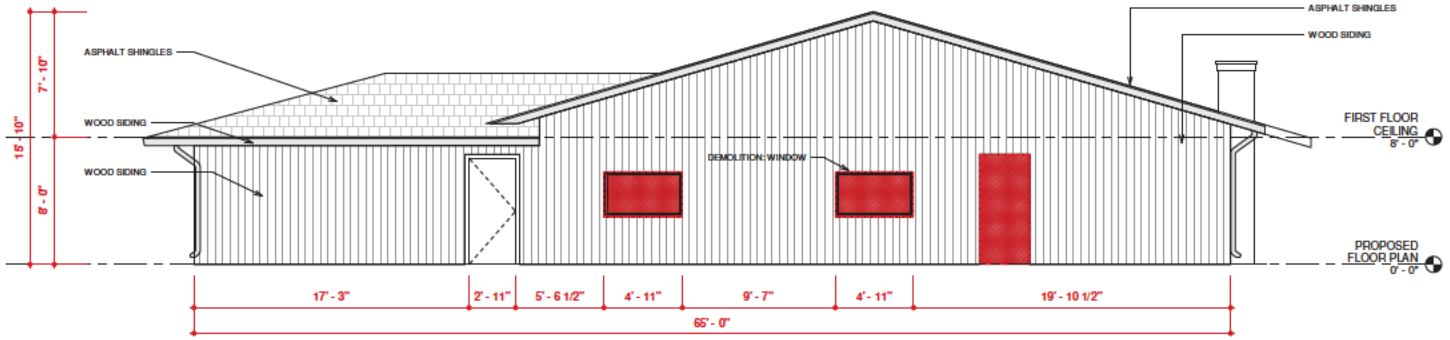
UTILITY SITE PLAN_EXISTING_PROPOSED

SCALE
1" = 10'-0"

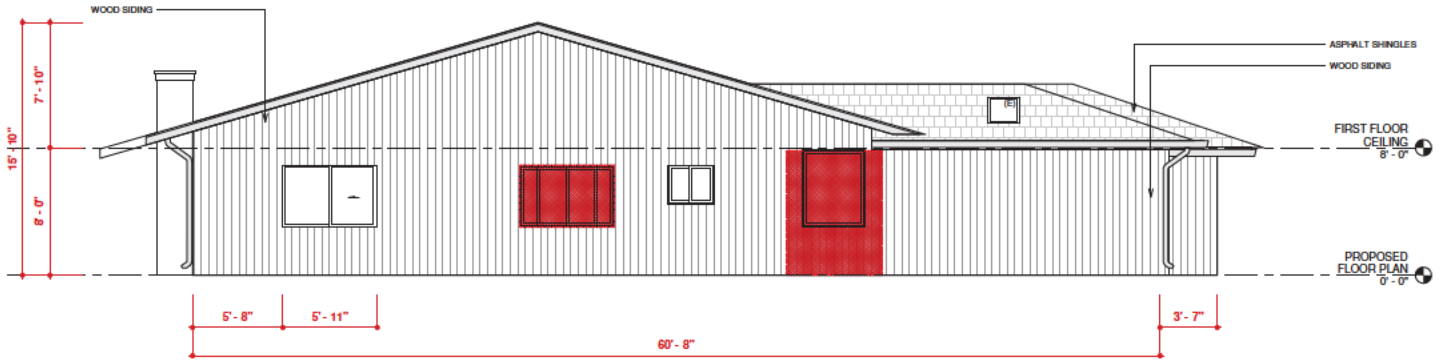
DATE
2026/09/24

SHEET NUMBER
A8.3

Docusign Envelope ID: 3811754B-0572-577D-805A-24523D18AA9B



1 EXISTING LEFT / EAST ELEVATIONS
1/4" = 1'-0"



EXISTING

DEMOLITION

NEW CONSTRUCTION

2 EXISTING RIGHT / WEST ELEVATIONS
1/4" = 1'-0"

CUSTOM HOME
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REVISIONS	BY

DESIGN MANAGER

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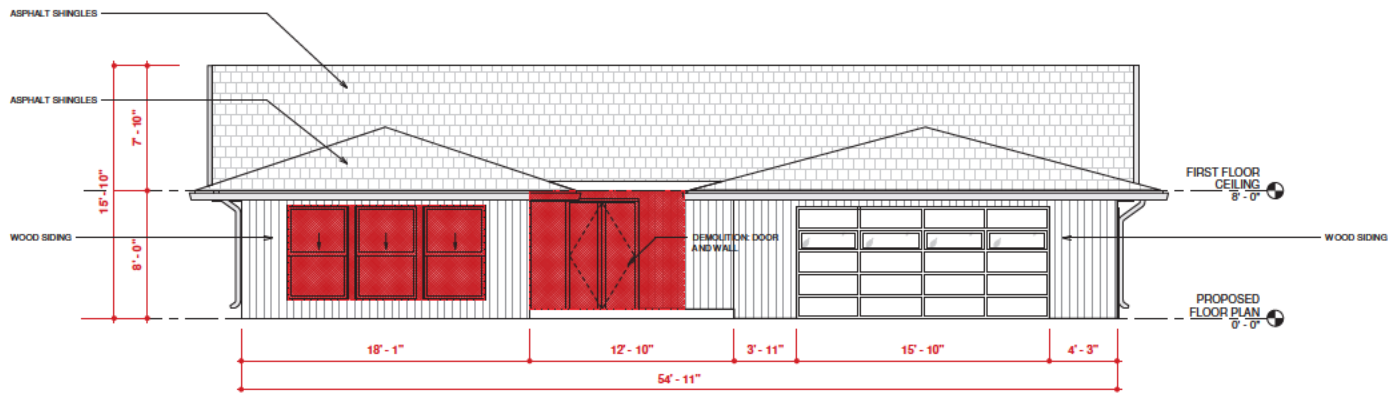
EXISTING ELEVATIONS

SCALE
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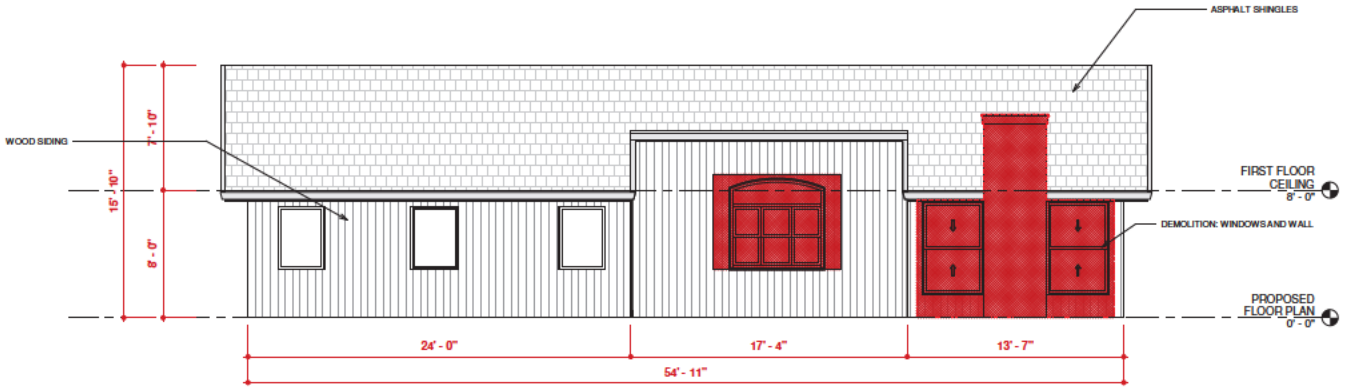
DATE
2026/08/14

SHEET NUMBER
A9

Docusign Envelope ID: 3811754B-0572-677D-808A-24523D18AAB8



2 EXISTING FRONT (NORTH) ELEVATIONS
1/4" = 1'-0"



1 EXISTING REAR (SOUTH) ELEVATIONS
1/4" = 1'-0"

EXISTING

DEMOLITION

NEW CONSTRUCTION

CUSTOM HOME DESIGN AND BUILD

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JAMIE CT

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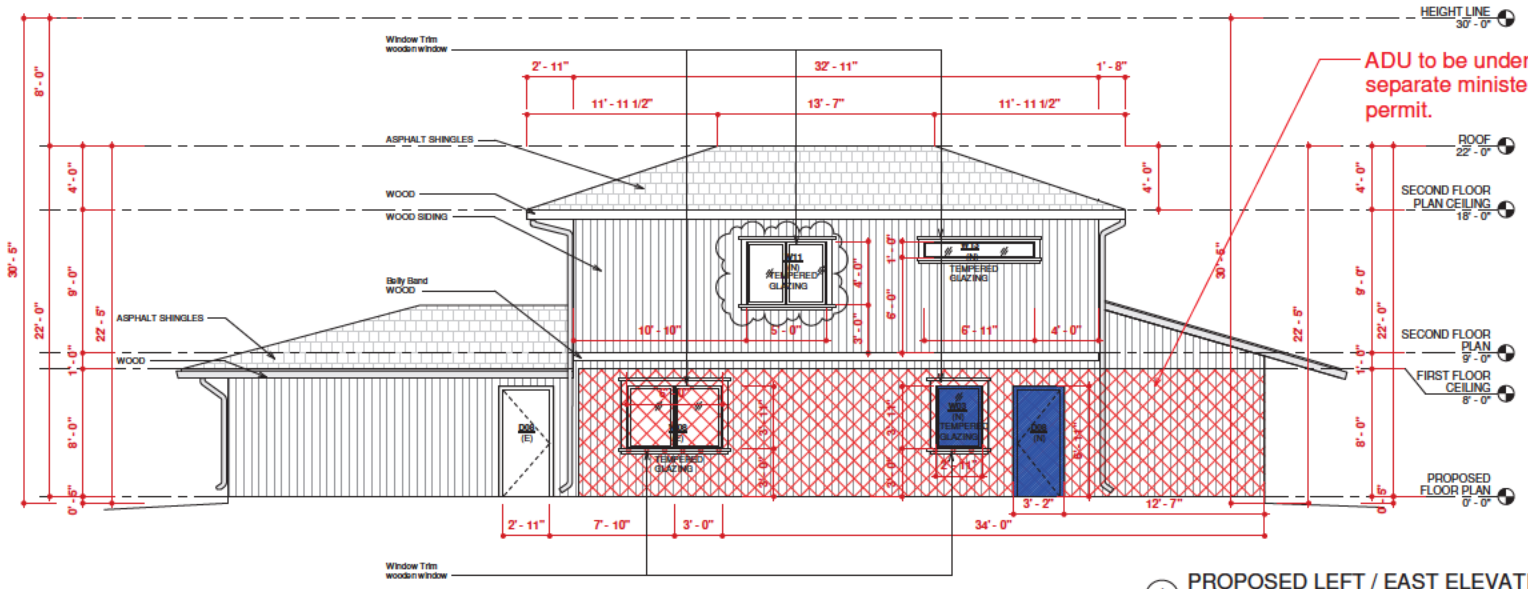
EXISTING ELEVATIONS

SCALE
1/4" = 1'-0"

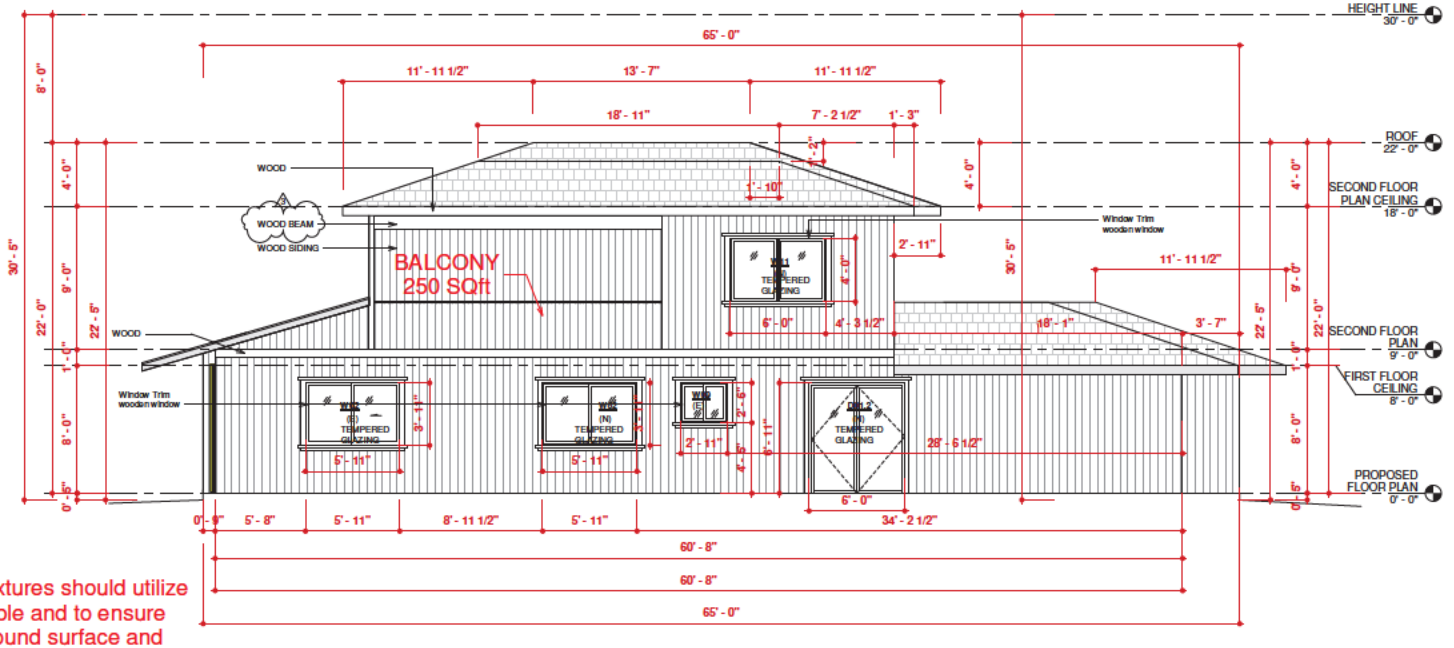
DATE
2026/08/14

SHEET NUMBER
A10

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AA9B



1 PROPOSED LEFT / EAST ELEVATIONS
1/4" = 1'-0"



2 PROPOSED RIGHT / WEST ELEVATIONS
1/4" = 1'-0"

All permanent exterior light fixtures should utilize shields so that no bulb is visible and to ensure that light is directed to the ground surface and does not spill light onto neighboring parcels or produce glare when seen from nearby homes.

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REVISIONS	BY

DESIGN MANAGER

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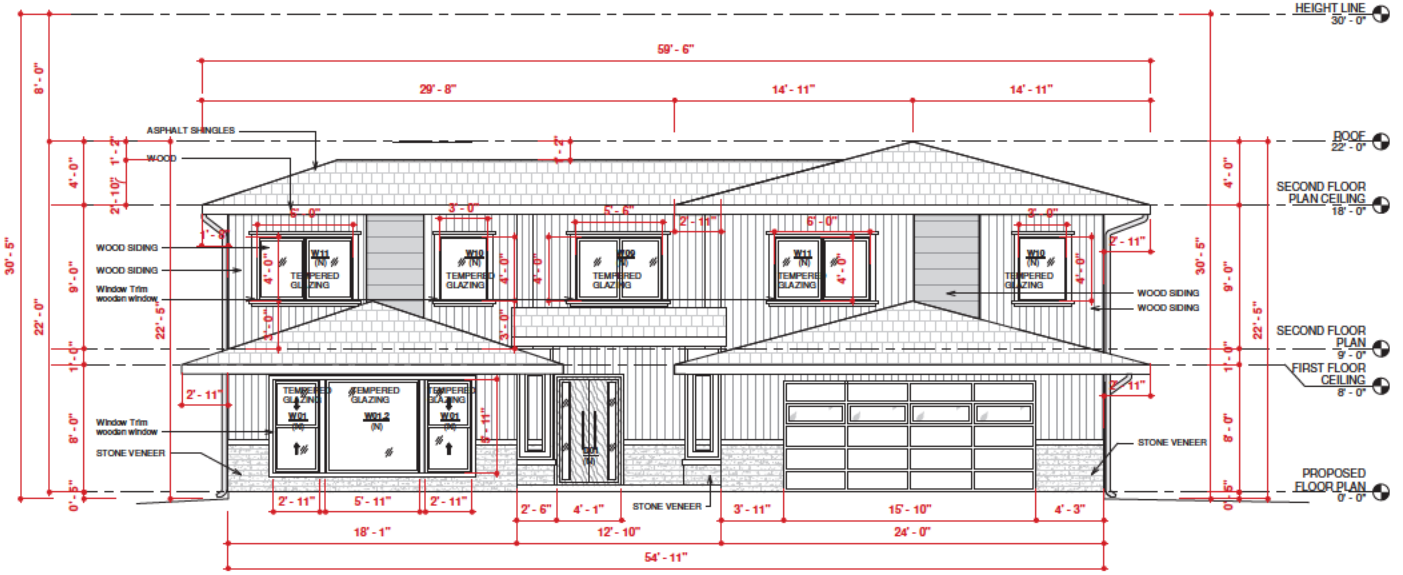
PROPOSED ELEVATIONS

SCALE
1/4" = 1'-0"

DATE
2026/09/24

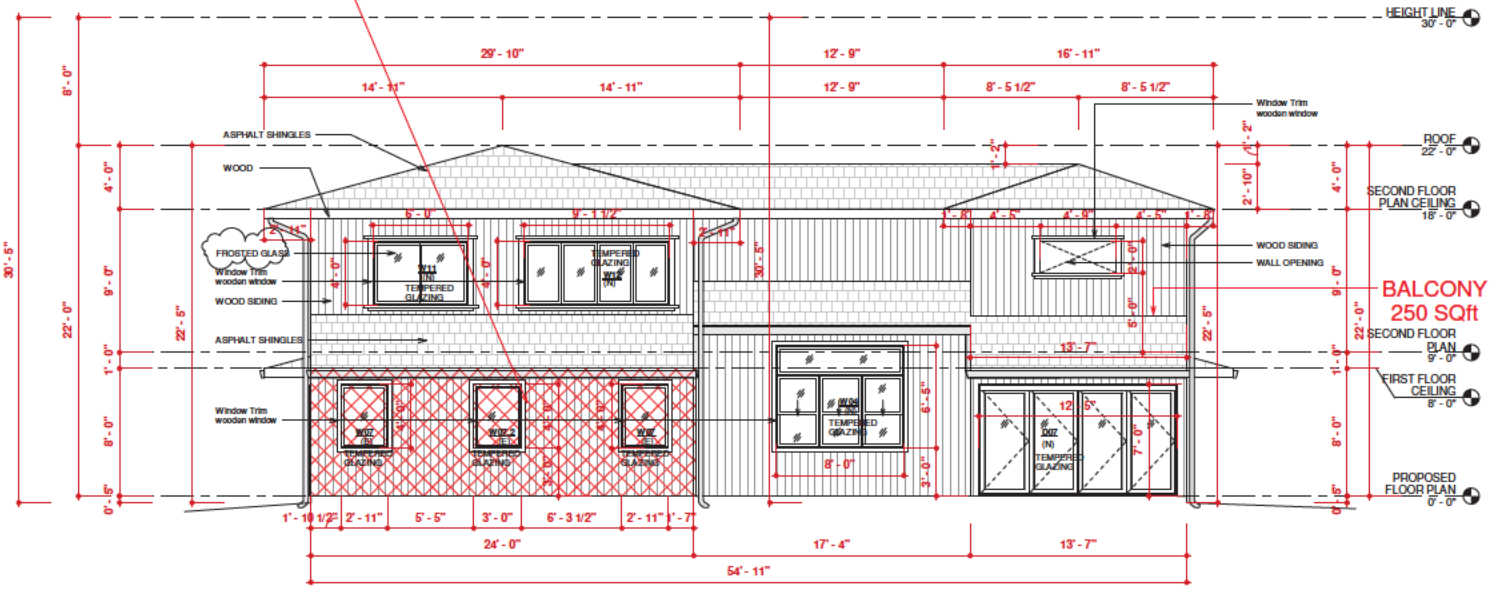
SHEET NUMBER
A11

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1 PROPOSED FRONT (NORTH) ELEVATIONS
1/4" = 1'-0"

ADU to be under a separate ministerial permit.



2 PROPOSED REAR (SOUTH) ELEVATIONS
1/4" = 1'-0"

All permanent exterior light fixtures should utilize shields so that no bulb is visible and to ensure that light is directed to the ground surface and does not spill light onto neighboring parcels or pr[illegible]when seen from nearby homes.

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PROPOSED ELEVATIONS

SCALE
1/4" = 1'-0"

DATE
2026/09/02

SHEET NUMBER
A12

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AA9B



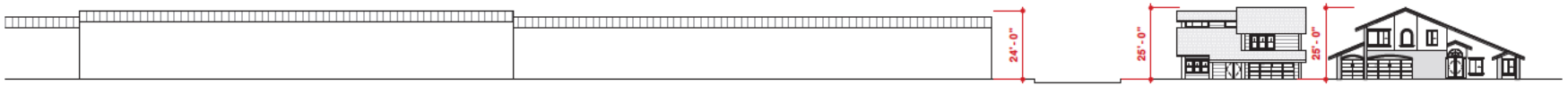
110 SINGLE - STORY | 106 TWO - STORY | 102 TWO - STORY | 100 SINGLE - STORY | 104 SINGLE - STORY | 108 SINGLE - STORY | 112 SINGLE - STORY

1 EXISTING FRONT (NORTH) STREET ELEVATIONS
1" = 20'-0"



110 SINGLE - STORY | 106 TWO - STORY | 102 TWO - STORY | 100 SINGLE - STORY | 104 SINGLE - STORY | 108 SINGLE - STORY | 112 SINGLE - STORY

2 PROPOSED FRONT (NORTH) STREET ELEVATIONS
1" = 20'-0"



SINGLE - STORY | 101 TWO - STORY | 105 TWO - STORY

3 OPPOSITE STREET ELEVATIONS
1" = 20'-0"

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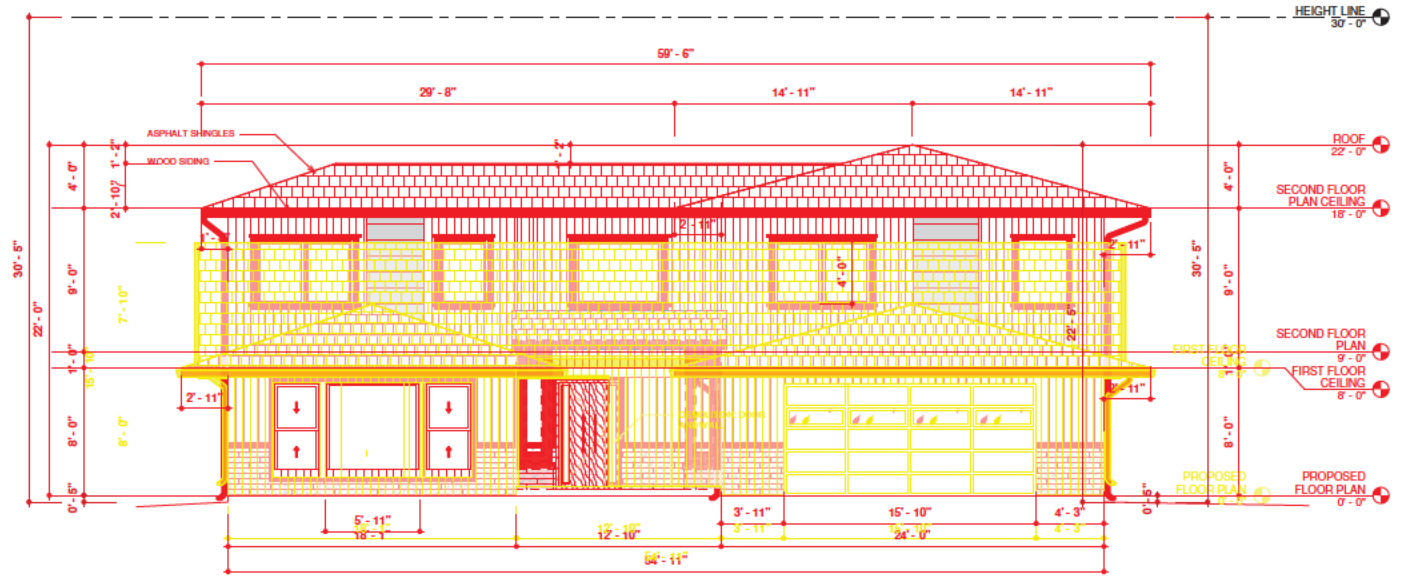
STREETSCAPE ELEVATIONS

SCALE
1" = 20'-0"

DATE
2026/08/14

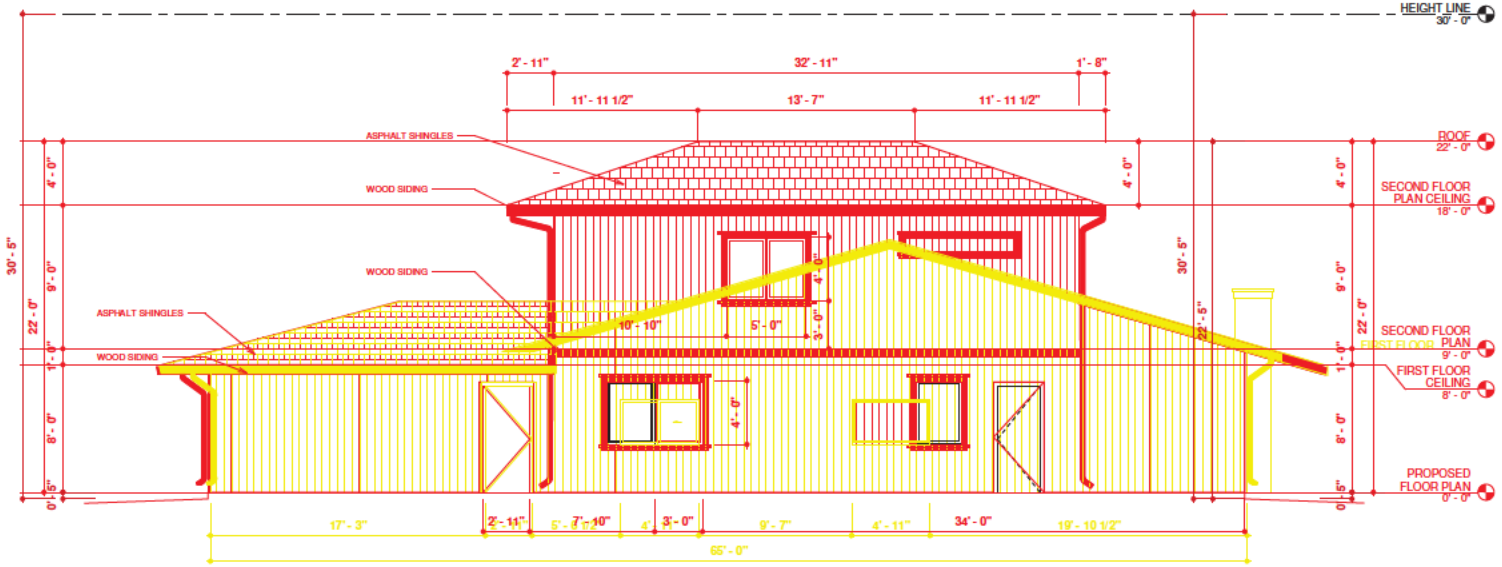
SHEET NUMBER
A12.1

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AAB8



1 SUPERIMPOSED FRONT (NORTH) ELEVATIONS

1/4" = 1'-0"



2 SUPERIMPOSED LEFT / EAST ELEVATIONS

1/4" = 1'-0"

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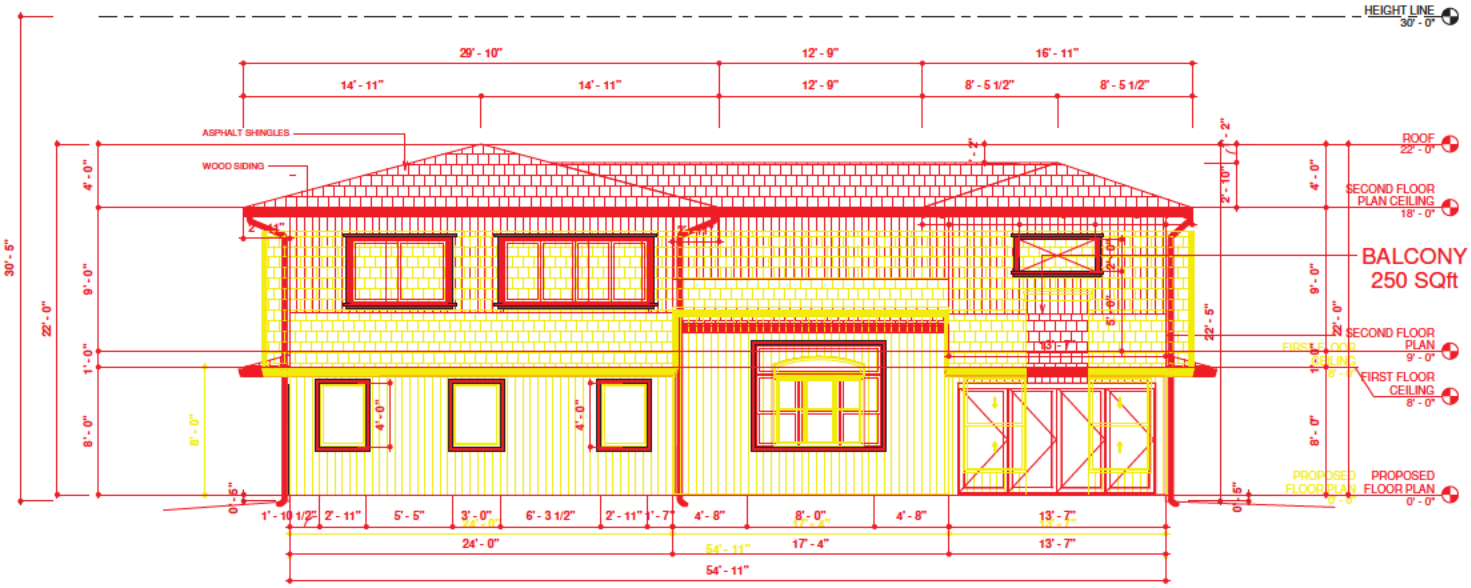
SUPERIMPOSED ELEVATIONS

SCALE
1/4" = 1'-0"

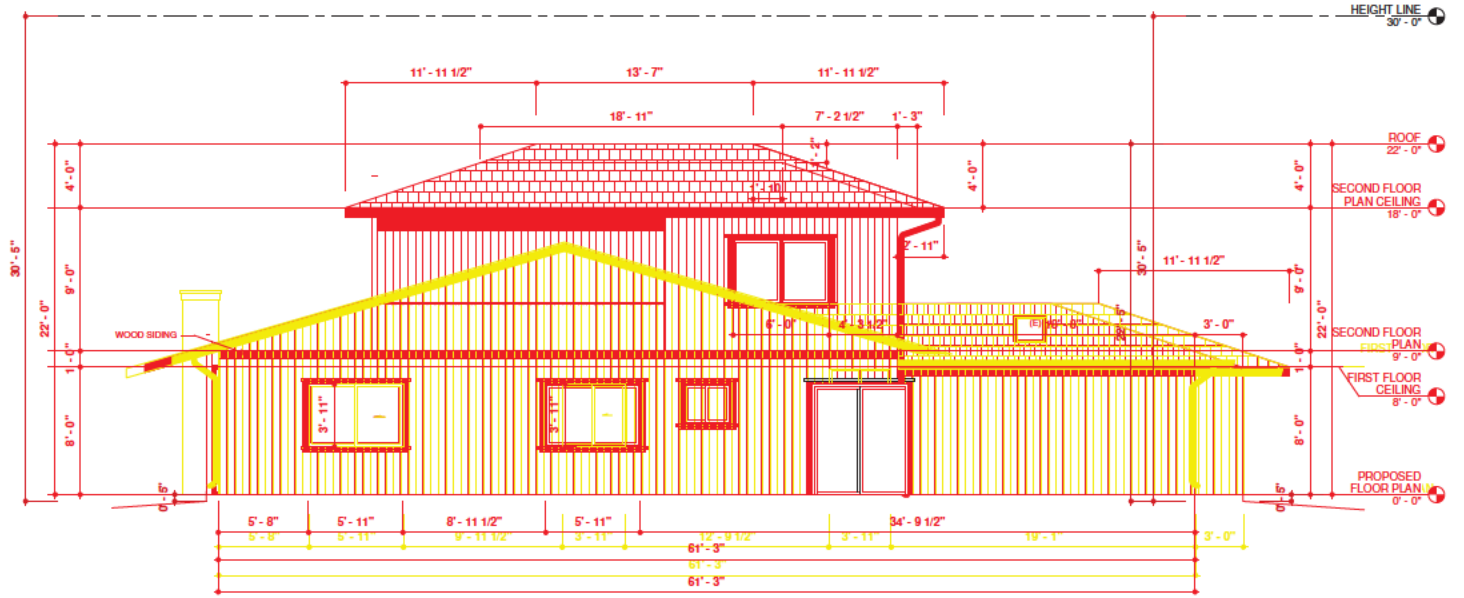
DATE
2026/09/24

SHEET NUMBER
A12.2

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AA9B



1 SUPERIMPOSED REAR (SOUTH) ELEVATIONS
1/4" = 1'-0"



2 SUPERIMPOSED RIGHT / WEST ELEVATIONS
1/4" = 1'-0"

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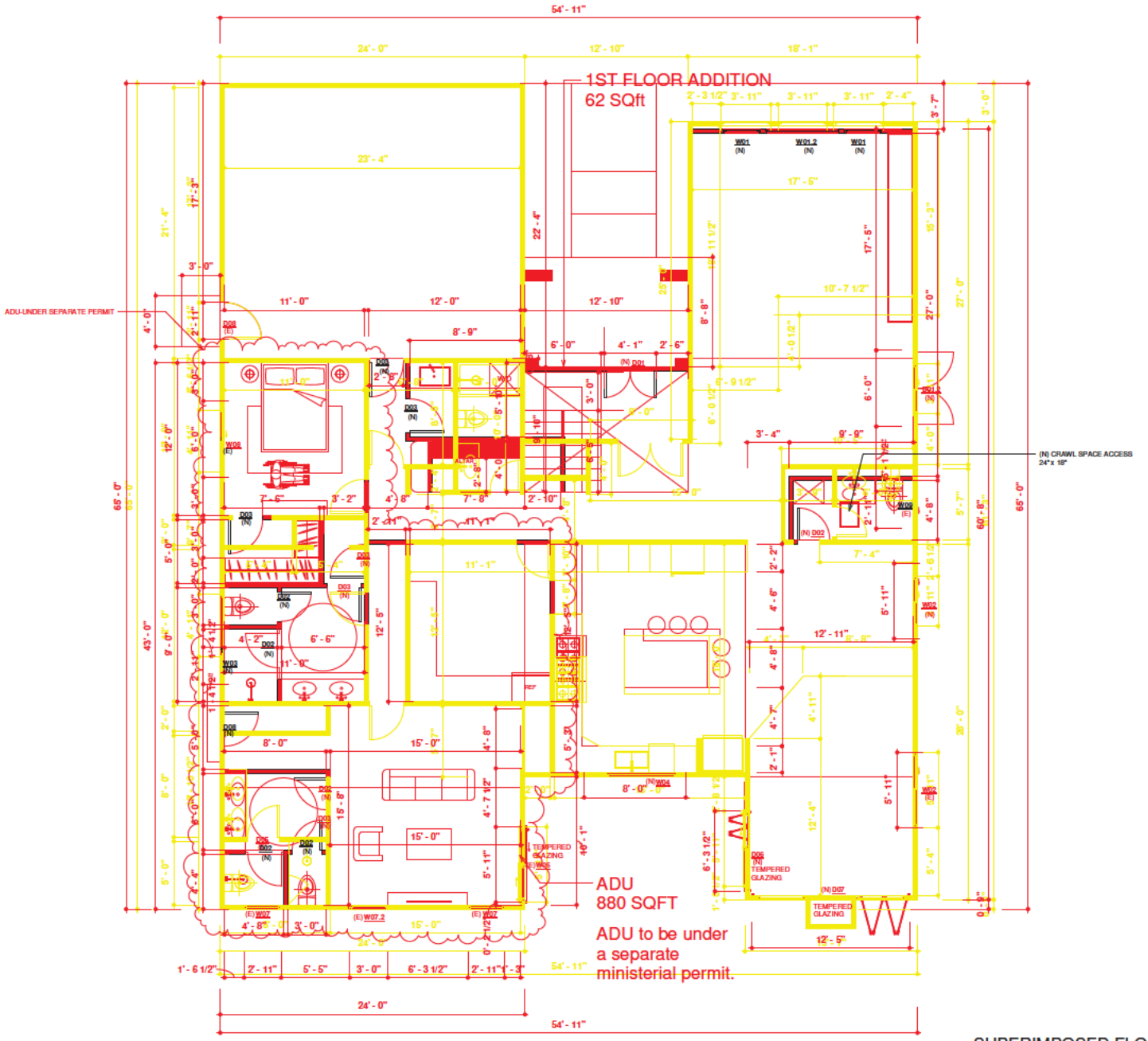
SUPERIMPOSED ELEVATIONS

SCALE
1/4" = 1'-0"

DATE
2026/09/04

SHEET NUMBER
A12.3

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AA9B



1 SUPERIMPOSED FLOOR PLAN
1/4" = 1'-0"

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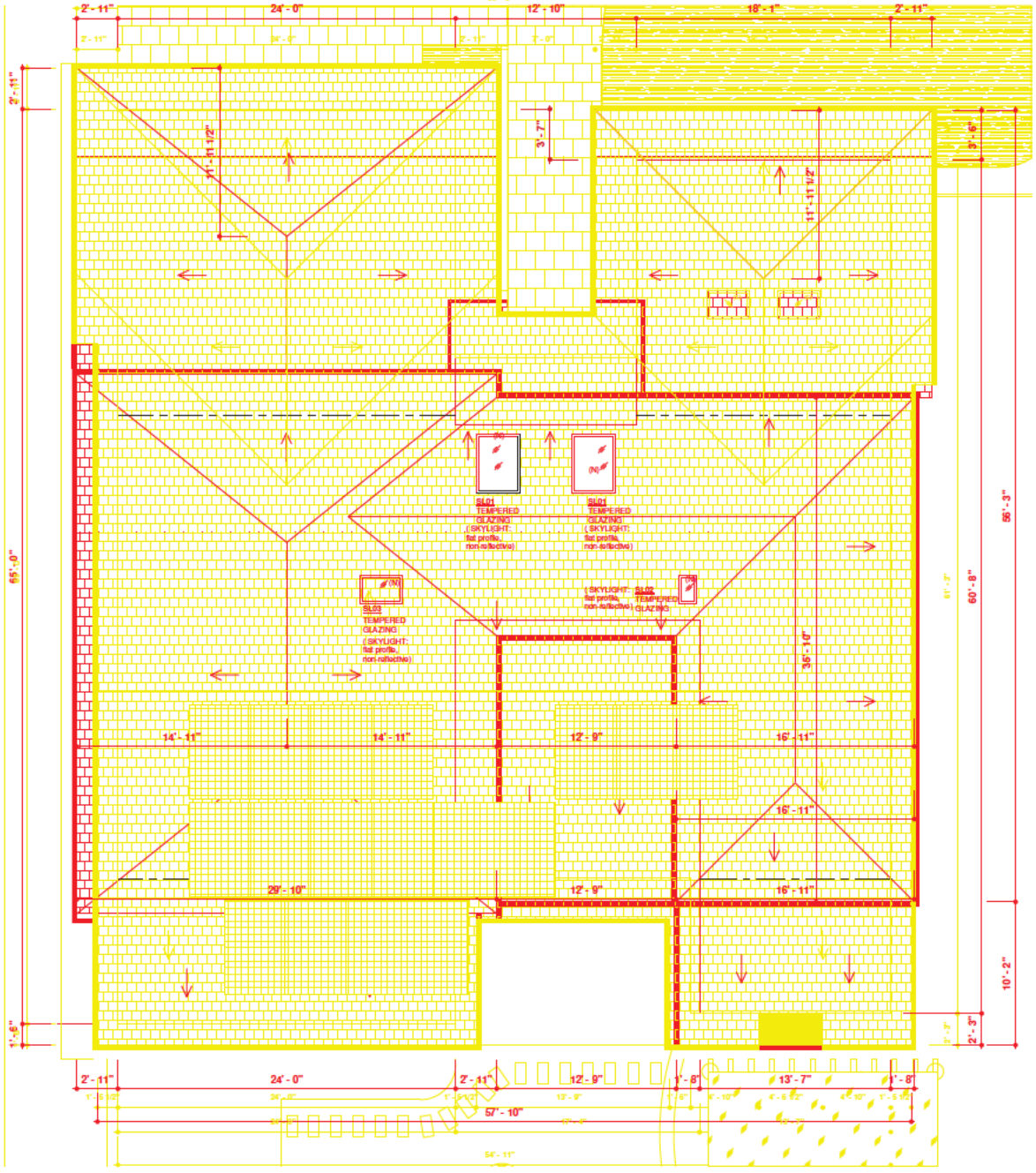
SUPERIMPOSED FLOOR PLAN

SCALE
As Indicated

DATE
2026/08/14

SHEET NUMBER
A12.4

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1 SUPERIMPOSED ROOF PLAN
1/4" = 1'-0"

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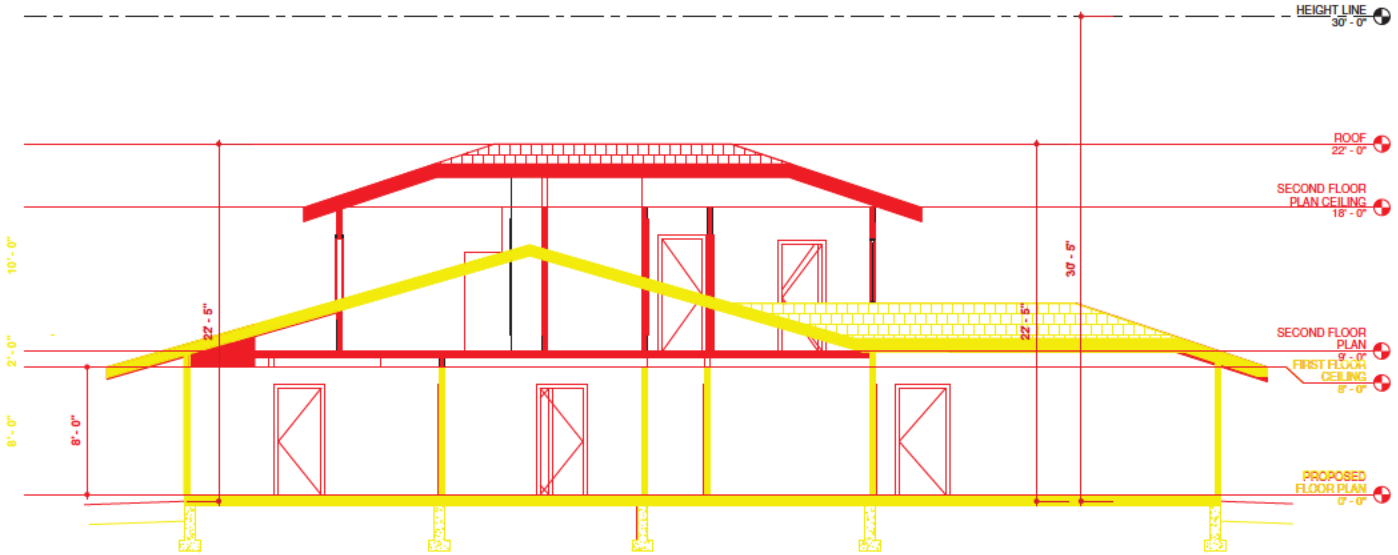
SUPERIMPOSED ROOF PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A12.5

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1 SUPERIMPOSED SECTION 2
1/4" = 1'-0"

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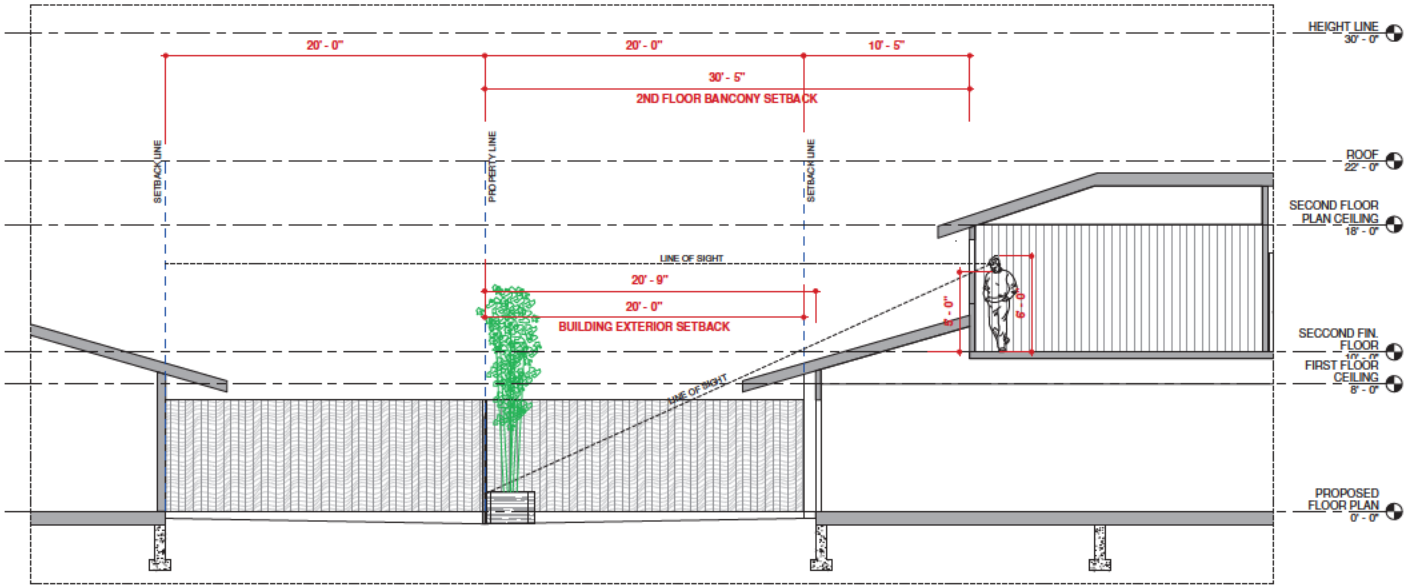
SUPERIMPOSED SECTION

SCALE
1/4" = 1'-0"

DATE
2026/08/14

SHEET NUMBER
A12.6

Docusign Envelope ID: 3811754B-0572-577D-808A-24523D18AAB8



1 SIGHT-LINE & PRIVACY DIAGRAM - BALCONY
1/4" = 1'-0"

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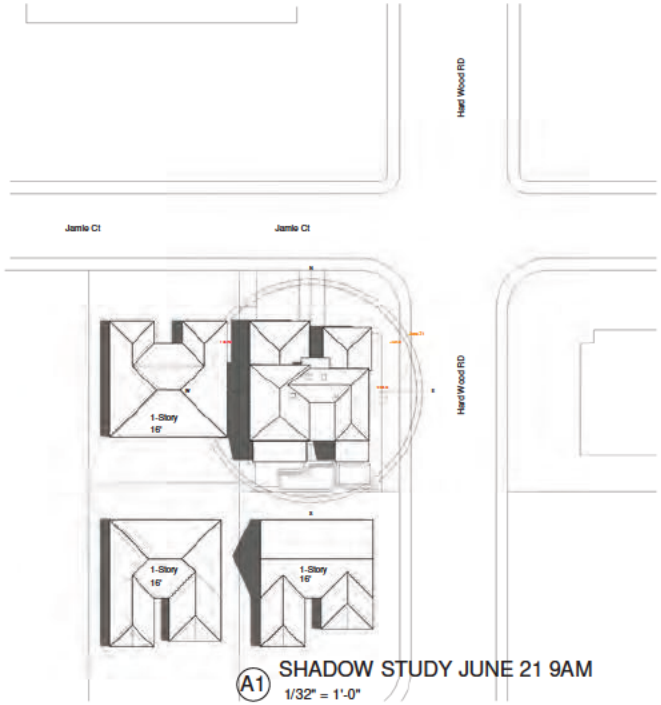
SIGHT-LINE&PRIVACY DIAGRAM-BALCONY

SCALE
1/4" = 1'-0"

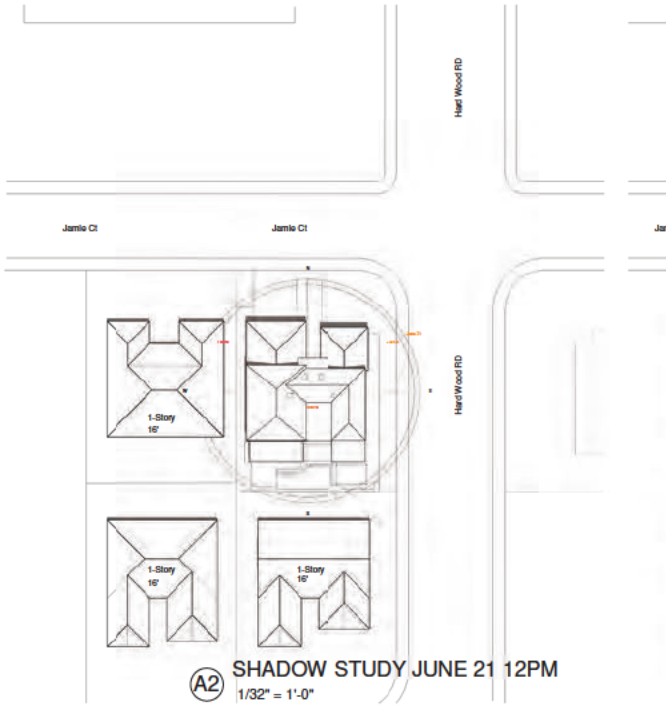
DATE
2026/08/20

SHEET NUMBER
A12.7

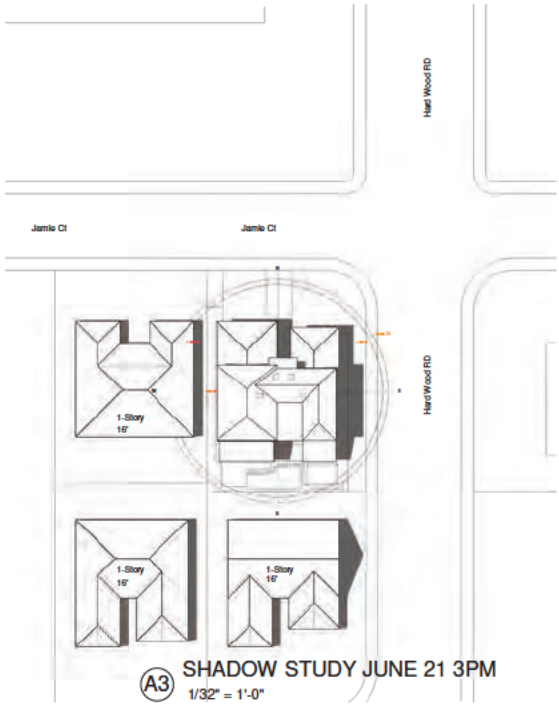
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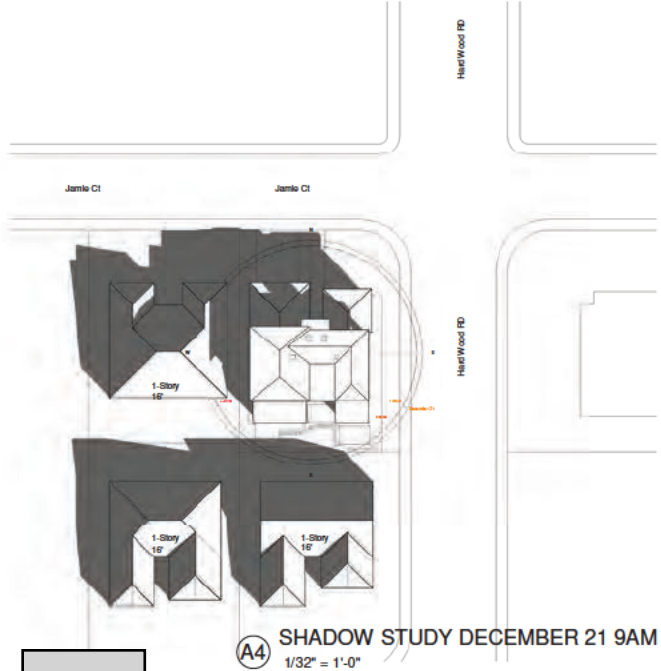
A1 SHADOW STUDY JUNE 21 9AM
1/32" = 1'-0"



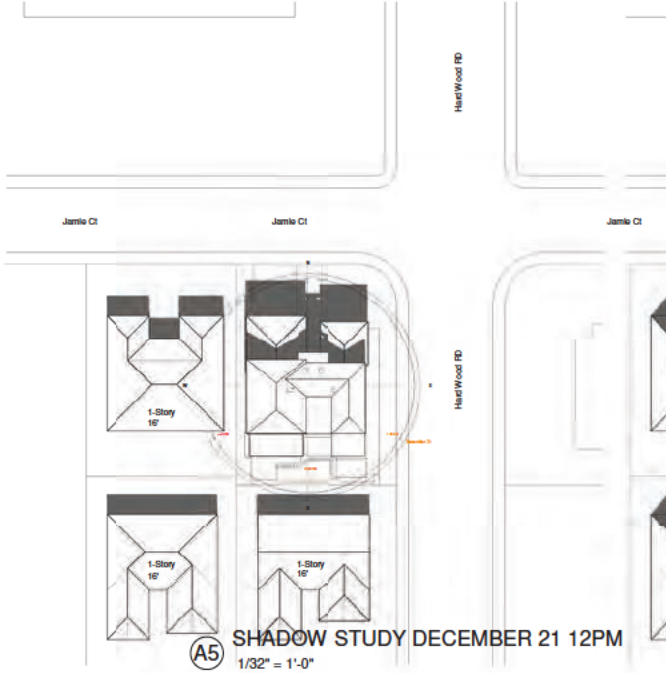
A2 SHADOW STUDY JUNE 21 12PM
1/32" = 1'-0"



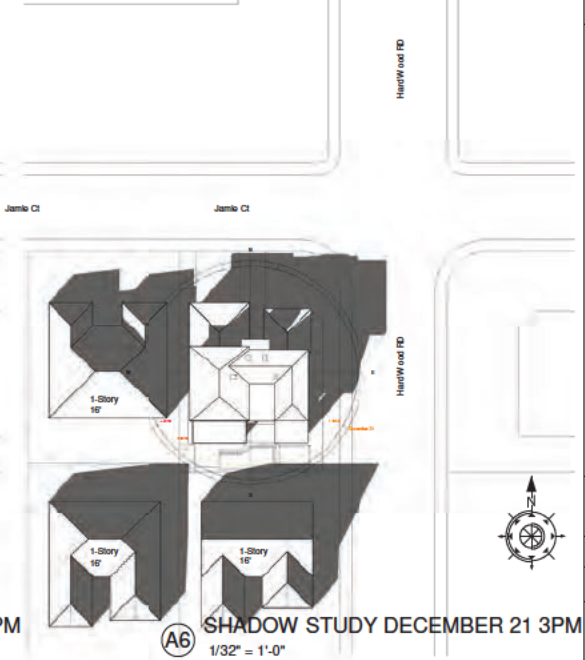
A3 SHADOW STUDY JUNE 21 3PM
1/32" = 1'-0"



A4 SHADOW STUDY DECEMBER 21 9AM
1/32" = 1'-0"



A5 SHADOW STUDY DECEMBER 21 12PM
1/32" = 1'-0"



A6 SHADOW STUDY DECEMBER 21 3PM
1/32" = 1'-0"

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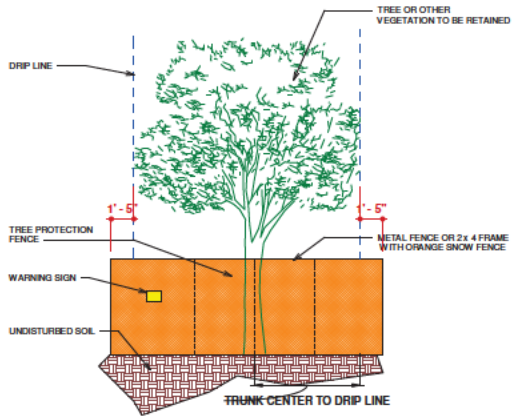
SHADOW STUDY PLAN

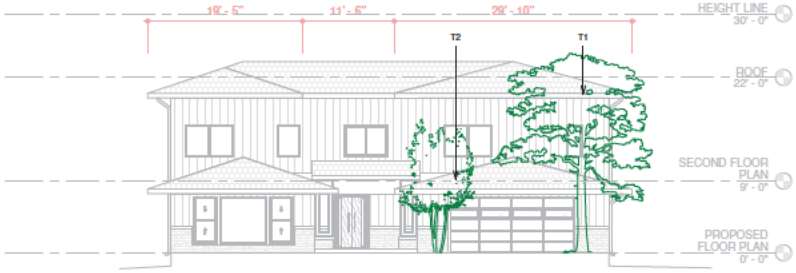
SCALE
As indicated

DATE
2026/08/14

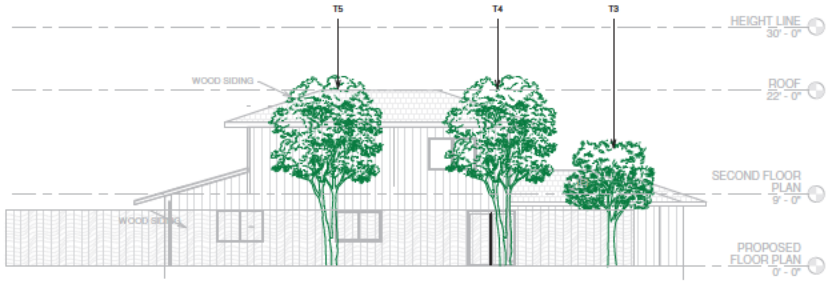
SHEET NUMBER
A12.8

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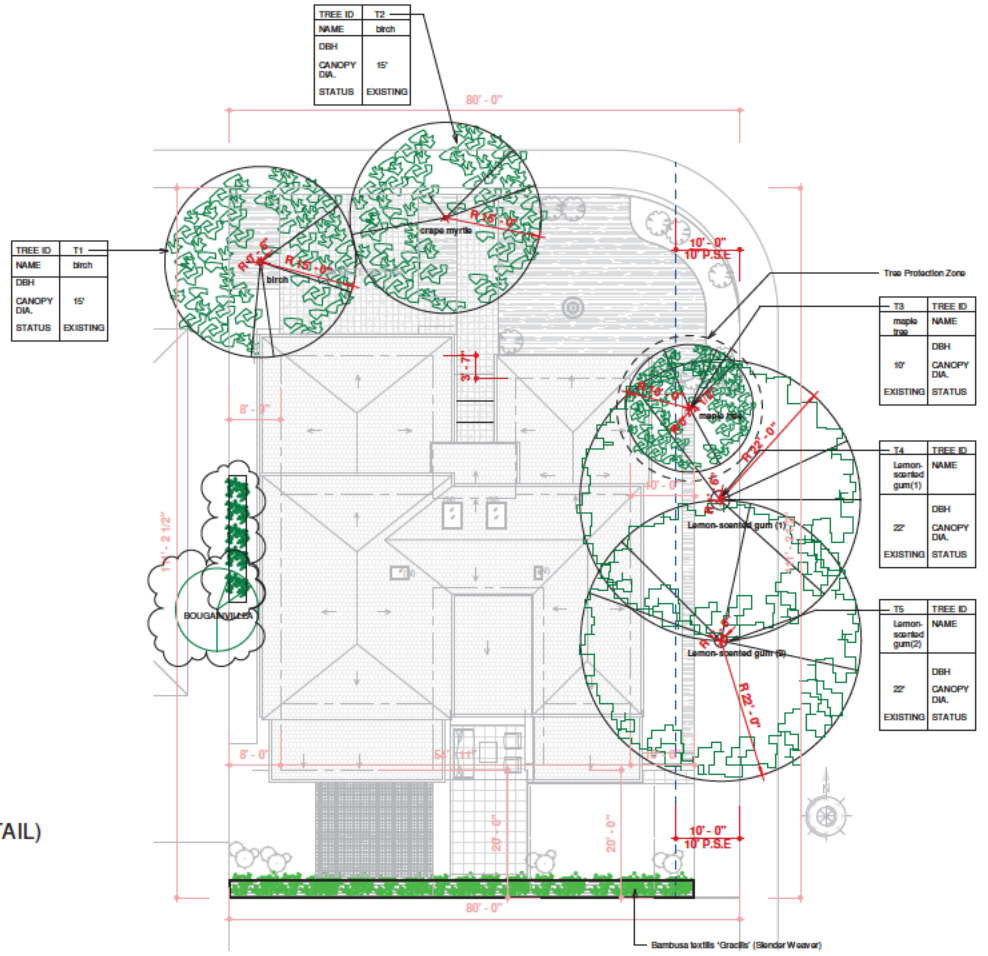




1 PROPOSED FRONT (NORTH) ELEVATIONS (TREE PROTECTION DETAIL)
1/8" = 1'-0"



2 TREE PROTECTION DETAIL (TREE PROTECTION DETAIL)
1/8" = 1'-0"



3 TREE PROTECTION PLAN
1" = 10'-0"

TREE SCHEDULE

TREE NUMBER	T1	T2	T3	T4	T5
COMMON NAME	birch	crape myrtle	maple tree	Lemon-scented gum (1)	Lemon-scented gum (2)
DBH	6"		4.5"	18"	12"
CANOPY DIA.	15'	15'	10'	22'	22'
STATUS	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING

PRIVACY SCREENING MATRIX

NO.	SPECIES		QUANTITY	CONTAINER SIZE (GAL.)	HEIGHT AT PLANTING
01	Bambusa textilis 'Gracilis' (Slender Weaver)		26	15GAL	12'

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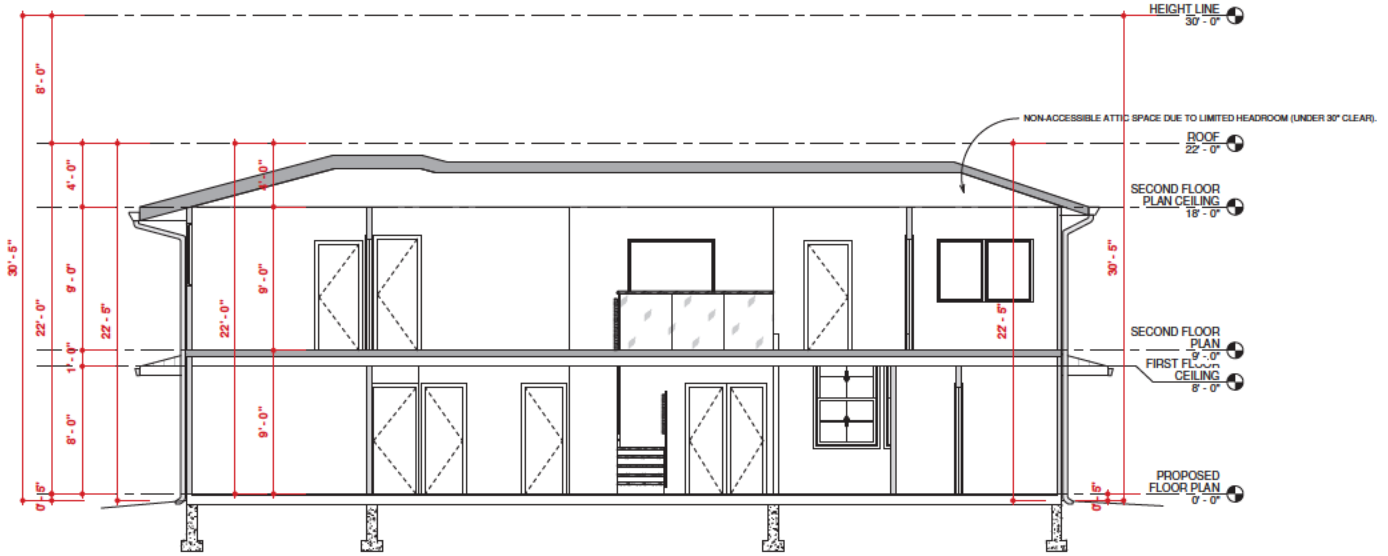
TREE PROTECTION PLAN

SCALE
As indicated

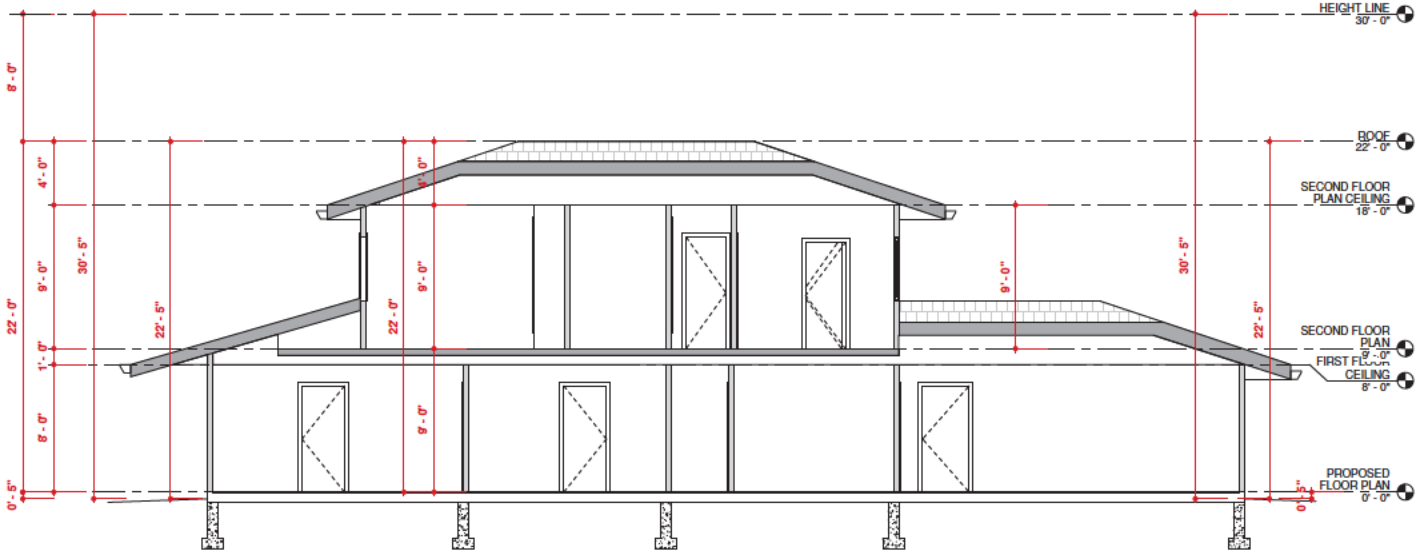
DATE
2026/09/24

SHEET NUMBER
A12.9

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1 Section 1
1/4" = 1'-0"



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

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BUILDING SECTION

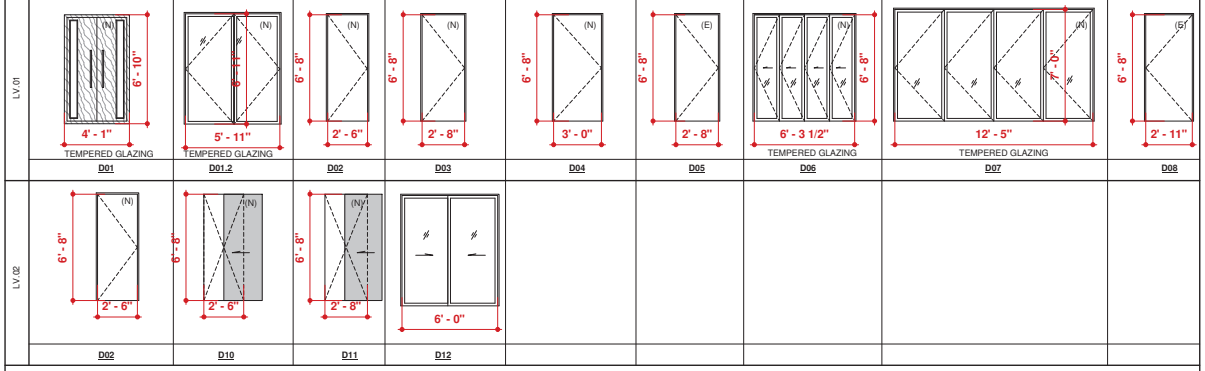
SCALE
1/4" = 1'-0"

DATE
2026/08/14

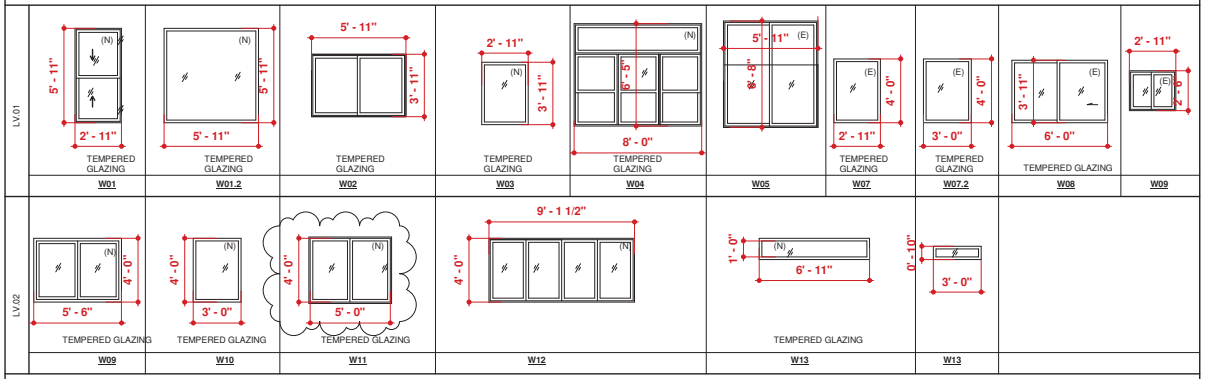
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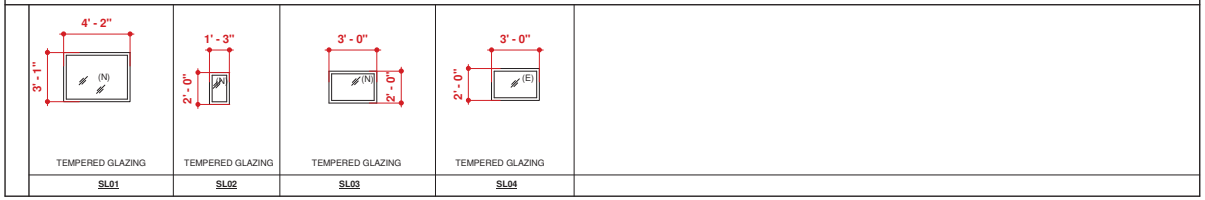
DOOR SCHEDULE



WINDOW SCHEDULE



SKYLIGHT SCHEDULE



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DOOR AND WINDOW SCHEDULE

SCALE
1/4" = 1'-0"

DATE
2026/09/24

SHEET NUMBER
A14

DOOR AND WINDOW SCHEDULE
1/4" = 1'-0"

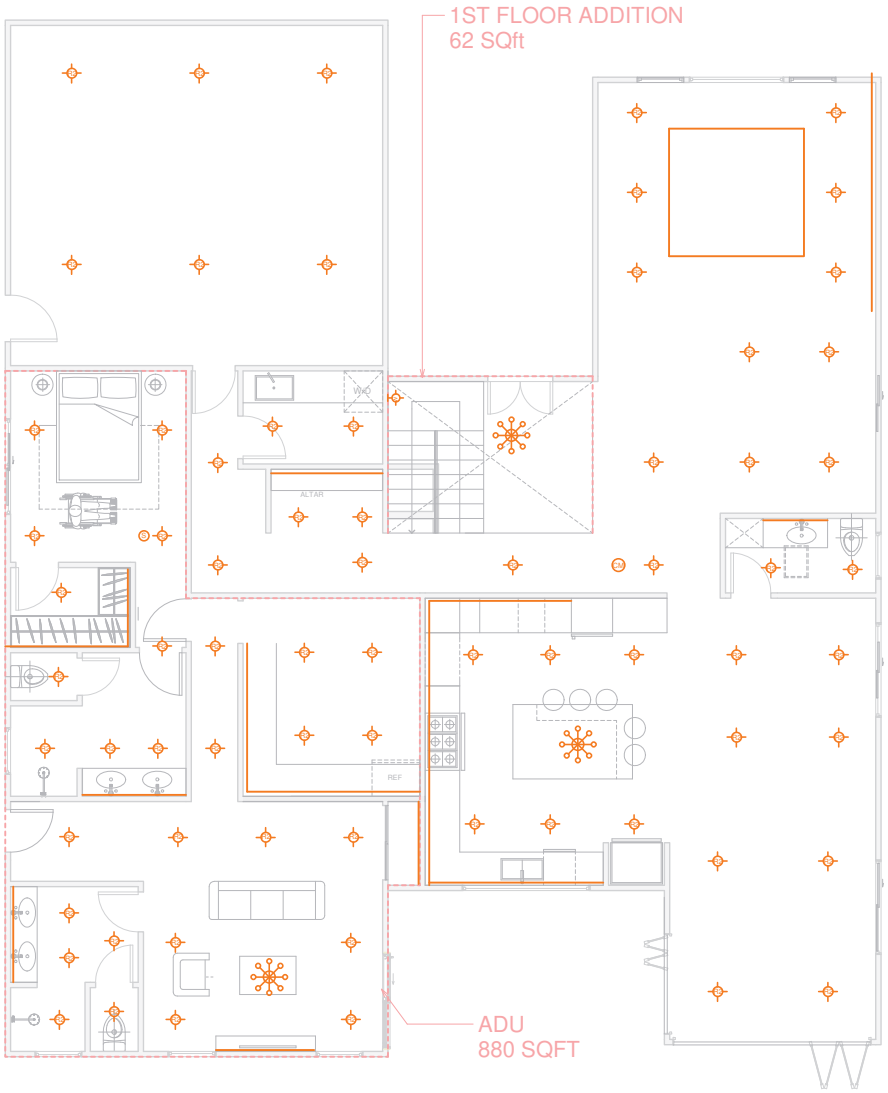
Docusign Envelope ID: 38117549-0572-877D-808A-24523D18AA9B

ELECTRICAL NOTES:

1. VERIFY LOCATION OF EXISTING OUTLETS AND ADD OUTLETS TO MEET SPACING OF CURRENT CODE.
2. LOCATIONS OF GENERAL USE RECEPTACLE OUTLETS AT NEW AND MODIFIED INTERIOR WALLS TO MEET THE PROVISIONS IN CEC. IN KITCHEN, FAMILY ROOM, DINING ROOM, LIBRARY AND BEDROOM RECEPTACLE OUTLETS SHALL BE INSTALLED SUCH THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE OF ANY WALL SPACE IS MORE THAN 6 FEET. WALL SPACE IN ANY SECTION OF WALL 2 FEET OR LONGER.
3. AFCI PROTECTION FOR ALL BEDROOM RECEPTACLES.
4. RECEPTACLES OUTLETS AT HOUSE FRONT AND REAR EXTERIOR WALLS ARE GFCI PROTECTED GASKETED-COVER TYPE FOR USE IN WET LOCATIONS.
5. PROVIDE ARC-FAULT CIRCUIT INTERRUPTER AT ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE-PHASE, 15 AND 20 AMPERE RECEPTACLE OUTLETS INSTALLED INDWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREA. (CEC 210-12B)
6. ALL 125-VOLT, 15AMP AND 20-AMP RECEPTACLE OUTLETS SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. (CEC 406.11, ARTICLE 210.52)
7. ALL 125-VOLT, SINGLE-PHASE, 15AMP AND 20AMP RECEPTACLES INSTALLED IN THE FOLLOWING LOCATIONS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL. (CEC 210.8):
a. BATHROOMS, GARAGES, OUTDOORS, CRAWL SPACES, UNFINISHED BASEMENTS.
b. KITCHEN COUNTERTOP SURFACES.
c. LAUNDRY, UTILITY AND WET BAR SINKS (W/IN 6 FEET OF THE EDGE OF SINK)
d. BOATHOUSES.
8. ADDITIONAL LIGHTING OUTLETS SHALL BE INSTALLED IN THE FOLLOWINGS: FOR DWELLING UNITS AT LEAST ONE WALL SWITCH CONTROLLED LIGHTING OUTLET SHALL BE INSTALLED TO PROVIDE ILLUMINATION ON THE EXTERIOR SIDE OF OUTDOOR ENTRANCES OR EXITS WITH GRADE LEVEL ACCESS.
9. PROVIDE SMOKE DETECTORS IN EACH SLEEPING ROOM AND IN CORRIDORS GIVING ACCESS TO EACH SLEEPING AREA. ALL SMOKE DETECTOR SHALL BE HARDWIRED TO 110V WITH BATTERY BACKUP AND SHALL BE INTERCONNECTED.
10. CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN DWELLING UNITS WHICH HAVE FUEL-BURNING APPLIANCES AND ATTACHED GARAGES, THESE ALARMS SHALL BE LOCATED OUTSIDE OF EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S) AND ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENT. DETECTORS SHALL BE INTERCONNECTED TO SOUND SIMULTANEOUSLY.
11. LIGHT OUTDOOR WALL MOUNT BRUSHED ALUMINUM FINISH WITH WHITE.
12. ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST EDITION ELECTRICAL CODE (CEC).
13. ELECTRICAL CONTRACTOR SHALL EVALUATE EXISTING SERVICE ENTRANCE PANEL BOX AND SERVICE CAPACITY AND MAKE A RECOMMENDATION TO THE OWNER AS TO ANY NECESSARY CHANGES.
14. WALL SWITCH-CONTROLLED EXTERIOR LIGHT FIXTURES AT THE EXTERIOR SIDE(S) OF OUTSIDE ENTRANCE/EXIT DOORS.
15. THE FOUNDATION SHALL HAVE A CONCRETE ENCASED ELECTRODE (#6 AWG COPPER WIRE).
16. ALL RECESSED LIGHT FIXTURES SHALL BE IC RATED AND AIR TIGHT OR FIXTURES NOT IDENTIFIED FOR CONTACT WITH INSULATION SHALL HAVE ALL RECESSED PARTS SPACED AT LEAST 1/2" FROM COMBUSTIBLE MATERIAL AND 3" FROM THERMAL INSULATION.
17. CONSULT PG&E FOR ELECTRICAL SERVICE REQUIREMENT.

Lighting Fixture Schedule

SYMBOL	MOUNTING TYPE/ DESCRIPTION	POWER	COLOR TEMPERATURE	QUANITY
	WALL-MOUNTED LIGHT	5W	3000K	
	MIRROR LIGHT	5W	3000K	
	PICTURE LIGHT	5W	3000K	
	RECESSED LIGHT	12W	3500K	
	RECESSED LIGHT	6W	3000K	
	RECESSED LIGHT	15W	5000K	
	RECESSED LIGHT	6W	4000K	
	CHANDELIER	5W	3500K	
	PENDANT	12W	3000K	
	PENDANT	5W	3500K	
	PENDANT	10W	3000K	
	PENDANT	10W	3000K	
	PENDANT	5W	3000K	
	PENDANT	5W	3000K	
	KITCHEN LED LINEAR LIGHT	5W	4000K	
	OTHER LED LINEAR LIGHTS	5W	4000K	
CM	CARBON MONOXIDE DETECTOR			
S	SMOKE ALARMS			



1 FIRST FLOOR LIGHTING PLAN
1/4" = 1'-0"

Custom Home
CUSTOM HOME
DESIGN AND BUILD
2092 CONCOURSE DR
#9 SAN JOSE,
CA 95131
WWW.CUSTOMHOME.US
EMAIL:
INFO@CUSTOMHOME.US
PHONE: 407-701-7116

REVISIONS	BY

DESIGN MANAGER

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

PROPOSED ELECTRICAL FOOR PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
E01

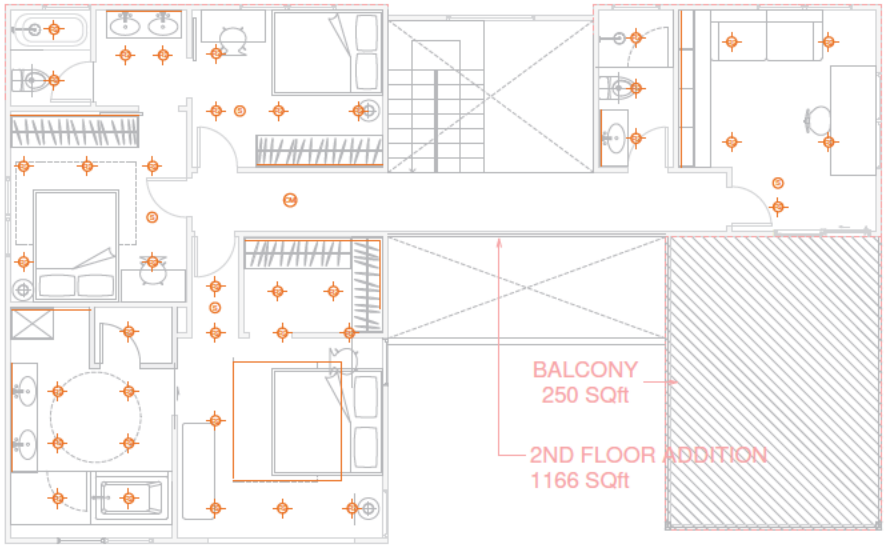
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ELECTRICAL NOTES:

1. VERIFY LOCATION OF EXISTING OUTLETS AND ADD OUTLETS TO MEET SPACING OF CURRENT CODE.
2. LOCATIONS OF GENERAL USE RECEPTACLE OUTLETS AT NEW AND MODIFIED INTERIOR WALLS TO MEET THE PROVISIONS IN CEC. IN KITCHEN, FAMILY ROOM, DINING ROOM, LIBRARY AND BEDROOM RECEPTACLE OUTLETS SHALL BE INSTALLED SUCH THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE OF ANY WALL SPACE IS MORE THAN 6 FEET. WALL SPACE IN ANY SECTION OF WALL 2 FEET OR LONGER.
3. AFCI PROTECTION FOR ALL BEDROOM RECEPTACLES.
4. RECEPTACLES OUTLETS AT HOUSE FRONT AND REAR EXTERIOR WALLS ARE GFCI PROTECTED GASKETED-COVER TYPE FOR USE IN WET LOCATIONS.
5. PROVIDE ARC-FAULT CIRCUIT INTERRUPTER AT ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE-PHASE, 15 AND 20 AMPERE RECEPTACLE OUTLETS INSTALLED INDWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREA. (CEC 210-12B)
6. ALL 125-VOLT, 15AMP AND 20-AMP RECEPTACLE OUTLETS SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. (CEC 406.11, ARTICLE 210.52)
7. ALL 125-VOLT, SINGLE-PHASE, 15AMP AND 20AMP RECEPTACLES INSTALLED IN THE FOLLOWING LOCATIONS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL. (CEC 210.8):
a. BATHROOMS, GARAGES, OUTDOORS, CRAWL SPACES, UNFINISHED BASEMENTS.
b. KITCHEN COUNTERTOP SURFACES.
c. LAUNDRY, UTILITY AND WET BAR SINKS (WITHIN 6 FEET OF THE EDGE OF SINK)
d. BOATHOUSES.
8. ADDITIONAL LIGHTING OUTLETS SHALL BE INSTALLED IN THE FOLLOWINGS: FOR DWELLING UNITS AT LEAST ONE WALL SWITCH CONTROLLED LIGHTING OUTLET SHALL BE INSTALLED TO PROVIDE ILLUMINATION ON THE EXTERIOR SIDE OF OUTDOOR ENTRANCES OR EXITS WITH GRADE LEVEL ACCESS.
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	PENDANT	10W	3000K	
	PENDANT	10W	3000K	
	PENDANT	5W	3000K	
	PENDANT	5W	3000K	
	KITCHEN LED LINEAR LIGHT	5W	4000K	
	OTHER LED LINEAR LIGHTS	5W	4000K	
CM	CARBON MONOXIDE DETECTOR			
S	SMOKE ALARMS			



1 SECOND FLOOR LIGHTING PLAN
1/4" = 1'-0"

CUSTOM HOME
DESIGN AND BUILD

2092 CONCOURSE DR
#9 SAN JOSE,
CA 95131
WWW.CUSTOMHOME.US

EMAIL:
INFO@CUSTOMHOME.US
PHONE: 407-701-7116

REVISIONS	BY

DESIGN MANAGER

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

PROPOSED ELECTRICAL FOOR PLAN

SCALE
As indicated

DATE
2026/09/24

SHEET NUMBER
E02

Docusign Envelope ID: 38117549-0572-877D-808A-24523D18AA9B

2025 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Code must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective sections for more information.

Space Conditioning, Water Heating, and Plumbing System

§ 110.0-110.3	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.
§ 170.2(e)	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Tables 110.2-A through -L.
§ 110.2(b) § 110.2(c)	**Controls for Heat Pumps with Supplementary Heaters.** Heat pumps with supplementary heaters must have control requirements as specified in § 150.0(b)7 and § 150.1(c)3. *
§ 110.2(c)(3)	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(a)1	**Insulation.** Unfired service water heater storage tanks and solar water heating backup tanks must have adequate insulation, or foil surface heat loss rating.
§ 110.3(a)2	**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.
§110.3(c)7	**Backup Heat and Ventilation.** Air-source heat pump water heaters must have backup heat (internal or external) if inlet air is reconditioned, unless compressor cut-off temperature is below Heating Winter Median of Extremes from Reference Appendix JA2. Heat pump water heater installation space and/or communicating space(s) must meet minimum volume, ducting, and/or grill net free area by kilbtuh of compressor capacity.
§ 110.5	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas fan-type central furnaces, household cooking appliances (except appliances without electrical supply voltage connection with pilot lights that consume less than 150 Btu/h), pool and spa heaters. *
§ 150.0(b)1	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Fundamentals Volume, Applications Volume, and Fundamentals Volume, the 'RMA/ACNA Residential Comfort Systems 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 any dryer outlet or vent.
§ 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(h)5	**System Selection.** Equipment sizing and selection must meet the cooling and heating loads of § 150.0(h)1 & 2, and systems must be sized per ACCA Manual S-2020 with no minimum cooling capacity. Furnace heating capacity must meet ACCA Manual S. Heat pump heating capacity must meet minimum CEC requirements without including supplementary heat with no limit on maximum heating capacity.
§ 150.0(h)6	**Defrost.** Installer-adjustable defrost delay timers must be set to greater than or equal to 90 minutes. CF2R certification required. *
§ 150.0(h)7	**Supplementary Heating Control Configuration.** Heat pumps with supplementary heating must have controls to lock supplementary heating above outdoor air temperature no greater than 25°F, allowed during defrost or emergency operation. CF2R certification required. *
§ 150.0(h)8	**Sizing of Electric Resistance Supplementary Heat.** When heat pumps have electric resistance heat, the capacity of electric resistance heat must not exceed the heat pump nominal cooling capacity (at 95°F ambient conditions) multiplied by 2.7 kW per ton, rounded up to the closest kW.
§ 150.0(h)9	**Capacity Variation with Third-party Thermostats.** For variable or multi-speed systems, the space conditioning system and thermostat must be capable of responding to heating and cooling loads by modulating system compressor speed and must meet thermostat requirements of § 150.0(i)2. CF2R certification required.
§ 150.0(i)	**Thermostat.** All heating or cooling systems including heat pumps which are not controlled by energy management control system (EMCS) must have setback thermostat. Additional requirements for thermostats that control heat pumps with supplemental heating include thermostat must display outdoor air temperature, must lock out supplementary heat when outdoor air temperature is above 35°F, and must notify when supplemental heat is in use. *
§ 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 § 609.12 of the California Plumbing Code.
§ 150.0(j)2	**Insulation Protection.** Piping insulation must be protected from damage, including from 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 and abrasive stress. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or II vapor retarder. Pipe insulation beyond those as left must be installed in a watertight 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' available 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)2	**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 § 604.8 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify in the statement, 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, 602.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply- and return air ducts and plenums must be insulated to R-6.0 or higher. Ducts located entirely in conditioned space as confirmed via field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation, in dwelling units with attics. Air ducts must be below the ceiling separating occupiable space from the attic. Connections of metal ducts and loose runs of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct closure system that meets 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, or behind support

2025 Single-Family Residential Mandatory Requirements Summary

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 E 283, or AAMA/WDMA/CSA 101/I.S.2/A440-2017. *
§110.6(a)2-4	**U-factor, Solar heat gain coefficient, Visible transmittance.** The fenestration product and exterior door's U-factor and solar heat gain coefficient (SHGC) shall be rated in accordance with NFRC 100 and NFRC 300, or use the applicable defaults in Table 110.6-A and TABLE 110.6-B. The visible transmittance (VT) shall be rated in accordance with NFRC 200 or ASTM E972, for tubular daylighting devices VT shall be rated using NFRC 203. *
§ 110.6(b)1	**Labelling.** 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 from Table 110.6-A and solar heat gain coefficient (SHGC) values from Table 110.6-B. 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 above conditioned space in climate zones 4 and 8-16 area weighted average U-factor not exceeding U-0.164. Ceiling and rafter roofs minimum R-22 insulation in wood frame ceiling, or area weighted average U-factor must not exceed 0.042. 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 that 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(c)	**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-15 insulation in 2x4 inch wood framing wall or have a U-factor of 0.056 or less, or R-21 in 2x6 inch wood framing or have a U factor of 0.059 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. *
§ 150.0(d)	**Raised-floor Insulation.** Minimum R-19 insulation in wood framed raised floor or 0.037 maximum U-factor. *
§ 150.0(f)	**Slab Edge Insulation.** Slab edge insulation must meet the following: water absorption rate no greater than 0.3 percent for insulation material alone without facings; water vapor permission no greater than 2.0 perm per inch, 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 area-weighted average U-factor of 0.46. *

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) through (e).
§110.10(b)1A	**Minimum Solar Zone Area.** The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements per Title 24, Part 9, or other parts of Title 24, or any requirements adopted by a local jurisdiction. 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. The solar zone total area must be comprised of areas with no dimension less than 5-feet and no less than 80 square feet each for buildings with roof areas up to 10,000 square feet; or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. *
§ 110.10(b)2	**Azimuth.** All sections of the solar zone located on sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A	**Shading.** No obstructions or solar zone, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. *
§ 110.10(b)4	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c)	**Interconnection Pathways.** The construction documents must indicate a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.

2025 Single-Family Residential Mandatory Requirements Summary

	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** must comply with applicable requirements of UL 181 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** 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 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 in 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 to sunlight, 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 Flue Duct.** Flue ducts with porous inner cores 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 and prevents air from bypassing the filter. *
§ 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 shall meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in §150.0(o)1.1 *
§ 150.0(o)1B	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers used as CFI systems is not a permissible method to provide whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) shall be installed on the ventilation duct(s) that prevents all air movement through the space conditioning duct system when the damper(s) is closed and controlled per §150.0(o)1Bvi&vii. CFI ventilation systems must have outside 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 dwellings.** Single-family dwellings shall have mechanical ventilation specified in §150.0(o)1C i. and §150.0(o)1C ii. 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 may reduce their required mechanical ventilation rates in accordance with §150.0(o)1Ciii-vi. * Vertically attached dwelling units shall not reduce their minimum ventilation rates in accordance with §150.0(o)1Civ.a.
§ 150.0(o)1Ci-ii	**Local Mechanical Exhaust.** Kitchens and bathrooms shall have local mechanical exhaust, nonrecirculated kitchens shall have demand-controlled exhaust system meeting requirements of §150.0(o)1Gii, enclosed kitchens and bathrooms shall either use demand-controlled as specified in §150.0(o)1Gii or continuous exhaust as specified in §150.0(o)1Civ. Airflow shall be measured by the installer per §150.0(o)1Civ, and rated for sound per §150.0(o)1Civ. *
§ 150.0(o)1Ci-ii	**Airflow Measurement, Sound Ratings, Label of Whole-Dwelling Unit Ventilation Systems.** The airflow required per §150.0(o)1D shall 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 shall be rated for sound per ASHRAE 62.2 ≤ 1.0 sones or less than the minimum airflow rate required by §150.0(o)1C. Manual on-off switches must be labeled per §150.0(o)1Ai.
§ 150.0(o)2	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HVAC and ERV net efficacy shall be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods shall 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)1C.

Electric and Battery Energy Storage Ready:

§ 150.0(n)	**Battery Energy Storage System (BESS) Ready.** All single-family residences that include one or two dwelling units, which a load serving entity provides with electrical service for the dwelling unit that is greater than 125 amps, shall meet at least one of the following. Either BESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more BESS-supplied branch circuits in §150.0(n)2. or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(n)2. at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the BESS.

2025 Single-Family Residential Mandatory Requirements Summary

§ 110.10(b)	**Documentation.** A copy of the construction documents or a comparable document indicating the information from §110.10(b)1-(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"

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. *

Pool and Spa Systems and Equipment:

§ 110.4(a)	**Certification by Manufacturers.** *Pool/spa heating equipment must be certified as compliant with Appliance Efficiency Regulations, have an externally mounted, readily accessible on-off switch that allows shutting off the heater without adjusting the thermostat setting; permanent, easily readable weatherproof plate or card with energy efficiency rating and operating instructions.
§ 110.4(b)1	**Heating Equipment.** Pool/spa heating equipment must meet applicable standards, by fuel type.
§ 110.4(b)2	**Piping.** At least 16 inches of horizontal or vertical pipe installed between the filter and the heater; or dedicated suction and return lines, or built-in or built-up connections installed to allow for the future addition of solar heating equipment.
§ 110.4(b)3	**Covers.** Outdoor pools or spas with electric or gas heater must have a cover.
§ 110.4(b)4	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a permanently installed time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.4(c)2	**Heat Source Sizing.** Pool/spa heating systems must be solar heating system with collector area of at least 50% of pool/spa surface area, heat pump sized per JA10.3, coordination of solar and heat pump, or use 80% or more on-site renewable/electric/renewable energy. *
§ 110.4(d)	**Heat Pump Pool Heaters with Supplementary Heating.** Controls for such systems must limit supplementary heating when the heating load can be met by the heat pump alone.
§ 110.5	**Pilot Light.** Natural gas pool and spa boilers must not have a continuously burning pilot light.
§ 150.0(p)1	**Pool Systems and Equipment Installation.** Single-family pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.

*Exceptions may apply.

2025 Single-Family Residential Mandatory Requirements Summary

	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 feet of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source. *
§ 150.0(l)	**Heat Pump Space Heater Ready.** Systems using gas or propane furnaces in 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(n)1	**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(o)	**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."

Lighting:

§ 110.9	**Lighting Controls and Components.** All lighting control devices and systems, light sources, and luminaires must meet the applicable requirements of §110.9. *
§ 150.0(k)1A	**Luminaire Efficacy.** All installed luminaires and light sources must meet the requirements of Reference Joint Appendix JA8, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt; and ceiling fan kits subject to EISR's Appliance and Equipment Standards. *
§ 150.0(k)1C	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw-based sockets, be airtight with air leakage rate, < 2.0 cfm at 75 Pascals, and leak paths be sealed with a gasket or caulk. California Electrical Code Article 410.116 must also be met. *
§ 150.0(k)1D	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other replaceable light sources installed in enclosed or recessed luminaires must meet the JA8 elevated temperature requirements, including marking requirements.
§ 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, occupancy sensor control, low voltage wiring, or tandem wired.
§ 150.0(k)2A	**Indoor Lighting Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off.
§ 150.0(k)2D	**Controls Permitted.** 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. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function installed to comply with §150.0(k)2.
§ 150.0(k)2E	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F	**Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down, except lighting integral to kitchen range hoods and bathroom exhaust fans, navigation lighting less than 5 watts, lighting internal to drawers, cabinetry with opaque fronts or doors and controlled by automatic-off controls, luminaires in a circuit with controlled lighting power less than 20 watts or controlled by an occupancy or vacancy sensor. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A. Lighting integrated with ceiling fan may be controlled via a remote control.
§ 150.0(k)2G	**Independent Controls.** Lighting integral to exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3	**Residential Outdoor Lighting.** Outdoor lighting permanently mounted to a single-family residential building or other buildings on the same lot must meet luminaire efficacy requirements of §150.0(k)1A, have a manual on/off switch and either a photocell and motion sensor, a photocell and automatic time switch, or an astronomical time clock. Controls that override to ON are not allowed, unless that override automatically returns the automatic control to the normal operation within 6 hours. An EMCS or other controls that provides the specified control functionality may be used but must meet all applicable requirements.
§ 150.0(k)4	**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.

Custom Home
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PHONE: 407-701-7116

REVISIONS	BY

DESIGN MANAGER

Signed by:
9F1D1404D87B4E3...

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

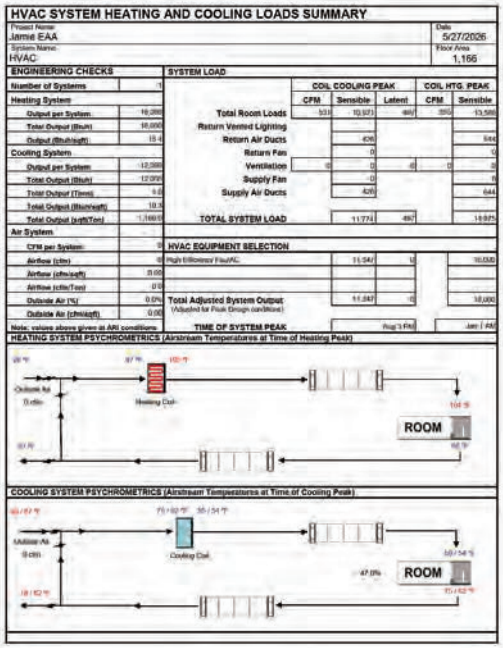
2025 Single-Family Residential Mandatory Requirements Summary

SCALE

DATE
2026/08/14

SHEET NUMBER
F01

Docusign Envelope ID: 38117549-0572-877D-808A-24523D18AA9B



HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: Jamie EAA
Date: 5/27/2026
System Name: HVAC
Floor Area: 1,155

ENGINEERING CHECKS

Number of Systems	1
Heating System	
Output per System	16,288
Total Output (Btu/h)	16,000
Output (Btu/h/sqft)	13.8
Cooling System	
Output per System	12,000
Total Output (Btu/h)	12,000
Total Output (Tons)	1.0
Total Output (Btu/h/sqft)	10.3
Total Output (sqft/Ton)	1,166.0
Air System	
CFM per System:	0
Airflow (cfm)	0
Airflow (cfm/sqft)	0.00
Airflow (cfm/Ton)	0.00
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00

SYSTEM LOAD

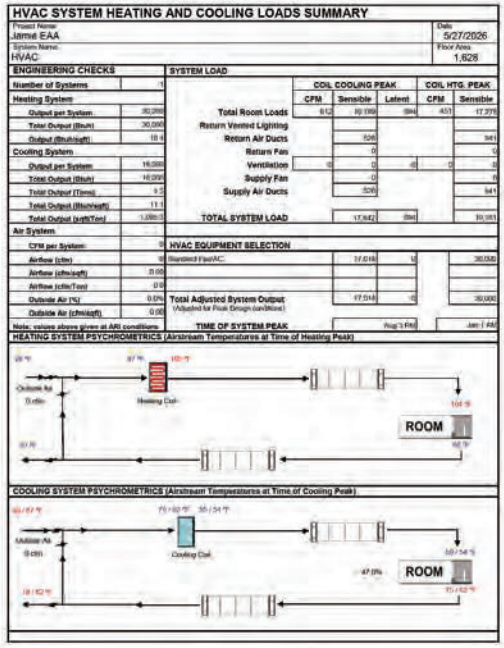
	COIL COOLING PEAK CFM	COIL COOLING PEAK Sensible	COIL COOLING PEAK Latent	COIL HTG. PEAK CFM	COIL HTG. PEAK Sensible
Total Room Loads	533	10,971	466	550	13,586
Return Vented Lighting					
Return Air Ducts		426			644
Return Fan		0			0
Ventilation	0	0	45	0	0
Supply Fan		0			0
Supply Air Ducts		426			644
TOTAL SYSTEM LOAD		11,774	497		13,975

HVAC EQUIPMENT SELECTION

High Efficiency Flex/AC	11,541	0		16,000
Total Adjusted System Output (Adjusted for Peak Groups coincidence)	11,541	0		16,000
Note: values above given at ARI conditions	TIME OF SYSTEM PEAK		Aug 3 Fri	Jan 7 Fri

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)

COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: Jamie EAA
Date: 5/27/2026
System Name: HVAC
Floor Area: 1,628

ENGINEERING CHECKS

Number of Systems	1
Heating System	
Output per System	30,288
Total Output (Btu/h)	30,000
Output (Btu/h/sqft)	18.4
Cooling System	
Output per System	16,000
Total Output (Btu/h)	16,000
Total Output (Tons)	1.3
Total Output (Btu/h/sqft)	11.1
Total Output (sqft/Ton)	1,086.0
Air System	
CFM per System:	0
Airflow (cfm)	0
Airflow (cfm/sqft)	0.00
Airflow (cfm/Ton)	0.00
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00

SYSTEM LOAD

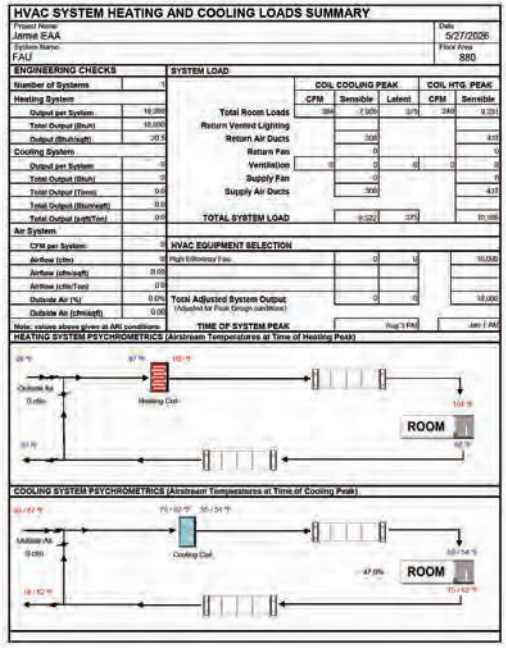
	COIL COOLING PEAK CFM	COIL COOLING PEAK Sensible	COIL COOLING PEAK Latent	COIL HTG. PEAK CFM	COIL HTG. PEAK Sensible
Total Room Loads	812	16,199	894	451	17,378
Return Vented Lighting					
Return Air Ducts		526			941
Return Fan		0			0
Ventilation	0	0	45	0	0
Supply Fan		0			0
Supply Air Ducts		526			941
TOTAL SYSTEM LOAD		17,842	894		19,183

HVAC EQUIPMENT SELECTION

Standard Flex/AC	17,616	0		30,000
Total Adjusted System Output (Adjusted for Peak Groups coincidence)	17,616	0		30,000
Note: values above given at ARI conditions	TIME OF SYSTEM PEAK		Aug 3 Fri	Jan 7 Fri

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)

COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: Jamie EAA
Date: 5/27/2026
System Name: FAU
Floor Area: 880

ENGINEERING CHECKS

Number of Systems	1
Heating System	
Output per System	16,288
Total Output (Btu/h)	16,000
Output (Btu/h/sqft)	20.5
Cooling System	
Output per System	0
Total Output (Btu/h)	0
Total Output (Tons)	0.0
Total Output (Btu/h/sqft)	0.0
Total Output (sqft/Ton)	0.0
Air System	
CFM per System:	0
Airflow (cfm)	0
Airflow (cfm/sqft)	0.00
Airflow (cfm/Ton)	0.00
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00

SYSTEM LOAD

	COIL COOLING PEAK CFM	COIL COOLING PEAK Sensible	COIL COOLING PEAK Latent	COIL HTG. PEAK CFM	COIL HTG. PEAK Sensible
Total Room Loads	384	7,909	379	240	8,251
Return Vented Lighting					
Return Air Ducts		308			410
Return Fan		0			0
Ventilation	0	0	45	0	0
Supply Fan		0			0
Supply Air Ducts		308			410
TOTAL SYSTEM LOAD		8,522	379		10,066

HVAC EQUIPMENT SELECTION

High Efficiency Flex	0	0		16,000
Total Adjusted System Output (Adjusted for Peak Groups coincidence)	0	0		16,000
Note: values above given at ARI conditions	TIME OF SYSTEM PEAK		Aug 3 Fri	Jan 7 Fri

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)

COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)

Custom Home

CUSTOM HOME
DESIGN AND BUILD

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REVISIONS	BY

DESIGN MANAGER

Signed by:

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

SCALE

DATE
2026/08/14

SHEET NUMBER
F02

Docusign Envelope ID: 3011754B-2B72-877D-80BA-24523D18AAB6

CERTIFICATE OF COMPLIANCE – RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01-E — (Page 1 of 16)

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-07:00
Calculation Description: Title 24 Analysis — **Input File Name:** Building2.ribd25x

GENERAL INFORMATION

01	Project Name	Jamie EAA			
02	Run Title	Title 24 Analysis			
03	Project Location	100 Jamie Ct			
04	City	Los Gatos	05	Standards Version	2022
06	Zip code	95032	07	Software Version	EnergyPro 10.1
08	Climate Zone	4	09	Front Orientation (deg/CardinalE)	0
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)	1740	15	Number of Stories	1
16	Existing Cond. Floor Area (ft²)	2128	17	Fenestration Average U-factor	0.3
18	Total Cond. Floor Area (ft²)	3674	19	Glazing Percentage (%)	17.56%
20	ADU Bedroom Count	2	21	ADU Conditioned Floor Area	980
22	Pool Type	Natural gas	23	No Dwelling Unit	No

COMPLIANCE RESULTS

Building Complies with Computer Performance

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

This building incorporates one or more Special Features shown below.

REQUIRED SPECIAL FEATURES

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

- insulation below roof deck
- Ducts in crawl space

Registration Number: 428-P010198182A-100-000-0000000-0000 — Registration Date/Time: 05/27/2026 20:46 — ECC Provider: CHEERS
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CA Building Energy Efficiency Standards - 2025 Single-family Compliance — Report Version: 2025.0.000 — Schema Version: rev 20250101 — Report Generated: 2026-05-27 20:34:15

CERTIFICATE OF COMPLIANCE – RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01-E — (Page 2 of 16)

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-07:00
Calculation Description: Title 24 Analysis — **Input File Name:** Building2.ribd25x

ECC FEATURE SUMMARY

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

- Whole-air quality ventilation
- Kitchen range hood
- Minimum Airflow
- Fan Efficacy Watts/CFM
- Duct leakage testing

Compliance Summary

	Long Term System Cost (LSC)[1]		Source Energy Use	Peak Cooling[2,3]
	Efficiency[2] ($/ft²-yr)	Total[3] ($/ft²-yr)	Total[3] (kBtu/ft²-yr)	Electricity (kW)
Standard Design	38.17	n/a	n/a	n/a
Proposed Design	37.71	n/a	n/a	n/a
Compliance Margins	0.46	n/a	n/a	n/a
	Pass			

RESULT: Complies

[1] Long-term System Cost (LSC) is a 30-year present value cost for California's energy system. LSC is set a predicted vicinity set.
[2] Efficiency measures include energy efficient improvements such as better building envelope and more efficient mechanical equipment.
[3] Total includes the sum of efficiency measures, solar photovoltaic (PV) measures and battery storage measures.
* Building complies when Proposed Design is equal to or less than Standard Design in all applicable compliance categories.
** Peak cooling target represents 120% of the standard design building peak cooling energy use.

Standard Design PV Capacity: 0.80 kWdc

Registration Number: 428-P010198182A-100-000-0000000-0000 — Registration Date/Time: 05/27/2026 20:46 — ECC Provider: CHEERS
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CERTIFICATE OF COMPLIANCE – RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01-E — (Page 3 of 16)

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-07:00
Calculation Description: Title 24 Analysis — **Input File Name:** Building2.ribd25x

IDC AND SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS

Energy Use	Standard Design Source Energy (kBtu/ft²-yr)	Standard Design LSC[1] ($/ft²-yr)	Proposed Design Source Energy (kBtu/ft²-yr)	Proposed Design LSC[1] ($/ft²-yr)	Compliance Margin Source (kBtu/ft²-yr)	Compliance Margin LSC[1] ($/ft²-yr)
Space Heating	0	14.44	0	13.76	0	1.69
Space Cooling	0	2.51	0	2.88	0	-0.37
IAQ Ventilation	0	0.87	0	0.87	0	0
Water Heating	0	10.15	0	10.2	0	-0.05
Self Utilization/Flexibility Credit	n/a	n/a	n/a	0	n/a	0
Efficiency Compliance Total	0	28.17	0	27.71	0	1.46
Photovoltaics And Battery	n/a	n/a	n/a	0	n/a	0
Flexibility	n/a	n/a	n/a	n/a	n/a	n/a
Indoor Lighting	0	3.49	0	3.49	n/a	0
Appl. & Cooking	0	4.31	0	4.31	n/a	0
Plug Loads	0	5.1	0	5.1	n/a	0
Outdoor Lighting	0	0.41	0	0.41	n/a	0
TOTAL COMPLIANCE	0	99.1	0	98.94	0.46	

Registration Number: 428-P010198182A-100-000-0000000-0000 — Registration Date/Time: 05/27/2026 20:46 — ECC Provider: CHEERS
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CERTIFICATE OF COMPLIANCE – RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01-E — (Page 4 of 16)

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-07:00
Calculation Description: Title 24 Analysis — **Input File Name:** Building2.ribd25x

ENERGY USE INTENSITY

	Standard Design (kBtu/ft²-yr)	Proposed Design (kBtu/ft²-yr)	Margin (kBtu/ft²-yr)	Margin Percentage
Gross EUI[1]	27.69	27.26	0.43	1.55
Net EUI[2]	27.69	27.26	0.43	1.55

Notes:
1. Gross EUI is Energy Use Total/Joint including PV) / Total Building Area
2. Net EUI is Energy Use Total(including PV) / Total building Area.

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
Jamie EAA	3674	1	5	8	0	2

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
Second	Conditioned	HVAC1	1165	9	DHW Sys 1	New
First_Ex	Conditioned	HVAC2	1565	9	DHW Sys 2	Existing Unchanged
First_Add	Conditioned	HVAC2	93	9	DHW Sys 2	New
ADU	Conditioned	HVAC3	980	9	DHW Sys 3	Existing Unchanged

OPAQUE SURFACES SUMMARY

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	Second	R-13 Wall	0	Front	550	100	90	Extension	New	n/a

Registration Number: 428-P010198182A-100-000-0000000-0000 — Registration Date/Time: 05/27/2026 20:46 — ECC Provider: CHEERS
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CERTIFICATE OF COMPLIANCE – RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01-E — (Page 5 of 16)

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-07:00
Calculation Description: Title 24 Analysis — **Input File Name:** Building2.ribd25x

OPAQUE SURFACES SUMMARY

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
Left Wall	Second	R-13 Wall	90	Left	380	40	90	Extension	New	n/a
Rear Wall	Second	R-13 Wall	180	Back	550	105	90	Extension	New	n/a
Right Wall	Second	R-13 Wall	270	Right	180	24	90	Extension	New	n/a
Front Wall 2	First_Ex	Default Wall 1978to 1991	0	Front	400	70	90	none	Existing	No
Left Wall	First_Ex	Default Wall 1978to 1991	90	Left	610	50	90	none	Existing	No
Rear Wall 2	First_Ex	Default Wall 1978to 1991	180	Back	670	11	90	none	Existing	No
Rear Wall 3	First_Ex	R-13 Wall	180	Back	140	83	90	none	Altered	No
Right Wall 2	First_Ex	Default Wall 1978to 1991	270	Right	30	0	90	none	Existing	No
Right Wall 3	First_Ex	R-21 Wall	270	Right	90	42	90	none	Altered	No
Front Wall 3	Nex_Add	R-13 Wall	0	Front	130	34	90	Extension	New	n/a
Left Wall 2	ADU	Default Wall 1978to 1991	90	Left	630	40	90	none	Existing	No
Rear Wall 3	ADU	Default Wall 1978to 1991	180	Back	380	12	90	none	Existing	No
Right Wall 4	ADU	Default Wall 1978to 1991	270	Right	430	36	90	none	Existing	No
Front Wall 4	ADU	Default Wall 1978to 1991	0	Front	100	0	90	none	Existing	No
Interior Surface	First_Ex>>First_Add	F-0 Wall	n/a	n/a	30	0	n/a	n/a	Existing	No
Interior Surface 2	First_Ex>>First_Add	F-0 Wall	n/a	n/a	90	0	n/a	n/a	Existing	No
Interior Surface 3	First_Ex>>ADU	R-13 Wall	n/a	n/a	280	0	n/a	n/a	Altered	No

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Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-07:00
Calculation Description: Title 24 Analysis — **Input File Name:** Building2.ribd25x

OPAQUE SURFACES SUMMARY

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
Interior Surface A	First_Ex>>First_Addi	F-0 Wall	n/a	n/a	90	0	n/a	n/a	Existing	No
Roof 1	Second	R-38 HP Attic	n/a	n/a	1136	n/a	n/a	n/a	New	n/a
Roof 4	First_Ex	R-38 HP Attic	n/a	n/a	450	n/a	n/a	n/a	New	n/a
Wall 5	ADU	R-38 HP Attic	n/a	n/a	880	n/a	n/a	n/a	Altered	No
Raised Floor	First_Ex	R-19 Floor Crawlspace	n/a	n/a	1546	n/a	n/a	n/a	Altered	No
Raised Floor 2	First_Add	R-19 Floor Crawlspace	n/a	n/a	80	n/a	n/a	n/a	New	n/a
Raised Floor 3	ADU	R-19 Floor Crawlspace	n/a	n/a	880	n/a	n/a	n/a	Altered	No
Interior Surface 5	Second	R-0 Floor to Crawlspace	n/a	n/a	1086	n/a	n/a	n/a	New	n/a
Interior Surface 6	Second	R-0 Floor to Crawlspace	n/a	n/a	80	n/a	n/a	n/a	New	n/a

OPAQUE SURFACES - ORTHORMAL EXAMPLES

01	02	03	04	05	06	07	08	09	10	11	12
Name	Zone	Construction	Azimuth	Orientation	Area (ft²)	Skylight Area (ft²)	Roof Rise (x in 12)	ERRC Rated Roof Reflectance	ERRC Rated Roof Emittance	Status	Verified Existing Condition
Roof	Second	R-38 HP Attic3	0	Front	30.1	30	3	0.1	0.85	New	n/a
Roof 2	First_Ex	R-38 HP Attic3	0	Front	12.1	12	3	0.1	0.85	New	n/a

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Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-07:00
Calculation Description: Title 24 Analysis — **Input File Name:** Building2.ribd25x

ATTIC

01	02	03	04	05	06	07	08a	09	10
Name	Construction	Type	Roof Rise (x in 12)	CRRC Rated Roof Reflectance	CRRC Rated Roof Emittance	Radiant Barrier	Above Roof Deck Air Gap	Status	Verified Existing Condition
Attic Second	Attic RoofSecond	Ventilated	3	0.1	0.85	No	No	New	n/a
Attic First_Ex	Attic RoofFirst_Ex	Ventilated	3	0.1	0.85	No	No	New	n/a
Attic ADU	Attic RoofADU	Ventilated	3	0.1	0.85	No	No	Existing	No

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13
Name	Type	Surface	Orientation	Azimuth	Mult.	Area (ft²)	U-factor	SHGC	Rating Source	Exception to 150.0 (q)*	Status	Verified Existing Condition
W09	Window	Front Wall	Front	0	1	18	0.27	0.23	NFRC	☐	New	NA
W09 2	Window	Front Wall	Front	0	1	18	0.27	0.23	NFRC	☐	New	NA
W10	Window	Front Wall	Front	0	1	1	0.27	0.23	NFRC	☐	New	NA
W11	Window	Front Wall	Front	0	1	25	0.27	0.23	NFRC	☐	New	NA
W11 2	Window	Front Wall	Front	0	1	16	0.27	0.23	NFRC	☐	New	NA
W14	Window	Front Wall	Front	0	1	1	0.27	0.23	NFRC	☐	New	NA
W13 1	Window	Left Wall	Left	90	1	16	0.27	0.23	NFRC	☐	New	NA
W12	Window	Left Wall	Left	90	1	1	0.27	0.23	NFRC	☐	New	NA
W12 2	Window	Left Wall	Left	90	1	1	0.27	0.23	NFRC	☐	New	NA
W18	Window	Rear Wall	Back	180	1	18	0.27	0.23	NFRC	☐	New	NA
D12	Window	Rear Wall	Back	180	1	18	0.27	0.23	NFRC	☐	New	NA

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13
Name	Type	Surface	Orientation	Azimuth	Mult.	Area (ft²)	U-factor	SHGC	Rating Source	Exception to 150.0 (q)*	Status	Verified Existing Condition
D13	Window	Rear Wall	Back	180	1	40	0.27	0.23	NFRC	☐	New	NA
W11 4	Window	Right Wall	Right	270	1	24	0.27	0.23	NFRC	☐	New	NA
W_Ex	Window	Front Wall 2	Front	0	1	72	0.55	0.67	Table 110.6-B	☐	Existing	No
W_Ex 2	Window	Left Wall	Left	90	1	80	0.55	0.67	Table 110.6-B	☐	Existing	No
W_Ex 3	Window	Rear Wall 2	Back	180	1	11	0.55	0.67	Table 110.6-B	☐	Existing	No
D07	Window	Rear Wall 3	Back	180	1	88	0.27	0.23	NFRC	☐	New	NA
D06	Window	Right Wall 3	Right	270	1	40	0.27	0.23	NFRC	☐	Altered	No
W_Ex 4	Window	Left Wall 2	Left	90	1	60	0.55	0.65	Table 110.6-B	☐	Existing	No
W_Ex 5	Window	Rear Wall 4	Back	180	1	12	0.55	0.67	Table 110.6-B	☐	Existing	No
W08	Window	Right Wall 4	Right	270	1	15	0.27	0.23	NFRC	☐	Altered	No
Sk01	Skylight	Roof	Front	0	1	10	0.45	0.25	NFRC	☐	New	NA
Sk01 2	Skylight	Roof	Front	0	1	10	0.45	0.25	NFRC	☐	New	NA
Sk03	Skylight	Roof	Front	0	1	1	0.45	0.25	NFRC	☐	New	NA
Sk03	Skylight	Roof	Front	0	1	1	0.45	0.25	NFRC	☐	New	NA
Skylight_ex	Skylight	Roof 2	Front	0	1	10	0.84	0.67	Table 110.6-B	☐	Existing	No

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Calculation Description: Title 24 Analysis — **Input File Name:** Building2.ribd25x

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13
Name	Type	Surface	Orientation	Azimuth	Mult.	Area (ft²)	U-factor	SHGC	Rating Source	Exception to 150.0 (q)*	Status	Verified Existing Condition

*Project includes fenestration not subject to maximum U-factor requirement per Exception 1 / Exception 2 / Exception 3 to Section 150.0(q)

Total North Facing Fenestration	214
Total East Facing Fenestration	146
Total South Facing Fenestration	215
Total West Facing Fenestration	81

OPAQUE DOORS

01	02	03	04	05	06	07
Name	Side of Building	Area (ft²)	U-factor	Status	Verified Existing Condition	NFRC Rating Req.
D01	Front Wall 3	38	0.2	New	n/a	Yes
D04	Right Wall 4	20	0.2	Altered	No	Yes

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08	09
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers	Non-Std Spray Foam
R-13 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-13	Interior / None	0.091	Inside Finish: Gypsum Board Cavity / Framing: R-13 / Ext Exterior Finish: 3-Coat Stucco	☐

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Custom Home Design and Build

CUSTOM HOME DESIGN AND BUILD
2092 CONCOURSE DR
#9 SAN JOSE, CA 95131
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EMAIL: INFO@CUSTOMHOME.US
PHONE: 407-701-7116

REVISIONS	BY

DESIGN MANAGER

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

SCALE

DATE
2026/08/14

SHEET NUMBER
G01

Docusign Envelope ID: 3811754B-0572-677D-808A-24523D18AAB8

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

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OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Exterior / Exterior Continuous R-value	07 U-factor	08 Assembly/Layers	09 Non-Std Spray Foam
Default-Wall 1978 to 1991	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O.C.	R-21	None / None	0.103	Inside Finish: Gypsum board Cavity / Frame: R-21 / 2x6 Exterior Finish: Wood Siding/sheathing/ding	☐
R-19 HP Attic 1	Cathedral Ceilings	Wood Framed Ceilings	2x8 @ 16 in. O.C.	R-19	19 / None	0.039	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/ding Cavity / Frame: R-19 / 2x8 Sheathing / Insulation: R-19 Sheathing Inside Finish: Gypsum board	☐
R-0 Wall	Interior Walls	Wood Framed Wall	2x6 @ 16 in. O.C.	R-0	None / None	0.277	Inside Finish: Gypsum board Cavity / Frame: no insul. / 2x6 Other Side Finish: Gypsum board	☐
R-15 Wall1	Interior Walls	Wood Framed Wall	2x6 @ 16 in. O.C.	R-15	None / None	0.086	Inside Finish: Gypsum board Cavity / Frame: R-15 / 2x6 Other Side Finish: Gypsum board	☐

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OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Exterior / Exterior Continuous R-value	07 U-factor	08 Assembly/Layers	09 Non-Std Spray Foam
Attic NonDeconst	Attic Roofs	Wood Framed Ceiling	2x6 @ 24 in. O.C.	R-19	None / 0	0.039	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/ding Cavity / Frame: R-19 / 2x6 Ground Roof Insul.: R-6.0 insul.	☐
Attic RoofFirst_Ex	Attic Roofs	Wood Framed Ceiling	2x6 @ 24 in. O.C.	R-19	None / 0	0.039	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/ding Cavity / Frame: R-13.9 / 2x6 Ground Roof Insul.: R-6.0 insul.	☐
AtticRoofADU	Attic Roofs	Wood Framed Ceiling	2x6 @ 24 in. O.C.	R-19	None / 0	0.039	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/ding Cavity / Frame: R-13.9 / 2x6 Ground Roof Insul.: R-6.0 insul.	☐

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OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Exterior / Exterior Continuous R-value	07 U-factor	08 Assembly/Layers	09 Non-Std Spray Foam
R-19 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x10 @ 16 in. O.C.	R-19	None / None	0.046	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/ding Cavity / Frame: R-19 / 2x10	☐
R-38 INF Attic	Ceilings (below attic)	Wood Framed Ceiling	2x6 @ 24 in. O.C.	R-38	None / None	0.025	Over Ceiling Joists: R-38.9 insul. Cavity / Frame: R-9.1 / 2x6 Inside Finish: Gypsum board	☐
R-0 Floor No Crawlspace	Interior Floors	Wood Framed Floor	2x12 @ 16 in. O.C.	R-0	None / None	0.086	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/ding Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum board	☐

WATER HEATING SYSTEMS

01 Name	02 System Type	03 Distribution Type	04 Water Heater Name	05 Number of Units	06 Solar Assisting System	07 Compact Distribution	08 ICC Verification	09 Water Heater Name (#)	10 Status	11 Verified Existing Condition	12 Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)	New	N/A	n/a

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WATER HEATING SYSTEMS

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

WATER HEATERS

01 Name	02 Heating Element Type	03 Tank Type	04 # of Units	05 Tank Vol. (gal)	06 Heating Efficiency Type	07 Efficiency	08 Rated Input Type	09 Input Rating or Flow	10 Tank Insulation R-value (int/Ext)	11 Standby Loss or Recovery Eff	12 1st Hr Rating or Flow Rate	13 Tank Location	14 Status	15 Verified Existing Condition
DHW Heater 1	Gas	Consumer Instantaneous	1	0	UEF	0.81	Btu/hr	200000	0	n/a	n/a	n/a	New	n/a
DHW Heater 2	Gas	Small Storage	1	50	EF	0.63	Btu/hr	76000	0	40	n/a	n/a	Existing	No

HVAC - HEATING UNIT TYPES

01 Name	02 System Type	03 Number of Units	04 Heating Efficiency	05 Status	06 Verified Existing Condition
Heating Component 1	Central gas furnace	1	AFUE - 95	New	No
Heating Component 2	Central gas furnace	1	AFUE - 80	Existing	No
Heating Component 3	Central gas furnace	1	AFUE - 95	New	No

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HVAC - COOLING UNIT TYPES

01 Name	02 System Type	03 Number of Units	04 Efficiency Metric	05 Efficiency EER/EER2/CEER	06 Efficiency SEER/SEER2	07 Airflow Target	08 Fan Power (Watts/CFM)	09 Status	10 Verified Existing Condition
Cooling Component 1	Central split AC	1	EER2/SEER2	11.7	14.3	350	0.45	New	No
Cooling Component 2	Central split AC	1	EER/SEER	11.7	14.3	350	0.58	Existing	No

HVAC - DISTRIBUTION SYSTEMS

01 Name	02 Type	03 Design Type	04 Duct Ins. R-value Supply/Return	05	06 Duct Location Supply	07 Return	08 Status	09 Verified Existing Condition	10 Existing Distribution system	11 New Ducts >= 10 ft
Air Distribution System 1	Uncondolated attic	Non-Verified	R-8		Attic	Attic	New	n/a	n/a	n/a
Air Distribution System 2	Unconditioned crawl space	Non-Verified	R-0		Crawl Space	Crawl Space	Alteration	No	n/a	n/a
Air Distribution System 3	Unconditioned attic	Non-Verified	R-8		Attic	Attic	New	n/a	n/a	n/a

INDOOR AIR QUALITY (IAQ) FANS

01 Dwelling Unit	02 Airflow (CFM)	03 Fan Efficacy (W/CFM)	04 IAQ Fan Type	05 Includes Heat/Energy Recovery?	06 IAQ Recovery Effectiveness - ASRE	07 Includes Fault Indicator Display?	08 Status
Sfam ADU (ADUvented)	97	0.35	Exhaust	No	n/a / n/a	No	

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INDOOR AIR QUALITY (IAQ) FANS

01 Dwelling Unit	02 Airflow (CFM)	03 Fan Efficacy (W/CFM)	04 IAQ Fan Type	05 Includes Heat/Energy Recovery?	06 IAQ Recovery Effectiveness - ASRE	07 Includes Fault Indicator Display?	08 Status
Sfam ADU (ADUvented)	49	0.35	Exhaust	No	n/a / n/a	No	

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
John Tao	
Company: Kwaltic, Inc	Signature Date: 05/27/2026
Address: 3615 Mackinthur Blvd	CEA/HERS/ACI Certification Identification (if applicable):
City/State/Zip: Oakland, CA 94602	Phone: (330) 957-1299

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. 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.
5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building and shall be made available to the enforcement agency for all applicable inspections. I will take the necessary steps to fulfill this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. I will take the necessary steps to fulfill this requirement.

Responsible Designer Name:	Responsible Designer Signature:
Duong Le	Duong Le
Company: Custom Home Design and Build	Date Signed: 05/27/2026
Address: 2092 Concourse Dr ste 9	License: 1089177
City/State/Zip: San Jose, CA 95131	Phone: 6509994797

Registration Number: 428-P010198182A-000-000-0000000-0000 — Registration Date/Time: 05/27/2026 20:46 — ECC Provider: CHEERS

CA Building Energy Efficiency Standards – 2025 Single-family Compliance — Report Version: 2025.0.000 — Schema Version: nrs 20250101 — Report Generated: 2026-05-27 20:34:15

Custom Home
CUSTOM HOME DESIGN AND BUILD
2092 CONCOURSE DR
#9 SAN JOSE, CA 95131
WWW.CUSTOMHOME.US
EMAIL: INFO@CUSTOMHOME.US
PHONE: 407-701-7116

REVISIONS	BY

DESIGN MANAGER

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

SCALE

DATE 2026/08/14

SHEET NUMBER G02

Docusign Envelope ID: 38117549-0572-877D-808A-24523D18AA9B

GENERAL REQUIREMENTS

1. VERIFICATION: VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. CONFLICTS: NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS IN CASE OF CONFLICT.
3. SUBSTITUTIONS: PROVIDE MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORTS ICC REPORTS AND A LIST OF ALL PROPOSED SUBSTITUTIONS TO THE ENGINEER FOR REVIEW AND WRITTEN APPROVAL BEFORE FABRICATION.
4. SIMILAR WORK: WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS.
5. PIPES, DUCTS, SLEEVES, CHASES, ETC.: SHALL NOT BE PLACED IN SLABS, BEAMS, OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC., UNLESS SPECIFICALLY SHOWN, OBTAIN PRIOR WRITTEN APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.
6. EXCAVATIONS: LOCATE AND PROTECT UNDERGROUND OR CONCEALED CONDUIT, PLUMBING OR OTHER UTILITIES WHERE NEW WORK IS BEING PERFORMED.
7. CONSTRUCTION LOADS: MATERIALS SHALL BE EVENLY DISTRIBUTED IF PLACED ON FRAMED FLOORS OR ROOFS. LOADS SHALL NOT EXCEED THE ALLOWABLE LOADING FOR THE SUPPORTING MEMBERS AND THEIR CONNECTIONS.
8. CONSTRUCTION METHODS AND PROJECT SAFETY: THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE METHODS, PROCEDURES, OR SEQUENCE OF CONSTRUCTION. TAKE NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION. NEITHER THE OWNER NOR ARCHITECT/ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
9. CHANGES TO THE DRAWINGS: OBTAIN PRIOR WRITTEN APPROVAL.

NAILING

1. ALL NAILING SHALL BE COMMON WIRE NAILS AND FOLLOW THIS TABLE:

SIZE	DIAMETER	WIRE	PENETRATION
PENNY	INCHES	GAGE	INCHES
8D	0.134	1-6	1-3/4
10D	0.148	9	1-7/8
16D	0.162	8	2
20D	0.192	6	2-3/8

PENETRATION IS MEASURED INTO THE PIECE RECEIVING THE NAIL POINT. 1-1/2 INCHES OF PENETRATION FOR 10D AND 16D NAILS IS ACCEPTABLE FOR TOP PLATES AND DOUBLED 2X MEMBERS. WHERE THE NAIL PENETRATION WILL BE LESS THAN SPECIFIED, INCREASE NAIL LENGTH (SIZE) TO OBTAIN THE PENETRATION REQUIRED FOR THE NAIL SPECIFIED.

2. FASTENER SCHEDULE FOR STRUCTURAL MEMBERS:- THE CONNECTIONS LISTED ARE THE MINIMUM PERMISSIBLE USE COMMON WIRE NAILS FOR ALL NAILED CONNECTIONS. WHERE POSSIBLE, NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED INSTEAD OF TOE NAILS. SEE THE DRAWINGS FOR ADDITIONAL NAILING REQUIREMENTS.

ROOF

1. CL'G. JOIST/RAFTER/TRUSS TO TOP PLATE/OTHER FRAMING BELOW, EACH END, TOE NAIL BELOW..... 3-8D
2. BLOCKING (NOT AT THE WALL TOP PLATE) TO RAFTER OR TRUSS,EACH END, TOE NAIL..... 3-8D
3. BLOCKING (NOT AT THE WALL TOP PLATE) TO RAFTER OR TRUSS,END NAIL..... 2-16D
4. FLAT BLOCKING TO TRUSS AND WEB FILLER, FACE NAIL..... 16D @ 6" O.C.
5. CL'G. JOIST TO TOP PLATE, EACH JOIST, TOENAIL..... 3-8D
6. CL'G. JOIST LAPS OVER PARTITIONS(NO THRUST), FACE NAIL..... 3-16D
7. CL'G. JOIST ATTACHED TO PARALLEL RAFTER(WELL JOINT), FACE NAIL PER DETAIL
8. COLLAR TIE TO RAFTER,FACE NAIL NAIL..... 3-10D
9. RAFTER OR ROOF TRUSS TO TOP PLATE, TOENAIL..... 3-10D
10. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS OR RIDGE BOARD END NAIL..... 2-16D
11. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS OR RIDGE BOARD TOENAIL..... 3-10D

WALL

1. STUD TO STUD (NOT AT BRACED WALL PANELS),FACE NAIL..... 16D @24" O.C.
2. STUD TO STUD & ABUTTING STUDS AT INTERSECTING WALL CORNER, FACE NAIL..... 16D @16" O.C.
3. BUILT-UP HEADER(2" TO 2" HEADER) EACH EDGE, FACE NAIL..... 12D @16"O.C.
4. CONTINUOUS HEADER TO STUD,TOENAIL..... 4-8D
5. TOP PLATE TO TOP PLATE,FACE NAIL..... 16D @16"O.C.
6. TOP PLATE TO TOP PLATE(AT END JOISTS),EACH SIDE OF END JOINT, FACE NAIL..... 2-16D
7. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT SPACED WALL PANEL S),FACE NAIL..... 16D @16"O.C.
8. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING I, FACE NAIL..... 2-16D@16"O.C.
9. STUD TO TOP OR BOTTOM PLATE,TOENAIL..... 4-8D
10. STUD TO TOP OR BOTTOM PLATE,END NAIL..... 2-16D
11. TOP PLATES,LAPS AT CORNERS AND INTERSECTIONS,FACE NAIL..... 2-16D
12. 1" BRACE TO EACH STUD AND PLATE,FACE NAIL..... 2-8D
13. 1"X6" SHEATHING TO EACH BEARING,FACE NAIL..... 2-8D
14. 1"X6" AND WIDER SHEATHING TO EACH BEARING,FACE NAIL..... 3-8D

FLOOR

1. JOIST TO SILL,TOP PLATE OR GIRDER,TOENAIL..... 3-8D
2. RIM (BAND JOIST) BLK'G TO TOP PLATE/SILL/OTHER FRAMING BELOW, TOENAIL..... 8D @ 6" O.C.
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST,FACE NAIL..... 2-8D
4. 2" SUBFLOOR TO JOIST OR GIRDER,FACE NAIL..... 2-16D
5. 2"PLANKS(PLANK & BEAM - FLOOR&ROOF),EACH BEATING,FACE NAIL..... 2-16D
6. BUILT-UP GIRDERS AND BEAMS,2" LUMBER LAYERS,FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES..... 20D @32" O.C.
7. BUILT-UP GIRDERS AND BEAMS,2" LUMBER LAYERS, EACH SPLICE,FACE..... 2-20D
7. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS,EACH JOIST OR RAFTER, FACE NAIL..... 3-16D
8. JOIST TO BAND JOIST OR RIM JOIST,END NAIL..... 3-16D
9. BRIDGING OR BLOCKING TO JOIST,RAFTER OR TRUSS,EACH END, TOENAIL..... 2-8D

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS SPECIFIED IN BUILDING CODE, CHAPTER 22 & REFERENCE.
2. STEEL SHALL BE PRIMED WITH A RUST RESISTANCE PRIMER & SHOULD CONFORM TO ASTM A36 (Fy=36 KSI) AS A MINIMUM, UNLESS OTHERWISE NOTED. ALL W SHAPES TO BE ASTM A992, (Fy=50 KSI)
3. STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B (Fy=35 KSI).
4. ROUND HSS TUBING SHALL CONFORM TO ASTM A500 GRADE B (Fy=42 KSI)
5. RECTANGULAR AND SQUARE HSS TUBING SHALL CONFORM TO ASTM A500, GRADE B (Fy=46 KSI).
6. WF SECTIONS SHALL CONFORM TO ASTM A572, GRADE 50 (Fy=50 KSI).
7. ALL STRUCTURAL WELDING PROCEDURES AND MATERIALS SHALL CONFORM TO BUILDING CODE, SECTION 2204.1, ALL WELDING SHALL BE BY THE SHIELD METAL ARC WELDING PROCESS OR THE SUBMERGED ARC WELDING PROCESS USING E70XX-LOW HYDROGEN ELECTRODES, UNLESS OTHERWISE NOTED.
8. ALL BOLTS FOR CONNECTIONS OF STEEL MEMBERS SHALL CONFORM TO BUILDING CODE, SECTION 2204.2 & ASTM A325N, UNLESS OTHERWISE NOTED. HOLES FOR BOLTS SHOULD BE DRILLED OR PUNCHED & SHALL BE 1/16" LARGER THAN BOLT DIAMETER.
9. PREFABRICATED STEEL MOMENT FRAMES PER MANUFACTURER. STEEL MOMENT FRAME MANUFACTURER SHALL SUBMIT SHOP DRAWING, DESIGN CALCULATIONS, AND APPROVED MOMENT FRAME TEST REPORT (ICC, IAMPO, OR TEST PER APPENDIX 5 OF AISC SEISMIC PROVISION) TO E.O.R. FOR REVIEW.
10. ALL SHOP WELDING AND FABRICATION MUST BE DONE IN A SHOP APPROVED BY A SPECIAL INSPECTION AGENCY WHICH IS APPROVED BY THE BUILDING OFFICIAL. ALL FIELD WELDING MUST BE PERFORMED BY A CERTIFIED WELDER AND A SPECIAL INSPECTOR SHALL CONTINUOUSLY INSPECT ALL STRUCTURAL FIELD WELDING. BOTH SHALL BE APPROVED BY THE BUILDING DIRECTOR.

WOOD

1. GRADE STAMPED DOUGLAS FIR-LARCH (SEE LUMBER GRADES).
2. NAILS: COMMON WIRE UNLESS OTHERWISE NOTED. EDGE SEE NAILING NOTE BELOW.
3. THE SPACING CENTER TO CENTER OF NAILS IN THE DIRECTION OF STRESS.
4. SHALL NOT BE LESS THAN THE REQUIRED PENETRATION. HOLES FOR NAILS, WHERE NECESSARY TO PREVENT SPLITTING, SHALL BE BORED TO A DIAMETER SMALLER THAN THAT OF THE NAIL.
5. ANCHOR BOLTS (FOUNDATION ANCHOR BOLTS): PROVIDE 5/8 INCH DIAMETER ANCHOR OR MACHINE BOLTS WITH A MINIMUM OF 7 INCHES EMBEDMENT INTO THE CONCRETE AND WITHIN 12 INCHES OF EACH END OF EACH PLATE. SPACE ANCHORS AT 48 INCHES ON CENTER U.O.N. ANCHORS SHALL BE LOCATED A MAXIMUM OF 2 INCHES FROM THE FACE OF STUD RECEIVING WOOD STRUCTURAL PANELS. ANCHOR BOLT HOLES 1/32 TO 1/16 INCH LARGER THAN THE ANCHOR BOLT DIAMETER. HOLES MORE THAN 1/16 INCH LARGER THAN THE ANCHOR BOLT SHALL BE EPOXY FILLED UNDER THE CONTINUOUS SUPERVISION OF A LICENSED SPECIAL INSPECTOR.
6. BOLTS: NOT LESS THAN 7 BOLT DIAMETERS FROM THE END AND 4 DIAMETERS FROM THE EDGE OF THE MEMBER. BOLT HOLES 1/32 TO 1/16 INCH LARGER THAN THE BOLT DIAMETER. ALL NUTS SHALL BE TIGHTENED WHEN INSTALLED AND RE-TIGHTENED AT THE COMPLETION OF WORK OR BEFORE CLOSING-IN. THREAD PROJECTION SHALL BE 1/16 INCH MINIMUM BEYOND THE NUT. BOLTS IN SPECIFIED SLOTTED HOLES SHALL BE CENTERED IN THE SLOT U.O.N.
7. LAG SCREW CLEARANCE & LEAD HOLES SHALL BE BORED AS FOLLOWS: THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK, AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK. THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 60% TO 75% OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION.
8. SQUARE STEEL PLATE WASHERS (PW), ANCHOR BOLTS, BOLTS, LAGS, AND NUTS; NOTED PW, SHALL BE SQUARE STEEL PLATE WASHERS.

BOLT DIAM	THICKNESS	SIZE
(IN)	(IN)	(IN)
1/2	1/4	3 X 3
5/8	1/4	3 X 3
3/4	5/16	3 X 3
7/8	5/16	3 X 3
1	3/8	3 1/2 X 3 1/2

9. CUT STEEL WASHERS: FOR BOLTS, LAGS AND NUTS, U.O.N.
10. FRAMING CONNECTORS: PER MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORTS ICC APPROVED AND INSTALLED ACCORDINGLY. SIZE AND NUMBER OF NAILS TO BE MAXIMUM SPECIFIED BY THE MANUFACTURER U.O.N.
11. NAILED/SCREWED HOLD DOWN ANCHORS: INSTALL PER MANUFACTURER'S APPROVED ICC PRODUCT EVALUATION REPORT. INSTALL HOLD DOWNS 1/2 INCH MINIMUM ABOVE THE PLATE TO ALLOW FOR TIGHTENING ANCHOR BOLT. THE HOLD DOWN SHALL BE INSTALLED TIGHT TO THE HOLD DOWN POST WITHOUT FILLERS OR DAMPING. DO NOT BEND HOLD DOWN ANCHORS.
12. BOLTED HOLD DOWN ANCHORS: INSTALL PER MANUFACTURER'S APPROVED ICC PRODUCT EVALUATION REPORT. INSTALL HOLD DOWNS 1/2 INCH MINIMUM ABOVE THE PLATE TO ALLOW FOR TIGHTENING ANCHOR BOLT. TIGHTEN HOLD DOWN ANCHOR BEFORE TIGHTENING POST BOLTS. USE EXTRA CARE IN BORING THE POST BOLT HOLES (1/32 TO 1/16 LARGER THAN THE BOLT DIAMETER). THE HOLD DOWN SHALL BE INSTALLED TIGHT TO THE HOLD DOWN POST WITHOUT FILLERS OR DAMPING. THE POST BOLTS SHALL NOT BE COUNTERSUNK INTO THE HOLD DOWN POST U.O.N. DO NOT BEND HOLD DOWN ANCHORS.
13. PRESERVATIVE TREATED WOOD: WOOD EXPOSED TO THE WEATHER, FOUNDATION PLATES ON CONCRETE SLABS, FOUNDATIONS WHICH ARE IN DIRECT CONTACT WITH EARTH SHALL BE TREATED WOOD WITH PRESERVATIVE RETENTION AS REQUIRED FOR USE. NEWLY EXPOSED SURFACES RESULTING FROM FIELD CUTTING, BORING OR HANDLING SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA M-4.
14. TOP PLATES: TWO PIECES, SAME SIZE AS STUDS, STAGGER SPLICE 4'-0" MINIMUM CENTER SPLICES OVER STUDS. SPLICE WITH 12-16D MINIMUM U.O.N.
15. FULL-DEPTH SOLID BLOCKING OR CROSS BRACING: INSTALLED AT INTERVALS NOT EXCEEDING 8 FEET FOR ALL JOISTS AND RAFTERS 2X12 AND DEEPER.
16. SOLID BLOCKING: TWO INCH FULL WIDTH BLOCKING (FIRE STOPS) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVELS, AND AT 10-FOOT INTERVALS BOTH VERTICAL AND HORIZONTAL.
17. CUTTING AND NOTCHING: DO NOT CUT, BORE, COUNTERSINK OR NOTCH WOOD MEMBERS EXCEPT WHERE SHOWN IN THE DETAILS. HOLES THROUGH PLATES, STUDS AND DOUBLE PLATES IN WALLS SHALL FOLLOW DETAIL S/SD1.0. THE MEMBER WIDTH AND SHALL BE LOCATED IN THE CENTER OF THE MEMBER.
18. PARTITIONS: DOUBLE JOISTS UNDER PARTITIONS PARALLEL TO JOISTS AND PROVIDE SOLID BLOCKING UNDER PARTITIONS PERPENDICULAR TO JOISTS.
19. END SUPPORT: ROOF AND FLOOR JOISTS OVER 4 INCHES DEEP SHALL HAVE THEIR ENDS HELD IN POSITION WITH EITHER: FULL DEPTH SOLID BLOCKING, NAILED SPONSORS, NAILING OR BOLTING TO OTHER FRAMING MEMBERS; OR APPROVED JOIST HANGERS.
20. HOT DIPPED ZINC-COATED GALVANIZING: ALL EXPOSED STEEL TIMBER HARDWARE, FASTENERS AND CONNECTORS.
21. FASTENERS: FOR PRESERVATIVE TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL.

WOOD STRUCTURAL PANELS (PANEL)

1. REFERENCES: PS1, PS2, APA STANDARD PRP-108, NATIONAL EVALUATION SERVICE REPORT NER-108
2. WALL PANELS: 15/32" APA RATED SHEATHING STRUCTURAL I EXP 1(PANEL INDEX OF 32/16)
3. ROOF PANELS: 15/32" APA RATED SHEATHING EXP 1(PANEL INDEX OF 32/16)
4. FLOOR PANELS: 23/32" APA RATED STURD-I-FLOOR T&G EXP. 1 (SPAN RATING OF 24" O.C.). (EXTERIOR EXPOSURE AT BALCONIES AND DECKS)
5. BLOCKING:
   a) WALLS: ALL UNSUPPORTED PANEL JOINTS SHALL BE BLOCKED SOLID WITH 3X BLOCKING
   b) FLOORS & ROOFS: WHERE NOTED ON THE DRAWINGS, ALL SUPPORT PANEL JOINTS SHALL BE BLOCKED SOLID WITH 2X4 FLAT BLOCKING
6. NAILING: COMMON WIRE NAILS. PANEL NAILS SHALL BE DRIVEN SO THAT THE HEADS ARE FLUSH WITH THE SURFACE OF THE PANEL. FIELD NAILING (FN) SHALL BE 12 INCHES ON CENTER AND THE MINIMUM PANEL EDGE DISTANCES SHALL BE MAINTAINED.
7. MACHINE NAILING: SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR THIS PROJECT AND REVIEW BY THE ENGINEER. THE USE OF MACHINE NAILING IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. PANEL NAILS SHALL BE DRIVEN SO THAT THE HEADS ARE FLUSH WITH THE SURFACE OF THE PANEL AND THE MINIMUM PANEL EDGE DISTANCES ARE MAINTAINED.
8. GLUED FLOORS: FIELD GLUE TO ALL SUPPORTS AND T&G EDGES PER APA, APS-01. FRAMING SHALL BE FREE OF SURFACE MOISTURE & DEBRIS PRIOR TO GLUING.
9. WOOD STRUCTURAL PANELS (PANELS): WHERE ADJACENT WALLS ARE PANELED, PANELS SHALL BE INSTALLED OVER AND UNDER OPENINGS.

WALL STUD TABLE

TRIB WIDTH = 10 FT, ROOF DL= 20, LL= 20, FLOOR DL=15, LL=40

STUD SIZE	STUD HEIGHT	MAX. SPACING						
		1 STORY	2 STORY		3 STORY			
			1_{st} LEVEL	1_{st} LEVEL	3_{rd} LEVEL	2_{nd} LEVEL	1_{st} LEVEL	
2X4	10'-0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	N/A	
2X4	12'-0"	16" O.C.	16" O.C.	12" O.C.	16" O.C.	12" O.C.	N/A	
3X4	12'-0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	
2X6	12'-0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	12" O.C.	
3-2X4	12'-0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	
2-2X6	12'-0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	

*LOWER STUDS MUST BE INLINE WITH UPPER STUDS
**2X BLOCKING BETWEEN STUDS AT 4'-8" O.C.

ENGINEERED LUMBER

1. LVL - LAMINATED VENEER LUMBER SHALL BE 2.0E MICRO=LAM LVL.
2. PSL - PARALLEL STRAND LUMBER SHALL BE 2.2E PAHALLAM PSL.
3. LSL - LAMINATED STRAND LUMBER SHALL BE 1.3E TIMBERSTRAND FOR STUDS, RIM BOARDS AND BLOCKING, 1.35E TIMBERSTRAND FOR JOIST, BEAMS AND HEADERS.

ENGINEERED LUMBER I-JOISTS

I-JOIST SHALL BE APA PERFORMANCE RATED MANUFACTURED IN CONFORMANCE WITH PRI-400. PERFORMANCE STANDARD FOR APA EWS, I-JOIST FLANGES TO HAVE MINIMUM WIDTH OF 1 1/2" 7 MINIMUM THICKNESS OF 1 5/16". WEBS TO BE PLYWOOD OR OSB WITH MINIMUM THICKNESS OF 3/8". FOR ONE HOUR CONSTRUCTION, PRI-50 JOISTS ARE REQUIRED AT 24" OC MAX., SEE ESR-1405. PROPER STORAGE, HANDLING AND INSTALLATION SHALL BE FOR THESE PLANS AND MANUFACTURER'S RECOMMENDATIONS.

LUMBER GRADES DOUGLAS FIR/LARCH

COMPLY WITH PS 20, AMERICAN SOFTWOOD LUMBER STANDARD AND STANDARD GRADING RULES FOR WESTERN LUMBER, 19% MAXIMUM MOISTURE CONTENT AT TIME OF PLACEMENT.

1. DIMENSION LUMBER: BLOCKING
   (2" TO 4" THICK, 2" TO 4" & NONBEARING STUDS WIDE: STANDARD)
   (10" MAXIMUM)
2. DIMENSION LUMBER: BEARING
   (2" TO 4" THICK, 2" TO 4" STUDS,JOISTS & RAFTERS WIDE; NO. 2)
3. DIMENSION LUMBER: JOISTS AND RAFTERS
   (2" TO 4" THICK, 5" AND STUDS, BLOCKING, WIDER; NO. 2)
4. BEAMS AND STRINGERS:
   (5" AND THICKER, WIDTH MORE THAN 2" GREATER THAN THICKNESS; NO. 1)
5. POSTS AND TIMBERS:
   (4" AND 6", AND LARGER, WIDTH NOT MORE THAN 2" GREATER THAN THICKNESS; NO.2)
6. HOLD DOWN POSTS: (NO. 2)

REINFORCED CONCRETE

1. MATERIALS:
   CEMENT..... ASTM C-150, TYPE II
   AGGREGATE..... ASTM C-33 STANDARD WEIGHT
   REINFORCEMENT..... ASTM A-615 GRADE 60 TYPICAL
   ANCHOR BOLTS:..... ASTM A-307 HOOKED ANCHOR BOLTS
   ANCHOR BOLTS..... ASTM A-307 HEADED MACHINE BOLTS
2. CONCRETE STRENGTHS: THE CONCRETE STRENGTHS SHOWN IN THE FOLLOWING TABLE ARE THE MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS, AND THE AGGREGATE (ASG) SHOWN IS THE MAXIMUM SIZE. CONCRETE SHALL BE STANDARD WEIGHT CONCRETE (145 PCF).

ITEM OF CONSTRUCTION	STRENGTH (PSI)	AGG. (IN)	SLUMP (IN)
FOUNDATIONS	2,500	1 1/2	4
POUR IN PLACE WALL	2,500	1 1/2	4
SLABS-ON-GRADE	2,500	1	4

(DESIGN STRENGTH BASED ON 2,500 PSI) NO SPECIAL INSPECTION IS REQUIRED)
EXCEPTION:
A) THE WEIGHT PERCENTAGE OF SULFATE

	STRENGTH(PSI)
> 1.0	4000
> 2.0	4500

B) SHOTCRETE CONCRETE STRENGTH = 4000 PSI MIN.

3. REINFORCEMENT:
   A) DETAILING, FABRICATION AND PLACING SHALL CONFORM TO ANSI ACI 318.
   B) MINIMUM CONCRETE COVER:
      CAST AGAINST & EXPOSED TO EARTH ..... 3"
      EXPOSED TO EARTH OR WEATHER ..... 2"
      NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
      SLABS, WALLS, JOISTS ..... 3/4"
      BEAMS, COLUMNS (TIES, STIRRUPS, SPIRALS) ..... 1-1/2"
   C) CHAIRS, SPACERS AND SAND PLATES: AS REQUIRED TO MAINTAIN CONCRETE COVER.
   D) VERTICAL REINFORCEMENT: SHALL BE DOWELED TO SUPPORTING MEMBERS WITH THE SAME SIZE AND SPACING OF REINFORCEMENT AS SHOWN IN THE DRAWINGS AND GENERAL NOTES.
   E) SPACING CLEAR DISTANCE BETWEEN PARALLEL REINFORCEMENT IN A LAYER SHALL NOT BE LESS THAN 1-1/2 TIMES THE NOMINAL DIAMETER OF THE REINFORCEMENT, OR 1-1/3 TIMES MAXIMUM SIZE AGGREGATE, NOR LESS THAN 1-1/2".
   F) TACK WELDING, WELDING, HEATING OR CUTTING OF BARS: NOT PERMITTED U.O.N.
   G) SLAB CORNERS: PROVIDE 2-#3 X 4'-0" AT RE-ENTRANT CORNERS AND EACH CORNER OF RECTANGULAR HOLES IN SLABS. PLACE BARS DIAGONALLY.
   H) SPLICES (STANDARD LAPS): LAP SPLICE PER DETAIL 1/SD1.0. STAGGER BOTTOM SPLICES AT LEAST 5'-0" FROM SPLICES IN OTHER BOTTOM REINFORCEMENT. STAGGER SPLICES FOR TOP REINFORCEMENT SIMILARLY.
4. ANCHOR BOLTS, DOWELS AND HOLD DOWN ANCHORS: SECURELY HELD IN PLACE PRIOR TO FOUNDATION INSPECTION BY THE BUILDING OFFICIAL AND OBSERVATION BY THE ENGINEER.
5. PIPES, SLEEVES AND DUCTS NOT TO BE PLACED IN WALLS, BEAMS, SLABS, FOOTINGS OR COLUMNS UNLESS SPECIFICALLY DETAILED.
6. CHAMFER: 3/4 INCH ON EXPOSED CORNERS.
7. ADMIXTURES: REVIEWED BY THE ENGINEER. CALCIUM CHLORIDE OR ADDED CHLORIDES ARE NOT PERMITTED.
8. CONSTRUCTION JOINTS: ACI 117-5 & 5.4. 1/4 INCH AMPLITUDE MINIMUM OR EYED JOINTS PER PLAN. LOCATION OF JOINTS TO BE REVIEWED BY THE ENGINEER. WAIT 48 HOURS BETWEEN POURS.
9. SLAB-ON-GRADE JOINTS: LOCATION OF ALL CONSTRUCTION, CONTROL AND WEAKENED PLANE JOINTS NOT SPECIFICALLY INDICATED ON THE DRAWINGS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO THE PLACING OF REINFORCEMENT. MAXIMUM SPACING 15 FEET ON CENTER.
10. ACTUAL DIMENSIONS: SLAB, WALL, BEAM AND COLUMN DIMENSIONS SHOWN ARE ACTUAL DIMENSIONS NOT NOMINAL DIMENSIONS (i.e. A 4 INCH SLAB IS 4 INCHES THICK, NOT 3-1/2 INCHES.)
11. CONCRETE CURING: ACI 318
12. VIBRATION: ALL CONCRETE SHALL BE CONSOLIDATED WITH MECHANICAL VIBRATORS.

SHEET INDEX

SN1.0	GENERAL NOTES
S1.0	FOUNDATION PLAN
S2.0	LOW ROOF & FLOOR FRAMING PLAN
S3.0	ROOF FRAMING PLAN
SD1.0	FOUNDATION DETAILS
SD2.0	FRAMING DETAILS
SD3.0	FOUNDATION DETAILS
SD4.0	FRAMING DETAILS

PROJECT DESIGN DATA

GOVERNING CODE: 2025 CALIFORNIA BUILDING CODE (CBC).

STRUCTURAL DESIGN LOADS:	DEAD LOAD	LIVE LOAD
ROOF LOADS:	15 PSF	20 PSF
CEILING LOADS (ATTICS WITHOUT STORAGE):	7 PSF	10 PSF
FLOOR LOADS:	15 PSF	40 PSF
DECK LOADS:	15 PSF	60 PSF

[redacted]

SPECIAL INSPECTION REQUIREMENTS

SPECIAL INSPECTION REQUIREMENTS:

1. SPECIAL INSPECTION AGENCY EMPLOYED BY THE OWNER.
2. REPORTS: PREPARED AND SIGNED BY THE INSPECTOR, SUBMITTED TO THE BUILDING OFFICIAL AND THE ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. THEN, IF NOT CORRECTED, TO THE BUILDING OFFICIAL AND THE ENGINEER.
3. CERTIFICATION: INSPECTOR MUST BE CITYCERTIFIED BY THE BUILDING OFFICIAL TO PERFORM THE TYPES OF INSPECTIONS SPECIFIED.
4. RESPONSIBILITY: IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY PRIOR TO PERFORMING ANY WORK THAT REQUIRESSPECIAL INSPECTION.
5. SPECIAL INSPECTIONS REQUIRED FOR THE FOLLOWING ITEM:
   (A) SHEAR WALLS WITH NAILING 4" SPACING OR LESS
   (B) EPOXY ANCHOR OR EXPANSION ANCHOR INSTALL INTO EXISTING CONCRETE SLAB OR FOOTING

ABBREVIATION:

&	AND	JST	JOIST
A.B.	ANCHOR BOLT	JT.	JOINT
ARCH	ARCHITECTURAL	L.S.	LAG SCREW
BLDG.	BUILDING	MAX.	MAXIMUM
BM	BEAM	M.B.	MACHINE BOLT
BOT.	BOTTOM	MECH.	MECHANICAL
BTWN.	BETWEEN	MFR.	MANUFACTURER
CONC.	CONCRETE	MIN.	MINIMUM
CONT.	CONTINUOUS	MISC.	MISCELLANEOUS
CTSK.	COUNTERSUNK	N.	NORTH
CTR.	CENTER	N/A	NOT APPLICABLE
DBL.	DOUBLE	N.I.C.	NOT IN CONTRACT
DET.	DETAIL	NO. OR #	NUMBER
DIA.	DIAMETER	N.T.S.	NOT TO SCALE
DN.	DIAMETER	O.C.	ON CENTER
DIM.	DIMENSION	OPP.	OPPOSITE
DN.	DOWN	OWG.	OPEN WEB STEEL GIRDER
DWG.	DRAWING	PL.	PLATE
DWLS.	DOWELS	PLYWD.	PLYWOOD
(E)	EXISTING	RAD.	RADIUS
EA.	EACA	REF.	REFERENCE
E.E	EACH END	REINF.	REINFORCED
E.F.	EACH FACE	REQD.	REQUIRED
EL.	ELEVATION	S.A.D.	SEE ARCH DRAWING
E.N	EDGE NAILING	SCHED.	SCHEDULED
EQ.	EQUAL	SECT.	SECTION
E.S.	EACH SIDE	SIM.	SIMILAR
E.W.	EACH WAY	SPEC.	SPECIFICATION
EXP.	EXPANSION	SQ.	SQUARE
EXT.	EXTERIOR	STAGG.	STAGGERED
F.F.	FINISH FLOOR	STD.	STANDARD
F.A.	FINISH GRADE	STL.	STEEL
FIN	FINISH	SYM.	SYMMETRICAL
FL.	FLOOR	SPA.	SPACING
F.O.C.	FACE OF CONCRETE	T.&B.	TOP & BOTTOM
FT	FOOT OR FEET	THK.	THICK
FTG.	FOOTING	T.O.F.	TOP OF FOOTING
GLB	GLU-LAM BEAM	TYP.	TYPICAL
H.D.	HOLDOWN	U.O.N.	UNLESS OTHERWISE NOTED
HGR	HANGER	VERT.	VERTICAL
HGT.	HEIGHT	W/	WITH
HK.	HOOK	W/O	WITHOUT
HORIZ.	HORIZONTAL	WP.	WATERPROOF
H.S.B.	HIGH STRENGTH BOLT	W.W.F.	WELDED WIRE FABRIC

ORANGE ENGINEERING
4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 928-5606

DESIGN BY:

[redacted]

PROJECT ADDRESS:
100 JAMIE CT., LOS GATOS, CA 95032

SHEET TITLE:
GENERAL NOTES

DATE: 02/02/26
JOB NO. ORE26017

REVISION:

	MM/DD/YY	DESCRIPTION
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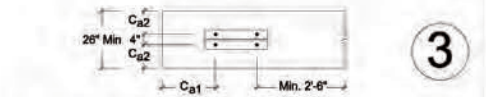
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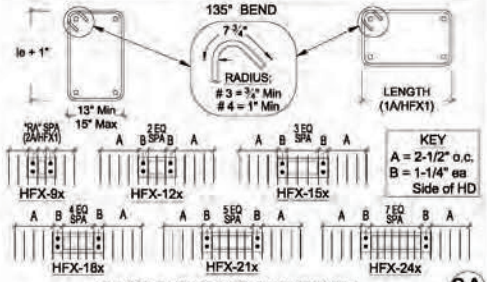
BACK TO BACK REINFORCED ANCHORAGE (BB-RA)

Model	Panel Width (in)	Anchorage[1]	Rod Dia (in)	Rod Grade[2,3]	BB-RA l_e[4] (in)	BB-RA C_{a1}[5] (in)	BB-RA C_{a2}[6] (in)	Stirrups[9] (in)	Shear[7] Ties
HFX-9x	9	1-1/8-STD-BB-RA	1-1/8	STD	15	19-3/4	11	8 - #4	# 3 (min) @ 3-3/4" OC
HFX-12x	12	1-1/8-STD-BB-RA		STD				13 - #4	# 3 (min) @ 4" OC
		1-1/8-HS-BB-RA		HS					
HFX-15x	15	1-1/8-STD-BB-RA		STD				14 - #4	
		1-1/8-HS-BB-RA		HS					
HFX-18x	18	1-1/8-STD-BB-RA		STD	23	20-5/8		15 - #4	# 4 (min) @ 4" OC
		1-1/8-HS-BB-RA		HS					
HFX-21x	21	1-1/8-STD-BB-RA		STD				16 - #4	
		1-1/8-HS-BB-RA		HS					
HFX-24x	24	1-1/8-STD-BB-RA		STD				18 - #4	
		1-1/8-HS-BB-RA		HS					

BACK TO BACK REINFORCED ANCHORAGE NOMENCLATURE
1-1/8 - STD - BB - RA
- REINFORCED ANCHORAGE
- "BACK TO BACK" INSTALLATION
- ROD GRADE
- ROD DIAMETER

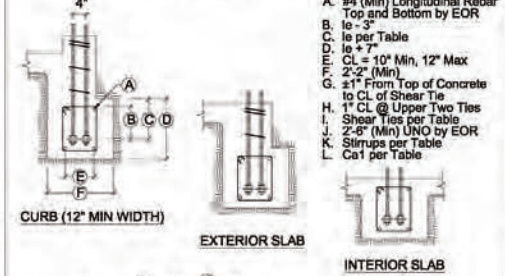


3



KEY
A = 2-1/2" o.c.
B = 1-1/4" ea Side of HD

BB-RA SHEAR TIES & STIRRUPS 3A



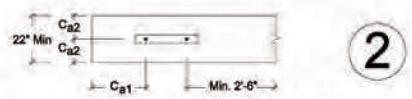
A. #4 (Min) Longitudinal Rebar Top and Bottom by EOR
B. le - 3"
C. le per Table
D. le + 7"
E. CL = 10" Min, 12" Max
F. 2'-2" (Min)
G. ±1" From Top of Concrete to CL of Shear Tie
H. 1" CL @ Upper Two Ties
I. Shear Ties per Table
J. 2'-6" (Min) UNO by EOR
K. Stirrups per Table
L. Ca1 per Table

BB-RA SECTIONS & ELEVATIONS 3B

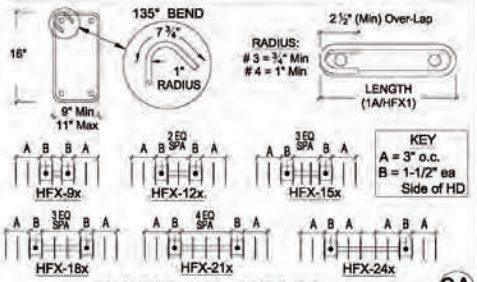
REINFORCED ANCHORAGE (RA)

Model	Panel Width (in)	Anchorage[1]	Rod Dia (in)	Rod Grade[2,3]	RA l_e[4] (in)	RA C_{a1}[5] (in)	RA C_{a2}[6] (in)	Stirrups[9] (in)	Shear[7] Ties
HFX-9x	9	1-1/8-STD-RA	1-1/8	STD	15	19-3/4	11	8 - #4	# 3 (min) @ 3-3/4" OC
HFX-12x	12	1-1/8-STD-RA		STD				9 - #4	# 3 (min) @ 4" OC
		1-1/8-HS-RA		HS					
HFX-15x	15	1-1/8-STD-RA		STD				10 - #4	
		1-1/8-HS-RA		HS					
HFX-18x	18	1-1/8-STD-RA		STD		20-5/8		11 - #4	
		1-1/8-HS-RA		HS					
HFX-21x	21	1-1/8-STD-RA		STD				12 - #4	# 4 (min) @ 4" OC
		1-1/8-HS-RA		HS					
HFX-24x	24	1-1/8-STD-RA		STD					
		1-1/8-HS-RA		HS					

REINFORCED ANCHORAGE NOMENCLATURE
1-1/8 - STD - RA
- REINFORCED ANCHORAGE
- ROD GRADE
- ROD DIAMETER

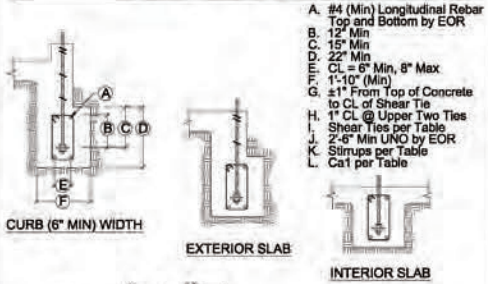


2



KEY
A = 3" o.c.
B = 1-1/2" ea Side of HD

RA SHEAR TIES & STIRRUPS 2A



A. #4 (Min) Longitudinal Rebar Top and Bottom by EOR
B. 12" Min
C. 15" Min
D. 22" Min
E. CL = 6" Min, 8" Max
F. 1'-10" (Min)
G. ±1" From Top of Concrete to CL of Shear Tie
H. 1" CL @ Upper Two Ties
I. Shear Ties per Table
J. 2'-6" Min UNO by EOR
K. Stirrups per Table
L. Ca1 per Table

RA SECTIONS & ELEVATIONS 2B

UNREINFORCED ANCHORAGE (UA)

Model	Panel Height	Anchorage[1]	Rod Dia (in)	Rod Grade[2,3]	UA l_e (in)	UA C_{a1} & C_{a2}[6] (in)	Shear[7,8] Ties
HFX-9x	78.5" - 8'	1-1/8-STD-13-19	1-1/8	STD	13	19	1 - # 3
HFX-12x	78" - 10'	1-1/8-HS-20-30		HS	20	30	
		1-1/8-STD-14-20		STD	14	20	
HFX-15x, 18x	78" - 13'						
HFX-15x, 18x Balloon	14' - 20'	1-1/8-HS-20-30		HS	20	30	
HFX-21x, 24x	78" - 13'	1-1/8-STD-14-20		STD	14	20	
		1-1/8-HS-23-34			23	34	2 - # 3
HFX-21x, 24x Balloon	14' - 20'	1-1/8-HS-20-30		HS	20	30	

UNREINFORCED ANCHORAGE NOMENCLATURE
1-1/8 - STD - 14 - 20
- END & EDGE DISTANCE (C_{a1} & C_{a2})
- EMBEDMENT DEPTH (l_e)
- ROD GRADE
- ROD DIAMETER

1

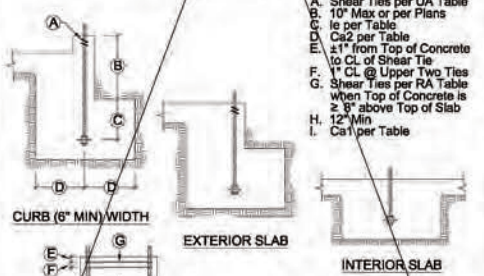


SHEAR TIES NOT REQUIRED WHEN

Model	Width	Distance	Edge Distance ≥
HFX-9x	9"	7-1/4"	2-3/8"
HFX-12x	10-1/2"	8-1/4"	3-1/2"
HFX-15x	12"	7-3/8"	4-1/4"
HFX-18x	15"	8-3/8"	5"
HFX-21x	18"	9-3/8"	5-1/2"
HFX-24x	21"	10-3/8"	6"

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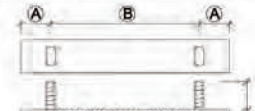
UA SHEAR TIES 1A



A. Shear Ties per UA Table
B. 10" Max or per Plans
C. le per Table
D. Ca2 per Table
E. ±1" from Top of Concrete to CL of Shear Tie
F. 1" CL @ Upper Two Ties
G. Shear Ties per RA Table when Top of Concrete is ≥ 8" above Top of Slab
H. 12" Min
I. Ca1 per Table

UA SECTIONS & ELEVATIONS 1B

1. DESIGNS ARE TO RESIST LOADING PER ACI 318-19, SEC 17.10.5.3.
2. STD INDICATES ANCHORS COMPLYING WITH ASTM F1554 GRADE 36 WITH A HARDY FRAME BOLT BRACE (HFXBB) INSTALLED WITH STD OR GRADE 8 DOUBLE NUTS ON THE EMBED END.
3. HS INDICATES ANCHORS COMPLYING WITH ASTM A193 GRADE B7 WITH A 1/2"x3"x3"(MIN) HFPW PLATE WASHER INSTALLED WITH DOUBLE NUTS ON THE EMBED END (HFXBB NOT REQUIRED).
4. LE = LENGTH OF EMBEDMENT FROM THE TOP OF FOOTING OR GRADE BEAM TO THE TOP OF THE HFXBB BOLT BRACE (TOP OF THE EMBEDDED HFPW PLATE. WASHER @ HS ANCHORS)
5. CA1 = DISTANCE FROM HD CENTERLINE TO THE END OF THE FOOTING OR GRADE BEAM.
6. CA2 = DISTANCE FROM HD CENTERLINE TO BOTH THE FRONT AND THE BACK FACE OF THE FOOTING OR GRADE BEAM.
7. SHEAR TIES ARE GRADE 60 (MIN) REBAR AND REQUIRED FOR NEAR EDGE DISTANCE CONDITIONS PER ACI 318-19, F'C = 2,500 PSI. CURBS AND STEM WALLS MUST BE 6 INCH (MIN) WIDTH FOR UA AND RA, 12 INCH (MIN) WIDTH FOR BB-RA.
8. FOR UA APPLICATIONS, ADDITIONAL TIES MAY BE REQUIRED AT STEM WALLS. SHEAR TIES ARE NOT REQUIRED FOR INSTALLATION AWAY FROM EDGE (SEE DETAIL 1A), INSTALLATION ON WOOD FRAMING, OR FOR IRC BRACED WALL PANEL APPLICATIONS.
9. STIRRUPS ARE GRADE 60 (MIN) REBAR. SEE TABLE FOR SIZE AND SPACING. SEE "STIRRUP LAYOUT" DIAGRAMS AND "KEY" FOR LAYOUT PATTERNS.
10. CONCRETE EDGE DISTANCES MUST COMPLY WITH ACI 318-19, SECTION 17.9.2. COATED REINFORCEMENT MAY BE SPECIFIED BY THE EOR TO LIMIT EXPOSURE AND THEREFORE REDUCE MINIMUM CONCRETE COVER. COATED REINFORCEMENT MUST COMPLY WITH ACI 318-19, SECTION 20.5.2.



Model	Width	A	B
HFX-9x	9"	1-3/4"	5-1/2"
HFX-12x	12"		8-1/2"
HFX-15x	15"	2-5/8"	9-3/4"
HFX-18x	18"		12-3/4"
HFX-21x	21"		15-3/4"
HFX-24x	24"		18-3/4"

HFX ANCHOR CENTERLINES A

IMPORTANT!

1. ANCHORAGE IS DESIGNED FOR TENSION AND SHEAR TRANSFER ONLY, FOUNDATION DESIGN PER EOR.
2. REINFORCEMENT SHOWN IS THE MINIMUM REQUIREMENT AND IS NOT INTENDED TO REPLACE REINFORCEMENT DESIGNED BY THE EOR.
3. FOR RA AND BB-RA INSTALLATIONS, THE HFXBB BOLT BRACE MAY BE PLACED ON TOP OF THE STIRRUPS WITH DOUBLE-NUTS INSTALLED AT EMBED END OF STANDARD GRADE ANCHOR RODS. (NOTE: ½" x 3" x 3" MIN. HFPW PLATE WASHERS ARE REQUIRED TO BE DOUBLE-NUTTED AT EMBED END OF HIGH STRENGTH ANCHOR RODS.)
4. HIGH STRENGTH ALL-THREAD RODS PROVIDED BY HARDY FRAMES ARE STAMPED ON BOTH ENDS. HF B7

IMPORTANT NOTES B

REVISIONS	DATE

ANCHORAGE DETAILS - HFX PANELS

THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH *HARDY FRAME* PRODUCTS

HARDY FRAME SHEAR WALL SYSTEMS
16023 SWINGLEY RIDGE RD
CHESTERFIELD, MO 63017
(800) 325-8075
WWW.HARDYFRAME.COM

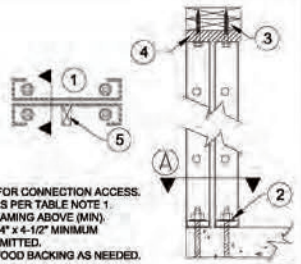
MiTek®

DATE: 1-1-2023

HFX1

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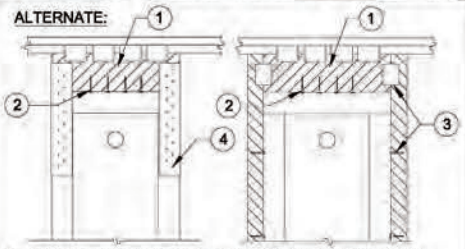
SECTION A



1. CAVITY ORIENTED FOR CONNECTION ACCESS.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. NOMINAL 8 INCH FRAMING ABOVE (MIN).
4. A 2x FILLER WITH 1/4" x 4-1/2" MINIMUM WS SCREWS IS PERMITTED.
5. FIELD INSTALLED WOOD BACKING AS NEEDED.

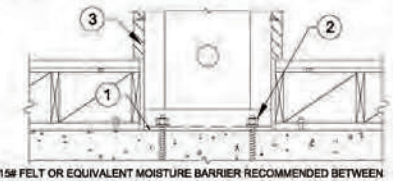
BACK TO BACK INSTALLATION 3

ALTERNATE:



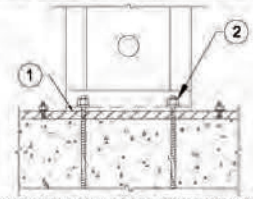
1. WOOD FILLER (13 ⅞" MAX DEPTH) WITH USP MP4F CONNECTORS BOTH SIDES, QUANTITY BY BUILDING DESIGN PROFESSIONAL.
2. 1/4" x 3" (MINIMUM) WS SCREWS, QUANTITY PER TABLES
3. ADJACENT FRAMING WITH 1/4" DIAMETER SCREWS INSTALLED THROUGH PRE-PUNCHED HOLES IN PANEL EDGES REQ'D WHEN INSTALLING A FILLER GREATER THAN 1-1/2" ABOVE TO BRACE OUT-OF-PLANE HINGE OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL.
4. MiTek HFFB FILLER BRACE WITH 1/4" x 1-1/2" WS SCREWS TO FILLER (FILL ALL HOLES) AND 1/4" SELF-TAPPING SCREWS TO PANEL (5 MIN. EACH FACE) REQ'D WHEN INSTALLING A FILLER GREATER THAN 3-1/4" ABOVE TO BRACE OUT-OF-PLANE HINGE OR WHEN SPECIFIED BY THE BUILDING DESIGN PROFESSIONAL.

FILLER GREATER THAN 1-1/2 IN. 6



1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. ADJACENT FRAMING WITH 1/4" DIAMETER SCREWS INSTALLED AT THE PANEL EDGES WHEN INSTALLING A FILLER GREATER THAN 1-1/2" ABOVE OR WHEN SPECIFIED BY DESIGN PROFESSIONAL.

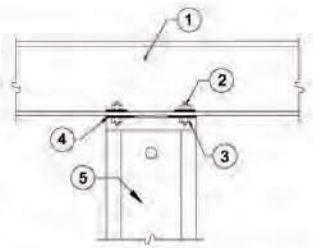
RAISED FLOOR HEAD-OUT 8



ALLOWABLE VALUES ON 2x PLATE ARE LESS THAN INSTALLATION ON CONCRETE

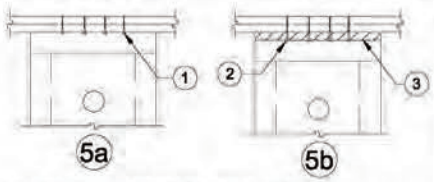
1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND TREATED PLATE.
2. NUTS AND WASHERS PER TABLE NOTE 1.

INSTALLATION ON 2x PLATE 11



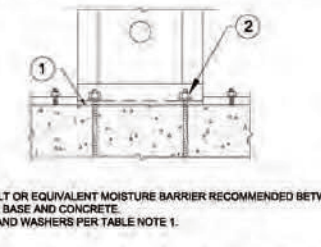
1. STEEL BEAM PER PLANS
2. ALL THREAD RODS THRU-BOLTED TO STEEL BEAM BY BUILDING DESIGN PROFESSIONAL.
3. NUTS AND WASHERS PER TABLE NOTE 1.
4. *HARDY FRAME*® STACKING WASHERS (HFSW) REQUIRED TO BE WELDED INSIDE TOP CHANNEL OF LOWER PANEL.
5. *HARDY FRAME*® "STK" PANEL WITH STACKING WASHERS WELDED INSIDE THE TOP CHANNEL BY MANUFACTURER.

STEEL BEAM ABOVE THRU-BOLT 2



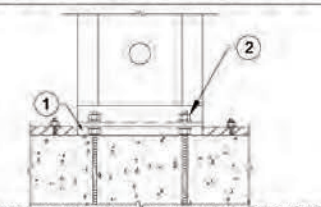
1. 1/4" x 3" (MINIMUM) WS SCREWS, QUANTITY PER TABLES
2. 1/4" x 4-1/2" (MINIMUM) WS SCREWS, QUANTITY PER TABLES
3. 2x WOOD FILLER.

TOP PLATE CONNECTIONS 5



1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.

INSTALLATION ON CONCRETE 7

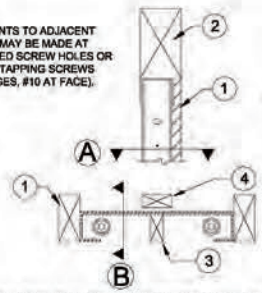


ALLOWABLE VALUES ON N&W ARE LESS THAN INSTALLATION ON CONCRETE

1. PLUS OR MINUS 1-1/2" GAP TO BE FILLED WITH 5,000 PSI NON-SHRINK GROUT (MINIMUM).
2. NUT AND WASHER GRADES PER TABLE NOTE 1.

INSTALLATION ON NUTS & WASHERS 10

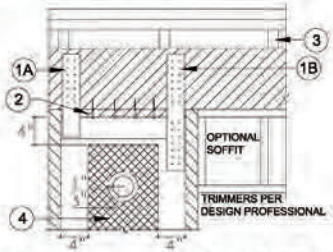
NOTE:
ATTACHMENTS TO ADJACENT TRIMMERS MAY BE MADE AT PREPUNCHED SCREW HOLES OR WITH SELF TAPPING SCREWS (#12 AT EDGES, #10 AT FACE).



1. TRIMMERS PROVIDE FULL BEARING FOR HEADER ABOVE; DESIGN AND CONNECTIONS BY BUILDING DESIGN PROFESSIONAL.
2. 6x HEADER.
3. WOOD MEMBERS FOR BACKING MAY BE INSERTED VERTICALLY OR HORIZONTALLY IN THE PANEL CAVITY AS NEEDED.
4. WOOD MEMBER FLUSH TO FACE OF WALL FOR BACKING AS NEEDED.

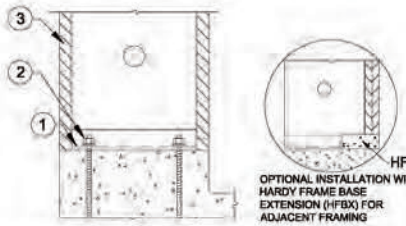
6x HEADER ABOVE-SECTIONS 1

NOTE:
TO PREVENT DRILLING ADDITIONAL HOLES ORIENT THE PANEL CAVITY TOWARD THE FIXTURE BEING INSTALLED.



1. (A) PRE-WELDED STRAPS ARE PROVIDED ON 78" AND 79-1/2" PANEL HEIGHTS. THEY ARE AVAILABLE FOR OTHER HEIGHTS UPON REQUEST.
   (B) FIELD INSTALLED STRAPS WITH SELF TAPPING SCREWS ARE PERMITTED. THE DESIGN AND CONNECTION IS BY THE DESIGN PROFESSIONAL.
2. A 2x WOOD FILLER WITH 1/4"x4-1/2" (MIN.) WS SCREWS IS PERMITTED.
3. WHEN CRIPPLE STUDS OCCUR, SHEAR TRANSFER DESIGN TO BE PER THE BUILDING DESIGN PROFESSIONAL.
4. A 1" DIA. HOLE MAY BE ADDED IN THE PANEL FACE WHEN IT IS LOCATED IN THE UPPER HALF OF THE PANEL HEIGHT AND IS 4" MINIMUM FROM ANY EDGE. FOR PANELS MORE THAN 12" WIDE, ADDITIONAL HOLES MUST BE OFFSET 1" MINIMUM FROM THE 3" DIA. PREPUNCHED HOLE. FOR HOLES LARGER THAN 1" DIAMETER OR TO ADD MORE THAN ONE HOLE CONTACT MITEK HARDY FRAME TECHNICAL SUPPORT AT (800) 754-3030.

TOP CONNECTION TO HEADER 4



1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. ADJACENT FRAMING OPTIONAL U.N.O. BY BUILDING DESIGN PROFESSIONAL.

INSTALLATION ON CURB 9

HFX PANELS 78 IN. THROUGH NOMINAL 13 FEET

Model Number	Net Height (in)	Depth (in)	Hold Down Diameter[1] (in)	Top Screw Qty[2] (ea)	Screw Qty Available at Edges (ea)[3]
HFX-12,15,18,21 & 24x78	78	3-1/2	1-1/8	9" Width = 5	4
HFX-9x79.5	79-1/2			12" Width = 6	
HFX-12,15,18,21 & 24x8	92-1/4			15" Width = 8	
HFX-9x8	93-3/4				
HFX-12,15,18,21 & 24x9	104-1/4			18" Width = 10	5
HFX-12,15,18,21 & 24x10	116-1/4				
HFX-15,18,21 & 24x11	128-1/4			21" Width = 12	
HFX-15,18,21 & 24x12	140-1/4			24" Width = 14	6
HFX-15,18,21 & 24x13	152-1/4				

BALLOON PANELS 14 FEET THROUGH 20 FEET

Model Number	Net Height (in)	Depth (in)	Hold Down Diameter[1] (in)	Top Screw Qty[2] (ea)	Screw Qty Available at Edges (ea)[3]
HFX-15,18,21 & 24x14	164-1/4	3-1/2	1-1/8	15" Width = 8	6
HFX-15,18,21 & 24x15	176-1/4				
HFX-15,18,21 & 24x16	188-1/4			18" Width = 10	
HFX-15,18,21 & 24x17	200-1/4				7
HFX-15,18,21 & 24x18	212-1/4			21" Width = 12	
HFX-15,18,21 & 24x19	224-1/4				
HFX-15,18,21 & 24x20	236-1/4			24" Width = 14	8

TABLE NOTES

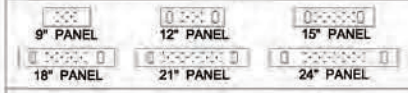
1. FOR STD OR HS GRADE HOLD DOWN ANCHOR BOLTS CONNECT TO THE PANEL BASE WITH HARDENED ROUND WASHERS BELOW GRADE 8 NUTS. ALTERNATE WASHERS ARE (2 EA) ROUND-FLAT OR (2 EA) SAE WASHERS ON EACH BOLT. ALTERNATE NUTS ARE 2H HEAVY HEX.
2. 1/4" DIAMETER MITEK® PRO SERIES™ WS SCREWS. LENGTH IS 3" (MINIMUM) WHEN ATTACHED DIRECTLY TO THE COLLECTOR AND 4-1/2" (MINIMUM) WHEN INSTALLING A 2x FILLER ABOVE THE PANEL.
3. ADJACENT FRAMING WITH 1/4" DIAMETER SCREWS IS REQUIRED AT THE PANEL EDGES WHEN INSTALLING A FILLER ABOVE THE TOP CHANNEL THAT IS GREATER THAN 1-1/2" OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL.

A

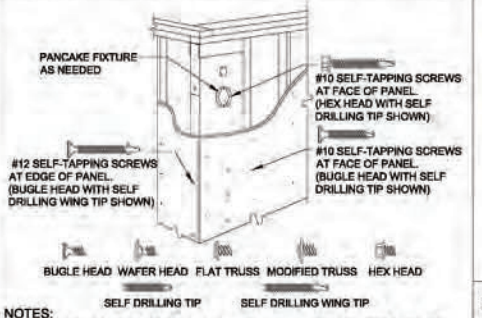
INSTALLATION INSTRUCTIONS

1. WHEN INSTALLING ON CONCRETE CONNECT WITH (1 EA) HARDENED ROUND WASHER BELOW (1 EA) GRADE 8 NUT, SECURE WITH A DEEP SOCKET (RECOMMENDED) UNTIL SNUG TIGHT. ALTERNATE WASHERS AND NUTS ARE PROVIDED IN TABLE NOTE 1.
2. INSTALLATION ON CONCRETE PROVIDES THE HIGHEST ALLOWABLE VALUES. CONFIRM WITH THE DESIGN PROFESSIONAL BEFORE INSTALLING ON OTHER SUPPORTING SURFACES.
3. USE 1/4"X4-1/2" MITEK® PRO SERIES® WS SCREWS AT TOP CONNECTIONS WITH A 2x FILLER. IF THE TOP OF PANEL IS IN DIRECT CONTACT WITH THE COLLECTOR ABOVE (TOP PLATES, HEADER, BEAM, ETC.) USE 1/4 x 3" (MIN)
4. FOR INSTALLATIONS WITH A FILLER GREATER THAN 1-1/2" ABOVE, OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL, ADJACENT KING POSTS TO BRACE THE OUT-OF-PLANE HINGE CAN BE CONNECTED WITH 1/4" DIA. SCREWS THROUGH PRE-PUNCHED HOLES AT THE PANEL EDGES.

B



C



NOTES:

A. SURFACE FINISHES, CONNECTORS AND FIXTURES ARE ATTACHED TO THE PANEL FACE WITH # 10 SELF-TAPPING SCREWS SPACED NO LESS THAN 2-1/4" OC.
B. ATTACHMENTS TO THE PANEL EDGES ARE MADE WITH # 12 SELF-TAPPING SCREWS.
C. STRUCTURAL CONNECTIONS ARE TO BE DESIGNED BY THE DESIGN PROFESSIONAL.
D. STRUCTURAL HARDWARE USED TO TRANSFER LOADS SHOULD NOT EXCEED 12 GAUGE.

D

REVISIONS	DATE

FRAMING DETAILS - HFX PANELS

THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH MITEK® *HARDY FRAME*® PRODUCTS

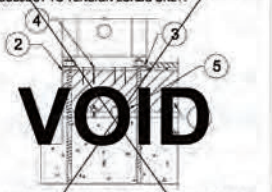
MiTek®
HARDY FRAME SHEAR WALL SYSTEMS
16023 SWINGLEY RIDGE RD
CHESTERFIELD, MO 63017
(800) 325-9075
WWW.HARDYFRAME.COM

DATE:
1-1-2023

HFX2

Docusign Envelope ID: 38117549-0572-877D-808A-24523D18AA9B

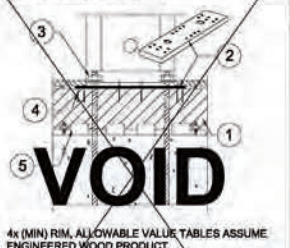
NOTES:
A. INSTALLATION WITHOUT *HARDY FRAME*® BEARING PLATE (HFXBP) MAY INCREASE DEFLECTION AND RESULT IN A DECREASE OF ALLOWABLE SHEAR VALUE. BUILDING DESIGN PROFESSIONAL MUST ANALYZE EFFECTS
B. COUPLERS MAY BE USED WHEN THREADED ROD IS SUBJECT TO TENSION LOADS ONLY.



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® PANEL DIRECTLY ON RIM.
3. NUTS AND WASHERS PER TABLE NOTE 1.
4. 1/4" x 4-1/2" (MINIMUM) WS SCREWS THROUGH BOTTOM OF PANEL MINIMUM QUANTITY PER TABLE.
5. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

RAISED-OS CORNER 4

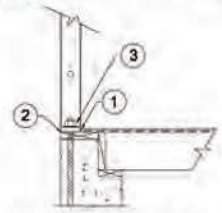
NOTE:
COUPLERS MAY BE USED WHEN THREADED ROD IS SUBJECT TO TENSION LOADS ONLY.



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. NUTS AND WASHERS PER TABLE NOTE 1.
4. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
5. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

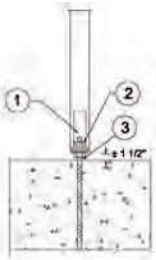
RAISED BEARING PLATE 3

NOTES:
A. CHECK WALL HEIGHT, *HARDY FRAME*® BEARING PLATES BELOW THE PANEL BASE OR CUSTOM HEIGHT PANELS ARE AVAILABLE TO AVOID FILLERS GREATER THAN 1-1/2".
B. FOR MAXIMUM ALLOWABLE VALUES INSTALL PANEL ON CONCRETE



1. FLOOR SHEATHING NOTCHED, INSTALL PANEL ON WOOD PLATE.
2. 15# FELT OR EQUIVALENT RECOMMENDED BETWEEN PANEL BASE AND TREATED MUDSILL.
3. NUTS AND WASHERS PER TABLE NOTE 1.

RAISED STEM WALL 2



1. ACCESS HOLE LOCATED AT EDGE OF POST.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. PLUS OR MINUS 1-1/2" GAP TO BE FILLED WITH 5,000 PSI STRENGTH NON-SHRINK GROUT (MIN).

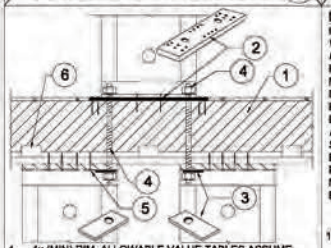
POST ON N&W 1

Model Number	Net Height (in)	Depth (in)	Hold Down Diameter[1] (in)	Screw Quantity Panel	Top[2] (ea)	Bott[3] (ea)	Screw Qty[4] Available at Edges (ea)
HFX-12,15,18,21 & 24x8	92-1/4	3-1/2	1-1/8	12" Width	6	6	4
HFX-12,15,18,21 & 24x9	104-1/4			15" Width	8	8	
HFX-12,15,18,21 & 24x10	116-1/4			18" Width	10	10	5
HFX-15,18,21 & 24x11	128-1/4			21" Width	12	12	
HFX-15,18,21 & 24x12	140-1/4			24" Width	14	14	6
HFX-15,18,21 & 24x13	152-1/4						

NOTE: *HARDY FRAME*® STACKING WASHERS (HFSW) ARE REQUIRED IN THE TOP OF PANELS WHEN CONNECTING TO TENSION ANCHORS FROM ABOVE. *HARDY FRAME*® "STK PANELS" INCLUDE HFSW WASHERS PRE-WELDED IN THE TOP CHANNEL.

1. HOLD DOWN TENSION ANCHORS SPECIFIED AS STANDARD GRADE (STD) MUST COMPLY WITH ASTM F1554 GRADE 36 (OR EQUAL). HOLD DOWN TENSION ANCHORS SPECIFIED AS HIGH STRENGTH (HS) MUST COMPLY WITH ASTM A 193 GRADE B7 (OR EQUAL). TENSION ANCHORS (BOTH GRADES) CONNECT TO THE UPPER AND LOWER PANELS WITH HARDENED ROUND WASHERS AND GRADE 8 NUTS. A *HARDY FRAME*®"HFSW" STACKING WASHER IS REQUIRED IN THE TOP CHANNEL OF THE LOWER PANEL (AVAILABLE PRE-WELDED IN A *HARDY FRAME*®"STK" PANEL). ALTERNATE WASHERS ARE (2 EA) ROUND-FLAT OR (2 EA) SAE WASHERS AT EACH ANCHOR CONNECTION. ALTERNATE NUTS ARE 2H HEAVY HEX.
2. 1/4" DIAMETER MITEK®PRO SERIES™ WS SCREWS. LENGTH IS 3" (MINIMUM) WHEN ATTACHING DIRECTLY TO THE COLLECTOR AND 4-1/2" (MINIMUM) WHEN INSTALLING A 2x FILLER ABOVE THE PANEL.
3. 1/4" DIAMETER MITEK®PRO SERIES™ WS SCREWS. LENGTH IS 4-1/2" (MINIMUM) AT CONNECTIONS TO FLOOR SYSTEMS AND BEAMS BELOW.
4. 1/4" DIAMETER SCREWS ARE REQUIRED AT THE EDGES WHEN INSTALLING A FILLER GREATER THAN 1-1/2 INCH ABOVE OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL.

A



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8 IN. DIA HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

PYRAMID STACK 8

NOTE:
INSTALLATION WITHOUT *HARDY FRAME*® BEARING PLATE (HFXBP) MAY INCREASE DEFLECTION AND RESULT IN A DECREASE OF ALLOWABLE SHEAR VALUE, BUILDING DESIGN PROFESSIONAL MUST ANALYZE EFFECTS.



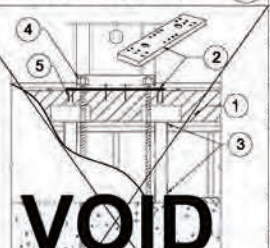
1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® PANEL DIRECTLY ON RIM.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

STACK @ OS CORNER 7



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

STRAIGHT STACK 6



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. USP POST CAP AND POST BASE BY THE BUILDING DESIGN PROFESSIONAL.
4. NUTS AND WASHERS PER TABLE NOTE 1.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.

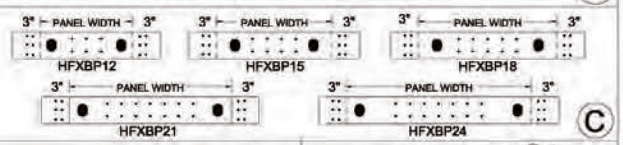
CRIPPLE WALL 5

INSTALLATION ON FLOOR SYSTEMS WITH *HARDY FRAME*® BEARING PLATE (HFXBP)

1. WITH HOLES PRE-DRILLED FOR 1-1/8" DIA.TENSION ANCHORS, INSTALL A SOLID 4x (MINIMUM) RIM IN FLOOR SYSTEM AT PANEL LOCATION. ALLOWABLE VALUE TABLES ASSUME THE RIM IS ENGINEERED WOOD PRODUCT (EWP).
2. NOTCH FLOOR SHEATHING THEN INSTALL HFXBP ON RIM WITH 6 EACH 1/4"X4-1/2" (MIN) "WS" SCREWS AT EACH END.
3. PLACE PANEL ON HFXBP.
4. WHEN STACKING PANELS, INSTALL "HFSW" STACKING WASHERS IN THE TOP CHANNEL OF THE LOWER PANEL. CONNECT LOWER TO UPPER PANELS WITH TENSION ANCHORS (GRADE PER PLANS) AND SECURE AT BOTH ENDS WITH HARDENED ROUND WASHERS AND GRADE 8 NUTS TO BE SNUG TIGHT. *HARDY FRAME* "STK" PANELS THAT INCLUDE "HFSW" STACKING WASHERS PRE-WELDED IN THE TOP CHANNEL ARE AVAILABLE.
5. WHEN MORE THAN 12 SCREWS ARE REQUIRED FOR THE BOTTOM CONNECTION OR JOINTS IN FRAMING MEMBERS OCCUR AT SCREW LOCATIONS, INSTALL ADDITIONAL 1/4"x4-1/2" WS SCREWS THROUGH THE BASE OF PANEL WHERE THEY ALIGN WITH HOLES IN THE HFXBP.
6. FOR STANDARD WALL HEIGHTS, INSTALL A 2x FILLER ABOVE PANEL (DTL 5/HFX2). FOR FILLERS GREATER THAN 1-1/2 IN. SEE DETAIL 6/HFX2.

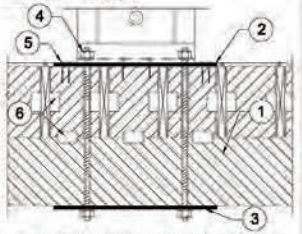
NOTE: INSTALLATIONS MAY VARY WITH JOB SPECIFIC CONDITIONS AND/OR SPECIFICATIONS BY THE BUILDING DESIGN PROFESSIONAL.

B



C

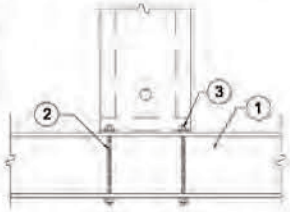
LOAD PATH FROM BEAM TO FOUNDATION AND CHECK THAT PANEL DRIFT IS WITHIN CODE LIMIT BY BUILDING DESIGN PROFESSIONAL.



1. DROP BEAM WITH FLOOR JOIST ABOVE PER PLAN.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® BEARING PLATE (HFXBP) OR BEARING PLATE WASHER AT UNDERSIDE OF BEAM SIZED PER BUILDING DESIGN PROFESSIONAL TO LIMIT CRUSHING FROM TENSION ANCHOR FORCES.
4. NUTS AND WASHERS PER TABLE NOTE 1.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP CONNECTORS BY DESIGN PROFESSIONAL

DROP BM - FL SYSTEM 14

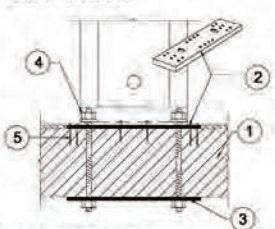
LOAD PATH FROM BEAM TO FOUNDATION AND CHECK THAT PANEL DRIFT IS WITHIN CODE LIMIT BY BUILDING DESIGN PROFESSIONAL.



1. STEEL BEAM PER PLANS
2. HOLD DOWN ALL THREAD RODS THRU-BOLTED TO BOTTOM FLANGE OF STEEL BEAM BY BUILDING DESIGN PROFESSIONAL.
3. NUTS AND WASHERS AT PANEL BASE PER TABLE NOTE 1

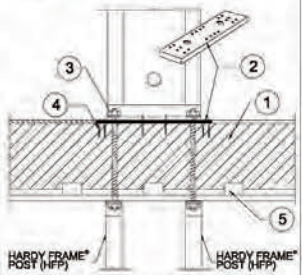
STEEL BM THRU-BOLT 13

LOAD PATH FROM BEAM TO FOUNDATION AND CHECK THAT PANEL DRIFT IS WITHIN CODE LIMIT BY BUILDING DESIGN PROFESSIONAL.



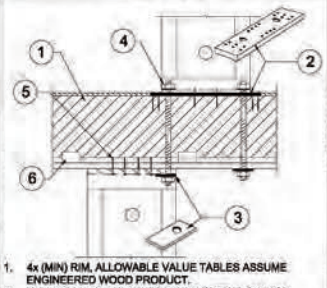
1. WOOD BEAM PER PLAN.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® BEARING PLATE (HFXBP) OR BEARING PLATE WASHER AT UNDERSIDE OF BEAM SIZED PER BUILDING DESIGN PROFESSIONAL TO LIMIT CRUSHING FROM TENSION ANCHOR FORCES.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.

WOOD BM THRU-BOLT 12



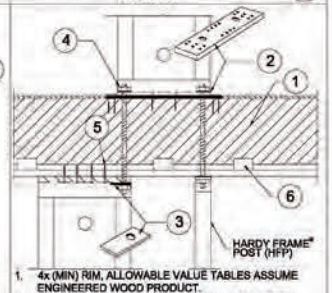
1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
4. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
5. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

HFP POSTS BELOW 11



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

STAGGERED THRU-BOLT 10



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

STAGGERED-HFP POST 9

REVISIONS | DATE

FLOOR SYSTEM DETAILS - HFX PANELS

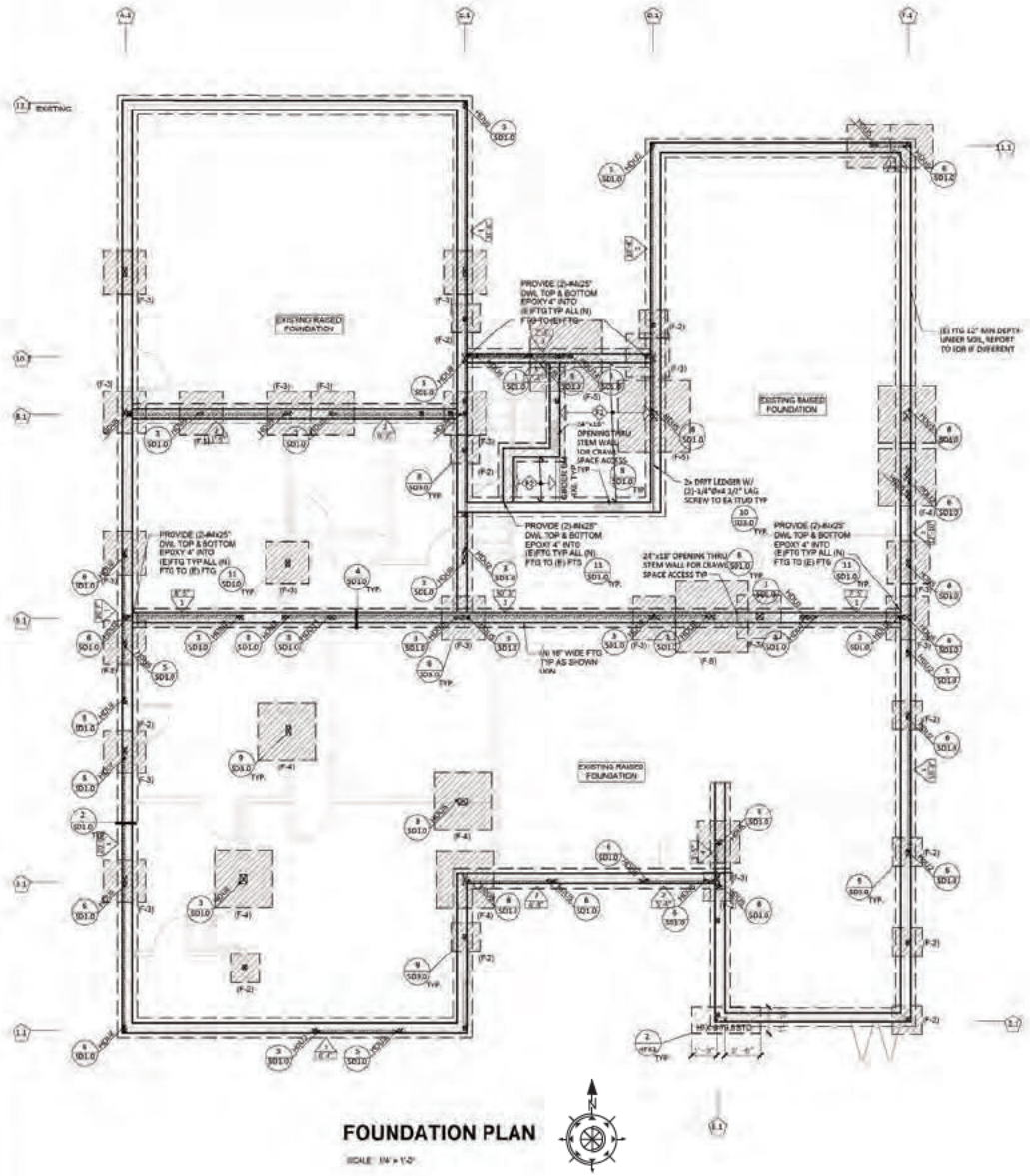
THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH MITEK®*HARDY FRAME*® PRODUCTS

MiTek®
HARDY FRAME SHEAR WALL SYSTEMS
16023 SWINGLEY RIDGE RD
CHESTERFIELD, MO 63017
(800) 325-8075
WWW.HARDYFRAME.COM

DATE:
1-1-2023

HFX3

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FOUNDATION PLAN

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

FOUNDATION NOTES

1. CONFIRM ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
   PLAN SHOWS STRUCTURAL SLAB WALLS ABOVE FOUNDATION.
   ARCHITECTURAL BACKGROUND INDICATES NON-STRUCTURAL WALLS.
   CONFIRM ALL BACKGROUND INFORMATION WITH CURRENT ARCHITECTURAL DRAWINGS.
2. SEE STRUCTURAL SPECIFICATIONS ON SHEET S0.0
3. NEW STEM WALL FTG. SHALL BE 18" WIDE CONT. FTG. W/ (2)-#4 TIE & #4 VERT @ 18" O.C. TYP.
4. PROVIDE 2x SOLID BLOCKING @ 6'-0C BETWEEN FLOOR JOIST TYP.
5. ALL FLOOR USE 3/4" PLYWOOD T&G WITH 10d@ 6" O.C. EDGE NAILS 10" O.C. FIELD NAILS TYP AT FLOOR AREA GLUED AND NAILED
6. PROVIDE FLOOR PLYWOOD EDGE NAILS FULL LENGTH AT ALL SHEAR WALL LINE.
7. FL. JST. GIRDER W/ HUTF HGR AT END TO WALL SILL PL TYP
8. HOLDOWNS SHOULD BE RE-TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
9. ALL HOLDOWNS REQUIRED 4x4 MINIMUM POST.
10. THE NEW FOUNDATION TYPE MUST MATCH EXISTING FOUNDATION. REPORT TO ENGINEER OF RECORD IF IT IS DIFFERENT.
11. HOLDOWN ANCHOR BOLT TO BE SET AND POSITIONED IN PLACE PRIOR TO CALLING FOR FOUNDATION INSPECTION.
12. ALL EXISTING FOUNDATION MUST FIELD IS VERIFY.
13. GC SHALL VERIFY ALL EXISTING FOUNDATION AND BEARING WALL LOCATIONS PRIOR TO DEMOLITION AND REPORT TO EOR IF THERE ARE ANY DISCREPANCIES WITH CONSTRUCTION DOCUMENTS.
14. THE SUBGRADE SHOULD BE EITHER CLEAN NATIVE SOIL OR IMPORT SOIL AND IT SHOULD BE UNIFORMLY COMPACTED TO A MINIMUM DEGREE OF RELATIVE COMPACTION OF 95% OF THE MAXIMUM DRY DENSITY.

SYMBOLS LEGEND

- WOOD POST / WOOD POST ABOVE
- DIRECTION OF JOISTS
- SHEAR PANEL LENGTH AND SCHEDULE
- SHEAR PANEL LENGTH AND SCHEDULE
- DETAIL
- BEAM NUMBER, REFER TO E.O.R. CALCULATIONS
- SHEAR LINE
- CALIFORNIA FRAMING
- PAD FOOTING
- (E) FOUNDATION
- (N) FOUNDATION

FRAMING NOTES

- (R) EXISTING ROOF RAFTERS
- (N1) 2 X 10 ROOF RAFTERS @ 16" O.C.
- (N2) 1 1/4" X 9 1/2" PSL ROOF RAFTERS @ 16" O.C.
- (C) 2 X 6 CEILING JOIST @ 16" O.C.
- (F1) TJI210 X 12" FLOOR JOIST @ 16" O.C.
- (F2) 2 X 6 FLOOR JOIST @ 16" O.C.
- (D) 2 X 6 DECK JOIST @ 16" O.C.
- (D2) TJI210 X 9 1/2" DECK JOIST @16" O.C.

PAD FOOTING SCHEDULE

MARK	FOOTING SIZE	2-STORY THICKNESS	REINFORCING
(F-1)	1'-6" x 1'-6"	24"	3-#4 EA. WAY
(F-2)	2'-0" x 2'-0"	24"	4-#5 EA. WAY
(F-3)	3'-0" x 3'-0"	24"	5-#5 EA. WAY
(F-4)	4'-0" x 4'-0"	24"	7-#5 EA. WAY
(F-5)	5'-0" x 5'-0"	24"	9-#5 EA. WAY

PLYWOOD SHEAR WALL SCHEDULE

MARK	TYPE	EDGE NAILING (10d) SPACING	PDN. SILL PLATE 1 SIDE	PDN. SILL PLATE 2 SIDE	ANCHOR BOLT SPACING 1 SIDE	ANCHOR BOLT SPACING 2 SIDE	A35/LTP4 CLIPS SPACING 1 SIDE	A35/LTP4 CLIPS SPACING 2 SIDE	TOP PLATE CONNECTION NAILING (SEE NOTE 8) 1 SIDE NAILING	1 SIDE RIM/BLKG	2 SIDE NAILING	2 SIDE RIM/BLKG	CAPACITY (PLF) 1 SIDE	CAPACITY (PLF) 2 SIDE
	1	6" O.C.	2x		32" O.C.	-	16" O.C.	-	16d @ 8" O.C.	2x	-	-	340	-
	2	4" O.C.	2x	3x	24" O.C.	12" O.C.	12" O.C.	12" O.C. EA. SIDE	16d @ 4" O.C.	2x	SDS @ 8" O.C.	3x	645	1030
	3	3" STAGG.	2x	3x	16" O.C.	8" O.C.	8" O.C.	8" O.C. EA. SIDE	(2) 16d @ 6" O.C.	2x	(2) SDS @ 16" O.C.	4x	865	1330
	4	2" STAGG.	2x	3x	12" O.C.	6" O.C.	6" O.C.	6" O.C. EA. SIDE	SDS @ 6" O.C.	2x	(2) SDS @ 8" O.C.	4x	870	1740

1. ALL SHEAR PANEL SHALL BE 15/32" OSB OR CDX **STRUCTURAL I** PLYWOOD. ALL FIELD NAILING SHALL BE 10d @ 12" O.C. ALL EDGE NAILING SHALL BE 10d.
2. WHERE PANELS ARE APPLIED ON BOTH FACES OF A SHEAR WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NAKED FACE OF FRAMING MEMBERS SHALL BE 3" NOMINAL OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED.
3. STUDS SHALL BE 2X4 MINIMUM AND SPACED @ 16" O.C. MAXIMUM, U.N.
4. INTERIOR SHEAR WALLS SHALL BE EXTENDED THROUGH THE ATTIC TO THE ROOF SHEATHING.
5. NAILS SHALL BE COMMON NAILS, PLACED AT LEAST 1/2" FROM PANEL EDGES AND AT LEAST 1/2" FROM THE EDGE OF CONNECTION MEMBER OF ALL PANELS.
6. NAILS SHALL BE STAGGERED IN TWO LINES ALONG PANEL EDGES WHEN NAIL SPACING IS 3" OR LESS O.C. (MINIMUM SPACING BETWEEN NAIL LINES IS 1/2").
7. NAILS FOR PRESERVATIVE-TREATED WOOD SHALL BE HOT-DIP GALVANIZED.
8. SDS DENOTES 1/4"Ø SDS WOOD SCREWS WITH 2" MINIMUM PENETRATION INTO FRAMING BELOW. ROWS OF SDS SHALL BE STAGGERED 1/2" APART.
9. ALL ANCHOR BOLTS SHALL HAVE 3"SQx1/4" W/ 11/16"x1 3/4"DIAGONAL SLOT "USE STD. CUT WASHER" PLATE WASHER) PLATE WASHERS. USE 3"x4 1/2" AT 5" THICK SHEAR WALL. PLATE WASHER. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGE OF THE SILL PLATE ON THE SIDE WITH SHEATHING.
   a. SSB" A.B. W= 7" MINIMUM EMBEDMENT INTO CONCRETE, OR
   b. SIMPSON RETROFIT FOUNDATION PLATES URFP/RFP PER MANUFACTURE'S RECOMENDATION.
   c. IN NON-P.T. SLABS, 5/8D" EXPENSION BOLT W/ 2 3/4" MIN. EMBEDMENT W/ MINIMUM 9" EDGE DISTANCE.

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DESIGN BY:

REGISTERED PROFESSIONAL ENGINEER — DI TARO — No. C82768 — 12/31/22 — STATE OF CALIFORNIA

PROJECT ADDRESS: 100 JAMIE CT., LOS GATOS, CA 95032

SHEET TITLE: FOUNDATION PLAN

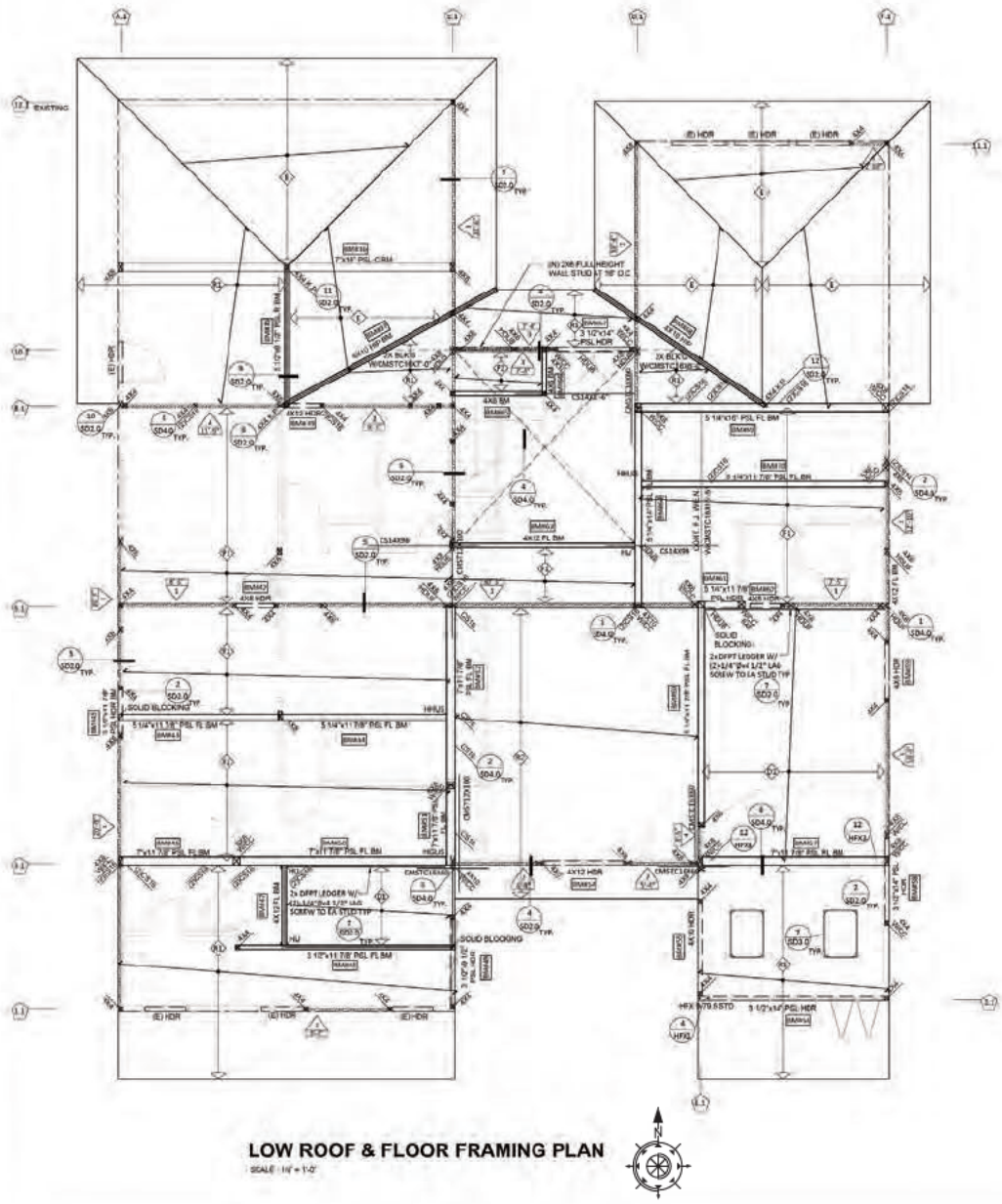
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LOW ROOF & FLOOR FRAMING PLAN
SCALE: 1/4" = 1'-0"

FRAMING NOTES

1. CONFIRM ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
   PLAN SHOWS STRUCTURAL WALLS. ROOF LINES ABOVE FOUNDATION. ARCHITECTURAL BACKGROUND INDICATES NON-STRUCTURAL WALLS CONFIRM ALL BACKGROUND INFORMATION WITH CURRENT ARCHITECTURAL DRAWINGS.
2. SEE STRUCTURAL SPECIFICATIONS ON SHEET S0.1.0.
3. FULL HEIGHT STUDS SHALL BE USED ON EXTERIOR WALLS OF ROOM WITH VAULTED CEILINGS. 2x6 STUD @ 16" O.C. FOR 10'-0" OR MORE WALL HIGH.
4. ALL ROOF USE 15/32" OSB PLYWOOD EXP I (INDEX 32/16) WITH 10d @ 6" O.C. EDGE NAILS AND 12" OC FIELDNAILS (UNBLOCKED) TYPICAL.
5. ALL FLOOR 21/32" PLYWOOD EXP I T&G WITH 10d@ 6" OC EDGE NAILS 10" O.C. FIELD NAILS TYP AT FLOOR AREA GLUED AND NAILED.
6. PROVIDE SIMP. CS16x36" @ SIDE OF EXTERIOR WALL & SHEAR WALL WHERE TOP PLATES SPLICED OR CONNECTED TO BM TYP AS SHOWN
7. ALL BEAM TO BEAM SUPPORT USE HANGER PER HANGER SCHEDULE
8. PROVIDE SIMP. CS16x30"MIN @ SIDE OF EXTERIOR WALL & SHEAR WALL WHERE TOP PLATES SPLICED OR CONNECTED TO BM TYP.
9. PROVIDE PC# CAP & BC# BASE TYP AT EA END OF DROPPED FLOOR BM EXTEND POST DOWN TO FOUNDATION.
10. SOLID BLOCKING SHALL BE PROVIDED AT ALL HORIZONTAL JOINTS OCCURRING IN BRACED WALL PANELS
11. ALL BEAMS PROVIDE 4x BEAM WIDTH POST.
12. HOLDOWN SHALL BE RE-TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
13. ALL EXTERIOR WALLS AND WOOD FRAMED CHIMNEYS MUST BE SHEATHED WITH SHEAR PANEL U.N.
14. PLYWOOD OF ALL INTERIOR SHEAR WALL TO BE EXTENDED UP TO ROOF.
15. THE NEW FOUNDATION TYPE MUST MATCH EXISTING FOUNDATION. REPORT TO ENGINEER OF RECORD IF IT IS DIFFERENT.
16. HOLDOWN ANCHOR BOLT TO BE SET AND POSITIONED IN PLACE PRIOR TO CALLING FOR FOUNDATION INSPECTION.
17. ALL EXISTING FRAMING MUST VERIFY IN FIELD.
18. GC SHALL VERIFY ALL EXISTING FRAMING AND BEARING WALL LOCATIONS PRIOR TO DEMOLITION AND REPORT TO EOR IF THERE ARE ANY DISCREPANCIES WITH CONSTRUCTION DOCUMENTS.
19. ADD 2X BLK'G BETWEEN FLOOR JOIST BELOW WHEN INTERIOR WALL PERPENDICULAR TO FLOOR JOIST
20. ADD DOUBLE FLOOR JOIST BELOW THE WALL WHEN INTERIOR WALL PARALLEL TO THE FLOOR JOIST

SYMBOLS LEGEND

- WOOD POST
- WOOD POST ABOVE
- DIRECTION OF JOISTS
- SHEAR PANEL LENGTH AND SCHEDULE
- SHEAR PANEL LENGTH AND SCHEDULE
- DETAIL
- BEAM NUMBER, REFER TO E.O.R. CALCULATIONS
- SHEAR LINE
- CALIFORNIA FRAMING
- PAD FOOTING
- (2) FOUNDATION
- (n) FOUNDATION

FRAMING NOTES

- EXISTING ROOF RAFTERS
- 2 X 10 ROOF RAFTERS @ 16" O.C.
- 3 1/4" X 9 1/2" PSL ROOF RAFTERS @ 16" O.C.
- 2 X 8 CEILING JOIST @ 16" O.C.
- TJI 210 X 12" FLOOR JOIST @ 16" O.C.
- 2 X 6 FLOOR JOIST @ 16" O.C.
- 2 X 8 DECK JOIST @ 16" O.C.
- TJI 210 X 9 1/2" DECK JOIST @16" O.C.

HANGER SCHEDULE (U.N.O.)

SUPPORTED MEMBER SIZE	HANGER	MIN. POST SIZE REQ.
2X RAFTERS, DBL RAFTERS	LSSU, LSSR	---
2X CEILING / FLOOR JOISTS, DBL. JOISTS	LUS, HU	---
TJI FLOOR I-JOISTS	ITS	---
4X BEAM/SAWN LUMBER	HU	4X4 DF#2
6X BEAM/SAWN LUMBER	HU	4X6 DF#2
3 1/2" WIDE ENGINEERED BEAM	HHUS	4X4 DF#2
5 1/4" WIDE ENGINEERED BEAM	HHUS	4X6 DF#2
7" WIDE ENGINEERED BEAM	HGUS2	6X6 DF#1 / 4X8 DF#1
1 3/4" MICRO LAM	LSU, HU	2-2X4 DF#2
TRUSS HANGERS	USE MANUF. SUPPLIED HANGERS	

PLYWOOD SHEAR WALL SCHEDULE

MARK	TYPE	EDGE NAILING (10d) SPACING	TOP& SILL PLATE 1 SIDE	TOP& SILL PLATE 2 SIDE	ANCHOR BOLT SPACING 1 SIDE	ANCHOR BOLT SPACING 2 SIDE	AMALTPN CLIPS SPACING 1 SIDE	AMALTPN CLIPS SPACING 2 SIDE	TOP PLATE CONNECTION NAILING (SEE NOTE. 8) 1 SIDE NAILING	1 SIDE RIM/BLKG	2 SIDE NAILING	2 SIDE RIM/BLKG	CAPACITY (PLF) 1 SIDE	CAPACITY (PLF) 2 SIDE
	1	6" O.C.	2x		32" O.C.	---	16" O.C.	---	16d @ 6" O.C.	2x	---	---	340	---
	2	4" O.C.	2x	3x	24" O.C.	12" O.C.	12" O.C.	12" O.C. EA SIDE	16d @ 4" O.C.	2x	SDS @ 6" O.C.	3x	510	1020
	3	3" STAGG	2x	3x	16" O.C.	8" O.C.	8" O.C.	8" O.C. EA SIDE	(2) 16d @ 6" O.C.	2x	(2) SDS @ 10" O.C.	4x	685	1330
	4	2" STAGG	2x	3x	12" O.C.	8" O.C.	8" O.C.	8" O.C. EA SIDE	SDS @ 6" O.C.	2x	(2) SDS @ 6" O.C.	4x	870	1740

1. ALL SHEAR PANEL SHALL BE 15/32" OSB OR CDX **STRUCTURAL I** PLYWOOD. ALL FIELD NAILING SHALL BE 10d @ 12" O.C. ALL EDGE NAILING SHALL BE 10d
2. WHERE PANELS ARE APPLIED ON BOTH FACES OF A SHEAR WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER EDGE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS SHALL BE 3" NOMINAL OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED.
3. STUDS SHALL BE 2X4 MINIMUM AND SPACED @ 16" O.C. MAXIMUM, U.N.
4. INTERIOR SHEAR WALLS SHALL BE EXTENDED THROUGH THE ATTIC TO THE ROOF SHEATHING.
5. NAILS SHALL BE COMMON NAILS, PLACED AT LEAST 1/2" FROM PANEL EDGES AND AT LEAST 1/2 FROM THE EDGE OF CONNECTION MEMBER OF ALL PANELS.
6. NAILS SHALL BE STAGGERED IN TWO LINES ALONG PANEL EDGES WHEN NAIL SPACING IS 2" OR LESS O.C. (MINIMUM SPACING BETWEEN NAIL LINES IS 1/2").
7. NAILS FOR PRESERVATIVE-TREATED WOOD SHALL BE HOT-DIP GALVANIZED.
8. SDS DENOTES 1/4"ø SDS WOOD SCREWS WITH 2" MINIMUM PENETRATION INTO FRAMING BELOW. ROWS OF SDS SHALL BE STAGGERED 12" APART.
9. ALL ANCHOR BOLTS SHALL HAVE 3"SQ.x1/4" W 11/16"x1 3/4"DIAGONAL SLOT *USE STD. CUT WASHER OF PLATE WASHER/PLATE WASHERS. USE 3"ø 5/2" AT 6" THICK SHEAR WALL PLATE WASHER. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGED OF THE SILL PLATE ON THE SIDE WITH SHEATHING.
   a. 5/8@" A.B. W/ 7" MINIMUM EMBEDMENT INTO CONCRETE, OR
   b. SIMPSON RETROFIT FOUNDATION PLATES URP/RFP PER MANUFACTURES RECOMENDATION.
   c. IN NON-P.T. SLABS, 5/80"EXPENSION BOLT W/ 2 3/4" MIN. EMBEDMENT W/ MINIMUM 9" EDGE DISTANCE

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DESIGN BY:

REGISTERED PROFESSIONAL ENGINEER — No. C82768 — 12/31/17 — CIVIL — STATE OF CALIFORNIA

PROJECT ADDRESS: 100 JAMIE CT., LOS GATOS, CA 95032

SHEET TITLE: LOW ROOF & FLOOR FRAMING PLAN

DATE: 02/02/18

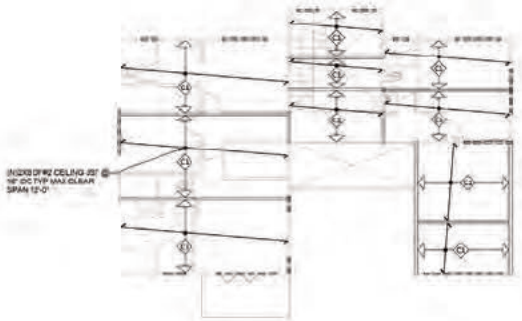
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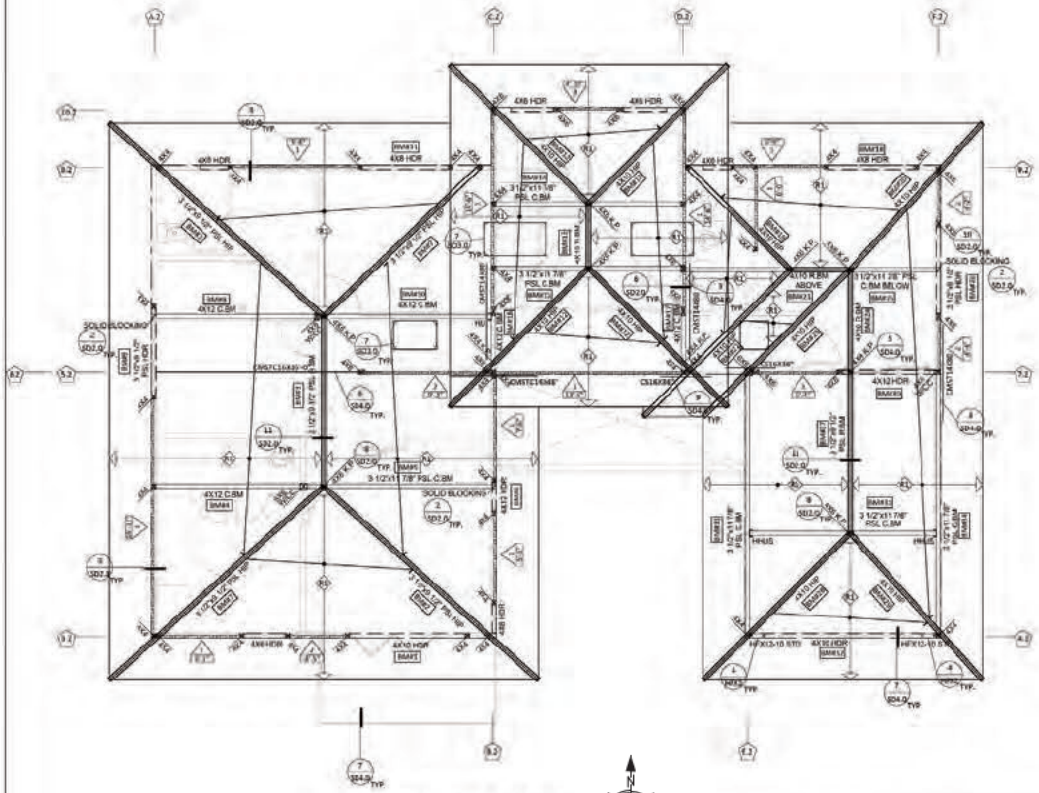
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CEILING PLAN

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



ROOF FRAMING PLAN

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

FRAMING NOTES

1. CONFIRM ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
   PLAN SHOWS STRUCTURAL WALLS, ROOF LINES ABOVE FOUNDATION. ARCHITECTURAL BACKGROUND INDICATES NON-STRUCTURAL WALLS CONFIRM ALL BACKGROUND INFORMATION WITH CURRENT ARCHITECTURAL DRAWINGS.
2. SEE STRUCTURAL SPECIFICATIONS ON SHEET SN1.0.
3. FULL HEIGHT STUDS SHALL BE USED ON EXTERIOR WALLS OF ROOM WITH VAULTED CEILINGS. 2x6 STUD @ 16" O.C. FOR 12'-0" OR MORE WALL HIGHT.
4. ALL ROOF USE 15/32" OSB PLYWOOD EXP I (INDEX 32/16) WITH 10d @ 6" O.C. EDGE NAILS AND 12" OC FIELD NAILS UNBLOCKED TYPICAL.
5. ALL FLOOR 23/32" PLYWOOD EXP I T&G WITH 10d@ 6" OC EDGE NAILS 10" O.C. FIELD NAILS TYP AT FLOOR AREA GLUED AND NAILED.
6. PROVIDE SIMP CS16x36" @ SIDE OF EXTERIOR WALL & SHEAR WALL WHERE TOP PLATES SPLICED OR CONNECTED TO BM TYP AS SHOWN.
7. ALL BEAM TO BEAM SUPPORT USE HANGER PER HANGER SCHEDULE
8. PROVIDE SIMP CS16x36"MIN @ SIDE OF EXTERIOR WALL & SHEAR WALL WHERE "OP PLATES SPLICED OR CONNECTED TO BM TYP.
9. PROVIDE PC4 CAP & BC4 BASE TYP AT EA END OF DROPPED FLOOR BM EXTEND POST DOWN TO FOUNDATION.
10. SOLID BLOCKING SHALL BE PROVIDED AT ALL HORIZONTAL JOINTS OCCURRING IN BRACED WALL PANELS
11. ALL BEAMS PROVIDE 4x BEAM WIDTH POST.
12. HOLDOWN SHALL BE RETIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING
13. ALL EXTERIOR WALLS AND WOOD FRAMED CHIMNEYS MUST BE SHEATHED WITH SHEAR PANEL U.N.
14. PLYWOOD OF ALL INTERIOR SHEAR WALL TO BE EXTENDED UP TO ROOF.
15. THE NEW FOUNDATION TYPE MUST MATCH EXISTING FOUNDATION. REPORT TO ENGINEER OF RECORD IF IT IS DIFFERENT.
16. HOLDOWN ANCHOR BOLT TO BE SET AND POSITIONED IN PLACE PRIOR TO CALLING FOR FOUNDATION INSPECTION.
17. ALL EXISTING FRAMING MUST VERIFY IN FIELD
18. GC SHALL VERIFY ALL EXISTING FRAMING AND BEARING WALL LOCATIONS PRIOR TO DEMOLITION AND REPORT TO EOR IF THERE ARE ANY DISCREPANCIES WITH CONSTRUCTION DOCUMENTS.
19. ADD 2I BLK'G BETWEEN FLOOR JOIST BELOW WHEN INTERIOR WALL PERPENDICULAR TO FLOOR JOIST
20. ADD DOUBLE FLOOR JOIST BELOW THE WALL WHEN INTERIOR WALL PARALLEL TO THE FLOOR JOIST

SYMBOLS LEGEND

- WOOD POST / WOOD POST ABOVE
- DIRECTION OF JOISTS
- SHEAR PANEL LENGTH AND SCHEDULE
- SHEAR PANEL LENGTH AND SCHEDULE
- DETAIL
- BEAM NUMBER, REFER TO E.O.R. CALCULATIONS
- SHEAR LINE
- CALIFORNIA FRAMING
- PAD FOOTING
- (E) FOUNDATION
- (N) FOUNDATION

FRAMING NOTES

- (E) EXISTING ROOF RAFTERS
- (R1) 2"X 10 ROOF RAFTERS @ 16" O.C.
- (R2) 3 1/4" X 9 1/2" PSL ROOF RAFTERS @ 36" O.C.
- (CJ) 2 X 8 CEILING JOIST @ 16" O.C.
- (F1) TI210 X 12" FLOOR JOIST @ 16" O.C.
- (F2) 2 1 6 FLOOR JOIST @ 16" O.C.
- (D1) 2 1 6 DECK JOIST @ 16" O.C.
- (D2) TI210 X 9 1/2" DECK JOIST @16" O.C.

HANGER SCHEDULE (U.N.O.)

SUPPORTED MEMBER SIZE	HANGER	MIN. POST SIZE REQ.
2X RAFTERS, DBL. RAFTERS	LSSJ LSSR	—
2X CEILING / FLOOR JOISTS, DBL. JOISTS	LUS, HU	—
7x9 FLOOR I-JOISTS	ITS	—
4X BEAM SAWN LUMBER	HU	4X4 DFN2
6X BEAM SAWN LUMBER	HU	4X6 DFN2
3 1/2" WIDE ENGINEERED BEAM	HHUS	4X4 DFN2
5-1/4" WIDE ENGINEERED BEAM	HHUS	4X6 DFN2
7" WIDE ENGINEERED BEAM	HGUS	6X6 DFN1 / 4X8 DFN1
1 3/4" MICROLAM	LSU, HU	-3-2X4 DFN2
TRUSS HANGERS	USE MANUF. SUPPLIED HANGERS	

PLYWOOD SHEAR WALL SCHEDULE

MARK	TYPE	EDGE NAILING (10d) SPACING	PDN. SILL PLATE 1 SIDE	PDN. SILL PLATE 2 SIDE	ANCHOR BOLT SPACING 1 SIDE	ANCHOR BOLT SPACING 2 SIDE	A35/LTP4 CLIPS SPACING 1 SIDE	A35/LTP4 CLIPS SPACING 2 SIDE	TOP PLATE CONNECTION NAILING (SEE NOTE 6) 1 SIDE NAILING	1 SIDE #NAILS/LIN.	TOP PLATE CONNECTION NAILING (SEE NOTE 6) 2 SIDE NAILING	2 SIDE #NAILS/LIN.	CAPACITY (PLF) 1 SIDE	CAPACITY (PLF) 2 SIDES
1		6" O.C.	2x		32" O.C.	-	16" O.C.	-	16d @ 4" O.C.	3x	-	-	340	-
2		4" O.C.	2x	3x	24" O.C.	12" O.C.	8" O.C.	12" O.C. EA. SIDE	16d @ 4" O.C.	3x	SDS @ 4" O.C.	3x	510	1020
3		3" STAGG.	2x	3x	16" O.C.	8" O.C.	4" O.C.	8" O.C. EA. SIDE	(2) 16d @ 8" O.C.	3x	(2) SDS @ 12" O.C.	4x	660	1330
4		2" STAGG.	2x	3x	12" O.C.	6" O.C.	6" O.C.	6" O.C. EA. SIDE	SDS @ 6" O.C.	3x	(2) SDS @ 6" O.C.	4x	870	1740

1. ALL SHEAR PANEL SHALL BE 15/32" OSB OR CDX **STRUCTURAL I** PLYWOOD. ALL FIELD NAILING SHALL BE 10d @ 12" O.C. ALL EDGE NAILING SHALL BE 10d.
2. WHERE PANELS ARE APPLIED ON BOTH FACES OF A SHEAR WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NAMED FACE OF FRAMING MEMBERS SHALL BE 3" NOMINAL OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED.
3. STUDS SHALL BE 2X4 MINIMUM AND SPACED @ 16" O.C. MAXIMUM.
4. INTERIOR SHEAR WALLS SHALL BE EXTENDED THROUGH THE ATTIC TO THE ROOF SHEATHING.
5. NAILS SHALL BE COMMON NAILS, PLACED AT LEAST 1/2" FROM PANEL EDGES AND AT LEAST 1/2" FROM THE EDGE OF CONNECTION MEMBER OF ALL PANELS.
6. NAILS SHALL BE STAGGERED IN TWO LINES ALONG PANEL EDGES WHEN NAIL SPACING IS 3" OR LESS O.C. (MINIMUM SPACING BETWEEN NAIL LINES IS 1/2")
7. NAILS FOR PRESERVATIVE-TREATED WOOD SHALL BE HOT-DIP GALVANIZED.
8. SDS DENOTES 1/4"Ø SDS WOOD SCREWS WITH 2" MINIMUM PENETRATION INTO FRAMING BELOW. ROWS OF SDS SHALL BE STAGGERED 1/2" APART.
9. ALL ANCHOR BOLTS SHALL HAVE 3"SQ x1/4" W/ 11/16"x1 3/4"DIAGONAL SLOT *USE STD. CUT WASHER OR PLATE WASHER) PLATE WASHERS. USE 3"x4 1/2" AT 8" THCK SHEAR WALL PLATE WASHER. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGED OF THE SILL PLATE ON THE SIDE WITH SHEATHING.
   a. SIM2" A.B. W/ 3" MINIMUM EMBEDMENT INTO CONCRETE. OR
   b. SIMPSON RETROFIT FOUNDATION PLATES URFP/RFP PER MANUFACTURE'S RECOMENDATION.
   c. IN NON-P.T. SLABS, 5/8Ø EXPENSION BOLT W/ 3 3/4" MIN. EMBEDMENT W MINIMUM 9" EDGE DISTANCE

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DESIGN BY:

REGISTERED PROFESSIONAL ENGINEER — DI TARO — No. C82768 — 12/31/22 — STATE OF CALIFORNIA

PROJECT ADDRESS: 100 JAMIE CT., LOS GATOS, CA 95032

SHEET TITLE: ROOF FRAMING PLAN

DATE: 02/02/22

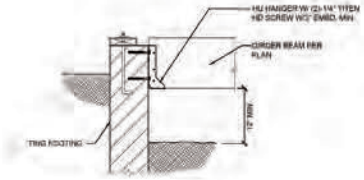
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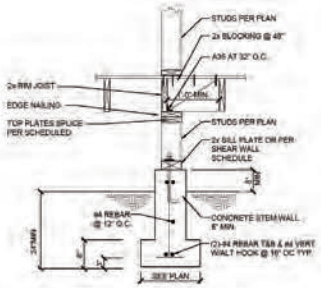
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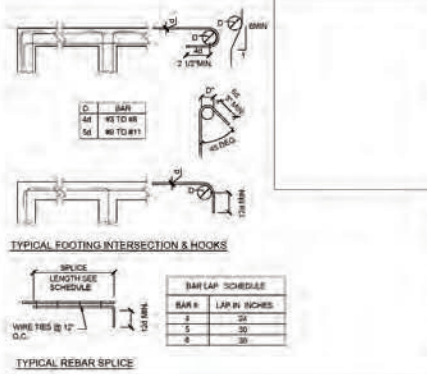
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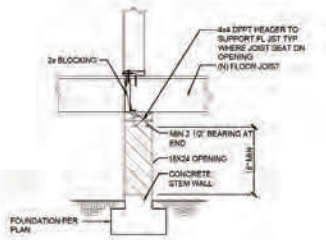
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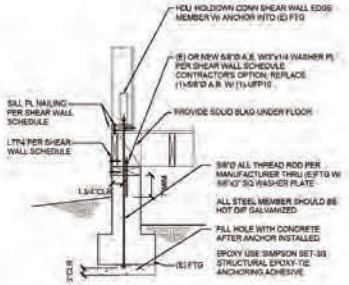
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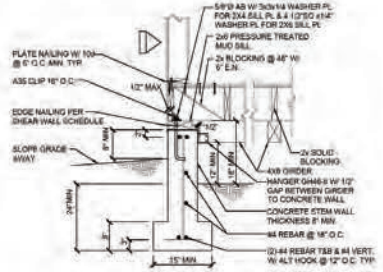
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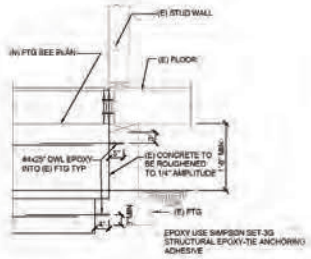
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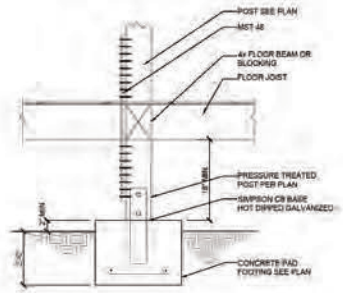
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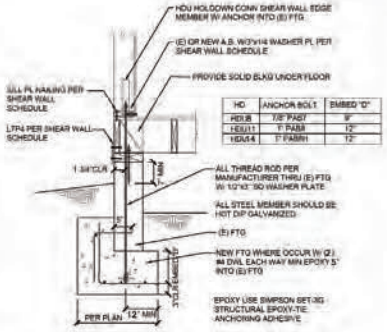
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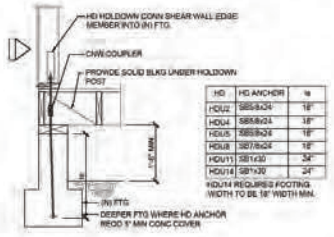
11 DOWEL EPOXY (N) FTG TO (E) FTG



9 POST TO PAD FTG



6 HDU DETAIL



3 HOLDOWN DETAIL

ORANGE ENGINEERING
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DESIGN BY:

REGISTERED PROFESSIONAL ENGINEER — STANLEY TANG — No. C82788 — 12/31/21 — CIVIL — STATE OF CALIFORNIA

PROJECT ADDRESS: 100 JAMIE CT., LOS GATOS, CA 95032

SHEET TITLE: FOUNDATION DETAIL

DATE: 02/02/20

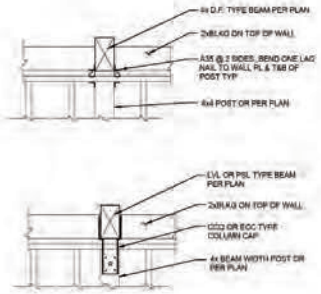
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REVISION:

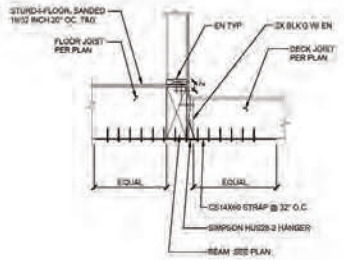
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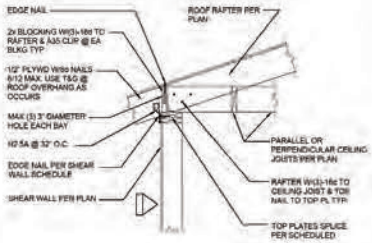
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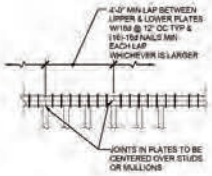
10 BEAM TO POST CONNECTION



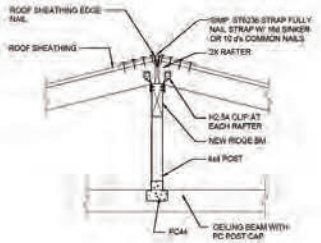
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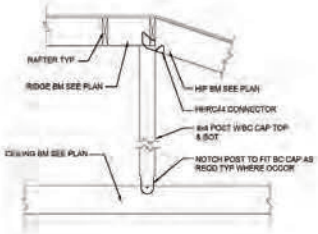
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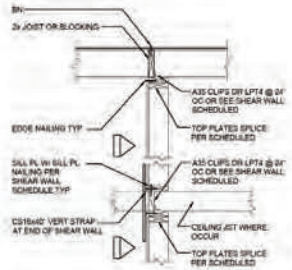
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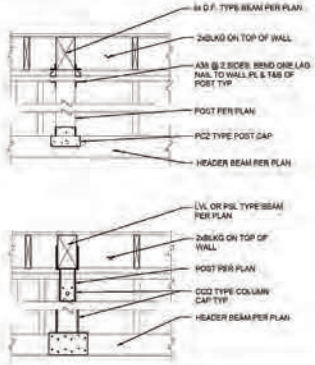
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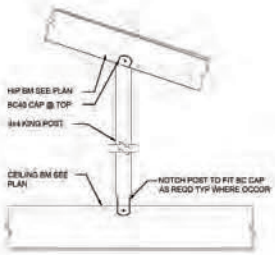
8 RIDGE & HIP CONNECTION



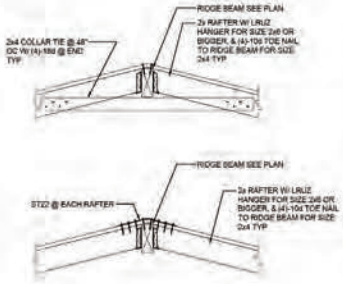
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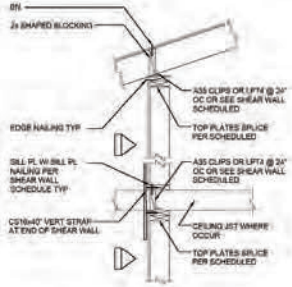
2 BEAM TO HDR CONNECTION



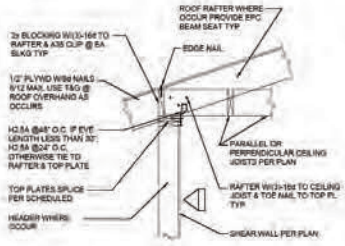
12 HIP BEAM SUPPORT



9 TYP ROOF CONNECTION



6 INTERIOR SHEAR WALL DETAIL



3 SHEAR TRANSFER AT EAVE

ORANGE ENGINEERING
4009 CLIPPER CT
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DESIGN BY:



PROJECT ADDRESS:
100 JAMIE CT., LOS GATOS, CA 95032

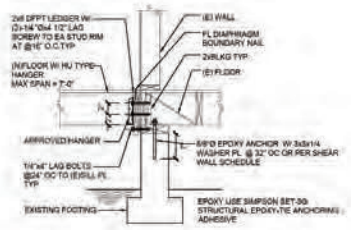
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DATE: 02/02/08
JOB NO.: ORS28017
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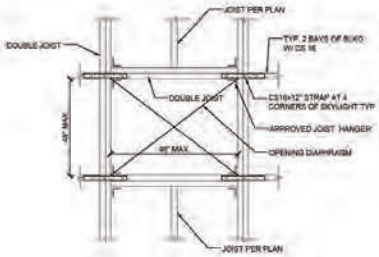
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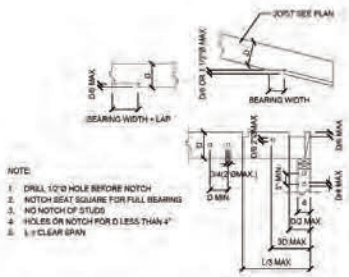
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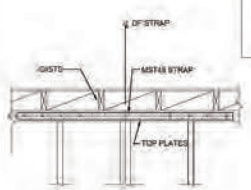
10 (N) FLOOR JOIST TO (E) FLOOR JOIST



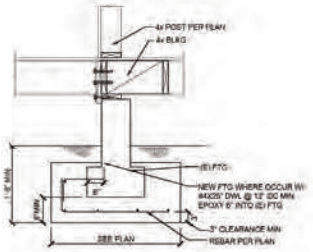
7 ROOF OPENING



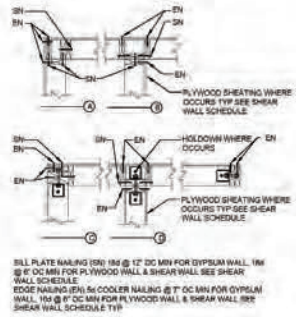
4 TYPICAL ALLOWABLE NOTCHS AT JOIST



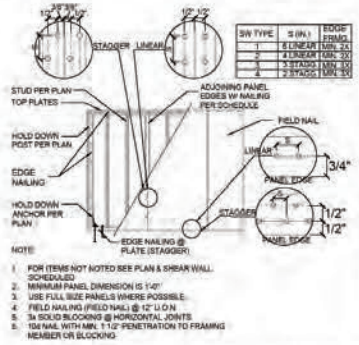
1 DISCONTINUED TOP PLATE



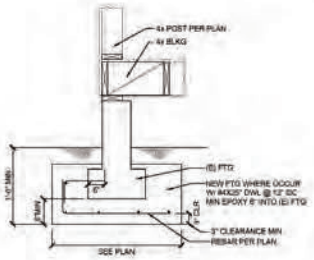
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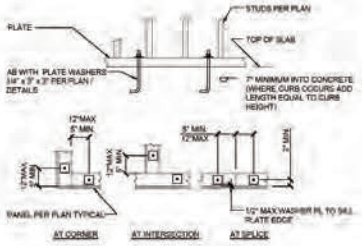
5 TYPICAL SHEAR WALL INTERSECTION



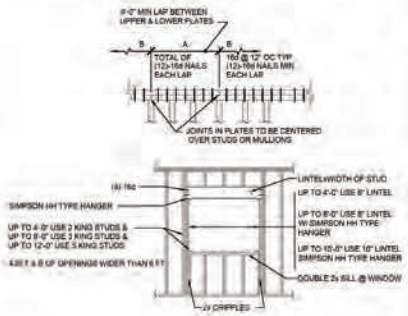
2 TYPICAL SHEAR WALL ELEVATION



9 (N) PAD FTG TO (E) CONT. FTG EXTERIOR



6 TYPICAL PLATE ANCHOR BOLTS



3 TYPICAL OPENING IN WOOD WALLS

ORANGE ENGINEERING
4009 CLIPPER CT
FREMONT, CA 94538
TEL (408) 508-5566

DESIGN BY:



PROJECT ADDRESS:
100 JAMIE CT., LOS GATOS, CA 95032

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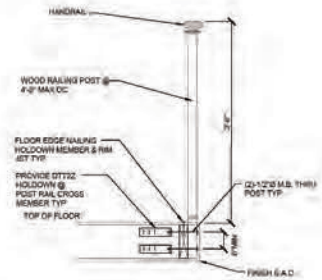
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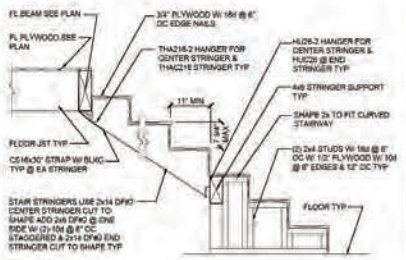
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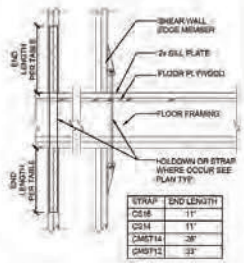
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7 WOOD HANDRAIL

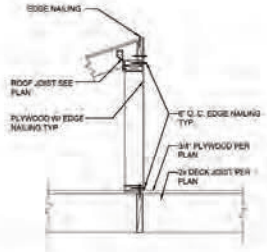


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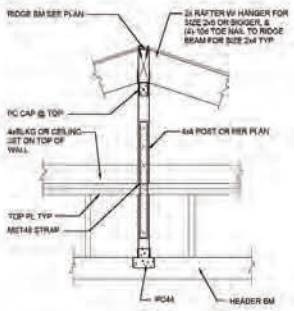


STRAP	END LENGTH
CS16	11"
CS14	11"
CMST14	28"
CMSTI12	33"

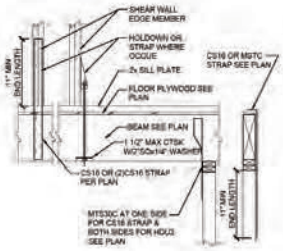
1 TYP EDGE MEMBER HOLDOWN



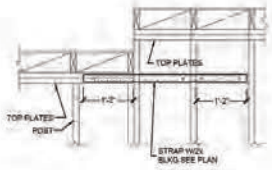
8 DECK TO ROOF CONNECTION DETAIL



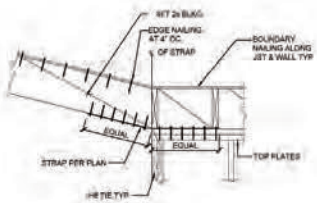
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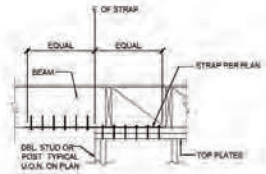
2 STRAP AND HOLDOWN DETAIL



9 STRAP DETAIL



6 STRAP DETAIL



3 STRAP TO BEAM DETAIL

ORANGE ENGINEERING
4029 CLIPPER CT
FREMONT, CA 94538
TEL (408) 508-8885

DESIGN BY:

No. C82788
12/31/21
CIVIL
STATE OF CALIFORNIA

PROJECT ADDRESS: 100 JAMIE CT., LOS GATOS, CA 95032

SHEET TITLE: FRAMING DETAIL

DATE: 02/02/08
JOB NO.: OBS38017
REVISION:

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SD4.0

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100 JAMIE CT
100 JAMIE CT, LOS GATOS, CA, 95032.

PREPARED FOR: CUSTOM HOME INVESTMENT INC.

GENERAL NOTES

1. ALL DETAILS, SECTIONS, AND NOTES SHOWN ON THESE DRAWINGS ARE IN COMPLIANCE WITH THE CURRENT ADOPTED APPLICABLE CODES, INCLUDING THE 2022 CRC, CBC, CPC, CMC, CEC, ENERGY CODE, AND GREEN BUILDING STANDARDS CODE. THE PROJECT SHALL ALSO COMPLY WITH THE APPLICABLE MUNICIPAL CODE OF THE JURISDICTION TOWN OF LOS GATOS.
2. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA CODE AND LOCAL OF CITY OR COUNTY CODE.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE AND ANY DISCREPANCIES SHALL BE REPORTED TO THE STRUCTURAL ENGINEER PRIOR TO THE START OF WORK. THE CONTRACTOR IS ALSO RESPONSIBLE FOR THE COORDINATION OF ALL WORK AND MATERIALS INCLUDING ONES FURNISHED BY SUBCONTRACTORS.
4. ALL OMISSIONS AND CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR THE ARCHITECTURAL SPECIFICATIONS, WHERE APPLICABLE, SHALL BE REPORTED TO THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY OF THE WORK INVOLVED.
5. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR SAFETY IN AND AROUND THE JOB SITE AND/OR ADJACENT PROPERTIES.
6. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR BRACING AND SHORING ALL EXISTING FRAMING, STRUCTURE AND PORTIONS OF THE WORK WHICH HAVE BEEN PARTIALLY COMPLETED.
7. ANY OBSERVATION VISITS TO THE JOB SITE BY THE STRUCTURAL ENGINEER OR A FIELD REPRESENTATIVE SHALL BE CONSTRUED AS NEITHER INSPECTION NOR APPROVAL OF ANY CONSTRUCTION WORK.
8. DURING AND AFTER CONSTRUCTION, THE BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS.
9. WORKING DIMENSIONS SHALL, IN NO CASE, BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THE STRUCTURAL DRAWINGS.
10. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO THE START OF WORK, DEMOLITION, EXCAVATION AND NEW CONSTRUCTION SHALL BE DONE IN A MANNER THAT WILL NOT DAMAGE ANY EXISTING UTILITES. THESE EXISTING UTILITIES ARE NOT SHOWN ON THESE PLANS.
11. IN ORDER TO CONDUCT PROPER FIELD OBSERVATION, THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF THE VARIOUS CONSTRUCTION PHASES.
12. NO OPENINGS, NOTCHES, CHASES, ETC. SHALL BE PLACED IN COLUMNS, JOISTS, BEAMS, BEARING WALLS OR SHEARWALLS UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER WHERE DRAWINGS BY OTHERS SHOW SUCH OPENINGS.
13. THE BUILDER MUST PROVIDE THE HOMEOWNER WITH A LUMINAIRE SCHEDULE (AS REQUIRED IN TITLE 24 CALIFORNIA CODE OF REGULATIONS, PART 1, §10-103(B)) THAT INCLUDES A LIST OF LAMPS INSTALLED IN THE LUMINARIES.

PROJECT DATA

PARCEL# : 52732038
GENERAL PLAN : Residential
ZONING : R-1
OCCUPANCY : R-3
BUILDING TYPE : Dwellings
LOT AREA : 8800 sq ft
STORY : 2 Stories
Zoning: R-1:8. Adjust accordingly

PROJECT INFORMATION

OWNER: DESAI JAIMIN K/SHRIANANDKUMAR KHUSHBU
ADDRESS: 100 JAMIE CT, LOS GATOS, CA, 95032.
PHONE: [redacted]
EMAIL:

DESIGN MANAGER: CUSTOM HOME DESIGN AND BUILD
ADDRESS: 2092 CONCOURE DR, STE 9 SAN JOSE CA 95131
PHONE: (408) 701-7116
EMAIL: duong@clah.us

VICINITY MAP





APPLICABLE CODES

ALL CONSTRUCTION SHALL COMPLY WITH THE TOWN OF LOS GATOS ORDINANCES
AND THE FOLLOWING CODES, INCLUDING ANY LOCAL AMENDMENTS:

2025 CALIFORNIA RESIDENTIAL CODE (CRC)

2025 CALIFORNIA BUILDING CODE (CBC)

2025 CALIFORNIA MECHANICAL CODE (CMC)

2025 CALIFORNIA ELECTRICAL CODE (CEC)

2025 CALIFORNIA PLUMBING CODE (CPC)

2025 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)

2025 CALIFORNIA ENERGY CODE

2025 LOS GATOS REACH CODE (AS APPLICABLE)

ALL APPLICABLE LOCAL ORDINANCES AND AMENDMENTS
AS ADOPTED AND ENFORCED BY THE TOWN OF LOS GATOS
IN EFFECT AT TIME OF PERMIT REVIEW

SCOPE OF WORK

ADU Conversion: Reconfigure the existing master bedroom, two guest bedrooms, and office into a ADU.

Structural Modifications: Remove the existing chimney. Replace the rear wall with a high-end bifold door system.

Roof & Ceiling Reconfiguration: Modify the kitchen roofline to adjust the slope and raise/vault the interior ceiling.

Vertical Expansion: Construct a second-story addition comprising three bedrooms, three bathrooms, a home office, and a balcony.

Circulation: Install a new internal staircase to connect the two levels.

Site Work: Professional landscape design and implementation for the backyard.

Remodel kitchen cabinet & adding cabinet to 1st floor living room

FLOOR AREA RATIO

BUILDING AREA	EXISTING S.F.	PROPOSED S.F.
GROUND FLOOR	2433	1591
SECOND FLOOR	0	1185
ATTACH GARAGE	520	520
ACCESSORY DWELLING	0	880
STOGARE	0	0
BALCONY	0	250
TOTAL	2953	4426

LOT SIZE	8800	
FLOOR AREA RATIO	2953/8800 (33,6%)	4426 (50.3%)
ADU FLOOR AREA RATIO	0/8800 (0%)	880 (10%)
LIVING FLOOR AREA RATIO	2433/8800 (27,6%)	2776 (31,5%)
LOT COVERAGE	2953/8800 (33,6%)	2991 (34.0%)
BUILDING HEIGHT	15' 10"	22' 5"

CUSTOM HOME DESIGN AND BUILD

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REVISIONS	BY

DESIGN MANAGER

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

SHEET TITLE

SCALE

DATE
2026/11/03

SHEET NUMBER
A0

EXHIBIT 14

Docusign Envelope ID: 526AD49C-7B45-8B97-8179-1866DCBDC2AD

Sheet List	
Sheet Number	Sheet Name
A0	SHEET TITLE
A1	DRAWING INDEX
A2	EXISTING FIRST FLOOR PLAN
A3	DEMOLITION FIRST FLOOR PLAN
A4	NEW CONSTRUCTION FIRST FLOOR PLAN
A5	EXISTING ROOF PLAN
A5.2	EXISTING SITE PLAN
A6	PROPOSED FIRST FLOOR PLAN
A7	PROPOSED SECOND FLOOR PLAN
A7.2	FLOOR AREA PLANS
A8	PROPOSED ROOF PLAN
A8.2	PROPOSED SITE PLAN
A8.3	UTILITY SITE PLAN_EXISTING_PROPOSED
A9	EXISTING ELEVATIONS
A10	EXISTING ELEVATIONS
A11	PROPOSED ELEVATIONS
A12	PROPOSED ELEVATIONS
A12.1	STREETSCAPE ELEVATIONS
A12.2	SUPERIMPOSED ELEVATIONS
A12.3	SUPERIMPOSED ELEVATIONS
A12.4	SUPERIMPOSED FLOOR PLAN
A12.5	SUPERIMPOSED ROOF PLAN
A12.6	SUPERIMPOSED SECTION
A12.7	SIGHT-LINE&PRIVACY DIAGRAM-BEDROOM
A12.8	SHADOW STUDY PLAN
A12.9	TREE PROTECTION PLAN
A13	BUILDING SECTION
A14	DOOR AND WINDOW SCHEDULE

Sheet List	
Sheet Number	Sheet Name
E01	PROPOSED ELECTRICAL FOOR PLAN
E02	PROPOSED ELECTRICAL FOOR PLAN
F01	2025 Single-Family Residential Mandatory Requirements Summary
F02	HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY
G01	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
G02	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Sheet List	
Sheet Number	Sheet Name
SN1.0	GENERAL NOTES

Sheet List	
Sheet Number	Sheet Name
HFX1	ANCHORAGE DETAILS - HFX PANELS
HFX2	ANCHORAGE DETAILS - HFX PANELS
HFX3	ANCHORAGE DETAILS - HFX PANELS

Sheet List	
Sheet Number	Sheet Name
S1.0	FOUNDATION PLAN
S2.0	LOW ROOF & FLOOR FRAMING PLAN
S3.0	ROOF FRAMING PLAN
SD1.0	FOUNDATION DETAIL
SD2.0	FRAMING DETAIL
SD3.0	FOUNDATION DETAIL
SD4.0	FRAMING DETAIL

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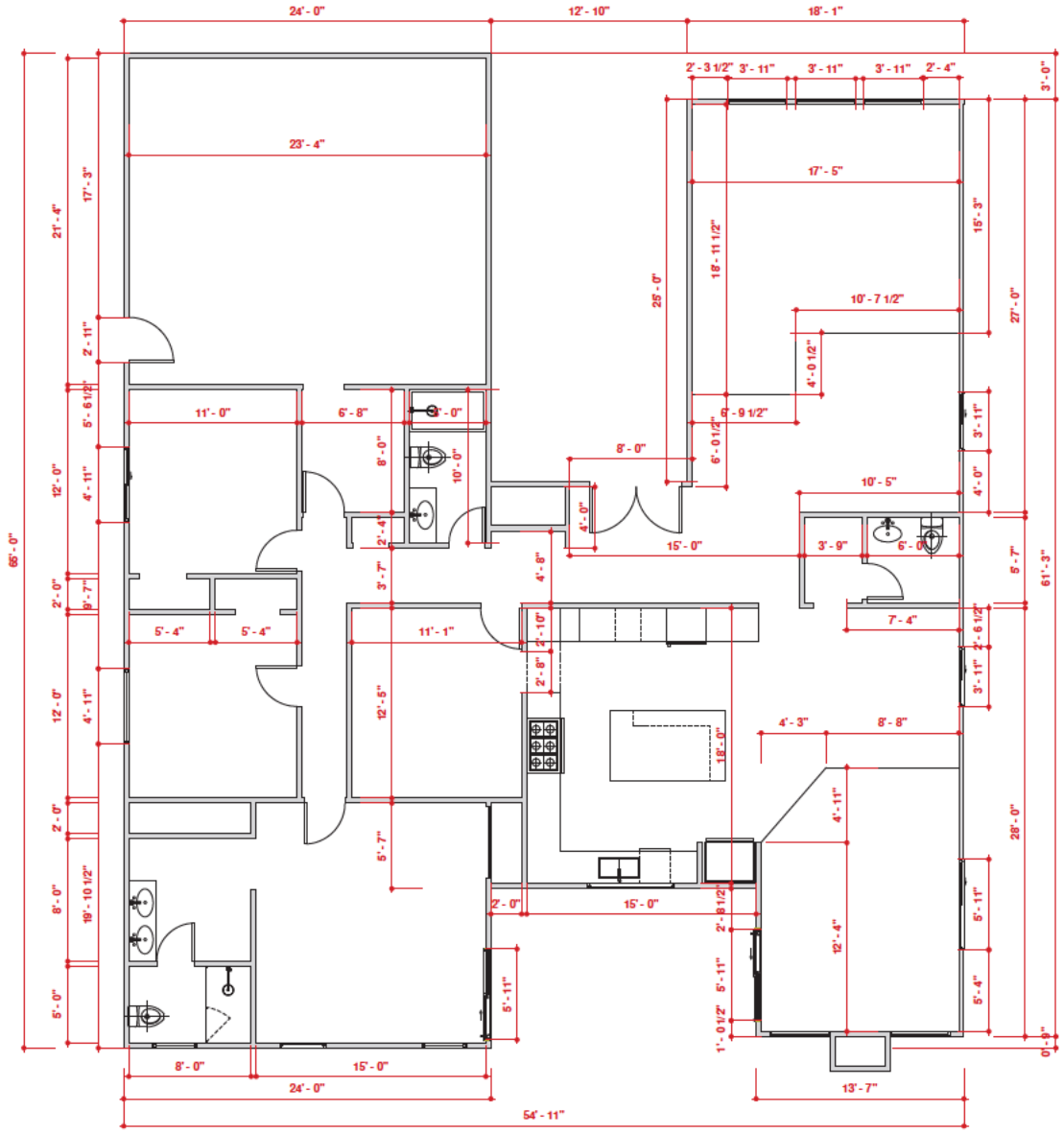
DRAWING INDEX

SCALE

DATE
2026/10/14

SHEET NUMBER
A1

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1 EXISTING FIRST FLOOR PLAN
1/4" = 1'-0"

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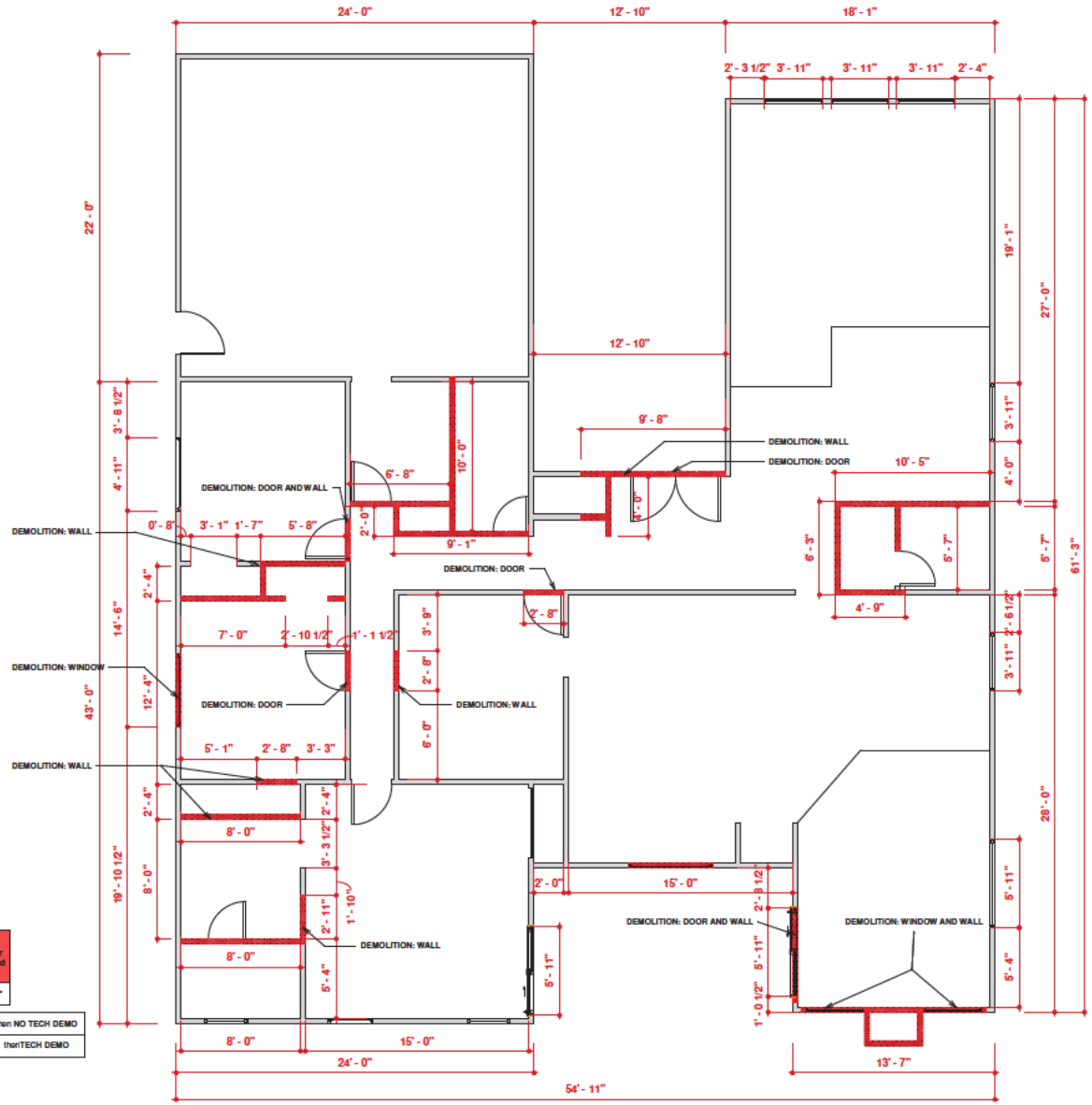
EXISTING FIRST FLOOR PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A2

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	Existing Footprint (linear 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)
1st	577'	455' 2"	121' 10"

If	Preserved Wall Framing	is greater than	Demo'd Wall Framing	then NO TECH DEMO
If	Demo'd Wall Framing	is greater than	Preserved Wall Framing	thenTECH DEMO

Since	455' 2"	is greater than	121' 10"	, then NO TECH DEMO

EXISTING

DEMOLITION

NEW CONSTRUCTION

1 DEMOLITION FLOOR PLAN
1/4" = 1'-0"

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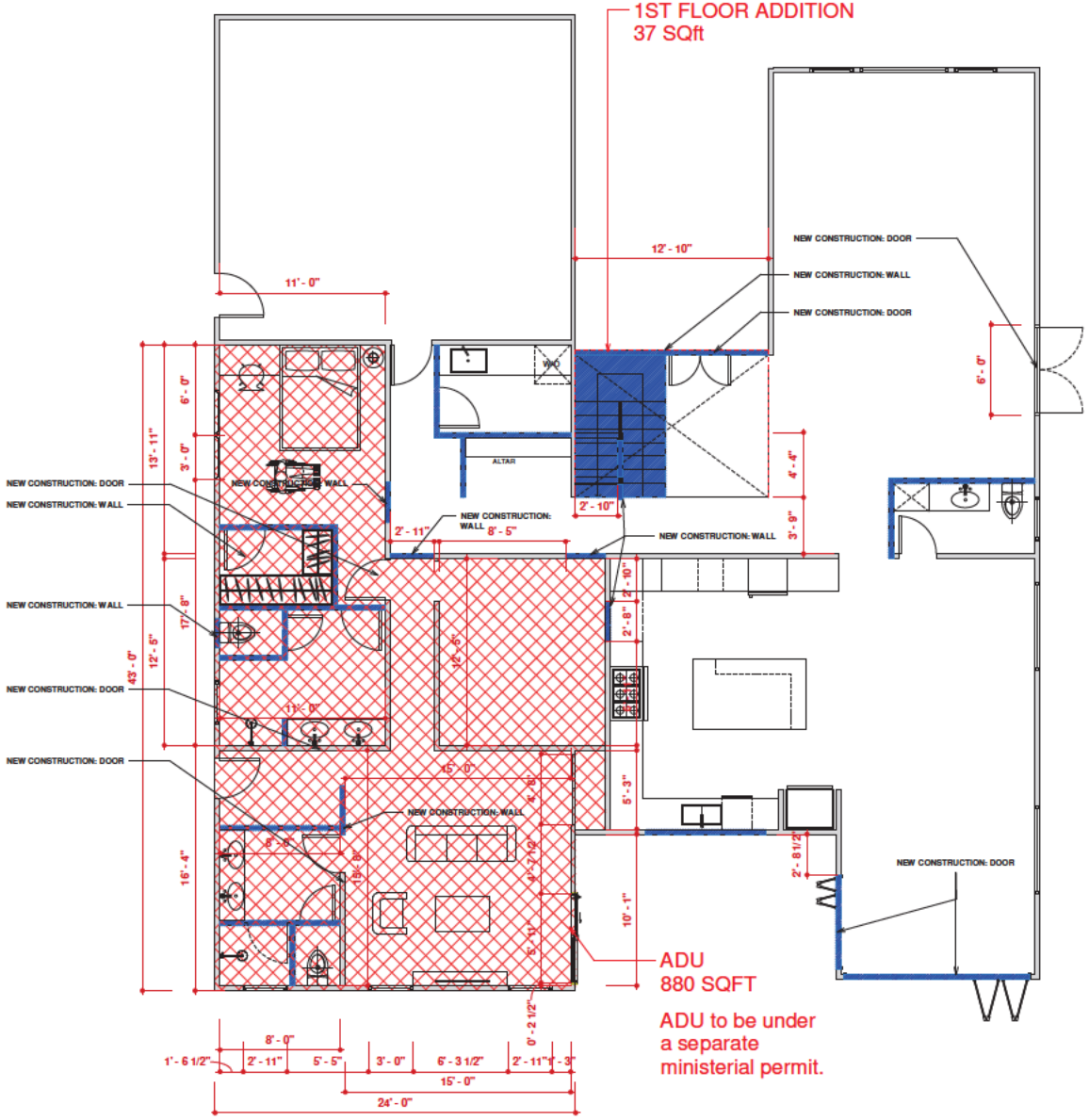
DEMOLITION FIRST FLOOR PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A3

Docusign Envelope ID: 526AD49C-7B45-6B97-6179-1866DCBDC2AD



EXISTING

DEMOLITION

NEW CONSTRUCTION

1 NEW CONSTRUCTION FLOOR PLAN
1/4" = 1'-0"

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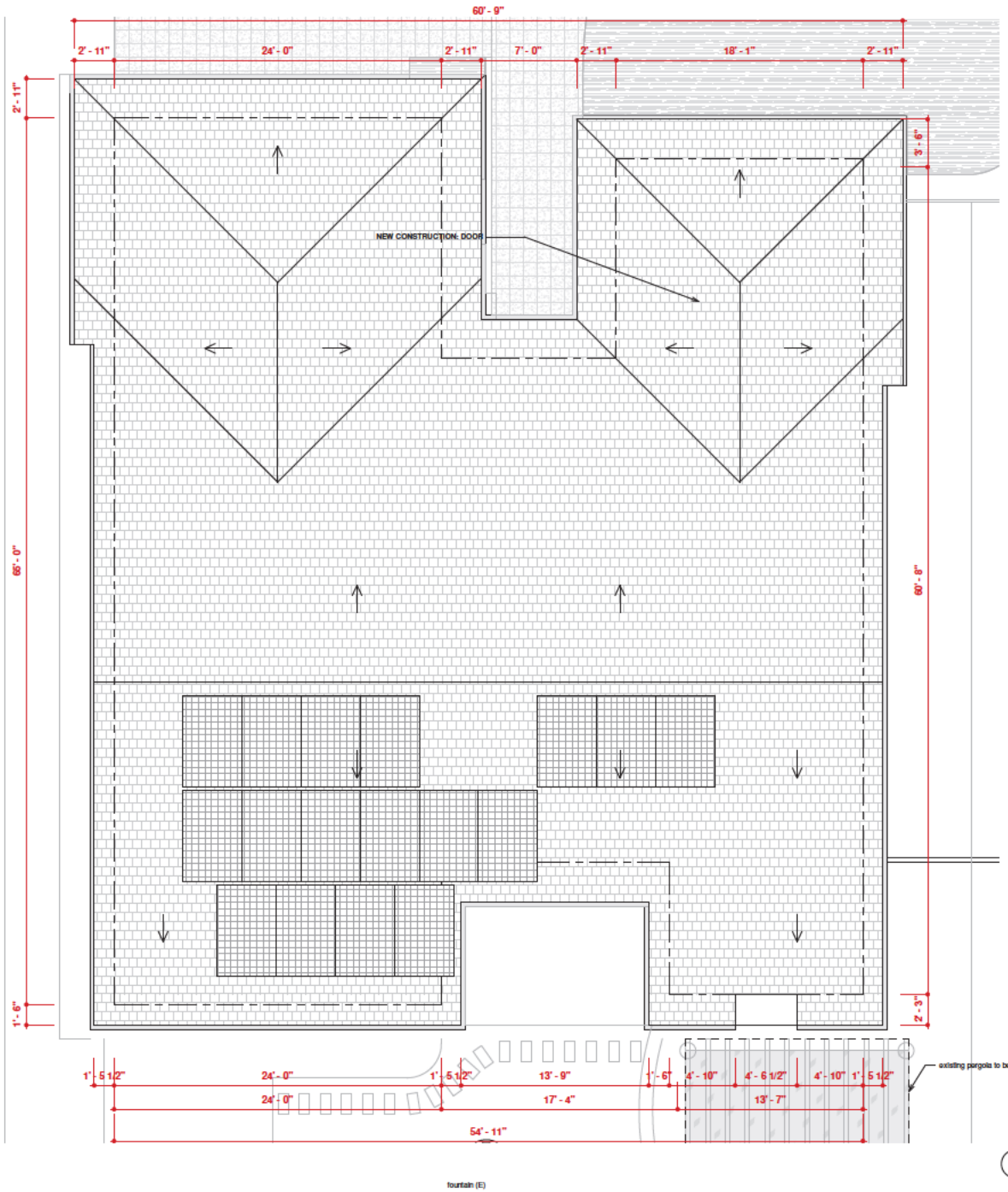
NEW CONSTRUCTION FIRST FLOOR PLAN

SCALE
As indicated

DATE
2026/11/03

SHEET NUMBER
A4

Docusign Envelope ID: 526AD49C-7B45-6B97-6179-1866DCBDC2AD



1 EXISTING ROOF PLAN
1/4" = 1'-0"

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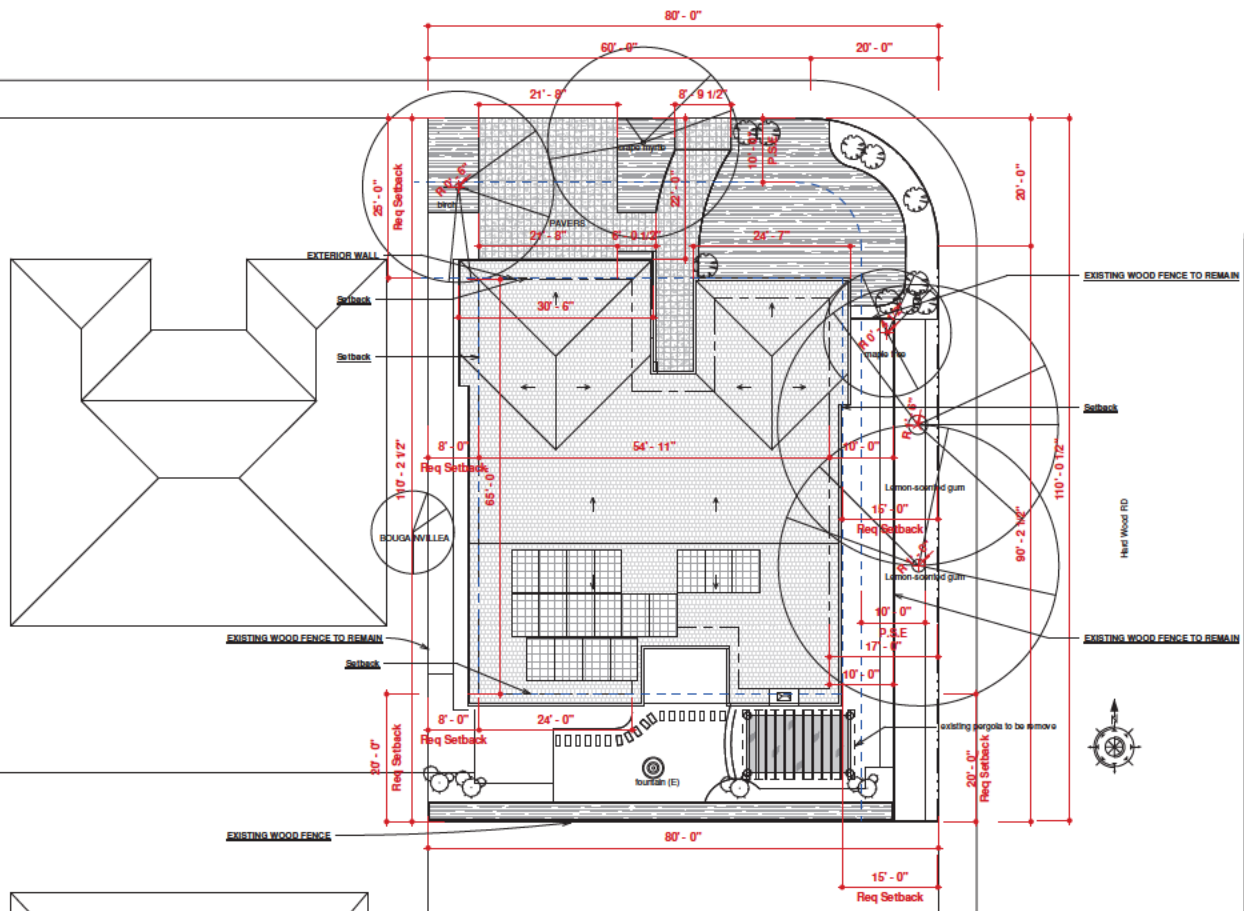
EXISTING ROOF PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A5

Docusign Envelope ID: 526AD49C-7B45-6B97-0179-1666DCBDC2AD



1 EXISTING SITE PLAN
1" = 10'-0"

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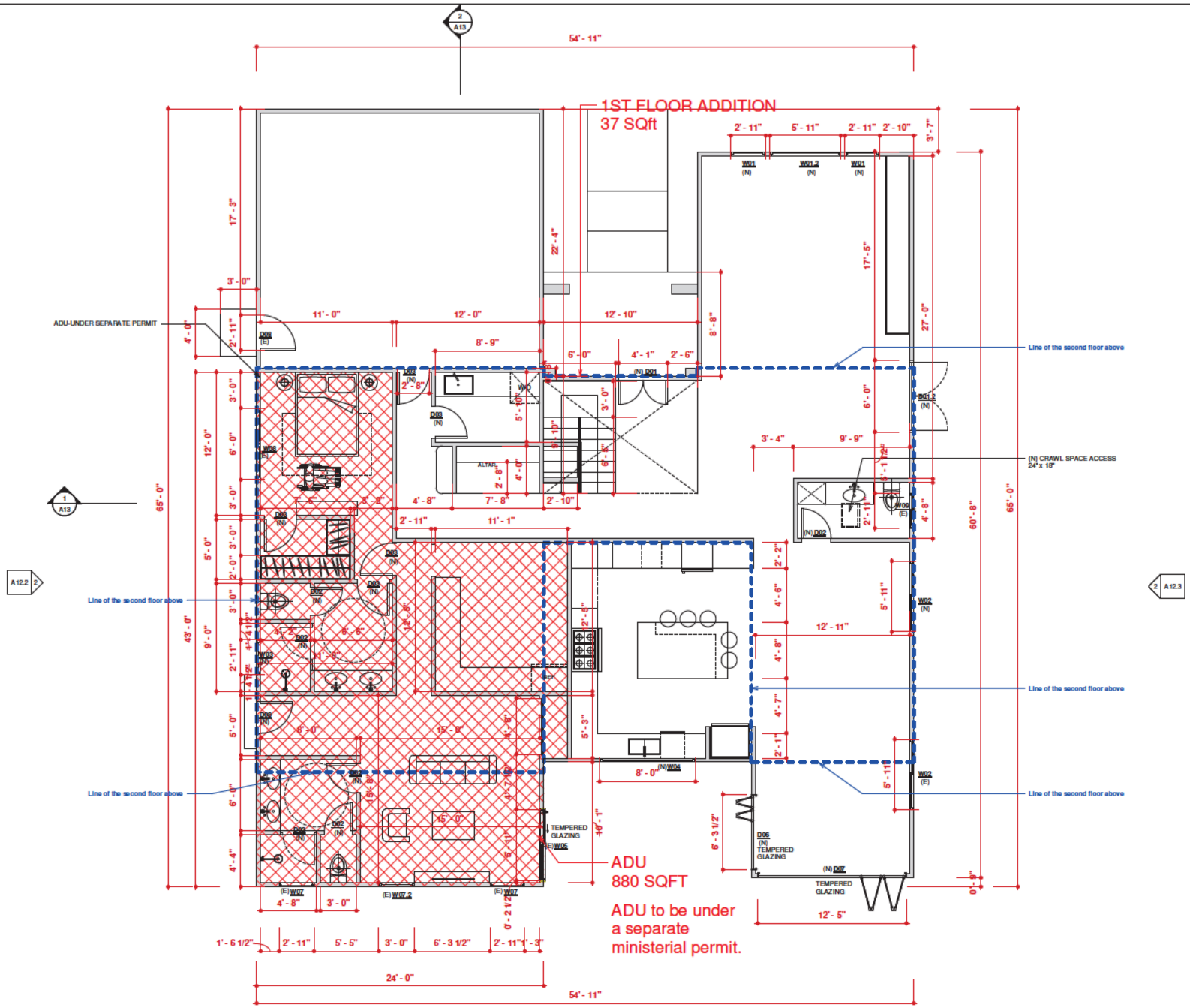
EXISTING SITE PLAN

SCALE
1" = 10'-0"

DATE
2026/10/14

SHEET NUMBER
A5.2

Docusign Envelope ID: 526AD49C-7B45-6B97-6179-1866DCBDC2AD



1 PROPOSED FLOOR PLAN
1/4" = 1'-0"

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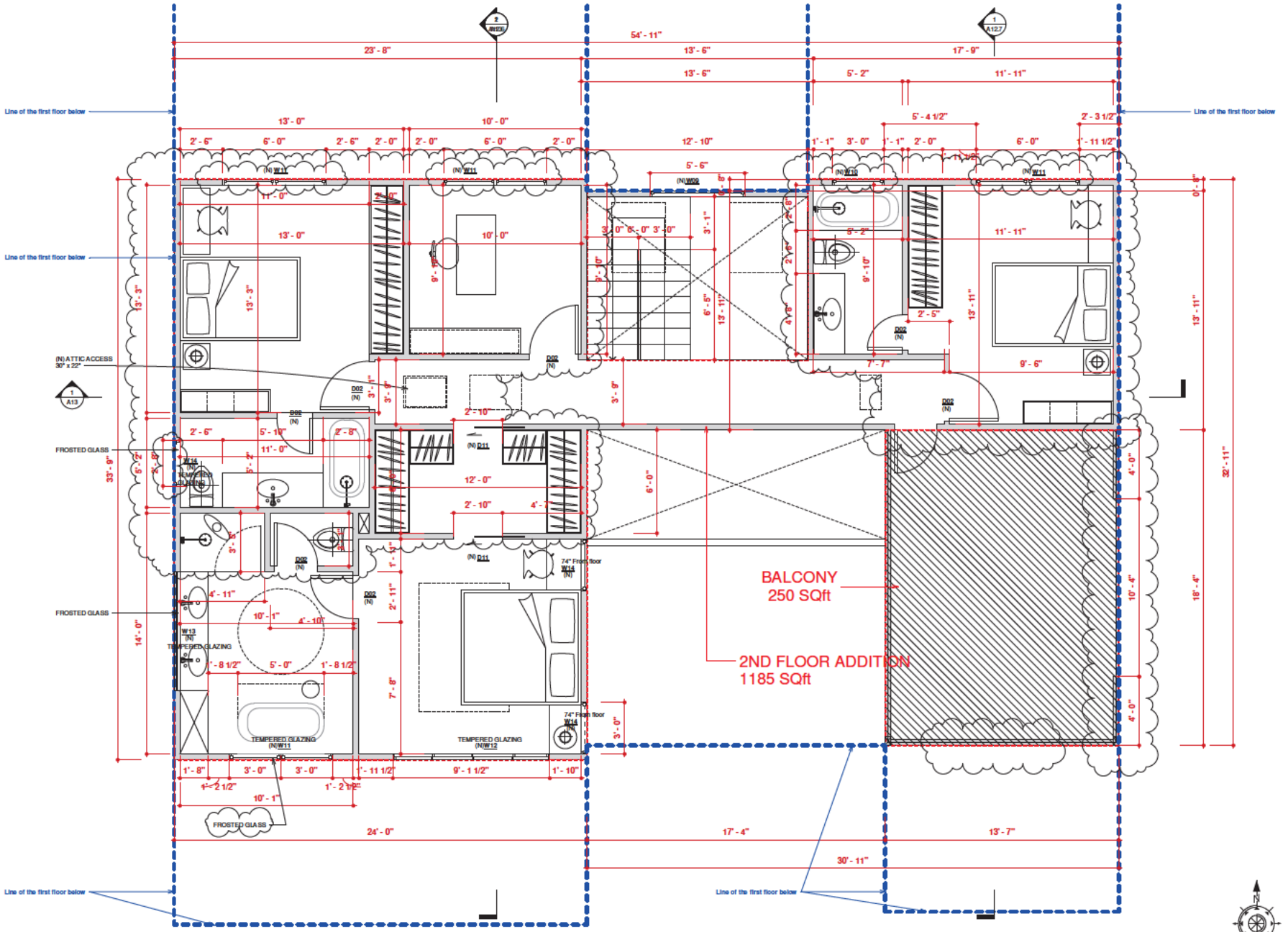
PROPOSED FIRST FLOOR PLAN

SCALE
As indicated

DATE
2026/11/03

SHEET NUMBER
A6

Docusign Envelope ID: 526AD49C-7B45-6B97-0179-1866DCBDC2AD



1 PROPOSED SECOND FLOOR PLAN
3/8" = 1'-0"

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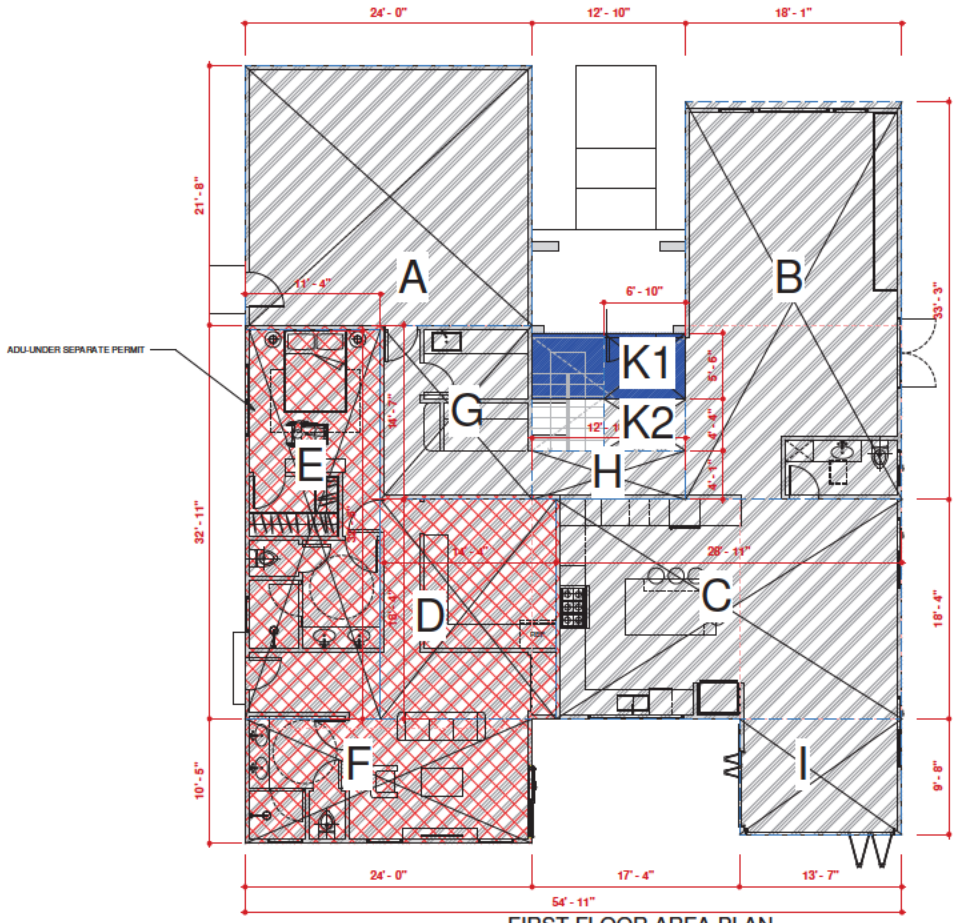
PROPOSED SECOND FLOOR PLAN

SCALE
As indicated

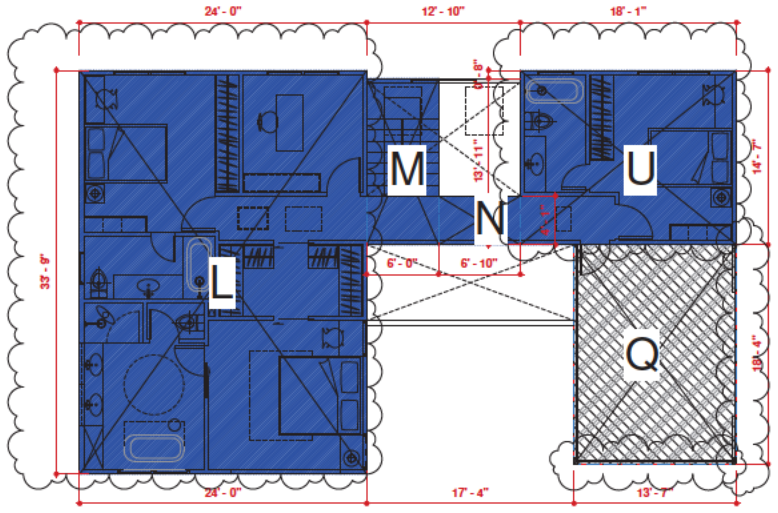
DATE
2026/11/03

SHEET NUMBER
A7

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1 FIRST FLOOR AREA PLAN
3/16" = 1'-0"



2 SECOND FLOOR AREA PLAN
3/16" = 1'-0"

ADU				
FLOOR AREA HOUSE				
	WIDTH	HEIGHT	AREA	SF
D	14'4"	18'4"	263	SF
E	11'4"	32'5"	367	SF
F	24'	10'5"	250	SF
	FIRST FLOOR SUBTOTAL		880	SF
	FIRST FLOOR ADDITION			
	SUBTOTAL		880	SF

FLOOR AREA HOUSE				
	WIDTH	HEIGHT	AREA	SF
B	18'1"	33'3"	601.27	SF
C	28'11"	18'4"	530.14	SF
G	14'4"	14'7"	209.03	SF
H	12'10"	4'1"	52.40	SF
I	13'7"	9'8"	131.31	SF
K2	6' 10"	4' 4"	29.61	SF
	FIRST FLOOR SUBTOTAL		1,553.76	SF
	FIRST FLOOR ADDITION			
K1	6' 10"	5' 6"	37.58	SF
	SUBTOTAL		37.58	SF
	SECOND FLOOR ADDITION			
L	24'	33' 9"	810.00	SF
M	6'	13' 11"	83.50	SF
N	6' 10"	4' 1"	27.90	SF
U	18' 1"	14' 7"	263.72	SF
	SUBTOTAL		1,185.12	SF
	ADDITION SUBTOTAL		1,222.70	SF

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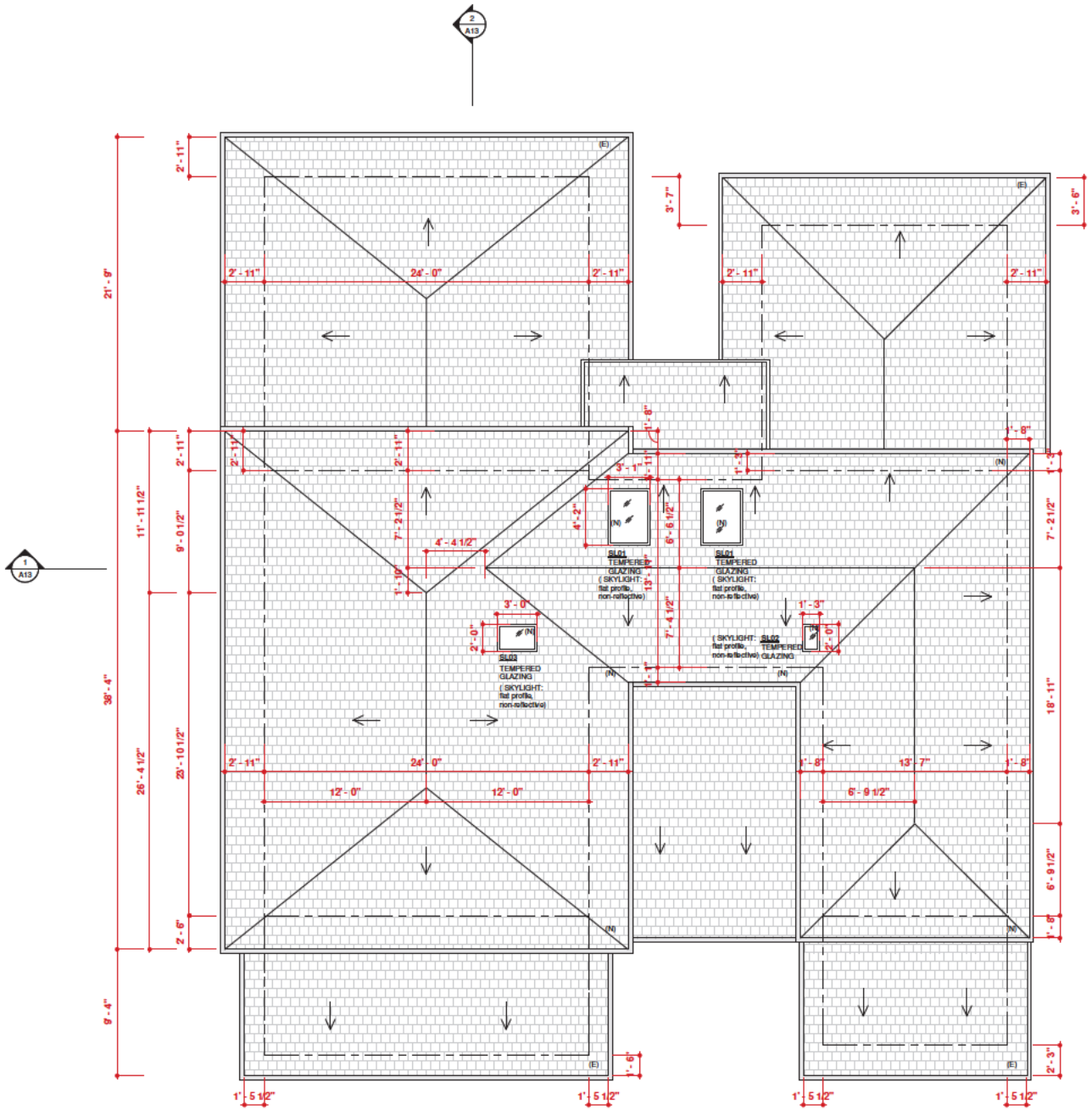
FLOOR AREA PLANS

SCALE
As Indicated

DATE
2026/10/14

SHEET NUMBER
A7.2

Docusign Envelope ID: 526AD49C-7B45-6B97-6179-1866DCBDC2AD



1 PROPOSED ROOF PLAN
1/4" = 1'-0"

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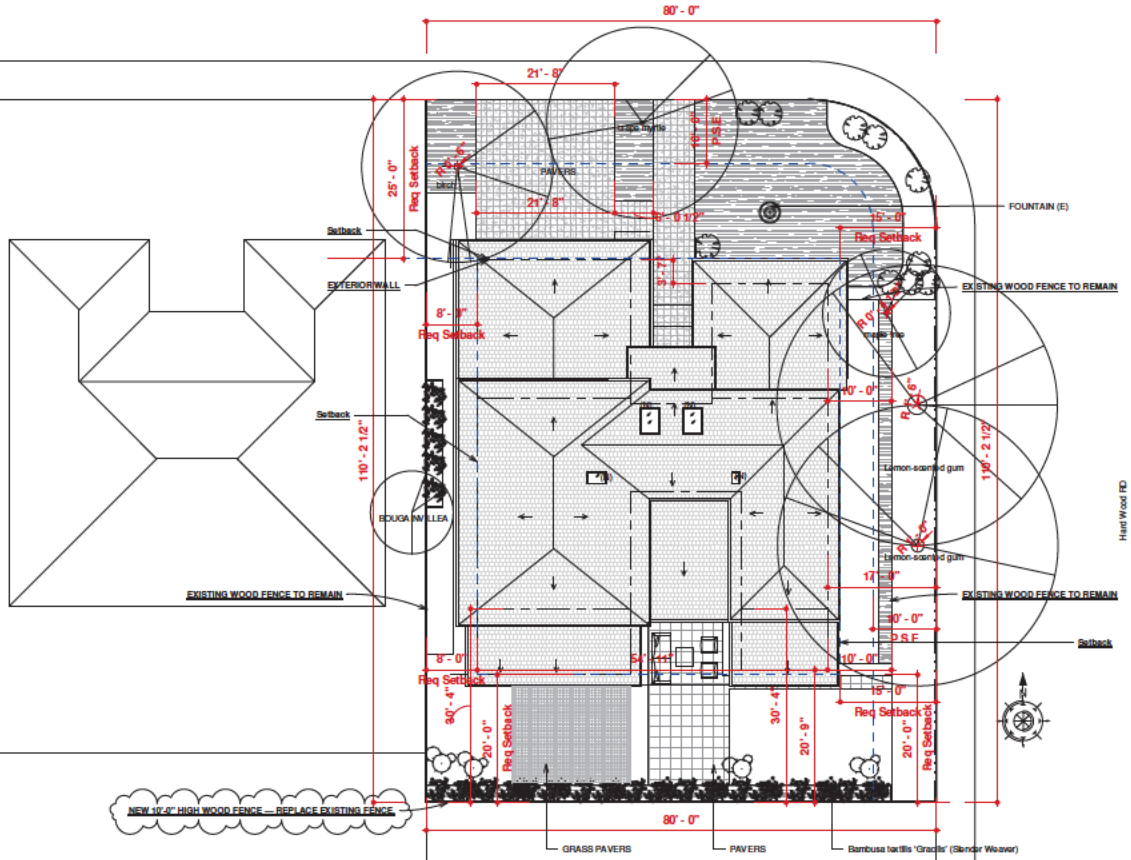
PROPOSED ROOF PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A8

Docusign Envelope ID: 526AD49C-7B45-6B97-6179-1866DCBDC2AD



1 PROPOSED SITE PLAN
1" = 10'-0"

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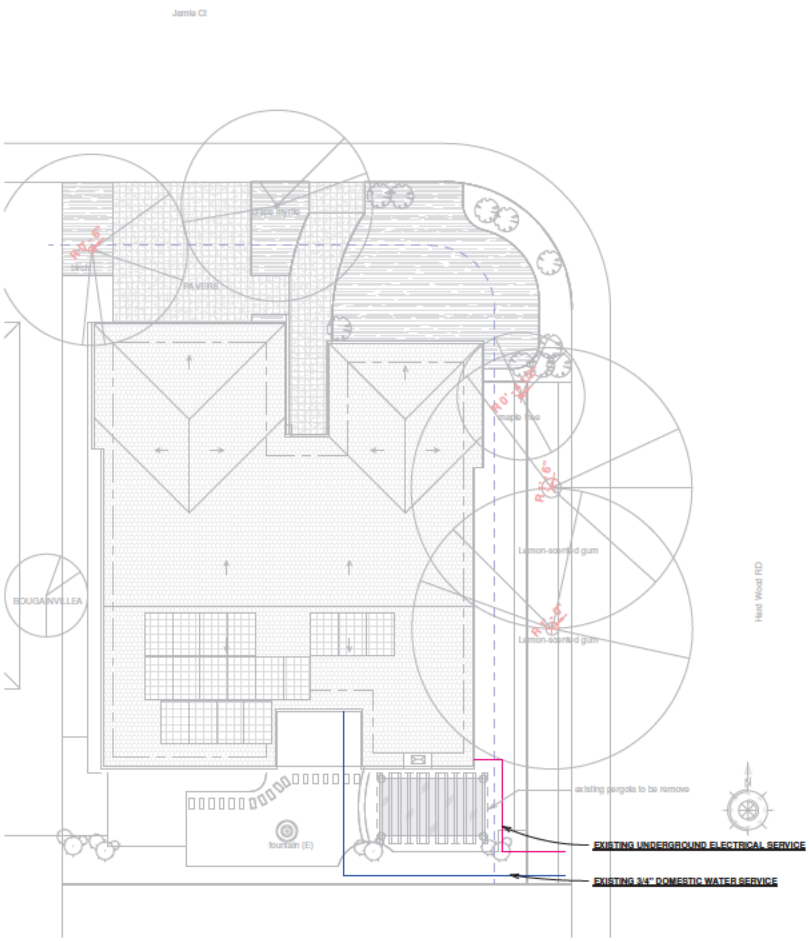
PROPOSED SITE PLAN

SCALE
1" = 10'-0"

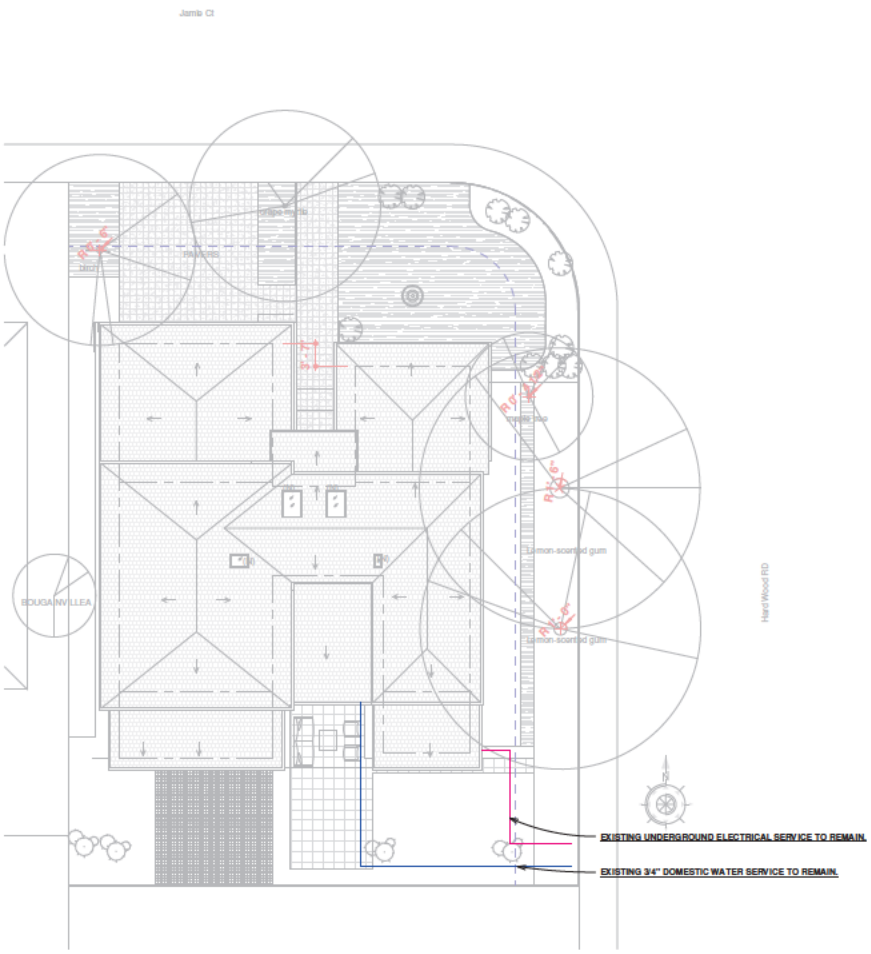
DATE
2026/10/14

SHEET NUMBER
A8.2

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1 UTILITY SITE PLAN – EXISTING
1" = 10'-0"



2 PROPOSED UTILITY SITE PLAN
1" = 10'-0"

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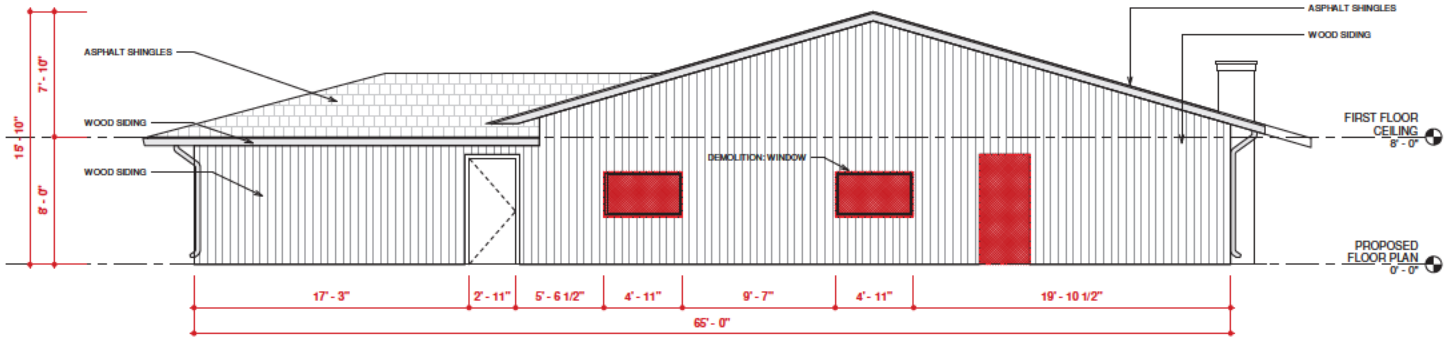
UTILITY SITE PLAN_EXISTING_PROPOSED

SCALE
1" = 10'-0"

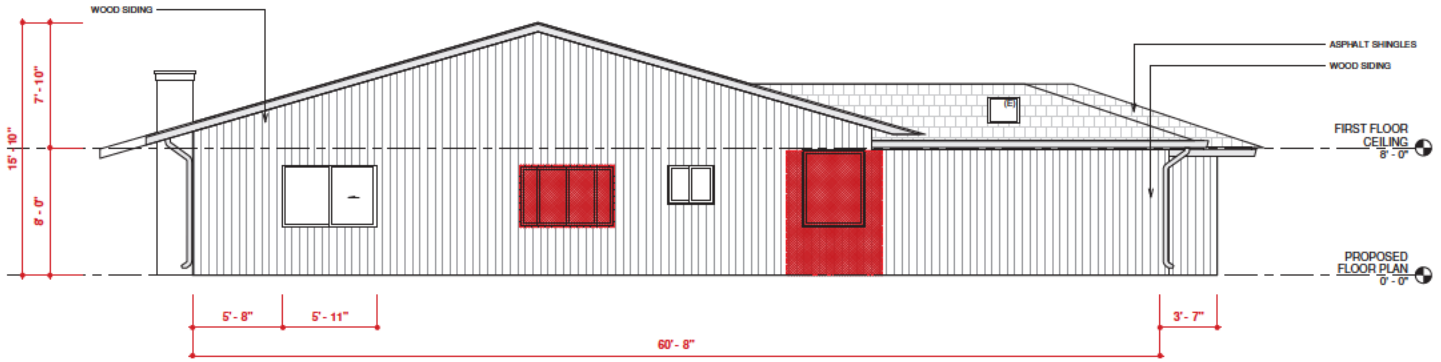
DATE
2026/09/24

SHEET NUMBER
A8.3

Docusign Envelope ID: 526AD49C-7B45-6B97-0179-1866DCBDC2AD



1 EXISTING LEFT / EAST ELEVATIONS
1/4" = 1'-0"



EXISTING

DEMOLITION

NEW CONSTRUCTION

2 EXISTING RIGHT / WEST ELEVATIONS
1/4" = 1'-0"

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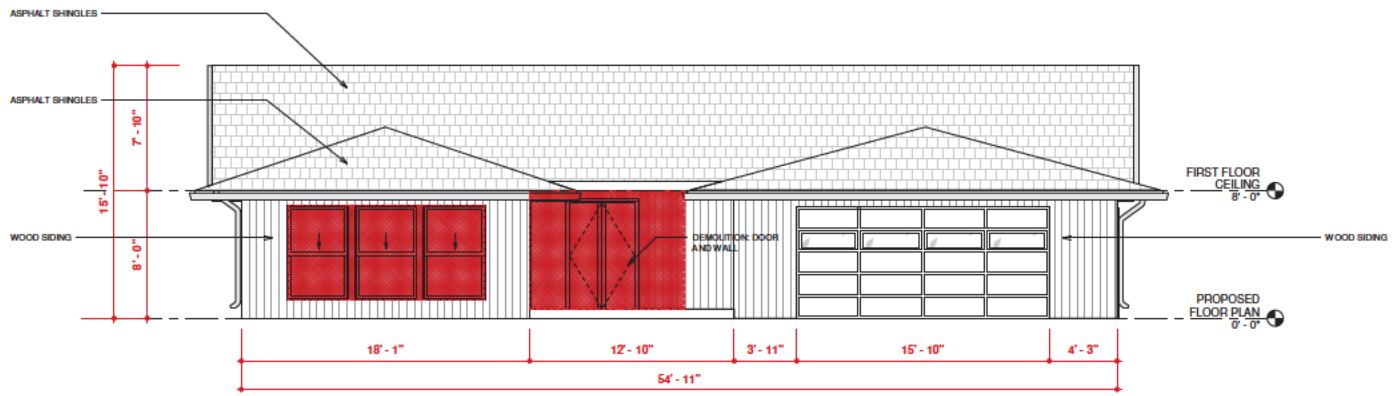
EXISTING ELEVATIONS

SCALE
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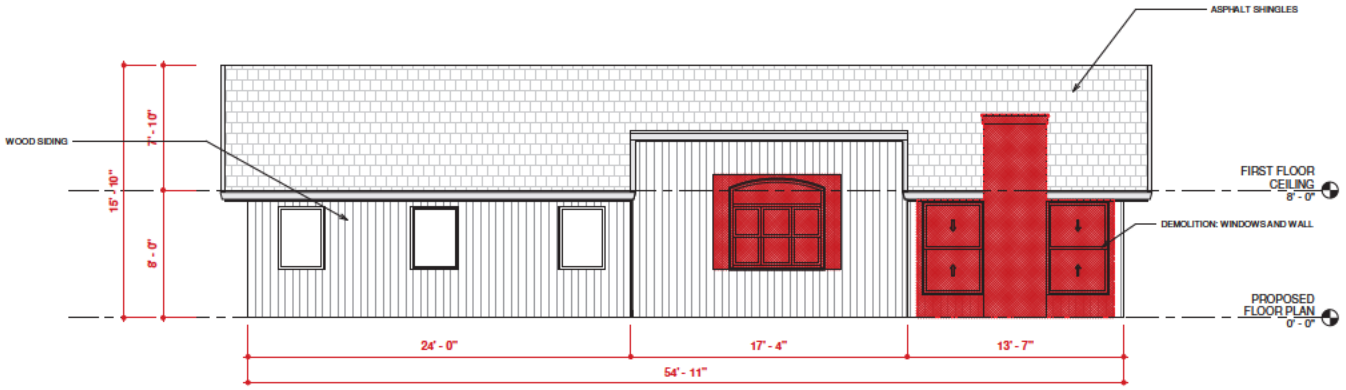
DATE
2026/08/14

SHEET NUMBER
A9

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2 EXISTING FRONT (NORTH) ELEVATIONS
1/4" = 1'-0"



1 EXISTING REAR (SOUTH) ELEVATIONS
1/4" = 1'-0"

EXISTING

DEMOLITION

NEW CONSTRUCTION

CUSTOM HOME DESIGN AND BUILD

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JAMIE CT

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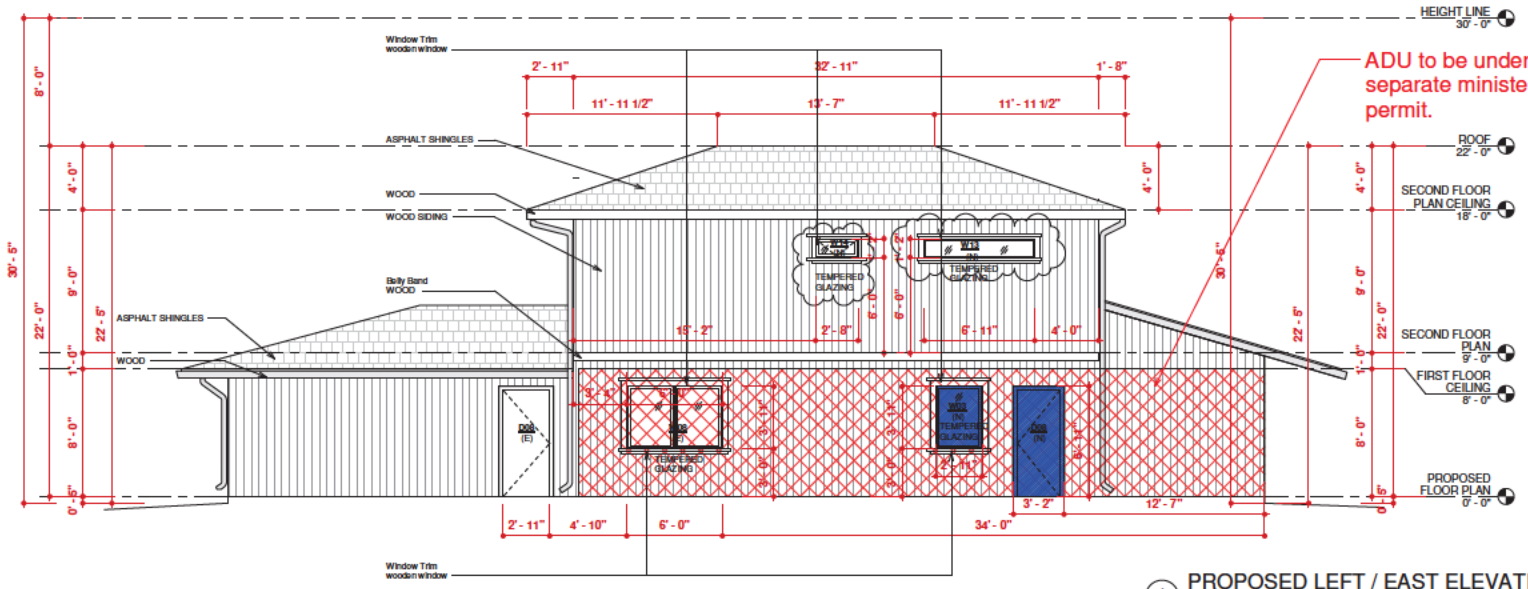
EXISTING ELEVATIONS

SCALE
1/4" = 1'-0"

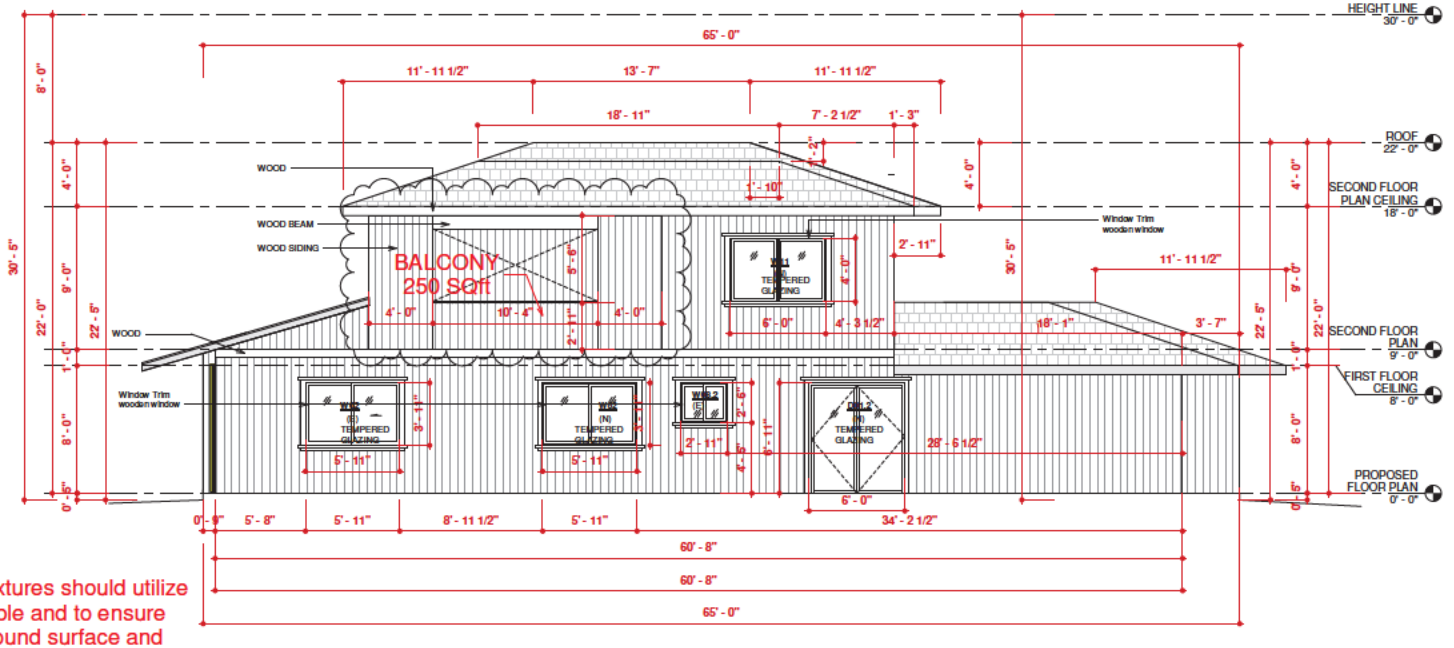
DATE
2026/08/14

SHEET NUMBER
A10

Docusign Envelope ID: 526AD49C-7B45-6B97-0179-1866DCBDC2AD



1 PROPOSED LEFT / EAST ELEVATIONS
1/4" = 1'-0"



2 PROPOSED RIGHT / WEST ELEVATIONS
1/4" = 1'-0"

All permanent exterior light fixtures should utilize shields so that no bulb is visible and to ensure that light is directed to the ground surface and does not spill light onto neighboring parcels or produce glare when seen from nearby homes.

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DESIGN MANAGER

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100 JAMIE CT, LOS GATOS, CA, 95032

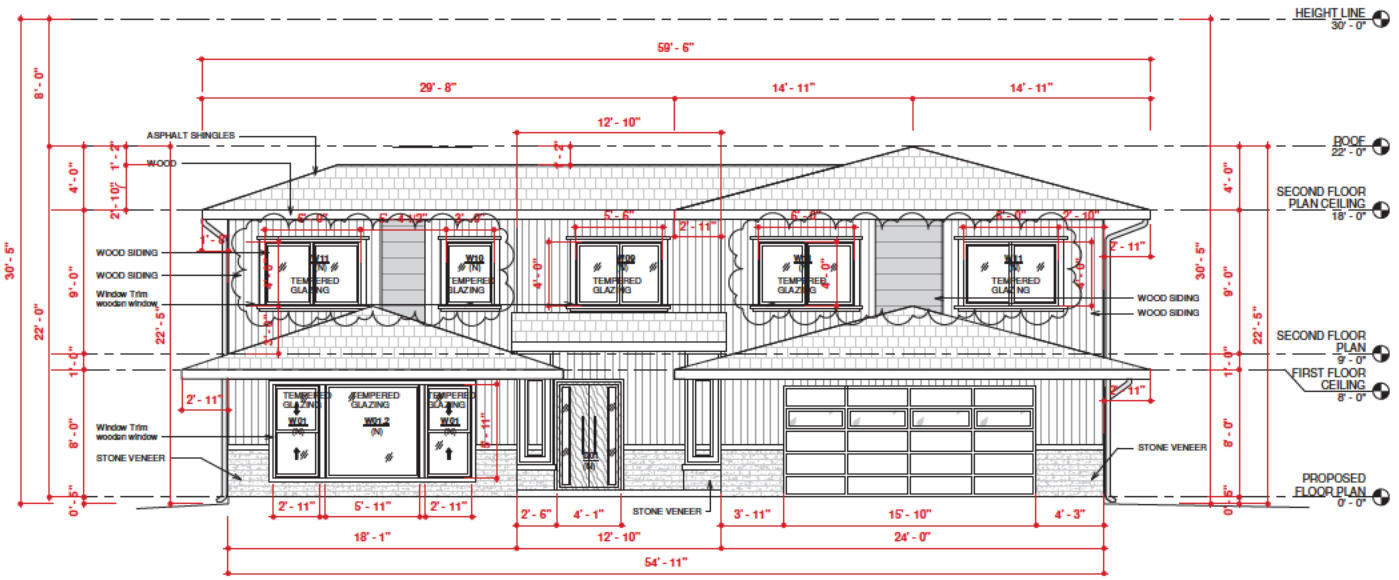
PROPOSED ELEVATIONS

SCALE
1/4" = 1'-0"

DATE
2026/10/14

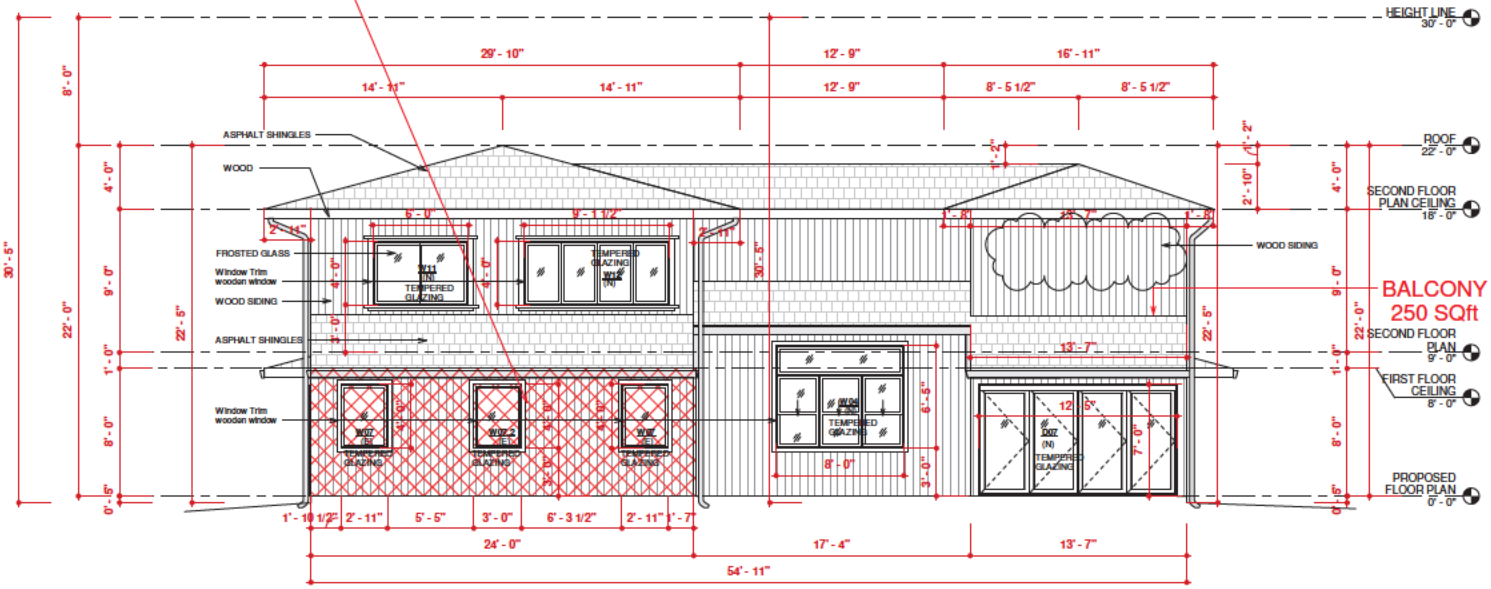
SHEET NUMBER
A11

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1 PROPOSED FRONT (NORTH) ELEVATIONS
1/4" = 1'-0"

ADU to be under a separate ministerial permit.



2 PROPOSED REAR (SOUTH) ELEVATIONS
1/4" = 1'-0"

All permanent exterior light fixtures should utilize shields so that no bulb is visible and to ensure that light is directed to the ground surface and does not spill light onto neighboring parcels or pr[illegible]hen seen from nearby homes.

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PROPOSED ELEVATIONS

SCALE
1/4" = 1'-0"

DATE
2026/10/14

SHEET NUMBER
A12

Docusign Envelope ID: 526AD49C-7B45-6B97-0179-1866DCBDC2AD



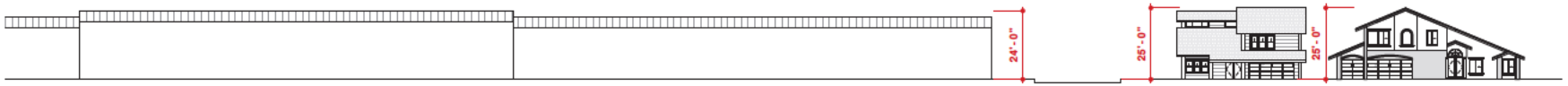
110 SINGLE - STORY | 106 TWO - STORY | 102 TWO - STORY | 100 SINGLE - STORY | 104 SINGLE - STORY | 108 SINGLE - STORY | 112 SINGLE - STORY

1 EXISTING FRONT (NORTH) STREET ELEVATIONS
1" = 20'-0"



110 SINGLE - STORY | 106 TWO - STORY | 102 TWO - STORY | 100 SINGLE - STORY | 104 SINGLE - STORY | 108 SINGLE - STORY | 112 SINGLE - STORY

2 PROPOSED FRONT (NORTH) STREET ELEVATIONS
1" = 20'-0"



SINGLE - STORY | 101 TWO - STORY | 105 TWO - STORY

3 OPPOSITE STREET ELEVATIONS
1" = 20'-0"

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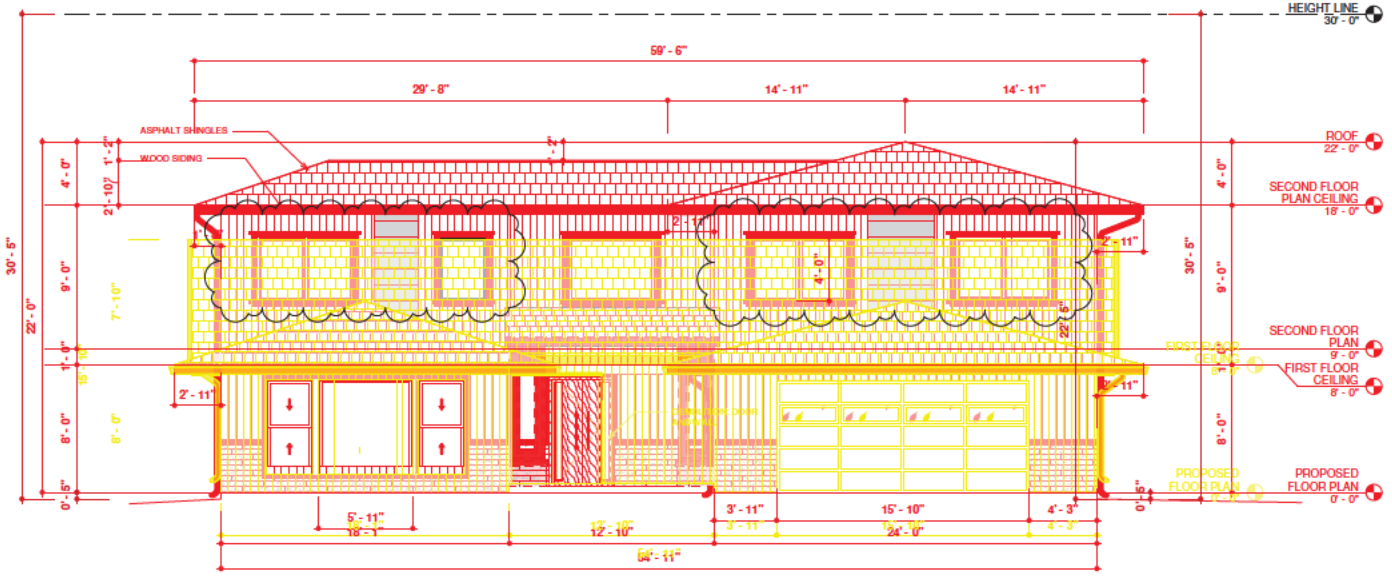
STREETSCAPE ELEVATIONS

SCALE
1" = 20'-0"

DATE
2026/10/14

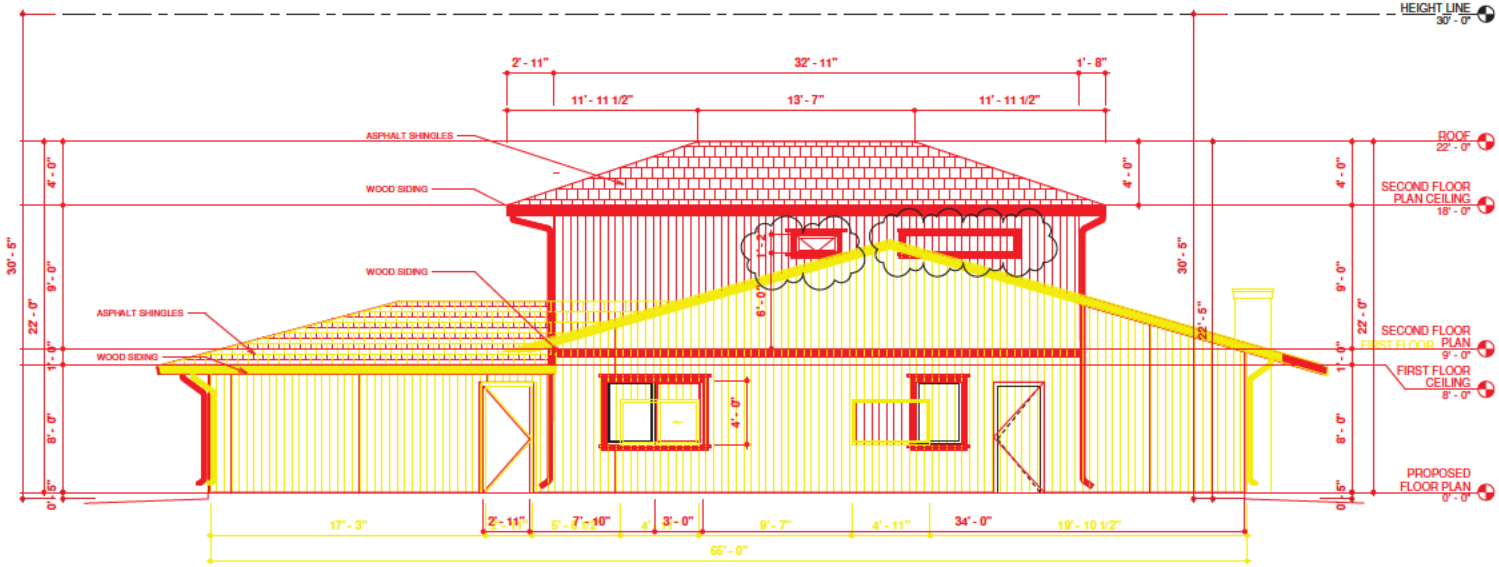
SHEET NUMBER
A12.1

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1 SUPERIMPOSED FRONT (NORTH) ELEVATIONS

1/4" = 1'-0"



2 SUPERIMPOSED LEFT / EAST ELEVATIONS

1/4" = 1'-0"

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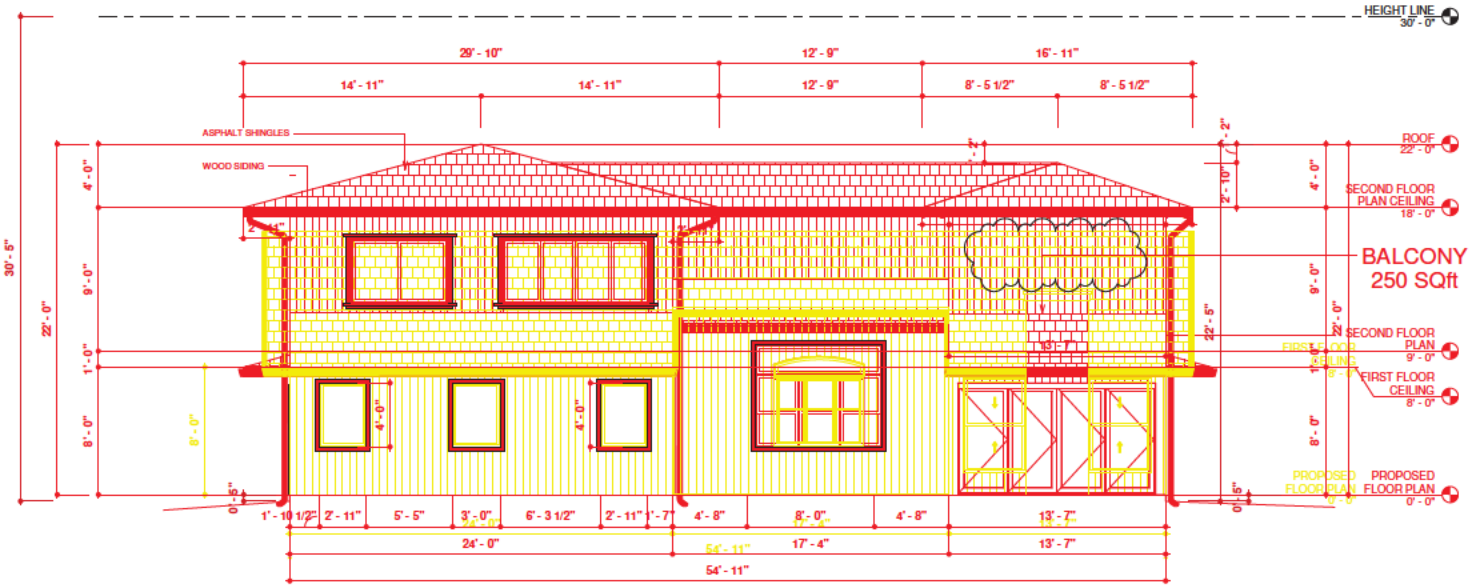
SUPERIMPOSED ELEVATIONS

SCALE
1/4" = 1'-0"

DATE
2026/10/14

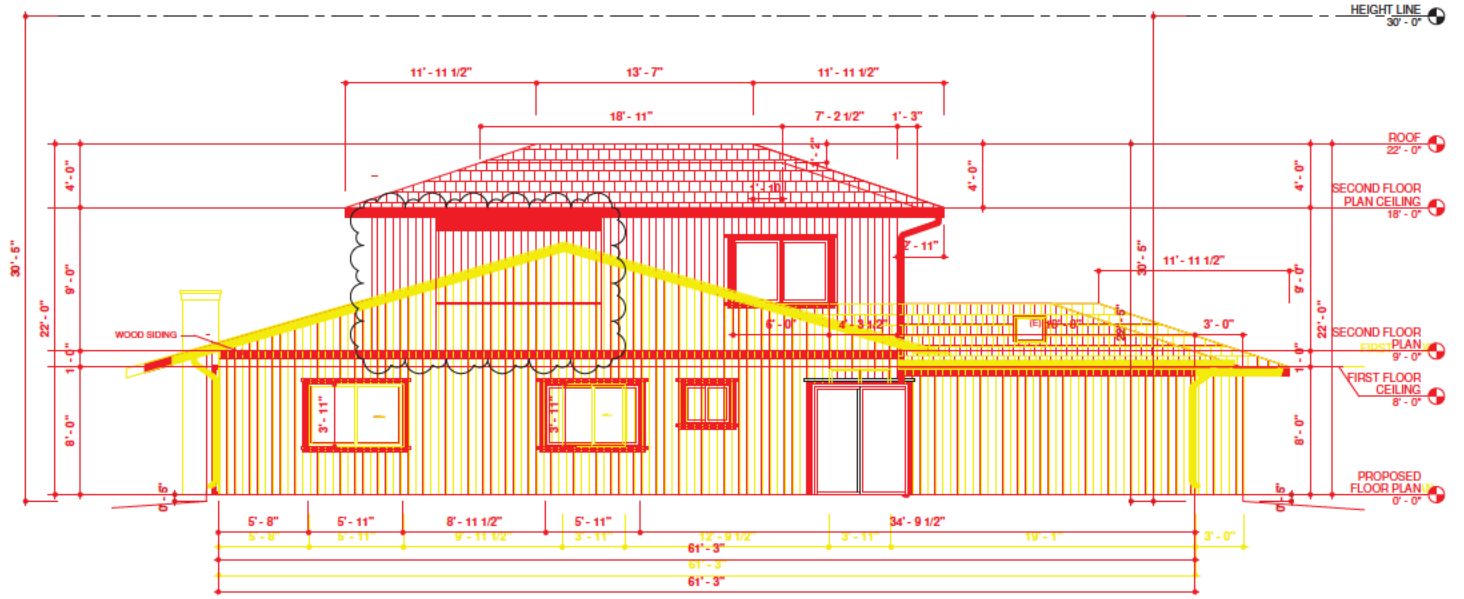
SHEET NUMBER
A12.2

Docusign Envelope ID: 526AD49C-7B45-6B97-0179-1866DCBDC2AD



1 SUPERIMPOSED REAR (SOUTH) ELEVATIONS

1/4" = 1'-0"



2 SUPERIMPOSED RIGHT / WEST ELEVATIONS

1/4" = 1'-0"

Custom Home

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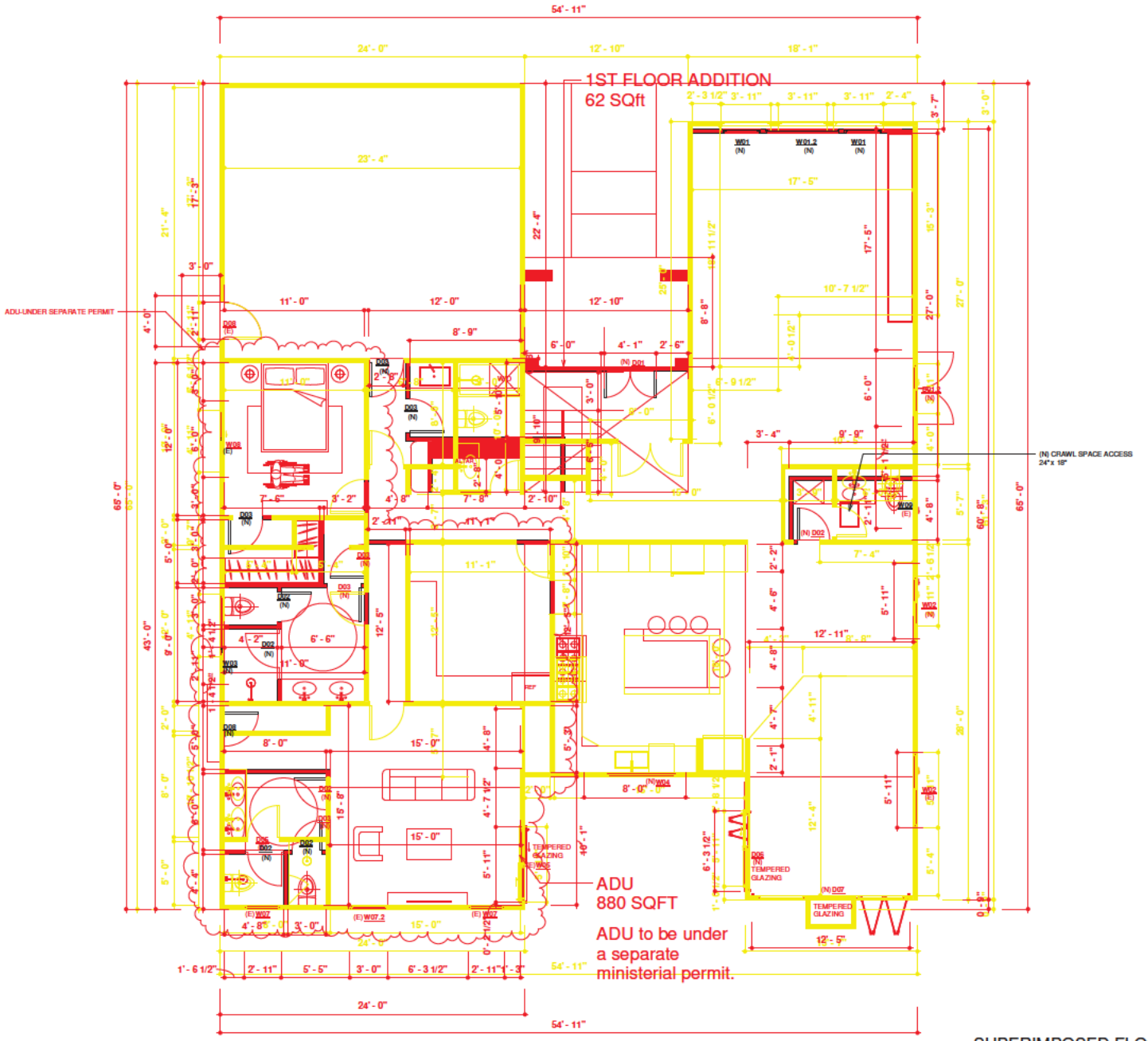
SUPERIMPOSED ELEVATIONS

SCALE
1/4" = 1'-0"

DATE
2026/10/14

SHEET NUMBER
A12.3

Docusign Envelope ID: 526AD49C-7B45-6B97-6179-1866DCBDC2AD



1 SUPERIMPOSED FLOOR PLAN
1/4" = 1'-0"

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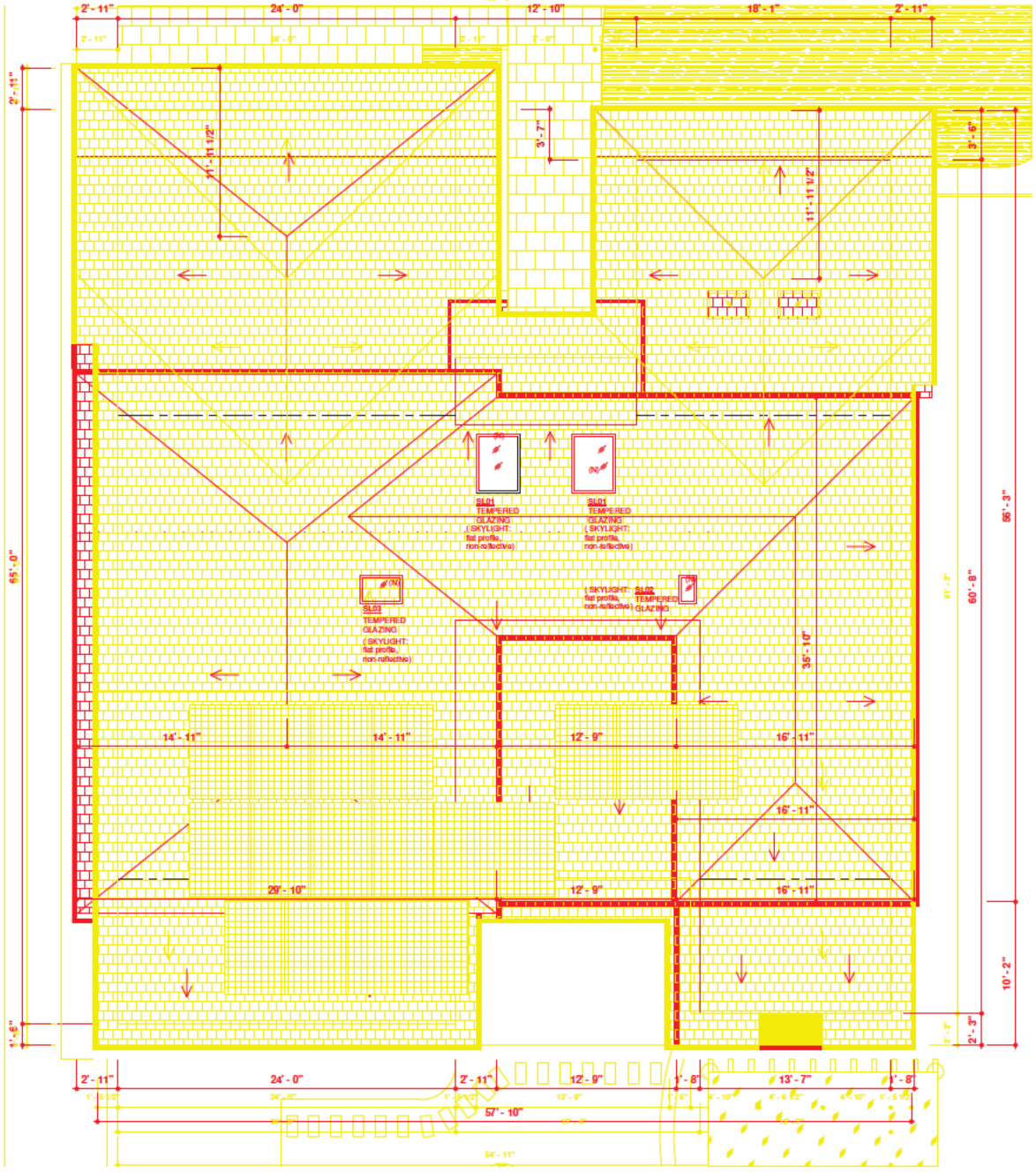
SUPERIMPOSED FLOOR PLAN

SCALE
As Indicated

DATE
2026/08/14

SHEET NUMBER
A12.4

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1 SUPERIMPOSED ROOF PLAN
1/4" = 1'-0"

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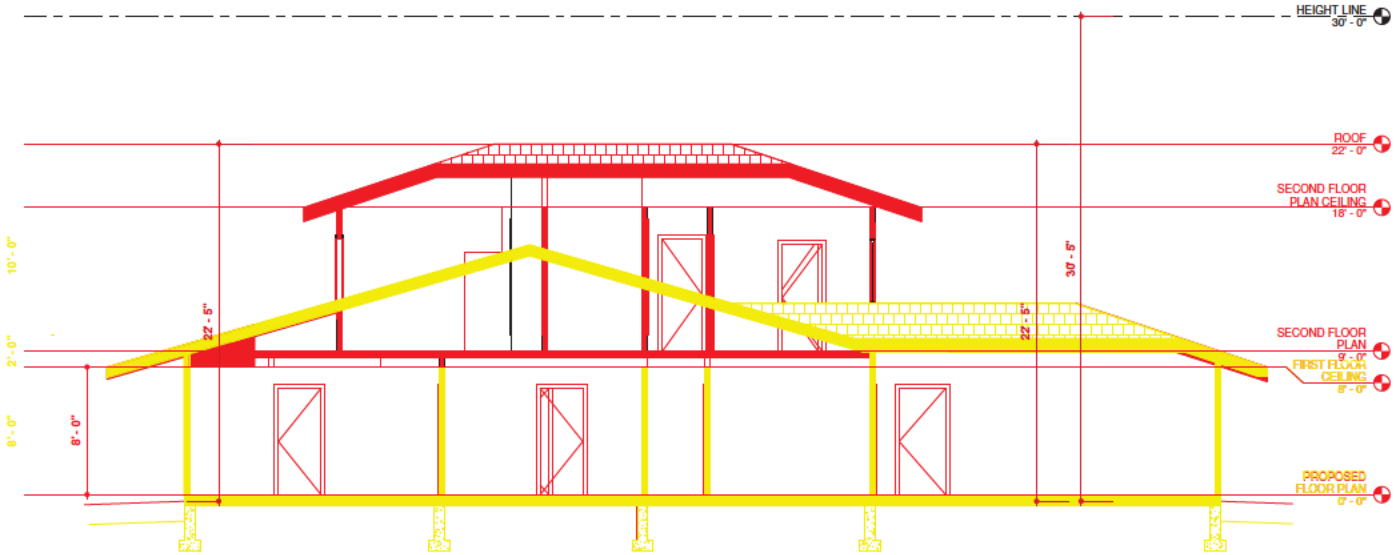
SUPERIMPOSED ROOF PLAN

SCALE
As indicated

DATE
2026/08/14

SHEET NUMBER
A12.5

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1 SUPERIMPOSED SECTION 2
1/4" = 1'-0"

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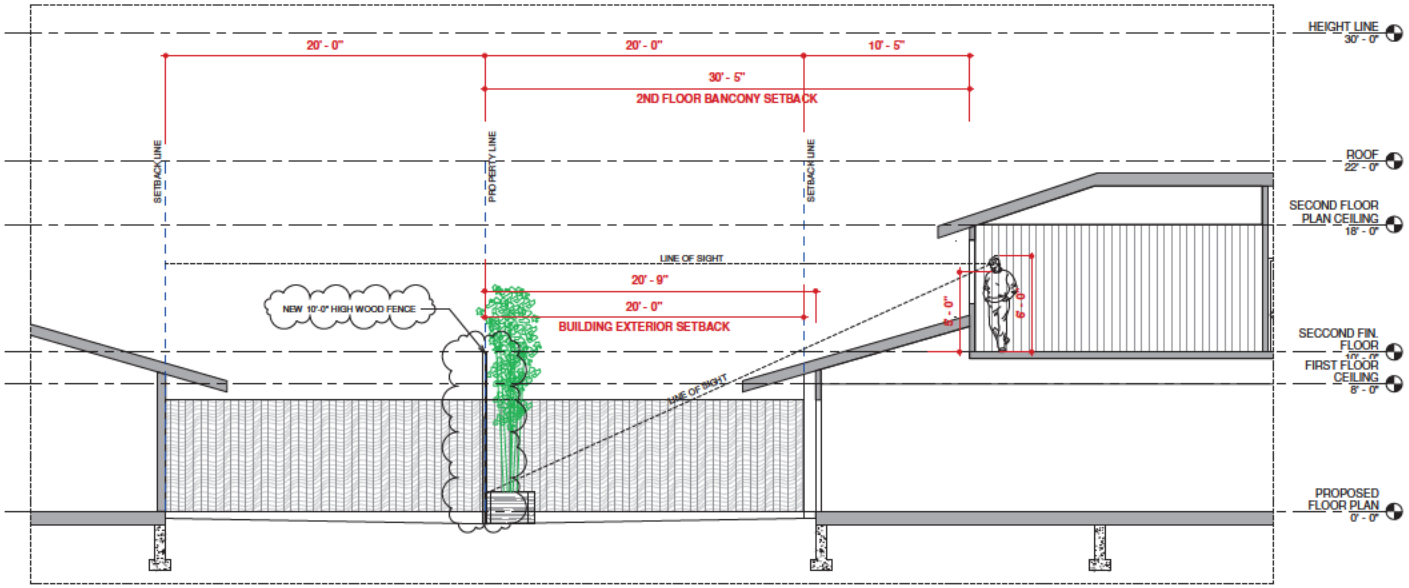
SUPERIMPOSED SECTION

SCALE
1/4" = 1'-0"

DATE
2026/08/14

SHEET NUMBER
A12.6

Docusign Envelope ID: 526AD49C-7B45-6B97-6179-1666DCBDC2AD



1 SIGHT-LINE & PRIVACY DIAGRAM - BEDROOM
1/4" = 1'-0"

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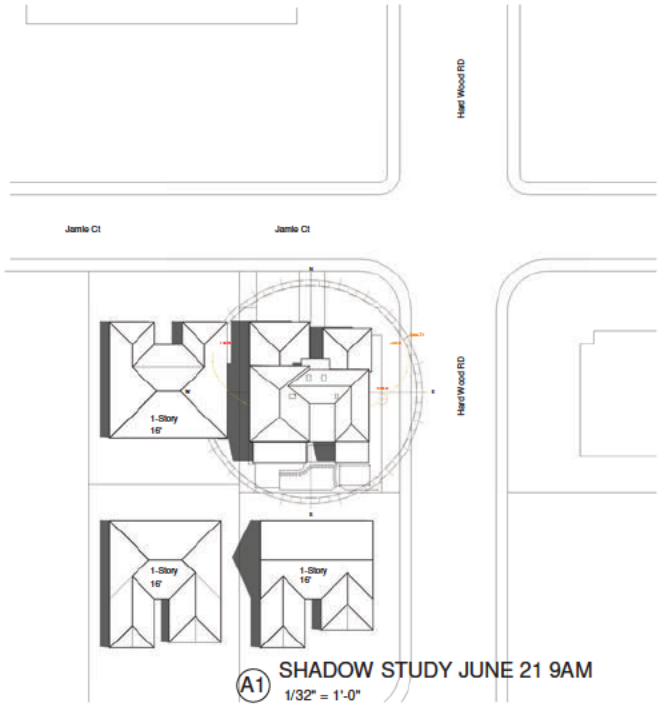
SIGHT-LINE&PRIVACY DIAGRAM-BEDROOM

SCALE
1/4" = 1'-0"

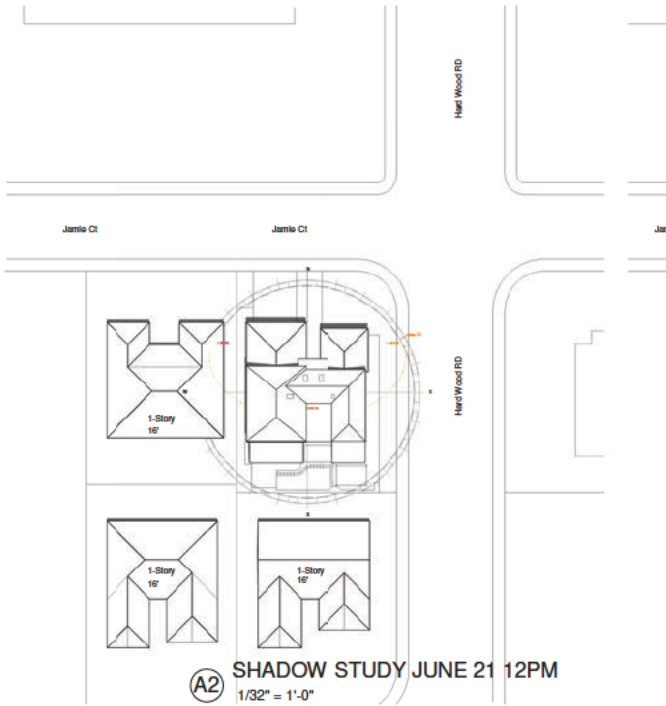
DATE
2026/10/14

SHEET NUMBER
A12.7

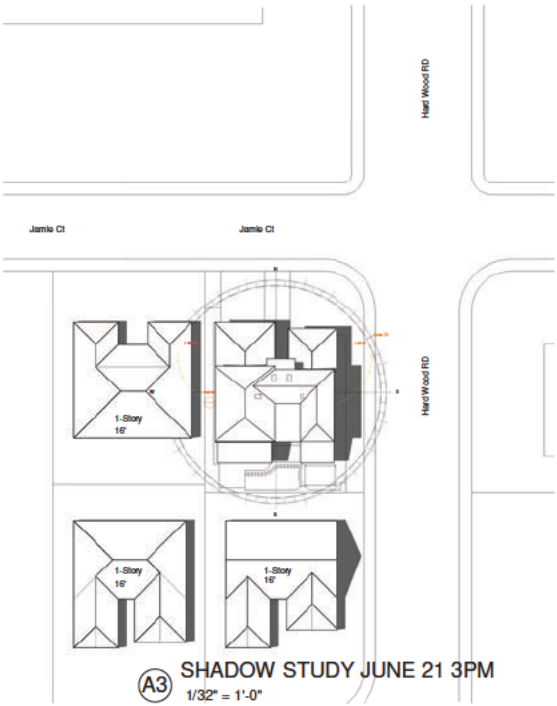
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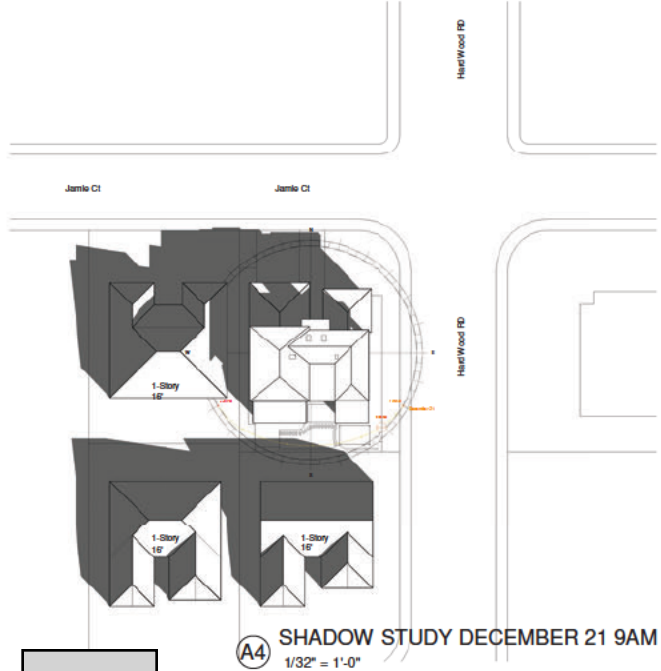
A1 SHADOW STUDY JUNE 21 9AM
1/32" = 1'-0"



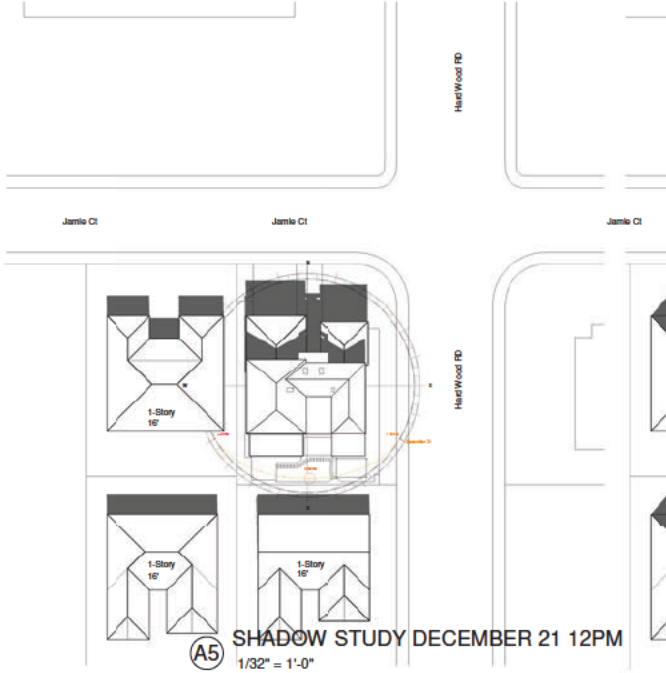
A2 SHADOW STUDY JUNE 21 12PM
1/32" = 1'-0"



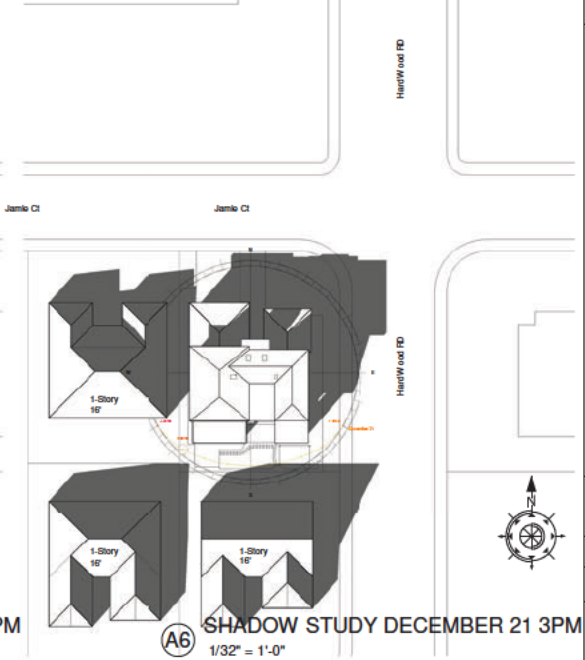
A3 SHADOW STUDY JUNE 21 3PM
1/32" = 1'-0"



A4 SHADOW STUDY DECEMBER 21 9AM
1/32" = 1'-0"



A5 SHADOW STUDY DECEMBER 21 12PM
1/32" = 1'-0"



A6 SHADOW STUDY DECEMBER 21 3PM
1/32" = 1'-0"

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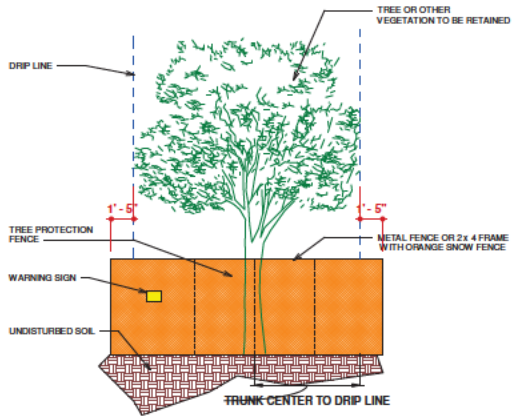
SHADOW STUDY PLAN

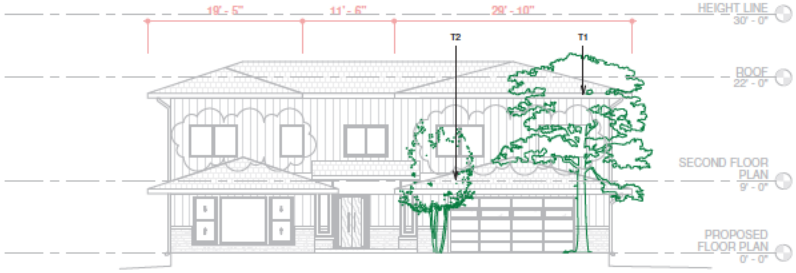
SCALE
As Indicated

DATE
2026/08/14

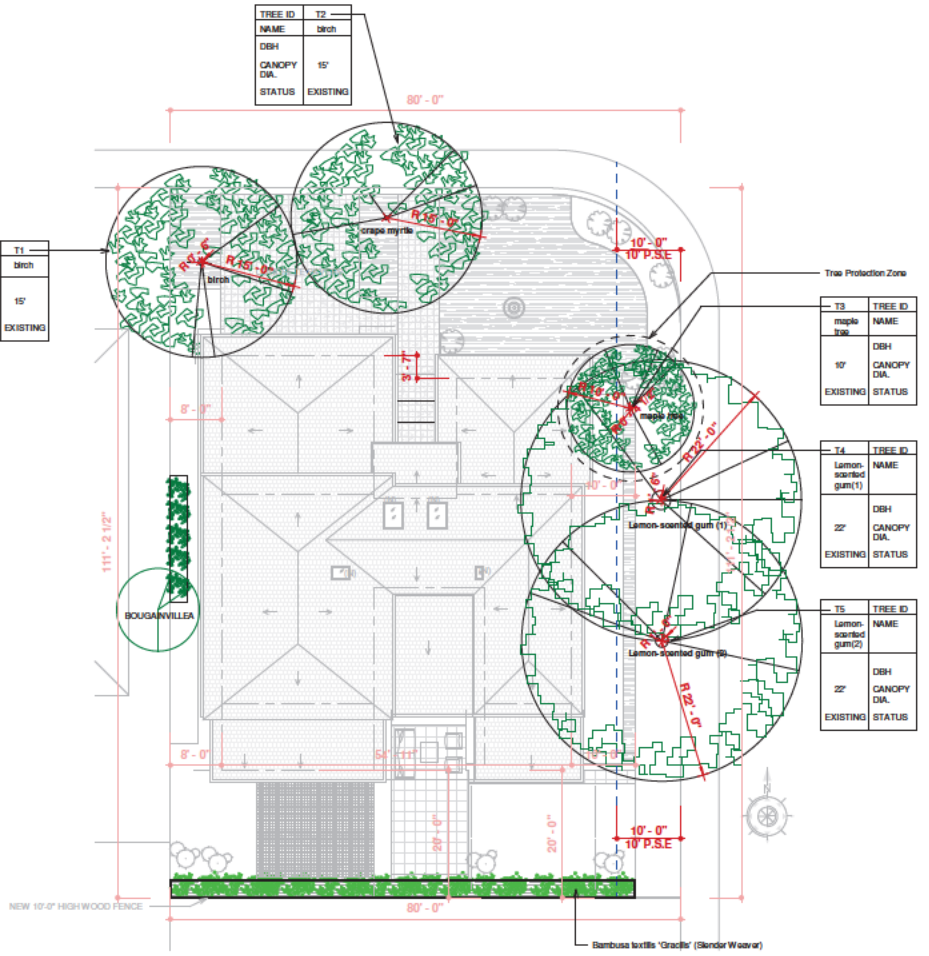
SHEET NUMBER
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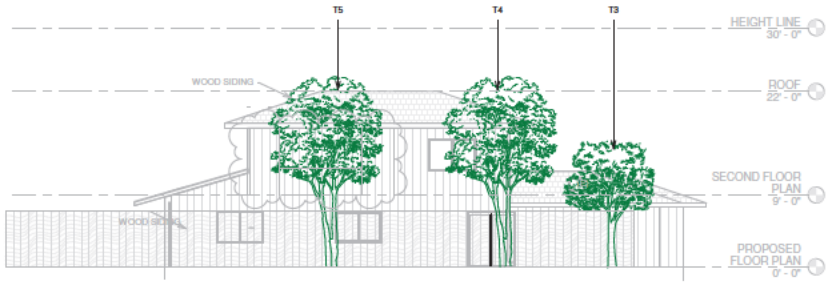




1 PROPOSED FRONT (NORTH) ELEVATIONS (TREE PROTECTION DETAIL)
1/8" = 1'-0"



3 TREE PROTECTION PLAN
1" = 10'-0"



2 TREE PROTECTION DETAIL (TREE PROTECTION DETAIL)
1/8" = 1'-0"

TREE SCHEDULE

TREE NUMBER	T1	T2	T3	T4	T5
COMMON NAME	birch	crape myrtle	maple tree	Lemon-scented gum (1)	Lemon-scented gum (2)
DBH	6"		4.5"	18"	12"
CANOPY DIA.	15'	15'	10'	22'	22'
STATUS	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING

PRIVACY SCREENING MATRIX

NO.	SPECIES		QUANTITY	CONTAINER SIZE (GAL.)	HEIGHT AT PLANTING
01	Bambusa textilis 'Gracilis' (Slender Weaver)		26	15GAL	12'

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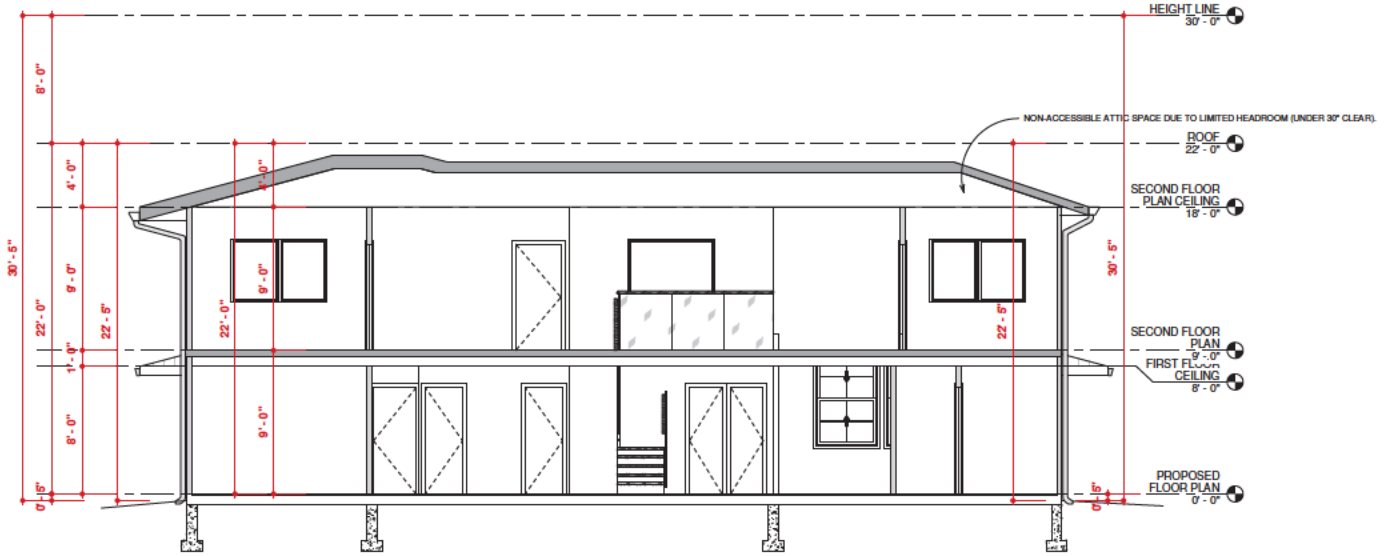
TREE PROTECTION PLAN

SCALE
As indicated

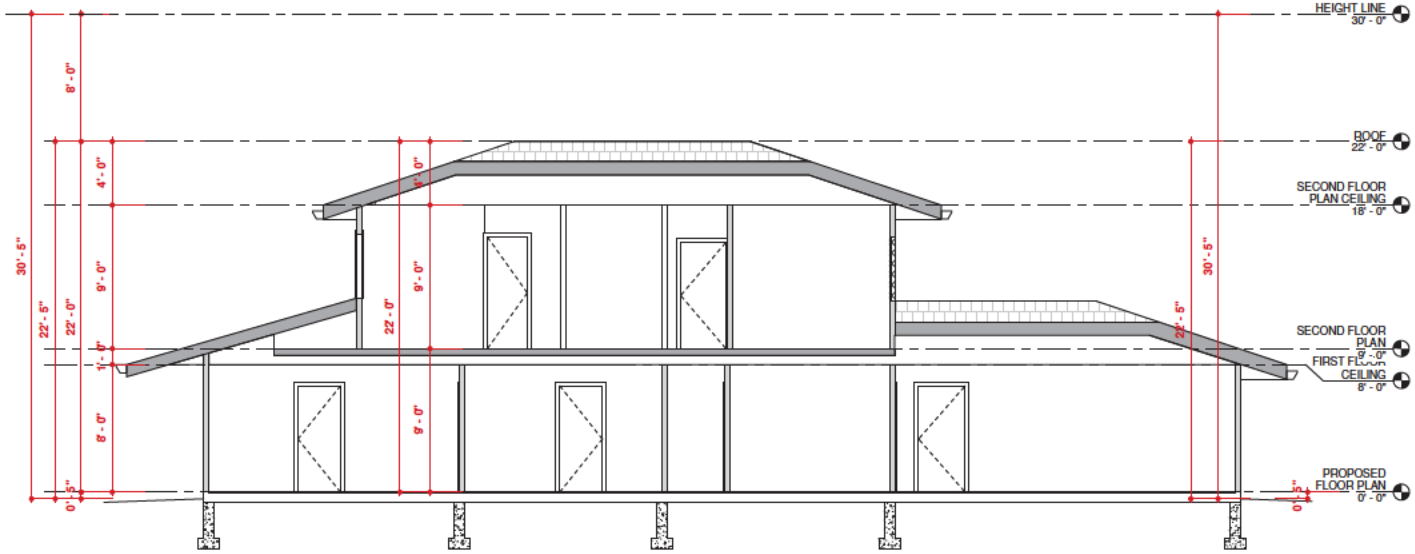
DATE
2026/10/14

SHEET NUMBER
A12.9

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1 Section 1
1/4" = 1'-0"



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

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BUILDING SECTION

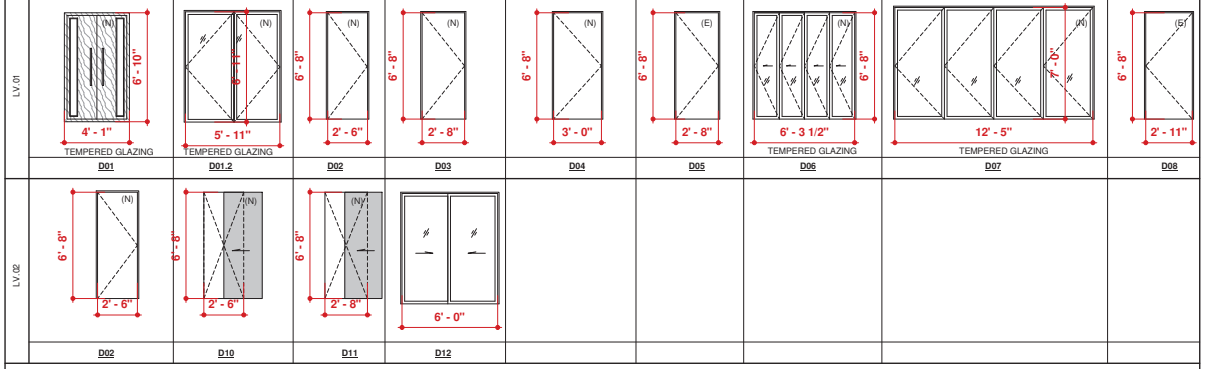
SCALE
1/4" = 1'-0"

DATE
2026/10/14

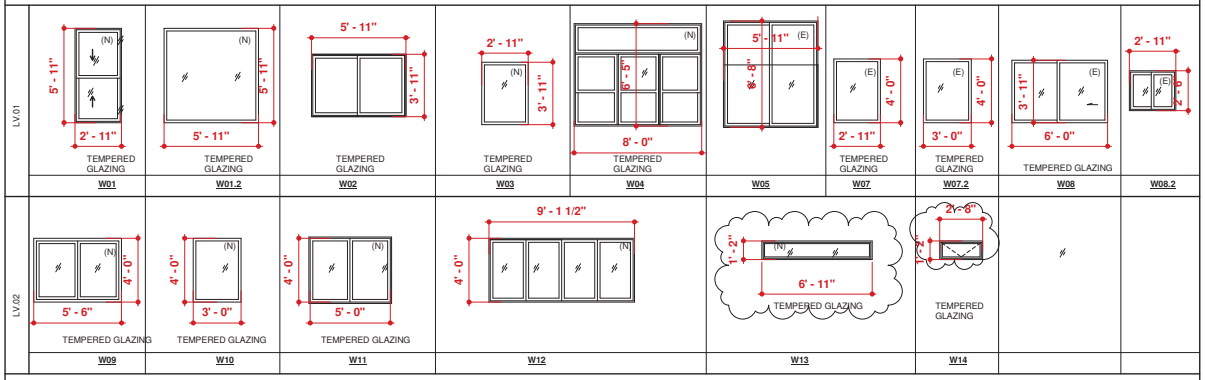
SHEET NUMBER
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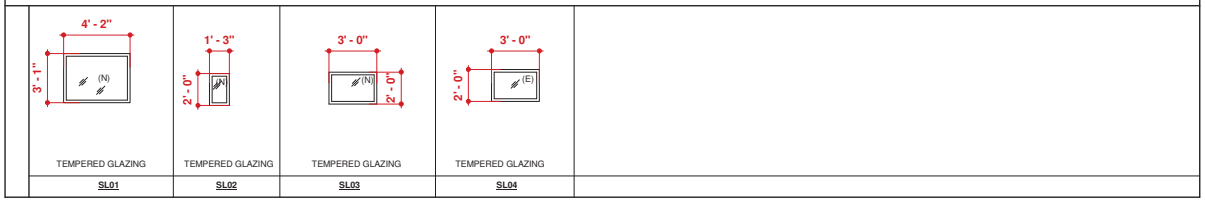
DOOR SCHEDULE



WINDOW SCHEDULE



SKYLIGHT SCHEDULE



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DOOR AND WINDOW SCHEDULE

SCALE
1/4" = 1'-0"

DATE
2026/10/14

SHEET NUMBER
A14

DOOR AND WINDOW SCHEDULE
1/4" = 1'-0"

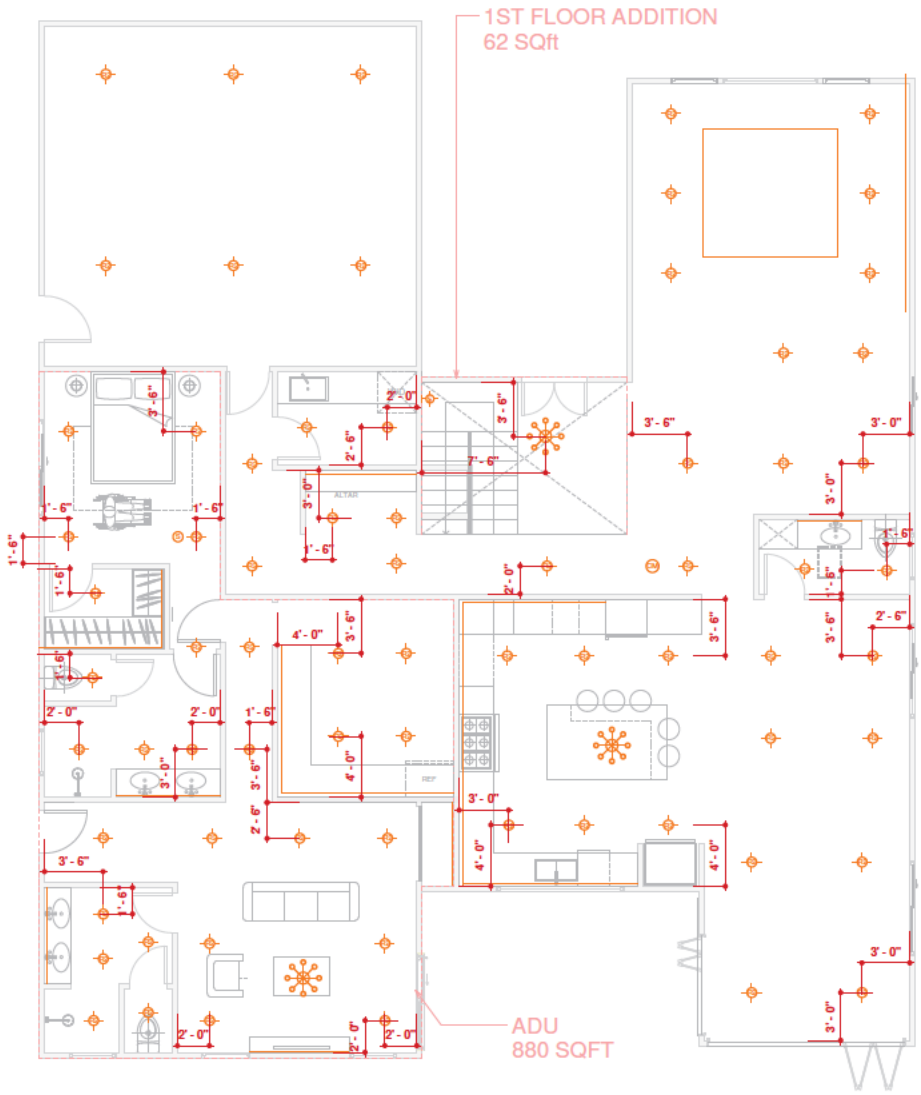
Docusign Envelope ID: 526AD49C-7B45-6B97-0179-1866DCBDC2AD

ELECTRICAL NOTES:

1. VERIFY LOCATION OF EXISTING OUTLETS AND ADD OUTLETS TO MEET SPACING OF CURRENT CODE.
2. LOCATIONS OF GENERAL USE RECEPTACLE OUTLETS AT NEW AND MODIFIED INTERIOR WALLS TO MEET THE PROVISIONS IN CEC. IN KITCHEN, FAMILY ROOM, DINING ROOM, LIBRARY AND BEDROOM RECEPTACLE OUTLETS SHALL BE INSTALLED SUCH THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE OF ANY WALL SPACE IS MORE THAN 6 FEET. WALL SPACE IN ANY SECTION OF WALL 2 FEET OR LONGER.
3. AFCI PROTECTION FOR ALL BEDROOM RECEPTACLES.
4. RECEPTACLES OUTLETS AT HOUSE FRONT AND REAR EXTERIOR WALLS ARE GFCI PROTECTED GASKETED-COVER TYPE FOR USE IN WET LOCATIONS.
5. PROVIDE ARC-FAULT CIRCUIT INTERRUPTER AT ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE-PHASE, 15 AND 20 AMPERE RECEPTACLE OUTLETS INSTALLED INDWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREA. (CEC 210-12B)
6. ALL 125-VOLT, 15AMP AND 20-AMP RECEPTACLE OUTLETS SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. (CEC 406.11, ARTICLE 210.52)
7. ALL 125-VOLT, SINGLE-PHASE, 15AMP AND 20AMP RECEPTACLES INSTALLED IN THE FOLLOWING LOCATIONS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL. (CEC 210.8):
a. BATHROOMS, GARAGES, OUTDOORS, CRAWL SPACES, UNFINISHED BASEMENTS.
b. KITCHEN COUNTERTOP SURFACES.
c. LAUNDRY, UTILITY AND WET BAR SINKS (WITHIN 6 FEET OF THE EDGE OF SINK)
d. BOATHOUSES.
8. ADDITIONAL LIGHTING OUTLETS SHALL BE INSTALLED IN THE FOLLOWINGS: FOR DWELLING UNITS AT LEAST ONE WALL SWITCH CONTROLLED LIGHTING OUTLET SHALL BE INSTALLED TO PROVIDE ILLUMINATION ON THE EXTERIOR SIDE OF OUTDOOR ENTRANCES OR EXITS WITH GRADE LEVEL ACCESS.
9. PROVIDE SMOKE DETECTORS IN EACH SLEEPING ROOM AND IN CORRIDORS GIVING ACCESS TO EACH SLEEPING AREA. ALL SMOKE DETECTOR SHALL BE HARDWIRED TO 110V WITH BATTERY BACKUP AND SHALL BE INTERCONNECTED.
10. CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN DWELLING UNITS WHICH HAVE FUEL-BURNING APPLIANCES AND ATTACHED GARAGES, THESE ALARMS SHALL BE LOCATED OUTSIDE OF EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S) AND ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENT. DETECTORS SHALL BE INTERCONNECTED TO SOUND SIMULTANEOUSLY.
11. LIGHT OUTDOOR WALL MOUNT BRUSHED ALUMINUM FINISH WITH WHITE.
12. ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST EDITION ELECTRICAL CODE (CEC).
13. ELECTRICAL CONTRACTOR SHALL EVALUATE EXISTING SERVICE ENTRANCE PANEL BOX AND SERVICE CAPACITY AND MAKE A RECOMMENDATION TO THE OWNER AS TO ANY NECESSARY CHANGES.
14. WALL SWITCH-CONTROLLED EXTERIOR LIGHT FIXTURES AT THE EXTERIOR SIDE(S) OF OUTSIDE ENTRANCE/EXIT DOORS.
15. THE FOUNDATION SHALL HAVE A CONCRETE ENCASED ELECTRODE (#6 AWG COPPER WIRE).
16. ALL RECESSED LIGHT FIXTURES SHALL BE IC RATED AND AIR TIGHT OR FIXTURES NOT IDENTIFIED FOR CONTACT WITH INSULATION SHALL HAVE ALL RECESSED PARTS SPACED AT LEAST 1/2" FROM COMBUSTIBLE MATERIAL AND 3" FROM THERMAL INSULATION.
17. CONSULT PG&E FOR ELECTRICAL SERVICE REQUIREMENT.

Lighting Fixture Schedule

SYMBOL	MOUNTING TYPE/ DESCRIPTION	POWER	COLOR TEMPERATURE	QUANITY
	WALL-MOUNTED LIGHT	5W	3000K	
	MIRROR LIGHT	5W	3000K	
	PICTURE LIGHT	5W	3000K	
	RECESSED LIGHT	12W	3500K	
	RECESSED LIGHT	6W	3000K	
	RECESSED LIGHT	15W	5000K	
	RECESSED LIGHT	6W	4000K	
	CHANDELIER	5W	3500K	
	PENDANT	12W	3000K	
	PENDANT	5W	3500K	
	PENDANT	10W	3000K	
	PENDANT	10W	3000K	
	PENDANT	5W	3000K	
	PENDANT	5W	3000K	
	KITCHEN LED LINEAR LIGHT	5W	4000K	
	OTHER LED LINEAR LIGHTS	5W	4000K	
CM	CARBON MONOXIDE DETECTOR			
S	SMOKE ALARMS			



1 FIRST FLOOR LIGHTING PLAN
1/4" = 1'-0"

CUSTOM HOME DESIGN AND BUILD

2092 CONCOURSE DR
#9 SAN JOSE,
CA 95131
WWW.CUSTOMHOME.US

EMAIL:
INFO@CUSTOMHOME.US
PHONE: 407-701-7116

REVISIONS	BY

DESIGN MANAGER

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

PROPOSED ELECTRICAL FOOR PLAN

SCALE
As indicated

DATE
2026/10/14

SHEET NUMBER
E01

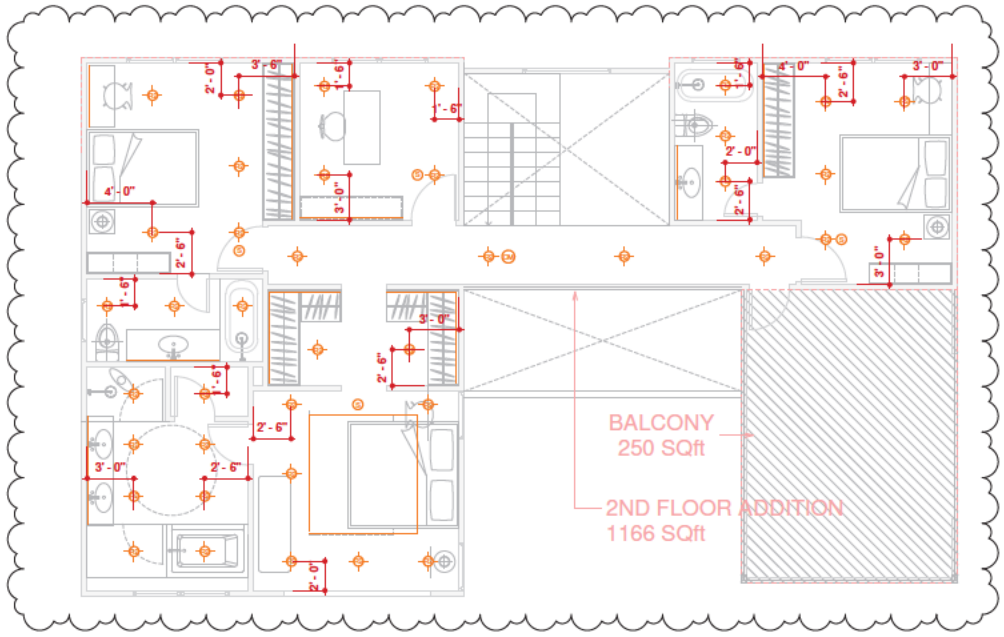
Docusign Envelope ID: 526AD49C-7B45-6B97-0179-1866DCBDC2AD

ELECTRICAL NOTES:

1. VERIFY LOCATION OF EXISTING OUTLETS AND ADD OUTLETS TO MEET SPACING OF CURRENT CODE.
2. LOCATIONS OF GENERAL USE RECEPTACLE OUTLETS AT NEW AND MODIFIED INTERIOR WALLS TO MEET THE PROVISIONS IN CEC. IN KITCHEN, FAMILY ROOM, DINING ROOM, LIBRARY AND BEDROOM RECEPTACLE OUTLETS SHALL BE INSTALLED SUCH THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE OF ANY WALL SPACE IS MORE THAN 6 FEET. WALL SPACE IN ANY SECTION OF WALL 2 FEET OR LONGER.
3. AFCI PROTECTION FOR ALL BEDROOM RECEPTACLES.
4. RECEPTACLES OUTLETS AT HOUSE FRONT AND REAR EXTERIOR WALLS ARE GFCI PROTECTED GASKETED-COVER TYPE FOR USE IN WET LOCATIONS.
5. PROVIDE ARC-FAULT CIRCUIT INTERRUPTER AT ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE-PHASE, 15 AND 20 AMPERE RECEPTACLE OUTLETS INSTALLED INDWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREA. (CEC 210-12B)
6. ALL 125-VOLT, 15AMP AND 20-AMP RECEPTACLE OUTLETS SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. (CEC 406.11, ARTICLE 210.52)
7. ALL 125-VOLT, SINGLE-PHASE, 15AMP AND 20AMP RECEPTACLES INSTALLED IN THE FOLLOWING LOCATIONS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL. (CEC 210.8):
a. BATHROOMS, GARAGES, OUTDOORS, CRAWL SPACES, UNFINISHED BASEMENTS.
b. KITCHEN COUNTERTOP SURFACES.
c. LAUNDRY, UTILITY AND WET BAR SINKS (WITHIN 6 FEET OF THE EDGE OF SINK)
d. BOATHOUSES.
8. ADDITIONAL LIGHTING OUTLETS SHALL BE INSTALLED IN THE FOLLOWINGS: FOR DWELLING UNITS AT LEAST ONE WALL SWITCH CONTROLLED LIGHTING OUTLET SHALL BE INSTALLED TO PROVIDE ILLUMINATION ON THE EXTERIOR SIDE OF OUTDOOR ENTRANCES OR EXITS WITH GRADE LEVEL ACCESS.
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	PENDANT	5W	3000K	
	KITCHEN LED LINEAR LIGHT	5W	4000K	
	OTHER LED LINEAR LIGHTS	5W	4000K	
CM	CARBON MONOXIDE DETECTOR			
S	SMOKE ALARMS			



1 SECOND FLOOR LIGHTING PLAN
1/4" = 1'-0"

CUSTOM HOME DESIGN AND BUILD
2092 CONCOURSE DR
#9 SAN JOSE,
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EMAIL:
INFO@CUSTOMHOME.US
PHONE: 407-701-7116

REVISIONS	BY

DESIGN MANAGER

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

PROPOSED ELECTRICAL FOOR PLAN

SCALE
As Indicated

DATE
2026/10/14

SHEET NUMBER
E02

Docusign Envelope ID: 526AD49C-7B45-8B97-8179-1866DCBDC2AD

2025 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Code must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the prospective sections for more information.

Space Conditioning, Water Heating, and Plumbing System:

§ 110.0-110.3:	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, 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 Tables 110.2-A through -L.
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Heaters.** Heat pumps with supplementary heaters must have control requirements as specified in § 150.0(b)7 and § 150.0(b)12. *
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.2(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.
§110.3(c)7:	**Backup Heat and Ventilation.** Air-source heat pump water heaters must have backup heat (internal or external) if inlet air is unconditioned, unless compressor cut-off temperature is below Heating Winter Median of Extremes from Reference Appendix JA2. Heat pump water heater installation space and/or communicating space(s) must meet minimum volume, ducting, and/or grille net free area by kBtu/h of compressor capacity.
§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas fan-type central furnaces, household cooking appliances (except appliances without electrical supply voltage connection with pilot lights that consume less than 150 Btu/h), 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 any dryer outlet or vent.
§ 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(h)5:	**System Selection.** Equipment sizing and selection must meet the cooling and heating loads of § 150.0(h)1 & 2, and systems must be sized per ACCA Manual S-2023 with no minimum cooling capacity. Furnace heating capacity must meet ACCA Manual S. Heat pump heating capacity must meet maximum OSC requirements without including supplementary heat with no limit on maximum heating capacity.
§ 150.0(h)6:	**Defrost.** Installer-adjustable defrost delay timers must be set to greater than or equal to 90 minutes. CF2R certification required. *
§ 150.0(h)7:	**Supplementary Heating Control Configuration:** Heat pumps with supplementary heating must have controls to lock supplementary heating above outside air temperatures no greater than 35°F, allowed during defrost or emergency operation. CF2R certification required. *
§ 150.0(h)8:	**Sizing of Electric Resistance Supplementary Heat.** When heat pumps have electric resistance heat, the capacity of electric resistance heat must not exceed the heat pump nominal cooling capacity (at 95°F ambient conditions) multiplied by 2.7 kW per ton, rounded up to the closest kW.
§ 150.0(h)9:	**Capacity Variation with Third-party Thermostats:** For variable or multi-speed systems, the space conditioning system and thermostat must be capable of responding to heating and cooling loads by modulating system compressor speed and must meet thermostat requirements of § 150.0(i)2. CF2R certification required.
§ 150.0(i):	**Thermostat.** All heating or cooling systems including heat pumps which are not controlled by energy management control system (EMCS) must have setback thermostat. Additional requirements for thermostats that control heat pumps with supplemental heating include thermostat must display outdoor air temperature, must lock out supplementary heat when outdoor air temperature is above 35°F, and must notify when supplemental heat is in use. *
§ 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 § 609.12 of the California Plumbing Code. *
§ 150.0(j)2:	**Insulation Protection.** Piping insulation must be protected from damage, including from 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 II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(j)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' available 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(j)2:	**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- and return air ducts and plenums must be insulated to R-6.0 or higher. Ducts located entirely in conditioned space as confirmed via field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation; in dwelling units with attics, the ducts must be below the ceiling separating occupiable space from the attic. 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 applicable UL requirements; or aerosol sealant that meets UL 723. The combination of mastic and other mesh or tape must be used to seal openings greater than ¼". If mastic or tape is used, Building cavities, air handler support

2025 Single-Family Residential Mandatory Requirements Summary

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)2-4:	**U-factor, Solar heat gain coefficient, Visible transmittance.** The fenestration product and exterior door's U-factor and solar heat gain coefficient (SHGC) shall be rated in accordance with NFRC 100 and NFRC 200, or use the applicable defaults in Table 110.6-A and TABLE 110.6-B. The visible transmittance (VT) shall be rated in accordance with NFRC 200 or ASTM E972, for tubular daylighting devices VT shall be rated using NFRC 203. *
§ 110.6(a)5:	**Labelling.** 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 from Table 110.6-A and solar heat gain coefficient (SHGC) values from Table 110.6-B. 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 labelled 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 above conditioned space 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 that 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-15 insulation in 2x4 inch wood framing wall or have a U-factor of 0.095 or less, or R-21 in 2x6 inch wood framing or have a U-factor of 0.069 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. *
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in wood framed raised-floor or 0.037 maximum U-factor. *
§ 150.0(f)	**Slab Edge Insulation.** Slab-edge insulation must meet the following: water absorption rate no greater than 0.3 percent for insulation material alone without facings; water vapor permeance no greater than 2.0 perm per inch; 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 area-weighted average U-factor of 0.40.

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 comply with access, pathway, smoke ventilation, and spacing requirements per Title 24, Part 9, or other parts of Title 24, or any requirements adopted by a local jurisdiction. 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. The solar zone total area must be comprised of areas with no dimension less than 5 feet and no less than 80 square feet each for buildings with roof areas up to 10,000 square feet; or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. *
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on sloped roofs must have an azimuth between 90 -300° of true north.
§ 110.10(b)3A:	**Shading.** No obstructions in solar zone, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. *
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system

2025 Single-Family Residential Mandatory Requirements Summary

	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** must comply with applicable requirements of UL 181 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** 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 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 to sunlight, 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.** Flex ducts with porous inner cores 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 and prevents air from bypassing the filter. *
§ 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 shall meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in §150.0(o)1. *
§ 150.0(o)1B:	**Central Fan integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers used in CFI systems is not a permissible method to provide whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) shall be installed on the ventilation duct(s) that prevents all air-handling unit flow from the space conditioning duct system when the damper(s) is closed and controlled per §150.0(o)1Ria&c. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family dwellings.** Single-family dwellings shall have mechanical ventilation specified in §150.0(o)1O and 150.0(o)1Oa.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 may reduce their required mechanical ventilation rates in accordance with §150.0(o)1Cii-iii. * Vertically attached dwelling units shall not reduce their minimum ventilation rates in accordance with §150.0(o)1Cii-iii.
§ 150.0(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms shall have local mechanical exhaust, nonrecirculated kitchens shall have demand-controlled exhaust system meeting requirements of §150.0(o)1Gii, enclosed kitchens and bathrooms shall either use demand-controlled as specified in §150.0(o)1Gii or continuous exhaust as specified in §150.0(o)1Giv. Airflow shall be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H-J:	**Airflow Measurement, Sound Ratings, Label of Whole-Dwelling Unit Ventilation Systems.** The airflow required per §150.0(o)1C shall 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 shall be rated for sound per ASHRAE 62.2 §7.3 at no less than the minimum airflow rate required by §150.0(o)1C. Manual on-off switches must be labeled per §150.0(o)1M.
§ 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 shall be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods shall 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.

Electric and Battery Energy Storage Ready:

§ 150.0(s):	**Battery Energy Storage System (BESS) Ready.** All single-family residences that include one or two dwelling units, which a load serving entity provides with electrical service for the dwelling unit that is greater than 125 amps, shall meet at least one of the following: Either BESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more BESS supplied branch circuits in §150.0(s)2, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s)2; at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the BFSS.

2025 Single-Family Residential Mandatory Requirements Summary

§ 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."

Fireplaces, Decorative Gas Appliances, and Gas Log:

§ 150.0(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. *

Pool and Spa Systems and Equipment:

§ 110.4(a):	**Certification by Manufacturers.** Pool/spa heating equipment must be certified as compliant with Appliance Efficiency Regulations, have an externally mounted, readily accessible on-off switch that allows shutting off the heater without adjusting the thermostat; permanent, easily readable weatherproof plate or card with energy efficiency rating and operating instructions.
§ 110.4(b)1:	**Heating Equipment.** Pool/spa heating equipment must meet applicable standards, by fuel type.
§ 110.4(b)2:	**Piping.** At least 18 inches of horizontal or vertical pipe installed between the filter and the heater; or dedicated suction and return lines; or built-in or built-up connections installed to allow for the future additions of solar heating equipment.
§ 110.4(b)3:	**Covers.** Outdoor pools or spas with electric or gas heater must have a cover.
§ 110.4(b)4:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a permanently installed time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.4(c):	**Heat Source Sizing.** Pool/spa heating systems must be solar heating system with collector area of at least 60% of pool/spa surface area, heat pump sized per JA18.3, combination of solar and heat pump, or use 60% or more on-site renewable/recoverable energy. *
§ 110.4(d)	**Heat Pump Pool Heaters with Supplementary Heating.** Controls for such systems must limit supplementary heating when the heating load can be met by the heat pump alone.
§ 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.** Single-family pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.

*Exceptions may apply.

2025 Single-Family Residential Mandatory Requirements Summary

	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 feet 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."

Lighting:

§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, light sources, and luminaires must meet the applicable requirements of §110.9. *
§ 150.0(k)1A	**Luminaire Efficacy.** All installed luminaires and light sources must meet the requirements of Reference Joint Appendix JA8, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt; and ceiling fan kits subject to DOE's Appliance and Equipment Standards. *
§ 150.0(k)1C:	**Recessed Downlight Luminaires In Ceilings.** Luminaires recessed into ceilings must not contain screw-based sockets, be airtight with air leakage rate < 2.0 cfm at 75 Pascals, and leak paths be sealed with a gasket or caulk. California Electrical Code Article 410.116 must also be met. *
§ 150.0(k)1D:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources installed in enclosed or recessed luminaires must meet the JA8 elevated temperature requirements, including marking requirements.
§ 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)2A:	**Indoor Lighting Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off.
§ 150.0(k)2D:	**Controls Permitted.** 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. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function installed to comply with §150.0(k)2.
§ 150.0(k)2E:	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	**Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down, except lighting integral to kitchen range hoods and bathroom exhaust fans, navigation lighting less than 5 watts, lighting internal to drawers, cabinetry with opaque fronts or doors and controlled by automatic-off controls, luminaires in a circuit with controlled lighting power less than 20 watts or controlled by an occupancy or vacancy sensor. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A. Lighting integrated with ceiling fan may be controlled via a remote control.
§ 150.0(k)2G:	**Independent Controls.** Lighting integral to exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3:	**Residential Outdoor Lighting.** Outdoor lighting permanently mounted to a single-family residential building or other buildings on the same lot must meet luminaire efficacy requirements of §150.0(k)1A, have a manual on/off switch and either a photocell and motion sensor, a photocell and automatic time switch, or an astronomical time clock. Controls that override to ON are not allowed, unless that override automatically returns the automatic control to its normal operation within 6 hours. As EMCS or other controls that provides the specified control functionality may be used but must meet all applicable requirements.
§ 150.0(k)4:	**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.

Custom Home Inc.
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WWW.CUSTOMHOME.US
EMAIL: INFO@CUSTOMHOME.US
PHONE: 407-701-7116

REVISIONS	BY

DESIGN MANAGER

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

2025 Single-Family Residential Mandatory Requirements Summary

SCALE

DATE
2026/08/14

SHEET NUMBER
F01

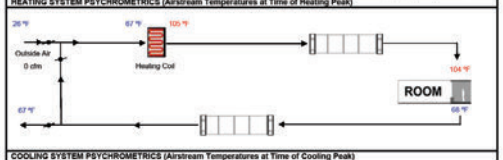
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HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

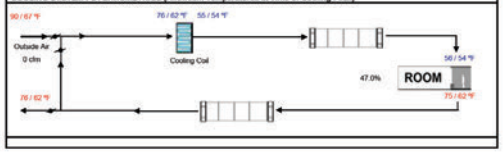
Project Name: Jamie EAA
Date: 5/27/2026
System Name: HVAC
Floor Area: 1,166

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	1						
Heating System		Total Room Loads	531	10,921	497	355	13,588
Output per System	18,000	Return Vented Lighting					
Total Output (Btuh)	18,000	Return Air Ducts		426			644
Output (Btuh/sqft)	15.4	Return Fan		0			0
Cooling System		Ventilation	0	0	0	0	0
Output per System	12,000	Supply Fan		0			0
Total Output (Btuh)	12,000	Supply Air Ducts		426			644
Total Output (Tons)	1.0						
Total Output (Btuh/sqft)	10.3	TOTAL SYSTEM LOAD		11,774	497		14,875
Total Output (sqft/Ton)	1,166.0						
Air System		HVAC EQUIPMENT SELECTION					
CFM per System	0	High Efficiency Fau/AC		11,347	0		18,000
Airflow (cfm)	0						
Airflow (cfm/sqft)	0.00						
Airflow (cfm/Ton)	0.0	Total Adjusted System Output (Adjusted for Peak Design conditions)		11,347	0		18,000
Outside Air (%)	0.0%						
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)

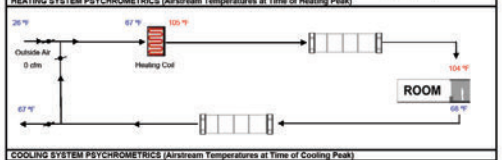


HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

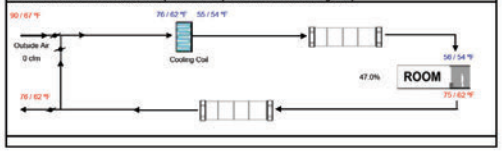
Project Name: Jamie EAA
Date: 5/27/2026
System Name: HVAC
Floor Area: 1,628

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	1						
Heating System		Total Room Loads	812	16,789	694	451	17,278
Output per System	30,000	Return Vented Lighting					
Total Output (Btuh)	30,000	Return Air Ducts		526			841
Output (Btuh/sqft)	18.4	Return Fan		0			0
Cooling System		Ventilation	0	0	0	0	0
Output per System	18,000	Supply Fan		0			0
Total Output (Btuh)	18,000	Supply Air Ducts		526			941
Total Output (Tons)	1.5						
Total Output (Btuh/sqft)	11.1	TOTAL SYSTEM LOAD		17,842	694		19,161
Total Output (sqft/Ton)	1,085.3						
Air System		HVAC EQUIPMENT SELECTION					
CFM per System	0	Standard Fau/AC		17,014	0		30,000
Airflow (cfm)	0						
Airflow (cfm/sqft)	0.00						
Airflow (cfm/Ton)	0.0	Total Adjusted System Output (Adjusted for Peak Design conditions)		17,014	0		30,000
Outside Air (%)	0.0%						
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)

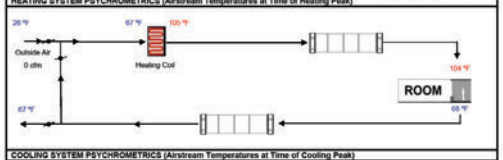


HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

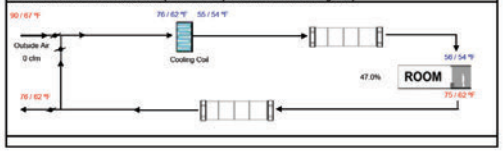
Project Name: Jamie EAA
Date: 5/27/2026
System Name: FAU
Floor Area: 880

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	1						
Heating System		Total Room Loads	384	7,905	375	240	9,231
Output per System	18,000	Return Vented Lighting					
Total Output (Btuh)	18,000	Return Air Ducts		308			437
Output (Btuh/sqft)	20.5	Return Fan		0			0
Cooling System		Ventilation	0	0	0	0	0
Output per System	0	Supply Fan		0			0
Total Output (Btuh)	0	Supply Air Ducts		308			437
Total Output (Tons)	0.0						
Total Output (Btuh/sqft)	0.0	TOTAL SYSTEM LOAD		8,522	375		10,106
Total Output (sqft/Ton)	0.0						
Air System		HVAC EQUIPMENT SELECTION					
CFM per System	0	High Efficiency Fau		0	0		18,000
Airflow (cfm)	0						
Airflow (cfm/sqft)	0.00						
Airflow (cfm/Ton)	0.0	Total Adjusted System Output (Adjusted for Peak Design conditions)		0	0		18,000
Outside Air (%)	0.0%						
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)



Custom Home
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CUSTOM HOME
DESIGN AND BUILD

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REVISIONS	BY

DESIGN MANAGER

Signed by:
9F1D...

JAMIE CT

100 JAMIE CT , LOS GATOS, CA, 95032

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

SCALE

DATE
2026/08/14

SHEET NUMBER
F02

Docusign Envelope ID: 526AD49C-7B45-8B97-0179-1866DCBDC2AD

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

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-01:00 — (Page 1 of 16)

Calculation Description: Title 24 Analysis — **Input File Name:** Building2.rbd25x

GENERAL INFORMATION

01	Project Name	Jamie EAA			
02	Run Title	Title 24 Analysis			
03	Project location	100 Jamie Ct			
04	City	Los Gatos	05	Standards Version	2025
06	Zip code	95032	07	Software Version	EnergyPro 10.1
08	Climate Zone	4	09	Front Orientation (deg/Cardinal)	0
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Addition and/or Alteration	13	Number of Bedrooms	5
14	Addition Cond. Floor Area (ft²)	1286	15	Number of Stories	1
16	Existing Cond. Floor Area (ft²)	2128	17	Fenestration Average U-factor	0.3
18	Total Cond. Floor Area (ft²)	3674	19	Glazing Percentage (%)	17.58%
20	ADU Bedroom Count	2	21	ADU Conditioned Floor Area	880
22	Pool Type	Natural gas	23	No Dwelling Unit	No

COMPLIANCE RESULTS

Building Complies with Computer Performance

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

This building incorporates one or more Special Features shown below

REQUIRED SPECIAL FEATURES

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

- Insulation below roof deck
- Ducts in crawl space

Registration Number: 426-P010158162A-000-000-0000000-0000 — Registration Date/Time: 05/27/2026 20:46 — ECC Provider: CHEERS

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CA Building Energy Efficiency Standards - 2025 Single-family Compliance — Report Version: 2025.0.000 — Schema Version: rev 20250101 — Report Generated: 2026-05-27 20:14:15

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

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-01:00 — (Page 2 of 16)

Calculation Description: Title 24 Analysis — **Input File Name:** Building2.rbd25x

ECC FEATURE SUMMARY

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

- Indoor air quality ventilation
- Kitchen range hood
- Minimum airflow
- Fan efficacy Watts/CFM
- Ductleakage testing

Compliance Summary

	Long Term System Cost (LSC)[1]		Source Energy Use	Peak Cooling**
	Efficiency[2] ($/ft²-yr)	Total[3] ($/ft²-yr)	Total[3] (kBtu/ft²-yr)	Electricity (kW/h)
Standard Design	28.17	n/a	n/a	n/a
Proposed Design	27.71	n/a	n/a	n/a
Compliance Margins	0.46	n/a	n/a	n/a
	Pass			

RESULT*:Complies

[1]Long-term System Cost (LSC) is a 30-year present value cost to California's energy system. LSC is not a predicted utility bill.
[2]Efficiency measures include energy efficient improvements such as better building envelope and more efficient mechanical equipment
[3]Total includes the sum of efficiency measures, solar photovoltaic (PV) measures and battery storage measures
* Building complies when Proposed Design is equal to or less than Standard Design in all applicable compliance categories
** Peak cooling target represents 120% of the standard design building peak cooling energy use.

Standard Design PV Capacity: 0.00 kWdc

Registration Number: 426-P010158162A-000-000-0000000-0000 — Registration Date/Time: 05/27/2026 20:46 — ECC Provider: CHEERS

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CA Building Energy Efficiency Standards - 2025 Single-family Compliance — Report Version: 2025.0.000 — Schema Version: rev 20250101 — Report Generated: 2026-05-27 20:14:15

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

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-01:00 — (Page 3 of 16)

Calculation Description: Title 24 Analysis — **Input File Name:** Building2.rbd25x

ISC AND SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS

Energy Use	Standard Design Source Energy (kBtu/ft²-yr)	Standard Design LSC[1] ($/ft²-yr)	Proposed Design Source Energy (kBtu/ft²-yr)	Proposed Design LSC[1] ($/ft²-yr)	Compliance Margin Source (kBtu/ft²-yr)	Compliance Margin LSC[1] ($/ft²-yr)
Space Heating	0	14.64	0	13.76	0	1.88
Space Cooling	0	2.51	0	2.88	0	-0.37
IAQ Ventilation	0	0.87	0	0.87	0	0
Water Heating	0	10.15	0	10.2	0	-0.05
Self Utilization/Flexibility Credit	n/a	n/a	n/a	0	n/a	0
Efficiency Compliance Total	0	28.17	0	27.71	0	1.46
Photovoltaics And Battery	n/a	n/a	n/a	0	n/a	0
Flexibility	n/a	n/a	n/a	n/a	n/a	n/a
Indoor Lighting	0	1.49	0	1.49	n/a	0
Appl. & Cooking	0	4.39	0	4.39	n/a	0
Plug Loads	0	5.1	0	5.1	n/a	0
Outdoor Lighting	0	0.41	0	0.41	n/a	0
TOTAL COMPLIANCE	0	39.1	0	39.34	0.46	

Registration Number: 426-P010158162A-000-000-0000000-0000 — Registration Date/Time: 05/27/2026 20:46 — ECC Provider: CHEERS

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CA Building Energy Efficiency Standards - 2025 Single-family Compliance — Report Version: 2025.0.000 — Schema Version: rev 20250101 — Report Generated: 2026-05-27 20:14:15

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

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-01:00 — (Page 4 of 16)

Calculation Description: Title 24 Analysis — **Input File Name:** Building2.rbd25x

ENERGY USE INTENSITY

	Standard Design (kBtu/ft² - yr)	Proposed Design (kBtu/ft² - yr)	Margin (kBtu/ft² - yr)	Margin Percentage
Gross EUI[1]	27.69	27.26	0.43	1.55
Net EUI[2]	27.69	27.26	0.43	1.55

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.

BUILDING FEATURES INFORMATION

01 Project Name	02 Conditioned Floor Area (ft²)	03 Number of Dwelling Units	04 Number of Bedrooms	05 Number of Zones	06 Number of Ventilation Cooling Systems	07 Number of Water Heating Systems
Jamie EAA	3674	1	5	4	0	2

ZONE INFORMATION

01 Zone Name	02 Zone Type	03 HVAC System Name	04 Zone Floor Area (ft²)	05 Avg. Ceiling Height	06 Water Heating System 1	07 Status
Second	Conditioned	HVAC1	1386	9	DHW Sys 1	New
First_Ex	Conditioned	HVAC2	1588	9	DHW Sys 3	Existing Unchanged
First_Add	Conditioned	HVAC2	80	9	DHW Sys 3	New
ADU	Conditioned	EAU3	880	9	DHW Sys 3	Existing Unchanged

OPAQUE SURFACES SUMMARY

01 Name	02 Zone	03 Construction	04 Azimuth	05 Orientation	06 Gross Area (ft²)	07 Window and Door Area (ft2)	08 Tilt (deg)	09 Wall Exceptions	10 Status	11 Verified Existing Condition
Front Wall	Second	R-15 Wall	3	Front	550	100	90	Extension	New	n/a

Registration Number: 426-P010158162A-000-000-0000000-0000 — Registration Date/Time: 05/27/2026 20:46 — ECC Provider: CHEERS

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CA Building Energy Efficiency Standards - 2025 Single-family Compliance — Report Version: 2025.0.000 — Report Generated: 2026-05-27 20:14:15

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

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-01:00 — (Page 5 of 16)

Calculation Description: Title 24 Analysis — **Input File Name:** Building2.rbd25x

OPAQUE SURFACES SUMMARY

01 Name	02 Zone	03 Construction	04 Azimuth	05 Orientation	06 Gross Area (ft²)	07 Window and Door Area (ft2)	08 Tilt (deg)	09 Wall Exceptions	10 Status	11 Verified Existing Condition
Left Wall	Second	R-15 Wall	90	Left	380	40	90	Extension	New	n/a
Rear Wall	Second	R-15 Wall	180	Back	550	105	90	Extension	New	n/a
Right Wall	Second	R-15 Wall	270	Right	380	24	90	Extension	New	n/a
Front Wall 3	First_Ex	Default Wall 1978 to 1991	3	Front	300	99	90	none	Existing	No
Left Wall	First_Ex	Default Wall 1978 to 1991	93	Left	630	60	90	none	Existing	No
Rear Wall 2	First_Ex	Default Wall 1978 to 1991	180	Back	170	11	90	none	Existing	No
Rear Wall 3	First_Ex	R-15 Wall	180	Back	140	83	90	none	Altered	No
Right Wall 2	First_Ex	Default Wall 1978 to 1991	270	Right	30	0	90	none	Existing	No
Right Wall 3	First_Ex	R-15 Wall	270	Right	90	42	90	none	Altered	No
Front Wall 3	First_Add	R-15 Wall	3	Front	130	34	90	Extension	New	n/a
Left Wall 2	ADU	Default Wall 1978 to 1991	90	Left	100	40	90	none	Existing	No
Rear Wall 4	ADU	Default Wall 1978 to 1991	180	Back	240	12	90	none	Existing	No
Right Wall 4	ADU	Default Wall 1978 to 1991	270	Right	430	89	90	none	Existing	No
Front Wall 4	ADU	Default Wall 1978 to 1991	3	Front	100	0	90	none	Existing	No
Interior Surface	First_Ex:oFirst_Add	F-0 Wall	n/a	n/a	30	0	n/a	n/a	Existing	No
Interior Surface 2	First_Ex:oFirst_Add	F-0 Wall	n/a	n/a	99	0	n/a	n/a	Existing	No
Interior Surface 3	First_Ex:>ADU	R-15 Wall1	n/a	n/a	280	0	n/a	n/a	Altered	No

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

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-01:00 — (Page 6 of 16)

Calculation Description: Title 24 Analysis — **Input File Name:** Building2.rbd25x

OPAQUE SURFACES SUMMARY

01 Name	02 Zone	03 Construction	04 Azimuth	05 Orientation	06 Gross Area (ft²)	07 Window and Door Area (ft2)	08 Tilt (deg)	09 Wall Exceptions	10 Status	11 Verified Existing Condition
Interior Surface 4	First_Ex:oFirst_Add	F-0 Wall	n/a	n/a	90	0	n/a	n/a	Existing	No
Roof 1	Second	R-38 HP Attic	n/a	n/a	1136	n/a	n/a	n/a	New	n/a
Roof 4	First_Ex	R-38 HP Attic	n/a	n/a	450	n/a	n/a	n/a	New	n/a
Roof 5	ADU	R-38 HP Attic	n/a	n/a	880	n/a	n/a	n/a	Altered	No
Raised Floor	First_Ex	R-19 Floor Cowlspace	n/a	n/a	1548	n/a	n/a	n/a	Altered	No
Raised Floor 2	First_Add	R-19 Floor Cowlspace	n/a	n/a	80	n/a	n/a	n/a	New	n/a
Raised Floor 3	ADU	R-19 Floor Cowlspace	n/a	n/a	880	n/a	n/a	n/a	Altered	No
Interior Surface 5	Second	R-4 Floor No Cowlspace	n/a	n/a	1086	n/a	n/a	n/a	New	n/a
Interior Surface 6	Second	R-4 Floor No Cowlspace	n/a	n/a	80	n/a	n/a	n/a	New	n/a

OPAQUE SURFACES - CATHEDRAL CEILINGS

01 Name	02 Zone	03 Construction	04 Azimuth	05 Orientation	06 Area (ft²)	07 Skylight Area (ft²)	08 Roof Rise (x in 12)	09 CRRC Rated Roof Reflectance	10 CRRC Rated Roof Emittance	11 Status	12 Verified Existing Condition
Roof	Second	R-38 HP Attic1	0	Front	30.1	30	3	0.1	0.85	New	n/a
Roof 2	First_Ex	R-38 HP Attic1	0	Front	12.1	12	3	0.1	0.85	New	n/a

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Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-01:00 — (Page 7 of 16)

Calculation Description: Title 24 Analysis — **Input File Name:** Building2.rbd25x

ATTIC

01 Name	02 Construction	03 Type	04 Roof Rise (x in 12)	05 CRRC Rated Roof Reflectance	06 CRRC Rated Roof Emittance	07 Radiant Barrier	08 Above Roof Deck Air Gap	09 Status	10 Verified Existing Condition
Attic Second	Attic RoofSecond	Ventilated	3	0.1	0.85	No	No	New	n/a
Attic First_Ex	Attic RoofFirst_Ex	Ventilated	3	0.1	0.85	No	No	New	n/a
Attic ADU	Attic RoofADU	Ventilated	3	0.1	0.85	No	No	Existing	No

FENESTRATION / GLAZING

01 Name	02 Type	03 Surface	04 Orientation	05 Azimuth	06 Mult.	07 Area (ft²)	08 U-factor	09 SHGC	10 Rating Source	11 Exception to 150.0 (q)*	12 Status	13 Verified Existing Condition
W09	Window	Front Wall	Front	0	1	18	0.27	0.23	NFRC	☐	New	NA
W09 2	Window	Front Wall	Front	0	1	18	0.27	0.23	NFRC	☐	New	NA
W10	Window	Front Wall	Front	0	1	3	0.27	0.23	NFRC	☐	New	NA
W11	Window	Front Wall	Front	0	1	28	0.27	0.23	NFRC	☐	New	NA
W11 2	Window	Front Wall	Front	0	1	28	0.27	0.23	NFRC	☐	New	NA
W14	Window	Front Wall	Front	0	1	3	0.27	0.23	NFRC	☐	New	NA
W11 3	Window	Left Wall	Left	90	1	28	0.27	0.23	NFRC	☐	New	NA
W12	Window	Left Wall	Left	90	1	3	0.27	0.23	NFRC	☐	New	NA
W12 2	Window	Left Wall	Left	90	1	3	0.27	0.23	NFRC	☐	New	NA
W13	Window	Rear Wall	Back	180	1	12	0.27	0.23	NFRC	☐	New	NA
D12	Window	Rear Wall	Back	180	1	58	0.27	0.23	NFRC	☐	New	NA

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

Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-01:00 — (Page 8 of 16)

Calculation Description: Title 24 Analysis — **Input File Name:** Building2.rbd25x

FENESTRATION / GLAZING

01 Name	02 Type	03 Surface	04 Orientation	05 Azimuth	06 Mult.	07 Area (ft²)	08 U-factor	09 SHGC	10 Rating Source	11 Exception to 150.0 (q)*	12 Status	13 Verified Existing Condition
D13	Window	Rear Wall	Back	180	1	40	0.27	0.23	NFRC	☐	New	NA
W11 4	Window	Right Wall	Right	270	1	28	0.27	0.23	NFRC	☐	New	NA
W_Ex	Window	Front Wall 2	Front	0	1	72	0.55	0.67	Table 110.6-B	☐	Existing	No
W_Ex 2	Window	Left Wall	Left	90	1	60	0.55	0.67	Table 110.6-B	☐	Existing	No
W_Ex 3	Window	Rear Wall 3	Back	180	1	11	0.66	0.67	Table 110.6-B	☐	Existing	No
D07	Window	Rear Wall 3	Back	180	1	83	0.27	0.23	NFRC	☐	New	NA
D06	Window	Right Wall 3	Right	270	1	42	0.27	0.23	NFRC	☐	Altered	No
W_Ex 4	Window	Left Wall 2	Left	90	1	40	0.53	0.65	Table 110.6-B	☐	Existing	No
W_Ex 5	Window	Rear Wall 4	Back	180	1	12	0.55	0.67	Table 110.6-B	☐	Existing	No
W08	Window	Right Wall 4	Right	270	1	15	0.27	0.23	NFRC	☐	Altered	No
Sk01	Skylight	Roof	Front	0	1	10	0.45	0.25	NFRC	☐	New	NA
Sk01 2	Skylight	Roof	Front	0	1	10	0.45	0.25	NFRC	☐	New	NA
Sk03	Skylight	Roof	Front	0	1	4	0.45	0.25	NFRC	☐	New	NA
Sk03	Skylight	Roof	Front	0	1	4	0.45	0.25	NFRC	☐	New	NA
Skylight_Ex	Skylight	Roof 2	Front	0	1	12	0.84	0.67	Table 110.6-B	☐	Existing	No

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Project Name: Jamie EAA — **Calculation Date/Time:** 2026-05-27T20:33:52-01:00 — (Page 9 of 16)

Calculation Description: Title 24 Analysis — **Input File Name:** Building2.rbd25x

FENESTRATION / GLAZING

01 Name	02 Type	03 Surface	04 Orientation	05 Azimuth	06 Mult.	07 Area (ft²)	08 U-factor	09 SHGC	10 Rating Source	11 Exception to 150.0 (q)*	12 Status	13 Verified Existing Condition

*Project includes fenestration not subject to maximum U-factor requirement per Exception 1 / Exception 2 / Exception 3 to Section 150.0(q).

Total North Facing Fenestration	214
Total East Facing Fenestration	140
Total South Facing Fenestration	211
Total West Facing Fenestration	81

OPAQUE DOORS

01 Name	02 Side of Building	03 Area (ft²)	04 U-factor	05 Status	06 Verified Existing Condition	07 NFRC Rating Req.
D01	Front Wall 3	34	0.2	New	n/a	Yes
D04	Right Wall 4	20	0.2	Altered	No	Yes

OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 Assembly Layers	09 Non-Std Spray Foam
R-15 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum board Cavity / Frame: R-15 / 2x6 Exterior Finish: 3 Coat Stucco	☐

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Custom Home Design

CUSTOM HOME DESIGN AND BUILD
2092 CONCOURSE DR #9 SAN JOSE, CA 95131
WWW.CUSTOMHOME.US
EMAIL: INFO@CUSTOMHOME.US
PHONE: 407-701-7116

REVISIONS	BY

DESIGN MANAGER

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

SCALE

DATE 2026/08/14

SHEET NUMBER G01

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OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 AssemblyLayers	09 Non-Ind Spray Foam
Default Wall 1978 to 1991	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-11	None / None	0.103	Inside Finish: Gypsum board Cavity / Frame: R-11 / 2x4 Exterior Finish: Wood Siding/sheathing/decking	☐
R-38 HP Attic1	Cathedral Ceilings	Wood Framed Ceiling	2x8 @ 24 in. O. C.	R-38	19 / None	0.019	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-38 / 2x4 Sheathing / Insulation: R-19 Sheathing Inside Finish: Gypsum board	☐
R-0 Wall	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	☐
R-15 Wall1	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.086	Inside Finish: Gypsum board Cavity / Frame: R-15 / 2x4 Other Side Finish: Gypsum board	☐

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Project Name: Jamie EAA — Calculation Date/Time: 2026-05-27T20:33:52-01:00 — (Page 11 of 16)

Calculation Description: Title 24 Analysis — Input File Name: Building2.ribd25x

OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 AssemblyLayers	09 Non-Ind Spray Foam
Attic RoofSecond	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-19	None / 0	0.059	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-13.0 / 2x4 Around Roof Joists: R-6.0 insul.	☐
Attic RoofFirst_Ex	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-19	None / 0	0.059	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-13.0 / 2x4 Around Roof Joists: R-6.0 insul.	☐
Attic RoofADU	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-19	None / 0	0.059	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-13.0 / 2x4 Around Roof Joists: R-6.0 insul.	☐

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Project Name: Jamie EAA — Calculation Date/Time: 2026-05-27T20:33:52-01:00 — (Page 12 of 16)

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OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 AssemblyLayers	09 Non-Ind Spray Foam
R-19 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x10 @ 16 in O. C.	R-19	None / None	0.046	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x10	☐
R-38 HP Attic	Ceilings (below attic)	Wood Framed Ceiling	2x8 @ 24 in. O. C.	R-38	None / None	0.025	Over Ceiling Joists: R-28.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum board	☐
R-0 Floor No Crawlspace	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. / 1x12 Ceiling Below Finish: Gypsum board	☐

WATER HEATING SYSTEMS

01 Name	02 System Type	03 Distribution Type	04 Water Heater Name	05 Number of Units	06 Solar Heating System	07 Compact Distribution	08 ICC Verification	09 Water Heater Name (#)	10 Status	11 Verified existing Condition	12 Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)	New	NA	n/a

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WATER HEATING SYSTEMS

01 Name	02 System Type	03 Distribution Type	04 Water Heater Name	05 Number of Units	06 Solar Heating System	07 Compact Distribution	08 ICC Verification	09 Water Heater Name (#)	10 Status	11 Verified Existing Condition	12 Existing Water Heating System
DHW Sys 3	Domestic Hot Water (DHW)	Standard	DHW Heater 3	1	n/a	None	n/a	DHW Heater 3 (1)	Existing	No	n/a

WATER HEATERS

01 Name	02 Heating Element Type	03 Tank Type	04 # of Units	05 Tank Vol. (gal)	06 Heating Efficiency Type	07 Efficiency	08 Rated Input Type	09 Input Rating or Heat	10 Tank Insulation R-value (Int/Ext)	11 Standby Loss or Recovery Eff	12 1st Hr. Rating or Flow Rate	13 Tank Location	14 Status	15 Verified Existing Condition
DHW Heater 1	Gas	Consumer Instantaneous	1	0	UEF	0.81	Btu/hr	200000	0	n/a	n/a	n/a	New	n/a
DHW Heater 3	Gas	Small Storage	1	50	EF	0.63	Btu/hr	75000	0	80	n/a	n/a	Existing	No

HVAC - HEATING UNIT TYPES

01 Name	02 System Type	03 Number of Units	04 Heating Efficiency	05 Status	06 Verified Existing Condition
Heating Component 1	Central gas furnace	1	AFUE - 95	New	No
Heating Component 2	Central gas furnace	1	AFUE - 80	Existing	No
Heating Component 3	Central gas furnace	1	AFUE - 95	New	No

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HVAC - COOLING UNIT TYPES

01 Name	02 System Type	03 Number of Units	04 Efficiency Metric	05 Efficiency EER/EER2/CEER	06 Efficiency SEER/SEER2	07 Airflow Target	08 Fan Power (Watts/CFM)	09 Status	10 Verified Existing Condition
Cooling Component 1	Central split AC	1	EER2/SEER2	11.7	14.3	350	0.45	New	No
Cooling Component 2	Central split AC	1	EER/SEER	11.7	14.3	350	0.58	Existing	No

HVAC - DISTRIBUTION SYSTEMS

01 Name	02 Type	03 Design Type	04 Duct Ins. R-value Supply/Return	05	06 Duct Location Supply	07 Return	08 Status	09 Verified Existing Condition	10 Existing Distribution system	11 New Ducts >= 10 ft
Air Distribution System1	Unconditioned attic	Non-Verified	R-8		Attic	Attic	New	n/a	n/a	n/a
Air Distribution System2	Unconditioned crawl space	Non-Verified	R-6		Crawl Space	Crawl Space	Alteration	No	n/a	n/a
Air Distribution System3	Unconditioned attic	Non-Verified	R-8		Attic	Attic	New	n/a	n/a	n/a

INDOOR AIR QUALITY(IAQ) FANS

01 Dwelling Unit	02 Airflow (CFM)	03 Fan Efficacy (W/CFM)	04 IAQ Fan Type	05 Includes Heat/Energy Recovery?	06 IAQ Recovery Effectiveness - ASRE	07 Includes Fault Indicator Display?	08 Status
SFam ADU IAQVentRpt	107	0.35	Exhaust	No	n/a / n/a	No	

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INDOOR AIR QUALITY(IAQ) FANS

01 Dwelling Unit	02 Airflow (CFM)	03 Fan Efficacy (W/CFM)	04 IAQ Fan Type	05 Includes Heat/Energy Recovery?	06 IAQ Recovery Effectiveness - ASRE	07 Includes Fault Indicator Display?	08 Status
SFam ADU IAQVentRpt	49	0.35	Exhaust	No	n/a / n/a	No	

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Calculation Description: Title 24 Analysis — Input File Name: Building2.ribd25x

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
John Tao	
Company: Rasaltic, Inc	Signature Date: 05/27/2026
Address: 2615 Macarthur Blvd	CEA/HERS/ICC Certification Identification (if applicable):
City/State/Zip: Oakland, CA 94602	Phone: (510) 967-1299

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. 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.
5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building and shall be made available to the enforcement agency for all applicable inspections. I will take the necessary steps to fulfill this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. I will take the necessary steps to fulfill this requirement.

Responsible Designer Name:	Responsible Designer Signature:
Duong Le	Duong Le
Company: Custom Home Design and Build	Date Signed: 05/27/2026
Address: 2092 Concourse Dr ste 9	License: 1089177
City/State/Zip: San Jose, CA 95131	Phone: 6509996797

Registration Number: 426-P010158162A-000-000-0000000-0000 — Registration Date/Time: 05/27/2026 20:46 — ECC Provider: CHEERS

CA Building Energy Efficiency Standards - 2025 Single-family Compliance — Report Version: 2025.0.000 — Schema Version: rev 20250101 — Report Generated: 2026-05-27 20:34:15

Custom Home
Design and Build

CUSTOM HOME DESIGN AND BUILD
2092 CONCOURSE DR
#9 SAN JOSE, CA 95131
WWW.CUSTOMHOME.US
EMAIL: INFO@CUSTOMHOME.US
PHONE: 407-701-7116

REVISIONS	BY

DESIGN MANAGER

JAMIE CT

100 JAMIE CT, LOS GATOS, CA, 95032

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

SCALE

DATE 2026/08/14

SHEET NUMBER G02

Docusign Envelope ID: 526AD49C-7B45-8B97-8179-1866DCBDC2AD

GENERAL REQUIREMENTS

1. VERIFICATION: VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. CONFLICTS: NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS IN CASE OF CONFLICT.
3. SUBSTITUTIONS: PROVIDE MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORTS ICC REPORTS AND A LIST OF ALL PROPOSED SUBSTITUTIONS TO THE ENGINEER FOR REVIEW AND WRITTEN APPROVAL BEFORE FABRICATION.
4. SIMILAR WORK: WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS.
5. PIPES, DUCTS, SLEEVES, CHASES, ETC.: SHALL NOT BE PLACED IN SLABS, BEAMS, OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC., UNLESS SPECIFICALLY SHOWN. OBTAIN PRIOR WRITTEN APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.
6. EXCAVATIONS: LOCATE AND PROTECT UNDERGROUND OR CONCEALED CONDUIT, PLUMBING OR OTHER UTILITIES WHERE NEW WORK IS BEING PERFORMED.
7. CONSTRUCTION LOADS: MATERIALS SHALL BE EVENLY DISTRIBUTED IF PLACED ON FRAMED FLOORS OR ROOFS. LOADS SHALL NOT EXCEED THE ALLOWABLE LOADING FOR THE SUPPORTING MEMBERS AND THEIR CONNECTIONS.
8. CONSTRUCTION METHODS AND PROJECT SAFETY: THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE METHODS, PROCEDURES OR SEQUENCE OF CONSTRUCTION. TAKE NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION. NEITHER THE OWNER NOR ARCHITECT/ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
9. CHANGES TO THE DRAWINGS: OBTAIN PRIOR WRITTEN APPROVAL.

NAILING

1. ALL NAILING SHALL BE COMMON WIRE NAILS AND FOLLOW THIS TABLE:

SIZE PENNY	DIAMETER INCHES	WIRE GAGE	PENETRATION INCHES
8D	0.134	10-1/4	1-5/8
10D	0.148	9	1-7/8
16D	0.165	8	2
20D	0.203	6	2-3/8

PENETRATION IS MEASURED INTO THE PIECE RECEIVING THE NAIL POINT. 1-1/2 INCHES OF PENETRATION FOR 10D AND 16D NAILS IS ACCEPTABLE FOR TOP PLATES AND DOUBLED 2X MEMBERS. WHERE THE NAIL PENETRATION WILL BE LESS THAN SPECIFIED, INCREASE NAIL LENGTH (SIZE) TO OBTAIN THE PENETRATION REQUIRED FOR THE NAIL SPECIFIED.

2. FASTENER SCHEDULE FOR STRUCTURAL MEMBERS - THE CONNECTIONS LISTED ARE THE MINIMUM PERMISSIBLE. USE COMMON WIRE NAILS FOR ALL NAILED CONNECTIONS. WHERE POSSIBLE, NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED INSTEAD OF TOE NAILS. SEE THE DRAWINGS FOR ADDITIONAL NAILING REQUIREMENTS.

ROOF
1. CL'G. JOIST/RAFTER/TRUSS TO TOP PLATE/OTHER FRAMING BELOW, EACH END, TOE NAIL BELOW.......3-8D
2. BLOCKING (NOT AT THE WALL TOP PLATE) TO RAFTER OR TRUSS,EACH END, TOE NAIL.......2-8D
3. BLOCKING (NOT AT THE WALL TOP PLATE) TO RAFTER OR TRUSS,END NAIL.......2-16D
4. FLAT BLOCKING TO TRUSS AND WEB FILLER, FACE NAIL.......14D @ 6" O.C.
5. CL'G. JOIST TO TOP PLATE, EACH JOIST, TOENAIL.......3-8D
6. CL'G. JOIST LAPS OVER PARTITIONS(NO THRUST),FACE NAIL.......3-16D
7. CL'G. JOIST ATTACHED TO PARALLEL RAFTER(HEEL JOINT), FACE NAIL PER DETAIL
8. COLLAR TIE TO RAFTER,FACE NAIL NAIL.......3-10D
9. RAFTER OR ROOF TRUSS TO TOP PLATE,TOENAIL.......3-10D
10. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS OR RIDGE BOARD,END NAIL.......2-16D
11. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS OR RIDGE BOARD, TOENAIL.......3-10D

WALL
1. STUD TO STUD (NOT AT BRACED WALL PANELS),FACE NAIL.......16D @24" O.C.
2. STUD TO STUD & ABUTTING STUDS AT INTERSECTING WALL CORNER, FACE NAIL.......16D @16" O.C.
3. BUILT-UP HEADER(2" TO 2" HEADER),EACH EDGE, FACE NAIL.......16D @16"O.C.
4. CONTINUOUS HEADER TO STUD,TOENAIL.......4-8D
5. TOP PLATE TO TOP PLATE,FACE NAIL.......16D @16"O.C.
6. TOP PLATE TO TOP PLATE(AT END JOISTS),EACH SIDE OF END JOINT, FACE NAIL.......8-16D
7. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS),FACE NAIL.......16D @16"O.C.
8. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING), FACE NAIL.......2-16D@16"O.C.
9. STUD TO TOP OR BOTTOM PLATE,TOENAIL.......4-8D
10. STUD TO TOP OR BOTTOM PLATE,END NAIL.......2-16D
11. TOP PLATES,LAPS AT CORNERS AND INTERSECTIONS,FACE NAIL.......2-16D
12. 1" BRACE TO EACH STUD AND PLATE,FACE NAIL.......2-8D
13. 1"X6" SHEATHING TO EACH BEARING,FACE NAIL.......2-8D
14. 1"X8" AND WIDER SHEATHING TO EACH BEARING,FACE NAIL.......3-8D

FLOOR
1. JOIST TO SILL,TOP PLATE OR GIRDER,TOENAIL.......3-8D
2. RIM /BAND JOIST/ BLK'G TO TOP PLATE/SILL/OTHER FRAMING BELOW, TOENAIL.......8D @ 6" O.C.
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST,FACE NAIL.......2-8D
4. 2" SUBFLOOR TO JOIST OR GIRDER,FACE NAIL.......2-16D
5. 2"PLANKS(PLANK & BEAM - FLOOR&ROOF),EACH BEATING,FACE NAL.......2-16D
6. BUILT-UP GIRDERS AND BEAM,2" LUMBER LAYERS,FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES.......20D @32" O.C.
BUILT-UP GIRDERS AND BEAM,2" LUMBER LAYERS, EACH SPLICE,FACE.......2-20D
7. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS,EACH JOIST OR RAFTER, FACE NAIL.......3-16D
8. JOIST TO BAND JOIST OR RIM JOIST,END NAIL.......3-16D
9. BRIDGING OR BLOCKING TO JOIST,RAFTER OR TRUSS,EACH END, TOENAIL.......2-8D

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS SPECIFIED IN BUILDING CODE, CHAPTER 22 & REFERENCE.
2. STEEL SHALL BE PRIMED WITH A RUST RESISTANCE PRIMER & SHOULD CONFORM TO ASTM A36 (FY=36 KSI) AS A MINIMUM, UNLESS OTHERWISE NOTED. ALL W SHAPES TO BE ASTM A992. (FY=50 KSI)
3. STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B (FY=35 KSI).
4. ROUND HSS TUBING SHALL CONFORM TO ASTM A500 GRADE B (FY=42 KSI)
5. RECTANGULAR AND SQUARE HSS TUBING SHALL CONFORM TO ASTM A500, GRADE B (FY=46 KSI).
6. HP SECTIONS SHALL CONFORM TO ASTM A572, GRADE 50 (FY=50 KSI).
7. ALL STRUCTURAL WELDING PROCEDURES AND MATERIALS SHALL CONFORM TO BUILDING CODE, SECTION 2204.1. ALL WELDING SHALL BE BY THE SHIELD METAL ARC WELDING PROCESS OR THE SUBMERGED ARC WELDING PROCESS USING E70XX-LOW HYDROGEN ELECTRODES, UNLESS OTHERWISE NOTED.
8. ALL BOLTS FOR CONNECTIONS OF STEEL MEMBERS SHALL CONFORM TO BUILDING CODE, SECTION 2204.2 & ASTM A325N, UNLESS OTHERWISE NOTED. HOLES FOR BOLTS SHOULD BE DRILLED OR PUNCHED & SHALL BE 1/16" LARGER THAN BOLT DIAMETER.
9. PREFABRICATED STEEL MOMENT FRAMES PER MANUFACTURER. STEEL MOMENT FRAME MANUFACTURER SHALL SUBMIT SHOP DRAWING, DESIGN CALCULATIONS, AND APPROVED MOMENT FRAME TEST REPORT (ICC, IAMPO, OR TEST PER APPENDIX S OF AISC SEISMIC PROVISION) TO E.O.R. FOR REVIEW.
10. ALL SHOP WELDING AND FABRICATION MUST BE DONE IN A SHOP APPROVED BY A SPECIAL INSPECTION AGENCY WHICH IS APPROVED BY THE BUILDING OFFICIAL. ALL FIELD WELDING MUST BE PERFORMED BY A CERTIFIED WELDER AND A SPECIAL INSPECTOR SHALL CONTINUOUSLY INSPECT ALL STRUCTURAL FIELD WELDING. BOTH SHALL BE APPROVED BY THE BUILDING OFFICIAL.

WOOD

1. GRADE STAMPED DOUGLAS FIR/LARCH (SEE LUMBER GRADES).
2. NAILS: COMMON WIRE UNLESS OTHERWISE NOTED. EDGE SEE NAILING NOTE BELOW.
3. THE SPACING CENTER TO CENTER OF NAILS IN THE DIRECTION OF STRESS
4. SHALL NOT BE LESS THAN THE REQUIRED PENETRATION. HOLES FOR NAILS, WHERE NECESSARY TO PREVENT SPLITTING, SHALL BE BORED TO A DIAMETER SMALLER THAN THAT OF THE NAIL.
5. ANCHOR BOLTS (FOUNDATION ANCHOR BOLTS): PROVIDE 5/8 INCH DIAMETER ANCHOR OR MACHINE BOLTS WITH A MINIMUM OF 7 INCHES EMBEDMENT INTO THE CONCRETE AND WITHIN 12 INCHES OF EACH END OF EACH PLATE. SPACE ANCHORS AT 48 INCHES ON CENTER U.O.N. ANCHORS SHALL BE LOCATED A MAXIMUM OF 2 INCHES FROM THE FACE OF STUD RECEIVING WOOD STRUCTURAL PANELS. ANCHOR BOLT HOLES 1/32 TO 1/16 INCH LARGER THAN THE ANCHOR BOLT DIAMETER. HOLES MORE THAN 1/16 INCH LARGER THAN THE ANCHOR BOLT SHALL BE EPOXY FILLED UNDER THE CONTINUOUS SUPERVISION OF A LICENSED SPECIAL INSPECTOR.
6. BOLTS: NOT LESS THAN 7 BOLT DIAMETERS FROM THE END AND 4 DIAMETERS FROM THE EDGE OF THE MEMBER. BOLT HOLES 1/32 TO 1/16 INCH LARGER THAN THE BOLT DIAMETER. ALL NUTS SHALL BE TIGHTENED WHEN INSTALLED AND RE-TIGHTENED AT THE COMPLETION OF WORK OR BEFORE CLOSING IN. THREAD PROJECTION SHALL BE 1/16 INCH MINIMUM BEYOND THE NUT. BOLTS IN SPECIFIED SLOTTED HOLES SHALL BE CENTERED IN THE SLOT UON.
7. LAG SCREW CLEARANCE & LEAD HOLES SHALL BE BORED AS FOLLOWS: THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK, AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK. THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 60% TO 75% OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION.
8. SQUARE STEEL PLATE WASHERS (PW): ANCHOR BOLTS, BOLTS, LAGS AND NUTS, NOTED PW, SHALL BE SQUARE STEEL PLATE WASHERS:

BOLT DIAM (IN)	THICKNESS (IN)	SIZ (IN)
1/2	1/4	3 X 3
5/8	1/4	3 X 3
3/4	5/16	3 X 3
7/8	5/16	3 X 3
1	3/8	3 1/2 X 3 1/2

9. CUT STEEL WASHERS: FOR BOLTS, LAGS AND NUTS, UON.
10. FRAMING CONNECTORS: PER MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORTS ICC APPROVED AND INSTALLED ACCORDINGLY. SIZE AND NUMBER OF NAILS TO BE MAXIMUM SPECIFIED BY THE MANUFACTURER UON.
11. NAILED/SCREWED HOLD DOWN ANCHORS: INSTALL PER MANUFACTURER'S APPROVED ICC PRODUCT EVALUATION REPORT. INSTALL HOLD DOWNS 1/2 INCH MINIMUM ABOVE THE PLATE TO ALLOW FOR TIGHTENING ANCHOR BOLT. THE HOLD DOWN SHALL BE INSTALLED TIGHT TO THE HOLD DOWN POST WITHOUT FILLERS OR DAPPING. DO NOT BEND HOLD DOWN ANCHORS.
12. BOLTED HOLD DOWN ANCHORS: INSTALL PER MANUFACTURER'S APPROVED ICC PRODUCT EVALUATION REPORT. INSTALL HOLD DOWNS 1/2 INCH MINIMUM ABOVE THE PLATE TO ALLOW FOR TIGHTENING ANCHOR BOLT. TIGHTEN HOLD DOWN ANCHOR BEFORE TIGHTENING POST BOLTS. USE EXTRA CARE IN BORING THE POST BOLT HOLES (1/32 TO 1/16 LARGER THAN THE BOLT DIAMETER). THE HOLD DOWN SHALL BE INSTALLED TIGHT TO THE HOLD DOWN POST WITHOUT FILLERS OR DAPPING. THE POST BOLTS SHALL NOT BE COUNTERSUNK INTO THE HOLD DOWN POST UON. DO NOT BEND HOLD DOWN ANCHORS.
13. PRESERVATIVE TREATED WOOD: WOOD EXPOSED TO THE WEATHER; FOUNDATION PLATES ON CONCRETE SLABS, FOUNDATIONS WHICH ARE IN DIRECT CONTACT WITH EARTH SHALL BE TREATED WOOD WITH PRESERVATIVE RETENTION AS REQUIRED FOR USE. NEWLY EXPOSED SURFACES RESULTING FROM FIELD CUTTING, BORING OR HANDLING SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA M-4.
14. TOP PLATES: TWO PIECES, SAME SIZE AS STUDS, STAGGER SPLICE 4'-0" MINIMUM. CENTER SPLICES OVER STUDS. SPLICE WITH 12-16D MINIMUM UON.
15. FULL-DEPTH SOLID BLOCKING OR CROSS BRACING: INSTALLED AT INTERVALS NOTEXCEEDING 8 FEET FOR ALL JOISTS AND RAFTERS 2X12 AND DEEPER.
16. SOLID BLOCKING: TWO INCH FULL WIDTH BLOCKING (FIRE STOPS) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVELS AND AT 10-FOOT INTERVALS BOTH VERTICAL AND HORIZONTAL.
17. CUTTING AND NOTCHING: DO NOT CUT, BORE, COUNTERSINK OR NOTCH WOOD MEMBERS EXCEPT WHERE SHOWN IN THE DETAILS. HOLES THROUGH PLATES, STUDS AND DOUBLE PLATES IN WALLS SHALL FOLLOW DETAIL 5/SD1.0. THE MEMBER WIDTH AND SHALL BE LOCATED IN THE CENTER OF THE MEMBER.
18. PARTITIONS: DOUBLE JOISTS UNDER PARTITIONS PARALLEL TO JOISTS AND PROVIDE SOLID BLOCKING UNDER PARTITIONS PERPENDICULAR TO JOISTS.
19. END SUPPORT: ROOF AND FLOOR JOISTS OVER 4 INCHES DEEP SHALL HAVE THEIR ENDS HELD IN POSITION WITH EITHER: FULL DEPTH SOLID BLOCKING; NAILED BRIDGING; NAILING OR BOLTING TO OTHER FRAMING MEMBERS; OR APPROVED JOIST HANGERS.
20. HOT DIPPED ZINC-COATED GALVANIZING: ALL EXPOSED STEEL TIMBER HARDWARE, FASTENERS AND CONNECTORS.
21. FASTENERS FOR PRESERVATIVE TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL.

WOOD STRUCTURAL PANELS (PANEL)

1. REFERENCES: PS1, PS2, APA STANDARD PRP-108, NATIONAL EVALUATION SERVICE REPORT NER-108
2. WALL PANELS: 15/32" APA RATED SHEATHING STRUCTURAL I EXP 1(PANEL INDEX OF 32/16)
3. ROOF PANELS: 15/32" APA RATED SHEATHING EXP 1(PANEL INDEX OF 32/16)
4. FLOOR PANELS: 23/32" APA RATED STURD-I-FLOOR T&G EXP 1 (SPAN RATING OF 24" O.C.) (EXTERIOR EXPOSURE AT BALCONIES AND DECKS)
5. BLOCKING:
6. A) WALLS: ALL UNSUPPORTED PANEL JOINTS SHALL BE BLOCKED SOLID WITH 3X BLOCKING
7. B) FLOORS & ROOFS: WHERE NOTED ON THE DRAWINGS, ALL SUPPORT PANEL JOINTS SHALL BE BLOCKED SOLID WITH 3X4 FLAT BLOCKING.
8. NAILING: COMMON WIRE NAILS. PANEL NAILS SHALL BE DRIVEN SO THAT THE HEADS ARE FLUSH WITH THE SURFACE OF THE PANEL. FIELD NAILING (FN) SHALL BE 12 INCHES ON CENTER AND THE MINIMUM PANEL EDGE DISTANCES SHALL BE MAINTAINED.
9. MACHINE NAILING: SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR THIS PROJECT AND REVIEW BY THE ENGINEER. THE USE OF MACHINE NAILING IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. PANEL NAILS SHALL BE DRIVEN SO THAT THE HEADS ARE FLUSH WITH THE SURFACE OF THE PANEL AND THE MINIMUM PANEL EDGE DISTANCES ARE MAINTAINED.
10. GLUED FLOORS: FIELD GLUE TO ALL SUPPORTS AND T&G EDGES PER APA, AFG-01. FRAMING SHALL BE FREE OF SURFACE MOISTURE & DEBRIS PRIOR TO GLUING.
11. WOOD STRUCTURAL PANELS (PANELS): WHERE ADJACENT WALLS ARE PANELED, PANELS SHALL BE INSTALLED OVER AND UNDER OPENINGS.

WALL STUD TABLE

TRIB WIDTH = 10 FT. ROOF DL= 20. LL= 20. FLOOR DL=15. LL=40

STUD SIZE	STUD HEIGHT	MAX. SPACING					
		1 STORY	2 STORY		3 STORY		
			2ND LEVEL	1ST LEVEL	3RD LEVEL	2ND LEVEL	1ST LEVEL
2X4	10'-0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	N/A
2X4	12'-0"	16" O.C.	16" O.C.	12" O.C.	16" O.C.	12" O.C.	N/A
3X4	12'-0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.
2X6	12'-0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	12" O.C.
2-2X4	12'-0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.
2-2X6	12'-0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.

*LOWER STUDS MUST BE INLINE WITH UPPER STUDS
*2X BLOCKING BETWEEN STUDS AT 4'-6" O.C.

ENGINEERED LUMBER

1. LVL - LAMINATED VENEER LUMBER SHALL BE 2.0E MICROLLAM LVL.
2. PSL - PARALLEL STRAND LUMBER SHALL BE 2.2E PARALLAM PSL.
3. LSL - LAMINATED STRAND LUMBER SHALL BE 1.3E TIMBERSTRAND FOR STUDS, RIM BOARDS AND BLOCKING. 1.55E TIMBERSTRAND FOR JOIST, BEAMS AND HEADERS.

ENGINEERED LUMBER I-JOISTS

I-JOIST SHALL BE APA PERFORMANCE RATED MANUFACTURED IN CONFORMANCE WITH PRI-400, PERFORMANCE STANDARD FOR APA EWS. I-JOIST FLANGES TO HAVE MINIMUM WIDTH OF 1 1/2" 7 MINIMUM THICKNESS OF 1 5/16". WEBS TO BE PLYWOOD OR OSB WITH MINIMUM THICKNESS OF 3/8". FOR ONE HOUR CONSTRUCTION, PRI-50 JOISTS ARE REQUIRED AT 24" OC. MAX., SEE ESR-1405. PROPER STORAGE, HANDLING AND INSTALLATION SHALL BE FOR THESE PLANS AND MANUFACTURER'S RECOMMENDATIONS.

LUMBER GRADES DOUGLAS FIR/LARCH

COMPLY WITH PS 20, AMERICAN SOFTWOOD LUMBER STANDARD AND STANDARD GRADING RULES FOR WESTERN LUMBER. 19% MAXIMUM MOISTURE CONTENT AT TIME OF PLACEMENT.
1. DIMENSION LUMBER: BLOCKING
(2" TO 4" THICK, 2" TO 4" & NONBEARING STUDS WIDE; STANDARD)
(10' MAXIMUM)
2. DIMENSION LUMBER: BEARING
(2" TO 4" THICK, 2" TO 4" STUDS JOISTS & RAFTERS WIDE; NO. 2)
3. DIMENSION LUMBER: JOISTS AND RAFTERS
(2" TO 4" THICK, 5" AND STUDS, BLOCKING, WIDER; NO. 2)
4. BEAMS AND STRINGERS:
(5" AND THICKER, WIDTH MORE THAN 2" GREATER THAN THICKNESS; NO. 1)
5. POSTS AND TIMBERS:
(4" AND 6", AND LARGER, WIDTH NOT MORE THAN 2" GREATER THAN THICKNESS; NO.2)
6. HOLD DOWN POSTS: (NO. 2)

REINFORCED CONCRETE

1. MATERIALS:
CEMENT.......ASTM C-150 TYPE II
AGGREGATE.......ASTM C-33 STANDARD WEIGHT
REINFORCEMENT.......ASTM A-615 GRADE 60 TYPICAL
ANCHOR BOLTS.......ASTM A-307 HOOKED ANCHOR BOLTS
ANCHOR BOLTS.......ASTM A-307 HEADED MACHINE BOLTS
2. CONCRETE STRENGTHS: THE CONCRETE STRENGTHS SHOWN IN THE FOLLOWING TABLE ARE THE MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS; AND THE AGGREGATE (AGG) SHOWN IS THE MAXIMUM SIZE. CONCRETE SHALL BE STANDARD WEIGHT CONCRETE (145 PCF).

ITEM OF CONSTRUCTION	STRENGTH (PSI)	AGG (IN)	SLUMP (IN)
FOUNDATIONS	2,500	1 1/2	4
POUR IN PLACE WALL	2,500	1 1/2	4
SLABS-ON-GRADE	2,500	1	4

(DESIGN STRENGTH BASED ON 2,500 PSI NO SPECIAL INSPECTION IS REQUIRED)
EXCEPTION:
A) THE WEIGHT PERCENTAGE OF SULFATE — STRENGTH(PSI)
> 1.0 — 4000
> 2.0 — 4500
B) SHOTCRETE CONCRETE STRENGTH = 4000 PSI MIN.
3. REINFORCEMENT:
A) DETAILING, FABRICATION AND PLACING: SHALL CONFORM TO AND ACI 318.
B) MINIMUM CONCRETE COVER:
CAST AGAINST & EXPOSED TO EARTH.......3"
EXPOSED TO EARTH OR WEATHER.......2"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
SLABS, WALLS, JOISTS.......3/4"
BEAMS, COLUMNS (TIES, STIRRUPS, SPIRALS).......1-1/2"
C) CHAIRS, SPACERS AND SAND PLATES: AS REQUIRED TO MAINTAIN CONCRETE COVER.
D) VERTICAL REINFORCEMENT: SHALL BE DOWELED TO SUPPORTING MEMBERS WITH THE SAME SIZE AND SPACING OF REINFORCEMENT AS SHOWN IN THE DRAWINGS AND GENERAL NOTES.
E) SPACING: CLEAR DISTANCE BETWEEN PARALLEL REINFORCEMENT IN A LAYER SHALL NOT BE LESS THAN 1-1/2 TIMES THE NOMINAL DIAMETER OF THE REINFORCEMENT, OR 1-1/3 TIMES MAXIMUM SIZE AGGREGATE, NOR LESS THAN 1-1/2".
F) TACK WELDING, WELDING, HEATING OR CUTTING OF BARS: NOT PERMITTED U.O.N.
G) SLAB CORNERS: PROVIDE 2-#4 X 4'-0" AT RE-ENTRANT CORNERS AND EACH CORNER OF RECTANGULAR HOLES IN SLABS. PLACE BARS DIAGONALLY.
H) SPLICES (STANDARD LAPS): LAP SPLICE PER DETAIL 1/SD1.0. STAGGER BOTTOM SPLICES AT LEAST 5'-0" FROM SPLICES IN OTHER BOTTOM REINFORCEMENT. STAGGER SPLICES FOR TOP REINFORCEMENT SIMILARLY.
4. ANCHOR BOLTS, DOWELS AND HOLD DOWN ANCHORS: SECURELY HELD IN PLACE PRIOR TO FOUNDATION INSPECTION BY THE BUILDING OFFICIAL AND OBSERVATION BY THE ENGINEER.
5. PIPES, SLEEVES AND DUCTS:NOT TO BE PLACED IN WALLS, BEAMS, SLABS, FOOTINGS OR COLUMNS UNLESS SPECIFICALLY DETAILED.
6. CHAMFER: 3/4 INCH ON EXPOSED CORNERS.
7. ADMIXTURES: REVIEWED BY THE ENGINEER. CALCIUM CHLORIDE OR ADDED CHLORIDES ARE NOT PERMITTED.
8. CONSTRUCTION JOINTS: ACI 117.9 & 6.4, 1/4 INCH AMPLITUDE MINIMUM OR EYED JOINTS PER PLAN. LOCATION OF JOINTS TO BE REVIEWED BY THE ENGINEER. WAIT 48 HOURS BETWEEN POURS.
9. SLAB-ON-GRADE JOINTS: LOCATION OF ALL CONSTRUCTION, CONTROL AND WEAKENED PLANE JOINTS NOT SPECIFICALLY INDICATED ON THE DRAWINGS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO THE PLACING OF REINFORCEMENT. MAXIMUM SPACING 15 FEET ON CENTER.
10. ACTUAL DIMENSIONS: SLAB, WALL, BEAM AND COLUMN DIMENSIONS SHOWN ARE ACTUAL DIMENSIONS NOT NOMINAL DIMENSIONS (i.e. A 4 INCH SLAB IS 4 INCHES THICK, NOT 3-1/2 INCHES.)
11. CONCRETE CURING: ACI 318
12. VIBRATION: ALL CONCRETE SHALL BE CONSOLIDATED WITH MECHANICAL VIBRATORS.

SHEET INDEX

SN1.0	GENERAL NOTES
S1.0	FOUNDATION PLAN
S2.0	LOW ROOF & FLOOR FRAMING PLAN
S3.0	ROOF FRAMING PLAN
SD1.0	FOUNDATION DETAILS
SD2.0	FRAMING DETAILS
SD3.0	FOUNDATION DETAILS
SD4.0	FRAMING DETAILS

PROJECT DESIGN DATA

GOVERNING CODE: 2025 CALIFORNIA BUILDING CODE (CBC).

STRUCTURAL DESIGN LOADS:	DEAD LOAD	LIVE LOAD
ROOF LOADS	18 PSF	20 PSF
CEILING LOADS (ATTICS WITHOUT STORAGE)	7 PSF	10 PSF
FLOOR LOADS	15 PSF	40 PSF
DECK LOADS	15 PSF	60 PSF

WIND DESIGN
1. WIND SPEED 92 MPH RISK CATEGORY II, EXPOSURE C, WIND PRESSURE MIN 16 PSF USED KH=0.85, KZT=1, KD=0.85, I=1

SEISMIC DESIGN
1. SEISMIC BASE SHEAR FOR LIGHT-FRAME WALLS SHEATHED WITH WOOD STRUCTURAL SYSTEM = 0.202W (ALLOWABLE STRESS DESIGN)
RISK CATEGORY II S_s = 2.34 S_1 = 0.81 C_s = 0.229
SEISMIC DESIGN CATEGORY E S_{DS} = 1.466 S_{D1} = 1.307 ρ = 1.3
R= 6.5 (LIGHT-FRAME WALLS SYSTEM)

FOUNDATION
1. FOUNDATION MATERIAL: SEE REINFORCED CONCRETE
2. MINIMUM FOUNDED DEPTH & WIDTH OF FOOTINGS:
BELOW ROUGH PAD GRADE.......24"
BELOW LOWEST ADJACENT FINISHED GRADE.......24"
WIDTH.......16" MIN
3. BASE OF FOOTINGS & SLABS: SEE PLAN
4. ALLOWABLE SOIL PRESSURES:
DL + LL LOAD.......1,500 PSF
ALL LOAD (WIND/SEISMIC) FORCES.......2,000 PSF
5. ROOF AND AREA DRAINAGE: SHALL BE DIRECTED AWAY FROM THE FOUNDATIONS
6. BACK FILL: EXCAVATIONS SHALL BE PROPERLY BACKFILLED. BACK FILL FOR WALLS SHALL BE PERVIOUS MATERIAL. DO NOT PLACE BACK FILL BEHIND WALLS BEFORE THEY HAVE ATTAINED THEIR DESIGN STRENGTH. SHORE AND PROTECT WALLS FROM LATERAL LOADS UNTIL THE SUPPORTING MEMBERS ARE IN PLACE HAVE DEVELOPED SPECIFIED STRENGTHS.

SPECIAL INSPECTION REQUIREMENTS

SPECIAL INSPECTION REQUIREMENTS

1. SPECIAL INSPECTION AGENCY EMPLOYED BY THE OWNER.
2. REPORTS: PREPARED AND SIGNED BY THE INSPECTOR, SUBMITTED TO THE BUILDING OFFICIAL AND THE ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION; THEN, IF NOT CORRECTED, TO THE BUILDING OFFICIAL AND THE ENGINEER.
3. CERTIFICATION: INSPECTOR MUST BE CITYCERTIFIED BY THE BUILDING OFFICIAL TO PERFORM THE TYPES OF INSPECTIONS SPECIFIED.
4. RESPONSIBILITY: IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY PRIOR TO PERFORMING ANY WORK THAT REQUIRESSPECIAL INSPECTION.
5. SPECIAL INSPECTIONS REQUIRED FOR THE FOLLOWING ITEM.:
(A) SHEAR WALLS WITH NAILING 4" SPACING OR LESS
(B) EPOXY ANCHOR OR EXPANSION ANCHOR INSTALL INTO EXISTING CONCRETE SLAB OR FOOTING

ABBREVIATION:

&	AND	JST	JOIST
A.B.	ANCHOR BOLT	JT.	JOINT
ARCH.	ARCHIECTURAL	L.S.	LAG SCREW
BLDG.	BUILDING	MAX.	MAXIMUM
BM.	BEAM	M.B.	MACHINE BOLT
BOT.	BOTTOM	MECH.	MECHANICAL
BTWN.	BETWEEN	MFR.	MANUFACTURER
CONC.	CONCRETE	MIN.	MINIMUM
CONT.	CONTINUOUS	MISC.	MISCELLANEOUS
CTSK.	COUNTERSUNK	N.	NORTH
CTR.	CENTER	N/A	NOT APPLICABLE
DBL.	DOUBLE	N.I.C.	NOT IN CONTRACT
DET.	DETAIL	NO. OR #	NUMBER
DIA.	DIAMETER	N.T.S.	NOT TO SCALE
DN.	DIAMETER	O.C.	ON CENTER
DIM.	DIMENSION	OPP.	OPPOSITE
DN.	DOWN	OWG	OPEN WEB STEEL GIRDER
DWG.	DRAWING	PL.	PLATE
DWLS.	DOWELS	PLYWD	PLYWOOD
(E)	EXISTING	RAD.	RADIUS
EA.	EACA	REF.	REFERENCE
E.E.	EACH END	REINF.	REINFORCED
E.F.	EACH FACE	REQD.	REQUIRED
E.L.	ELEVATION	S.A.D.	SEE ARCH DRAWING
E.N.	EDGE NAILING	SCHED.	SCHEDULED
EQ.	EQUAL	SECT.	SECTION
E.S.	EACH SIDE	SIM.	SIMILAR
E.W.	EACH WAY	SPEC.	SPECIFICATION
EXP.	EXPANSION	SQ.	SQUARE
EXT.	EXTERIOR	STAGG.	STAGGERED
F.F.	FINISH FLOOR	STD.	STANDARD
F.A.	FINISH GRADE	STL.	STEEL
FIN.	FINISH	SYM.	SYMMETRICAL
FL.	FLOOR	SPA.	SPACING
F.O.C.	FACE OF CONCRETE	T.&B.	TOP & BOTTOM
FT.	FOOT OR FEET	THK.	THICK
FTG.	FOOTING	T.O.F.	TOP OF FOOTING
GLB	GLU-LAM BEAM	TYP.	TYPICAL
H.D.	HOLDOWN	U.O.N.	UNLESS OTHERWISE NOTED
HGR	HANGER	VERT.	VERTICAL
HGT.	HEIGHT	W/	WITH
HK.	HOOK	W/O	WITHOUT
HORIZ.	HORIZONTAL	WP.	WATERPROOF
H.S.B.	HIGH STRENGTH BOLT	W.W.F.	WELDED WIRE FABRIC

ORANGE ENGINEERING

4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 508-5595

DESIGN BY:

PROJECT ADDRESS: 100 JAMIE CT., LOS GATOS, CA 95032

SHEET TITLE: GENERAL NOTES

DATE: 02/02/26
JOB NO. OES26017

REVISION

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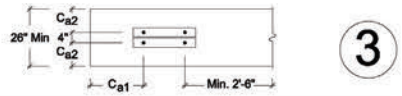
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SN1.0

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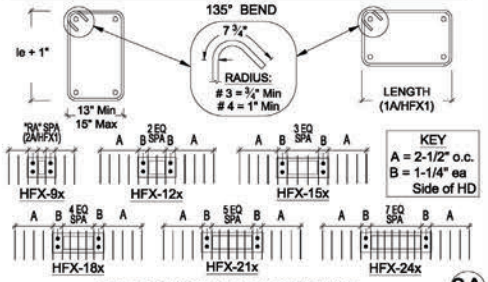
BACK TO BACK REINFORCED ANCHORAGE (BB-RA)

Model	Panel Width (in)	Anchorage[1]	Rod Dia (in)	Rod Grade[2,3]	BB-RA le[4] (in)	BB-RA Ca1[5] (in)	BB-RA Ca2[6] (in)	Stirrups[9] (in)	Shear[7] Ties
HFX-9x	9	1-1/8-STD-BB-RA	1-1/8	STD	15	19-3/4	11	8 - #4	# 3 (min) @ 3-3/4" OC
HFX-12x	12	1-1/8-STD-BB-RA		STD				13 - #4	# 3 (min) @ 4" OC
		1-1/8-HS-BB-RA		HS					
HFX-15x	15	1-1/8-STD-BB-RA		STD	23	20-5/8		14 - #4	
		1-1/8-HS-BB-RA		HS					
HFX-18x	18	1-1/8-STD-BB-RA		STD				15 - #4	# 4 (min) @ 4" OC
		1-1/8-HS-BB-RA		HS					
HFX-21x	21	1-1/8-STD-BB-RA		STD				16 - #4	
		1-1/8-HS-BB-RA		HS					
HFX-24x	24	1-1/8-STD-BB-RA		STD				18 - #4	
		1-1/8-HS-BB-RA		HS					

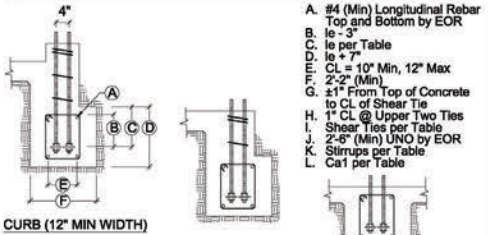
BACK TO BACK REINFORCED ANCHORAGE NOMENCLATURE
1-1/8 - STD - BB - RA
- REINFORCED ANCHORAGE
- "BACK TO BACK" INSTALLATION
- ROD GRADE
- ROD DIAMETER

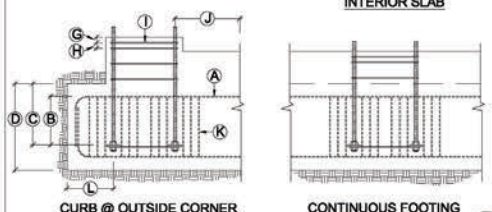


3



BB-RA SHEAR TIES & STIRRUPS 3A



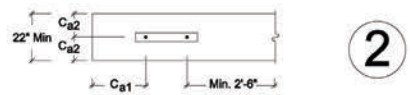


BB-RA SECTIONS & ELEVATIONS 3B

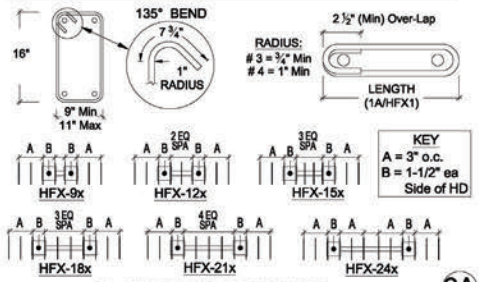
REINFORCED ANCHORAGE (RA)

Model	Panel Width (in)	Anchorage[1]	Rod Dia (in)	Rod Grade[2,3]	RA le[4] (in)	RA Ca1[5] (in)	RA Ca2[6] (in)	Stirrups[9] (in)	Shear[7] Ties
HFX-9x	9	1-1/8-STD-RA	1-1/8	STD	15	19-3/4	11	8 - #4	# 3 (min) @ 3-3/4" OC
HFX-12x	12	1-1/8-STD-RA		STD				9 - #4	# 3 (min) @ 4" OC
		1-1/8-HS-RA		HS					
HFX-15x	15	1-1/8-STD-RA		STD				10 - #4	
		1-1/8-HS-RA		HS					
HFX-18x	18	1-1/8-STD-RA		STD		20-5/8		11 - #4	
		1-1/8-HS-RA		HS					
HFX-21x	21	1-1/8-STD-RA		STD				12 - #4	# 4 (min) @ 4" OC
		1-1/8-HS-RA		HS					
HFX-24x	24	1-1/8-STD-RA		STD					
		1-1/8-HS-RA		HS					

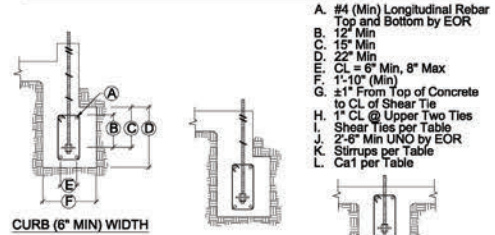
REINFORCED ANCHORAGE NOMENCLATURE
1-1/8 - STD - RA
- REINFORCED ANCHORAGE
- ROD GRADE
- ROD DIAMETER

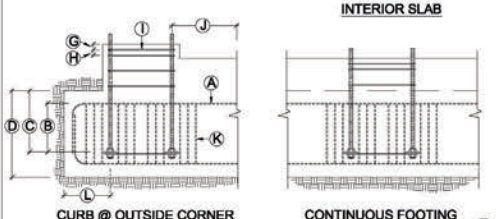


2



RA SHEAR TIES & STIRRUPS 2A





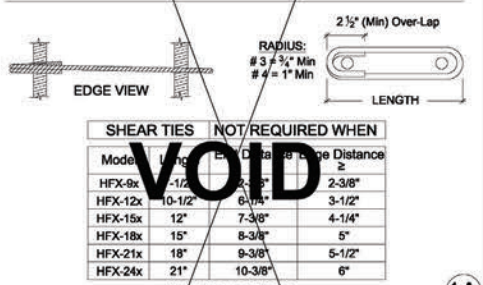
RA SECTIONS & ELEVATIONS 2B

UNREINFORCED ANCHORAGE (UA)

Model	Panel Height	Anchorage[1]	Rod Dia (in)	Rod Grade[2,3]	UA le[6] (in)	UA Ca1[5] & Ca2[6] (in)	Shear[7,8] Ties
HFX-9x	79.5" - 8'	1-1/8-STD-13-19	1-1/8	STD	13	19	1 - # 3
HFX-12x	78" - 10'	1-1/8-HS-20-30		HS	20	30	
		1-1/8-STD-14-20		STD	14	20	
HFX-15x, 18x	78" - 13'	1-1/8-HS-20-30		HS	20	30	
HFX-15x, 18x Balloon	14' - 20'						
HFX-21x, 24x	78" - 13'	1-1/8-STD-14-20		STD	14	20	
		1-1/8-HS-23-34			23	34	2 - # 3
HFX-21x, 24x Balloon	14' - 20'	1-1/8-HS-20-30		HS	20	30	

UNREINFORCED ANCHORAGE NOMENCLATURE
1-1/8 - STD - 14 - 20
- END & EDGE DISTANCE (C_{a1} & C_{a2})
- EMBEDMENT DEPTH (l_e)
- ROD GRADE
- ROD DIAMETER

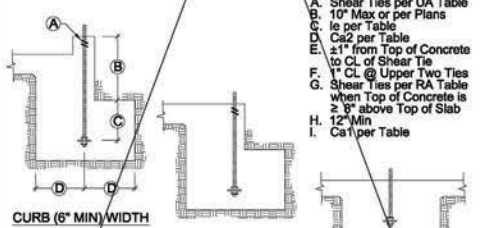
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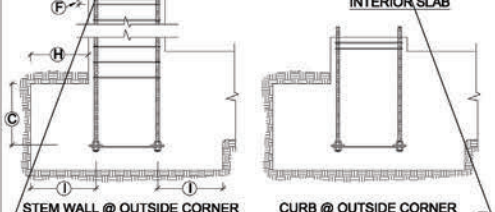


SHEAR TIES NOT REQUIRED WHEN			
Model	Edge Distance ≥	Edge Distance ≥	Edge Distance ≥
HFX-9x	5-1/2"	2-3/8"	2-3/8"
HFX-12x	10-1/2"	6-1/4"	3-1/2"
HFX-15x	12"	7-3/8"	4-1/4"
HFX-18x	15"	8-3/8"	5"
HFX-21x	18"	9-3/8"	5-1/2"
HFX-24x	21"	10-3/8"	6"

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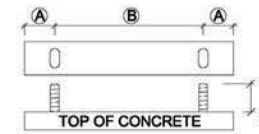
UA SHEAR TIES 1A





UA SECTIONS & ELEVATIONS 1B

1. DESIGNS ARE TO RESIST LOADING PER ACI 318-19, SEC 17.10.5.3.
2. STD INDICATES ANCHORS COMPLYING WITH ASTM F1554 GRADE 36 WITH A HARDY FRAME BOLT BRACE (HFXBB) INSTALLED WITH STD OR GRADE 8 DOUBLE NUTS ON THE EMBED END.
3. HS INDICATES ANCHORS COMPLYING WITH ASTM A193 GRADE B7 WITH A 1/2"x3"x3"(MIN) HFPW PLATE WASHER INSTALLED WITH DOUBLE NUTS ON THE EMBED END (HFXBB NOT REQUIRED).
4. LE = LENGTH OF EMBEDMENT FROM THE TOP OF FOOTING OR GRADE BEAM TO THE TOP OF THE HFXBB BOLT BRACE (TOP OF THE EMBEDDED HFPW PLATE WASHER @ HS ANCHORS)
5. CA1 = DISTANCE FROM HD CENTERLINE TO THE END OF THE FOOTING OR GRADE BEAM.
6. CA2 = DISTANCE FROM HD CENTERLINE TO BOTH THE FRONT AND THE BACK FACE OF THE FOOTING OR GRADE BEAM.
7. SHEAR TIES ARE GRADE 60 (MIN) REBAR AND REQUIRED FOR NEAR EDGE DISTANCE CONDITIONS PER ACI 318-19, F'C = 2,500 PSI. CURBS AND STEM WALLS MUST BE 6 INCH (MIN) WIDTH FOR UA AND RA, 12 INCH (MIN) WIDTH FOR BB-RA.
8. FOR UA APPLICATIONS, ADDITIONAL TIES MAY BE REQUIRED AT STEM WALLS. SHEAR TIES ARE NOT REQUIRED FOR INSTALLATION AWAY FROM EDGE (SEE DETAIL 1A), INSTALLATION ON WOOD FRAMING, OR FOR IRC BRACED WALL PANEL APPLICATIONS.
9. STIRRUPS ARE GRADE 60 (MIN) REBAR. SEE TABLE FOR SIZE AND SPACING. SEE "STIRRUP LAYOUT" DIAGRAMS AND "KEY" FOR LAYOUT PATTERNS.
10. CONCRETE EDGE DISTANCES MUST COMPLY WITH ACI 318-19, SECTION 17.9.2. COATED REINFORCEMENT MAY BE SPECIFIED BY THE EOR TO LIMIT EXPOSURE AND THEREFORE REDUCE MINIMUM CONCRETE COVER. COATED REINFORCEMENT MUST COMPLY WITH ACI 318-19, SECTION 20.5.2.



Model	Width	A	B
HFX-9x	9"	1-3/4"	5-1/2"
HFX-12x	12"		8-1/2"
HFX-15x	15"	2-5/8"	9-3/4"
HFX-18x	18"		12-3/4"
HFX-21x	21"		15-3/4"
HFX-24x	24"		18-3/4"

HFX ANCHOR CENTERLINES A

IMPORTANT!

1. ANCHORAGE IS DESIGNED FOR TENSION AND SHEAR TRANSFER ONLY, FOUNDATION DESIGN PER EOR.
2. REINFORCEMENT SHOWN IS THE MINIMUM REQUIREMENT AND IS NOT INTENDED TO REPLACE REINFORCEMENT DESIGNED BY THE EOR.
3. FOR RA AND BB-RA INSTALLATIONS, THE HFXBB BOLT BRACE MAY BE PLACED ON TOP OF THE STIRRUPS WITH DOUBLE-NUTS INSTALLED AT EMBED END OF STANDARD GRADE ANCHOR RODS. (NOTE: ½" x 3" x 3" MIN. HFPW PLATE WASHERS ARE REQUIRED TO BE DOUBLE-NUTTED AT EMBED END OF HIGH STRENGTH ANCHOR RODS.)
4. HIGH STRENGTH ALL-THREAD RODS PROVIDED BY HARDY FRAMES ARE STAMPED ON BOTH ENDS. HF B7

IMPORTANT NOTES B

REVISIONS	DATE

ANCHORAGE DETAILS - HFX PANELS

THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH *HARDY FRAME* PRODUCTS

HARDY FRAME SHEAR WALL SYSTEMS
16023 SWINGLEY RIDGE RD
CHESTERFIELD, MO 63017
(800) 325-8075
WWW.HARDYFRAME.COM

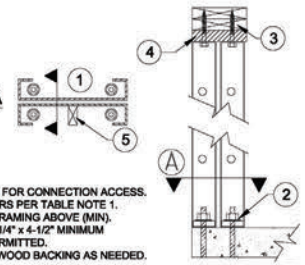
MiTek®

DATE: 1-1-2023

HFX1

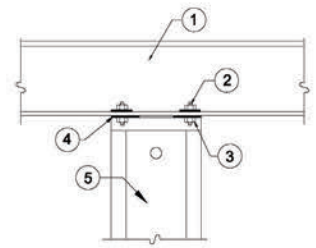
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SECTION A



1. CAVITY ORIENTED FOR CONNECTION ACCESS.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. NOMINAL 8 INCH FRAMING ABOVE (MIN).
4. A 2x FILLER WITH 1/4" x 4-1/2" MINIMUM WS SCREWS IS PERMITTED.
5. FIELD INSTALLED WOOD BACKING AS NEEDED.

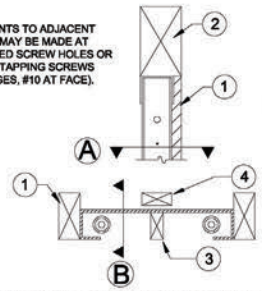
BACK TO BACK INSTALLATION 3



1. STEEL BEAM PER PLANS
2. ALL THREAD RODS THRU-BOLTED TO STEEL BEAM BY BUILDING DESIGN PROFESSIONAL.
3. NUTS AND WASHERS PER TABLE NOTE 1.
4. *HARDY FRAME*® STACKING WASHERS (HFSW) REQUIRED TO BE WELDED INSIDE TOP CHANNEL OF LOWER PANEL.
5. *HARDY FRAME*® "STK" PANEL WITH STACKING WASHERS WELDED INSIDE THE TOP CHANNEL BY MANUFACTURER.

STEEL BEAM ABOVE THRU-BOLT 2

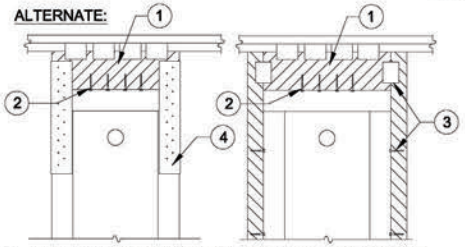
NOTE:
ATTACHMENTS TO ADJACENT TRIMMERS MAY BE MADE AT PREPUNCHED SCREW HOLES OR WITH SELF TAPPING SCREWS (#12 AT EDGES, #10 AT FACE).



1. TRIMMERS PROVIDE FULL BEARING FOR HEADER ABOVE, DESIGN AND CONNECTIONS BY BUILDING DESIGN PROFESSIONAL.
2. 6x HEADER.
3. WOOD MEMBERS FOR BACKING MAY BE INSERTED VERTICALLY OR HORIZONTALLY IN THE PANEL CAVITY AS NEEDED.
4. WOOD MEMBER FLUSH TO FACE OF WALL FOR BACKING AS NEEDED.

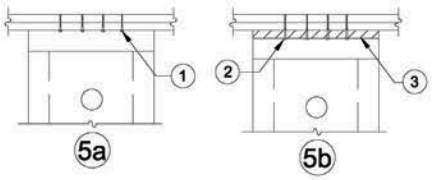
6x HEADER ABOVE-SECTIONS 1

ALTERNATE:



1. WOOD FILLER (13 $\frac{1}{2}$" MAX DEPTH) WITH USP MP4F CONNECTORS BOTH SIDES, QUANTITY BY BUILDING DESIGN PROFESSIONAL.
2. 1/4" x 3" (MINIMUM) WS SCREWS, QUANTITY PER TABLES
3. ADJACENT FRAMING WITH 1/4" DIAMETER SCREWS INSTALLED THROUGH PRE-PUNCHED HOLES IN PANEL EDGES REQ'D WHEN INSTALLING A FILLER GREATER THAN 1-1/2" ABOVE TO BRACE OUT-OF-PLANE HINGE OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL.
4. MiTek HFFB FILLER BRACE WITH 1/4" x 1-1/2" WS SCREWS TO FILLER (FILL ALL HOLES) AND 1/4" SELF-TAPPING SCREWS TO PANEL (5 MIN. EACH FACE) REQ'D WHEN INSTALLING A FILLER GREATER THAN 3-1/4" ABOVE TO BRACE OUT-OF-PLANE HINGE OR WHEN SPECIFIED BY THE BUILDING DESIGN PROFESSIONAL.

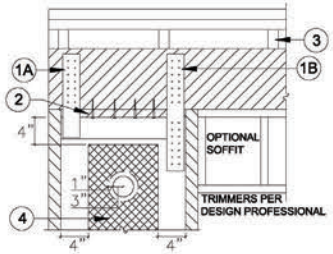
FILLER GREATER THAN 1-1/2 IN. 6



1. 1/4" x 3" (MINIMUM) WS SCREWS, QUANTITY PER TABLES
2. 1/4" x 4-1/2" (MINIMUM) WS SCREWS, QUANTITY PER TABLES
3. 2x WOOD FILLER.

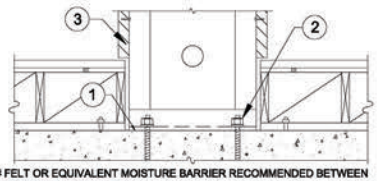
TOP PLATE CONNECTIONS 5

NOTE:
TO PREVENT DRILLING ADDITIONAL HOLES ORIENT THE PANEL CAVITY TOWARD THE FIXTURE BEING INSTALLED.



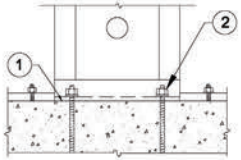
1. (A) PRE-WELDED STRAPS ARE PROVIDED ON 78" AND 79-1/2" PANEL HEIGHTS. THEY ARE AVAILABLE FOR OTHER HEIGHTS UPON REQUEST.
   (B) FIELD INSTALLED STRAPS WITH SELF TAPPING SCREWS ARE PERMITTED. THE DESIGN AND CONNECTION IS BY THE DESIGN PROFESSIONAL.
2. A 2x WOOD FILLER WITH 1/4"x4-1/2" (MIN.) WS SCREWS IS PERMITTED.
3. WHEN CRIPPLE STUDS OCCUR, SHEAR TRANSFER DESIGN TO BE PER THE BUILDING DESIGN PROFESSIONAL.
4. A 1" DIA. HOLE MAY BE ADDED IN THE PANEL FACE WHEN IT IS LOCATED IN THE UPPER HALF OF THE PANEL HEIGHT AND IS 4" MINIMUM FROM ANY EDGE. FOR PANELS MORE THAN 12" WIDE, ADDITIONAL HOLES MUST BE OFFSET 1" MINIMUM FROM THE 3" DIA. PREPUNCHED HOLE. FOR HOLES LARGER THAN 1" DIAMETER OR TO ADD MORE THAN ONE HOLE CONTACT MITEK HARDY FRAME TECHNICAL SUPPORT AT (800) 754-3030.

TOP CONNECTION TO HEADER 4



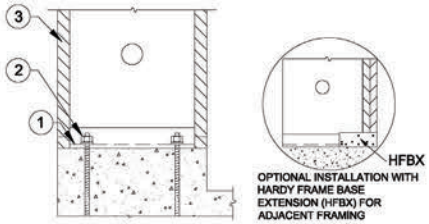
1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. ADJACENT FRAMING WITH 1/4" DIAMETER SCREWS INSTALLED AT THE PANEL EDGES WHEN INSTALLING A FILLER GREATER THAN 1-1/2" ABOVE OR WHEN SPECIFIED BY DESIGN PROFESSIONAL.

RAISED FLOOR HEAD-OUT 8



1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.

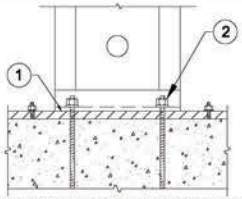
INSTALLATION ON CONCRETE 7



OPTIONAL INSTALLATION WITH HARDY FRAME BASE EXTENSION (HFBX) FOR ADJACENT FRAMING

1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. ADJACENT FRAMING OPTIONAL U.N.O. BY BUILDING DESIGN PROFESSIONAL.

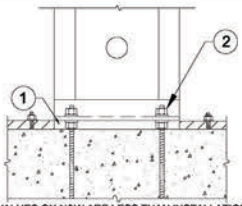
INSTALLATION ON CURB 9



ALLOWABLE VALUES ON 2x PLATE ARE LESS THAN INSTALLATION ON CONCRETE

1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND TREATED PLATE.
2. NUTS AND WASHERS PER TABLE NOTE 1.

INSTALLATION ON 2x PLATE 11



ALLOWABLE VALUES ON N&W ARE LESS THAN INSTALLATION ON CONCRETE

1. PLUS OR MINUS 1-1/2" GAP TO BE FILLED WITH 5,000 PSI NON-SHRINK GROUT (MINIMUM).
2. NUT AND WASHER GRADES PER TABLE NOTE 1.

INSTALLATION ON NUTS & WASHERS 10

HFX PANELS 78 IN. THROUGH NOMINAL 13 FEET

Model Number	Net Height (in)	Depth (in)	Hold Down Diameter[1] (in)	Top Screw Qty[2] (ea)	Screw Qty Available at Edges (ea)[3]
HFX-12,15,18,21 & 24x78	78	3-1/2	1-1/8	9" Width = 5	4
HFX-9x79.5	79-1/2			12" Width = 6	
HFX-12,15,18,21 & 24x8	92-1/4			15" Width = 8	
HFX-9x8	93-3/4			18" Width = 10	5
HFX-12,15,18,21 & 24x9	104-1/4			21" Width = 12	
HFX-12,15,18,21 & 24x10	116-1/4			24" Width = 14	6
HFX-15,18,21 & 24x11	128-1/4				
HFX-15,18,21 & 24x12	140-1/4				
HFX-15,18,21 & 24x13	152-1/4				

BALLOON PANELS 14 FEET THROUGH 20 FEET

Model Number	Net Height (in)	Depth (in)	Hold Down Diameter[1] (in)	Top Screw Qty[2] (ea)	Screw Qty Available at Edges (ea)[3]
HFX-15,18,21 & 24x14	164-1/4	3-1/2	1-1/8	15" Width = 8	6
HFX-15,18,21 & 24x15	176-1/4			18" Width = 10	
HFX-15,18,21 & 24x16	188-1/4			21" Width = 12	7
HFX-15,18,21 & 24x17	200-1/4			24" Width = 14	8
HFX-15,18,21 & 24x18	212-1/4				
HFX-15,18,21 & 24x19	224-1/4				
HFX-15,18,21 & 24x20	236-1/4				

TABLE NOTES

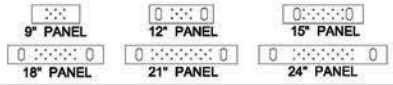
1. FOR STD OR HS GRADE HOLD DOWN ANCHOR BOLTS CONNECT TO THE PANEL BASE WITH HARDENED ROUND WASHERS BELOW GRADE 8 NUTS. ALTERNATE WASHERS ARE (2 EA) ROUND-FLAT OR (2 EA) SAE WASHERS ON EACH BOLT. ALTERNATE NUTS ARE 2H HEAVY HEX.
2. 1/4" DIAMETER MITEK® PRO SERIES™ WS SCREWS. LENGTH IS 3" (MINIMUM) WHEN ATTACHED DIRECTLY TO THE COLLECTOR AND 4-1/2" (MINIMUM) WHEN INSTALLING A 2x FILLER ABOVE THE PANEL.
3. ADJACENT FRAMING WITH 1/4" DIAMETER SCREWS IS REQUIRED AT THE PANEL EDGES WHEN INSTALLING A FILLER ABOVE THE TOP CHANNEL THAT IS GREATER THAN 1-1/2" OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL.

A

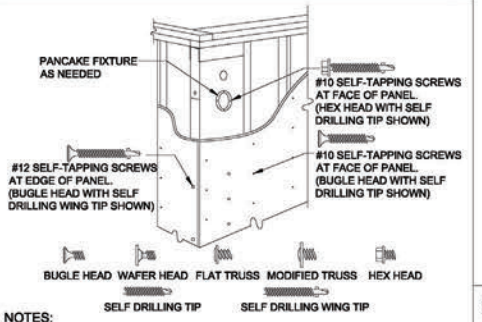
INSTALLATION INSTRUCTIONS

1. WHEN INSTALLING ON CONCRETE CONNECT WITH (1 EA) HARDENED ROUND WASHER BELOW (1 EA) GRADE 8 NUT, SECURE WITH A DEEP SOCKET (RECOMMENDED) UNTIL SNUG TIGHT. ALTERNATE WASHERS AND NUTS ARE PROVIDED IN TABLE NOTE 1.
2. INSTALLATION ON CONCRETE PROVIDES THE HIGHEST ALLOWABLE VALUES. CONFIRM WITH THE DESIGN PROFESSIONAL BEFORE INSTALLING ON OTHER SUPPORTING SURFACES.
3. USE 1/4"X4-1/2" MITEK® PRO SERIES® WS SCREWS AT TOP CONNECTIONS WITH A 2x FILLER. IF THE TOP OF PANEL IS IN DIRECT CONTACT WITH THE COLLECTOR ABOVE (TOP PLATES, HEADER, BEAM, ETC.) USE 1/4 x 3" (MIN)
4. FOR INSTALLATIONS WITH A FILLER GREATER THAN 1-1/2" ABOVE, OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL, ADJACENT KING POSTS TO BRACE THE OUT-OF-PLANE HINGE CAN BE CONNECTED WITH 1/4" DIA. SCREWS THROUGH PRE-PUNCHED HOLES AT THE PANEL EDGES.

B



C



NOTES:

A. SURFACE FINISHES, CONNECTORS AND FIXTURES ARE ATTACHED TO THE PANEL FACE WITH # 10 SELF-TAPPING SCREWS SPACED NO LESS THAN 2-1/4" OC.
B. ATTACHMENTS TO THE PANEL EDGES ARE MADE WITH # 12 SELF-TAPPING SCREWS.
C. STRUCTURAL CONNECTIONS ARE TO BE DESIGNED BY THE DESIGN PROFESSIONAL.
D. STRUCTURAL HARDWARE USED TO TRANSFER LOADS SHOULD NOT EXCEED 12 GAUGE.

D

REVISIONS	DATE

FRAMING DETAILS - HFX PANELS

THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH MITEK® *HARDY FRAME*® PRODUCTS

HARDY FRAME SHEAR WALL SYSTEMS
16023 SWINGLEY RIDGE RD
CHESTERFIELD, MO 63017
(800) 325-9075
WWW.HARDYFRAME.COM

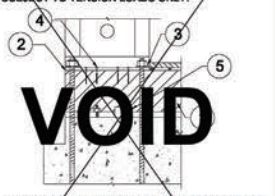
MiTek®

DATE:
1-1-2023

HFX2

Docusign Envelope ID: 526AD49C-7B45-8B97-8179-1866DCBDC2AD

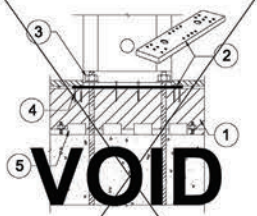
NOTES:
A. INSTALLATION WITHOUT *HARDY FRAME*® BEARING PLATE (HFXBP) MAY INCREASE DEFLECTION AND RESULT IN A DECREASE OF ALLOWABLE SHEAR VALUE. BUILDING DESIGN PROFESSIONAL MUST ANALYZE EFFECTS
B. COUPLERS MAY BE USED WHEN THREADED ROD IS SUBJECT TO TENSION LOADS ONLY.



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. NUTS AND WASHERS PER TABLE NOTE 1.
4. 1/4" x 4-1/2" (MINIMUM) WS SCREWS THROUGH BOTTOM OF PANEL MINIMUM QUANTITY PER TABLE.
5. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

RAISED-OS CORNER 4

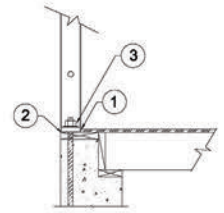
NOTE:
COUPLERS MAY BE USED WHEN THREADED ROD IS SUBJECT TO TENSION LOADS ONLY.



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. NUTS AND WASHERS PER TABLE NOTE 1.
4. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
5. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

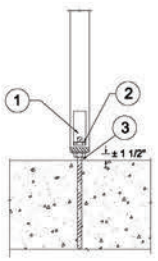
RAISED BEARING PLATE 3

NOTES:
A. CHECK WALL HEIGHT, *HARDY FRAME*® BEARING PLATES BELOW THE PANEL BASE OR CUSTOM HEIGHT PANELS ARE AVAILABLE TO AVOID FILLERS GREATER THAN 1-1/2".
B. FOR MAXIMUM ALLOWABLE VALUES INSTALL PANEL ON CONCRETE



1. FLOOR SHEATHING NOTCHED, INSTALL PANEL ON WOOD PLATE.
2. 15# FELT OR EQUIVALENT RECOMMENDED BETWEEN PANEL BASE AND TREATED MUDSILL.
3. NUTS AND WASHERS PER TABLE NOTE 1.

RAISED STEM WALL 2



1. ACCESS HOLE LOCATED AT EDGE OF POST.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. PLUS OR MINUS 1-1/2" GAP TO BE FILLED WITH 5,000 PSI STRENGTH NON-SHRINK GROUT (MIN).

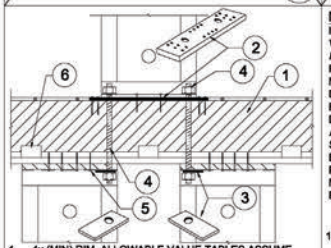
POST ON N&W 1

Model Number	Net Height (in)	Depth (in)	Hold Down Diameter[1] (in)	Screw Quantity Panel	Screw Quantity Top[2] (ea)	Screw Quantity Bott[3] (ea)	Screw Qty[4] Available at Edges (ea)
HFX-12,15,18,21 & 24x8	92-1/4	3-1/2	1-1/8	12" Width	6	6	4
HFX-12,15,18,21 & 24x9	104-1/4			15" Width	8	8	
HFX-12,15,18,21 & 24x10	116-1/4			18" Width	10	10	5
HFX-15,18,21 & 24x11	128-1/4			21" Width	12	12	
HFX-15,18,21 & 24x12	140-1/4			24" Width	14	14	6
HFX-15,18,21 & 24x13	152-1/4						

NOTE: *HARDY FRAME*® STACKING WASHERS (HFSW) ARE REQUIRED IN THE TOP OF PANELS WHEN CONNECTING TO TENSION ANCHORS FROM ABOVE. *HARDY FRAME*® "STK PANELS" INCLUDE HFSW WASHERS PRE-WELDED IN THE TOP CHANNEL.

1. HOLD DOWN TENSION ANCHORS SPECIFIED AS STANDARD GRADE (STD) MUST COMPLY WITH ASTM F1554 GRADE 36 (OR EQUAL). HOLD DOWN TENSION ANCHORS SPECIFIED AS HIGH STRENGTH (HS) MUST COMPLY WITH ASTM A 193 GRADE B7 (OR EQUAL). TENSION ANCHORS (BOTH GRADES) CONNECT TO THE UPPER AND LOWER PANELS WITH HARDENED ROUND WASHERS AND GRADE 8 NUTS. A *HARDY FRAME*®"HFSW" STACKING WASHER IS REQUIRED IN THE TOP CHANNEL OF THE LOWER PANEL (AVAILABLE PRE-WELDED IN A *HARDY FRAME*®"STK" PANEL). ALTERNATE WASHERS ARE (2 EA) ROUND-FLAT OR (2 EA) SAE WASHERS AT EACH ANCHOR CONNECTION. ALTERNATE NUTS ARE 2H HEAVY HEX.
2. 1/4" DIAMETER MITEK®PRO SERIES™ WS SCREWS. LENGTH IS 3" (MINIMUM) WHEN ATTACHING DIRECTLY TO THE COLLECTOR AND 4-1/2" (MINIMUM) WHEN INSTALLING A 2x FILLER ABOVE THE PANEL.
3. 1/4" DIAMETER MITEK®PRO SERIES™ WS SCREWS. LENGTH IS 4-1/2" (MINIMUM) AT CONNECTIONS TO FLOOR SYSTEMS AND BEAMS BELOW.
4. 1/4" DIAMETER SCREWS ARE REQUIRED AT THE EDGES WHEN INSTALLING A FILLER GREATER THAN 1-1/2 INCH ABOVE OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL.

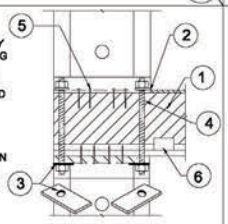
A



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8 IN. DIA HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

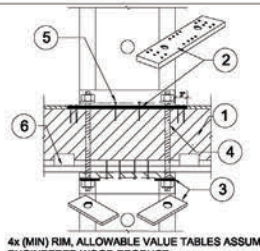
PYRAMID STACK 8

NOTE:
INSTALLATION WITHOUT *HARDY FRAME*® BEARING PLATE (HFXBP) MAY INCREASE DEFLECTION AND RESULT IN A DECREASE OF ALLOWABLE SHEAR VALUE, BUILDING DESIGN PROFESSIONAL MUST ANALYZE EFFECTS.



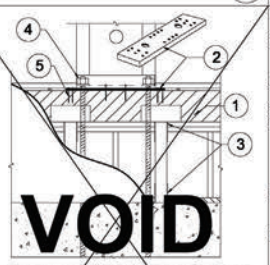
1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® PANEL DIRECTLY ON RIM.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

STACK @ OS CORNER 7



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

STRAIGHT STACK 6



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. USP POST CAP AND POST BASE BY THE BUILDING DESIGN PROFESSIONAL.
4. NUTS AND WASHERS PER TABLE NOTE 1.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.

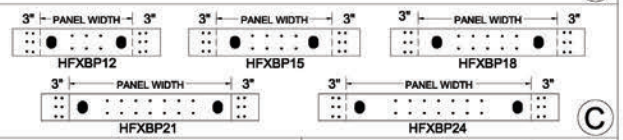
CRIPPLE WALL 5

INSTALLATION ON FLOOR SYSTEMS WITH *HARDY FRAME*® BEARING PLATE (HFXBP)

1. WITH HOLES PRE-DRILLED FOR 1-1/8" DIA.TENSION ANCHORS, INSTALL A SOLID 4x (MINIMUM) RIM IN FLOOR SYSTEM AT PANEL LOCATION. ALLOWABLE VALUE TABLES ASSUME THE RIM IS ENGINEERED WOOD PRODUCT (EWP).
2. NOTCH FLOOR SHEATHING THEN INSTALL HFXBP ON RIM WITH 6 EACH 1/4"X4-1/2" (MIN) "WS" SCREWS AT EACH END.
3. PLACE PANEL ON HFXBP.
4. WHEN STACKING PANELS, INSTALL "HFSW" STACKING WASHERS IN THE TOP CHANNEL OF THE LOWER PANEL. CONNECT LOWER TO UPPER PANELS WITH TENSION ANCHORS (GRADE PER PLANS) AND SECURE AT BOTH ENDS WITH HARDENED ROUND WASHERS AND GRADE 8 NUTS TO BE SNUG TIGHT. *HARDY FRAME* "STK" PANELS THAT INCLUDE "HFSW" STACKING WASHERS PRE-WELDED IN THE TOP CHANNEL ARE AVAILABLE.
5. WHEN MORE THAN 12 SCREWS ARE REQUIRED FOR THE BOTTOM CONNECTION OR JOINTS IN FRAMING MEMBERS OCCUR AT SCREW LOCATIONS, INSTALL ADDITIONAL 1/4"x4-1/2" WS SCREWS THROUGH THE BASE OF PANEL WHERE THEY ALIGN WITH HOLES IN THE HFXBP.
6. FOR STANDARD WALL HEIGHTS, INSTALL A 2x FILLER ABOVE PANEL (DTL 5/HFX2). FOR FILLERS GREATER THAN 1-1/2 IN. SEE DETAIL 6/HFX2.

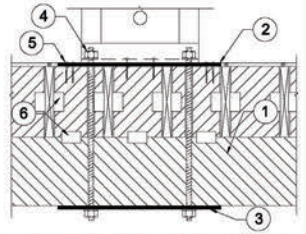
NOTE: INSTALLATIONS MAY VARY WITH JOB SPECIFIC CONDITIONS AND/OR SPECIFICATIONS BY THE BUILDING DESIGN PROFESSIONAL.

B



C

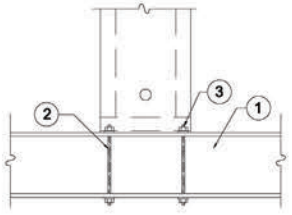
LOAD PATH FROM BEAM TO FOUNDATION AND CHECK THAT PANEL DRIFT IS WITHIN CODE LIMIT BY BUILDING DESIGN PROFESSIONAL.



1. DROP BEAM WITH FLOOR JOIST ABOVE PER PLAN.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® BEARING PLATE (HFXBP) OR BEARING PLATE WASHER AT UNDERSIDE OF BEAM SIZED PER BUILDING DESIGN PROFESSIONAL TO LIMIT CRUSHING FROM TENSION ANCHOR FORCES.
4. NUTS AND WASHERS PER TABLE NOTE 1.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP CONNECTORS BY DESIGN PROFESSIONAL

DROP BM - FL SYSTEM 14

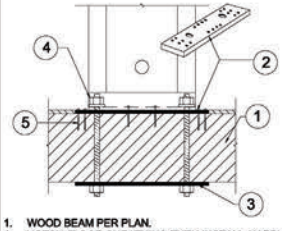
LOAD PATH FROM BEAM TO FOUNDATION AND CHECK THAT PANEL DRIFT IS WITHIN CODE LIMIT BY BUILDING DESIGN PROFESSIONAL.



1. STEEL BEAM PER PLANS
2. HOLD DOWN ALL THREAD RODS THRU-BOLTED TO BOTTOM FLANGE OF STEEL BEAM BY BUILDING DESIGN PROFESSIONAL.
3. NUTS AND WASHERS AT PANEL BASE PER TABLE NOTE 1

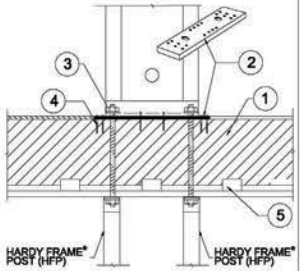
STEEL BM THRU-BOLT 13

LOAD PATH FROM BEAM TO FOUNDATION AND CHECK THAT PANEL DRIFT IS WITHIN CODE LIMIT BY BUILDING DESIGN PROFESSIONAL.



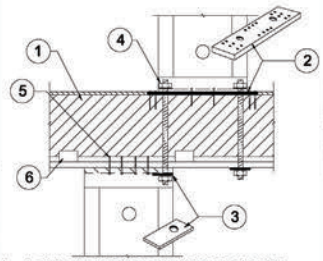
1. WOOD BEAM PER PLAN.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® BEARING PLATE (HFXBP) OR BEARING PLATE WASHER AT UNDERSIDE OF BEAM SIZED PER BUILDING DESIGN PROFESSIONAL TO LIMIT CRUSHING FROM TENSION ANCHOR FORCES.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.

WOOD BM THRU-BOLT 12



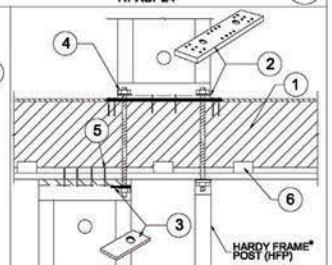
1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
4. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
5. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

HFP POSTS BELOW 11



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

STAGGERED THRU-BOLT 10



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

STAGGERED-HFP POST 9

REVISIONS	DATE

FLOOR SYSTEM DETAILS - HFX PANELS

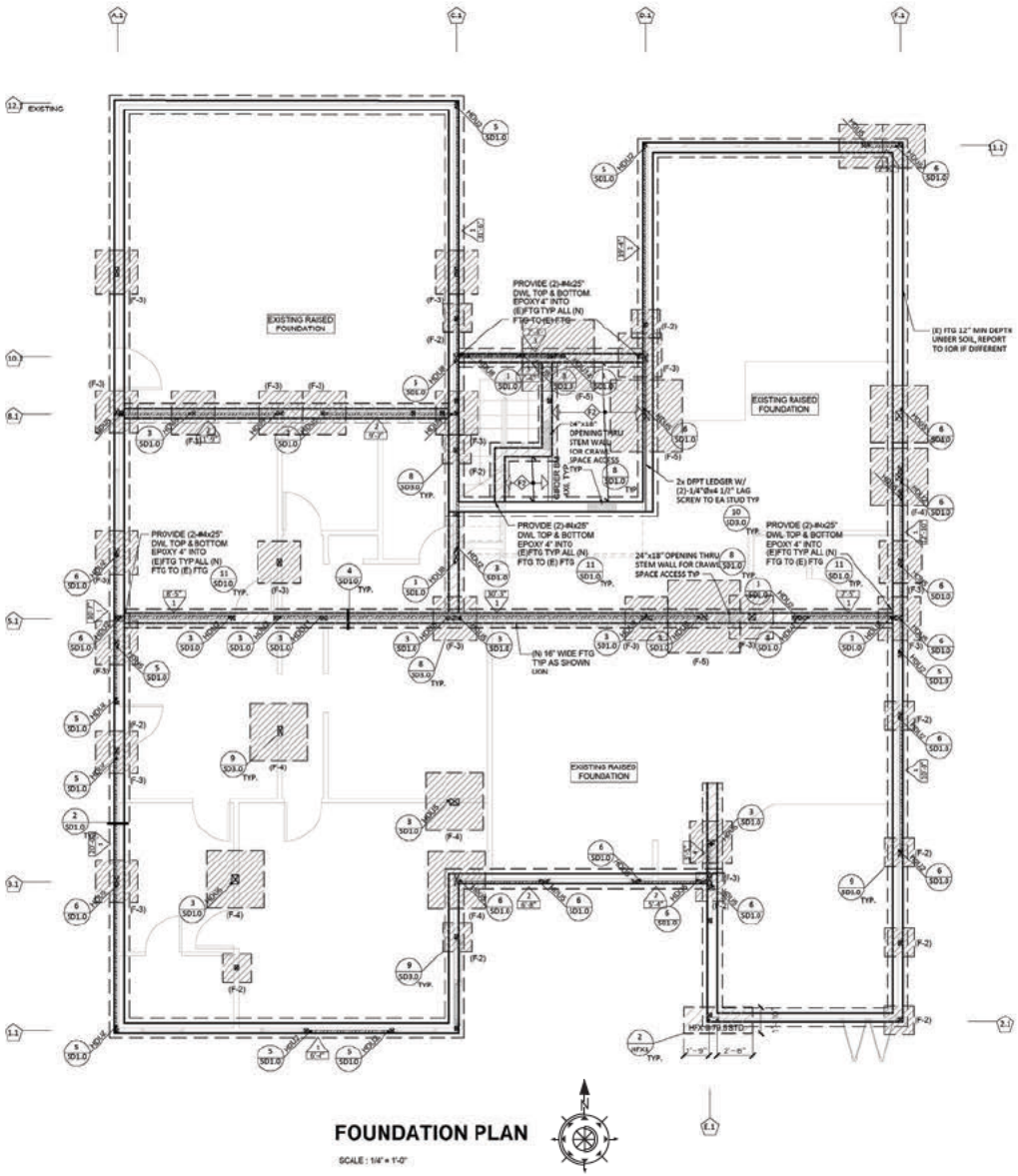
THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH MITEK®*HARDY FRAME*® PRODUCTS

MiTek®
HARDY FRAME SHEAR WALL SYSTEMS
16023 SWINGLEY RIDGE RD
CHESTERFIELD, MO 63017
(800) 325-8075
WWW.HARDYFRAME.COM

DATE:
1-1-2023

HFX3

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FOUNDATION PLAN

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

FOUNDATION NOTES

1. CONFIRM ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
   PLAN SHOWS STRUCTURAL SLAB, WALLS, ABOVE FOUNDATION.
   ARCHITECTURAL BACKGROUND INDICATES NON-STRUCTURAL WALLS.
   CONFIRM ALL BACKGROUND INFORMATION WITH CURRENT ARCHITECTURAL DRAWINGS.
2. SEE STRUCTURAL SPECIFICATIONS ON SHEET SN1.0.
3. NEW STEM WALL FTG. SHALL BE 16" WIDE CONT. FTG. W/ (2)-#4 T&B & #4 VERT @ 16" O.C. TYP.
4. PROVIDE 2x SOLID BLOCKING @ 6'-0" O.C. BETWEEN F.J. JOIST TYP.
5. ALL FLOOR USE 3/4" PLYWOOD T&G WITH 10d@ 6" O.C. EDGE NAILS 10" O.C. FIELD NAILS TYP AT FLOOR AREA GLUED AND NAILED.
6. PROVIDE FLOOR PLYWOOD EDGE NAILS FULL LENGTH AT ALL SHEAR WALL LINE.
7. FL. JST. GIRDER W/ HUTF HGR AT END TO WALL SILL PL. TYP.
8. HOLDOWNS SHOULD BE RE-TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
9. ALL HOLDOWNS REQUIRED 4x4 MINIMUM POST.
10. THE NEW FOUNDATION TYPE MUST MATCH EXISTING FOUNDATION, REPORT TO ENGINEER OF RECORD IF IT IS DIFFERENT.
11. HOLDOWN ANCHOR BOLT TO BE SET AND POSITIONED IN PLACE PRIOR TO CALLING FOR FOUNDATION INSPECTION.
12. ALL EXISTING FOUNDATION MUST FIELD IN VERIFY.
13. GC SHALL VERIFY ALL EXISTING FOUNDATION AND BEARING WALL LOCATIONS PRIOR TO DEMOLITION AND REPORT TO EOR IF THERE ARE ANY DISCREPANCIES WITH CONSTRUCTION DOCUMENTS.
14. THE SUBGRADE SHOULD BE EITHER CLEAN NATIVE SOIL OR IMPORT SOIL AND IT SHOULD BE UNIFORMLY COMPACTED TO A MINIMUM DEGREE OF RELATIVE COMPACTON OF 90% OF THE MAXIMUM DRY DENSITY.

SYMBOLS LEGEND

- WOOD POST / WOOD POST ABOVE
- DIRECTION OF JOISTS
- SHEAR PANEL LENGTH AND SCHEDULE
- SHEAR PANEL LENGTH AND SCHEDULE
- DETAIL
- BEAM NUMBER, REFER TO E.O.R. CALCULATIONS
- SHEAR LINE
- CALIFORNIA FRAMING
- PAD FOOTING
- (E) FOUNDATION
- (N) FOUNDATION

FRAMING NOTES

- EXISTING ROOF RAFTERS
- 2 X 10 ROOF RAFTERS @ 16" O.C.
- 1 1/4" X 9 1/2" PSL ROOF RAFTERS @ 16" O.C.
- 2 E 8 CEILING JOIST @ 16" O.C.
- TJ210 X 12" FLOOR JOIST @ 16" O.C.
- 2 E 6 FLOOR JOIST @ 16" O.C.
- 2 E 8 DECK JOIST @ 16" O.C.
- TJ210 X 9 1/2" DECK JOIST @16" O.C.

PAD FOOTING SCHEDULE

MARK	FOOTING SIZE	2-STORY THICKNESS	REINFORCING
(F-1)	1'-8" x 1'-4"	24"	3-#4 EA. WAY
(F-2)	2'-0" x 2'-4"	24"	4-#5 EA. WAY
(F-3)	3'-0" x 3'-4"	24"	5-#5 EA. WAY
(F-4)	4'-0" x 4'-4"	24"	7-#5 EA. WAY
(F-5)	5'-0" x 5'-4"	24"	9-#5 EA. WAY

PLYWOOD SHEAR WALL SCHEDULE

MARK	TYPE	EDGE NAILING (10d) SPACING	FDN. SILL PLATE 1 SIDE	FDN. SILL PLATE 2 SIDE	ANCHOR BOLT SPACING 1 SIDE	ANCHOR BOLT SPACING 2 SIDE	A35/LTP4 CLIPS SPACING I SIDE	A35/LTP4 CLIPS SPACING 2 SIDE	TOP PLATE CONNECTION NAILING (SEE NOTE. 8) 1 SIDE NAILING	1 SIDE RIM/BLKG	2 SIDE NAILING	2 SIDE RIM/BLKG	CAPACITY (PLF) 1 SIDE	CAPACITY (PLF) 2 SIDE
	1	6" O.C.	2x		32" O.C.	-	16" O.C.	-	16d @ 8" O.C.	2x	-	-	340	-
	2	4" O.C.	2x	3x	24" O.C.	12" O.C.	12" O.C.	12" O.C. EA. SIDE	16d @ 4" O.C.	2x	SDS @ 8" O.C.	3x	510	1020
	3	3" STAGG.	2x	3x	16" O.C.	8" O.C.	9" O.C.	9" O.C. EA. SIDE	(2) 16d @ 6" O.C.	2x	(2) SDS @ 10" O.C.	4x	665	1330
	4	2" STAGG.	2x	3x	12" O.C.	6" O.C.	6" O.C.	6" O.C. EA. SIDE	SDS @ 6" O.C.	2x	(2) SDS @ 6" O.C.	4x	870	1740

1. ALL SHEAR PANEL SHALL BE 15/32" OSB OR CDX **STRUCTURAL I** PLYWOOD. ALL FIELD NAILING SHALL BE 10d @ 12" O.C. ALL EDGE NAILING SHALL BE 10d.
2. WHERE PANELS ARE APPLIED ON BOTH FACES OF A SHEAR WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NARROW FACE OF FRAMING MEMBERS SHALL BE 3" NOMINAL OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED.
3. STUDS SHALL BE 2X4 MINIMUM AND SPACED @ 16" O.C. MAXIMUM, U.N.
4. INTERIOR SHEAR WALLS SHALL BE EXTENDED THROUGH THE ATTIC TO THE ROOF SHEATHING.
5. NAILS SHALL BE COMMON NAILS, PLACED AT LEAST 1/2" FROM PANEL EDGES AND AT LEAST 1/2" FROM THE EDGE OF CONNECTION MEMBER OF ALL PANELS.
6. NAILS SHALL BE STAGGERED IN TWO LINES ALONG PANEL EDGES WHEN NAIL SPACING IS 3" OR LESS O.C. (MINIMUM SPACING BETWEEN NAIL LINES IS 1/2")
7. NAILS FOR PRESERVATIVE-TREATED WOOD SHALL BE HOT-DIP GALVANIZED.
8. SDS DENOTES 1/4"Ø SDS WOOD SCREWS WITH 2" MINIMUM PENETRATION INTO FRAMING BELOW. ROWS OF SDS SHALL BE STAGGERED 1/2" APART.
9. ALL ANCHOR BOLTS SHALL HAVE 3"SQ.x1/4" W/ 11/16"x1 3/4"DIAGONAL SLOT "USE STD. CUT WASHER OF PLATE WASHER) PLATE WASHERS. USE 3"x4 1/2" AT 6" THICK SHEAR WALL. PLATE WASHER. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGED OF THE SILL PLATE ON THE SIDE WITH SHEATHING.
   a. 5/8Ø A.B. W/ 7" MINIMUM EMBEDMENT INTO CONCRETE. OR
   b. SIMPSON RETROFIT FOUNDATION PLATES URFP/RFP PER MANUFACTURE'S RECOMENDATION.
   c. IN NON-P.T. SLABS, 5/8Ø " EXPENSION BOLT W/ 2 3/4" MIN. EMBEDMENT W MINIMUM 9" EDGE DISTANCE.

ORANGE ENGINEERING
4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 508-5565

DESIGN BY:

REGISTERED PROFESSIONAL ENGINEER — DI TANG — No. C82788 — 12/31/19 — STATE OF CALIFORNIA

PROJECT ADDRESS: 100 JAMIE CT., LOS GATOS, CA 95032

SHEET TITLE: FOUNDATION PLAN

DATE: 02/02/20

JOB NO. OE526017

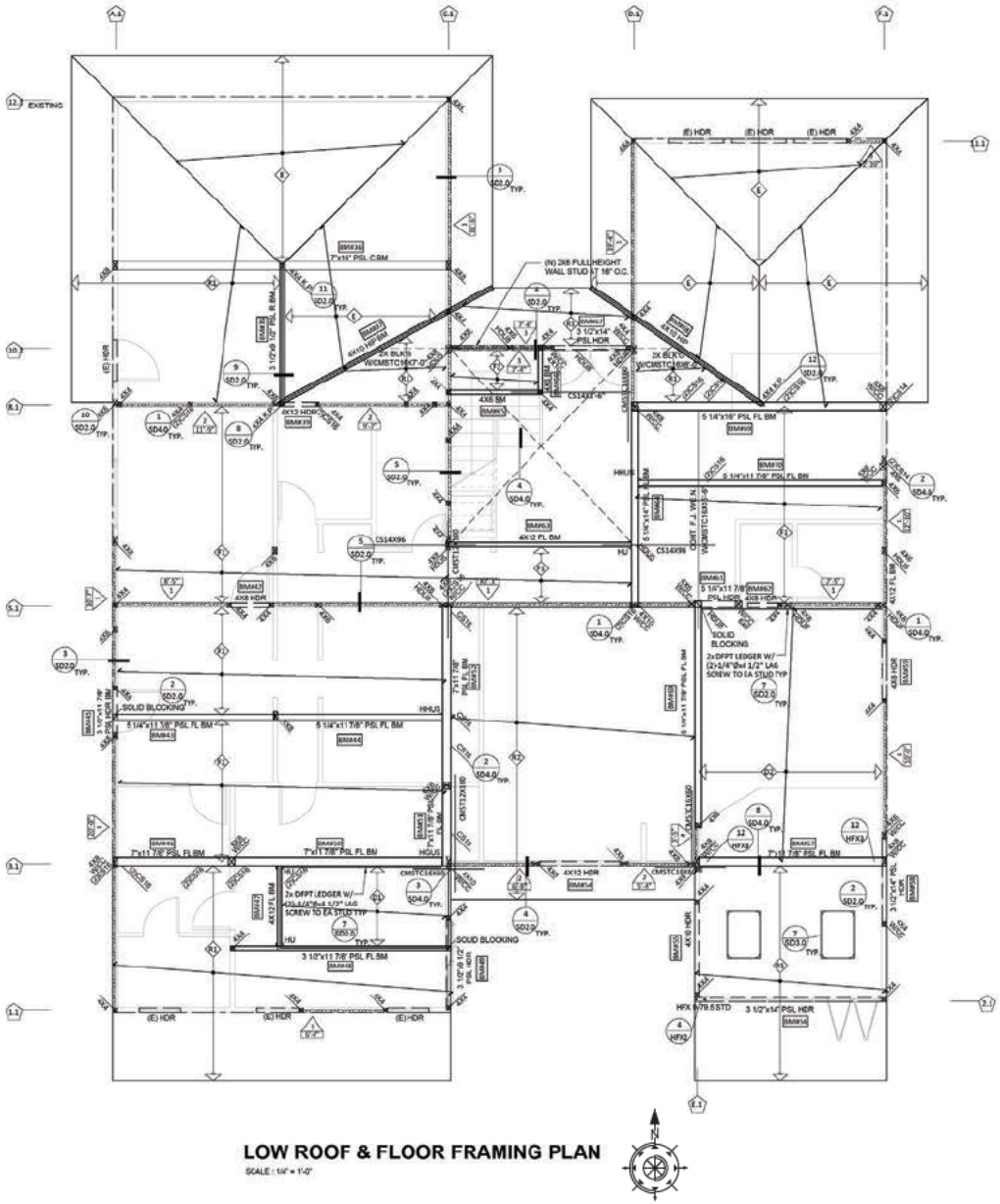
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S1.0

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LOW ROOF & FLOOR FRAMING PLAN

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

FRAMING NOTES

1. CONFIRM ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS. PLAN SHOWS STRUCTURAL WALLS. ROOF LINES ABOVE FOUNDATION. ARCHITECTURAL BACKGROUND INDICATES NON-STRUCTURAL WALLS CONFIRM ALL BACKGROUND INFORMATION WITH CURRENT ARCHITECTURAL DRAWINGS.
2. SEE STRUCTURAL SPECIFICATIONS ON SHEET SN1.0.
3. FULL HEIGHT STUDS SHALL BE USED ON EXTERIOR WALLS OF ROOM WITH VAULTED CEILINGS. 2x6 STUD @ 16" O.C. FOR 12'-0" OR MORE WALL HIGH.
4. ALL ROOF USE 15/32" OSB PLYWOOD EXP I (INDEX 32/16) WITH 10d @ 6" O.C. EDGE NAILS AND 12" OC FIELD NAILS UNBLOCKED TYPICAL
5. ALL FLOOR 23/32" PLYWOOD EXP I T&G WITH 10d@ 6" OC EDGE NAILS 10" O.C. FIELD NAILS TYP AT FLOOR AREA GLUED AND NAILED.
6. PROVIDE SIMP. CS16x30" @ SIDE OF EXTERIOR WALL & SHEAR WALL WHERE TOP PLATES SPLICED OR CONNECTED TO BM TYP AS SHOWN.
7. ALL BEAM TO BEAM SUPPORT USE HANGER PER HANGER SCHEDULE.
8. PROVIDE SIMP. CS16x30"MIN @ SIDE OF EXTERIOR WALL & SHEAR WALL WHERE TOP PLATES SPLICED OR CONNECTED TO BM TYP.
9. PROVIDE PC4 CAP & BC4 BASE TYP AT EA END OF DROPPED FLOOR BM EXTEND POST DOWN TO FOUNDATION.
10. SOLID BLOCKING SHALL BE PROVIDED AT ALL HORIZONTAL JOINTS OCCURRING IN BRACED WALL PANELS.
11. ALL BEAMS PROVIDE 4x BEAM WIDTH POST.
12. HOLDOWN SHALL BE RE-TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
13. ALL EXTERIOR WALLS AND WOOD FRAMED CHIMNEYS MUST BE SHEATHED WITH SHEAR PANEL U.N.
14. PLYWOOD OF ALL INTERIOR SHEAR WALL TO BE EXTENDED UP TO ROOF.
15. THE NEW FOUNDATION TYPE MUST MATCH EXISTING FOUNDATION. REPORT TO ENGINEER OF RECORD IF IT IS DIFFERENT.
16. HOLDOWN ANCHOR BOLT TO BE SET AND POSITIONED IN PLACE PRIOR TO CALLING FOR FOUNDATION INSPECTION.
17. ALL EXISTING FRAMING MUST VERIFY IN FIELD
18. GC SHALL VERIFY ALL EXISTING FRAMING AND BEARING WALL LOCATIONS PRIOR TO DEMOLITION AND REPORT TO EOR IF THERE ARE ANY DISCREPANCIES WITH CONSTRUCTION DOCUMENTS.
19. ADD 2X BLK'G BETWEEN FLOOR JOIST BELOW WHEN INTERIOR WALL PERPENDICULAR TO FLOOR JOIST
20. ADD DOUBLE FLOOR JOIST BELOW THE WALL WHEN INTERIOR WALL PARALLEL TO THE FLOOR JOIST

SYMBOLS LEGEND

- WOOD POST
- WOOD POST ABOVE
- DIRECTION OF JOISTS
- SHEAR PANEL LENGTH AND SCHEDULE
- SHEAR PANEL LENGTH AND SCHEDULE
- DETAIL
- BEAM NUMBER, REFER TO E.O.R. CALCULATIONS
- SHEAR LINE
- CALIFORNIA FRAMING
- PAD FOOTING
- (E) FOUNDATION
- (N) FOUNDATION

FRAMING NOTES

- EXISTING ROOF RAFTERS
- 2 X 10 ROOF RAFTERS @ 16" O.C.
- 1 1/4" X 9 1/2" PSL ROOF RAFTERS @ 16" O.C.
- 2 X 8 CEILING JOIST @ 16" O.C.
- TJI210 X 12" FLOOR JOIST @ 16" O.C.
- 2 X 6 FLOOR JOIST @ 16" O.C.
- 2 X 8 DECK JOIST @ 16" O.C.
- TJI210 X 9 1/2" DECK JOIST @16" O.C.

HANGER SCHEDULE (U.N.O.)

SUPPORTED MEMBER SIZE	HANGER	MIN POST SIZE REQ.
2X RAFTERS, DBL RAFTERS	LSSJ, LSSR	--
2X CEILING / FLOOR JOISTS, DBL. JOISTS	LUS, HU	--
TJI FLOOR I-JOISTS	ITS	--
4X BEAM SAWN LUMBER	HU	4X4 DF#2
6X BEAM SAWN LUMBER	HU	4X6 DF#2
3 1/2" WIDE ENGINEERED BEAM	HHUS	4X4 DF#2
5 1/4" WIDE ENGINEERED BEAM	HHUS	4X6 DF#2
7" WIDE ENGINEERED BEAM	HGUS	6X6 DF#1 / 4X8 DF#1
1 3/4" MICROLAM	LSU, HU	2-2X4 DF#2
TRUSS HANGERS	USE MANUF. SUPPLIED HANGERS	

PLYWOOD SHEAR WALL SCHEDULE

MARK	TYPE	EDGE NAILING (10d) SPACING	TDN. SILL PLATE 1 SIDE	TDN. SILL PLATE 2 SIDE	ANCHOR BOLT SPACING 1 SIDE	ANCHOR BOLT SPACING 2 SIDE	ASSLTP4 CLIPS SPACING 1 SIDE	ASSLTP4 CLIPS SPACING 2 SIDE	TOP PLATE CONNECTION NAILING (SEE NOTE. 6) 1 SIDE NAILING	1 SIDE RIM/BLKG	2 SIDE NAILING	2 SIDE RIM/BLKG	CAPACITY (PLF) 1 SIDE	CAPACITY (PLF) 2 SIDE
▽	1	6" O.C.	2x		32" O.C.	-	16" O.C.	-	16d @ 6" O.C.	2x	-	-	340	-
▽▽	2	4" O.C.	2x	3x	24" O.C.	12" O.C.	12" O.C.	12" O.C. EA. SIDE	16d @ 4" O.C.	2x	SDS @ 6" O.C.	3x	510	1020
▽▽▽	3	3" STAGG.	2x	3x	16" O.C.	8" O.C.	9" O.C.	9" O.C. EA. SIDE	(2) 16d @ 6" O.C.	2x	(2) SDS @ 10" O.C.	4x	665	1330
▽▽▽	4	2" STAGG.	2x	3x	12" O.C.	6" O.C.	6" O.C.	6" O.C. EA. SIDE	SDS @ 6" O.C.	2x	(2) SDS @ 6" O.C.	4x	870	1740

1. ALL SHEAR PANEL SHALL BE 15/32" OSB OR CDX **STRUCTURAL I** PLYWOOD. ALL FIELD NAILING SHALL BE 10d @ 12" O.C. ALL EDGE NAILING SHALL BE 10d.
2. WHERE PANELS ARE APPLIED ON BOTH FACES OF A SHEAR WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER EDGE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NAIED FACE OF FRAMING MEMBERS SHALL BE 3" NOMINAL OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED.
3. STUDS SHALL BE 2X4 MINIMUM AND SPACED @ 16" O.C. MAXIMUM, U.N.
4. INTERIOR SHEAR WALLS SHALL BE EXTENDED THROUGH THE ATTIC TO THE ROOF SHEATHING.
5. NAILS SHALL BE COMMON NAILS, PLACED AT LEAST 1/2" FROM PANEL EDGES AND AT LEAST 1/2" FROM THE EDGE OF CONNECTION MEMBER OF ALL PANELS.
6. NAILS SHALL BE STAGGERED IN TWO LINES ALONG PANEL EDGES WHEN NAIL SPACING IS 2" OR LESS O.C. (MINIMUM SPACING BETWEEN NAIL LINES IS 1/2")
7. NAILS FOR PRESERVATIVE-TREATED WOOD SHALL BE HOT DIP GALVANIZED.
8. SDS DENOTES 1/4"Ø SDS WOOD SCREWS WITH 2" MINIMUM PENETRATION INTO FRAMING BELOW. ROWS OF SDS SHALL BE STAGGERED 12" APART.
9. ALL ANCHOR BOLTS SHALL HAVE 3"SQ.x1/4" W/ 11/16"x1 3/4" DIAGONAL SLOT "USE STD. CUT WASHER O/ PLATE WASHER) PLATE WASHERS. USE 3"x4 1/2" AT 6" THICK SHEAR WALL. PLATE WASHER. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGED OF THE SILL PLATE ON THE SIDE WITH SHEATHING.
   a. 5/8Ø" A.B. W/ a 7" MINIMUM EMBEDMENT INTO CONCRETE, OR
   b. SIMPSON RETROFIT FOUNDATION PLATES URFP/RFP PER MANUFACTURES RECOMENDATION.
   c. IN NON-P.T. SLABS, 5/8Ø" EXPENSION BOLT W/ 2 3/4" MIN. EMBEDMENT W/ MINIMUM 9" EDGE DISTANCE.

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DESIGN BY:



PROJECT ADDRESS: 100 JAMIE CT., LOS GATOS, CA 95032

SHEET TITLE: LOW ROOF & FLOOR FRAMING PLAN

DATE: 02/02/26

JOB NO. OE526017

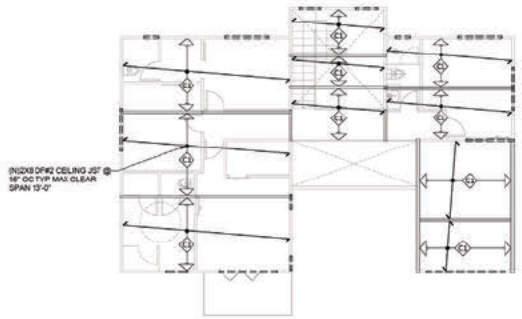
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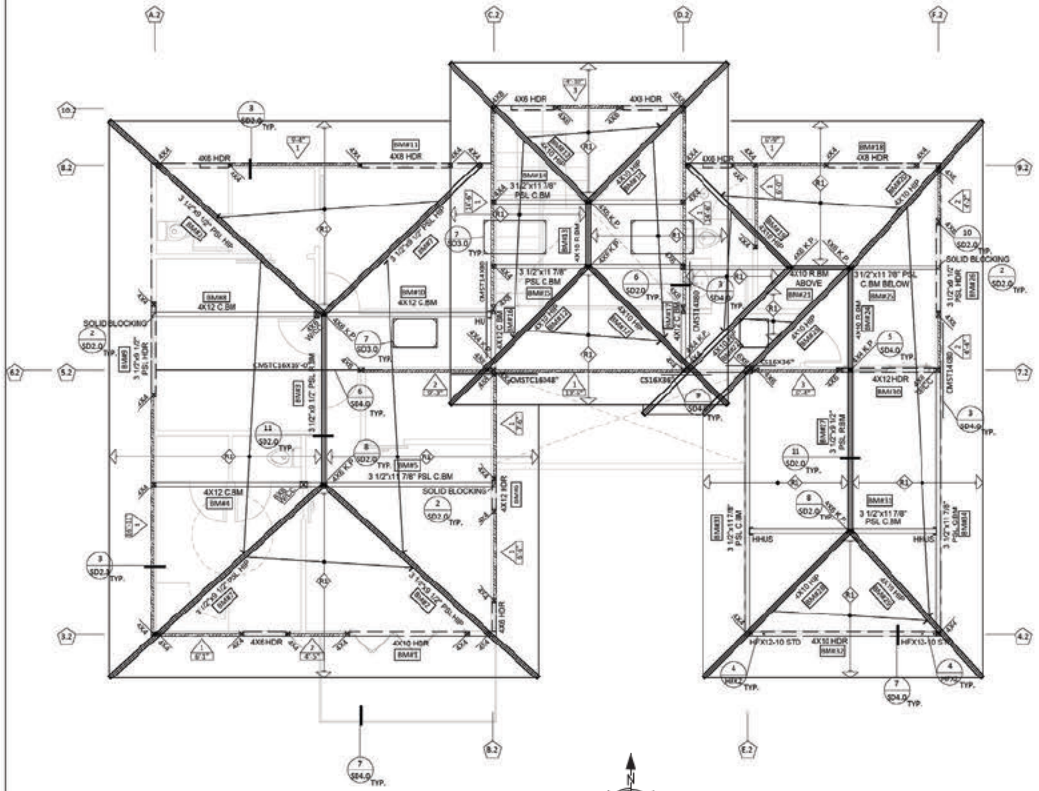
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CEILING PLAN

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



ROOF FRAMING PLAN

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

FRAMING NOTES

1. CONFIRM ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
   PLAN SHOWS STRUCTURAL WALLS, ROOF LINES ABOVE FOUNDATION. ARCHITECTURAL BACKGROUND INDICATES NON-STRUCTURAL WALLS CONFIRM ALL BACKGROUND INFORMATION WITH CURRENT ARCHITECTURAL DRAWINGS.
2. SEE S1"RUCTURAL SPECIFICATIONS ON SHEET SN1.0.
3. FULL HEIGHT STUDS SHALL BE USED ON EXTERIOR WALLS OF ROOM WITH VAULTED CEILINGS. 2x6 STUD @ 16" O.C. FOR 12'-0" OR MORE WALL HIGH.
4. ALL ROOF USE 15/32" OSB PLYWOOD EXP I (INDEX 32/16) WITH 10d @ 6" O.C. EDGE NAILS AND 12" OC FIELD NAILS UNBLOCKED TYPICAL.
5. ALL FLOOR 23/32" PLYWOOD EXP I T&G WITH 10d@ 6" OC EDGE NAILS 10" O.C. FIELD NAILS TYP AT FLOOR AREA GLUED AND NAILED.
6. PROVIDE SIMP. CS16x36" @ SIDE OF EXTERIOR WALL & SHEAR WALL WHERE TOP PLATES SPLICED OR CONNECTED TO BM TYP AS SHOWN.
7. ALL BEAM TO BEAM SUPPORT USE HANGER PER HANGER SCHEDULE
8. PROVIDE SIMP. CS16x36"MIN @ SIDE OF EXTERIOR WALL & SHEAR WALL WHERE TOP PLATES SPLICED OR CONNECTED TO BM TYP.
9. PROVIDE PC4 CAP & BC4 BASE TYP AT EA END OF DROPPED FLOOR BM EXTEND POST DOWN TO FOUNDATION.
10. SOLID BLOCKING SHALL BE PROVIDED AT ALL HORIZONTAL JOINTS OCCURRING IN BRACED WALL PANELS.
11. ALL BEAMS PROVIDE 4x BEAM WIDTH POST.
12. HOLDOWN SHALL BE RE-TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
13. ALL EXTERIOR WALLS AND WOOD FRAMED CHIMNEYS MUST BE SHEATHED WITH SHEAR PANEL U.N.
14. PLYWOOD OF ALL INTERIOR SHEAR WALL TO BE EXTENDED UP TO ROOF.
15. THE NEW FOUNDATION TYPE MUST MATCH EXISTING FOUNDATION. REPORT TO ENGINEER OF RECORD IF IT IS DIFFERENT.
16. HOLDOWN ANCHOR BOLT TO BE SET AND POSITIONED IN PLACE PRIOR TO CALLING FOR FOUNDATION INSPECTION.
17. ALL EXISTING FRAMING MUST VERIFY IN FIELD
18. GC SHALL VERIFY ALL EXISTING FRAMING AND BEARING WALL LOCATIONS PRIOR TO DEMOLITION AND REPORT TO EOR IF THERE ARE ANY DISCREPANCIES WITH CONSTRUCTION DOCUMENTS.
19. ADD 23 BLK'G BETWEEN FLOOR JOIST BELOW WHEN INTERIOR WALL PERPENDICULAR TO FLOOR JOIST
20. ADD DOUBLE FLOOR JOIST BELOW THE WALL WHEN INTERIOR WALL PARALLEL TO THE FLOOR JOIST

SYMBOLS LEGEND

- WOOD POST
- WOOD POST ABOVE
- DIRECTION OF JOISTS
- SHEAR PANEL LENGTH AND SCHEDULE
- SHEAR PANEL LENGTH AND SCHEDULE
- DETAIL
- BEAM NUMBER, REFER TO E.O.R. CALCULATIONS
- SHEAR LINE
- CALIFORNIA FRAMING
- PAD FOOTING
- (E) FOUNDATION
- (N) FOUNDATION

FRAMING NOTES

- EXISTING ROOF RAFTERS
- 2 X 10 ROOF RAFTERS @ 16" O.C.
- 1 1/4" X 9 1/2" PSL ROOF RAFTERS @ 16" O.C.
- 2 I 8 CEILING JOIST @ 16" O.C.
- TJI210 X 12" FLOOR JOIST @ 16" O.C.
- 2 I 6 FLOOR JOIST @ 16" O.C.
- 2 I 8 DECK JOIST @ 16" O.C.
- TJI210 X 9 1/2" DECK JOIST @16" O.C.

HANGER SCHEDULE (U.N.O.)

SUPPORTED MEMBER SIZE	HANGER	MIN. POST SIZE REQ.
2X RAFTERS, DBL. RAFTERS	LSSJ, LSSR	-.-
2X CEILING / FLOOR JOISTS, DBL. JOISTS	LUS, HU	-.-
TJI FLOOR I-JOISTS	ITS	-.-
4X BEAM SAWN LUMBER	HU	4X4 DF#2
6X BEAM SAWN LUMBER	HU	4X6 DF#2
3 1/2" WIDE ENGINEERED BEAM	HHUS	4X4 DF#2
5 1/4" WIDE ENGINEERED BEAM	HHUS	4X6 DF#2
7" WIDE ENGINEERED BEAM	HGUS	6X6 DF#1 / 6X8 DF#1
1 3/4" MICROLAM	LSU, HU	2-2X4 DF#2
TRUSS HANGERS	USE MANUF. SUPPLIED HANGERS	

PLYWOOD SHEAR WALL SCHEDULE

MARK	TYPE	EDGE NAILING (10d) SPACING	PDN. SILL PLATE 1 SIDE	PDN. SILL PLATE 2 SIDE	ANCHOR BOLT SPACING 1 SIDE	ANCHOR BOLT SPACING 2 SIDE	A35/LTP4 CLIPS SPACING 1 SIDE	A35/LTP4 CLIPS SPACING 2 SIDE	TOP PLATE CONNECTION NAILING (SEE NOTE. 8) 1 SIDE NAILING	1 SIDE RIM/BLKG	2 SIDE NAILING	2 SIDE RIM/BLKG	CAPACITY (PLF) 1 SIDE	CAPACITY (PLF) 2 SIDE
▽	1	6" O.C.	2x		32" O.C.	-	16" O.C.	-	16d @ 4" O.C.	2x	-	-	340	-
▽▽	2	4" O.C.	2x	3x	24" O.C.	12" O.C.	12" O.C.	12" O.C. EA. SIDE	16d @ 4" O.C.	2x	SDS @ 6" O.C.	3x	510	1020
▽▽	3	3" STAGG.	2x	3x	16" O.C.	8" O.C.	8" O.C.	9" O.C. EA. SIDE	(2) 16d @ 6" O.C.	2x	(2)SDS @ 10" O.C.	4x	665	1330
▽▽	4	2" STAGG.	2x	3x	12" O.C.	6" O.C.	6" O.C.	6" O.C. EA. SIDE	SDS @6" O.C.	2x	(2)SDS @ 6" O.C.	4x	870	1740

1. ALL SHEAR PANEL SHALL BE 15/32" OSB OR CDX **STRUCTURAL I** PLYWOOD. ALL FIELD NAILING SHALL BE 10d @ 12" O.C. ALL EDGE NAILING SHALL BE 10d.
2. WHERE PANELS ARE APPLIED ON BOTH FACES OF A SHEAR WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NAKED FACE OF FRAMING MEMBERS SHALL BE 3" NOMINAL OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED.
3. STUDS SHALL BE 2X4 MINIMUM AND SPACED @ 16" O.C. MAXIMUM.
4. INTERIOR SHEAR WALLS SHALL BE EXTENDED THROUGH THE ATTIC TO THE ROOF SHEATHING.
5. NAILS SHALL BE COMMON NAILS, PLACED AT LEAST 1/2" FROM PANEL EDGES AND AT LEAST 1/2" FROM THE EDGE OF CONNECTION MEMBER OF ALL PANELS.
6. NAILS SHALL BE STAGGERED IN TWO LINES ALONG PANEL EDGES WHEN NAIL SPACING IS 3" OR LESS O.C. (MINIMUM SPACING BETWEEN NAIL LINES IS 1/2")
7. NAILS FOR PRESERVATIVE-TREATED WOOD SHALL BE HOT-DIP GALVANIZED.
8. SDS DENOTES 1/4"Ø SDS WOOD SCREWS WITH 2" MINIMUM PENETRATION INTO FRAMING BELOW. ROWS OF SDS SHALL BE STAGGERED 1/2" APART.
9. ALL ANCHOR BOLTS SHALL HAVE 3"SQ.x1/4" W/ 11/16"x1 3/4"DIAGONAL SLOT "USE STD. CUT WASHER O/ PLATE WASHER) PLATE WASHERS. USE 3"x4 1/2" AT 6" THICK SHEAR WALL. PLATE WASHER. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGED OF THE SILL PLATE ON THE SIDE WITH SHEATHING.
   a. 5/8Ø" A.B. W/ a 7" MINIMUM EMBEDMENT INTO CONCRETE. OR
   b. SIMPSON RETROFIT FOUNDATION PLATES URFP/RFP PER MANUFACTURE'S RECOMENDATION.
   c. IN NON-P.T. SLABS, 5/8Ø" EXPENSION BOLT W/ 3 3/4" MIN. EMBEDMENT W MINIMUM 9" EDGE DISTANCE.

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SHEET TITLE: ROOF FRAMING PLAN

DATE: 02/02/26

JOB NO. OES26017

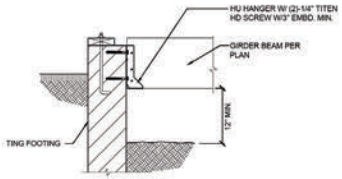
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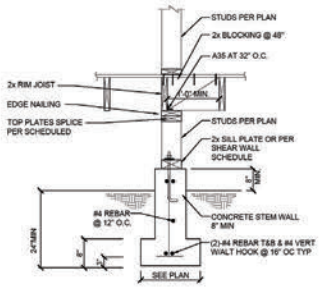
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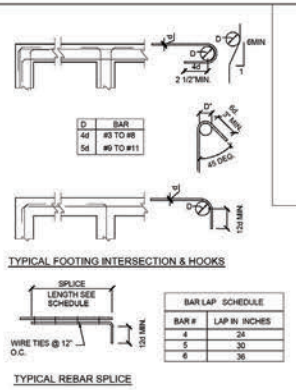
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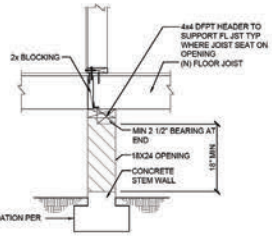
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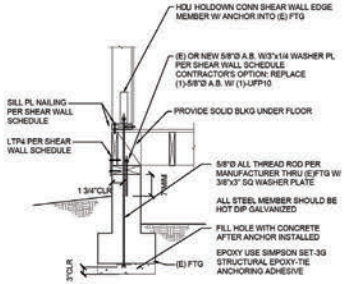
4 INTERIOR FTG



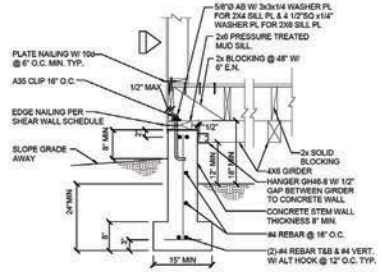
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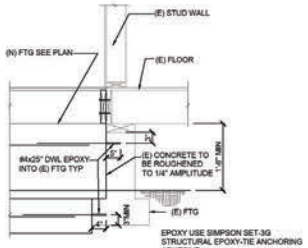
8 CRAWL SPACE ACCESS



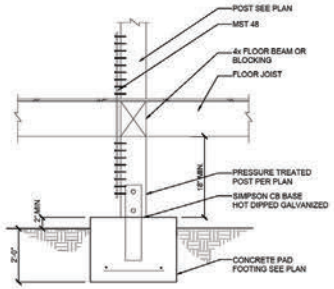
5 HDU DETAIL



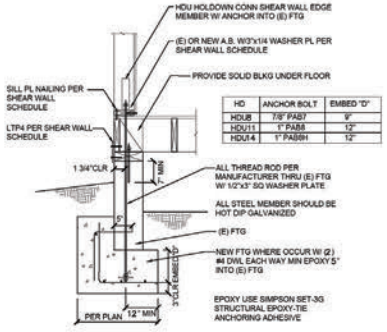
2 TYPICAL EXTERIOR WALL FOOTING



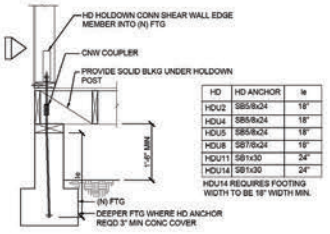
11 DOWEL EPOXY (N) FTG TO (E) FTG



9 POST TO PAD FTG



6 HDU DETAIL



3 HOLDOWN DETAIL

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SHEET TITLE: FOUNDATION DETAIL

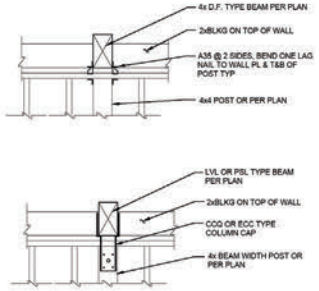
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JOB NO. OE526017

REVISION

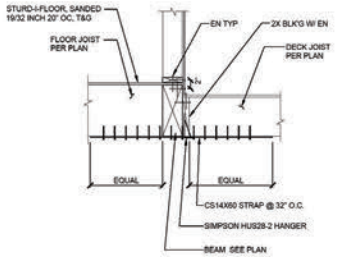
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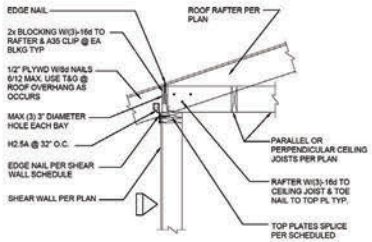
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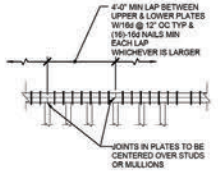
10 BEAM TO POST CONNECTION



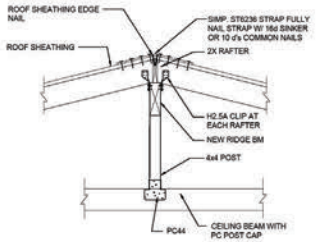
7 DECK TO FLOOR JOIST CONNECTION



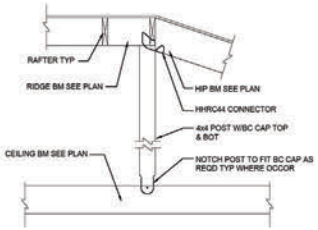
4 SHEAR TRANSFER AT EAVE



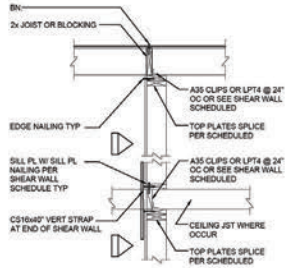
1 TOP PLATE SPLICE



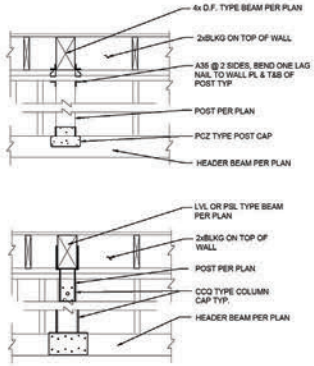
11 KING POST TO ROOF CONNECTION DETAIL



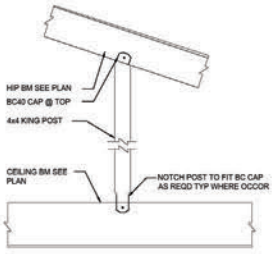
8 RIDGE & HIP CONNECTION



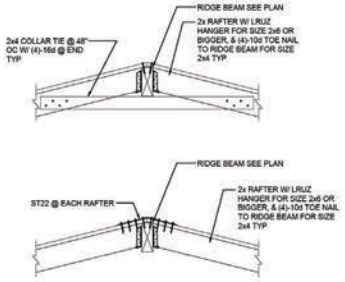
5 INTERIOR SHEAR WALL DETAIL



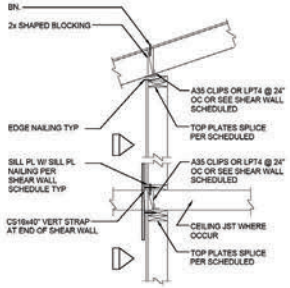
2 BEAM TO HDR CONNECTION



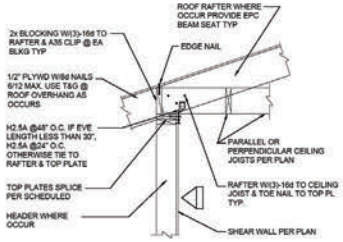
12 HIP BEAM SUPPORT



9 TYP ROOF CONNECTION



6 INTERIOR SHEAR WALL DETAIL



3 SHEAR TRANSFER AT EAVE

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DESIGN BY:



PROJECT ADDRESS: 100 JAMIE CT., LOS GATOS, CA 95032

SHEET TITLE: FRAMING DETAIL

DATE: 02/02/26

JOB NO. OES26017

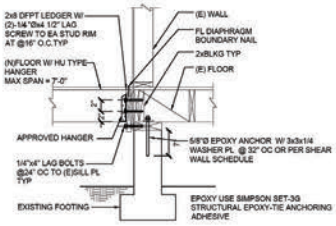
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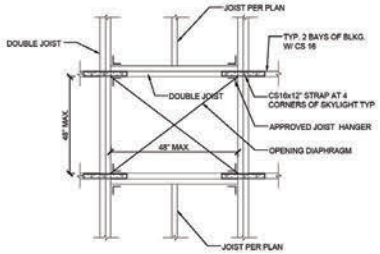
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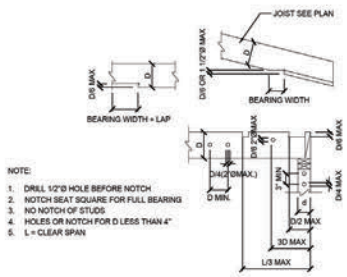
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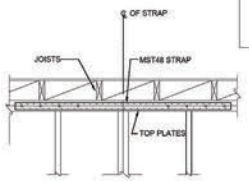
10 (N) FLOOR JOIST TO (E) FLOOR JOIST



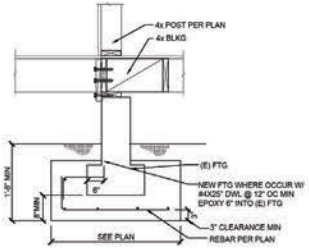
7 ROOF OPENING



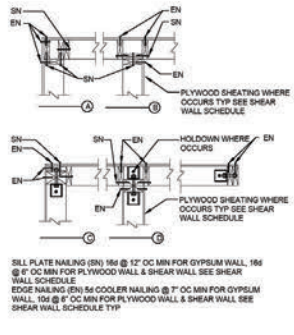
4 TYPICAL ALLOWABLE NOTCHS AT JOIST



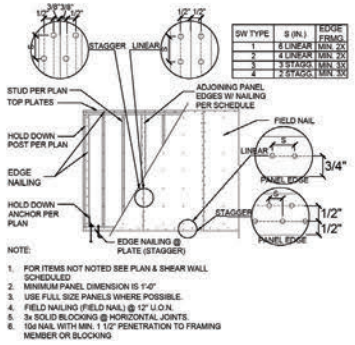
1 DISCONTINUED TOP PLATE



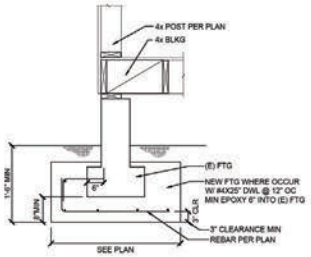
8 (N) PAD FTG TO (E) CONT. FTG INTERIOR



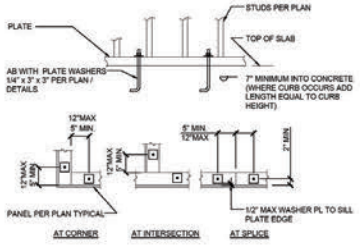
5 TYPICAL SHEAR WALL INTERSECTION



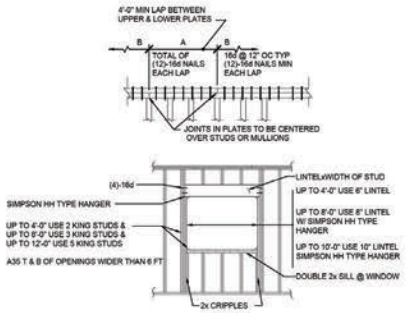
2 TYPICAL SHEAR WALL ELEVATION



9 (N) PAD FTG TO (E) CONT. FTG EXTERIOR



6 TYPICAL PLATE ANCHOR BOLTS



3 TYPICAL OPENING IN WOOD WALLS

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DESIGN BY:

REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
No. C82788
12/31/27
CIVIL

100 JAMIE CT., LOS GATOS, CA 95032

PROJECT ADDRESS:

FOUNDATION DETAIL

SHEET TITLE:

DATE: 02/02/26

JOB NO. OE526017

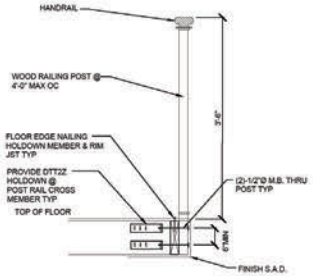
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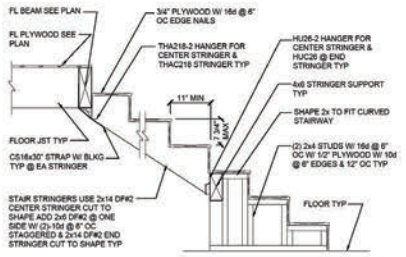
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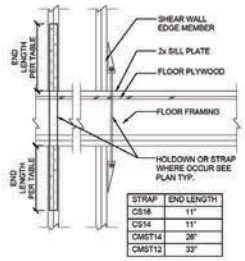
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7 WOOD HANDRAIL

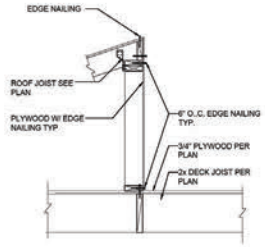


4 STAIRS FRAMING

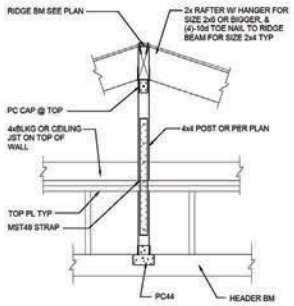


STRAP	END LENGTH
CS16	11"
CS14	11"
CMST14	26"
CMST12	33"

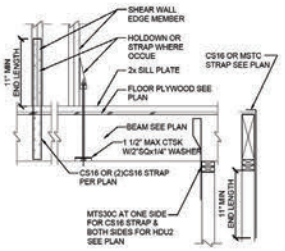
1 TYP EDGE MEMBER HOLDOWN



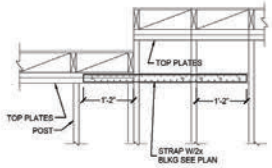
8 DECK TO ROOF CONNECTION DETAIL



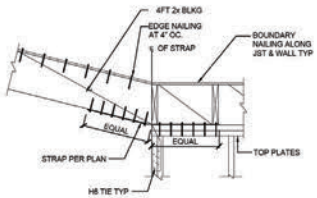
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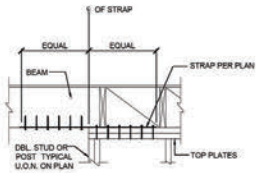
2 STRAP AND HOLDOWN DETAIL



9 STRAP DETAIL



6 STRAP DETAIL



3 STRAP TO BEAM DETAIL

ORANGE ENGINEERING
4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 508-5585

DESIGN BY:



PROJECT ADDRESS: 100 JAMIE CT., LOS GATOS, CA 95032

SHEET TITLE: FRAMING DETAIL

DATE: 02/02/26

JOB NO. OES26017

REVISION

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SHEET NO.

SD4.0

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From: Raphael Durst
To: Suray Nathan
Subject: Letter of Support – 100 Jamie Court (MR-26-007)
Date: Sunday, November 1, 2026 7:20:21 PM

[EXTERNAL SENDER]

Dear Mr. Nathan and Members of the Planning Commission,

My name is Raphael Durst, and my family and I have lived at [redacted], directly across from the proposed construction site at 100 Jamie Court, for the past two years.

During this time, we have come to know the Desai family as kind, considerate, and family-oriented neighbors. We value having them in our neighborhood and fully support their proposed development project at 100 Jamie Court

I have reviewed the plans and seen the story poles on site. In my opinion, the proposed project will be a positive addition to our neighborhood for several reasons:

- **Neighborhood improvement:** A modern, thoughtfully designed home will enhance the appearance and character of our street and contribute positively to the surrounding property values.
- **A family-friendly community:** We believe Los Gatos should encourage homeowners to invest in upgrading their properties to meet the needs of today's families and future generations. Attractive, updated homes help keep our neighborhood desirable for families for years to come.
- **Support for our neighbors:** We appreciate families like the Desais who are committed to our community and willing to invest in improving their homes.

As residents living directly across from the property, we have a particularly close perspective on the proposed development. We believe this project represents a positive investment in the long-term quality and appeal of our neighborhood.

We respectfully express our full support for the project and hope the Planning Commission will approve the application.

Thank you for your time and service to our community.

Sincerely,

Raphael Durst
[redacted]

EXHIBIT 15

From: Hesam Fathi
To: Suray Nathan
Subject: Support for 100 Jamie Ct, MR-26-007 (Planning Commission Appeal)
Date: Friday, October 30, 2026 11:32:30 PM

[EXTERNAL SENDER]

Dear Mr. Nathan and Members of the Planning Commission,

I live at [redacted] in Los Gatos. We have known the Desai family for over two years. My family and I value the Desai family as our neighbors, and we support their proposed remodel at 100 Jamie Court (Minor Residential Application MR-26-007). I respectfully ask the Commission to deny the appeal and uphold the Director's approval.

Having reviewed the plans and seen the story poles on site, I believe the proposed remodel will be a positive addition to our neighborhood. The updated home will enhance the appearance of the property and contribute to the character of our street.

We also believe our community benefits when families choose to invest in their homes and continue building their lives in Los Gatos. We appreciate having the Desai family as neighbors and support their efforts to improve their home to meet their family's needs.

I hope the Commission will consider this perspective from a neighboring household and allow the approved project to move forward.

Thank you for your time, consideration, and service to our community.

Sincerely,
Hesam Fathi Moghadam
[redacted]

TOWN OF LOS GATOS
PLANNING COMMISSION
REPORT

MEETING DATE: 11/12/2026

ITEM NO: 2

DATE: November 6, 2026

TO: Planning Commission

FROM: Joel Paulson, Community Development Director

SUBJECT: Consider an Appeal of a Community Development Director Decision to Approve a Large Protected Tree Removal on Property Zoned R-1:10. **Located at 16401 Kennedy Road**. APN 532-15-036. Tree Removal Permit T25-148. Categorically Exempt Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Section 15303: New Construction, and Section 15304: Minor Alterations to Land. Property Owners: Mazen Louis. Applicant: West Valley Arborists, Inc. Appellant: Amr Abdelrazik. Project Planner: Ryan Safty.

RECOMMENDATION:

Deny the appeal of a Community Development Director decision to approve a large protected tree removal on property zoned R-1:10, located at 16401 Kennedy Road.

PROJECT DATA:

General Plan Designation:	Low Density Residential
Zoning Designation:	R-1:10 (Single Family Residential, 10,000-square foot minimum)
Applicable Plans & Standards:	General Plan, Zoning Regulations
Parcel Size:	10,607 square feet

Surrounding Area:

	Existing Land Use	General Plan	Zoning
North	Residential	Low Density Residential	R-1:10
South	Residential	Hillside Residential	HR-1
East	Residential	Low Density Residential	R-1:10
West	Residential	Low Density Residential	R-1:10

PREPARED BY: Ryan Safty
Associate Planner

Reviewed by: Planning, Manager, Community Development Director, and Town Attorney

CEQA:

The project is Categorically Exempt pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15303: New Construction, and 15304: Minor Alterations to Land.

FINDINGS:

- The project is Categorically Exempt pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15303: New Construction, and Section 15304: Minor Alterations to Land.
- The required findings for removal of a large protected tree can be made, pursuant to Town Code Section 29.10.0992.

ACTION:

The decision of the Planning Commission is final unless appealed within ten days.

BACKGROUND:

The subject property is located on the north side of Kennedy Road approximately 250 feet east of Olde Drive (Exhibit 1). On October 14, 2024, an Architecture and Site application was submitted for the construction of a new single-family residence and accessory dwelling unit (ADU) on the subject, vacant property. As a part of the standard Architecture and Site application process, an arborist report was created by the Town's Consulting Arborist (Exhibit 4). According to the report, several trees on the property would be highly impacted by the proposed new residence construction. One of these trees, Tree 668, is a coast live oak adjacent to the front corner of the proposed attached garage that is considered a large protected tree pursuant to Town Code.

Following three rounds of review, the property owner decided to withdraw the Architecture and Site application and instead proceed with a Senate Bill (SB) 9 Two-Unit Housing Development permit (TUD). TUD25-003 was approved on May 22, 2025. SB 9 permits are not required to provide an arborist report and instead are required to note on the plans that the building permit will comply with all relevant Tree Protection Ordinance requirements. However, since one was previously provided for the Architecture and Site application and since the proposed footprint did not change when converting to a TUD application, the owner was able to use the report in Exhibit 4 for their building permit submittal. Although findings for removal could have been made to remove Tree 668 at time of building permit issuance, it was the owner's intention to save this tree, so instead they opted to use hand-excavation in the area around the tree.

Building permits have since been issued, and the property is currently under construction. On September 29, 2026, the owner applied to amend the previous tree removal permit (T25-0148) to include Tree 668 (Exhibit 5). Included with the request to amend the previous permit was an updated arborist report from West Valley Arborists Inc., dated September 19, 2026 (Exhibit 6). The report notes, in addition to the "high" expected impact noted in the previous report, that the majority of this tree's critical root structure has been significantly compromised, and will continue to be compromised with the rest of the proposed work. The roots now have limited anchorage, which poses a significant failure and safety risk, and the sudden loss of nutrients and moisture uptake will essentially starve the tree. Additionally, the report notes that the tree has a significant lean and a multi-trunk structure, further leading to a high likelihood of failure.

On October 1, 2026, the Town Arborist reviewed the application materials, visited the site, and found that Finding 4 from Town Code Section 29.10.0992 could be made for the removal of this large protected tree. Finding 4 states the following: The retention of the tree restricts the economic enjoyment of the property or creates an unusual hardship for the property owner by severely limiting the use of the property in a manner not typically experienced by owners of similarly situated properties, and the applicant has demonstrated to the satisfaction of the Director or deciding body that there are no reasonable alternatives to preserve this tree.

On October 8, 2026, Notice of Pending Issuance of Large Protected Tree Removal Permit letters were mailed out to surrounding neighbors (Exhibit 7). Pursuant to Town Code Section 29.10.0994 (4), the notice described the requested tree removal and provided neighbors with 10 days to contact the Town with any concerns or problems.

On October 13, 2026, two neighbors emailed Town staff regarding concerns over the proposed tree removal permit (Exhibit 8). Pursuant to Town Code Section 29.10.0994 (6), since an objection was filed and a mutually acceptable resolution could not be agreed upon, the neighbors were provided an additional five days to file a formal appeal.

On October 19, 2026, the decision was appealed to the Planning Commission by a neighbor, Amr Abdelrazik, who resides east of the subject property at 130 Clover Way (Exhibit 9). In their appeal, the neighbor sites concerns related to privacy and aesthetic benefits of the tree.

Pursuant to Town Code Section 29.20.265, the hearing for the appeal must be set for the first regular meeting of the Planning Commission more than five days after the date of filing the appeal. The hearing date of November 12, 2026, meets these requirements. The Planning Commission may hear the matter anew and render a new decision on the matter.

DISCUSSION:

A. Appeal Analysis

The neighbor at 130 Clover Way has appealed the Director's approval for the removal of a large protected tree associated with permit T25-148 at 16401 Kennedy Road. The appeal

materials in Exhibit 9 notes that this tree provides privacy coverage both between their two properties and from Kennedy Road; the appellants enjoy the canopy; and that multiple large oak trees have already been removed from the property. The appeal materials include pictures taken from the appellant's property, showing the tree in question.

Following the appeal, the property owner of 16401 Kennedy Road provided a response letter, outlining their reasons for the request and responses to the appellant's points (Exhibit 10). The letter notes that the Town's Consulting Arborist previously recommended removal due to the proposed work; that they chose to try and keep it; that West Valley Arborists have reviewed the health of the tree again and determined it should be removed; and that the proposed Indian Laurel replacement trees would do more to provide privacy with the neighbor than the existing tree due to the height of canopy above grade. Condition of Approval 3 in Exhibit 3 mandates the species and location of these trees along the shared property line with 130 Clover Way.

Staff will note that unlike with a standard discretionary application, no comments can be made on the proposed design or location of the SB 9 Two-Unit Housing Development that was previously approved and is currently under construction. Instead, the review of the appeal should be based solely on whether the required findings for removal from Town Code Section 29.10.0992 can be made based on the existing condition of Tree 668:

1. The tree is dead, severely diseased, decayed, or disfigured to such an extent that the tree is unable to recover or return to a healthy and structurally sound condition.
2. The tree has a tree risk rating of Extreme or High on the ISA Tree Risk Rating Matrix as set forth in the ISA Tree Risk Assessment Best Management Practices, or successor publication.
3. The tree is crowding other protected trees to the extent that removal or severe pruning is necessary to ensure the long-term viability of adjacent and more significant trees.
4. The retention of the tree restricts the economic enjoyment of the property or creates an unusual hardship for the property owner by severely limiting the use of the property in a manner not typically experienced by owners of similarly situated properties, and the applicant has demonstrated to the satisfaction of the Director or deciding body that there are no reasonable alternatives to preserve the tree.
5. The tree has, or will imminently, interfere with utility services where such interference cannot be controlled or remedied through reasonable modification, relocation, or repair of the utility service or the pruning of the root or branch structure of the tree; or where removal or pruning is required by a public utility to comply with California Public Utility Commission (CPUC) or Federal Energy Regulatory Commission (FERC) rules or regulations.
6. The tree has caused or may imminently cause significant damage to an existing structure that cannot be controlled or remedied through reasonable modification of the root or branch structure of the tree.

7. Except for properties within the hillsides, the retention of the protected tree would result in reduction of the otherwise-permissible building envelope by more than twenty-five (25) percent.
8. The removal of the tree is unavoidable due to restricted access to the property.
9. The removal of the tree is necessary to repair a geologic hazard.
10. The removal of the tree and replacement with a more appropriate tree species will enhance the Town's urban forest.
11. The removal of the tree is necessary to conform with the implementation and maintenance of Defensible Space per Chapter 9 - Fire Prevention and Protection per direction by the Fire Chief or his/her designee.

The Town Arborist used Finding 4 for the removal of this tree. It appears that Finding 1 would also be applicable if the Commission chooses.

PUBLIC COMMENTS:

Written notice was sent to property owners and tenants within 300 feet of the subject property. At the time of this report's preparation, the Town has not received any public comment beyond what was received in Exhibit 8, prior to receiving the appeal.

ENVIRONMENTAL REVIEW:

The project is Categorically Exempt pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15303: New Construction, and Section 15304: Minor Alterations to Land. The permit is for the removal of a large protected tree associated with the construction of a new residential dwelling unit.

CONCLUSION:

A. Summary

A neighbor has appealed the Town's decision to approve a large protected tree at 16401 Kennedy Road due to concerns related to privacy and screening (Exhibit 9).

B. Recommendation

For the reasons stated in this report, it is recommended that the Planning Commission deny the appeal of the Director's decision approving removal of a large protected tree at 16401 Kennedy Road, by taking the following actions:

1. Make the finding that the proposed project is Categorically Exempt, pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15303: New Construction, and Section 15304: Minor Alterations to Land (Exhibit 2);

2. Make one of the findings as required by Section 29.10.0992 of the Town Code for approval of a tree removal permit; and
3. Approve removal of Tree 668, amending Tree Removal Permit T25-0148 with the conditions contained in Exhibit 3.

C. Alternatives

Alternatively, the Commission can:

1. Continue the matter to a date certain with specific direction;
2. Grant the appeal and deny the Tree Removal Permit application for Tree 668; or
3. Continue the matter to a date certain with specific direction.

EXHIBITS:

1. Location Map
2. Required Findings
3. Recommended Conditions of Approval
4. Consulting Arborist Report, dated December 3, 2024
5. Amended Tree Removal Permit T25-148
6. West Valley Arborist Report, dated September 19, 2026
7. Notice of Pending Approval, dated October 8, 2026
8. Neighbor Comments, received October 13, 2026
9. Appeal of the Director of Community Development, received October 16, 2026
10. Owner Response to Appeal, dated October 22, 2026

16401 Kennedy Rd

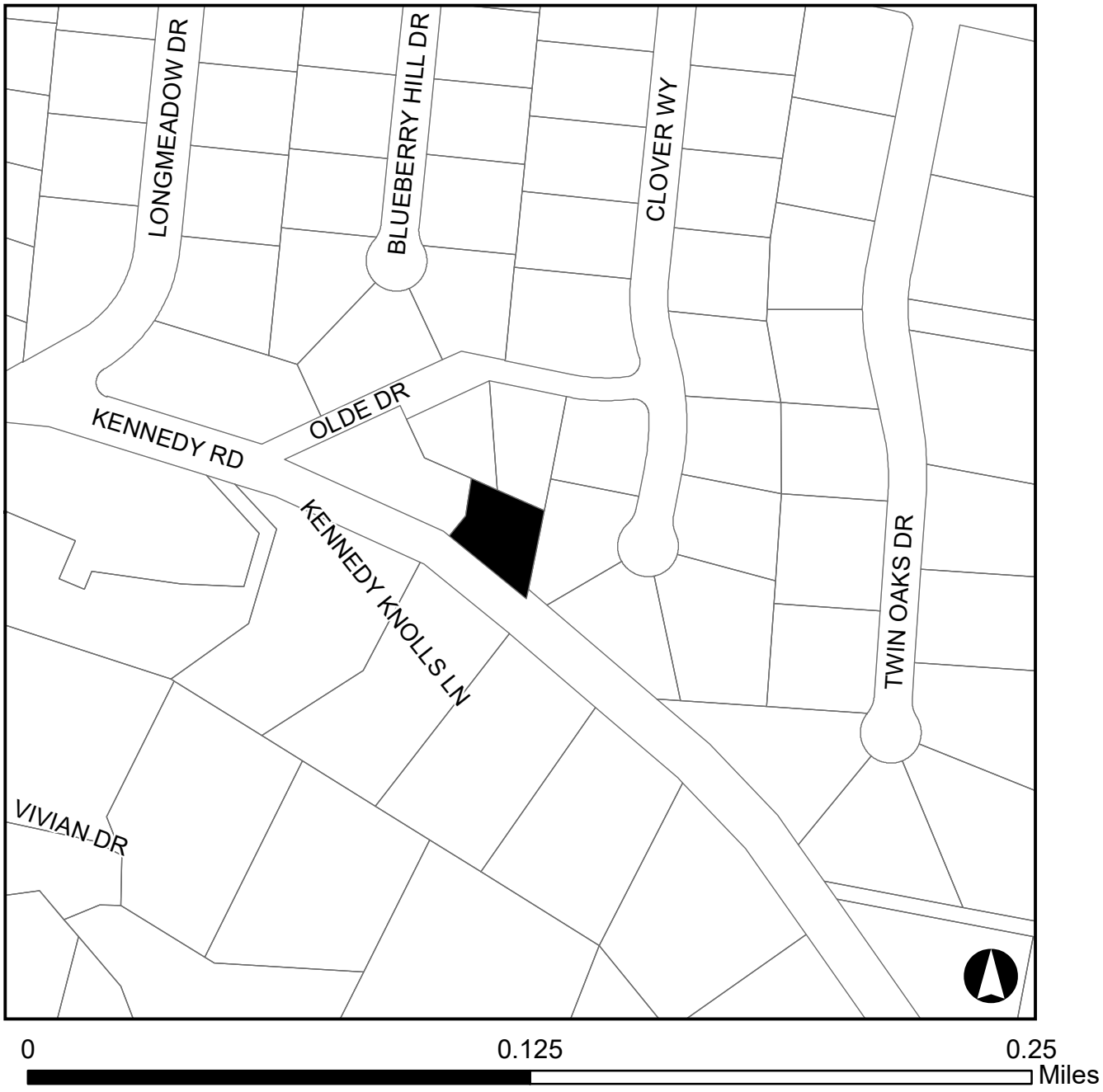


EXHIBIT 1

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PLANNING COMMISSION – November 12, 2026
REQUIRED FINDINGS FOR:

16401 Kennedy Road
Tree Removal Permit Application T25-148

Consider an Appeal of a Community Development Director Decision to Approve a Large Protected Tree Removal on Property Zoned R-1:10. APN 532-15-036. Categorically Exempt Pursuant to the California Environmental Quality Act, Section 15303: New Construction, and 15304: Minor Alterations to Land. Property Owner: Mazen Louis. Applicant: West Valley Arborists, Inc. Appellant: Amr Abdelrazik. Project Planner: Ryan Safty.

Required finding for CEQA:

- The project is Categorically Exempt pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15303: New Construction, and Section 15304: Minor Alterations of Land. The permit is for the removal of a large protected tree associated with the construction of a new residential dwelling unit.

Required finding for Tree Removal Permit Approval:

- Pursuant to Town Code Section 29.10.0992, required Finding 4 for removal of a protected tree can be made.

EXHIBIT 2

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PLANNING COMMISSION – November 12, 2026
DRAFT CONDITIONS OF APPROVAL

16401 Kennedy Road
Tree Removal Permit Application T25-148

Consider an Appeal of a Community Development Director Decision to Approve a Large Protected Tree Removal on Property Zoned R-1:10. APN 532-15-036. Categorically Exempt Pursuant to the California Environmental Quality Act, Section 15303: New Construction, and 15304: Minor Alterations to Land. Property Owner: Mazen Louis. Applicant: West Valley Arborists, Inc. Appellant: Amr Abdelrazik. Project Planner: Ryan Safty.

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 listed below.
2. EXPIRATION: The Tree Removal Permit 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. REPLACEMENT TREES: Replacement trees are required. As noted in the application materials, four, 24-inch box Indian Laurel, or similar, evergreen trees shall be planted along the shared property line with 130 Clover Way.
4. TREE STAKING: All newly planted trees shall be double-staked using rubber tree ties.
5. 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

EXHIBIT 3

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.

DRAFT

Tree Inventory, Assessment, and Protection Report

16405 Kennedy Road
Los Gatos, CA 95032

Prepared for:

Town of Los Gatos

November 19, 2024
Revised December 3, 2024

Prepared By:

Monarch Consulting Arborists

Richard Gessner
P.O. Box 1010 - Felton, CA 95018
1 831 331 8982
www.monarcharborists.com

EXHIBIT 4

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Summary

The applicant is requesting approval for construction of a new single-family residence, and site work requiring a grading permit on vacant property zoned R-1:10. APN 532-15-036. Categorically Exempt Pursuant to the California Environmental Quality Act, Section 15303: New Construction or Conversion of Small Structures.

The inventory contains fourteen trees (14) trees comprised of two (2) different species (coast live oak and London plane. There are four (4) Large Protected trees and none are Exempt or Street Trees. Five trees are in good condition, five fair, one poor, and three are in very poor shape. Trees #662, #667, and #669 are all in “very poor” condition.

Seven (7) trees will be highly impacted and caused to be removed although the plans only indicate two.

Tree protection will focus on the area around the adjacent tree #657 which will need all the space between the neighbor fence and the proposed construction (about 14 feet). This area will need to be fenced off. Tree #670 is near some construction and the sewer but the tree is containerized similar to #665. #665 will require trunk protection along with #666.

The applicant will be required to replace seven protected trees and possibly eight. There were fourteen (14) protected trees appraised for a rounded depreciated value of $97,220.00.

Introduction

Background

The Town of Los Gatos asked me to assess the site, trees, and proposed footprint plan, and to provide a report with my findings and recommendations to help satisfy planning requirements.

Assignment

- Provide an arborist’s report including an assessment of the trees within the project area and on the adjacent sites. The assessment is to include the species, size (trunk diameter), condition (health, structure, and form), and suitability for preservation ratings. Affix number tags on the trees for reference on site and on plans.
- Provide tree protection specifications, guidelines, and impact ratings for those affected by the project.
- Provide appraised values using the Trunk Formula Technique.

Limits of the assignment

- The information in this report is limited to the condition of the trees during my inspection on November 6, 2024. No tree risk assessments were performed.
- Tree heights and canopy diameters are estimates.

- The plans reviewed for this assignment were as follows (Table 1).

Table 1: Plans Reviewed Checklist

Plan	Date	Sheet	Reviewed	Source
Existing Site Topographic	September 2024	1 of 2	Yes	Westfall Engineers
Proposed Site Plan	10/04/2024	C1	Yes	THIS Design
Erosion Control	September 2024	1 of 2	Yes	Westfall Engineers
Grading and Drainage	September 2024	1 of 2	Yes	Westfall Engineers
Utility Plan and Hook-up locations	September 2024	1 of 2	Yes	Westfall Engineers
Exterior Elevations	10/04/2024	C5	Yes	THIS Design
Landscape Plan	10/04/2024	C1	Yes	THIS Design
Irrigation Plan				
T-1 Tree Protection Plan				

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the Town of Los Gatos and the property owners as a reference for existing tree conditions to help satisfy planning requirements.

Observations

Tree Inventory

The inventory consists of trees protected by the Town of Los Gatos located on site and those in close proximity on neighboring properties. Sec. 29.10.0960. - Scope of protected trees. All trees which have a four-inch or greater diameter (twelve and one half-inch circumference) of any trunk, when removal relates to any review for which zoning approval or subdivision approval is required. (Appendix A and B). Los Gatos Town Ordinance 29.10.0970 Exceptions (1) states the following: “A fruit or nut tree that is less than eighteen (18) inches in diameter (fifty-seven-inch circumference).

The inventory contains fourteen trees (14) trees comprised of two (2) different species (coast live oak (*Quercus agrifolia*) and London plane (P*latanus x hispanica*). There are four (4) Large Protected[1] trees and none are Exempt[2] or Street Trees[3] (Table 2).

Table 2: Inventory Characteristics

Tree Species	I.D. Number	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Status
coast live oak (*Quercus agrifolia*)	657	34	35	Large Protected
coast live oak (*Quercus agrifolia*)	658	12	20	Protected
coast live oak (*Quercus agrifolia*)	659	12	20	Protected
coast live oak (*Quercus agrifolia*)	660	7	15	Protected
coast live oak (*Quercus agrifolia*)	661	6	10	Protected
coast live oak (*Quercus agrifolia*)	662	5	8	Protected
coast live oak (*Quercus agrifolia*)	663	20	25	Protected
coast live oak (*Quercus agrifolia*)	664	10	20	Protected
coast live oak (*Quercus agrifolia*)	665	36	30	Large Protected
coast live oak (*Quercus agrifolia*)	666	12	20	Protected
coast live oak (*Quercus agrifolia*)	667	28	15	Large Protected
coast live oak (*Quercus agrifolia*)	668	20, 14	30	Large Protected
coast live oak (*Quercus agrifolia*)	669	16	25	Protected
London plane (*Platens x hispanica*)	670	18	30	Protected

[1] Large protected tree means any oak (*Quercus spp.*), California buckeye (*Aesculus californica*), or Pacific madrone (*Arbutus menziesii*) which has a 24-inch or greater diameter (75-inch circumference); or any other species of tree with a 48-inch or greater diameter (150-inch circumference).

[2] A fruit or nut tree that is less than eighteen (18) inches in diameter (fifty-seven-inch circumference). Species listed in 29.10.0970 subsection (2).

[3] Street tree means a tree in a public place, or along or within a public street or right-of-way.

Analysis

Tree appraisal was performed according to the Council of Tree & Landscape Appraisers *Guide for Plant Appraisal 10th Edition, 2019* (CLTA) along with Western Chapter International Society of Arboriculture *Species Classification and Group Assignment, 2004*. The trees were appraised using the "Cost Approach" and more specifically the "Trunk Formula Technique" (Appendix B).

"Trunk Formula Technique" is calculated as follows: Basic Tree Cost = (Unit tree cost x Appraised trunk area), Appraised Value = (Basic tree cost X functional Limitations (percentage) X Condition (percentage) X External Limitations (percentage)).

The trunk formula valuations are based on four tree factors; size (trunk cross sectional area), condition, functional limitations, and external limitations. There are two steps to determine the overall value. The first step is to determine the "Basic Tree Cost" based on size and unit tree cost. Unit tree cost is calculated by dividing the nursery wholesale cost of a 24 inch box specimen and its replacement size (cost per square inch trunk caliper) which is determined by the *Species Classification and Group Assignment, 2004 Western Chapter Regional Supplement*. The cost of the 24 inch box wholesale specimen was determined through personal communications with BrightView and Normans nurseries in Farmington and Central Wholesale in San Jose for an average of $214.00.

The second part is to depreciate the tree's Basic Cost through an assessment of condition, functional limitations, and external limitations. The condition assessment guidelines and percentages are defined in the "Condition Rating" section of this report. Functional limitations are based on factors associated with the tree's interaction to its planting site that would affect condition, limit development, or reduce the utility in the future and include genetics, placement, and site conditions for the individual tree. External limitations are outside the property, out of control of the owner and also affect condition, limit development, or reduce the utility in the future (i.e power lines, municipal restrictions, drought adaptations, or species susceptibility to pests).

There were fourteen (14) protected trees appraised for a rounded depreciated value of $97,220.00.

Appraisal worksheets are available upon request.

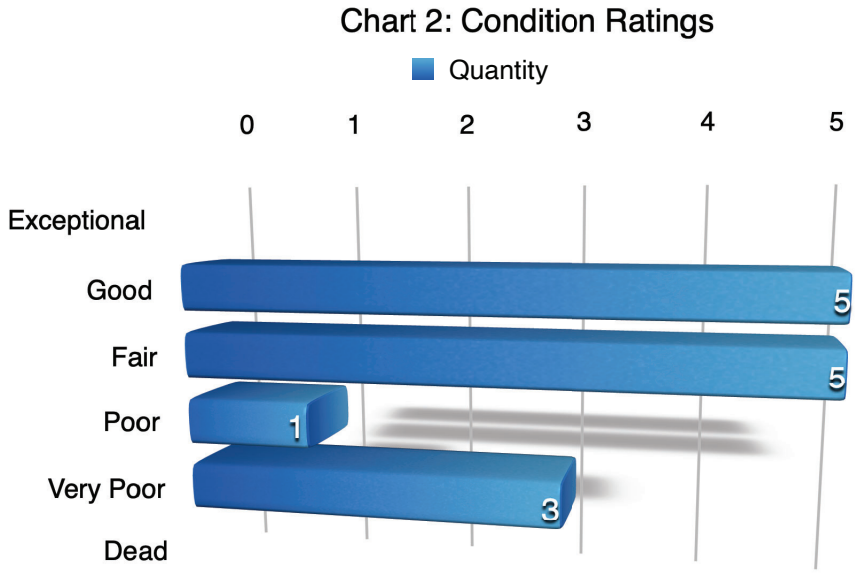
Discussion

Condition Rating

A tree's condition is a determination of its overall health, structure, and form. The assessment considered all three criteria for a combined condition rating.

- 100% - Exceptional = Good health and structure with significant size, location or quality.
- 61-80% - Good = Normal vigor, well-developed structure, function and aesthetics not compromised with good longevity for the site.
- 41-60 % - Fair = Reduced vigor, damage, dieback, or pest problems, at least one significant structural problem or multiple moderate defects requiring treatment. Major asymmetry or deviation from the species normal habit, function and aesthetics compromised.
- 21-40% - Poor = Unhealthy and declining appearance with poor vigor, abnormal foliar color, size or density with potential irreversible decline. One serious structural defect or multiple significant defects that cannot be corrected and failure may occur at any time. Significant asymmetry and compromised aesthetics and intended use.
- 6-20% - Very Poor = Poor vigor and dying with little foliage in irreversible decline. Severe defects with the likelihood of failure being probable or imminent. Aesthetically poor with little or no function in the landscape.
- 0-5% - Dead/Unstable = Dead or imminently ready to fail.

Five trees are in good condition, five fair, one poor, and three are in very poor shape (Chart 2). Trees #662, #667, and #669 are all in very poor condition.



Mitigation for Removals

The table below indicates the recommended replacement values (Table 2). The applicant will be required to replace seven protected trees. Alternatively it may be possible to create an approved landscape plan or provide an in-lieu payment. The landscape plan does not indicate any replacement trees.

Table 2: Town of Los Gatos Tree Canopy - Replacement Standard

Canopy Size of Removed Tree (1)	Replacement Requirement (2)(4)	Single Family Residential Replacement Option (3)(4)
10 feet or less	Two 24 inch box trees	Two 15 gallon trees
More than 10 feet to 25 feet	Three 24 inch box trees	Three 15 gallon trees
More than 25 feet to 40 feet	Four 24 inch box trees or two 36 inch box trees	Four 15 gallon trees
More than 40 feet to 55 feet	Six 24 inch box trees; or three 36 inch box trees	Not available
Greater than 55 feet	Ten 24 inch box trees; or five 36 inch box trees	Not available

[1]To measure an asymmetrical canopy of a tree, the widest measurement shall be used to determine canopy size.

[2]Often, it is not possible to replace a single large, older tree with an equivalent tree(s). In this case, the tree may be replaced with a combination of both the Tree Canopy Replacement Standard and in-lieu payment in an amount set forth by Town Council resolution paid to the Town Tree Replacement Fund.

[3]Single Family Residential Replacement Option is available for developed single family residential lots under 10,000 square feet that are not subject to the Town's Hillside Development Standards and Guidelines. All 15-gallon trees must be planted on-site. Any in-lieu fees for single family residential shall be based on 24" box tree rates as adopted by Town Council.

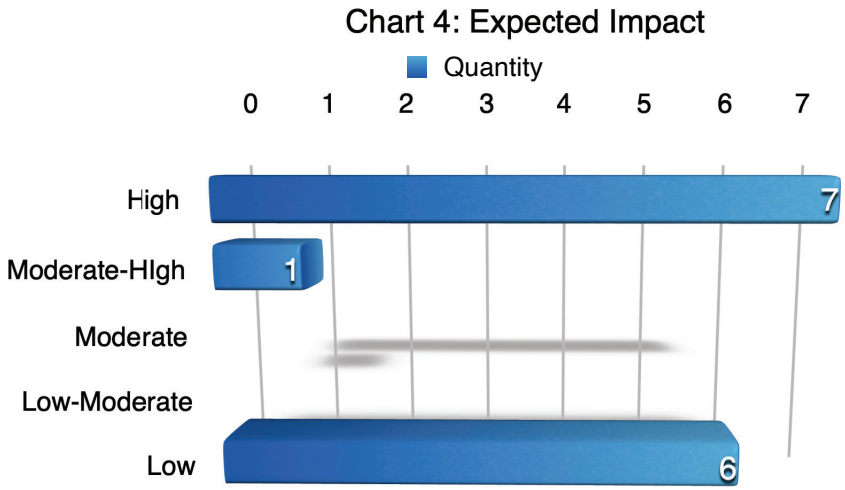
[4]Replacement Trees shall be approved by the Town Arborist and shall be of a species suited to the available planting location, proximity to structures, overhead clearances, soil type, compatibility with surrounding canopy and other relevant factors. Replacement with native species shall be strongly encouraged. Replacement requirements in the Hillsides shall comply with the Hillside Development Standards and Guidelines Appendix A and Section 29.10.0987 Special Provisions—Hillsides.

Expected Impacts

Impact level defines how a tree may be affected by construction activity and proximity to the tree, and is described as low, moderate, or high. The following scale defines the impact rating:

- Low = The construction activity will have little influence on the tree.
- Moderate = The construction may cause future health or structural problems, and steps must be taken to protect the tree to reduce future problems.
- High = Tree structure and health will be compromised and removal is recommended, or other actions must be taken for the tree to remain. The tree is located in the building envelope.

Seven (7) trees will be highly impacted and caused to be removed. The plans only indicate trees two trees, #658 and #659, as removals for the driveway. Tree #660 (not on the survey) is in close proximity to #658 and #659 and will also need to be removed for the driveway. Trees #661, #662, (neither on the survey) and #663 are near the existing utility pole where a joint trench is proposed for gas and electric, these will also require removal. Trees #668 and #669 are indicated as "save" trees but at least #668 will be highly impacted. Tree #668 has impacts on threes sides with the storm drain, driveway, and new garage all between five and eight feet from the trunk on three sides. Although it may survive the construction for some time it may also fall over if roots are removed on three sides as likely to occur. Tree #669 is in a slightly better predicament but the tree itself is in "very poor" condition. This tree should also be removed on its own merits regardless of impacts which are indicated as "moderate-high". The remaining six trees are not likely to be affected including #665 because it is perched on top of a soil cut and wall that are to remain.



Tree Protection

Typically there are three different tree protection schemes which are called Type I (Appendix D1), Type II and Type III (Appendix D2) trunk protection only. The tree protection zone (TPZ) is the defined area in which certain activities are prohibited to minimize potential injury to the tree. There are two tree protection zones determined which include the “calculated” and “specified”. The “calculated” tree protection zone is determined by a multiplication factor based on species tolerance, tree age/vigor/health, and trunk diameter. The “specified” tree protection zone is adjusted in size and shape to accommodate the existing infrastructure, planned construction, and specific site constraints. This “specified” zone includes tree canopy conformation, visible root orientation, size, condition, maturity, and species tolerances (Gilpin, R, Hauer, R, Matheny, N, and Smiley, E.T. 2023).

Tree protection will focus on the area around the adjacent tree #657, which will need all the space between the neighbor fence and the proposed construction (about 14 feet). This area will need to be fenced off. Tree #670 is near some construction and the sewer, but the tree is containerized similar to #665. Tress #665 will require trunk protection along with #666.

Conclusion

The inventory contains fourteen trees (14) trees comprised of two (2) different species (coast live oak and London plane. There are four (4) Large Protected trees and none are Exempt or Street Trees.

Five trees are in good condition, five fair, one poor, and three are in very poor shape. Trees #662, #667, and #669 are all in “very poor” condition.

Seven (7) trees will be highly impacted and caused to be removed although the plans only indicate two.. Tree #660 (not on the survey) is in close proximity to #658 and #659 and will also need to be removed for the driveway. Trees #661, #662, (neither on the survey) and #663 are near the existing utility pole where a joint trench is proposed for gas and electric, these will also require removal and be highly impacted. Trees #668 and #669 are indicated as “save” trees but at least #668 will be highly impacted. Tree #668 has impacts on threes sides with the storm drain, driveway, and new garage all between five and eight feet from the trunk on three sides. Tree #669 is in a slightly better predicament but is in “very poor” condition. This tree should also be removed on its own merits regardless of impacts which are indicated as “moderate-high”. The remaining six trees are not likely to be affected including #665 because it is perched on top of a soil cut and wall that are to remain.

Tree protection will focus on the area around the adjacent tree #657 which will need all the space between the neighbor fence and the proposed construction (about 14 feet). This area will need to be fenced off. Tree #670 is near some construction and the sewer but the tree is containerized similar to #665. #665 will require trunk protection along with #666.

The applicant will be required to replace seven protected trees and possibly eight.

There were fourteen (14) protected trees appraised for a rounded depreciated value of $97,220.00.

Recommendations

1. Place tree protection fence around the trees to be retained as indicated in Appendix A.

2. Place tree protection fence inside the site around tree 657 at a radius of 14 feet where possible and no closer than 10.

3. Place straw wattle or vertical timbers around trees #665 and #666.

4. All tree maintenance and care shall be performed by a qualified arborist with a C-61/D-49 California Contractors License. Tree maintenance and care shall be specified in writing according to American National Standard for Tree Care Operations: *Tree, Shrub and Other Woody Plant Management: Standard Practices* parts 1 through 10 and adhere to ANSI Z133.1 safety standards and local regulations. All maintenance is to be performed according to ISA Best Management Practices.

5. Refer to Appendix D for general tree protection guidelines including recommendations for arborist assistance while working under trees, trenching, or excavation within a trees drip line or designated TPZ/CRZ.

6. Place all the tree protection fence locations and guidelines on the plans including the grading, drainage, and utility plans. Create a separate plan sheet that includes all three protection measures labeled “T-1 Tree Protection Plan.”

7. Provide a copy of this report to all contractors and project managers, including the architect, civil engineer, and landscape designer or architect. It is the responsibility of the owner to ensure all parties are familiar with this document. Arrange a pre-construction meeting with the project arborist or landscape architect to verify tree protection is in place, with the correct materials, and at the proper distances.

Bibliography

Gilpin, R, Hauer, R, Matheny, N, and Smiley, E.T. *Managing trees during construction*, Third edition. Champaign, IL: International Society of Arboriculture, 2023.

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ISA. Species Classification and Group Assignment, 2004 Western Chapter Regional Supplement. Western Chapter ISA

Matheny, Nelda P., Clark, James R. Trees and development: A technical guide to preservation of trees during land development. Bedminster, PA: International Society of Arboriculture 1998.

Smiley, E, Matheny, N, Lilly, S, ISA. *Best Management Practices: Tree Risk Assessment:* International Society of Arboriculture, 2017. Print

Glossary of Terms

calculated tree protection zone: A TPZ calculated using the trunk diameter and a multiplication factor based on species tolerance to construction and tree age. It is often plotted on a plan as a circle or other arbitrary shape and can be used as a guide for establishing the specified TPZ.

critical root zone: a conceptual soil area containing the minimal amount of all the essential parts of the root zone needed to sustain tree health and structural integrity. There are no universally accepted methods to calculate the CRZ.

basic Tree Cost: The cost of replacement for a perfect specimen of a particular species and cross sectional area prior to location and condition depreciation.

cost Approach: An indication of value by adding the land value to the depreciated value of improvements.

defect: An imperfection, weakness, or lack of something necessary. In trees defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.

diameter at breast height (DBH): Measures at 1.4 meters (4.5 feet) above ground in the United States, Australia (arboriculture), New Zealand, and when using the Guide for Plant Appraisal, 9th edition; at 1.3 meters (4.3 feet) above ground in Australia (forestry), Canada, the European Union, and in UK forestry; and at 1.5 meters (5 feet) above ground in UK arboriculture.

drip Line: Imaginary line defined by the branch spread or a single plant or group of plants. The outer extent of the tree crown.

form: Describes a plant's habit, shape or silhouette defined by its genetics, environment, or management.

health: Assessment is based on the overall appearance of the tree, its leaf and twig growth, and the presence and severity of insects or disease

mechanical damage: Physical damage caused by outside forces such as cutting, chopping or any mechanized device that may strike the tree trunk, roots or branches.

scaffold branches: Permanent or structural branches that for the scaffold architecture or structure of a tree.

specified tree protection zone (specified TPZ): a TPZ that is adjusted in size or shape to accommodate the existing infrastructure, planned construction, and aspects of the site, as well as the tree canopy conformation, visible root orientation, size, condition, maturity, and species response to construction.

straw wattle: also known as straw worms, bio-logs, straw noodles, or straw tubes are man made cylinders of compressed, weed free straw (wheat or rice), 8 to 12 inches in diameter and 20 to 25 feet long. They are encased in jute, nylon, or other photo degradable materials,
and have an average weight of 35 pounds.

structure: Evaluation focused on the crown, trunk, trunk flare, above ground roots and the site conditions contributing to conditions and/or defects that may contribute to failure.

Tree Protection Zone (TPZ): Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

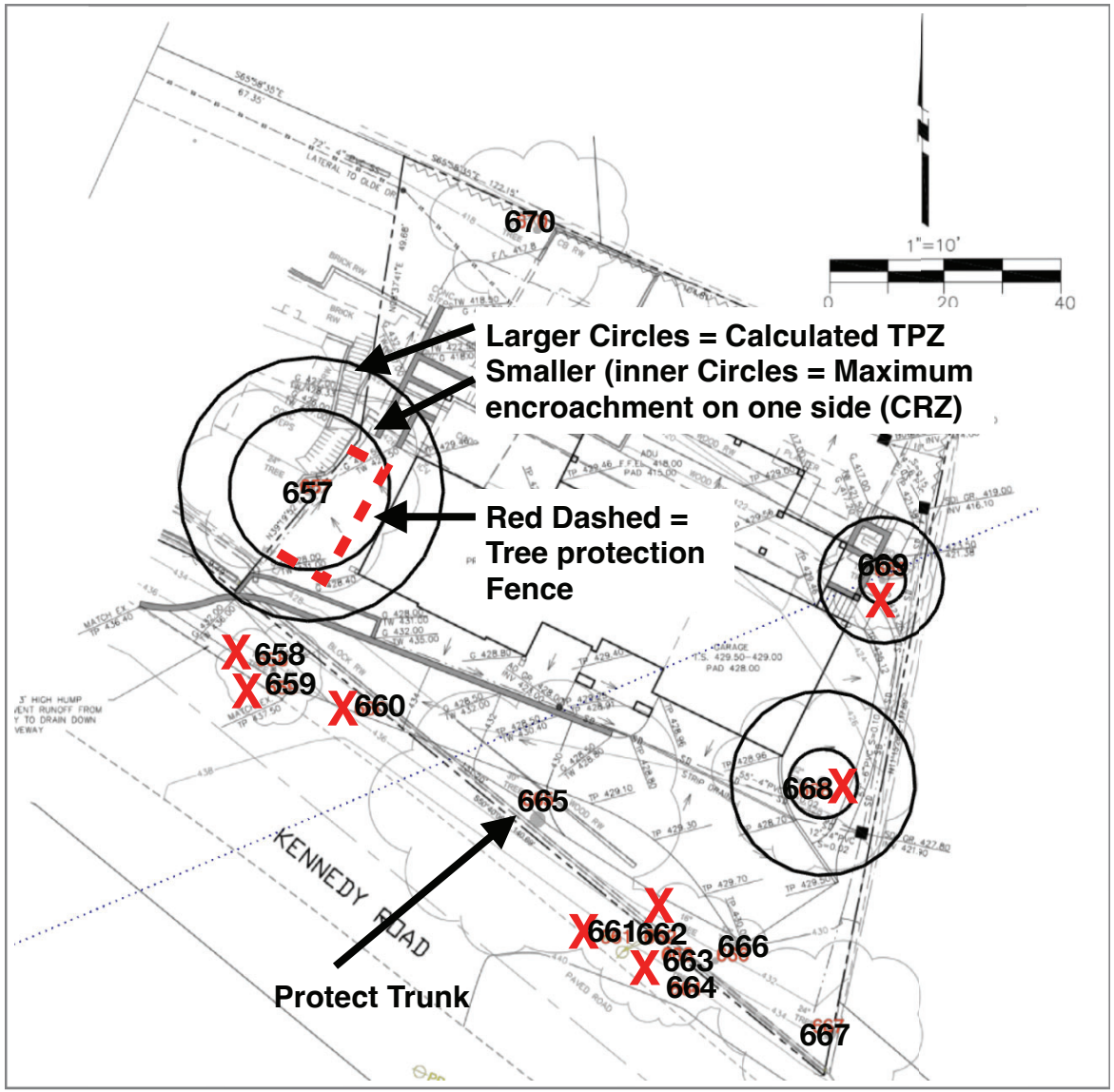
Tree Risk Assessment: Process of evaluating what unexpected things could happen, how likely it is, and what the likely outcomes are. In tree management, the systematic process to determine the level of risk posed by a tree, tree part, or group of trees.

trunk: Stem of a tree.

Trunk Formula Technique: Method to appraise the monetary value of trees considered too large to be replaced with nursery or field grown stock. Based on developing a representative unit cost for replacement with the same or comparable species of the same size and in the same place, subject to depreciation for various factors. Contrast with replacement cost method.

volunteer: A tree, not planted by human hands, that begins to grow on residential or commercial property. Unlike trees that are b drought in and installed on property, volunteer trees usually spring up on their own from seeds placed onto the ground by natural causes or accidental transport by people. Normally, volunteer trees are considered weeds and removed, but many desirable and attractive specimens have gone on to become permanent residents on many public and private grounds.

Appendix A: Tree Inventory, Site Plan, and Protection



Appendix B: Tree Inventory and Assessment Tables

Table 3: Inventory and Assessment Summary

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Protection Status	Rounded Depreciated Value	Calculated Protection Radii (ft.)
coast live oak (*Quercus agrifolia*)	657	34	35	Good	Low	Large Protected	$32,200.00	23
coast live oak (*Quercus agrifolia*)	658	12	20	Good	High	Protected	$4,010.00	8
coast live oak (*Quercus agrifolia*)	659	12	20	Good	High	Protected	$4,010.00	8
coast live oak (*Quercus agrifolia*)	660	7	15	Good	High	Protected	$1,360.00	5
coast live oak (*Quercus agrifolia*)	661	6	10	Poor	High	Protected	$430.00	4
coast live oak (*Quercus agrifolia*)	662	5	8	Very poor	High	Protected	$150.00	3
coast live oak (*Quercus agrifolia*)	663	20	25	Fair	High	Protected	$8,000.00	13
coast live oak (*Quercus agrifolia*)	664	10	20	Fair	Low	Protected	$1,990.00	7
coast live oak (*Quercus agrifolia*)	665	36	30	Fair	Low	Large Protected	$25,800.00	24
coast live oak (*Quercus agrifolia*)	666	12	20	Fair	Low	Protected	$2,860.00	8
coast live oak (*Quercus agrifolia*)	667	28	15	Very poor	Low	Large Protected	$4,680.00	19
coast live oak (*Quercus agrifolia*)	668	20, 14	30	Fair	High	Large Protected	$11,500.00	16
coast live oak (*Quercus agrifolia*)	669	16	25	Very poor	Moderate-high	Protected	$1,530.00	11

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Protection Status	Rounded Depreciated Value	Calculated Protection Radii (ft.)
London plane (*Platens x hispanica*)	670	18	30	Good	Low	Protected	$9,000.00	12

Appendix C: Photographs

C1: Coast live oak #657



C2: Coast live oaks #658, #659, and #657



C3: Trees #661 - #664



C4: Tree #665



C5: Tree #669

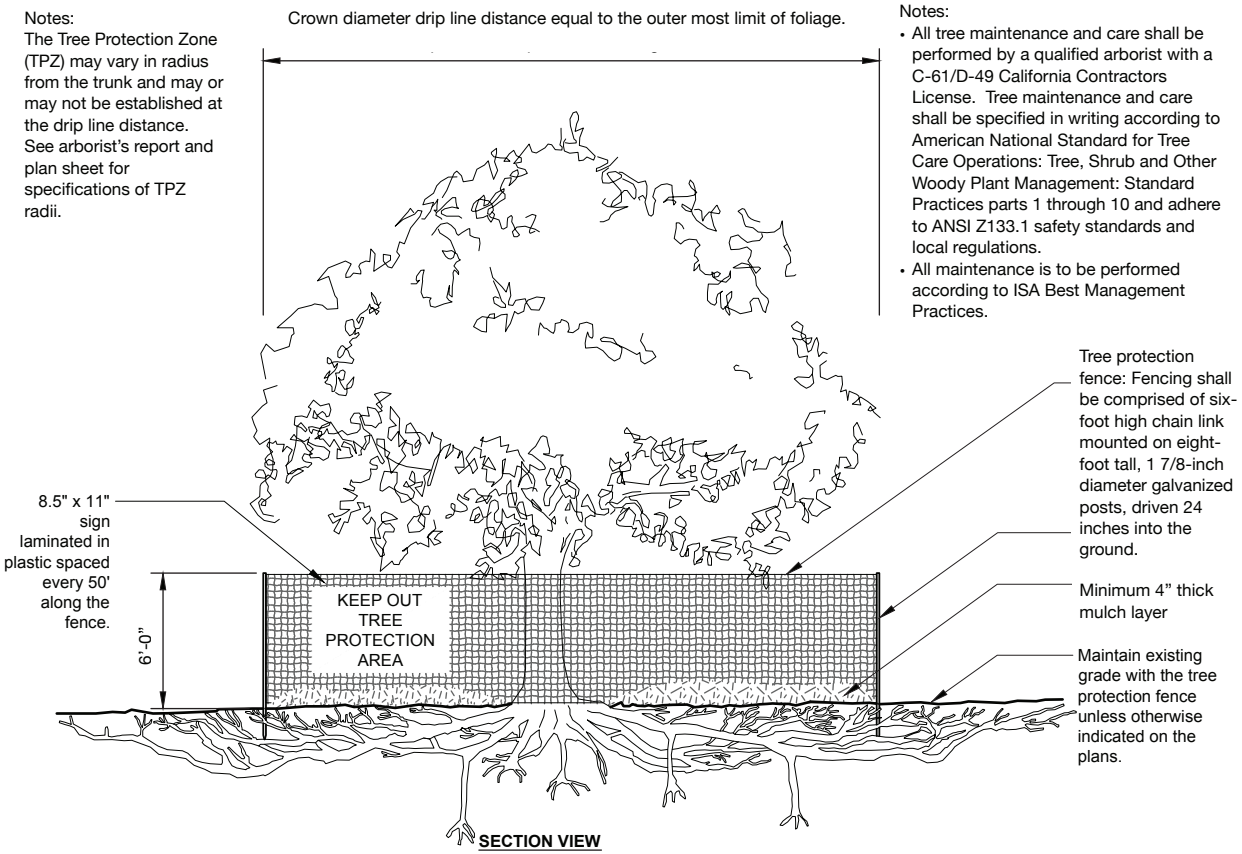


C6: Tree #668



Appendix D: Tree Protection Guidelines

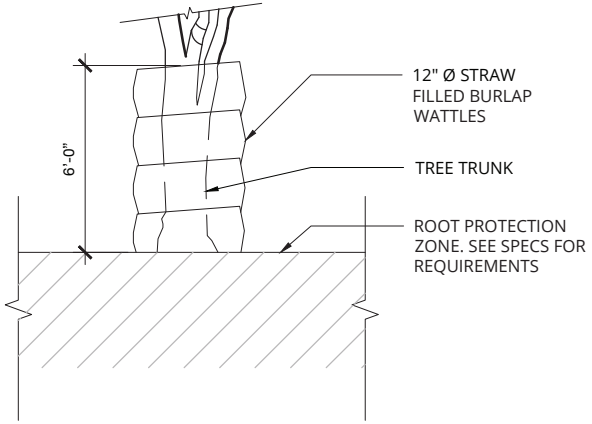
D1: Plan Sheet Detail S-X (Type I)



S-X TREE PROTECTION

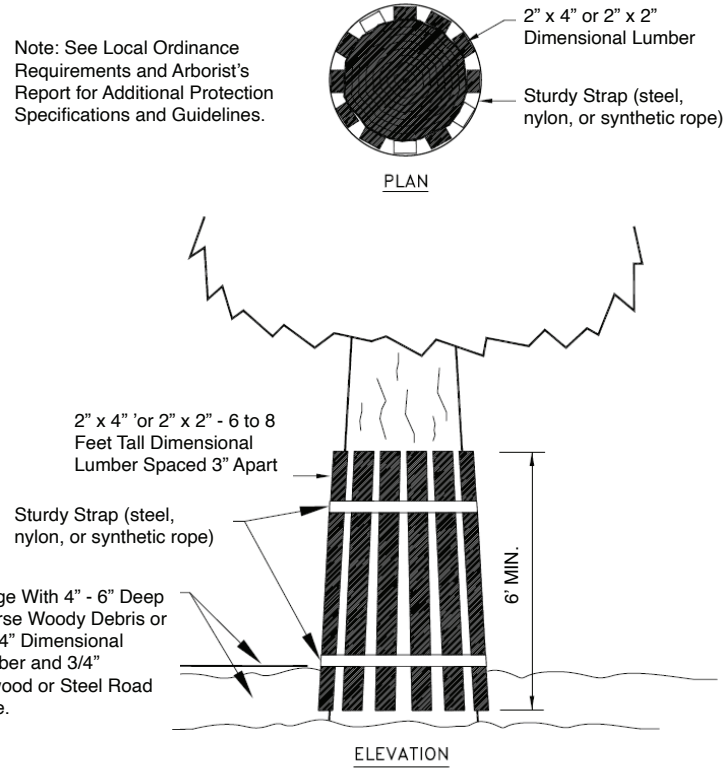
URBAN TREE FOUNDATION © 2014
OPEN SOURCE FREE TO USE
Modified by Monarch Consulting Arborists LLC, 2019

D2: Plan Sheet Detail S-Y (Type III)



SECTION VIEW

S-Y TRUNK PROTECTION WITH WATTLE



Trunk Protection Vertical Timber Detail

D3: Section 29.10.1005. - Protection of Trees During Construction

Tree Protection Zones and Fence Specifications

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 ten-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 two-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 eight and one-half-inch by eleven-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.” Text on the signs should be in both English and Spanish (Appendix E).

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.

Prohibited Activities

The following are prohibited activities within the TPZ:

- Grade changes (e.g. soil cuts, fills);
- Trenches;
- Root cuts;
- Pedestrian and equipment traffic that could compact the soil or physically damage roots;
- Parking vehicles or equipment;
- Burning of brush and woody debris;
- Storing soil, construction materials, petroleum products, water, or building refuse; and,
- Disposing of wash water, fuel or other potentially damaging liquids.

Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Roots greater than two inches in diameter shall not be cut. When roots over two inches in diameter are encountered and are authorized to be cut or removed, they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Boring or Tunneling

Boring machines should be set up outside the drip line or established Tree Protection Zone. Boring may also be performed by digging a trench on both sides of the tree until roots one inch in diameter are encountered and then hand dug or excavated with an Air Spade® or similar air or water excavation tool. Bore holes should be adjacent to the trunk and never go directly under the main stem to avoid oblique (heart) roots. Bore holes should be a minimum of three feet deep.

Tree Pruning and Removal Operations

All tree pruning or removals should be performed by a qualified arborist with a C-61/D-49 California Contractors License. Treatment, including pruning, shall be specified in writing according to the most recent ANSI A-300A Standards and Limitations and performed according to ISA Best Management Practices while adhering to ANSI Z133.1 safety standards. Trees that need to be removed or pruned should be identified in the pre-construction walk through.

Appendix E: Tree Protection Signs

E1: English

Warning
Tree Protection Zone

This Fence Shall Not Be Removed
And Is Subject To Penalty According To
Town Code 29.10.1025

E2: Spanish

Cuidado
Zona De Arbol Pretejido

Esta valla no podrán ser sacados
Y está sujeta a sanción en función de
Código Ciudad del 29.101025

Qualifications, Assumptions, and Limiting Conditions

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or attend meetings, hearings, conferences, mediations, arbitration, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant's fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings, and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is only for coordination and ease of reference. Inclusion of said information with any drawings or other documents does not constitute a representation as to the sufficiency or accuracy of said information.

Unless otherwise expressed: a) this report covers only examined items and their condition at the time of inspection; and b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.

Certification of Performance

I Richard Gessner, Certify:

That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and/or appraisal is stated in the attached report and Terms of Assignment;

That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;

That the analysis, opinions and conclusions stated herein are my own;

That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;

That no one provided significant professional assistance to the consultant, except as indicated within the report.

That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any other subsequent events;

I further certify that I am a Registered Consulting Arborist® with the American Society of Consulting Arborists, and that I acknowledge, accept and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Board Certified Master Arborist®. I have been involved with the practice of Arboriculture and the care and study of trees since 1998.

Richard J. Gessner 

ASCA Registered Consulting Arborist® #496
ISA Board Certified Master Arborist® WE-4341B

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TOWN OF LOS GATOS

APPLICATION FOR TREE REMOVAL AND/OR PRUNING PERMIT

PARKS & PUBLIC WORKS
SERVICE CENTER
41 MILES AVENUE
LOS GATOS, CA 95030
(408) 399-5771

Purpose of Application (check all that apply): ☐ **Protected Tree Removal** ☐ **Protected Tree Pruning (more than 25% in a 3 year period)** ☐ **Heritage or Large Protected Tree Removal** ☐ **Heritage or Large Protected Tree Pruning**

☐ **Check here if removal or pruning is in compliance with an approved development application. Photos and site plan required.**

Name of CDD Planner:_____ Project Application #:_____ Date of Approval: _____

☐ **Check here if removal or pruning deviates in some way from an approved development application (describe on separate sheet if needed)**

☐ **Check here if property is located within the designated Town of Los Gatos Hillside Area (See FAQ sheet for additional provisions)**

Property Owner Name: Mazen Louis Phone: [redacted]
Property Location/Address 16401 Kennedy Road, Los Gatos 95032 Email: [redacted]
Mailing Address (if different from above) _____
Applicant Name (if different from above) West Valley Arborists, Inc Phone: 408-866-1148

I hereby certify that I am the owner of record of the property described above, and that I approve of the action(s) requested herein. I also hereby grant the Town or the Town's agent permission to visit the property to inspect the tree(s) that are covered by this application.

Property Owner's Signature (required): Mazen J. Louis Date: 9/23/2026

Tree #	List of species of all trees. Show corresponding # on Site Plan	Diameter Inches	Canopy Feet	List birds living in tree If any	Remove or Prune	DESCRIBE REASON FOR REMOVAL AND/OR PRUNING
668	Multi-trunk Live Oak	34"	32'	none	remove	Suboptimal health and form located in unmitigable conflicted space / exposure - poses risk to both tree (safety hazard) and infrastructure (damages)

~~Copy to~~ another sheet if more than 10 trees.

Notes:
- *Tree numbers* should match those in arborist report where applicable.
- *Diameter* is measured at a height of 4.5' above the average grade.
- *Canopy* measurement is the widest dimension of the canopy spread.
- *Inspect* trees prior to removal or major pruning to confirm the absence of active bird nests, particularly during the spring/summer nesting season (February 1 through August 31).
- *Replacement Trees* are not required if the tree being removed is dead or has a Tree Risk Rating of Extreme or High, as determined by the Town Arborist.
- Fee is $256 for first tree, and $128 for each additional tree.

For Office Use Only
Application Number: 125-148
Total Number Tree(s): 1
Payment Amount Received: $128 [TREEREM]
Check Number: 8782
Credit Card Auth.: _____
Inspection Date_____ Approved ☐ Denied ☐ Initials _____

#ED665

☐ **Check here if replacement trees cannot be reasonably replanted on site and payment of an in-lieu fee is requested. Town arborist approval is required for all in-lieu fee payment options. *See reverse for more information on replacement requirements.***

IMPORTANT: Be sure to provide the following required documents when submitting the application:
- ☐ Photos and site plan of tree(s) proposed for removal or pruning. *For pruning, proposed cuts should be indicated on photo.*
- ☐ Completed Tree Replacement Worksheet. *See reverse for replacement tree requirements and worksheet.*
- ☐ ...ent made using cash, check or credit card (VISA/MasterCard only).
- ☐ ...on required for Heritage and Large Protected Tree Permits only. *See attached FAQs for guidelines.*

EXHIBIT 6

TOWN OF LOS GATOS

TREE REMOVAL AND/OR PRUNING PERMIT

PARKS & PUBLIC WORKS
SERVICE CENTER
41 MILES AVENUE
LOS GATOS, CA 95030
(408) 399-5771

Application Number: T25-148 **Approved:** 1-3 **Denied:** _____ **Permit Number:** T25-148 **Expires:** 1-3-26

Permit for (check all that apply): ☒ Protected Tree Removal ☐ Protected Tree Pruning (more than 25% in a 3 year period) ☐ Heritage or Large Protected Tree Removal ☒ Heritage or Large Protected Tree Pruning

Property Owner Name:	Mazen Louis	Phone:	[redacted]
Property Location/Address	16401 Kennedy Road, Los Gatos, CA 95030	E-Mail:	[redacted]
Mailing Address (if different from above)	1534 Darlene Avenue, San Jose, CA 95125		
Applicant Name (if different from above)	Tony Jeans – T.H.I.S. Design & Development	Phone:	408-354-1833

Tree #	Approved	Required Finding(s)	Denied	Reason for Denial	Replacement Requirement	In Lieu Fee
666	Yes	4			2 - 24" box trees	
667	Yes	4			2 - 24" box trees	
669	Yes	4			2 - 24" box trees	
668	Yes	4			4 - 24 Inch Box Trees	
	CDD Planner: Ryan Safty *Per CDD required findings –Section 29.10.0992*					
					Total In Lieu Fees	

☐ **All or some of the required replacement trees cannot be reasonably replanted on site and payment of the in-lieu fee as indicated above has been approved. Permit will not be issued until all in-lieu fees are paid in full.**

General Permit Conditions

1. Notify the Town of Los Gatos Parks and Public Works Department at 408-399-5770 48 hours before work begins.
2. All underground utilities shall be located and protected from damage due to removal, stump grinding, or root pruning activities. **Contact Underground Service Alert (USA) by dialing 811 or 800-227-2600 or online at www.usanorth.org at least 48 hours before tree removal activities.**
3. Inspect trees prior to removal or major pruning to confirm the absence of active bird nests, particularly during the spring/summer nesting season (February 1 through August 31).
4. The use of gas-powered leaf blowers is prohibited in the Town of Los Gatos. Use of electric powered leaf blowers is permitted.
5. Approved pedestrian and vehicular traffic control shall be used and maintained at all times. Depending on the location of the work, time of day, and the required equipment, an encroachment permit may be required.
6. All contractors performing tree work in the Town of Los Gatos are required to have a Town Business License. Contractors performing work valued at more than $500 must also hold a current, valid license from the Contractors State License Board (CSLB).
7. The permit must be posted on site at all times while tree removal or pruning is taking place.
8. Permit holder is required to submit photographs of replacement trees along with replanting date to the Town of Los Gatos Parks and Public Works Department prior to permit expiration date.

Special Permit Conditions

_____

_____

_____

_____

_____

Rob Moulden, Town Arborist — Date: 10-1-25

TOWN OF LOS GATOS
TREE REMOVAL AND/OR PRUNING PERMIT

Required Findings for Tree Removal and/or Pruning Permit *(Los Gatos Town Code Section 29.10.0992)*

(1) The tree is dead, severely diseased, decayed or disfigured to such an extent that the tree is unable to recover or return to a healthy and structurally sound condition.

(2) The tree has a tree risk rating of Extreme or High on the ISA Tree Risk Rating Matrix as set forth in the ISA Tree Risk Assessment Best Management Practices, or successor publication. (Town Arborist Discretion)

(3) The tree is crowding other protected trees to the extent that removal or severe pruning is necessary to ensure the long-term viability of adjacent and more significant trees.

(4) The retention of the tree restricts the economic enjoyment of the property or creates an unusual hardship for the property owner by severely limiting the use of the property in a manner not typically experienced by owners of similarly situated properties, and the applicant has demonstrated to the satisfaction of the Director or deciding body that there are no reasonable alternatives to preserve the tree.

(5) The tree has, or will imminently, interfere with utility services where such interference cannot be controlled or remedied through reasonable modification, relocation or repair of the utility service or the pruning of the root or branch structure of the tree; or where removal or pruning is required by a public utility to comply with California Public Utility Commission (CPUC) or Federal Energy Regulatory Commission (FERC) rules or regulations.

(6) The tree has caused or may imminently cause significant damage to an existing structure that cannot be controlled or remedied through reasonable modification of the root or branch structure of the tree.

(7) Except for properties within the hillsides, the retention of the protected tree would result in reduction of the otherwise-permissible building envelope by more than twenty-five (25) percent.

(8) The removal of the tree is unavoidable due to restricted access to the property.

(9) The removal of the tree is necessary to repair a geologic hazard.

(10) The removal of the tree and replacement with a more appropriate tree species will enhance the Town's urban forest.

Inspection Notes

_____
_____
_____
_____
_____
_____

Additional Information Requested

_____
_____
_____
_____
_____
_____

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West Valley Arborists Inc.
Urban Tree Specialist

ATTN: Town of Los Gatos
Tree Removal Application

09/19/2026

Re: West Valley Arborists, Inc.
Arborist Report
Recommendation: Removal

For: Mazen Louis
16401 Kennedy Road
Los Gatos, CA 95032

Ref# T25-148
Tree #668

To whom it may concern,

At the property owner's request, we performed a site visit to the above listed address to assess the current health of the trees on the property and make recommendations based on our findings and best practice as defined by the International Society of Arboriculture (ISA) and American National Standards Institute (ANSI).

• ARBORIST OBSERVATIONS & SUMMARY OF FACTS & FINDINGS •

Of particular concern and after close inspection, we observed (1) Twin-trunk Live Oak tree at the above listed single-family residence/ property that we, given the following findings, recommend immediate removal.

TREE #668	Twin-trunk Live Oak
Height:	55'
Canopy Spread:	32'
DBH:	20", 14"
Condition/Main Concerns:	Suboptimal form and decline observed. In a high-impact /unmitigable conflicted space leading to exposure and risk to both tree (safety hazard) and infrastructure (damages).

Severe Impact

This property is currently under construction; reference# T25-148. As noted in the previously provided Consulting Arborist's report as well as C1 in the approved site plans, the preservation of tree #668 has always been in question. While labeled a tree to be saved, its location in relation to the development was rightly identified as being highly impacted and the tree's longevity uncertain. This means the trees health and structural integrity will be compromised and most often times, removal is recommended.

All reasonable efforts to protect and preserve this tree have been made (careful excavation, etc.) however, at this point, the tree's protection zone (TPZ) or space remaining, is simply insufficient. Today's observations, with the roots exposed, highlight that the majority of this trees' critical root structure will be significantly compromised; three of four sides are experiencing a direct impact. Here, the installation of the driveway, garage, storm drain and critical utility lines will require significant root removal in close proximity to the tree's trunk during construction. Trees get into trouble when they become low on energy reserves. In this case, this is unavoidable; the sudden and significant root loss will result severe stress and expected death. Now exposed, we can see best practice in root mitigation such as limiting the size, proximity and volume of root removal cannot be followed.

Trees cannot survive without a meaningful root structure or the removal thereof. Here, this proves true for two reasons. The first is limited anchorage. Without critical structural integrity or proper anchorage, this tree is weakened, unstable and poses a significant failure risk; it can and will fall over. The second, the sudden loss of the singular source of nutrient and moisture uptake, essentially starves the tree and while its decline may not show immediately, its death is near imminent.

Furthermore, severed roots create an injury resulting in an entry point for opportunistic pathogens and pests, further exacerbating the tree's vulnerability and great likelihood of decline.

Fair-Poor Condition and Form

Separately, we assessed the general health and quality of the tree. Here too, we feel this tree suboptimal; in fair - poor condition and form. Reduced vigor, dieback, and two significant and irreversible structural problems exist. From the onset, inconsistent with the specie's natural form, this tree has limited structural integrity. This tree has (naturally developed) a significant lean and a low, soil level, junction in which the tree splits into a twin-trunk formation.

Multi-trunk or codominant trunks represent poor structural development, form and ultimately, integrity with problems that cannot be corrected. In this case, connective wood tissue is lacking and this junction serves as a weak point in the tree. Also present, this split between trunks features included bark which increases its susceptibility, making it even more prone to splitting and failure.

Conclusion

Finally, in the highly unlikely case that this tree (#668) was to survive all of the above provided conditions and stressors (both naturally occurring and otherwise), we would expect that to be short lived. Not only would we expect long-term and irreversible decline, the space conflict remains.

(CRZ) Critical Root Zone radius calculated: 34 (combined DBH inches) x 1.5 = 51'. This tree is within 4'-10' of various aspects requiring deep excavation in support of the site development. This is a highly conflicted space and not only does it do a disservice by causing severe stress and harm to the tree, poses great risk of damage occurring to the home and its infrastructure and serves as a hazardous condition, high failure risk.

Please also note: We have been advised that PG&E's intention is to also perform severe trenching in order to run major underground lines for both electricity and gas within this same zone. This excavation will most certainly cause additional extensive damage to the root zone and if left, compound the conflicted space.

The limitations of the space and suboptimal conditions of the tree are insurmountable and without remedy; co-existence is not a viable option and the risks associated are too great to warrant further attempts in this tree's preservation.

• ARBORISTS RECOMMENDATION FOR IMMEDIATE REMOVAL •

Best practice in Arboriculture - our commitment to a healthy Urban Forest and with the utmost respect to the Town's ordinances and vision, we embrace the demand to prioritize the saving of established trees. With that in mind, we have considered all of the possible measures available in support of tree preservation or alternatives to removal; however, in this case, there are no viable options, reasonable or otherwise, that will remedy the impact on the root structure, result in the reversal of decline, address the structural deficiencies and otherwise mitigate the highly impacted/conflicted space.

When we take all the above points, in totality, into thoughtful consideration, we believe immediate removal and replacement of this tree is only way in which this hazardous condition can be remedied.

We respectfully submit this report for your review and given our findings, believe our recommendation for tree removal is in accordance with the Town's Municipal Code. As such, we are requesting the issuance of a permit for the immediate removal of this tree.

Sec. 29.10.0992.- Required findings. (1) The *tree* is dead, severely diseased, decayed or disfigured to such an extent that the *tree* is unable to recover or return to a healthy and structurally sound condition. (4) The retention of the *tree* restricts the economic enjoyment of the property or creates an unusual hardship for the property owner by severely limiting the use of the property in a manner not typically experienced by owners of similarly situated properties, and the applicant has demonstrated to the satisfaction of the Director or deciding body that there are no reasonable alternatives to preserve the *tree*. (5) The *tree* has, or will imminently, interfere with utility services where such interference cannot be controlled or remedied through reasonable modification, relocation or repair of the utility service or the pruning of the root or branch structure of the *tree*; or where removal or pruning is required by a public utility to comply with California Public Utility Commission (CPUC) or Federal Energy Regulatory Commission (FERC) rules or regulations. (6) The *tree* has caused or may imminently cause significant damage to an existing structure that cannot be controlled or remedied through reasonable modification of the root or branch structure of the *tree*.

• ARBORISTS RECOMMENDATION REGARDING REPLACEMENT PLANTING(S) •

As we strive to be good stewards of the Town's Urban Forest, canopy coverage and rural character, we also highly recommend the planting of a replacement tree(s) at the City Arborists' direction that will be better suited for the area, conditions and resources available on this property and in support of the Town's Vision to the benefit of the property owner and surrounding community for years to come.

Please see the support materials and pictures to follow and feel free to contact our office with any questions or concerns you may have regarding these findings and our recommendation.

Very Respectfully,

Jeremy Simon Tunnicliffe
ISA Certified Arborist WE 7505A
Owner/President, West Valley Arborists, Inc

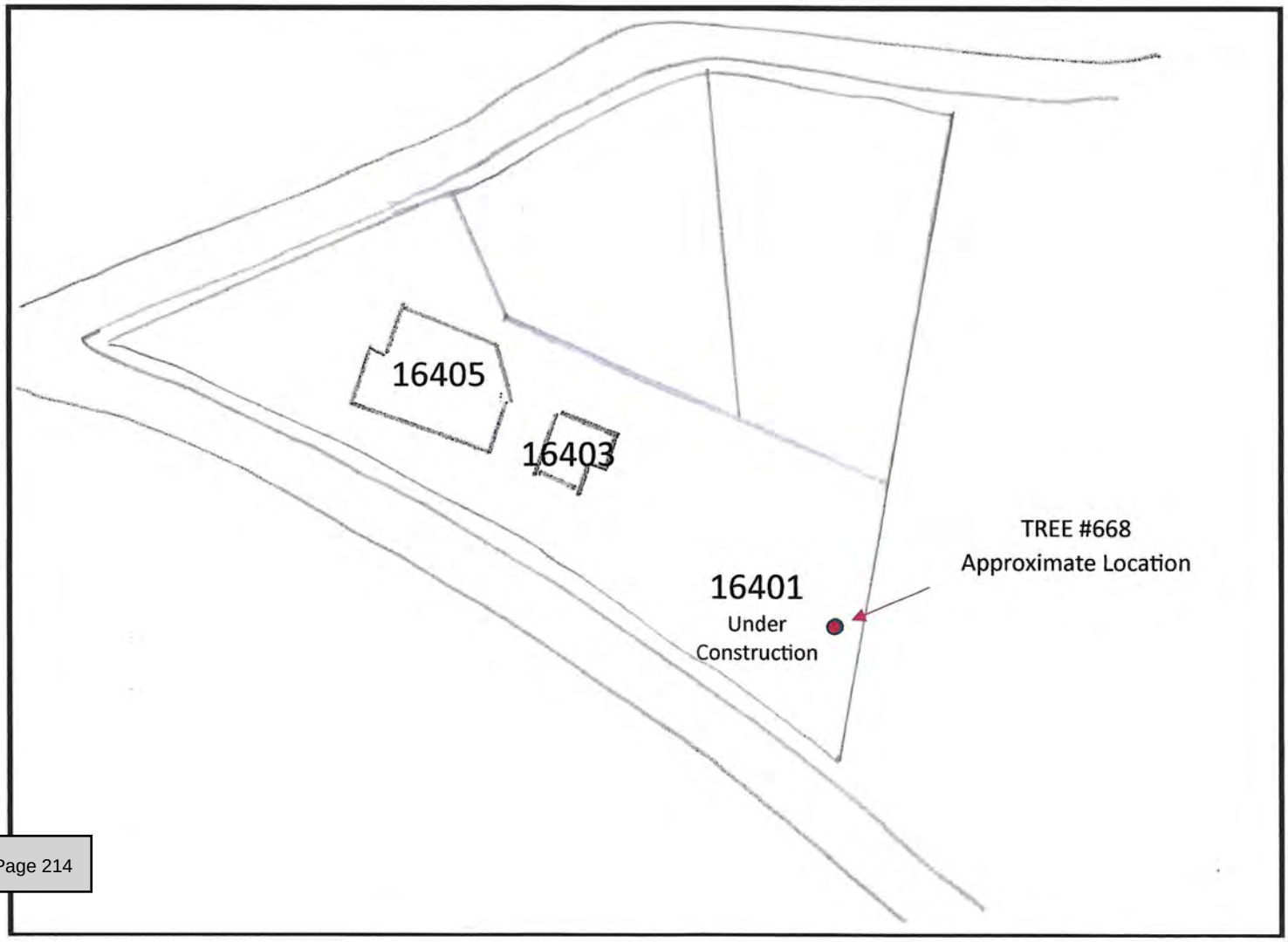
West Valley Arborists Inc.
Urban Tree Specialist



Tree Removal Site Plan

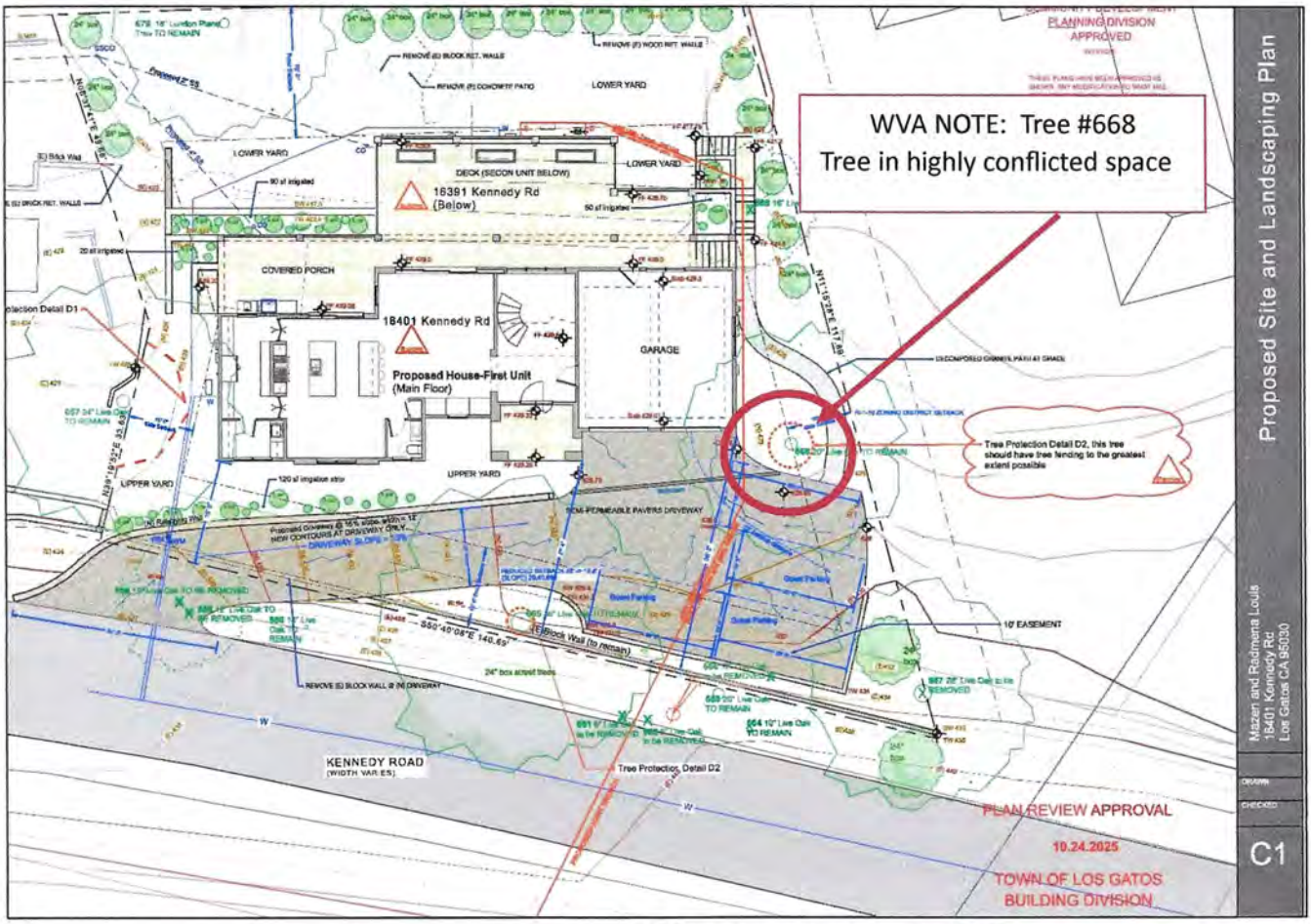
Mazen Louis
16401 Kennedy Road
Los Gatos, CA 95032

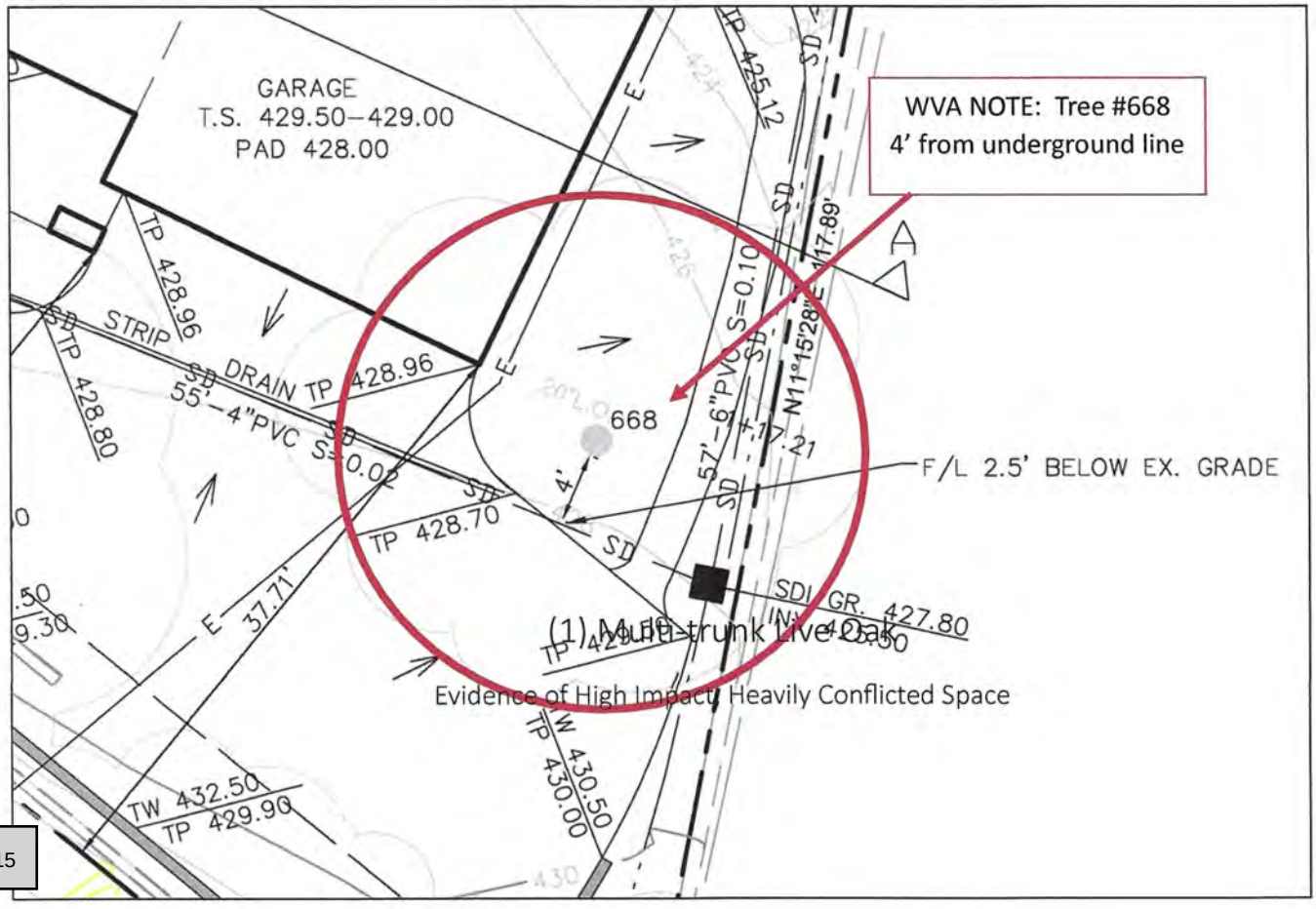
RECOMMENDATION FOR REMOVAL:
(1) Multi-trunk Live Oak
Tree #668 – DBH 18", 12"



Reference Materials Provided by Client and Construction Firm

Top: Approved Site Plan C1
Bottom: Grading, Drainage Plan pg. 1 of 3





(1) Multi-trunk Live Oak

Recommendation: Removal



(1) Multi-trunk Live Oak

Evidence of Poor Form and Compromised Structural Integrity



(1) Multi-trunk Live Oak

Evidence of Severely Conflicted Space and Inability to Avoid High-Impact to Critical Root Structure





TOWN OF LOS GATOS
COMMUNITY DEVELOPMENT DEPARTMENT
(408) 354-6872 Fax (408) 354-7593

CIVIC CENTER
110 E. MAIN STREET
LOS GATOS, CA 95031

October 8, 2026

NOTICE OF PENDING ISSUANCE OF LARGE PROTECTED TREE REMOVAL PERMIT

The Los Gatos Community Development Department has received a Tree Removal Permit application from West Valley Arborists, Inc. requesting approval for removal of a Large Protected Tree, 34-inch diameter multi-trunk Live Oak tree, with a replacement requirement of 4 – 24" box trees at **16401 Kennedy Road (T25-148), Assessor Parcel Number 532-15-036)**. It is the intent of the Town to approve this application ten days from the date of this letter (October 19, 2026).

The application is available for public review in the Town Planning Department from 8:00 a.m. to 1:00 p.m. Monday through Friday (except holidays). Any interested person has ten (10) days from the date of this letter to notify the Community Development Director of any concerns or problems. If written objection is not filed by 4:00 p.m., October 19, 2026, the permit will be issued.

If you have any questions concerning this matter, please contact Ryan Safty at (408) 354-6802 or rsafty@losgatosca.gov

Sincerely,

Ryan Safty

Ryan Safty
Associate Planner

APN	Owner	MailAddress	MailLine2
[redacted]	FAZELI CYRUS AND KATHERINE	[redacted]	LOS GATOS, CA 95032-5639
[redacted]	RIGGIO MARCIA G TRUSTEE & ET AL	[redacted]	LOS GATOS, CA 95032-6442
[redacted]	HASLETT GAYLE A TRUSTEE & ET AL	[redacted]	LOS GATOS, CA 95032-5639
[redacted]	LOUIS MAZEN J TRUSTEE & ET AL	[redacted]	SAN JOSE, CA 95125-4749
[redacted]	BARNETT SCOTT L AND CHRISTINE A TRUSTEE	[redacted]	LOS GATOS, CA 95032-6442
[redacted]	ABDELRAZIK AMR AND HAFEZ DINA	[redacted]	LOS GATOS, CA 95032-5620
[redacted]	GOMEZ WILLIAM AND SUE A TRUSTEE	[redacted]	LOS GATOS, CA 95032-6442
[redacted]	Occupant	[redacted]	LOS GATOS, CA 95032
[redacted]	KARAVELIOGLU FEVZI AND SEVIL TRUSTEE	[redacted]	LOS GATOS, CA 95032-6430
[redacted]	PAIGE MICHAEL T AND SCHUELER KRISTIN M TRUS	[redacted]	LOS GATOS, CA 95032-5620

From: [redacted]
To: Ryan Safty
Subject: 16401 Kennedy Road (125-148) Assessor Parcel Number 532-15-036)
Date: Tuesday, October 13, 2026 7:56:59 PM

[EXTERNAL SENDER]

Dear Ryan,

While we are not able to review the application in person, we recall that the original arborist report recommended the preservation of far more trees than were actually saved. We are concerned that the considerable alteration of this property will change the light/shadowing of adjacent properties. Also, we have a real concern that the topography of the land will vastly affect the drainage.

Given that our property is directly adjacent and downhill from 16401 Kennedy Road, we ask that you deny the permit.

Regards,

Gayle and Steve Haslett
[redacted]

EXHIBIT 8

From: [redacted]
To: Ryan Safty
Subject: Tree permit: T25-148 opposition
Date: Tuesday, October 13, 2026 3:34:35 PM

[EXTERNAL SENDER]

Dear Mr Safty-
I strongly disapprove of the issuance of the large protected tree removal permit for 16401 Kennedy Road (T25-148). The issuance of this permit would unnecessarily remove a large protected Oak specimen on a hillside ecology that has already been negatively impacted by the clearing and building of the new home associated with the parcel. This tree is a healthy, beautiful specimen that should not be removed as it adds to the aesthetic and ecology of the hillside neighborhood.
I strongly oppose this permit.
Thank you,
Michael Paige
Neighbor [redacted]

TOWN OF LOS GATOS
COMMUNITY DEVELOPMENT DEPARTMENT

110 E. Main Street
Los Gatos, CA 95030

APPEAL OF TREE REMOVAL OR PRUNING PERMIT DECISION

PLEASE TYPE or PRINT NEATLY

I, the undersigned, do hereby appeal a decision of the Town of Los Gatos regarding the following tree removal or pruning permit:

DATE OF DECISION: oct 19th, 2026

APPLICATION NUMBER: T25-148

LOCATION: 16401 Kennedy road

PAID
OCT 16 2026
TOWN OF LOS GATOS

LIST REASONS WHY THE APPEAL SHOULD BE GRANTED Tree provides privacy and visual Aethetic benefit. The development already removed 7 large trees. Removing this makes our property completely exposed to Kennedy road
(If more space is needed, attach additional sheets.)

IMPORTANT:

1. APPEAL MUST BE FILED BY 4:00 P.M. WITHIN TEN (10) DAYS AFTER THE DATE OF MAILING OF WRITTEN NOTIFICATION OF THE DECISION. ***IF AN APPEAL IS FILED ON A FRIDAY, THEY MUST BE SUBMITTED BY 1:00 P.M.***
2. THE APPEAL SHALL BE SET FOR THE FIRST REGULAR MEETING OF THE PLANNING COMMISSION WHICH THE BUSINESS OF THE PLANNING COMMISSION WILL PERMIT, MORE THAN FIVE (5) DAYS AFTER THE DATE OF THE FILING OF THE APPEAL. THE PLANNING COMMISSION MAY HEAR THE MATTER ANEW AND RENDER A NEW DECISION IN THE MATTER.
3. YOU WILL BE NOTIFIED, IN WRITING, OF THE APPEAL DATE.
4. YOU WILL BE CONTACTED BY THE PROJECT PLANNER IF ADDITIONAL MATERIAL IS REQUIRED TO BE SUBMITTED FOR THE PUBLIC HEARING.

RETURN APPEAL FORM TO COMMUNITY DEVELOPMENT DEPARTMENT

PRINT NAME Amr Abdelrazik SIGNATURE Amr E. Hou

DATE oct, 16th, 2026 ADDRESS [redacted]

PHONE [redacted] los gatos, 95032

****

OFFICE USE ONLY

DATE OF PLANNING COMMISSION HEARING: _____

COMMISSION ACTION: 1. _____ DATE: _____
2. _____ DATE: _____
3. _____ DATE: _____

PLAPPEAL $ 112.00 Tree Appeal

From: [redacted]
Sent: Friday, October 23, 2026 12:21 AM
To: Ryan Safty <RSafty@losgatosca.gov>
Cc: [redacted] Sean Mullin <SMullin@losgatosca.gov>
Subject: Re: Appeal of T25-148

[EXTERNAL SENDER]

Hi Ryan,

Please see the attached photos of our yard, taken in the morning and at night.

As you can see the tree in dispute provides substantial privacy coverage from it's branches AND from it's trunk. Also note that the trees in our garden are seasonal, so once the leaves for our trees fall the oak tree provides the primary privacy shield from Kennedy.

Also the tree provides an important part of the green scenery from our garden, which was one of the main reasons we came to Los Gatos and paid such a premium.

As you might know multiple large oak trees were already removed as part of this development. And even though SB-9 limited the city's power in multiple aspect, I still believe that the city still has an important role in working with developers to find ways to develop while protecting the natural scenery as much as possible.

I also want to caution against the surprisingly convenient scenario where the tree is suddenly deemed unsafe due to negligence or intention. This happened before with the other large oak tree so I would not be surprised if this is natural next step in this matter. So I hope we can hold people accountable for taking care of those protected trees in Los Gatos.

I appreciate your support for this matter.

Best,

Amr Hamed Abdelrazik

[redacted]

[redacted]











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Letter to Town of Los Gatos – Tree #668 Appeal

Oct 22, 2026

Mazen Louis
16401 Kennedy Road
Los Gatos, CA 95032

Ryan Safty
Associate Planner
Community Development Department - Town of Los Gatos
110 E. Main Street
Los Gatos, CA 95030

Re: Appeal of Tree Removal Permit – Tree #668 (Twin-trunk Live Oak), 16401 Kennedy Road (Ref. T25-148) Planning Commission Hearing: November 12, 2026

Dear Mr. Safty,

Thank you for the opportunity to share our perspective ahead of the Planning Commission hearing. We respectfully ask the Commission to deny the appeal and uphold the removal of Tree #668. The appeal raises a single concern, privacy, and we believe the tree's condition and our planned screening fully address it.

The Town's arborist originally recommended removal

The Town's original arborist report on our project identified Tree #668 as highly impacted by construction and recommended its removal. It was our choice, as the owners, to try to save the tree. The approved site plan (Sheet C1) shows it as a tree to remain, with a tree protection detail, because we asked to preserve it.

We followed through on that effort. All excavation around the tree was done by hand to limit root damage. Unfortunately, the drainage system and concrete foundation required cutting a significant portion of the root system, and that damage cannot be mitigated.

The tree will not recover and is now a hazard

West Valley Arborists, whose report is included in our application, found the following:

- The tree's critical root zone has been impacted on three of four sides, with excavation within 4 to 10 feet of the trunk.
- The root loss leaves the tree without adequate anchorage, creating a significant failure risk to people and to the home and its infrastructure.
- The tree has a significant lean and a codominant trunk union at soil level with included bark, a structural defect that cannot be corrected.
- The tree is expected to decline and will not recover.

PG&E's plan for the new gas service also routes a trench through the same area near the trunk, which will add to the root loss. Given these findings, keeping the tree would leave a hazard next to the home and the shared property line.

Our plan increases the appellant's privacy

Kennedy Road sits about 20 to 25 feet above the appellant's backyard at 130 Clover Way. The oak's canopy begins about 33 feet above that yard, roughly 8 to 13 feet higher than the road surface. Because people on the road look down toward the appellant's home, their line of sight passes beneath the canopy. Today the oak provides much less screening than it appears to.

Our plan adds two layers of screening in its place:

1. **Indian Laurel (or similar) hedge.** We will plant mature Indian Laurels (or similar) along our shared fence, growing into a continuous hedge about 15 feet tall. Because the hedge sits at the fence near the appellant's home, it blocks views at the level that matters: windows and yard.
2. **Fence along Kennedy Road.** We plan a new 8-foot wood and metal fence along Kennedy Road. We are building it mainly for our own privacy, since our home also sits below the road. It also closes off views from the road toward the appellant's property.

Together, the fence at the road and the hedge at the shared property line give the appellant more privacy than the single oak canopy, which sits above the line of sight. We will also plant replacement trees as directed by the Town Arborist.

Our outreach to the appellant

We have reached out to the appellant to discuss his concerns directly, and we remain open to adjusting the size, placement or planting schedule of the new trees to address them.

For these reasons, we respectfully ask the Planning Commission to deny the appeal and allow the removal of Tree #668 to proceed. Please let me know if you need any additional information before the hearing.

Sincerely,
Mazen Louis, Owner
16401 Kennedy Road
Los Gatos, CA 95032

Enclosures: West Valley Arborists report dated September 19, 2026; Approved Site Plan C1; PG&E gas service plan

West Valley Arborists Inc.
Urban Tree Specialist

ATTN: Town of Los Gatos
Tree Removal Application

09/19/2026

Re: West Valley Arborists, Inc.
Arborist Report
Recommendation: Removal

For: Mazen Louis
16401 Kennedy Road
Los Gatos, CA 95032

Ref# T25-148
Tree #668

To whom it may concern,

At the property owner's request, we performed a site visit to the above listed address to assess the current health of the trees on the property and make recommendations based on our findings and best practice as defined by the International Society of Arboriculture (ISA) and American National Standards Institute (ANSI).

• ARBORIST OBSERVATIONS & SUMMARY OF FACTS & FINDINGS •

Of particular concern and after close inspection, we observed (1) Twin-trunk Live Oak tree at the above listed single-family residence/ property that we, given the following findings, recommend immediate removal.

TREE #668	Twin-trunk Live Oak
Height:	55'
Canopy Spread:	32'
DBH:	20", 14"
Condition/Main Concerns:	Suboptimal form and decline observed. In a high-impact /unmitigable conflicted space leading to exposure and risk to both tree (safety hazard) and infrastructure (damages).

Severe Impact

This property is currently under construction; reference# T25-148. As noted in the previously provided Consulting Arborist's report as well as C1 in the approved site plans, the preservation of tree #668 has always been in question. While labeled a tree to be saved, its location in relation to the development was rightly identified as being highly impacted and the tree's longevity uncertain. This means the trees health and structural integrity will be compromised and most often times, removal is recommended.

All reasonable efforts to protect and preserve this tree have been made (careful excavation, etc.) however, at this point, the tree's protection zone (TPZ) or space remaining, is simply insufficient. Today's observations, with the roots exposed, highlight that the majority of this trees' critical root structure will be significantly compromised; three of four sides are experiencing a direct impact. Here, the installation of the driveway, garage, storm drain and critical utility lines will require significant root removal in close proximity to the tree's trunk during construction. Trees get into trouble when they become low on energy reserves. In this case, this is unavoidable; the sudden and significant root loss will result severe stress and expected death. Now exposed, we can see best practice in root mitigation such as limiting the size, proximity and volume of root removal cannot be followed.

Trees cannot survive without a meaningful root structure or the removal thereof. Here, this proves true for two reasons. The first is limited anchorage. Without critical structural integrity or proper anchorage, this tree is weakened, unstable and poses a significant failure risk; it can and will fall over. The second, the sudden loss of the singular source of nutrient and moisture uptake, essentially starves the tree and while its decline may not show immediately, its death is near imminent.

Furthermore, severed roots create an injury resulting in an entry point for opportunistic pathogens and pests, further exacerbating the tree's vulnerability and great likelihood of decline.

Fair-Poor Condition and Form

Separately, we assessed the general health and quality of the tree. Here too, we feel this tree suboptimal; in fair - poor condition and form. Reduced vigor, dieback, and two significant and irreversible structural problems exist. From the onset, inconsistent with the specie's natural form, this tree has limited structural integrity. This tree has (naturally developed) a significant lean and a low, soil level, junction in which the tree splits into a twin-trunk formation.

Multi-trunk or codominant trunks represent poor structural development, form and ultimately, integrity with problems that cannot be corrected. In this case, connective wood tissue is lacking and this junction serves as a weak point in the tree. Also present, this split between trunks features included bark which increases its susceptibility, making it even more prone to splitting and failure.

Conclusion

Finally, in the highly unlikely case that this tree (#668) was to survive all of the above provided conditions and stressors (both naturally occurring and otherwise), we would expect that to be short lived. Not only would we expect long-term and irreversible decline, the space conflict remains.

(CRZ) Critical Root Zone radius calculated: 34 (combined DBH inches) x 1.5 = 51'. This tree is within 4'-10' of various aspects requiring deep excavation in support of the site development. This is a highly conflicted space and not only does it do a disservice by causing severe stress and harm to the tree, poses great risk of damage occurring to the home and its infrastructure and serves as a hazardous condition, high failure risk.

Please also note: We have been advised that PG&E's intention is to also perform severe trenching in order to run major underground lines for both electricity and gas within this same zone. This excavation will most certainly cause additional extensive damage to the root zone and if left, compound the conflicted space.

The limitations of the space and suboptimal conditions of the tree are insurmountable and without remedy; co-existence is not a viable option and the risks associated are too great to warrant further attempts in this tree's preservation.

• ARBORISTS RECOMMENDATION FOR IMMEDIATE REMOVAL •

Best practice in Arboriculture - our commitment to a healthy Urban Forest and with the utmost respect to the Town's ordinances and vision, we embrace the demand to prioritize the saving of established trees. With that in mind, we have considered all of the possible measures available in support of tree preservation or alternatives to removal; however, in this case, there are no viable options, reasonable or otherwise, that will remedy the impact on the root structure, result in the reversal of decline, address the structural deficiencies and otherwise mitigate the highly impacted/conflicted space.

When we take all the above points, in totality, into thoughtful consideration, we believe immediate removal and replacement of this tree is only way in which this hazardous condition can be remedied.

We respectfully submit this report for your review and given our findings, believe our recommendation for tree removal is in accordance with the Town's Municipal Code. As such, we are requesting the issuance of a permit for the immediate removal of this tree.

Sec. 29.10.0992.- Required findings. (1) The *tree* is dead, severely diseased, decayed or disfigured to such an extent that the *tree* is unable to recover or return to a healthy and structurally sound condition. (4) The retention of the *tree* restricts the economic enjoyment of the property or creates an unusual hardship for the property owner by severely limiting the use of the property in a manner not typically experienced by owners of similarly situated properties, and the applicant has demonstrated to the satisfaction of the Director or deciding body that there are no reasonable alternatives to preserve the *tree*. (5) The *tree* has, or will imminently, interfere with utility services where such interference cannot be controlled or remedied through reasonable modification, relocation or repair of the utility service or the pruning of the root or branch structure of the *tree*; or where removal or pruning is required by a public utility to comply with California Public Utility Commission (CPUC) or Federal Energy Regulatory Commission (FERC) rules or regulations. (6) The *tree* has caused or may imminently cause significant damage to an existing structure that cannot be controlled or remedied through reasonable modification of the root or branch structure of the *tree*.

• ARBORISTS RECOMMENDATION REGARDING REPLACEMENT PLANTING(S) •

As we strive to be good stewards of the Town's Urban Forest, canopy coverage and rural character, we also highly recommend the planting of a replacement tree(s) at the City Arborists' direction that will be better suited for the area, conditions and resources available on this property and in support of the Town's Vision to the benefit of the property owner and surrounding community for years to come.

Please see the support materials and pictures to follow and feel free to contact our office with any questions or concerns you may have regarding these findings and our recommendation.

Very Respectfully,

Jeremy Simon Tunnicliffe
ISA Certified Arborist WE 7505A
Owner/President, West Valley Arborists, Inc

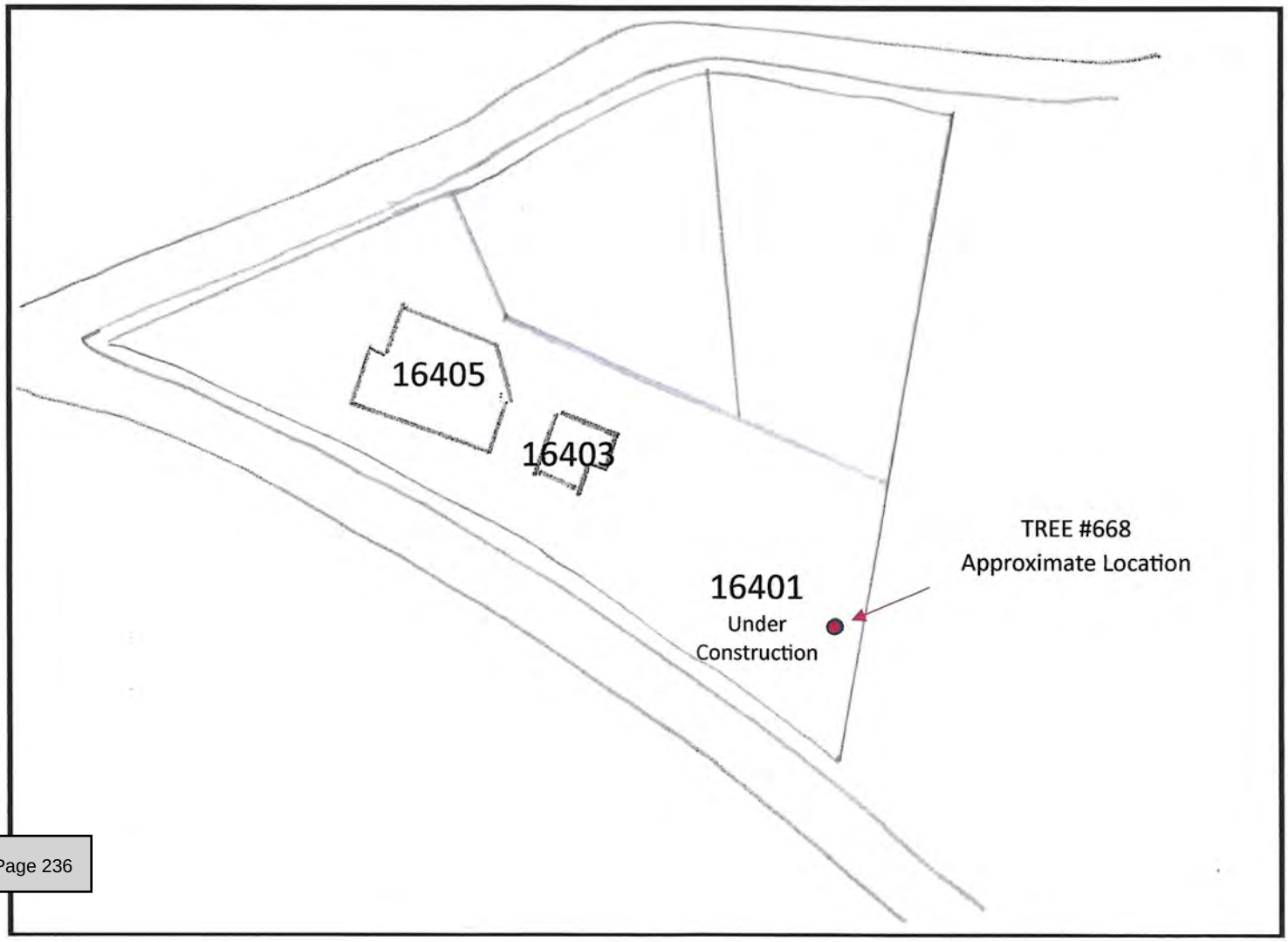
West Valley Arborists Inc.
Urban Tree Specialist



Tree Removal Site Plan

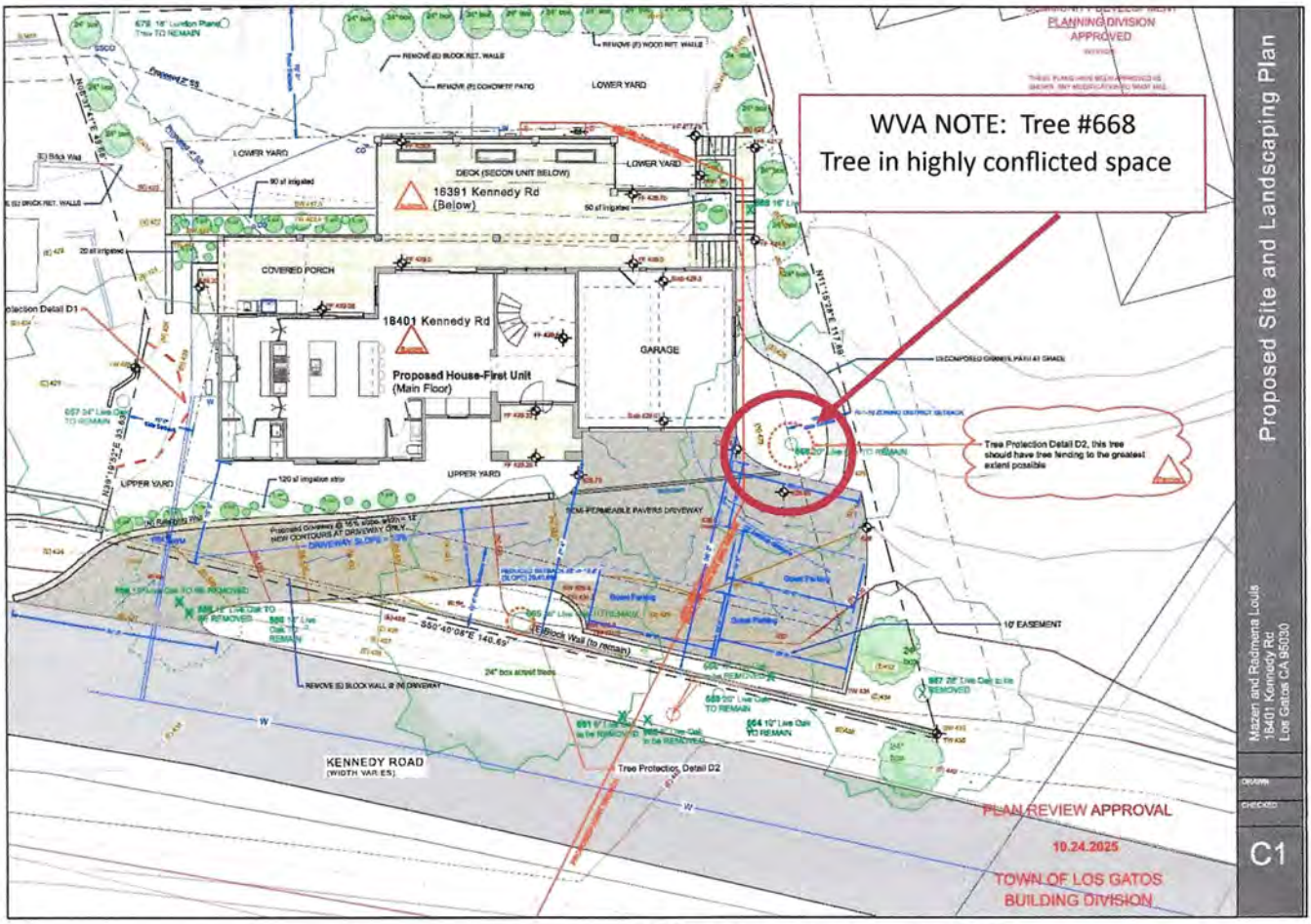
Mazen Louis
16401 Kennedy Road
Los Gatos, CA 95032

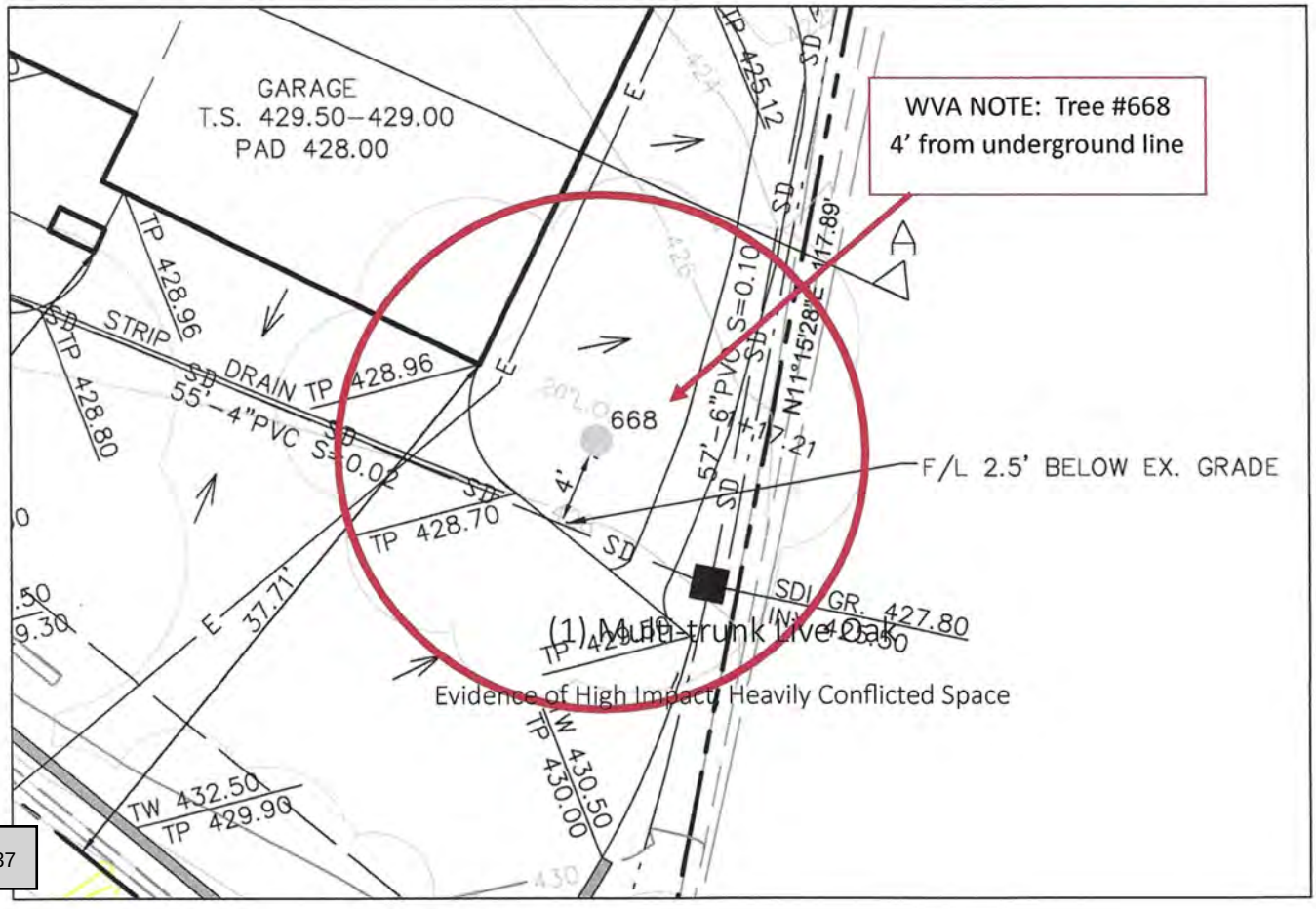
RECOMMENDATION FOR REMOVAL:
(1) Multi-trunk Live Oak
Tree #668 – DBH 18", 12"



Reference Materials Provided by Client and Construction Firm

Top: Approved Site Plan C1
Bottom: Grading, Drainage Plan pg. 1 of 3





(1) Multi-trunk Live Oak

Recommendation: Removal



(1) Multi-trunk Live Oak

Evidence of Poor Form and Compromised Structural Integrity



(1) Multi-trunk Live Oak

Evidence of Severely Conflicted Space and Inability to Avoid High-Impact to Critical Root Structure





SITE and LANDSCAPING PLAN

Scale 1" = 10'

0 10 20

N

104 Olde Drive
± 22' Split Level House

126 Clover Way
± 20' One Story House

100 Olde Drive
± 28' Two Story House

130 Clover Way
± 20' One Story House

16405 Kennedy Rd
± 22' Two Story House

Proposed sanitary sewer tie-in

Proposed sanitary sewer line

Building

APN: 532-15-036

ADDRESS TO REMAIN: 16401 Kennedy Rd (Main Home)

ADD ADDRESS: 16391 Kennedy Rd

Planning

430 SF total irrigated area - drip irrigation to support new 24" box trees, 5 gal plants and ground cover - no WELO required

150 sf irrigation strip for new 24" box trees

Large Conifer (approx 100' tall)

Mature Oak

COMMUNITY DEVELOPMENT
PLANNING DIVISION
APPROVED
10/23/2025

THESE PLANS HAVE BEEN APPROVED AS SHOWN. ANY MODIFICATION TO WHAT HAS BEEN PROPOSED OR TO WHAT IS SHOWN AS EXISTING MAY REQUIRE A SEPARATE APPROVAL.

Tree removal permits must be issued before demo and construction permits can be issued

Tree fencing must be installed, with pictures uploaded to Accela, before any demo or construction permits are issued

Tree Table

ID #	Species	Diameter	Condition	Remain or Remove	Tree Protection Detail	
657	Coast Live Oak (Quercus Agrifolia)	34	Good	Remain	D1	
658	Coast Live Oak (Quercus Agrifolia)	12	Good	Remove		Driveway
659	Coast Live Oak (Quercus Agrifolia)	12	Good	Remove		Driveway
660	Coast Live Oak (Quercus Agrifolia)	7	Good	Remain		
661	Coast Live Oak (Quercus Agrifolia)	6	Poor	Remove		Poor Condition
662	Coast Live Oak (Quercus Agrifolia)	5	Very Poor	Remove		Poor Condition
663	Coast Live Oak (Quercus Agrifolia)	20	Fair	Remain		
664	Coast Live Oak (Quercus Agrifolia)	10	Fair	Remain		
665	Coast Live Oak (Quercus Agrifolia)	36	Fair	Remain	D2	
666	Coast Live Oak (Quercus Agrifolia)	12	Fair	Remove		Driveway
667	Coast Live Oak (Quercus Agrifolia)	28	Very Poor	Remove		Poor Condition
668	Coast Live Oak (Quercus Agrifolia)	20,14	Fair	Remain*	D2	*Attempt to Keep
669	Coast Live Oak (Quercus Agrifolia)	16	Very Poor	Remove		Poor Condition
670	London Plane (platens hispanica)	18	Good	Remain		

Remove 4 Trees Good/Fair: Replace with 21 x 24" box screening

Remove 3 Trees Very Poor/Dead: Replace 9 x 15 gallon

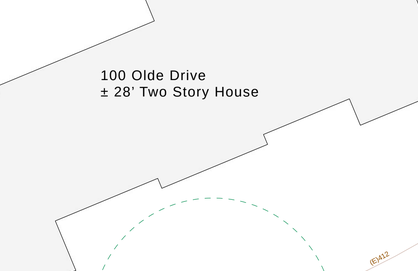
REPLACEMENT TREES: 21 x 24" box drought-tolerant replacement trees

24" box — 2 x 24" box Coast Live Oak

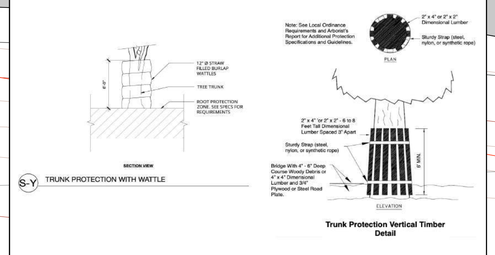
24" box — 19 x 24" box Indian Laurel

Tree Protection Detail D1

D1: Plan Sheet Detail S-X (Type I)



D2: Plan Sheet Detail S-Y (Type III)



Tree Protection Detail D2

Tree Protection Detail D2, this tree should have tree fencing to the greatest extent possible

Planning

PLAN REVIEW APPROVAL

10.24.2025

TOWN OF LOS GATOS
BUILDING DIVISION

REVISIONS
5-30-2025
6-30-2025
7-24-2025
9-17-2025

THE DOCUMENT CONSTITUTES WORK PRODUCT PREPARED BY T.H.I.S. AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE PERMISSION OF T.H.I.S. THE DOCUMENT IS THE PROPERTY OF T.H.I.S. AND SHALL BE RETURNED UPON REQUEST

T.H.I.S.
DESIGN AND DEVELOPMENT
P.O. BOX 3518, LOS GATOS, CA 95031
408-354-1882

Proposed Site and Landscaping Plan

Mazen and Radmena Louis
16401 Kennedy Rd
Los Gatos CA 95030

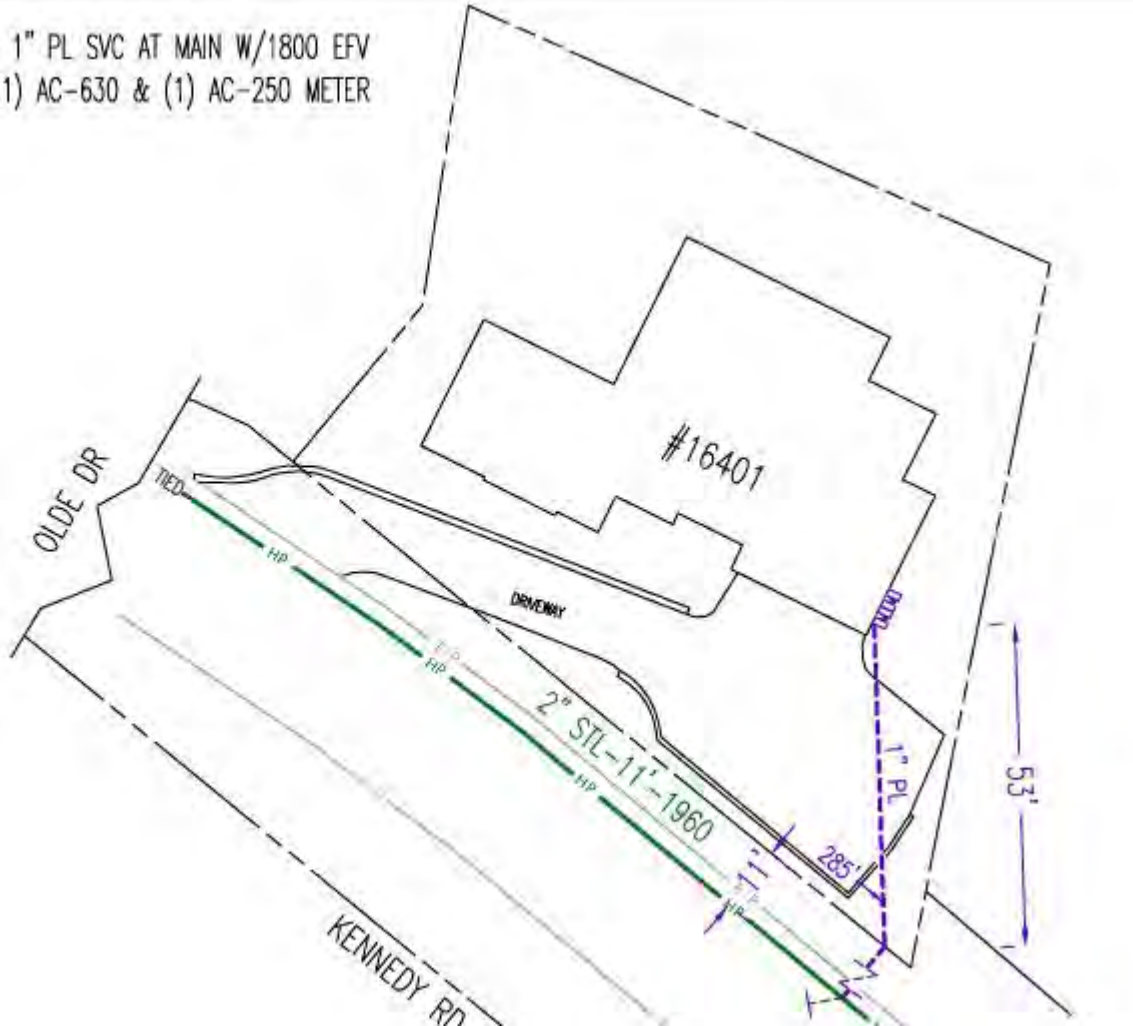
DRAWN

CHECKED

C1

NOTES:

1) PG&E TO INSTALL 64' OF 1" PL SVC AT MAIN W/1800 EFV
2) PG&E TO INSTALL 2MM: (1) AC-630 & (1) AC-250 METER @ .25 PSIG
3) PG&E TO T/B ALL



TOWN OF LOS GATOS
PLANNING COMMISSION
REPORT

MEETING DATE: 11/12/2026

ITEM NO: 3

DATE: November 6, 2026

TO: Planning Commission

FROM: Joel Paulson, Community Development Director

SUBJECT: Consider a Request for Approval of a Conditional Use Permit Application to Install a New 76-Foot-Tall Wireless Telecommunication Facility on Property Zoned R-M:5-12. **Located at 42 Miles Avenue.** APN 529-05-043. Categorically Exempt Pursuant to California Environmental Quality Act Guidelines Section 15303: New Construction or Conversion of Small Structures. Conditional Use Permit Application U-26-002. Applicant: Jacob Hamilton, SBA Monarch Towers III, LLC. Property Owner: Ashley Van, Pacific Gas & Electric Company. Project Planner: Samina Merchant.

RECOMMENDATION:

Consider a request for approval of a Conditional Use Permit (CUP) to install a new 76-foot-tall wireless telecommunications facility on property zoned R-M:5-12, located at 42 Miles Avenue.

PROJECT DATA:

General Plan Designation: Public
Zoning Designation: R-M:5-12 (Multi-Family Residential)
Applicable Plans & Standards: Town Code, Town Standards for Wireless Telecommunications Facilities
Parcel Size: 1.8 acres
Surrounding Area:

	Existing Land Use	General Plan	Zoning
North	Highway 9	N/A	N/A
South	Multifamily residential and Town buildings	Medium Density Residential and Public	R-M:5-12:LHP
East	Caltrans ROW	N/A	N/A
West	Los Gatos Creek	N/A	N/A

PREPARED BY: Samina Merchant
Associate Planner

Reviewed by: Planning Manager, Community Development Director, and Town Attorney

CEQA:

The project is Categorically Exempt pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15303: New Construction or Conversion of Small Structures.

FINDINGS:

- As required, pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, this project is Categorically Exempt under Section 15303: New Construction or Conversion of Small Structures.
- As required by Section 29.20.190 of the Town Code for granting a Conditional Use Permit.
- That the proposed project complies with the Town's Standards for Wireless Telecommunications Facilities.

ACTION:

The decision of the Planning Commission is final unless appealed within ten days.

BACKGROUND:

The subject property is approximately 1.8 acres and is located adjacent to the Highway 17/Highway 9 interchange (Exhibit 1). The site contains a Pacific Gas & Electric (PG&E) substation and an existing wireless facility consisting of a 70-foot-tall wood monopole with antennas and associated ground equipment on a raised wood platform.

On February 26, 2026, Jacob Hamilton of Virtual Site Walk LLC, agent for SBA Monarch Towers III, LLC (SBA), filed CUP Application U-26-002 for the replacement of the existing pole with a new steel stealth monopole to support T-Mobile's modernized antenna configuration. The project is also referred to in the application materials as "Hwy 17 & Bell Vista Relo" and "Bella Vista CA27386." The submittal includes a Letter of Justification (Exhibit 4), an Alternative Site Analysis and Propagation Schematic (Exhibit 5), Photo Simulations (Exhibit 6), RF Emissions Compliance Report dated December 2, 2025 (Exhibit 7), and the Development Plans (Exhibit 8).

PROJECT DESCRIPTION:

A. Location and Surrounding Neighborhood

The project site is a PG&E owned parcel located at 42 Miles Avenue, at the terminus of the street. The existing wireless pole is in the east portion of the parcel near Miles Avenue and Highway 17. A PG&E electric substation occupies much of the parcel.

The site is bordered by Highway 9 to the north, Highway 17 and its interchange ramps to the east, Parks and Public Works building and an apartment complex along Miles Avenue to the southwest of the site.

B. Project Summary

The applicant is requesting a CUP to construct a new wireless telecommunications facility structure to support T-Mobile's modernized antenna configuration and allow future carriers' co-location. The project would remove the existing 70-foot-tall wood pole and construct a new steel stealth faux tree behind the existing generator. The applicant states that the new stealth monopole would be installed first so that antennas can be moved to the new structure and tested before the old pole is removed. The applicant estimates construction for four to six weeks. The project consists of the following:

	Existing	**Proposed**
Structure	70-foot-tall wood pole	Stealth monopole: a 70-foot-tall steel pole with about a six-foot top of faux branch; 76 feet overall to the uppermost branch.
Location	PG&E utility parcel, existing SBA lease area	Same utility parcel; new pole adjacent to the existing pole
Antennas and radios	Three panel antennas and a microwave dish	Six panel antennas, six radios, and the relocated microwave dish
Antenna elevations (radiation centers)	58 feet and 50 feet	58 feet and 52 feet
Appearance	Exposed wood pole with visible antennas and cables	Faux branches and bark conceal the antennas and mounts; hybrid cables run inside the pole
Structural capacity	Applicant states it cannot support T-Mobile's proposed equipment loading	New steel structure designed for the proposed loading and, per the applicant, future carriers
Ground equipment	RBS 6102 cabinet, wood equipment platform, wood fence, and hydrogen fuel cell	RBS 6102 cabinet remains; new battery and equipment cabinets; wood fence replaced with fiber composite fencing; platform painted with fire-retardant paint; fuel cell removed
Lighting, noise, trees	No tower lighting	No new lighting, generator, or noise-generating equipment; no tree removal

Construction	Removal	Construct the new pole first, transfer and test the equipment, and then remove the wood pole (about 4 to 6 weeks); no service interruption planned

Proposed antenna radiation centers are 52 and 58 feet, compared with 50 and 58 feet existing. The site continues to provide T-Mobile service. The principal changes are a concealed monopole in place of an exposed wood pole, six additional feet of height for the faux branches that conceal the antennas, and a structure built for modern equipment and future additional carriers, per the applicant.

C. Zoning and Wireless Facility Standards Compliance

The project site is zoned R-M:5-12. The Town's Standards for Wireless Telecommunications Facilities establish an order of preference for locations, with co-location on an existing telecommunications structure being the first preference. The project replaces a pole at an existing wireless facility on a utility parcel rather than creating a new site, and the applicant contends this meets the first preference. The applicant states that the existing pole cannot structurally support T-Mobile's proposed equipment, so a new structure is proposed adjacent to it. Continued use of the established site is consistent with the intent of the standards to limit the proliferation of new towers.

The applicant's Letter of Justification and Alternative Site Analysis (Exhibit 4 and 5) address the remaining location and development standards. The applicant has acknowledged the draft conditions, including but not limited to signage, building code compliance, tree protection, non-reflective colors and materials, and proposes no compound or tower lighting. The following table summarizes the project's consistency with key zoning requirements and wireless standards.

Standard	Requirement	Proposed	Compliance
Height	30 feet (R-M principal structure); may be exceeded if the deciding body determines the antenna height will satisfy the coverage needs of multiple other antennas	76 feet overall (existing pole: 70 feet)	Requires Commission determination
Front yard setback	25 feet; deciding body may require an additional foot of setback per foot of height beyond the front yard setback	At least 25 feet away from the front and at least 8 feet away from the side property lines	Complies with the 25-foot setback; additional setback is discretionary.

Distance to residential property line	Wireless facilities within 50 feet of a residential property line require a CUP	At least 50 feet away	Complies
Stealth design	Architectural treatments and advanced screening to mitigate visual impacts	Stealth faux tree with branches and bark	Complies
Colors and materials	Non-reflective finish; blend with background	Non-reflective finish proposed	Compliance with COAs
Lighting	No artificial lighting unless required by another authority	None proposed	Complies
Noise	Compliance with the Town noise ordinance	No new generator or noise-generating equipment	Complies
RF exposure	Compliance with FCC limits; bi-annual RF exposure report	18.352 precent of FCC general population limit at ground level	Complies; certified by a California-registered professional engineer

DISCUSSION:

A. Alternative Site Analysis

The applicant's Alternative Site Analysis (Exhibit 5) considers nine alternatives, including no build, a lower height at the existing site, a new location elsewhere on the PG&E parcel, Los Gatos High School/Helm Field, downtown rooftops, commercial and hotel parcels east of Highway 17, residential parcels, and a separate new ground-mounted tower. The analysis concludes that replacement at the existing site is the least intrusive and most feasible option because it uses an established wireless and utility location, avoids a new site, maintains service during construction by building the new pole before removing the old one, and improves concealment.

B. Neighborhood Compatibility

The existing facility contains a visible 70-foot-tall wood pole with antennas, a microwave dish, and cables. The proposed stealth monopole conceals the antennas, radios, and cables within a tree form. The applicant submitted three photo simulations prepared by Artistic Engineering (Exhibit 6). Staff observations on each view are as follows:

1. View 1 (looking northwest from Highway 17): The stealth monopole appears as a small conifer above the tree line and is a minor element in the highway view.

2. View 2 (looking southwest from Highway 9): The stealth monopole is barely discernible at a distance among the trees.
3. View 3 (looking northeast from Miles Avenue): This is the most visible location. The existing facility is a wood pole with exposed antennas, partly screened by trees. The stealth monopole has a tree form that conceals the antennas, although it is a larger element that rises above part of the adjacent canopy, and its conical form differs from the surrounding eucalyptus, willow, and other broadleaf trees.

The applicant states that the stealth monopole provides substantially greater visual concealment than the existing exposed wood pole and antennas, and that the site is surrounded by dense, mature vegetation. The applicant has stated that future carriers' co-location must conform to the stealth design and color and materials palette.

C. Building Height

The R-M zone limits principal structures to 30 feet in height. The Town Code defines height as the plumb vertical distance from existing natural or finished grade, whichever is lower and creates a lower profile, to the uppermost point of the structure, which here is the top of the monopole branches, stated by the applicant as 76 feet. The existing pole is 70 feet tall, and the replacement would be six feet taller. The Town Standards for Wireless Telecommunications Facilities provide that facilities should be located at the minimum possible height based on technical requirements and the Town's objective of full service coverage, and that the underlying height limit may be exceeded if the deciding body determines that the height of the antenna will satisfy the service coverage needs of multiple other antennas.

The existing 70-foot-tall pole already exceeds the 30-foot limit, so the project continues an existing condition rather than introducing a new one. The plans and the RF Emissions Report show proposed antenna radiation centers of 52 feet and 58 feet, while the existing antennas are at 50 and 58 feet. The additional structure height provides the tree form that conceals the antennas.

The applicant's coverage map shown in Exhibit 5 indicates that the site provides in-building coverage to 5,429 commercial population versus 4,617 without the site, and to 3,064 residential population versus 2,934 without the site. The applicant explains that the site is surrounded by dense mature trees and local terrain, and that lowering the antennas materially would place more of the signal path through the tree canopy.

The proposed facility would carry six T-Mobile panel antennas in three sectors. SBA, a neutral-host tower owner, states that the structure is intended to support future carriers where structurally and technically feasible, and that future antennas below T-Mobile would be screened.

D. Radio Frequency Emissions

The applicant submitted an RF Emissions Compliance Report by Waterford Consultants, LLC, dated December 2, 2025, certified by a California-registered professional engineer (Exhibit 7). It evaluates T-Mobile's 600 to 2500 MHz operations under FCC OET Bulletin 65 at maximum duty cycle and concludes that the facility complies with FCC limits. Ground-level exposure is 18.352 percent of the general population limit (3.670 percent occupational). Areas above the general population limit exist only at antenna height, extending 14 feet vertically and 80 feet horizontally, and the report recommends RF warning signage at the equipment cabinets and tower base. Further, the draft conditions require bi-annual RF exposure reports, a five-year RF emission report, and warning signage. The report analyzes only T-Mobile equipment at the 52-foot and 58-foot radiation centers. An updated RF report is required before any additional carrier is added or if any new antenna configuration or heights differ from those analyzed.

E. Tree Impacts

The applicant has indicated that no tree removal is proposed as part of the project. Existing mature trees surrounding the site are located outside the tower compound and are separated from the compound by an existing chain-link fence. The proposed foundation and underground conduits are to be installed adjacent to the existing generator, a draft condition requires a tree protection plan with the construction plans.

F. Federal Law Considerations

Federal law [47 U.S.C. Section 332 (c)(7)] preserves but limits local zoning authority over wireless facilities. The Town must act within a reasonable time; may not deny an application based on RF emissions if the facility complies with FCC standards; may not unreasonably discriminate among providers of functionally equivalent services; and may not take action that effectively prohibits personal wireless services. Any denial must be in writing and supported by substantial evidence in a written record.

G. Conditional Use Permit Findings

In order to grant approval of a CUP, the deciding body must make the following findings, which are followed by staff's analysis.

(1) The proposed uses of the property are essential to the public convenience or welfare.

The facility provides wireless coverage and capacity for T-Mobile customers in the Highway 17, Bell Vista, and Miles Avenue area. The applicant's coverage exhibit shows that removal of the site would reduce in-building coverage by 812 commercial and 130

residential population, and the replacement allows modern equipment that the existing pole cannot support.

(2) The proposed uses will not impair the existing uses of the zone.

The facility replaces an existing wireless facility installation on a utility parcel. No new lighting, noise-generating equipment, generator, or tree removal is proposed, and the nearest residences are separated from the site by the PG&E yard and mature vegetation.

(3) The proposed uses would not be detrimental to public health, safety, or general welfare.

The RF report shows compliance with FCC limits, with ground-level exposure at 18.352 percent of the general population limit. The conditions require compliance with the California Building Code, signage, and ongoing RF reporting.

(4) The proposed uses are in harmony with the general plan and the purposes of the chapter.

The proposed use is in harmony with the goals and policies of the General Plan and consistent with the purposes of the Town Code. The project continues an established wireless telecommunications use at an existing utility site and replaces an exposed wood pole with a concealed design, maintaining reliable wireless communications service while minimizing visual impacts and preserving community character. Although the General Plan does not contain goals or policies that directly reference telecommunications facilities, the Town Council-adopted Telecommunications Ordinance and Standards for Wireless Telecommunications Facilities, determined to be consistent with the General Plan, provide the applicable framework for evaluating such facilities. Relevant General Plan policies and Town standards include, but are not limited to:

- **Policy HAZ-4.9: Resilient Infrastructure.** Requires new public utilities, communication infrastructure, and transportation facilities to be located, designed, and constructed to minimize risk and maximize functionality during and after an earthquake.
- **Policy HAZ-1.1: Emergency Preparedness Planning.** Supports coordination and planning for emergency preparedness, including communications and emergency response capabilities.
- **Standards for Wireless Telecommunications Facilities.** Establish objectives for providing high-quality wireless communications infrastructure, improving wireless service coverage, supporting emergency-response communications, and encouraging efficient facility deployment and co-location.

- **Telecommunications Ordinance.** Establishes the regulatory framework for wireless telecommunications facilities to ensure appropriate siting and design while protecting community character.

The project is consistent with the Town's Telecommunications Ordinance and Standards for Wireless Telecommunications Facilities and, by reference, the General Plan.

The fifth finding (hazardous waste facilities) does not apply.

PUBLIC COMMENTS:

A project identification sign was installed on site consistent with Town policy and written notice was sent to property owners and occupants within 300 feet of the property. No comments were received at the time this report was published.

ENVIRONMENTAL REVIEW:

The project is Categorically Exempt pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15303: New Construction or Conversion of Small Structures. Given the established use and similar scale of the replacement structure, the project is not expected to result in significant environmental impacts.

CONCLUSION:

A. Summary

The applicant is requesting approval to replace an existing 70-foot-tall wood pole at an established wireless and utility site with a 76-foot-tall stealth monopole to accommodate modern wireless equipment and future carriers. The proposed antennas would be at 52 and 58 feet, compared with the existing 50 and 58 feet, and the faux tree design would conceal the antennas. RF Emissions Compliance Report indicates the project complies with FCC radiofrequency exposure limits and does not propose new lighting, noise-generating equipment, a generator, or tree removal.

If the CUP is approved, it will be subject to the conditions of approval, including compliance with applicable permitting requirements prior to construction.

B. Recommendation

Based on the analysis above, staff recommends approval of the CUP application subject to the recommended conditions of approval (Exhibit 3). If the Planning Commission finds merit with the proposed project, it should:

1. Find that the proposed project is categorically exempt, pursuant to Section 15303 of the California Environmental Quality Act as adopted by the Town (Exhibit 2);
2. Make the findings as required by Section 29.20.190 of the Town Code for granting approval of a CUP (Exhibit 2);
3. Determine that the height of the antenna will satisfy the service coverage needs of multiple other antennas, allowing the facility to exceed the 30-foot height limit of the R-M:5-12 zone; and
4. Approve CUP application U-26-002 with the recommended conditions of approval contained in Exhibit 3.

C. Alternatives

Alternatively, the Commission can:

1. Continue the matter to a date certain with specific direction; or
2. Approve the application with additional and/or modified conditions.

EXHIBITS:

1. Location Map
2. Required Findings for Conditional Use Permit
3. Recommended Conditions of Approval
4. Letter of Justification
5. Alternative Site Analysis and Propagation Schematic Exhibit
6. Photo Simulations
7. RF Emissions Compliance Report (December 2, 2025)
8. Development Plans

42 Miles Avenue

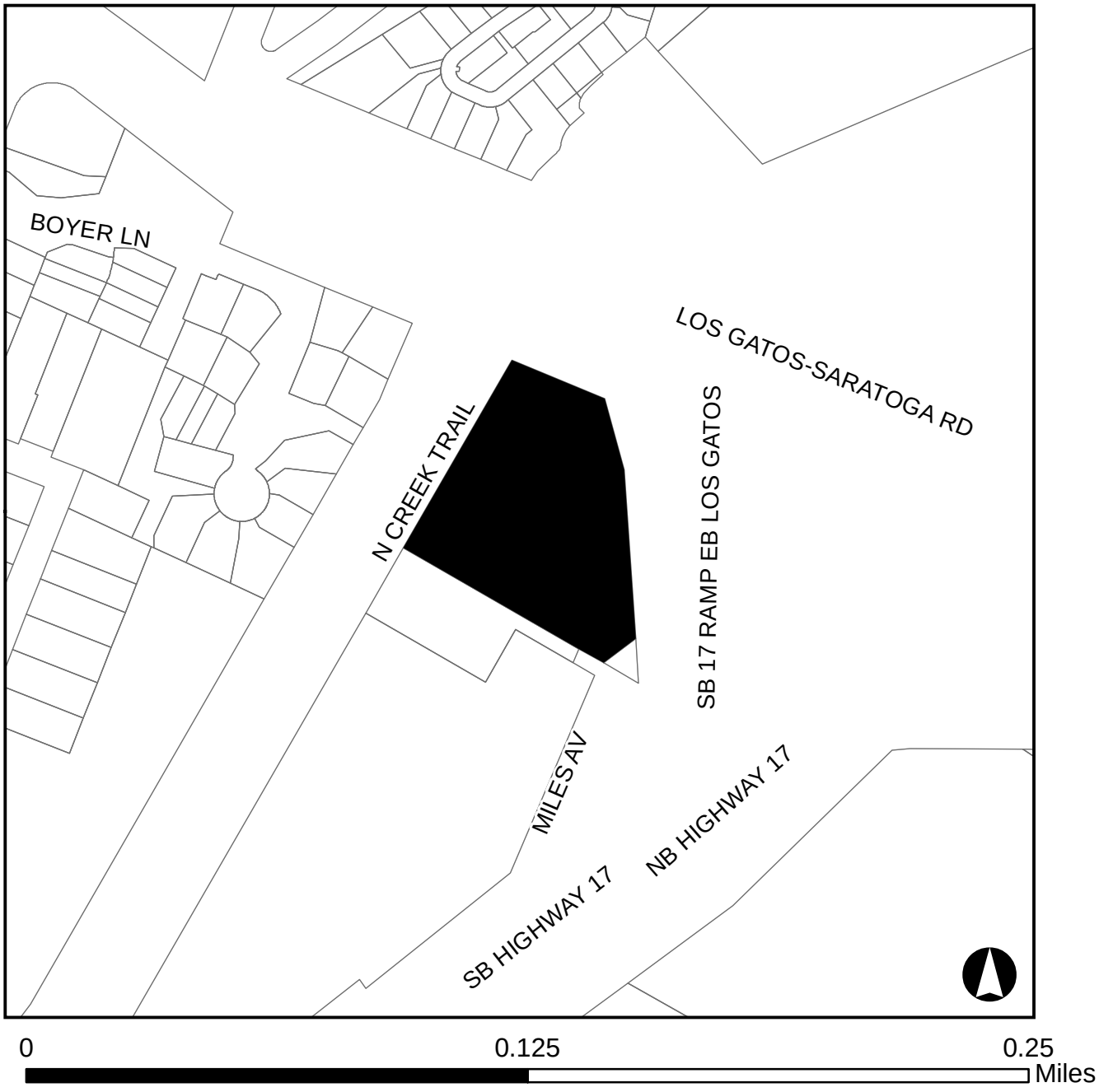


EXHIBIT 1

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PLANNING COMMISSION – *November 12, 2026*
REQUIRED FINDINGS:

42 Miles Avenue
Conditional Use Permit U-26-002

Consider a Request for Approval of a Conditional Use Permit Application to Install a New 76-Foot-Tall Wireless Telecommunication Facility on Property Zoned R-M:5-12. APN 523-06-038. Categorically Exempt Pursuant to California Environmental Quality Act Guidelines Section 15303: New Construction or Conversion of Small Structures.

Property Owner: Ashley Van, Pacific Gas & Electric Company
Applicant: Jacob Hamilton, SBA Monarch Towers III, LLC

FINDINGS

Required Finding for CEQA:

- The project is Categorically Exempt pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15303: New Construction or Conversion of Small Structures.

Required Findings for a Conditional Use Permit:

- As required by Section 29.20.190 of the Town Code for granting a Conditional Use Permit:

  The deciding body, on the basis of the evidence submitted at the hearing, may grant a conditional use permit when specifically authorized by the provisions of the Town Code if it finds that:

  1. The proposed uses of the property are essential to the public convenience or welfare because the facility provides wireless coverage and capacity for T-Mobile customers in the Highway 17, Bell Vista, and Miles Avenue area. The applicant's coverage exhibit shows that removal of the site would reduce in-building coverage by 812 commercial and 130 residential population, and the replacement allows modern equipment that the existing pole cannot support;
  2. The proposed uses will not impair the existing uses of the zone because the facility replaces an existing wireless facility installation on a utility parcel. No new lighting, noise-generating equipment, generator, or tree removal is proposed, and the nearest residences are separated from the site by the PG&E yard and mature vegetation;
  3. The proposed uses would not be detrimental to public health, safety, or general welfare because the RF report for the project shows compliance with FCC limits, with ground-level exposure at 18.352 percent of the general population limit. The conditions require compliance with the California Building Code, signage, and ongoing RF reporting.;

4. The proposed uses of the property are in harmony with the various elements or objectives of the general plan and the purposes of this chapter because the project continues an established wireless telecommunications use at an existing utility site and replaces an exposed wood pole with a concealed design, maintaining reliable wireless communications service while minimizing visual impacts and preserving community character. Although the General Plan does not contain goals or policies that directly reference telecommunications facilities, the Town Council-adopted Telecommunications Ordinance and Standards for Wireless Telecommunications Facilities, determined to be consistent with the General Plan, provide the applicable framework for evaluating such facilities. Relevant General Plan policies and Town standards include, but are not limited to:

    - **Policy HAZ-4.9: Resilient Infrastructure**. Requires new public utilities, communication infrastructure, and transportation facilities to be located, designed, and constructed to minimize risk and maximize functionality during and after an earthquake.
    - **Policy HAZ-1.1: Emergency Preparedness Planning**. Supports coordination and planning for emergency preparedness, including communications and emergency response capabilities.
    - **Standards for Wireless Telecommunications Facilities**. Establish objectives for providing high-quality wireless communications infrastructure, improving wireless service coverage, supporting emergency-response communications, and encouraging efficient facility deployment and co-location.
    - **Telecommunications Ordinance**. Establishes the regulatory framework for wireless telecommunications facilities to ensure appropriate siting and design while protecting community character.

    The project is consistent with the Town's Telecommunications Ordinance and Standards for Wireless Telecommunications Facilities and, by reference, the General Plan; and
5. A hazardous waste facility proposal is subject to the California Health and Safety Code, Article 8.7, Section 25199—25199.14 and shall be consistent with the Santa Clara County Hazardous Waste Management Plan. This finding does not apply because the site is not a hazardous waste facility.

PLANNING COMMISSION – *November 12, 2026*
CONDITIONS OF APPROVAL

42 Miles Avenue
Conditional Use Permit U-26-002

Consider a Request for Approval of a Conditional Use Permit Application to Install a New 76-Foot-Tall Wireless Telecommunication Facility on Property Zoned R-M:5-12. APN 523-06-038. Categorically Exempt Pursuant to California Environmental Quality Act Guidelines Section 15303: New Construction or Conversion of Small Structures.

Property Owner: Ashley Van, Pacific Gas & Electric Company
Applicant: Jacob Hamilton, SBA Monarch Towers III, LLC

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 operations shall be approved by the Community Development Director, the DRC, or the Planning Commission, depending on the scope of the changes.
2. EXPIRATION: The approval will expire one year from the approval date pursuant to Section 29.20.218 of the Town Code, unless the approval has been vested.
3. LENGTH OF PERMIT: Once vested, this permit shall be in effect for an initial period of five years, after which time, the Town may require an administrative review to verify compliance with the original project approval and the provisions of the Town Code and related standards enacted by Town Council resolution per Town Code Section 29.20.217.
4. COMPLIANCE WITH AGENCY REGULATIONS: The construction and operation of the approved use shall comply at all times with the regulations of this or any other governmental agencies.
5. COMPLIANCE WITH EASEMENTS / LAND USE RESTRICTIONS: The facility shall comply with all applicable easements, deed restrictions, and land use approvals affecting the subject parcel.
6. ACCESSORY USE: The telecommunications facility shall remain an accessory use to the primary use of the subject parcel.
7. PROPERTY OWNER AUTHORIZATION: Prior to building permit issuance, the applicant shall submit written documentation, in a form acceptable to the Community Development Director, that Pacific Gas & Electric Company (PG&E), the property owner, authorizes the proposed installation of the new facility at the location as shown on the approved plans.
8. INDEPENDENT TECHNICAL REVIEW: The Town reserves the right to retain an independent technical consultant to review the facility for compliance with Town Code and applicable standards. All costs associated with such a review shall be borne by the applicant.
9. BUSINESS LICENSE: A Business License from the Town of Los Gatos Finance Department, including a Certificate of Use and Occupancy approval from Planning, must be obtained prior to the commencement of any new or change of use.

10. STRUCTURAL STANDARDS: Telecommunications facilities shall at all times comply with the California Building Code and all applicable structural standards. The Town may require upgrades where necessary to address safety concerns or to comply with applicable code requirements.
11. MAINTENANCE AND SAFETY: All telecommunications facilities shall be designed, constructed, and maintained in accordance with applicable building, structural, and safety codes to ensure protection of public health, safety, and welfare.
12. NOISE: The facility shall operate in compliance with the Town's adopted noise ordinance.
13. COLOR AND MATERIALS: The proposed stealth monopole and antennas shall use non-reflective colors and materials. Prior to building permit issuance, the plans shall specify the faux tree branch density, bark texture, color, and branch extension beyond the antennas, subject to approval by the Community Development Director. Antennas, radios, and future carrier equipment shall be screened and painted to match the monopole. Equipment cabinets shall be compatible in appearance with surrounding structures.
14. CO-LOCATION REQUIREMENT: The facility shall be designed to accommodate co-location of additional wireless service providers where technically feasible in order to minimize the proliferation of additional towers.
15. SECURITY FENCING: All wireless telecommunications facilities and related equipment shall be enclosed by a security fence not less than six feet high and incorporating an anti-climbing device sufficient to prevent trespassing.
16. SIGNAGE: All wireless telecommunications facilities shall provide identification either by sign, sticker or placard that includes the most current phone number and emergency contact information for the wireless providers. The sign information shall also include warnings and safety precautions for people nearing the equipment as may be required by any applicable FCC adopted standards including RF symbols. Advertising signs or logos are not allowed.
17. LIGHTING: The stealth monopole tower shall not be artificially lit unless required by some other applicable authority. If lighting is required, it shall be placed in the least intrusive manner with minimal disturbance to surrounding views.
18. 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.
19. 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. The Town Arborist shall review any proposed tree trimming.
20. 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.
21. 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.
22. TREE STAKING: All newly planted trees shall be double-staked using rubber tree ties.
23. LANDSCAPE PLAN: Any new or existing trees or landscaping required as a part of this approval shall be maintained in good condition at all times, and the owner or operator of

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the facility shall be responsible for replacing any damaged, dead or decayed landscaping as soon as possible. Amendments or modification to an approved landscape/screening plan shall be submitted for approval to the Community Development Director.

24. INTERFERENCE: All wireless telecommunications facilities shall be operated in a manner which complies with the FCC regulations for signal interference, including but not limited to interference with other telecommunications facilities and household electronics.
25. RF EXPOSURE REPORT: A bi-annual, RF exposure report is required. This report shall be prepared by a Food and Drug Administration-certified professional and submitted to the Community Development Department to ensure that no modifications to the site, surrounding environment, or equipment wear and tear have caused an increase in RF exposure over the period after initiation of use of the facility. In the event an increase over accepted levels is detected, the equipment shall be immediately taken out of service, and the application shall be responsible for immediately making all necessary adjustments to comply with Federal Communications Commission guidelines; otherwise, revocation hearings will commence per Town Code Section 29.20.214.
26. RF EMISSION REPORT: Per Town Code Section 29.20.214, an updated RF emission report shall be submitted to the Town every five years as part of the renewal of this permit.
27. TECHNOLOGY UPGRADES: Any replacement, modification, or upgrade of antennas or associated equipment shall require review and approval by the Community Development Director and may require additional permits if the modification materially changes the approved facility.
28. TELECOMMUNICATIONS FACILITY MAINTENANCE: The normal maintenance of the equipment and antennas shall be performed between 8:00 a.m. and 6:00 p.m. on a weekday and 9:00 a.m. to 4:00 p.m on Saturday. No work shall be done on Sundays or on Town Holidays unless otherwise approved by the Town. Maintenance outside of these hours shall only occur in the event of an emergency. Each owner or operator of a facility shall routinely and regularly inspect each site to ensure compliance with Town Code and relevant resolutions. All facilities and related equipment shall be maintained in good repair, free from trash, debris, litter, graffiti, and other forms of vandalism, and any damage from any cause shall be repaired as soon as reasonably possible.
29. LAPSE IN USE: If the telecommunications facility ceases operation for a continuous period of six (6) months, the facility owner shall remove all associated equipment within ninety (90) days of notice from the Community Development Director and restore the site to its original pre-construction condition in accordance with Section 29.20.220 of the Town Code.
30. REMOVAL OR OWNERSHIP CHANGE: The applicant or other designated representative shall be responsible for notifying the Community Development Department in writing upon temporary or permanent cessation of operation or change of ownership of any telecommunications facility. The applicant and/or property owner shall be responsible for the removal of all obsolete or unused facilities or portions thereof within the time limit found in Town Code Section 29.20.220.
31. BONDING SECURITY AND INSURANCE: Prior to Building Permit issuance, the Town shall set the form and amount of security that represents the cost for removal and disposal of abandoned wireless telecommunications facilities in the event that these facilities are abandoned and the facility owner is incapable and/or unwilling to remove them.

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Additionally, proof of insurance covering accident or damage caused by any elements of the approved facility is required.

32. 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.
33. COMPLIANCE MEMORANDUM: A memorandum shall be prepared and submitted with the building plans detailing how the Conditions of Approval will be addressed.
34. CONDITIONS OF APPROVAL IN THE PLANSET: Include the conditions of approval outlined in the Conditions of Approval document on either the first or second page of the construction drawing plan set. All sheets in the construction drawings shall be the same size.

TO THE SATISFACTION OF THE DIRECTOR OF PARKS AND PUBLIC WORKS:

Engineering Division

THE FOLLOWING CONDITIONS SHALL BE ADDRESSED OR NOTED ON THE CONSTRUCTION PLANS SUBMITTED FOR ANY BUILDING OR GRADING PERMIT, OR IF ANOTHER DEADLINE IS SPECIFIED IN A CONDITION, AT THAT TIME.

35. PAYMENT OF PARKS AND PUBLIC WORKS ("PPW") ENGINEERING PLAN CHECK FEE AND INSPECTION FEE: At the time of the first construction submittal, the Applicant shall submit to the Town Engineer for approval a detailed construction project cost estimate prepared and stamped by the Applicant's civil engineer. The cost estimate shall break out on-site and

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off-site improvements separately. This cost estimate will be used to determine the Engineering Plan Check Fee. A final construction cost estimate shall be provided once the project plans are approved. This cost estimate will be used to determine the Engineering Inspection Fee. The Engineering Inspection Fee must be paid prior to the issuance of any construction related permit.

36. PERMITS REQUIRED BY OTHER AGENCIES: The Applicant shall obtain all applicable permits from federal, state, and local agencies as required to construct the proposed improvements. The Applicant is hereby informed that permits may be required by one (1) or more of the following: Army Corps of Engineers, Fish and Wildlife (1603), The Bay Area Joint Aquatic Resources Permit Application (JARPA), Regional Water Quality Control Board, Santa Clara County Roads and Airports, Valley Water, or Habitat Permit. If the project is within jurisdiction of any of these agencies, verification of permit or waiver of permit must be given to PPW prior to issuance of any required Town permits. If the Town is required to be a party to the permit application and a fee is required, the Applicant shall reimburse the Town for its cost. A copy of these permits shall be provided to the satisfaction of the Town Engineer prior to the issuance of the first building permit.
37. STANDARD PLAN COMPLIANCE: The project shall comply with the Town's Standard Plans to the approval of the Town Engineer. Street improvements, all street sections, the design of all off-site storm drainage facilities shall be in accordance with most current Town Standard Specifications and Standard Plans approved by the Town Engineer. Improvements deemed necessary by the Town Engineer shall be shown on the Improvement Plans.
38. EXISTING FACILITY PROTECTION AND REPAIR: All existing public utilities shall be either protected in place, relocated, or repaired. The Applicant shall repair or replace all existing improvements not designated for removal, and all new improvements that are damaged during construction or removed because of the Applicant's operations. This includes sidewalk, curb and gutter, streetlights, valley gutters, curb ramps, and any other existing improvements in the area that are not intended to be removed and replaced. The Applicant shall request a walk-through with the PPW construction Inspector before the start of construction to verify existing conditions. Said repairs shall be completed prior to issuance of the first certificate of occupancy of the project.
39. UNDERGROUND UTILITIES: All new services to the development shall be placed underground in accordance with the various utility regulations. Underground utility plans must be submitted to the Town and approved by the Town Engineer prior to installation.
40. UTILITY RESPONSIBILITIES: The Applicant is responsible for the maintenance of existing stormwater drainage facilities, including piped and open channel stormwater conveyances in private areas. The Applicant is responsible for all expenses necessary to connect to the various utility providers. Currently, the public storm sewer system is owned and maintained by the Town of Los Gatos, the water system in Los Gatos is owned and maintained by San José Water Company, and the sanitary sewer system in Los Gatos is owned and maintained by West Valley Sanitation District. Any alterations of the approved utilities listed must be approved by the Town prior to any construction.
41. UTILITY COMPANY COORDINATION: The Applicant shall negotiate any necessary right-of-way or easements with the various utility companies in the area, subject to the review and approval by the Town Engineer and the utility companies. Prior to the approval of the site

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plan for construction, the Applicant shall submit "Will Serve" letters from PG&E, San José Water, West Valley Sanitation District, West Valley Collections and Recycling, and AT&T (or the current "Carrier of Last Resort") with a statement indicating either a list of improvements necessary to serve the project or a statement that the existing network is sufficient to accommodate the project. Coordination of the stormwater conveyance system will be addressed during the Grading Permit review.

42. EXTERIOR SITE LIGHTING STANDARDS: The Applicant shall submit a photometric plan for on-site lighting showing lighting levels in compliance with the Town Standard Specifications section 2.38. The plan shall show the minimum maintained horizontal illumination in foot-candles and the uniformity ratio for all areas. This lighting standard is applicable to all parking lots, driveways, circulation areas, aisles, passageways, recesses, and accessible grounds contiguous to all buildings. Private, interior courtyards not accessible to the public are not required to meet this standard. The lighting system shall be so designed as to limit light spill beyond property lines and to shield the light source from view from off site. The photometric plan shall be approved by the Town Engineer and shall be addressed on the construction plans submitted for the first building permit. Any subsequent building permits that include any site lighting shall also meet these requirements.
43. DEVELOPER STORM WATER QUALITY RESPONSIBILITY: The Applicant is responsible for ensuring that all contractors including subcontractors are aware of all stormwater quality measures and implement such measures. The Applicant shall perform all construction activities in accordance with approved Improvement Plans, Los Gatos Town Code Chapter 12 - Grading, Erosion and Sediment Control, and the National Pollutant Discharge Elimination System (NPDES) General Permit. Failure to comply with these rules and regulations will result in the issuance of correction notices, citations, or a project stop order.
44. LOCAL DRAINAGE PATTERNS: The Applicant shall not alter any existing drainage patterns without an approved Grading Permit.
45. GRADING & DRAINAGE WINTER MORATORIUM: All grading activity shall comply with the Municipal Regional Stormwater Permit and Chapter 12 of the Town Code. There shall be no earthwork disturbance or grading activities between October 15th and April 15th of each year unless approved by the Town Engineer. In order to be considered for approval, the Applicant must submit a Winterization Erosion Control Plan certified by a California certified QSD to the Town Engineer for review and approval. If grading is allowed during the rainy season, a maximum of two (2) weeks is allowed between clearing of an area and stabilizing/building on the exposed area. The submission of a certified plan does not guarantee approval. Any approved and executed plan must be kept on-site while the project is in construction.
46. EROSION CONTROL: The Applicant shall prepare and submit interim and final erosion control plans to the Town Engineer for review and approval. The interim erosion control plan(s) shall include measures carried out during construction before final landscaping is installed. Multiple phases of interim erosion control plans may be necessary depending on the complexity of the project. Interim erosion control best management practices may include silt fences, fiber rolls, erosion control blankets, Town approved seeding mixtures, filter berms, check dams, retention basins, etc. The Applicant shall install, maintain, and modify the erosion control measures as needed to continuously protect downstream water

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quality. In the event an emergency modification is deemed necessary, the Applicant must implement necessary measures to protect downstream waterways immediately and then submit the changes made within 24-hours to the Town Engineer for review and approval. The erosion control plans shall be in compliance with applicable measures contained in the most current Santa Clara County National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit (MRP). Any fees or penalties assessed against the Town in response to the Applicant's failure to comply with the Permit must be paid by the Applicant. The Applicant must permit Town staff onsite to conduct periodic NPDES inspections throughout the recognized storm season to verify compliance with the Construction General Permit and Stormwater ordinances and regulations.

47. PRECONSTRUCTION MEETING: After the issuance of any Grading or Encroachment permit and before the commencement of any on or off-site work, the Applicant shall request a pre-construction meeting with the PPW Inspector to discuss the project conditions of approval, working hours, site maintenance, and other construction matters. At that meeting, the Applicant shall submit a letter acknowledging that:
    a. They have read and understand these project Conditions of Approval;
    b. They will require that all project sub-contractors read and understand these project Conditions of Approval; and,
    c. They ensure a copy of these project Conditions of Approval will be posted on-site at all times during construction.

THE FOLLOWING CONDITIONS SHALL BE MET PRIOR TO RELEASE OF UTILITIES, FINAL INSPECTION, OR ISSUANCE OF A CERTIFICATE OF OCCUPANCY, WHICHEVER OCCURS FIRST, OR IF ANOTHER DEADLINE IS SPECIFIED IN A CONDITION, AT THAT TIME.

48. RESTORATION OF PUBLIC IMPROVEMENTS: The Applicant shall repair or replace all existing improvements not designated for removal that are damaged or removed during construction. Improvements such as, but not limited to curbs, gutters, sidewalks, driveways, signs, streetlights, pavements, raised pavement markers, thermoplastic pavement markings, etc., shall be repaired or replaced to a condition equal to or better than the original condition. Any new concrete shall be free of stamps, logos, names, graffiti, etc. Existing improvement to be repaired or replaced shall be at the direction of the PPW Inspector and shall comply with all Title 24 Disabled Access provisions. The restoration of all improvements identified by the PPW Inspector shall be completed before the issuance of a certificate of occupancy. The Applicant shall request a walk-through with the PPW Inspector before the start of construction to verify existing conditions.

THE FOLLOWING CONDITIONS SHALL BE COMPLIED WITH AT ALL TIMES DURING THE CONSTRUCTION PHASE OF THE PROJECT, OR IF ANOTHER DEADLINE IS SPECIFIED IN A CONDITION, AT THAT TIME.

49. PROJECT CONSTRUCTION SETUP: All storage and office trailers will be kept off the public right-of-way.

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50. PUBLIC WORKS CONSTRUCTION NOTICE: The contractor shall notify the PPW Inspector at least ten (10) working days prior to the start of any construction work. At that time, the Contractor shall provide an initial project construction schedule and a 24-hour emergency telephone number list.
51. PROJECT CONSTRUCTION SCHEDULE: The contractor shall submit the project schedule in a static PDF 11”x17” format and Microsoft Project, or an approved equal. The Contractor shall identify the scheduled critical path for the installation of improvements to the approval of the Town Engineer. The schedule shall be updated monthly and submitted to the PPW Inspector in the same formats as the original.
52. PROJECT CONSTRUCTION HANDOUT: The Contractor shall provide to the Town Engineer an approved construction information handout for the purpose of responding to questions the Town receives regarding the project construction.
53. PROJECT CONSTRUCTION SUPERVISION: The Contractor shall always provide a qualified supervisor on the job site during construction.
54. PUBLIC WORKS CONSTRUCTION INSPECTION: All work shown on the Improvement Plans shall be inspected to the approval of the Town Engineer. Uninspected work shall be removed as deemed appropriate by the Town Engineer.
55. PROJECT CONSTRUCTION HOURS: Construction activities related to the issuance of any PPW permit shall comply with Town Code Section 16.20.035 which restricts construction to the weekday between 8:00 a.m. and 6:00 p.m. and Saturday 9:00 a.m. to 4:00 p.m. No work shall be done on Sundays or on Town Holidays unless otherwise approved by the Town Engineer. Please note that no work shall be allowed to take place within the Town right-of-way after 5:00 p.m. Monday through Friday. In addition, no work being done under Encroachment Permit may be performed on the weekend unless prior approvals have been granted by the Town Engineer. The Town Engineer may apply additional construction period restrictions, as necessary, to accommodate standard commute traffic along arterial roadways and along school commute routes. Onsite project signage must state the project construction hours. The permitted construction hours may be modified if the Town Engineer finds that the following criteria is met:
    a. Permitting extended hours of construction will decrease the total time needed to complete the project without an unreasonable impact to the neighborhood.
    b. Permitting extended hours of construction is required to accommodate a construction requirement such as a large concrete pour or major road closure. Such a need would be presented by the project's design engineer and require approval of the Town Engineer.
    c. An emergency situation exists where the construction work is necessary to correct an unsafe or dangerous condition resulting in obvious and eminent peril to public health and safety. If such a condition exists, the Town may waive any of the remaining requirements outlined below.
    d. The exemption will not conflict with any other condition of approval required by the Town to mitigate significant environmental impacts.
    e. The contractor or property owner will notify residential and commercial occupants of adjacent properties of the modified construction work hours. This notification must be provided three days prior to the start of the extended construction activity.

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f. The approved hours of construction activity will be posted at the construction site in a place and manner that can be easily viewed by any interested member of the public.
g. The Town Engineer may revoke the extended work hours at any time if the contractor or owner of the property fails to abide by the conditions of extended work hours or if it is determined that the peace, comfort, and tranquility of the occupants of adjacent residential or commercial properties are impaired because of the location and nature of the construction.
h. The waiver application must be submitted to the PPW Inspector ten (10) working days prior to the requested date of waiver.

56. PROJECT CONSTRUCTION BMPs: All construction activities shall conform to the latest requirements of the CASQA Stormwater Best Management Practices Handbooks for Construction Activities and New Development and Redevelopment, the Town's grading and erosion control ordinances, the project specific temporary erosion control plan, and other generally accepted engineering practices for erosion control as required by the Town Engineer when undertaking construction activities.
57. PROJECT CONSTRUCTION ACTIVITIES: The following provisions to control traffic congestion, noise, and dust shall be followed during site excavation, grading, and construction:
    a. All construction vehicles should be properly maintained and equipped with exhaust mufflers that meet State standards.
    b. Travel speeds on unpaved roads shall be limited to fifteen (15) miles per hour.
    c. Blowing dust shall be reduced by timing construction activities so that paving and building construction begin as soon as possible after completion of grading, and by landscaping disturbed soils as soon as possible.
    d. Water trucks shall be present and in use at the construction site. All portions of the site subject to blowing dust shall be watered as often as deemed necessary by the Town, or a minimum of three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites in order to ensure proper control of blowing dust for the duration of the project.
    e. Watering on public streets and wash down of dirt and debris into storm drain systems is prohibited. Streets will be cleaned by street sweepers or by hand as often as deemed necessary by the PPW Inspector, or at least once a day. Watering associated with on-site construction activity shall take place between the hours of 8 a.m. and 5 p.m. and shall include at least one late-afternoon watering to minimize the effects of blowing dust. Recycled water shall be used for construction watering to manage dust control where possible, as determined by the Town Engineer. Where recycled water is not available potable water shall be used. All potable construction water from fire hydrants shall be coordinated with the San José Water Company.
    f. All public streets soiled or littered due to this construction activity shall be cleaned and swept on a daily basis during the workweek to the satisfaction of the Construction Inspector.
    g. Construction grading activity shall be discontinued in wind conditions in excess of 25 miles per hour, or that in the opinion of the PPW Inspector cause excessive neighborhood dust problems.

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h. Site dirt shall not be tracked into the public right-of-way and shall be cleaned immediately if tracked into the public right-of-way. Mud, silt, concrete and other construction debris shall not be washed into the Town's storm drains.
i. Construction activities shall be scheduled so that paving and foundation placement begin immediately upon completion of grading operation.
j. All aggregate materials transported to and from the site shall be covered in accordance with Section 23114 of the California Vehicle Code during transit to and from the site.
k. Prior to issuance of any permit, the Applicant shall submit any applicable pedestrian or traffic detour plans to the satisfaction of the Town Engineer for any lane or sidewalk closures. The temporary traffic control plan shall be prepared by a licensed professional engineer with experience in preparing such plans and in accordance with the requirements of the latest edition of the California Manual on Uniform Traffic Control Devices (MUTCD) and standard construction practices. The Traffic Control Plan shall be approved prior to the commencement of any work within the public right-of-way.
l. During construction, the Applicant shall make accessible any or all public and private utilities within the area impacted by construction, as directed by the Town Engineer.
m. The minimum soils sampling and testing frequency shall conform to Chapter 8 of the Caltrans Construction Manual. The Applicant shall require the soils engineer submit to daily testing and sampling reports to the Town Engineer.

58. MATERIAL HAULING ROUTE AND PERMIT: For material delivery vehicles equal to, or larger than two-axle, six-tire single unit truck size as defined by FHWA Standards, the Applicant shall submit a truck hauling route that conforms to Town of Los Gatos Standards for approval. Note that the Town requires a Haul Permit be issued for any hauling activities. The Applicant shall require contractors to prohibit trucks from using "compression release engine brakes" on residential streets. The haul route for this project unless otherwise approved by the Town Engineer, shall be: Miles Avenue to University Avenue to Hwy 9 to Hwy 17 and vice versa in the other direction. A letter from the Applicant confirming the intention to use the designated haul route shall be submitted to the Town Engineer for review and approval prior to the issuance of any Town permits. All material hauling activities including but not limited to, adherence to the approved route, hours of operation, staging of materials, dust control and street maintenance shall be the responsibility of the Applicant. Hauling of soil on- or off-site shall not occur during the morning or evening peak periods (between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m.), and at other times as specified by the Town Engineer. The Applicant must provide an approved method of cleaning tires and trimming loads on site. All material hauling activities shall be done in accordance with applicable Town ordinances and conditions of approval.
59. PROJECT CLOSE-OUT: Prior to requesting a Final Inspection, the Applicant shall submit to the Town Engineer a letter indicating that all project conditions have been met, and all improvements are complete. All work must be completed to the satisfaction of the Planning Director and Town Engineer prior to the first occupancy. All public improvements, including the complete installation of all improvements relative to streets, fencing, storm drainage, underground utilities, etc., shall be completed and attested to by the Town Engineer before approval of occupancy of any unit. Where facilities of other agencies are involved, including those for water and sanitary sewer services, such installation shall be verified as having

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been completed and accepted by those agencies. In addition, the Applicant shall submit an itemized final quantities list of all public improvements constructed on-site and within the public right-of-way. The final quantities list shall be prepared by the project engineer and be to the approval of the Town Engineer. The final quantities list shall be broken out into on-site and off-site improvements based on the format provided by the Town. Until such time as all required improvements are fully completed and accepted by Town, the Applicant shall be responsible for the care, maintenance, and any damage to such improvements. Town shall not, nor shall any officer or employee thereof, be liable or responsible for any accident, loss or damage, regardless of cause, happening or occurring to the work or improvements required for this project prior to the completion and acceptance of the work or Improvements. All such risks shall be the responsibility of and are hereby assumed by the Applicant.

60. CONSTRUCTION WORKER PARKING: The Applicant shall provide a Construction Parking Plan that minimizes the effect of construction worker parking in the neighborhood and shall include an estimate of the number of workers that will be present on the site during the various phases of construction and indicate where sufficient off-street parking will be utilized and identify any locations for off-site material deliveries. Said plan shall be approved by the Town Engineer prior to issuance of Town permits and shall be complied with at all times during construction. Failure to enforce the parking plan may result in suspension of the Town permits. No vehicle having a manufacturer's rated gross vehicle weight exceeding ten thousand (10,000) pounds shall be allowed to park on the portion of a street which abuts property in a residential zone without prior approval from the Town Engineer (§15.40.070).
61. SITE WATER DISCHARGE: In accordance with the Town Code, Prohibition of Illegal Discharges (Los Gatos Town Code Section 22.30.015), the Town Engineer may approve in coordination West Valley Sanitation District the discharge of uncontaminated pumped ground waters to the sanitary sewer only when such source is deemed unacceptable by State and Federal authorities for discharge to surface waters of the United States, whether pretreated or untreated, and for which no reasonable alternative method of disposal is available. Following the verification of the applicable local, state and/or federal approvals, a Discharge Plan will be approved and monitored by the Town Engineer.

THE FOLLOWING CONDITIONS SHALL BE COMPLIED WITH AT ALL TIMES THAT THE USE PERMITTED BY THIS ENTITLEMENT OCCUPIES THE PREMISES.

62. POST CONSTRUCTION BEST MANAGEMENT PRACTICES (BMP): Post construction storm water pollution prevention requirements shall include:
    a. The Applicant shall be charged the cost of abatement for issues associated with, but not limited to, inspection of the private stormwater facilities, emergency maintenance needed to protect public health or watercourses, and facility replacement or repair if the treatment facility is no longer able to meet performance standards or has deteriorated. Any abatement activity performed on the Applicant’s property by Town staff will be charged to the Applicant at the Town’s adopted fully-loaded hourly rates.

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b. Maintenance of the storm drain inlets “No Dumping: Drains to Bay” plaques to alert the public to the destination of storm water and to prevent direct discharge of pollutants into the storm drain. Template ordering information is available at www.flowstobay.org.
c. All process equipment, oils, fuels, solvents, coolants, fertilizers, pesticides, and similar chemical products, as well as petroleum based wastes, tallow, and grease planned for storage outdoors shall be stored in covered containers at all times.
d. All public outdoor spaces and trails shall include installation and upkeep of dog waste stations.
e. Garbage and recycling receptacles and bins shall be designed and maintained with permanent covers to prevent exposure of trash to rain. Trash enclosure drains shall be connected to the sanitary sewer system.
f. It is the responsibility of the property owner(s)/homeowners association to implement a plan for street sweeping of paved private roads and cleaning of all storm drain inlets.

DRAFT

VIRTUAL SITE WALK LLC | (619) 341-9208 | jake@virtualsitewalk.com

LETTER OF JUSTIFICATION — UPDATED

Bella Vista CA27386 / Hwy 17 & Bell Vista Relo | 42 Miles Avenue, Los Gatos, CA 95030 | CUP U-26-002 | APN 529-05-043

October 26, 2026

Request and development description

On behalf of the applicant, SBA Monarch Towers III, LLC (as identified in the Town review letter), this application requests discretionary Conditional Use Permit approval for installation of a new steel monopine wireless telecommunications structure on PG&E property serving the existing T-Mobile SF04939A wireless network location. The new monopine is to be constructed before the existing approximately 70-foot wood pole is decommissioned and removed, permitting migration and testing of antennas before service cutover. The 90% drawings dated October 15, 2026 describe a 70-foot steel support and 76-foot overall monopine height measured from existing natural grade to the highest faux branch; proposed antenna radiation centers are 52 and 58 feet AGL.

I. Property, existing use, and site-control configuration

The subject is a preexisting utility/wireless site on PG&E property, APN 529-05-043, in the R-M:5-12 district. This is not an assertion that the replacement fits within the former 183.3 SF equipment/platform footprint. The 2026 drawings instead show an existing 645 SF lease area and a proposed 100 SF extension, resulting in a total 745 SF depicted area that contains the new foundation/tower. A 2023 PG&E/GSL monopole agreement governs the proposed replacement subject to its approvals; PG&E Cupertino Maintenance Crew Lead Todd Bradford stated on November 17, 2025, “I see no issues with the new location,” following a request to review a changed proposed location. This is evidence of PG&E operational concurrence with the revised position, not by itself confirmation that a particular 745 SF land-rights amendment or surveyed legal description has been executed.

III.A.3 — Location, spacing, and alternatives

Because this is a replacement at an existing wireless/utility location, the preferred approach is to retain existing network geography and relocate the replacement structure within the same PG&E parcel, subject to expanded-site-control documentation. Off-site relocation introduces additional property rights, permits, utilities and disruption. The updated Alternative Site Analysis evaluates these alternatives, including the new tower position as drawn.

III.B.1 — Co-location

The proposed new monopine modernizes an existing T-Mobile location and can accommodate additional providers to the extent technically and structurally feasible. This project is subject to a discretionary CUP and does not seek approval under FCC Section 6409(a).

III.B.4 — Screening and landscaping

The proposed new tower and foundation are at a slightly shifted location within the proposed enlarged project area; therefore, the project does change the specific construction footprint. Faux branches and nonreflective finishes provide additional concealment. Tree protection and any tree removal/trimming approvals will be implemented consistent with final approved drawings and Town conditions.

III.B.5 — Height and minimum practical elevation

The R-M zone has a 30-foot underlying principal-structure height standard. The Town wireless standard permits the deciding body to authorize an antenna height exceeding that limit when necessary to serve the coverage needs of multiple antennas. The applicant requests the discretionary height determination based on the existing macro-network function, three-sector antenna configuration, dense mature tree canopy, terrain and retained service. The controlling October 15 drawings show proposed 52-foot and 58-foot radiation centers, a nominal 70-foot support pole, and 76 feet from grade to highest monopine branch; no proposed 64-foot centerline is claimed. The conceptual 2% downtilt graphic is illustrative only and contains an outdated approximately 64-foot centerline that must be revised or withdrawn before submission.

III.B.6 — Setbacks

The project must be evaluated using the relocated monopine and actual proposed 745 SF perimeter, not the previous 183.3 SF footprint. The updated LP-1 survey/plan should explicitly dimension the 10-foot side-yard line, property boundaries, proposed monopine, foundation, equipment, and any requested exception or relief. The October 15 drawings do not establish in this narrative alone a verified dimension to the 10-foot side-yard line; the applicant requests Town evaluation based on a signed final dimensioned plan.

III.C — Design and operational compatibility

The new concealed monopine replaces an existing exposed wood pole at the same established wireless site. The plans propose modernization of T-Mobile antenna/radio equipment, electrical work, fencing replacement and fire-retardant painting of the equipment platform. Construction/testing is estimated at four to six weeks; normal maintenance is approximately one visit per month. No new generator, new noise-generating equipment, or new compound lighting is proposed.

Applicant follow-through

The applicant will supply the final coordinated and signed survey, applicable PG&E land-rights/consent documentation, corrected plan sheet index/title blocks and FCC license materials as requested. The letter is intended to align with the October 15, 2026 design, not to certify any unproduced document as submitted. Important record clarification: the October 15, 2026 90% PZD set identifies an existing 645 SF lease area plus 100 SF proposed expansion (745 SF total), whereas the Town's October 7 letter refers to a preexisting 183.3 SF area and a 645 SF proposed area. The October 15 set also shows 76 feet overall to top of monopine branches, not 78 feet. These values cannot be represented as reconciled until the survey, PG&E land-rights documentation, and final engineer-approved plans are harmonized.

Jacob Hamilton | Agent for Applicant | Virtual Site Walk LLC

VIRTUAL SITE WALK LLC | (619) 341-9208 | jake@virtualsitewalk.com

ALTERNATIVE SITE ANALYSIS — UPDATED

Bella Vista CA27386 / Hwy 17 & Bell Vista Relo | 42 Miles Avenue, Los Gatos, CA 95030 | CUP U-26-002 | APN 529-05-043

October 26, 2026

Purpose and preferred site

This updated evaluation replaces the July 7, 2026 version for CUP U-26-002. It compares modernization of the established PG&E/T-Mobile location at approximately 42 Miles Avenue with plausible alternatives in the vicinity. It references the October 15, 2026 90% PZD drawings and the November 17, 2025 PG&E location-concurrence email. Proposed structure height is 76 feet overall to the highest faux branch, with proposed radiation centers at 52 and 58 feet AGL; the 64-foot centerline and 78-foot structure in the prior analysis are superseded for purposes of describing the supplied October drawings.

Network need and radio-frequency evidence

The existing installation provides T-Mobile SF04939A service near Highway 17/Bell Vista. Prior propagation material reports in-building commercial population coverage of 5,429 with the site versus 4,617 without and residential 3,064 with versus 2,934 without; these are with/without-site results, not a comparative 52/58-foot versus lower-height RF engineering study. The supplied 2% downtilt schematic is conceptual and labels an outdated approximately 64-foot antenna position; it is not relied upon as engineering proof of the current design. Lower structure options require technical validation by T-Mobile if the Town requests RF evidence for minimum height.

Alternatives and findings

1. Existing PG&E parcel; adjusted tower location (preferred)

Existing network role, utility setting, established access and usable equipment platform; allows construction before transfer and minimizes interruption. The new foundation requires a site-area extension and signed land-rights/survey coordination. PG&E maintenance staff reported no issues with the revised location.

2. Retain wood pole/no build

Would avoid short-term ground work but does not provide the intended structural replacement and modern antenna configuration.

3. Shorter new structure at the existing location

Could reduce height/visibility but risks additional vegetation obstruction and loss of intended service. No comparative engineering model for 52/58-foot centers versus shorter heights is supplied; this remains a technical factor for review.

4. Other portion of the PG&E parcel

May keep utility setting but changes access, construction and land-rights issues; an alternative PG&E location has not been demonstrated superior to the specifically reviewed replacement location.

5. Los Gatos High School / Helm Field area

Would require new school/district site control and introduce construction and operation within a more sensitive community setting.

6. Downtown / commercial rooftops

Potentially avoid a new ground tower but nearby low-rise rooftops may not provide sufficient elevation; would require separate roof structural analysis and agreements.

7. Commercial/hotel sites east of Highway 17

Introduce new land, new access/utility rights and additional visibility and proximity considerations; no demonstrated improvement over existing PG&E location.

8. Neighborhood residential parcels

New facilities on residential lots would intensify compatibility and community-impact concerns, with no demonstrated technical advantage.

9. Separate new ground tower in broader search area

Would create another freestanding structure and require new utilities, land control, zoning and service-transfer planning.

Site control, lease area, and design reconciliation

Important record clarification: the October 15, 2026 90% PZD set identifies an existing 645 SF lease area plus 100 SF proposed expansion (745 SF total), whereas the Town's October 7 letter refers to a preexisting 183.3 SF area and a 645 SF proposed area. The October 15 set also shows 76 feet overall to top of monopine branches, not 78 feet. These values cannot be represented as reconciled until the survey, PG&E land-rights documentation, and final engineer-approved plans are harmonized.

Conclusion

Subject to final engineering and lawful land control, the adjusted position within the PG&E utility property remains the preferred alternative because it modernizes the existing facility, retains network continuity and avoids creating a new remote site. The applicant does not assert that PG&E operational concurrence alone constitutes a recorded lease amendment. A final surveyed/dimensioned plan is necessary to substantiate setbacks and the definitive lease footprint.

ALTERNATIVE SITE ANALYSIS

Bella Vista CA27386 / Hwy 17 & Bell Vista Relo

42 Miles Avenue, Los Gatos, CA 95030

Conditional Use Permit Application U-26-002

Site No. CA1B19C-S / T-Mobile SF04939A

Prepared for SBA Towers XI, LLC / SBA Monarch Towers III, LLC

July 7, 2026

Project Summary

SBA proposes to replace an existing 70-foot wood pole at an existing wireless telecommunications facility with a new 78-foot tall steel monopine within the existing wireless/utility site area near Highway 17 and Bell Vista. The 78-foot height is measured from existing natural grade to the uppermost faux branch, consistent with the Town of Los Gatos height-measurement instruction. The proposed replacement maintains the existing wireless site function while improving concealment through a stealth monopine design and allowing modernized T-Mobile antennas, radios, and related equipment to operate from the existing network location.

This Alternative Site Analysis evaluates the feasibility of continuing service at the existing site versus relocating to other properties or structures within the surrounding search area. Based on the existing network role, the established lease/site control, the coverage objective, the lack of better nearby alternatives, and the additional impacts that would result from a new off-site location, the existing 42 Miles Avenue / Hwy 17 & Bell Vista site remains the least intrusive and most feasible alternative.

Item	Project Information
Site Name	Hwy 17 & Bell Vista Relo / Bella Vista CA27386
Site Address	Approx. 42 Miles Avenue, Los Gatos, CA 95030
Jurisdiction	Town of Los Gatos, Santa Clara County
APN / Owner	APN 529-005-043 / Pacific Gas and Electric Company
Zoning	R-M:5-12 (Multiple-Family Residential)
Existing Facility	Existing 70-foot wood pole wireless facility with existing equipment platform and cabinet area
Proposed Facility	New 78-foot tall steel monopine, measured to uppermost faux branch; underlying steel pole approximately 70 feet AGL; proposed antenna centerline 64 feet AGL
Scope	Replace wood pole with stealth monopine; remove/relocate existing antennas and ancillary equipment; install modernized T-Mobile antennas, radios/RRUs, hybrid cables, and cabinets
Construction Duration	Approximately 4 to 6 weeks, with the new monopine constructed before removal of the existing wood pole to avoid service disruption

Figure 1 - Site context / search area from provided Google Earth screenshot


Monterey
Chester St
Associa Northern California
Wright Ave
Bird Ave
Los Gatos Creek
Pine Ave
Caldwell Ave
Los Gatos Cafe Downtown
Hercules Draft House & Cantina
Village Ln
Croissante
Boyer Ln
Asa Restaurant | Los Gatos
Best Western Inn of Los Gatos
Bella Vista CA27386 Proposed
Bella Vista CA27386
Bella Vista Ave
University Ave
Edelen Ave
Miles Ave
Helm Field
New York Ave
LGHS Community Aquatic Center
Los Gatos Blvd
Whitney Ave
Pleasant St
Terrace Ct
Church St
Los Gatos United Methodist Church
E Main St
Image © 2026 Vexcel Imaging US, Inc.
Loma
Stacia

1. Purpose of Alternative Site Analysis

The purpose of this Alternative Site Analysis is to explain why replacement of the existing wireless facility at 42 Miles Avenue is preferred over relocating the facility to a new site or modifying the project to a materially lower or less effective design. The analysis is intended to support the Town of Los Gatos review of the Conditional Use Permit for a replacement wireless facility at an existing wireless/utility location.

The proposed project is not a new search for an entirely new wireless site. It is the replacement and modernization of an existing wireless facility that is already integrated into the network. The existing wood pole does not adequately accommodate the proposed modern antenna and equipment loading. SBA therefore proposes replacing the existing wood pole with a new 78-foot tall steel monopine, measured to the uppermost faux branch, using a stealth design that better blends with the existing tree canopy and surrounding conditions. The underlying steel pole extends to approximately 70 feet AGL, while the faux branches extend the overall stealth structure to 78 feet AGL.

2. Existing Site and Proposed Replacement

The project drawings identify an existing SBA lease/equipment area with an existing 70-foot wood pole on PG&E property near Highway 17 and Miles Avenue. The revised drawings describe the project as a steel pole replacement and show the proposed 78-foot tall monopine, measured to the uppermost faux branch, together with existing and proposed T-Mobile equipment, the existing wood equipment platform, existing and proposed equipment cabinets, and antenna/radio loading.

The proposed design allows construction of the new monopine before the existing wood pole is removed. This sequence is necessary because the existing facility currently provides service in the area. Constructing the replacement facility first allows antennas and equipment to be transferred and tested before the old pole is removed, thereby avoiding unnecessary disruption to T-Mobile coverage and capacity.

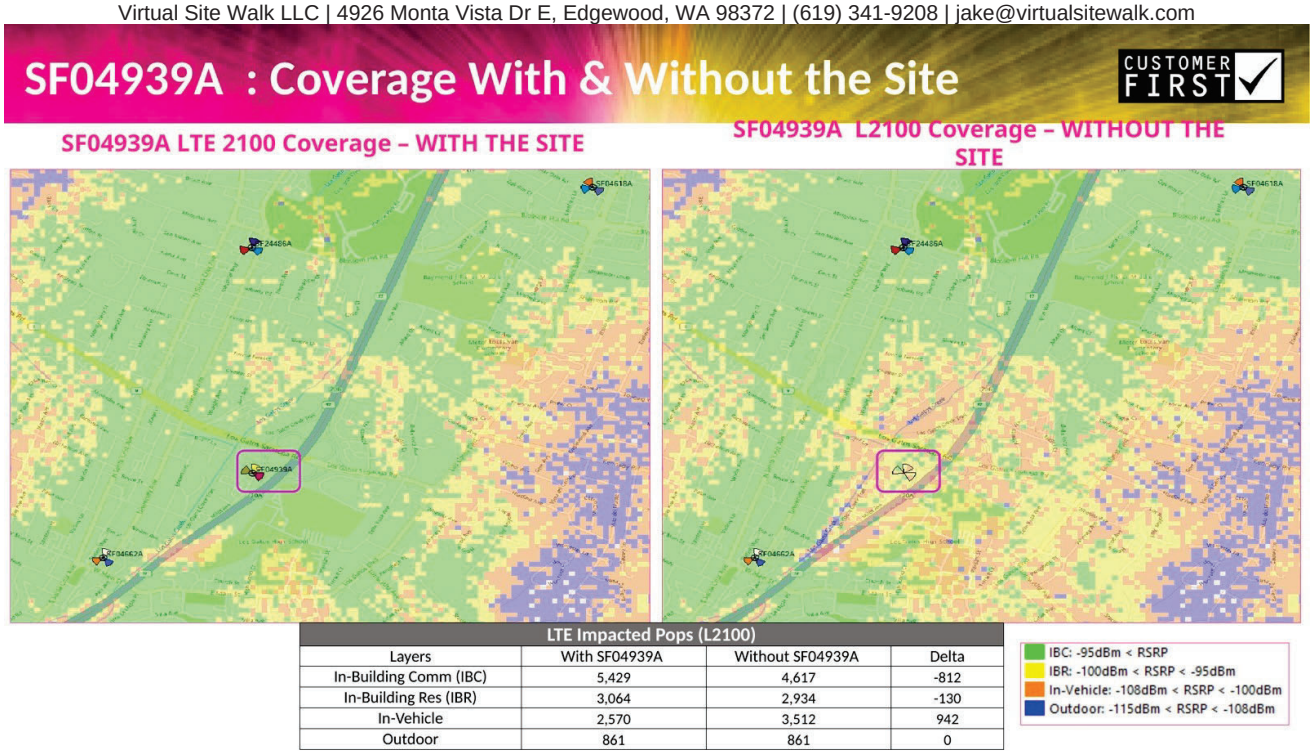
The proposed facility is superior to the existing pole from a visual and operational standpoint because it converts the existing exposed wood pole configuration to a stealth monopine with faux branches and a screened appearance. The proposed antennas and ancillary equipment are designed to be painted or finished to match the monopine and minimize visual contrast. No new generator, no new noise-generating equipment, no new compound lighting, and no new fencing are proposed as part of the project.

3. Network Need and Propagation Support

The propagation materials show that the existing site is part of T-Mobile’s coverage and capacity network in the Hwy 17, Bell Vista, and 42 Miles Avenue area. The coverage package compares LTE 2100 coverage with and without the SF04939A site and shows that removal of the site would negatively affect in-building coverage and materially alter coverage distribution in the area. The analysis identifies 5,429 in-building commercial population coverage with the site compared to 4,617 without the site, a loss of 812; and 3,064 in-building residential population coverage with the site compared to 2,934 without the site, a loss of 130. The coverage exhibits support the continued need for the facility at this location.

Because the site is already integrated into the network, the relevant alternative analysis is not simply whether another parcel could physically hold a pole. The question is whether another nearby location can meet the same coverage objective, maintain service continuity, avoid greater visual or community impacts, and be reasonably feasible from a site acquisition, land use, construction, and operational perspective. The reviewed alternatives do not provide a better solution than replacing the existing facility at the current site.

Figure 2 - T-Mobile propagation coverage exhibit from provided justification package



LTE Impacted Pops (L2100)			
Layers	With SF04939A	Without SF04939A	Delta
In-Building Comm (IBC)	5,429	4,617	-812
In-Building Res (IBR)	3,064	2,934	-130
In-Vehicle	2,570	3,512	942
Outdoor	861	861	0

4. Alternatives Considered

The following alternatives were considered based on the surrounding search area, the existing site location, available land uses, the propagation objective, and the practical limitations of replacing an existing network site. The analysis emphasizes whether the alternative would be a better candidate than the existing location. None of the alternatives below is superior to replacing the existing wood pole with a stealth monopine at the current site.

Alternative	Potential Benefit	Conclusion / Reason Not Selected
Alternative 1: Existing 42 Miles Avenue / Hwy 17 & Bell Vista Site (Preferred)	Existing wireless facility on PG&E property with existing site control, existing access, existing power/utility context, and existing network integration. Replacement can be completed while maintaining service.	Preferred alternative. It avoids creating a new wireless facility on a new parcel, maintains the existing network location, minimizes disruption, uses an existing wireless/utility setting, and improves visual concealment by replacing the wood pole with a stealth monopine.
Alternative 2: No Build / Do Not Replace Existing Pole	Would avoid immediate construction but would leave the existing aging/limited wood pole in place and would not support the proposed modernization.	Not feasible because the existing pole does not accommodate the proposed full antenna and equipment loading. The no-build option would undermine coverage/capacity objectives and would not address the structural and modernization need.
Alternative 3: Lower Height at Existing Site	A lower structure could reduce height but would reduce antenna elevation and would be less effective in clearing local terrain, mature trees, buildings, and the Hwy 17/Bell Vista corridor.	Not a better alternative. Lower heights would not provide the same coverage/capacity objective and would compromise the existing network role. The proposed facility is 78 feet tall to the uppermost faux branch, with the active antenna elevations set at the minimum practical height needed to maintain the site's coverage and capacity role while improving stealthing and concealment.
Alternative 4: New Location Elsewhere on PG&E / Utility Parcel	A different location on the same general parcel may appear similar, but it would require new site design, new foundation	Not preferred. The proposed location is tied to existing wireless infrastructure and is designed to maintain service

	location, new utility routing/access impacts, and may not align with the established lease and network coordinates.	during construction. Moving farther from the established site would not materially improve visual impacts and could increase disturbance and entitlement complexity.
Alternative 5: Los Gatos High School / Helm Field Area	The high school and athletic facilities are nearby and appear within the general service area.	Not a better candidate. The school is a sensitive/community use, would require a new wireless facility in a more publicly used setting, would create greater community concern, and would not avoid the need for a tall facility. It would also require new site control, school/district approvals, and more complicated construction and operations near students and athletic facilities.
Alternative 6: Downtown / Low-Rise Commercial Rooftops West/Northwest of Site	Downtown Los Gatos contains commercial buildings and rooftops, but most nearby structures are low-rise and located farther from the existing network point.	Not preferred. Rooftop alternatives are expected to be lower than the required antenna elevation, may be blocked by terrain, trees, and building parapets, and would require new lease/site control and rooftop structural approvals. A rooftop solution would also move the facility away from the existing network location.
Alternative 7: Commercial / Hotel Parcels East of Highway 17	Commercial/hotel uses east of Highway 17 may be near the search area, but are across the highway interchange and closer to residential and hospitality uses.	Not a better alternative. These parcels would require an entirely new facility, new access and utility arrangements, new site control, and likely greater visual exposure. They do not provide a clear technical or land use advantage over the existing utility/wireless location.
Alternative 8: Residential Parcels in the Surrounding Neighborhoods	Residential parcels exist west, south, and east of the site.	Not feasible or preferred. A new facility on a residential parcel would create greater land use and neighborhood compatibility concerns than use of the established PG&E/wireless site. Residential alternatives are less compatible than the existing utility setting and would not reduce community impacts.
Alternative 9: Separate New Ground-Mounted Tower Within Search Area	A new tower could theoretically be sited elsewhere if a willing landlord, zoning path, access, power, utilities, and RF location were available.	Not a better alternative. A new tower would increase proliferation, require new ground disturbance, create a new visual impact, require new lease negotiations, and likely face greater land use and neighborhood impacts. Replacement of the existing facility is the least intrusive approach.

5. Why the Existing Site Is the Least Intrusive and Most Feasible Alternative

The existing site is the least intrusive and most feasible alternative because it uses an established wireless/utility location rather than introducing a new wireless facility on a school, residential property, or new commercial parcel. The project replaces a 70-foot wood pole with a new 78-foot tall stealth monopine, measured to the uppermost faux branch, and does not require a new generator, new compound lighting, or a new fenced compound. The proposed stealth design provides a visual improvement over the existing exposed pole configuration.

The project also avoids service disruption. A new monopine can be constructed first and existing antennas/equipment can then be relocated and tested before the existing wood pole is removed. An off-site relocation would require new lease negotiations, a new land use process, new utility/access arrangements, new construction impacts, and potential service interruption, with no demonstrated improvement over the proposed replacement design.

6. Search Area Constraints

The surrounding search area includes a combination of highway interchange, Los Gatos Creek/open space, school and athletic facilities, residential neighborhoods, low-rise commercial areas, and hotel/restaurant uses. These conditions limit the availability of superior alternatives. The high school is not a better alternative because it is a sensitive community use and would introduce a new wireless facility into a more publicly used environment. Residential parcels are less compatible than the existing utility/wireless site. Low-rise commercial rooftops and hotel/commercial parcels do not provide a clear height, coverage, visual, or entitlement advantage.

The existing site is already located in a utility context on PG&E property, has existing access, and is already part of the wireless network. Relocating to another nearby property would likely increase land use conflict and would not avoid the technical need for a facility of comparable height.

7. Height and Design Alternative Analysis

The proposed facility is a 78-foot tall monopine when measured from existing natural grade to the uppermost faux branch, consistent with the Town's requested height description. The drawings identify the proposed antenna centerline at 64 feet AGL, the top of the underlying steel pole at approximately 70 feet AGL, and the uppermost monopine branches at 78 feet AGL. The proposed design is intended to screen the antennas and reduce visual contrast through a faux tree/monopine appearance.

A lower structure was considered but is not a better alternative. The existing network has been designed around this location and height. Lower antenna elevations would increase the likelihood of obstruction from trees, terrain, surrounding buildings, and the highway corridor, and would not provide the same coverage and capacity objective. The proposed design balances the minimum effective wireless height with stealthing and continued use of an existing site.

8. Community and Land Use Considerations

The replacement approach reduces community impacts compared to new off-site construction. The existing facility is already present in the neighborhood, and the replacement design improves concealment by using a monopine rather than an exposed wood pole. The project does not expand the use into a new neighborhood location, does not propose new lighting, and does not add a generator or other new noise source.

The nearby high school, athletic fields, residential neighborhoods, and downtown properties are not superior candidates. Placing the facility on a school or residential parcel would likely increase public concern and land use sensitivity. The existing PG&E/wireless facility site is a more appropriate location because it is already used for utility and telecommunications purposes and can be improved without establishing a new site elsewhere.

9. Conclusion

The proposed replacement of the existing 70-foot wood pole with a new 78-foot tall steel monopine, measured to the uppermost faux branch, at the current 42 Miles Avenue / Hwy 17 & Bell Vista site is the preferred alternative. It maintains an existing network location, preserves service continuity, uses an established wireless/utility site, improves concealment, avoids unnecessary proliferation of new towers, and minimizes additional land use impacts.

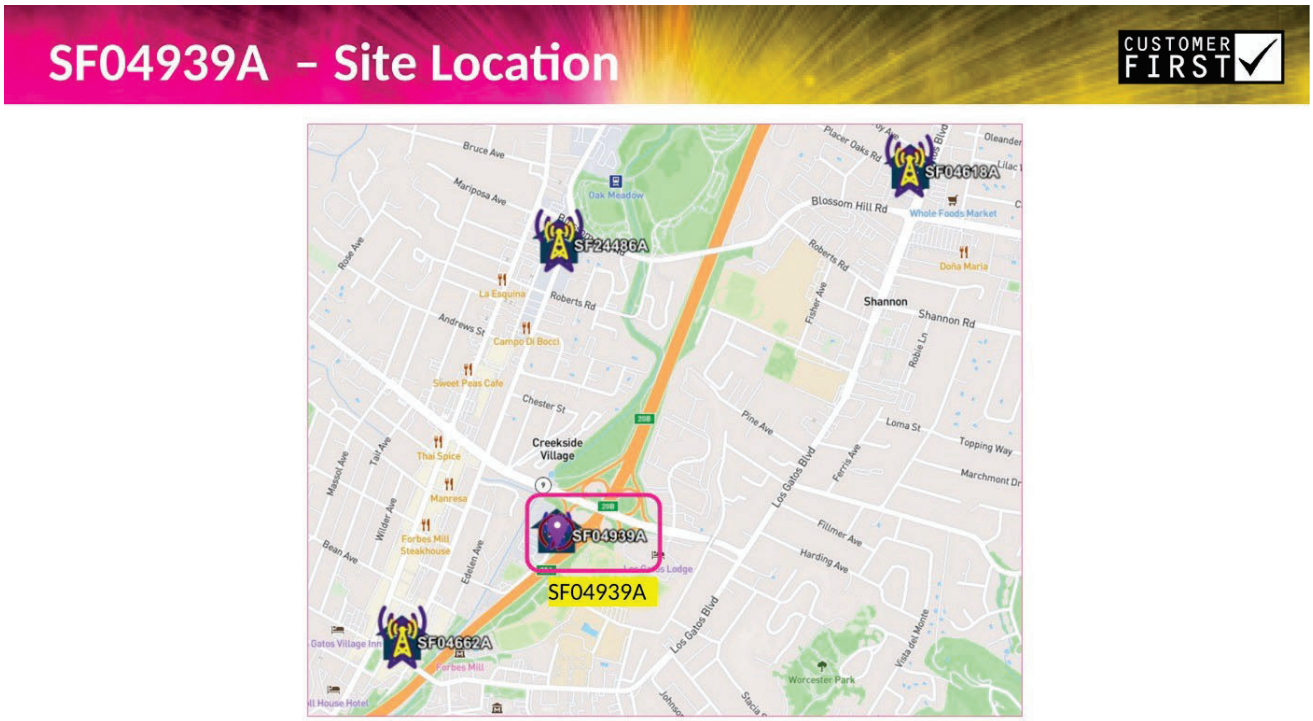
No reviewed alternative within the surrounding search area provides a better combination of coverage, feasibility, site control, land use compatibility, visual mitigation, and construction practicality. The existing site is therefore the least intrusive and most technically feasible alternative for meeting the project's coverage and capacity objectives.

Attachments / Exhibits Included in This Analysis

- Figure 1 - Site context / search area screenshot showing the existing/proposed Bella Vista site near Hwy 17, Miles Avenue, Bell Vista Avenue, Los Gatos High School/Helm Field, downtown Los Gatos, and surrounding residential/commercial uses.
- Figure 2 - Propagation coverage exhibit from the T-Mobile justification package showing coverage with and without the SF04939A site and the associated impacted population table.

- Revised project drawings dated June 19, 2026, including title sheet, site plans, antenna schedules, elevations, and survey attachments.
- Response to Staff Technical Review Comments and Project Narrative / Letter of Justification submitted for CUP Application U-26-002.

Additional Context - Site Location Exhibit



Hwy 17 & Bell Vista
Los Gatos, CA
37.22596, -121.97678

1.15 mi

CCL – Unknown' AGL – Utility
2 – RAD Centers (ATT TMO)
37.2317, -121.993

2.46 mi

CCL – 70' AGL – Monopole
1 – RAD Center (ATT)
37.25528, -121.95111

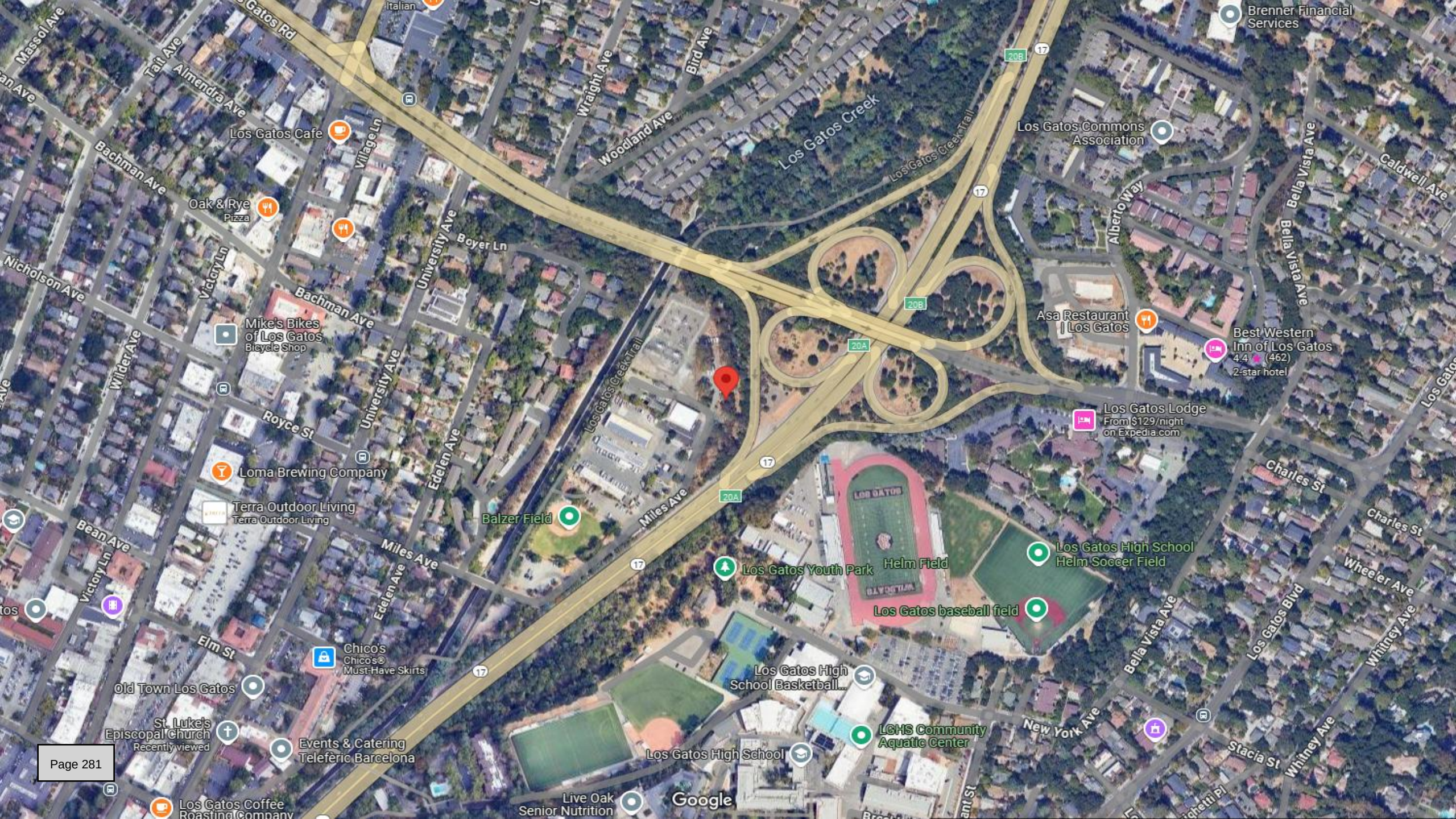
CA27386-U– 70' AGL – Utility
1 – RAD Center (TMO)

1.02 mi

CCL – 65' AGL – Monopole
ATC – 50' AGL – Monopole
2 – RAD Centers (TMO VZW)
37.22067, -121.99392

CCL – 25' AGL – Monopole
1 – RAD Center (TMO)
37.21151, -121.985

1.13 mi


Massol Ave
Tait Ave
Almendra Ave
Los Gatos Rd
Italian
Wright Ave
Bird Ave
Woodland Ave
Los Gatos Creek
Los Gatos Creek Trail
Brenner Financial Services
Los Gatos Commons Association
Bella Vista Ave
Caldwell Ave
Alberto Way
Los Gatos Cafe
Village Ln
Bachman Ave
Oak & Rye
Pizza
University Ave
Boyer Ln
Nicholson Ave
Victory Ln
Mike's Bikes of Los Gatos
Bicycle Shop
Wilder Ave
Royce St
Edelen Ave
Loma Brewing Company
Terra Outdoor Living
Terra Outdoor Living
Bean Ave
Miles Ave
Balzer Field
Los Gatos Youth Park
Helm Field
Los Gatos High School Helm Soccer Field
Los Gatos baseball field
Asa Restaurant | Los Gatos
Best Western Inn of Los Gatos
4.4 (462)
2-star hotel
Los Gatos Lodge
From $129/night
on Expedia.com
Charles St
Wheeler Ave
Whitney Ave
Los Gatos Blvd
Elm St
Chico's
Chico's®
Must-Have Skirts
Old Town Los Gatos
St. Luke's Episcopal Church
Recently viewed
Events & Catering
Teleférico Barcelona
Los Gatos High School Basketball...
LGHS Community Aquatic Center
Los Gatos High School
New York Ave
Stacia St
Live Oak Senior Nutrition
Los Gatos Coffee Roasting Company
Google
17
20B
20A

5G SS-RSRP

Percent	T-Mobile US	Verizon Wireless	AT&T US	FirstNet US	Boost
100	16%	26%	27%	14%	
90	29%	24%	35%		
80					
70					
60					
50	24%	12%			
40		11%	14%	64%	
30	14%				
20	16%	26%	15%		
10					

Averages

T-Mobile US	-99 dBm
Verizon Wireless	-99 dBm
AT&T US	-97 dBm
FirstNet US	-109 dBm

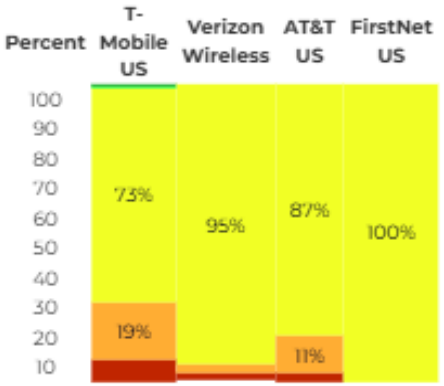
LTE RSRP

Percent	T-Mobile US	Verizon Wireless	AT&T US	CBRS	Boost
100	19%	23%	16%	100%	
90					
80	27%	31%	25%		
70					
60			20%		
50	23%	16%	11%		
40		10%			
30			28%		
20	20%	19%			
10					

Averages

T-Mobile US	-99 dBm
Verizon Wireless	-98 dBm
AT&T US	-101 dBm
CBRS	-79 dBm

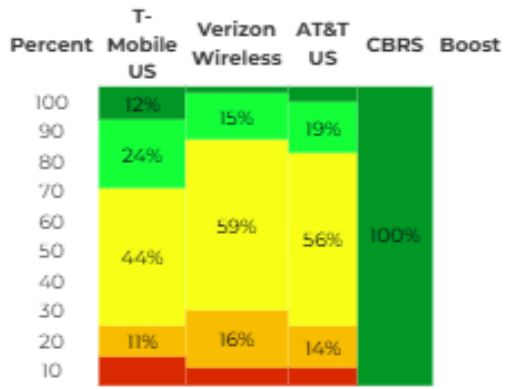
5G SS-RSRQ



Averages

T-Mobile US	-12 dB
Verizon Wireless	-11 dB
AT&T US	-11 dB
FirstNet US	-12 dB

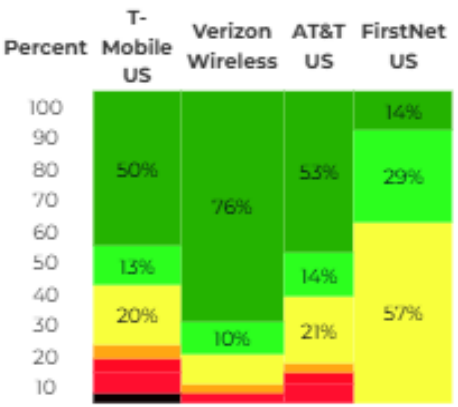
LTE RSRQ



Averages

T-Mobile US	-10 dB
n Wireless	-11 dB
S	-11 dB
CBRS	-6 dB

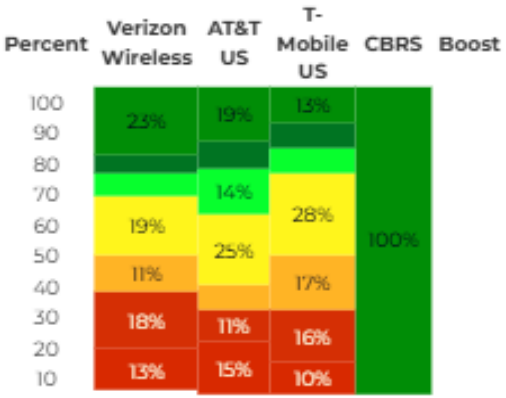
5G SS-SINR



Averages

T-Mobile US	10 dB
Verizon Wireless	18 dB
AT&T US	11 dB
FirstNet US	7 dB

LTE SNR



Averages

Verizon Wireless	5 dB
AT&T US	5 dB
T-Mobile US	4 dB
CBRS	27 dB

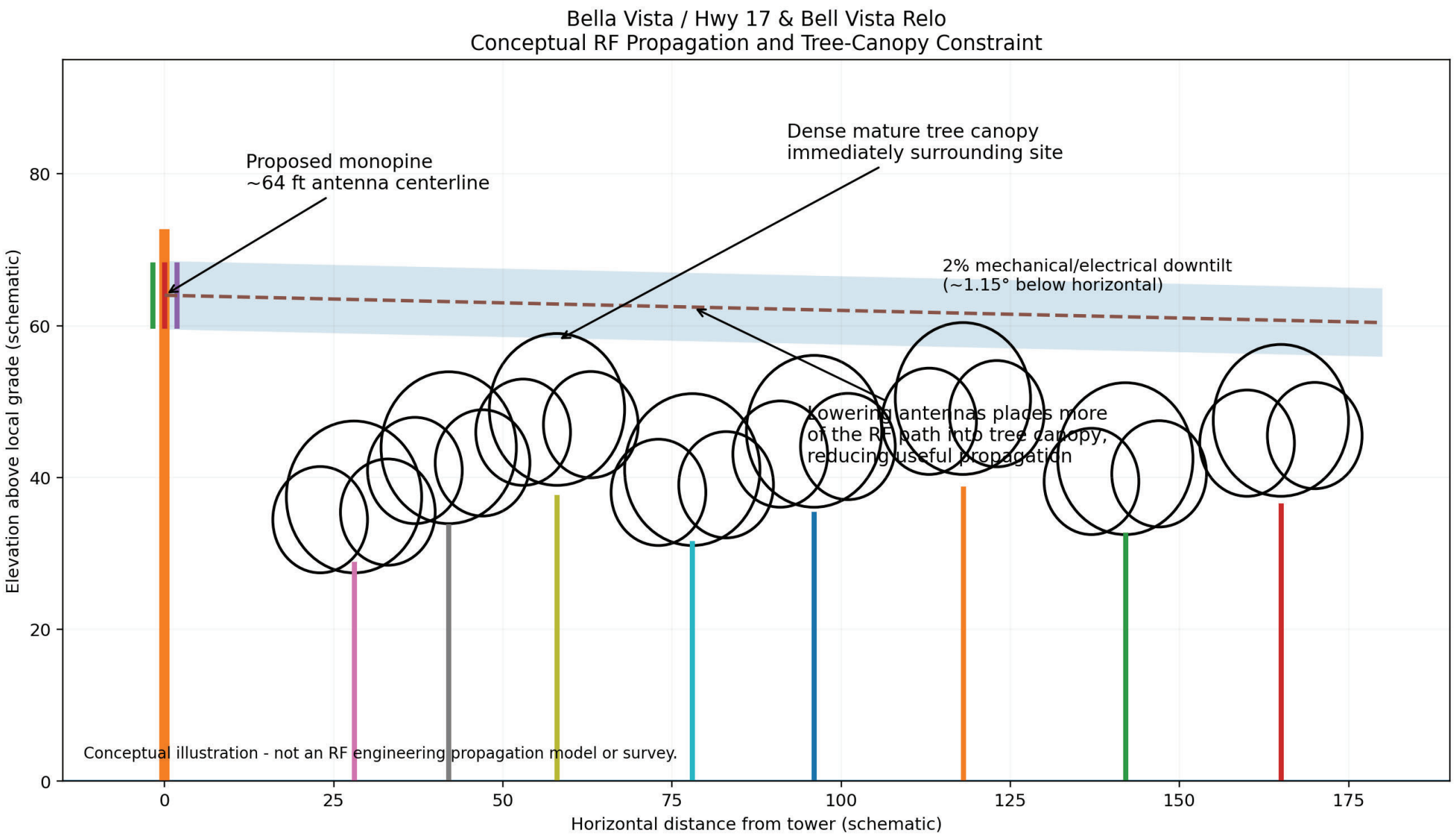

CA27386-U– 70’ AGL – Utility 1 – RAD Center (TMO)
Google Images November 2022


CCL – 65’ AGL – Monopole
ATC – 50’ AGL – Monopole
2 – RAD Centers (TMO VZW)
37.22067, -121.99392
Distance – 1.02 mi
Bing Maps 2025
40 Fairview Plz, Los Gatos, CA 95030-5818, United States


CCL – 25’ AGL – Monopole
1 – RAD Center (TMO)
37.21151, -121.985
Distance – 1.13 mi
Bing Maps 2025
300 College Ave, Los Gatos, CA 95030, United States


CCL – Unknown' AGL – Utility 2 – RAD Centers (ATT TMO)
37.2317, -121.993
Distance – 1.15 mi
Google Images February 2023


CCL – 70’ AGL – Monopole
1 – RAD Center (ATT)
37.25528, -121.95111
Distance – 2.46 mi
Bing Maps 2025
E Mozart Ave
16146
E Mozart Ave
16146 E Mozart Ave,
Los Gatos, CA 95032-
2015, United States


Bella Vista / Hwy 17 & Bell Vista Relo
Conceptual RF Propagation and Tree-Canopy Constraint
Proposed monopine
~64 ft antenna centerline
Dense mature tree canopy
immediately surrounding site
2% mechanical/electrical downtilt
(~1.15° below horizontal)
Lowering antennas places more
of the RF path into tree canopy,
reducing useful propagation
Conceptual illustration - not an RF engineering propagation model or survey.
Elevation above local grade (schematic)
Horizontal distance from tower (schematic)
0
20
40
60
80
0
25
50
75
100
125
150
175

SBA

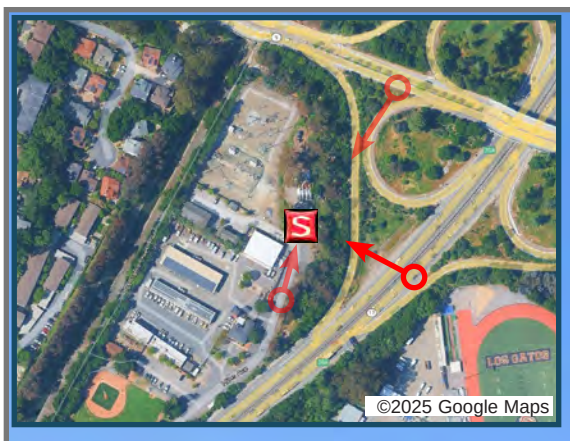
CA1B19C

Hwy 17 & Bell Vista RELO

Approx to 42 Miles Ave Los Gatos CA 95030

ARTISTIC engineering
AEsims.com
877.9AE.sims

View 1



Existing



Proposed Looking northwest from CA-17

Accuracy of photo simulation based upon information provided by project applicant.

EXHIBIT 6

SBA

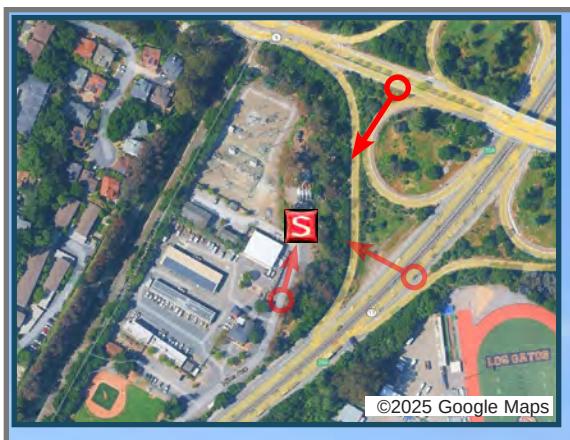
CA1B19C

Hwy 17 & Bell Vista RELO

Approx to 42 Miles Ave Los Gatos CA 95030

ARTISTIC engineering
AEsims.com
877.9AE.sims

View 2



Existing



Proposed Looking southwest from CA-9

Accuracy of photo simulation based upon information provided by project applicant.

SBA

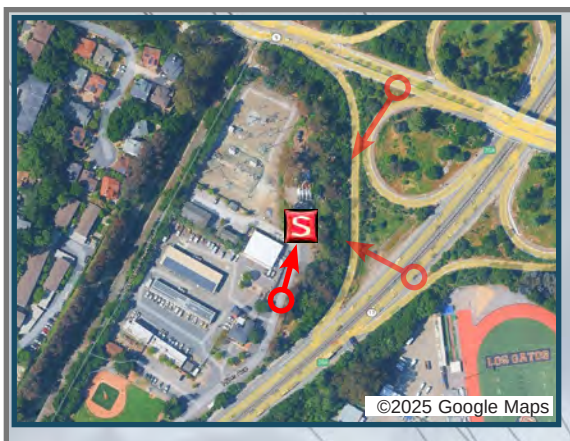
CA1B19C

Hwy 17 & Bell Vista RELO

Approx to 42 Miles Ave Los Gatos CA 95030

ARTISTIC engineering
AEsims.com
877.9AE.sims

View 3



Existing



Proposed Looking northeast from Miles Avenue

Accuracy of photo simulation based upon information provided by project applicant.

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RF EMISSIONS COMPLIANCE REPORT

Prepared for:

SBA Towers XI, LLC
8051 Congress Ave
Boca Raton, FL 33487

Site:

HWY 17 & BELL VISTA RELO
42 Miles Ave
Los Gatos, CA
37.225944, -121.976805

December 2, 2025

This site WILL BE IN COMPLIANCE with

FCC Regulations and MPE Limits:

T-Mobile Is 18.352% of General Population (GP) Limit

(3.67% of Occupational (Occ) Limit)

Certification
I have reviewed this RF Emissions assessment report and believe it to be both true and accurate to the best of my knowledge.

REGISTERED PROFESSIONAL ENGINEER
TIM ALEXANDER
No. E18344
Exp, 31 MAR 2026
Tim Alexander
ELECTRICAL
STATE OF CALIFORNIA

SIGNED, 2 DEC 2025

Analysis completed using Waterford's NIERTool© software.

Only clients and client representatives are authorized to provide input data through the Waterford web portal. In securing that authorization, clients and client representatives warrant the accuracy of all input data. Waterford Consultants, LLC attests to the accuracy of the engineering calculations. Waterford also attests that the results of those engineering calculations are correctly summarized in this report.

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New Technology Way, Suite 150 Frederick, Maryland 21703 (703) 596-1022 Phone www.waterfordconsultants.com

RF EMISSIONS COMPLIANCE STATEMENT

Site:
HWY 17 & BELL VISTA RELO
42 Miles Ave
Los Gatos, CA

Compliance Statement

Subject site COMPLIES with Radiofrequency Radiation Exposure Limits of 47 C.F.R. §§ 1.1307(b)(3) and 1.1310.

Ground Level Site Summary

Predicted cumulative RF power density at ground level as a percentage of the FCC General Population limits. This result is the sum of the maximum ground level MPE for each RF emitter by band of operation. Sites below 100% are in full compliance.

Source	Predicted Power Density, % of Limit (GP)
T-Mobile 600 MHz	0.590 %
T-Mobile 700 MHz	0.994 %
T-Mobile 1900 MHz	3.715 %
T-Mobile 2100 MHz	5.985 %
T-Mobile 2500 MHz	7.068 %
Sum of Listed Sources	**18.352%**

Antenna Level Site Summary

Predicted cumulative RF power density at elevated levels near the antenna(s) has been evaluated with respect to the FCC General Population limits. The mitigation measures recommended herein are necessary to achieve and maintain compliance at the site based on the following assessment:

Antenna Level Assessment

Signage directives for this report are specified in the Elevation Detail Plot which depicts predicted RF power density near the antenna as a percentage of the FCC General Population limits. Areas exceeding 100% of the General Population limits are depicted as blue. Any work required within areas exceeding 100% of the limits should be coordinated with wireless operators or performed by personnel trained in RF safety and equipped with personal protection equipment. Workers in areas depicted as green or clear will not be exposed to hazardous levels of RF energy and no action is required to maintain a safe working environment.

As shown in the Elevation Detail Plot, the following keep-back distances to the FCC limits have been determined:

Reference Level	Maximum Level: General Population (%)	Maximum Level: Occupational (%)
Ground Level	18.352	3.670
Antenna Level	9433.420	1886.680

Distance to FCC 100% MPE Limits at Antenna Level

- Vertical Stand Off Distance (General Population) 14 feet
- Vertical Stand Off Distance (Occupational) 12 feet
- Horizontal Stand Off Distance (General Population) 80 feet
- Horizontal Stand Off Distance (Occupational) 38 feet

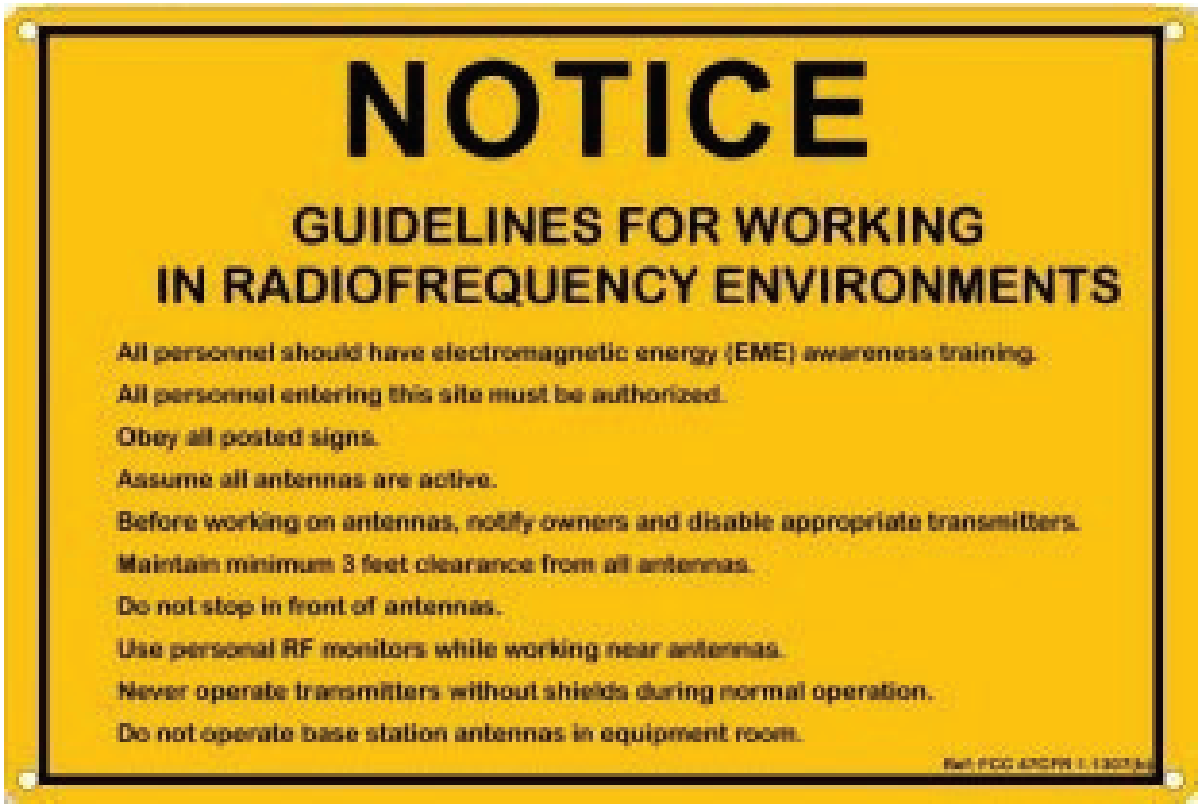
Distance to FCC 100% MPE Limits at Ground Level

- Horizontal Stand Off Distance (General Population) N/A
- Horizontal Stand Off Distance (Occupational) N/A

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RF Alerting Signage

The Ten Point Guideline sign should be posted at the last accessible area before someone can potentially enter an area that can cause exposure. It should be placed near the entrance of the equipment cabinets/shelter, and at the base of the cell tower.



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Technical Framework: Basis for Compliance Statement

The compliance framework is derived from the Federal Communications Commission (FCC) Rules and Regulations for preventing human exposure in excess of the applicable Maximum Permissible Exposure ("MPE") limits listed in Table 1 of 47 C.F.R. § 1.1310. Calculations using input data provided to Waterford by client or client's representative numerically confirm the subject site can operate at a 100% duty cycle without exceeding the FCC MPE limits in areas of uncontrolled access.

At this site, the radio frequency (RF) power density resulting from each transmitter at any location may be expressed as a percentage of the frequency-specific limits and added to determine if 100% of the exposure limit has been exceeded. The FCC Rules define two tiers of permissible exposure differentiated by the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. General Population / Uncontrolled exposure limits apply to those situations in which persons may not be aware of the presence of electromagnetic energy, where exposure is not employment related, or where persons cannot exercise control over their exposure. Occupational / Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment, have been made fully aware of the potential for exposure, and can exercise control over their exposure. Based on the criteria for these classifications, continuous exposure to RF power density levels below the FCC General Population limits is not hazardous. The FCC General Population limits are 5 times more restrictive than the Occupational limits.

	Limits for General Population/ Uncontrolled Exposure		*Limits for Occupational/ Controlled Exposure*	
Frequency (MHz)	Power Density (mW/cm^2)	Averaging Time (minutes)	Power Density (mW/cm^2)	Averaging Time (minutes)
30-300	0.2	30	1	6
300-1500	f/1500	30	f/300	6
1500-100,000	1.0	30	5.0	6

In situations where the predicted MPE exceeds the General Population threshold in an accessible area because of emissions from multiple transmitters, FCC licensees that contribute greater than 5% of the aggregate MPE share responsibility for mitigation.

For any location where radiofrequency (RF) power densities exceed 100% MPE of the General Population limits, access controls with appropriate RF alerting signage must be available to be visible upon approach from any direction to provide notification of potential conditions within these areas. Subject to other site security requirements, occupational personnel should be trained in RF safety and equipped with personal protective equipment (e.g. RF personal monitor) designed for safe work in the vicinity of RF emitters. Waterford Consultants, LLC recommends that any work activity in these designated areas or in front of any transmitting antennas be coordinated with the wireless operators.

Predictive Modeling

Based on the computational guidelines set forth in FCC Office of Engineering and Technology, Bulletin 65 ("OET65"), Waterford Consultants, LLC has developed software to predict the overall MPE possible at any particular location given the spatial orientation and operating parameters of multiple RF sources. These theoretical results represent worst-case predictions as emitters are assumed to be operating at maximum duty cycle.

The tabular analysis in this report calculates the spatial peak power density produced at ground level from each RF emitter. The far field power density in microWatts per square centimeter is expressed as Sff = 33.4 x ERP / R2 where ERP is the Effective Radiated Power along a specific azimuth in Watts and R is the distance from the antenna radiation center in meters. The antenna manufacturer's horizontal and vertical radiation patterns have been considered in determining the ERP in any direction. This computation is based on the maximum ERP and includes a 1.6-fold increase in field strength due to ground reflection. The result provides a conservative estimate of spatially averaged power density at ground level and may be higher than predicted MPE in the graphical plots described below.

As the limits are frequency dependent, the contribution of any RF source at a specific location may be expressed as a percentage of the FCC General Population MPE limits at the associated operating frequency. The percentage contributions from all RF sources are added to determine the overall exposure level. If this result is less than 100%, the predicted cumulative exposure level is below the General Population limits set forth in the FCC Rules. The cumulative MPE depicted on the summary page is the summation of maximum MPE values for each emitter regardless of antenna orientation.

A graphical plot of calculated spatially averaged RF power density, based on the Cylindrical Model as described in OET65, predicts spatially averaged MPE conditions at areas in near proximity to the antenna. In the vertical display, predicted MPE is depicted at the center of the 6 ft vertical zone that a person could occupy.

Qualifications of Waterford

With more than 100 team-years of experience, Waterford Consultants, LLC [Waterford] provides technical consulting services to clients in the radio communications and antenna locating industry. Waterford retains professional engineers who are placed in responsible charge of the processes for analysis.

Waterford is familiar with 47 C.F.R. § § 1.1307(b)(3) and 1.1310 along with the general Rules, Regulations and policies of the FCC. Waterford work processes incorporate all specifications of FCC Office of Engineering and Technology, Bulletin 65 ("OET65"), from the website: www.fcc.gov/oet/rfsafety and follow criteria detailed in 47 CFR § 1.1310 "Radiofrequency radiation exposure Limits".

Within the technical and regulatory framework detailed above, Waterford developed tools according to recognized and generally accepted good engineering practices. Permissible exposure limits are band specific, and the Waterford computerized modeling tools correctly calculate permissible exposure based on the band(s) specified in the input data. Only clients and client representatives are authorized to provide input data through the Waterford web portal. In securing that authorization, clients and client representatives attest to the accuracy of all input data.

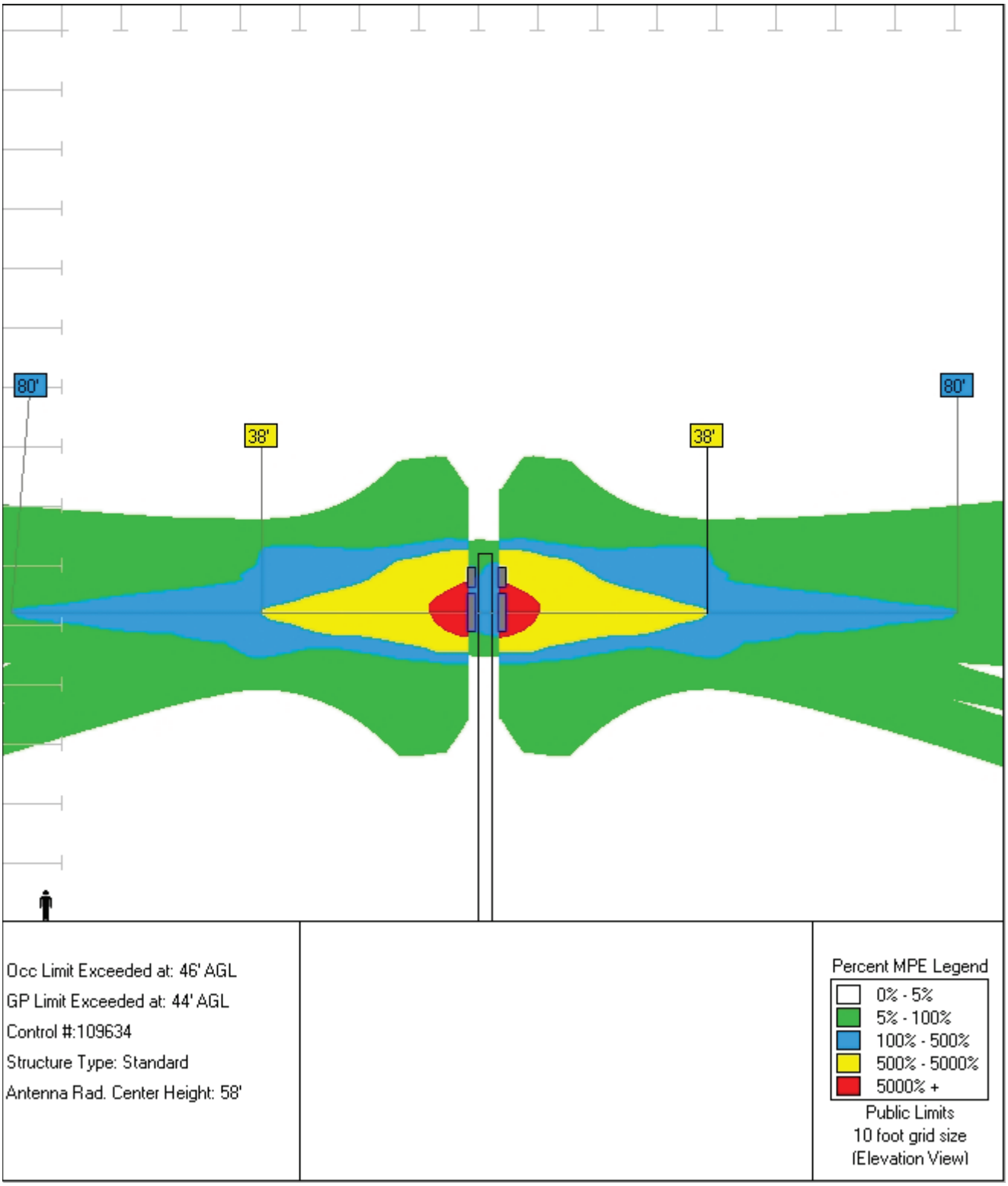
Waterford Consultants, LLC attests to the accuracy of the engineering calculations computed by those modeling tools. Furthermore, Waterford attests that the results of those engineering calculations are correctly summarized in this report.

Antenna Inventory

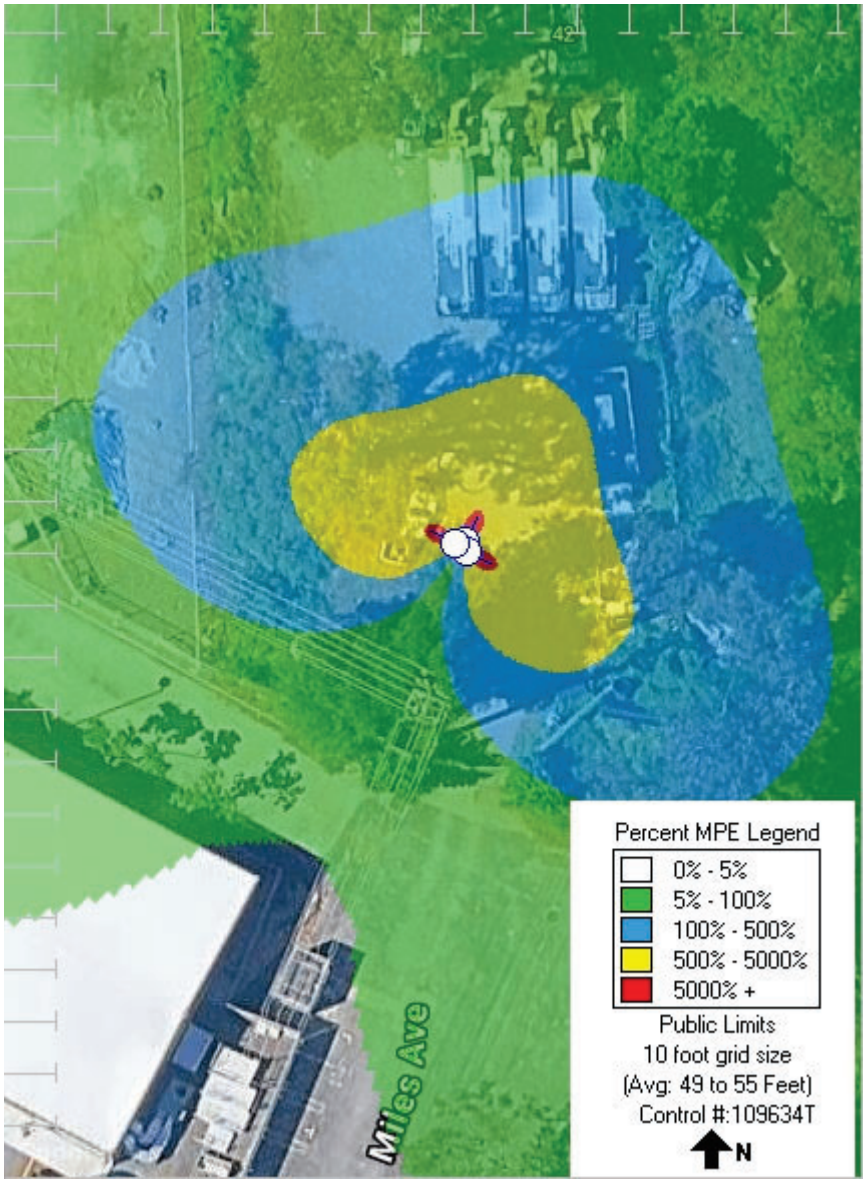
#	Operator	Make	Model	Freq (MHz)	Az (deg)	Tilt (deg)	HorBW (deg)	Ant (ft)	TPO (w)	Paths	Loss (db)	Ant Gain	Utilization %	Radiated Power (W)	RC AGL (ft)	RC AGL (ft, in.)
1	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 600	600	30	0	66	6	320.1151	1	0	11.66dBd	100	2344.900 ERP	52'	52'
2	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 600	600	120	0	66	6	320.1151	1	0	11.66dBd	100	2344.900 ERP	52'	52'
3	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 600	600	300	0	66	6	320.1151	1	0	11.66dBd	100	2344.900 ERP	52'	52'
4	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 700	700	30	0	62	6	320.1151	1	0	12.31dBd	100	4085.200 ERP	52'	52'
5	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 700	700	120	0	62	6	320.1151	1	0	12.31dBd	100	4085.200 ERP	52'	52'
6	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 700	700	300	0	62	6	320.1151	1	0	12.31dBd	100	4085.200 ERP	52'	52'
7	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 1900	1900	30	0	62	6	320.1151	1	0	150515.05 dBd	100	16793.800 EIRP	52'	52'
8	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 1900	1900	30	0	62	6	320.1151	1	0	150515.05 dBd	100	8396.900 EIRP	52'	52'
9	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 1900	1900	120	0	62	6	320.1151	1	0	150515.05 dBd	100	8396.900 EIRP	52'	52'
10	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 1900	1900	120	0	62	6	320.1151	1	0	150515.05 dBd	100	16793.800 EIRP	52'	52'
11	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 1900	1900	300	0	62	6	320.1151	1	0	150515.05 dBd	100	16793.800 EIRP	52'	52'
12	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 1900	1900	300	0	62	6	320.1151	1	0	150515.05 dBd	100	8396.900 EIRP	52'	52'
13	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 2100	2100	30	0	55	6	320.1151	1	0	15.53dBd	100	18756.400 EIRP	52'	52'
14	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 2100	2100	120	0	55	6	320.1151	1	0	15.53dBd	100	18756.400 EIRP	52'	52'
15	T-Mobile	RFS	APXVAALL18_43-U-NA20 02DT 2100	2100	300	0	55	6	320.1151	1	0	15.53dBd	100	18756.400 EIRP	52'	52'
16	T-Mobile	ERICSSON	SON_AIR6419 B41 NR TB 02.09.21 2500 TMO	2500	30	0	13	2.858	320.1151	1	0	22.05dBd	75	16045.800 EIRP	58'	58'
17	T-Mobile	ERICSSON	SON_AIR6419 B41 NR TB 02.09.21 2500 TMO	2500	120	0	13	2.858	320.1151	1	0	22.05dBd	75	16045.800 EIRP	58'	58'
18	T-Mobile	ERICSSON	SON_AIR6419 B41 NR TB 02.09.21 2500 TMO	2500	300	0	13	2.858	320.1151	1	0	22.05dBd	75	16045.800 EIRP	58'	58'

ELEVATION DETAIL

Predicted MPE depicted at the center of the 6 ft vertical zone that a person could occupy



TOP DOWN DETAIL



GROUND LEVEL MPE BY RF EMITTER

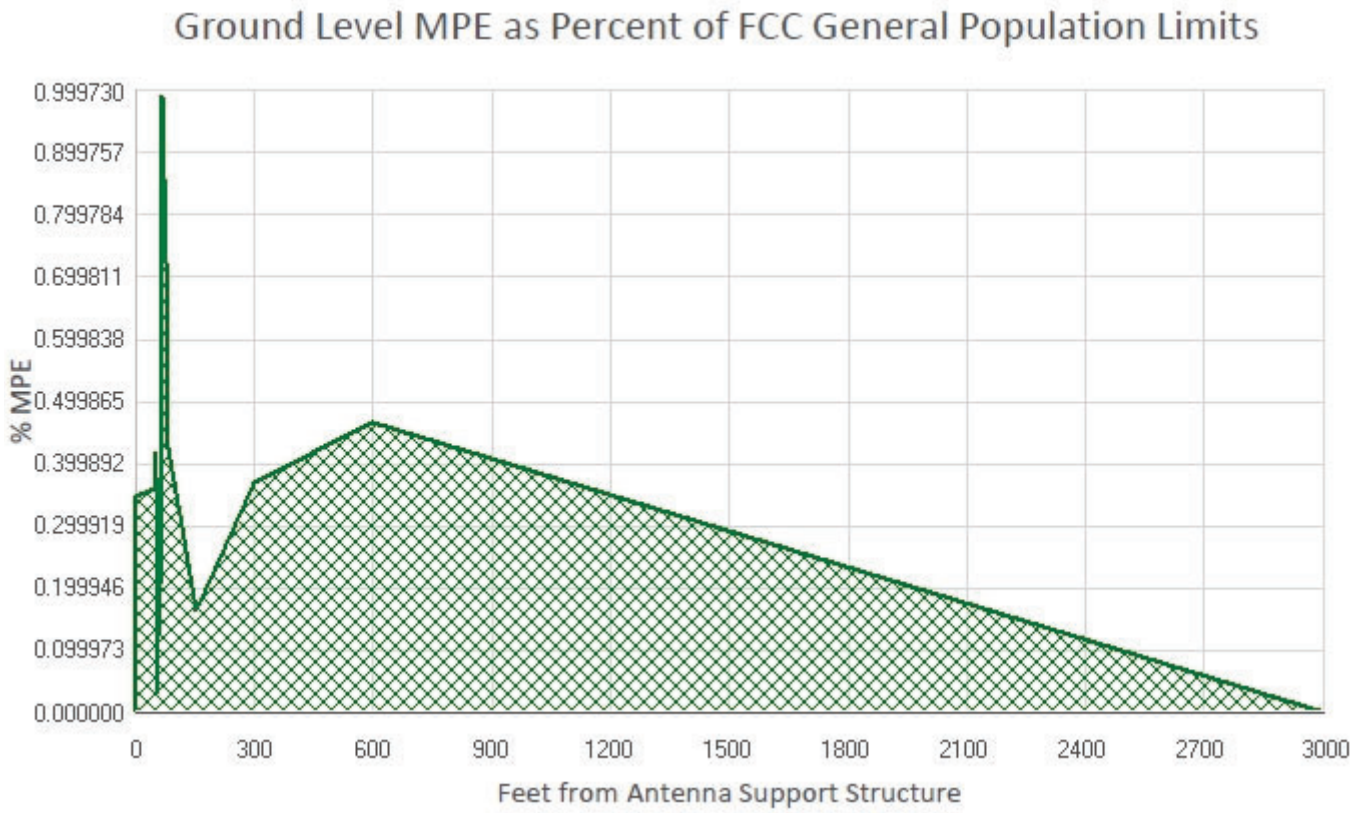
The maximum ground level MPE along the azimuth of orientation for each RF emitter by band of operation is listed below. The computational approach is described in the Predictive Modeling section. The maximum MPE by operator and band is contributive to the cumulative ground level MPE summary table presented above.

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 700 30° Sector

Maximum Exposure Limit - 700 MHz

Limit (GP): 466.000 µW/cm^2

ERP		**Height**		**Downtilt**	
(Watts)	4085.200	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 4.637 µW/cm^2

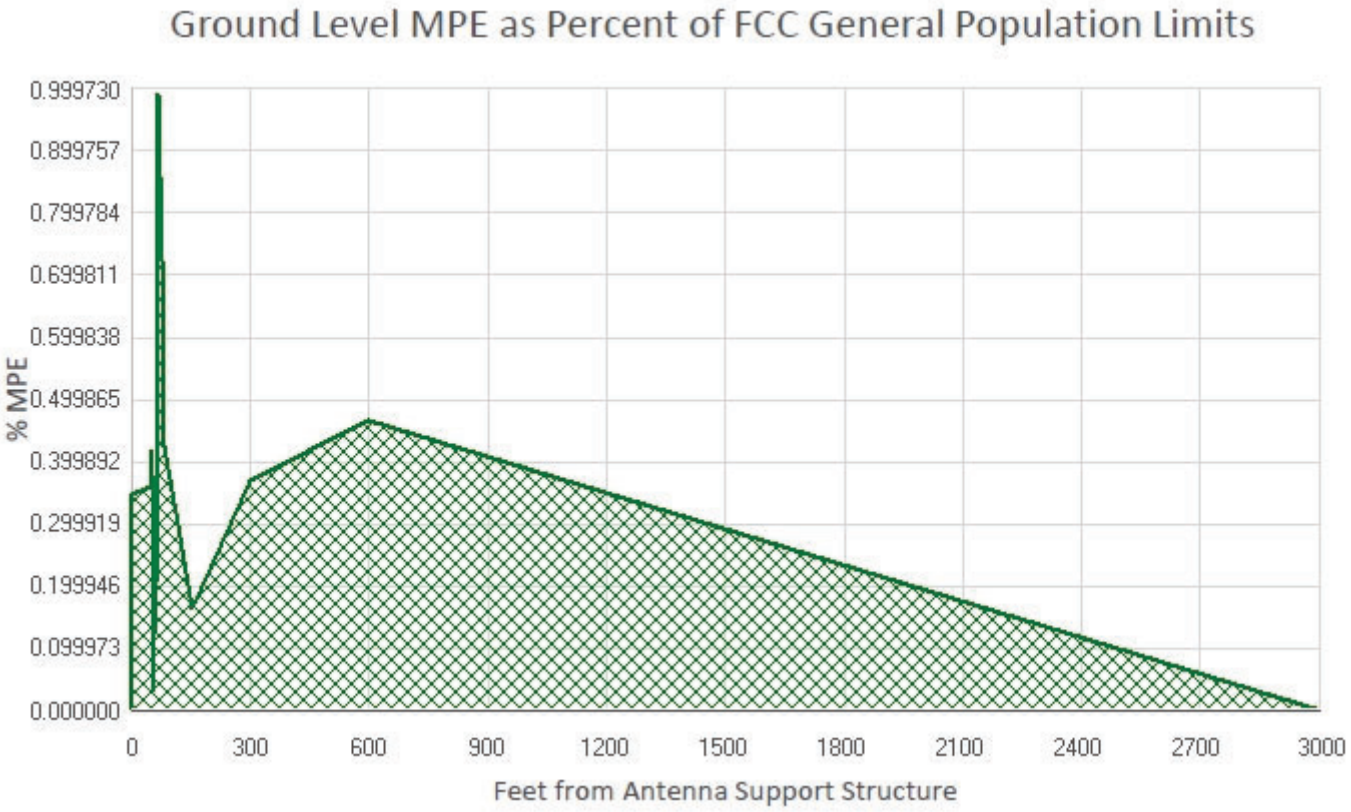
Highest percentage of Maximum Exposure Limit: 0.994 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 700 120° Sector

Maximum Exposure Limit - 700 MHz

Limit (GP): 466.000 µW/cm^2

ERP		**Height**		**Downtilt**	
(Watts)	4085.200	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 4.637 µW/cm^2

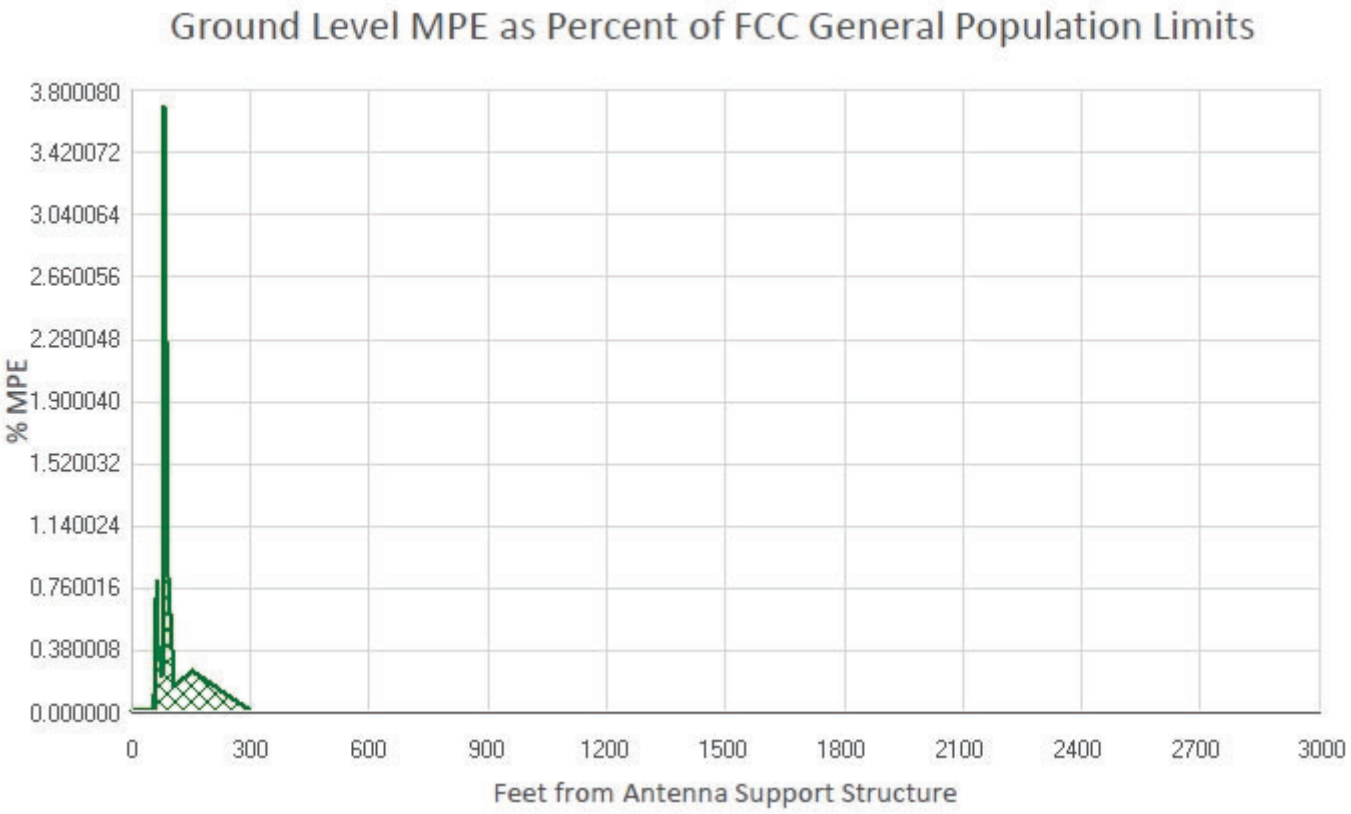
Highest percentage of Maximum Exposure Limit: 0.994 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 1900 30° Sector

Maximum Exposure Limit - 1900 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	16793.800	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 37.151 µW/cm^2

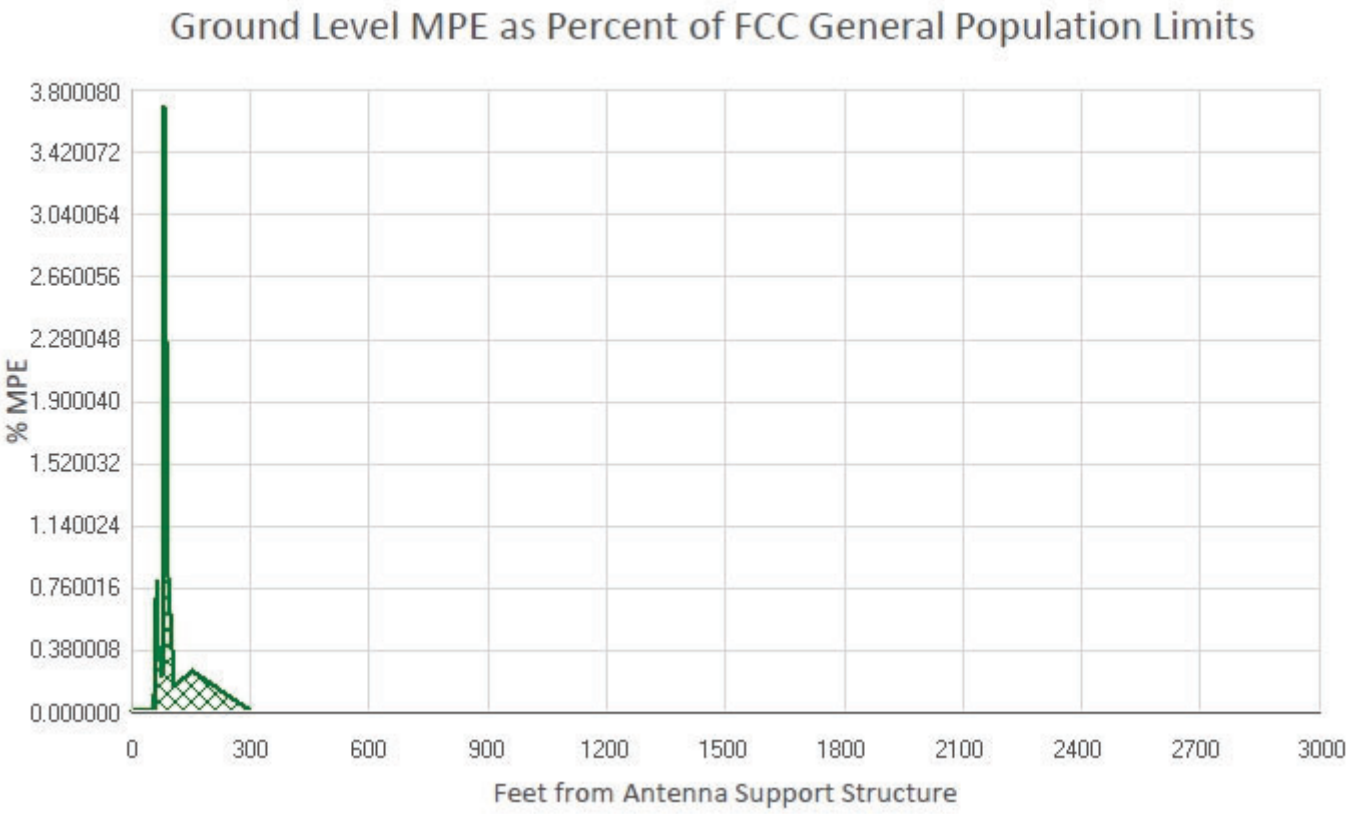
Highest percentage of Maximum Exposure Limit: 3.715 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 1900 120° Sector

Maximum Exposure Limit - 1900 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	16793.800	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 37.151 µW/cm^2

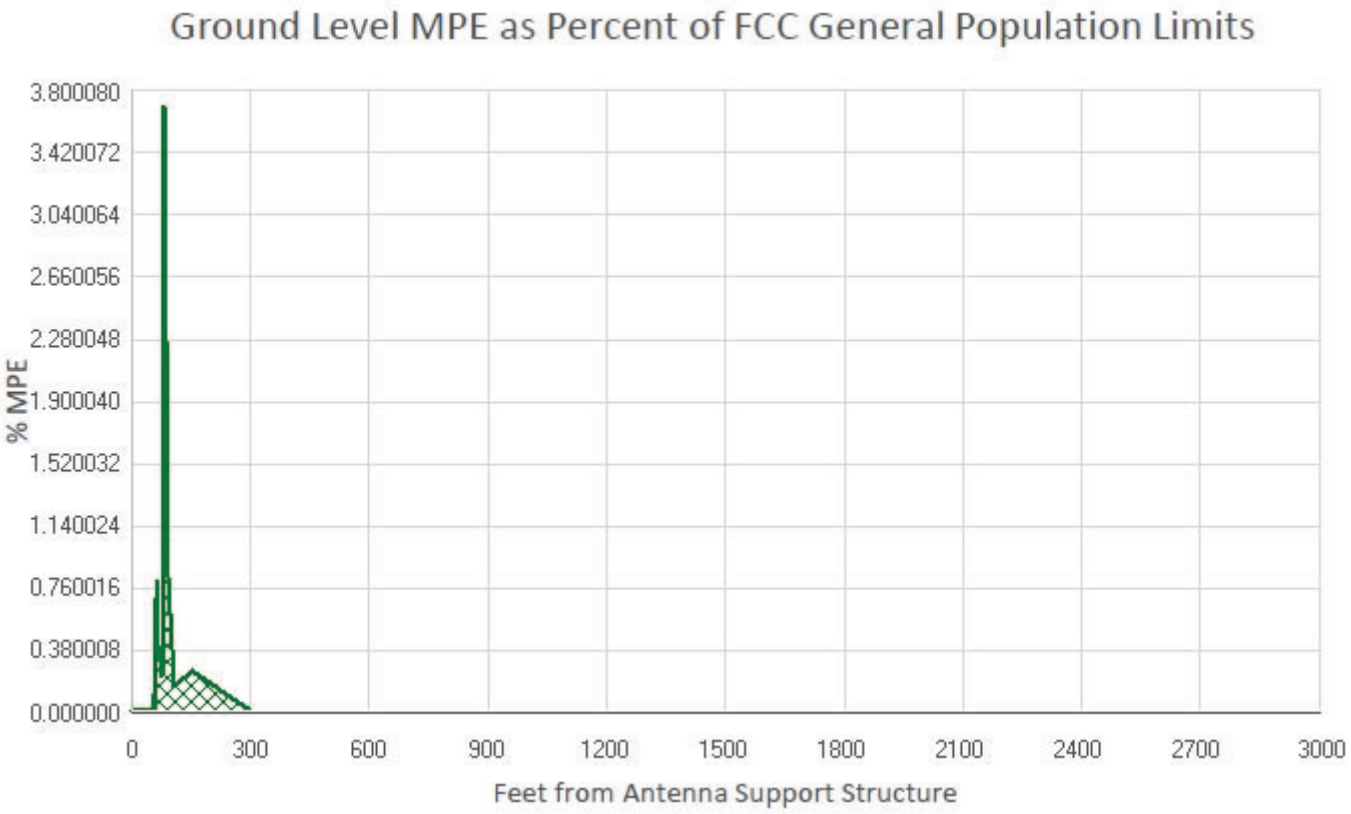
Highest percentage of Maximum Exposure Limit: 3.715 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 1900 300° Sector

Maximum Exposure Limit - 1900 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	16793.800	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 37.151 µW/cm^2

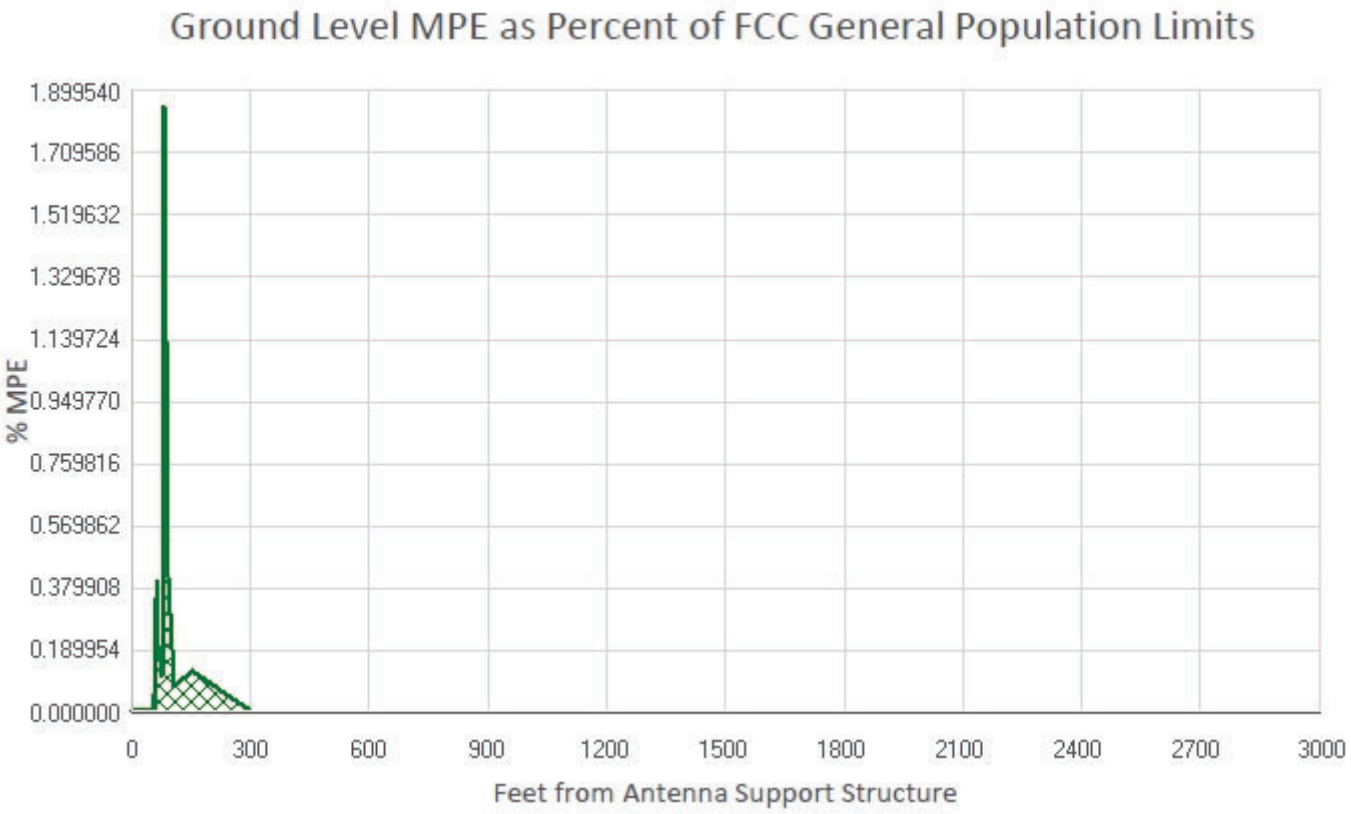
Highest percentage of Maximum Exposure Limit: 3.715 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 1900 300° Sector

Maximum Exposure Limit - 1900 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	8396.900	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 18.575 µW/cm^2

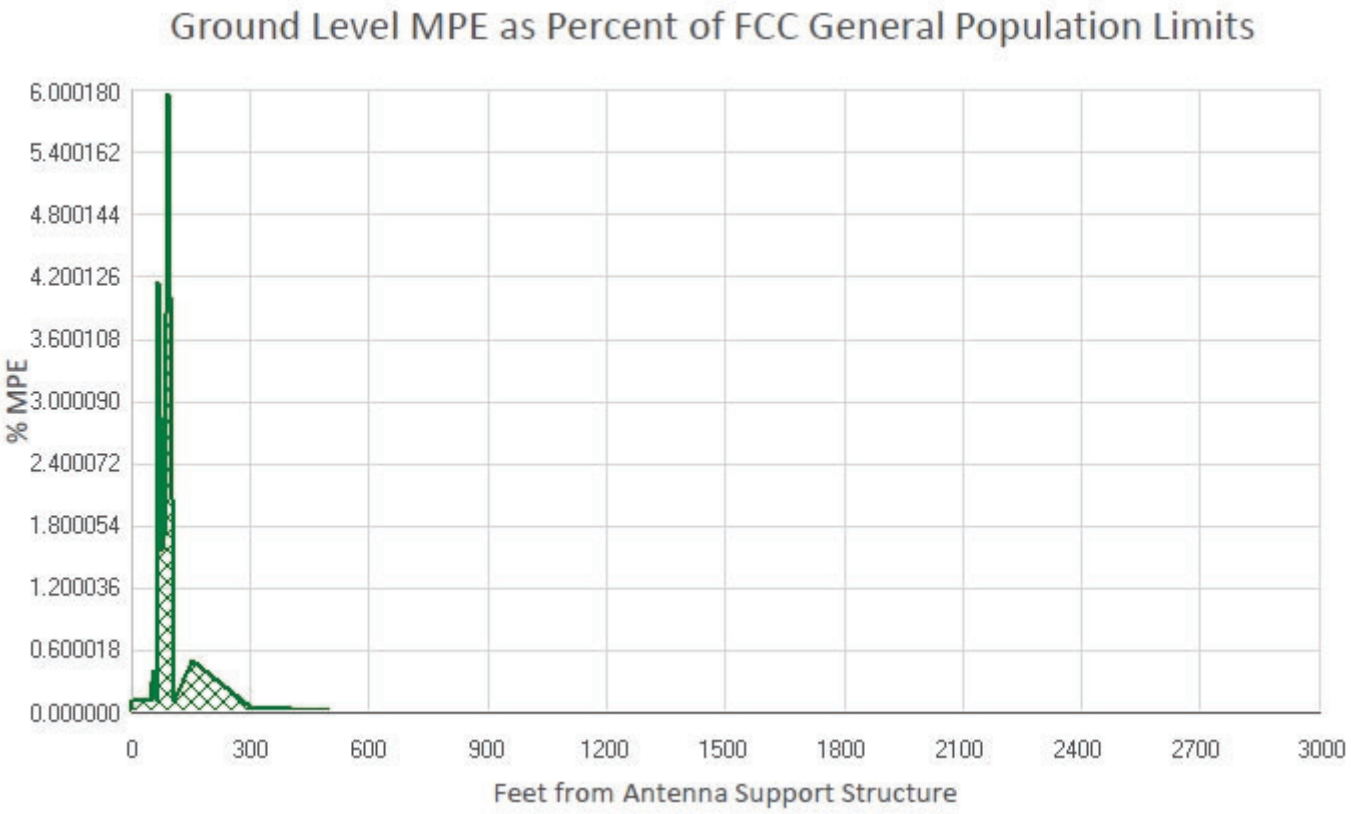
Highest percentage of Maximum Exposure Limit: 1.858 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 2100 30° Sector

Maximum Exposure Limit - 2100 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	18756.400	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 59.852 µW/cm^2

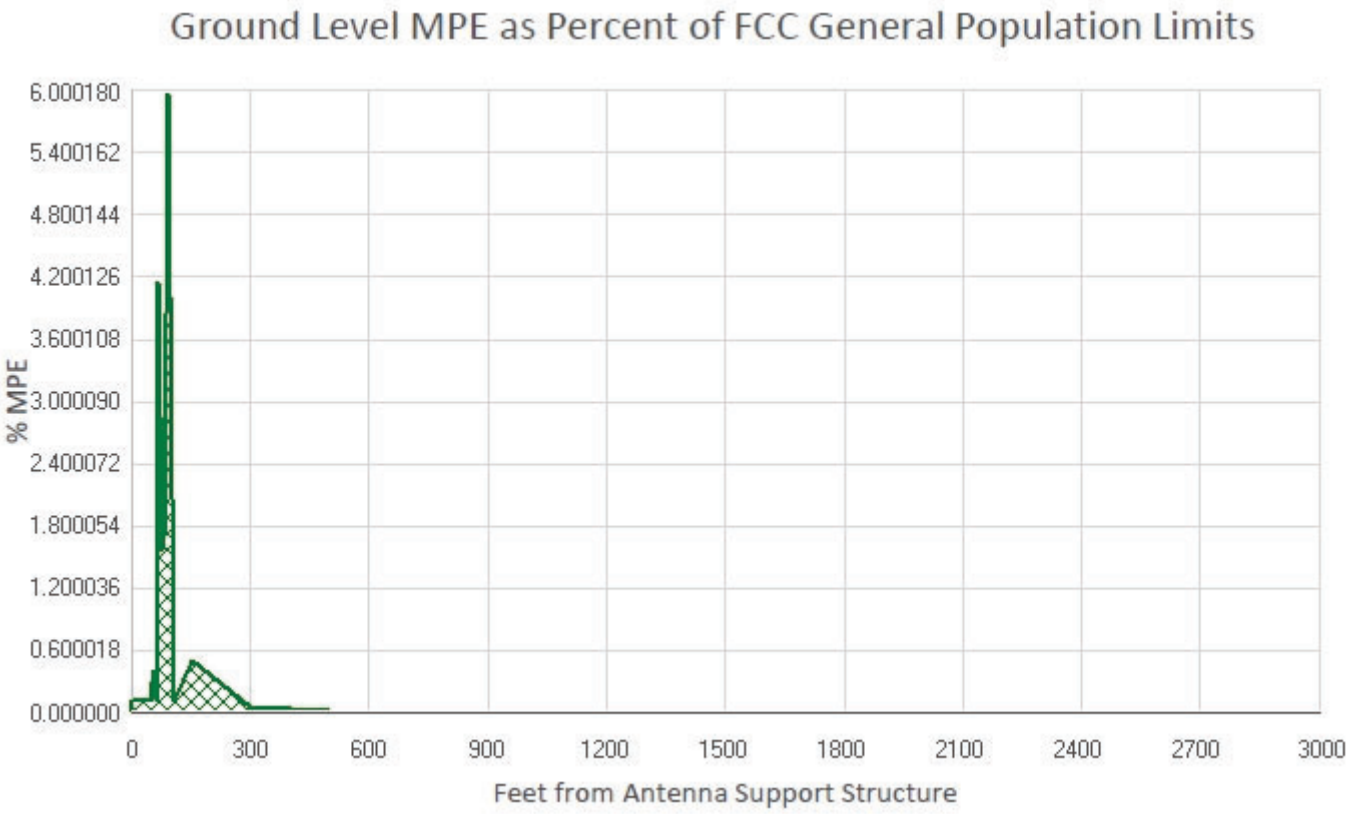
Highest percentage of Maximum Exposure Limit: 5.985 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 2100 120° Sector

Maximum Exposure Limit - 2100 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	18756.400	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 59.852 µW/cm^2

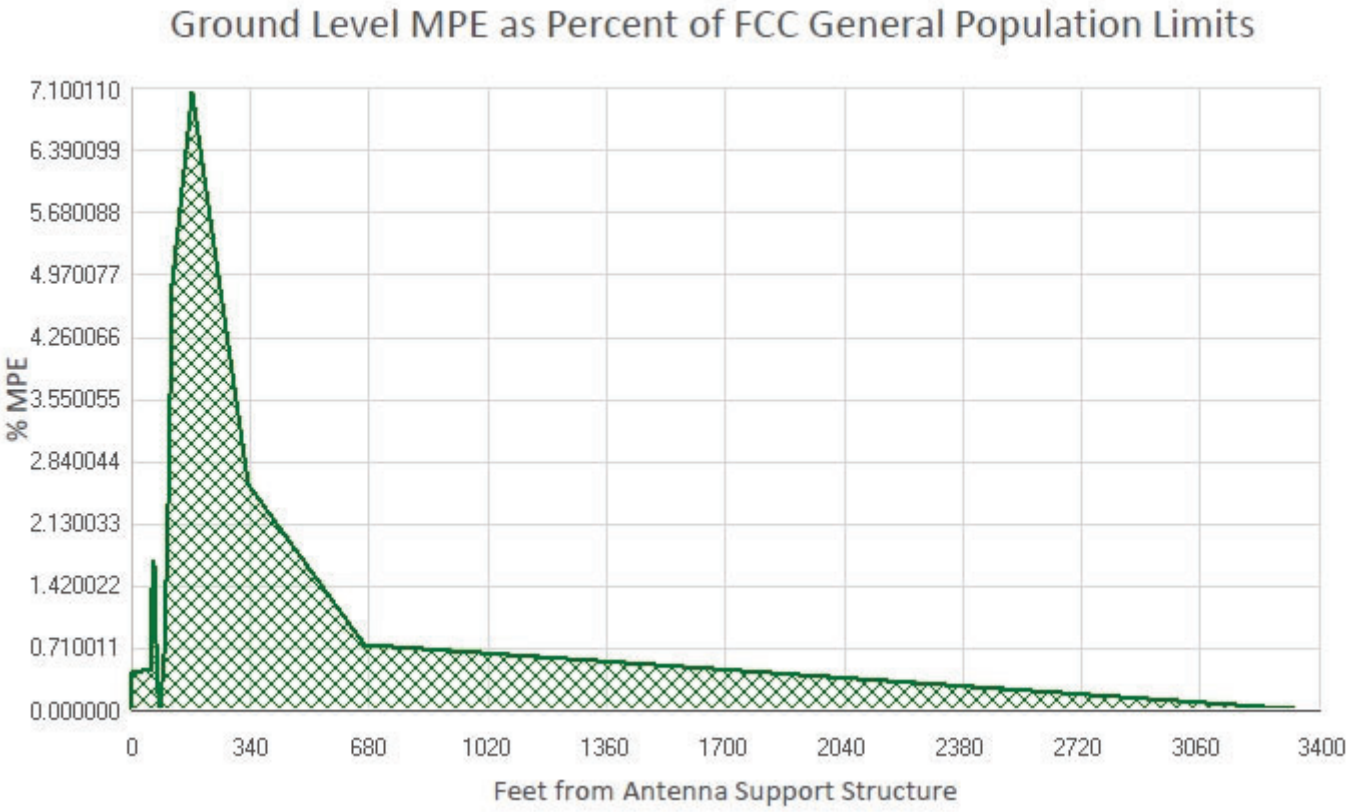
Highest percentage of Maximum Exposure Limit: 5.985 %

T-Mobile
HWY 17 & BELL VISTA RELO
ERICSSON - SON_AIR6419 B41 NR TB 02.09.21 2500 TMO 30° Sector

Maximum Exposure Limit - 2500 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	16045.800	(feet)	58.000	(Degrees)	0



Maximum power density at ground level: 70.681 µW/cm^2

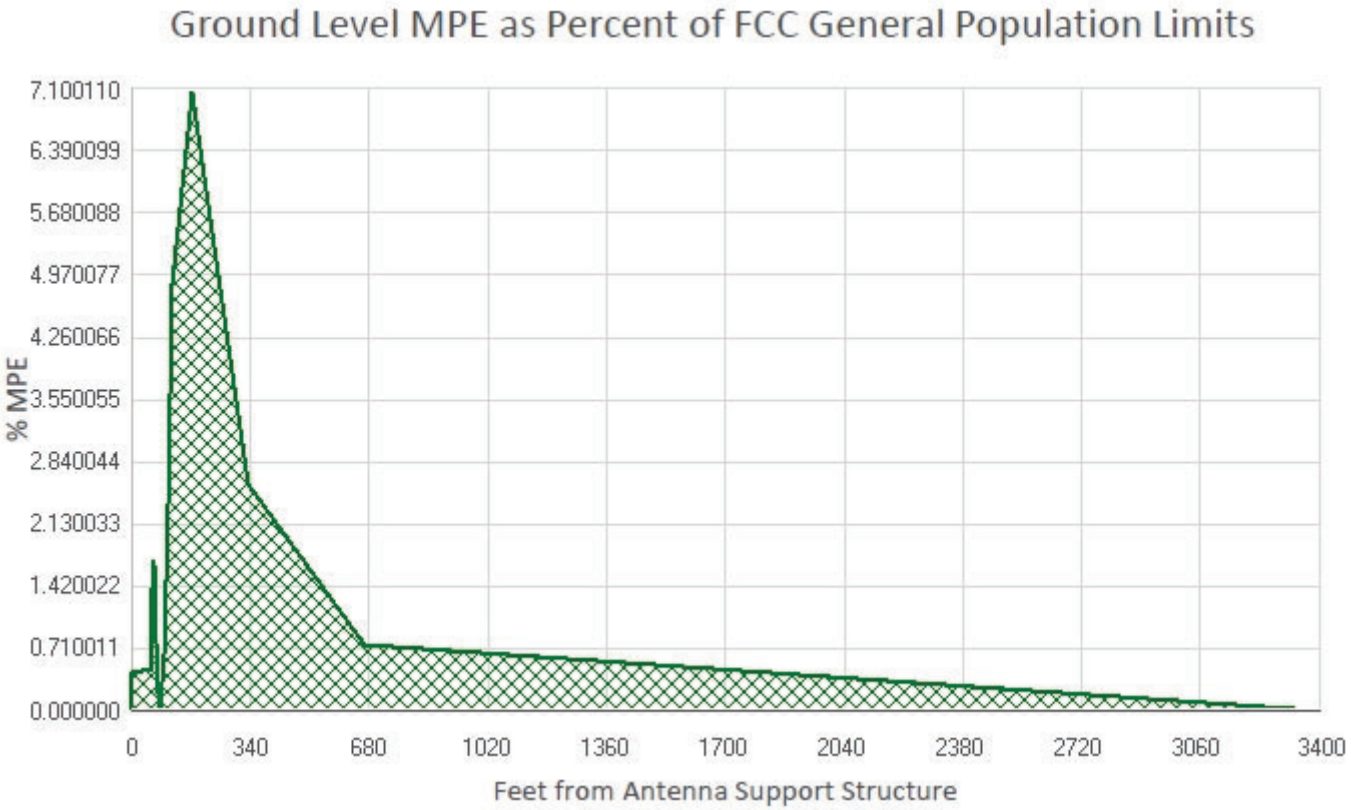
Highest percentage of Maximum Exposure Limit: 7.068 %

T-Mobile
HWY 17 & BELL VISTA RELO
ERICSSON - SON_AIR6419 B41 NR TB 02.09.21 2500 TMO 120° Sector

Maximum Exposure Limit - 2500 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	16045.800	(feet)	58.000	(Degrees)	0



Maximum power density at ground level: 70.681 µW/cm^2

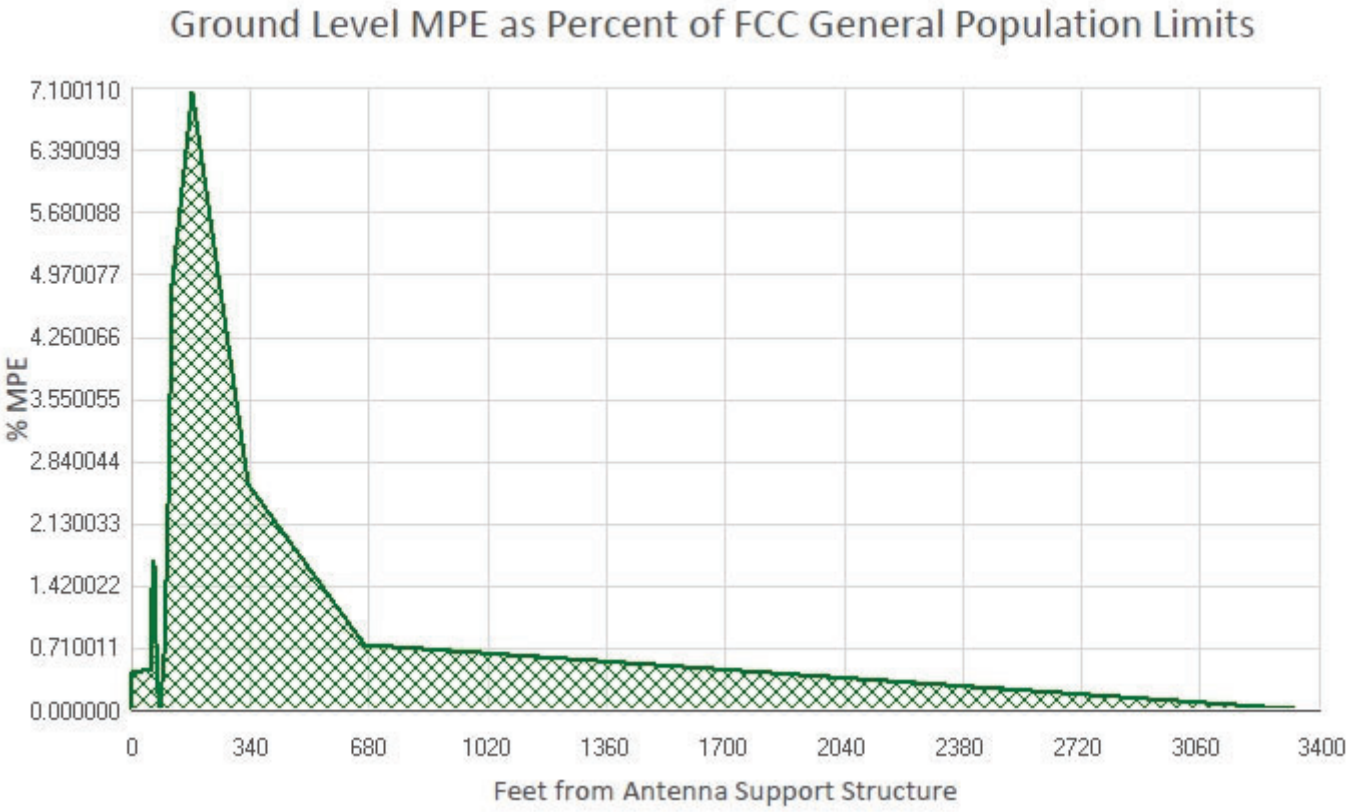
Highest percentage of Maximum Exposure Limit: 7.068 %

T-Mobile
HWY 17 & BELL VISTA RELO
ERICSSON - SON_AIR6419 B41 NR TB 02.09.21 2500 TMO 300° Sector

Maximum Exposure Limit - 2500 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	16045.800	(feet)	58.000	(Degrees)	0



Maximum power density at ground level: 70.681 µW/cm^2

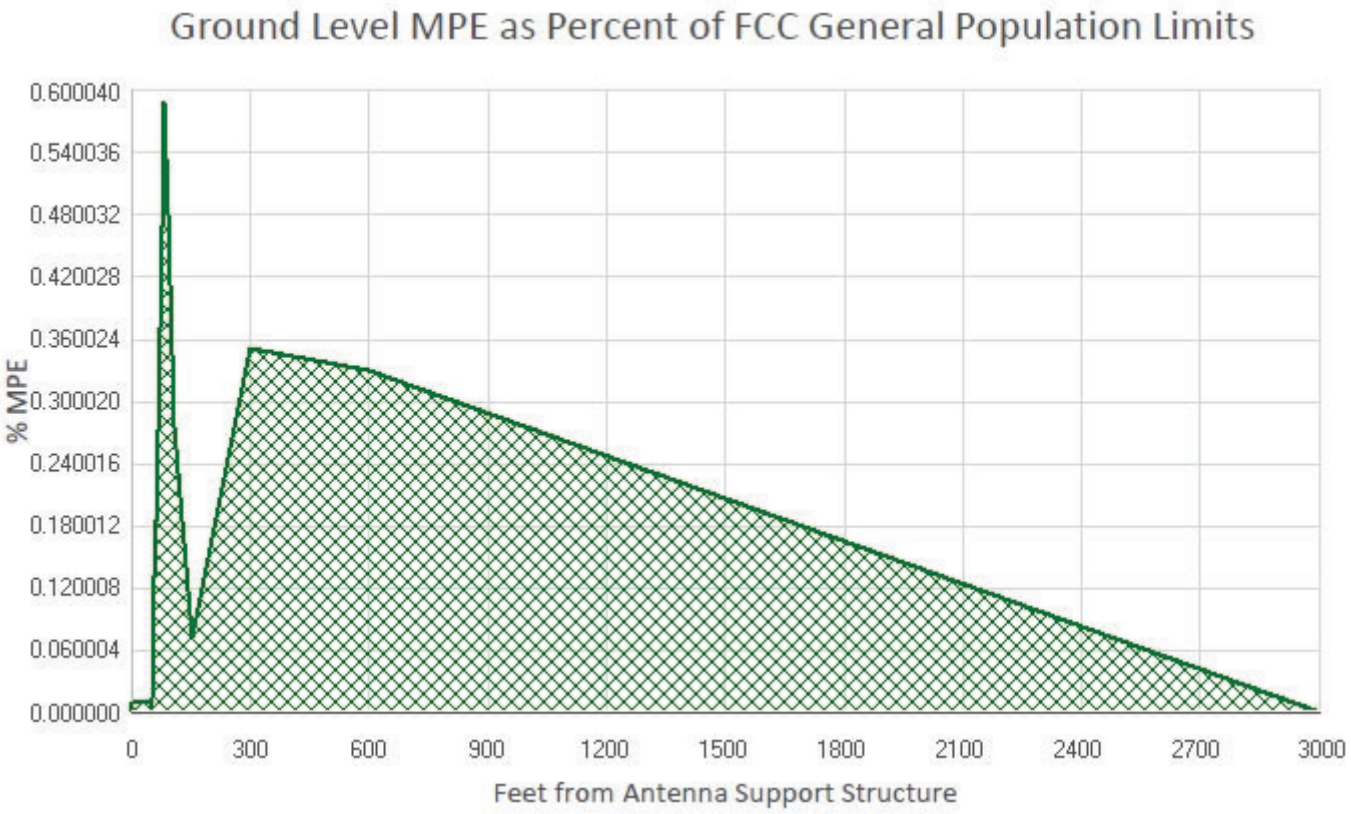
Highest percentage of Maximum Exposure Limit: 7.068 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 600 30° Sector

Maximum Exposure Limit - 600 MHz

Limit (GP): 400.000 µW/cm^2

ERP		Height		Downtilt	
(Watts)	2344.900	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 2.360 µW/cm^2

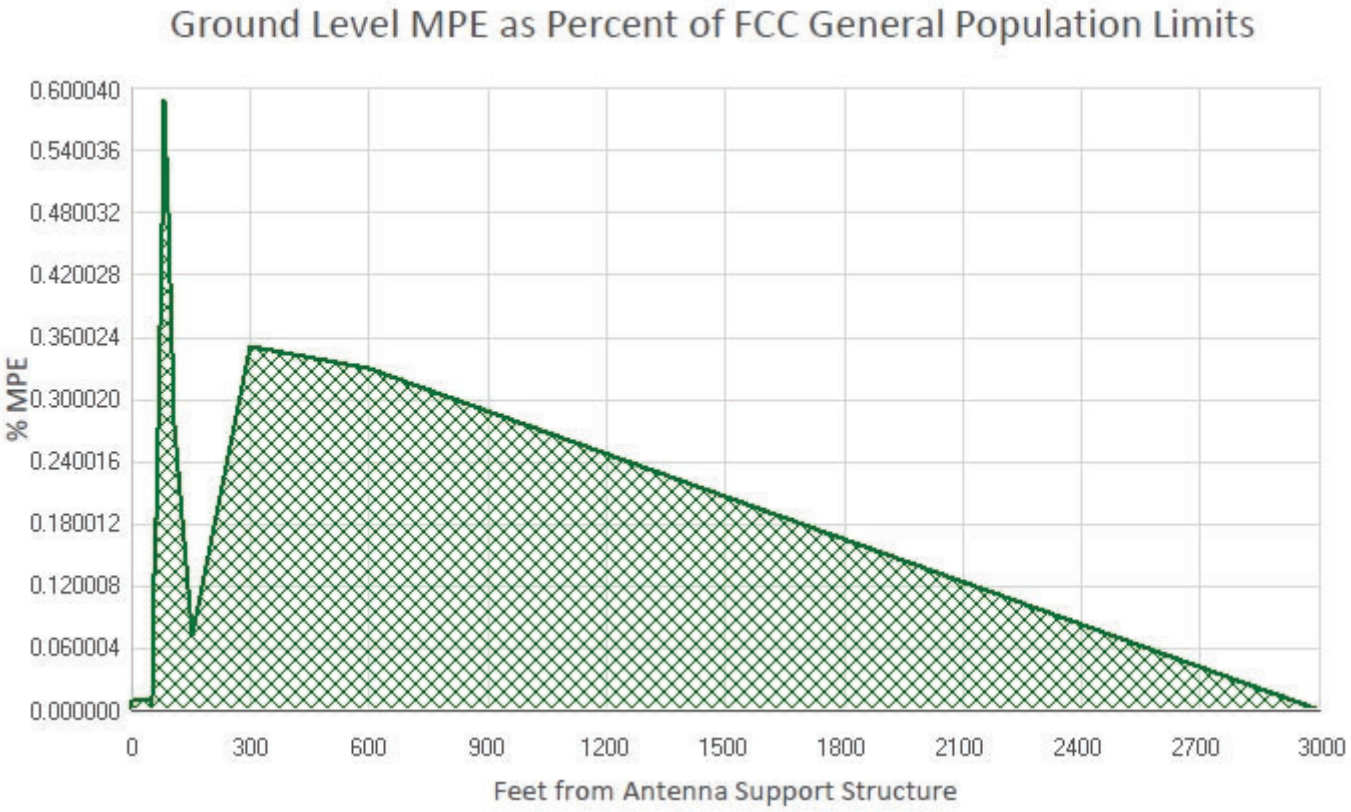
Highest percentage of Maximum Exposure Limit: 0.590 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 600 120° Sector

Maximum Exposure Limit - 600 MHz

Limit (GP): 400.000 µW/cm^2

ERP		**Height**		**Downtilt**	
(Watts)	2344.900	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 2.360 µW/cm^2

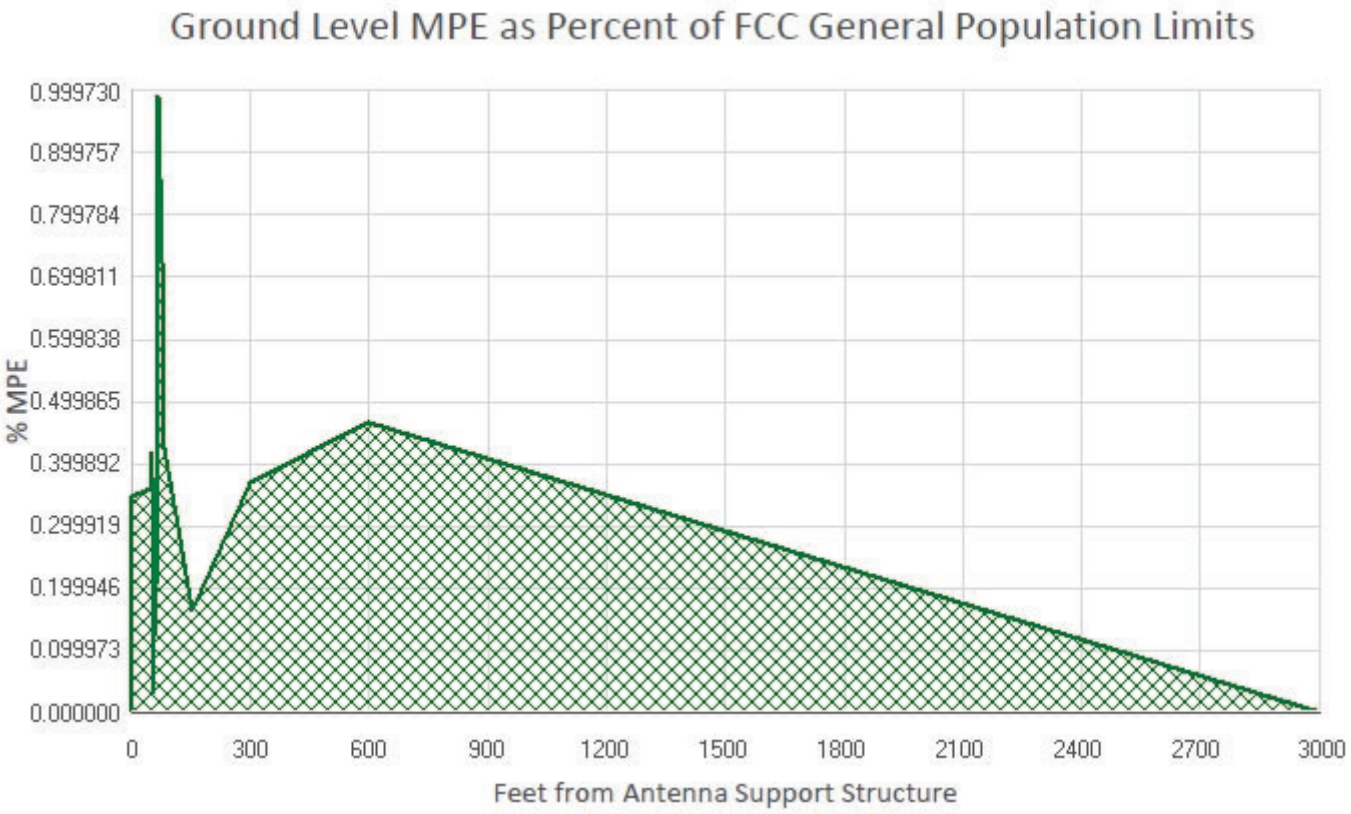
Highest percentage of Maximum Exposure Limit: 0.590 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 700 300° Sector

Maximum Exposure Limit - 700 MHz

Limit (GP): 466.000 µW/cm^2

ERP		**Height**		**Downtilt**	
(Watts)	4085.200	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 4.637 µW/cm^2

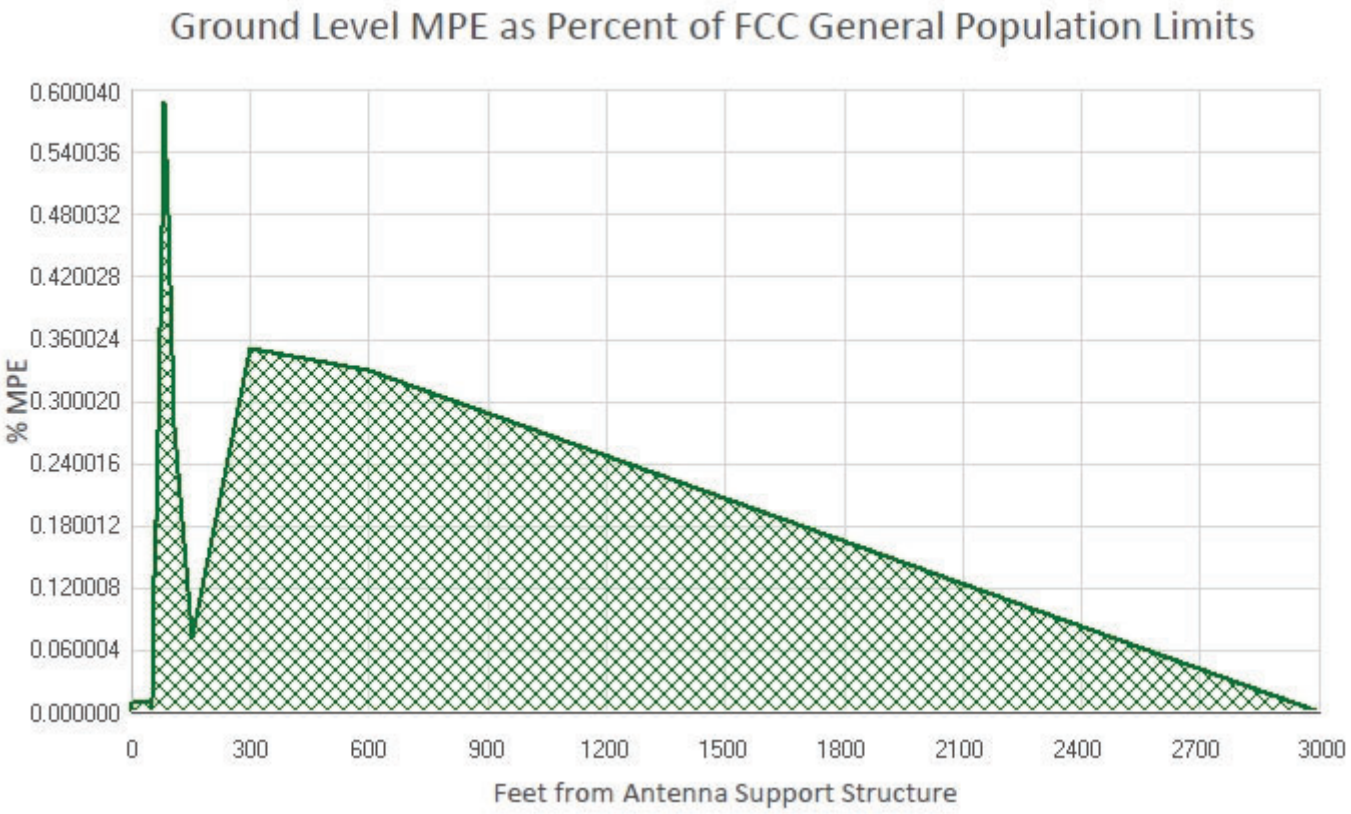
Highest percentage of Maximum Exposure Limit: 0.994 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 600 300° Sector

Maximum Exposure Limit - 600 MHz

Limit (GP): 400.000 µW/cm^2

ERP		**Height**		**Downtilt**	
(Watts)	2344.900	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 2.360 µW/cm^2

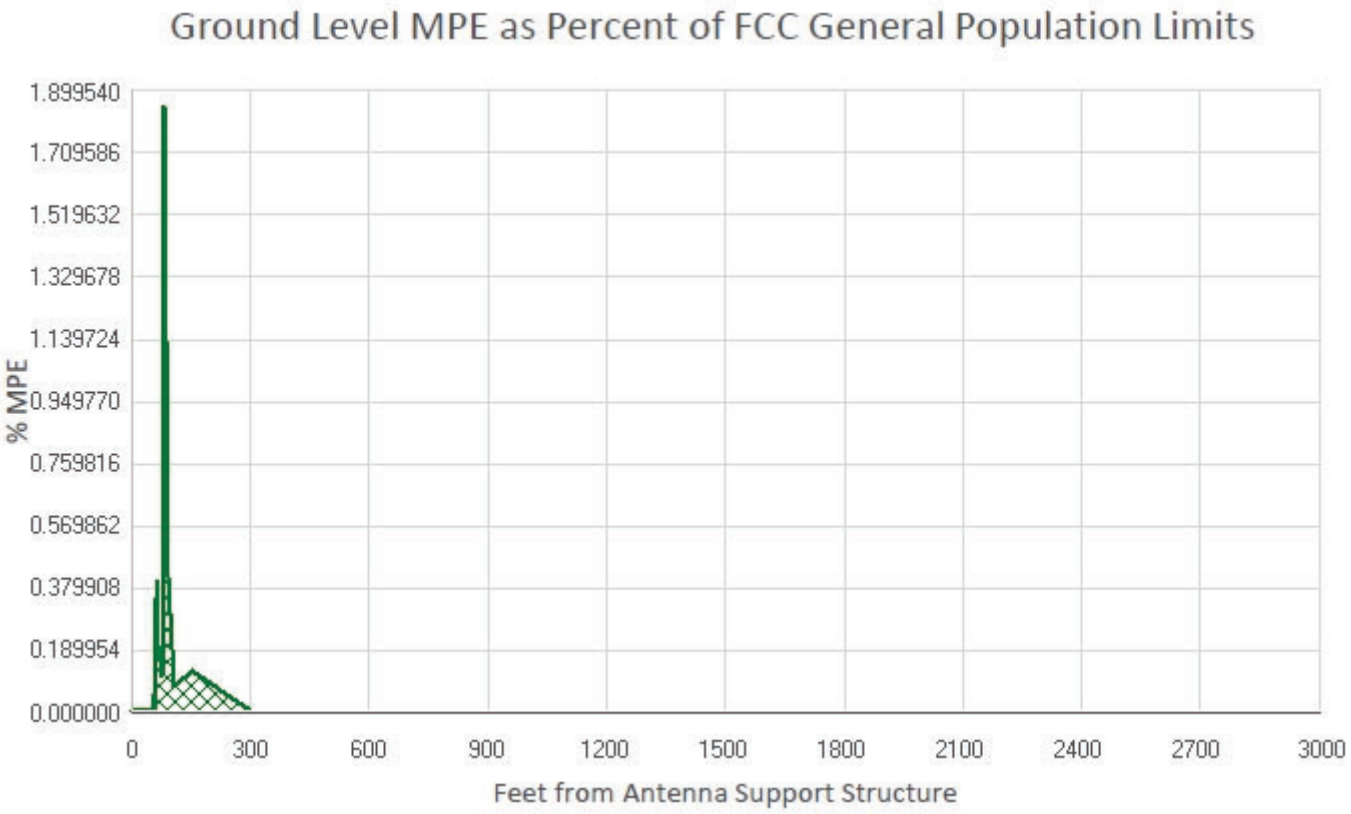
Highest percentage of Maximum Exposure Limit: 0.590 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 1900 30° Sector

Maximum Exposure Limit - 1900 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	8396.900	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 18.575 µW/cm^2

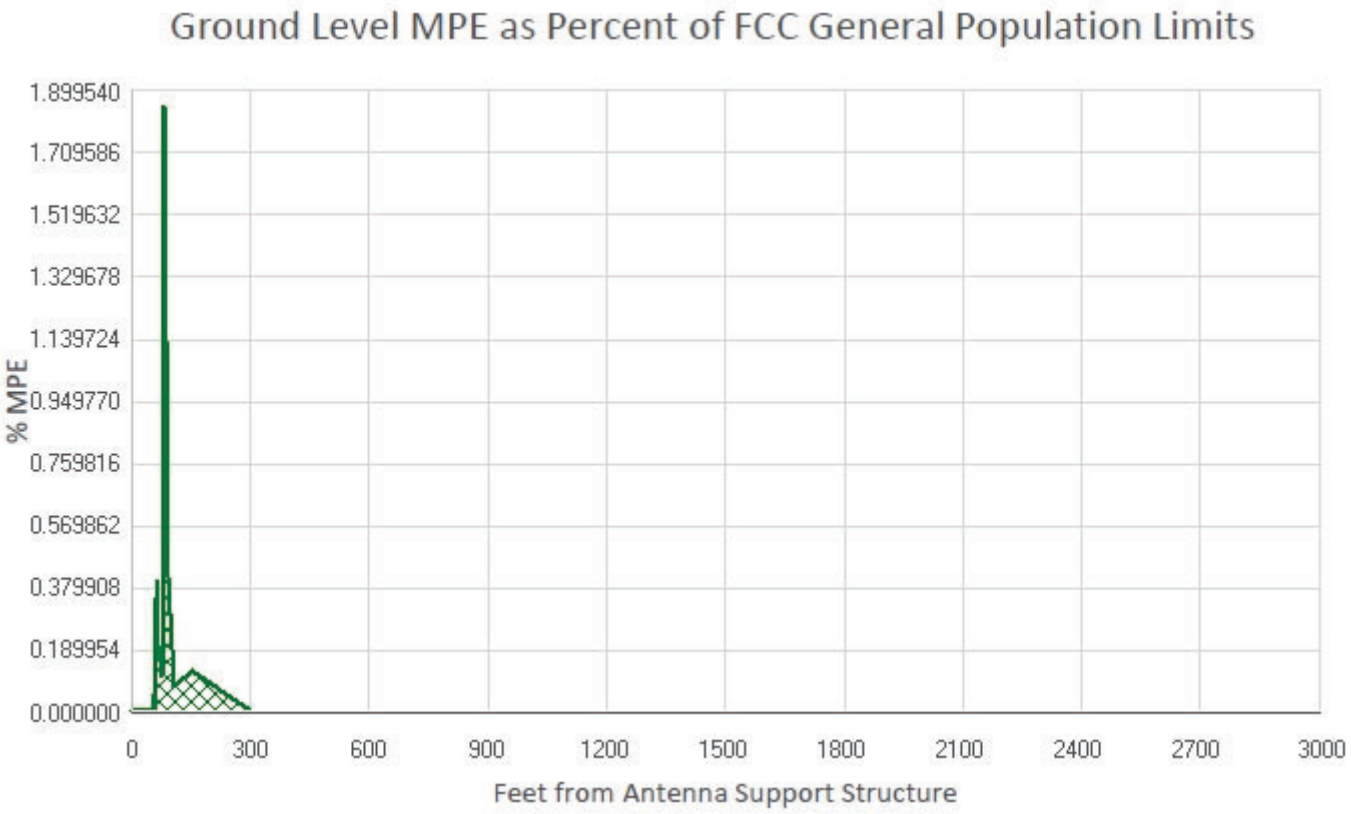
Highest percentage of Maximum Exposure Limit: 1.858 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 1900 120° Sector

Maximum Exposure Limit - 1900 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	8396.900	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 18.575 µW/cm^2

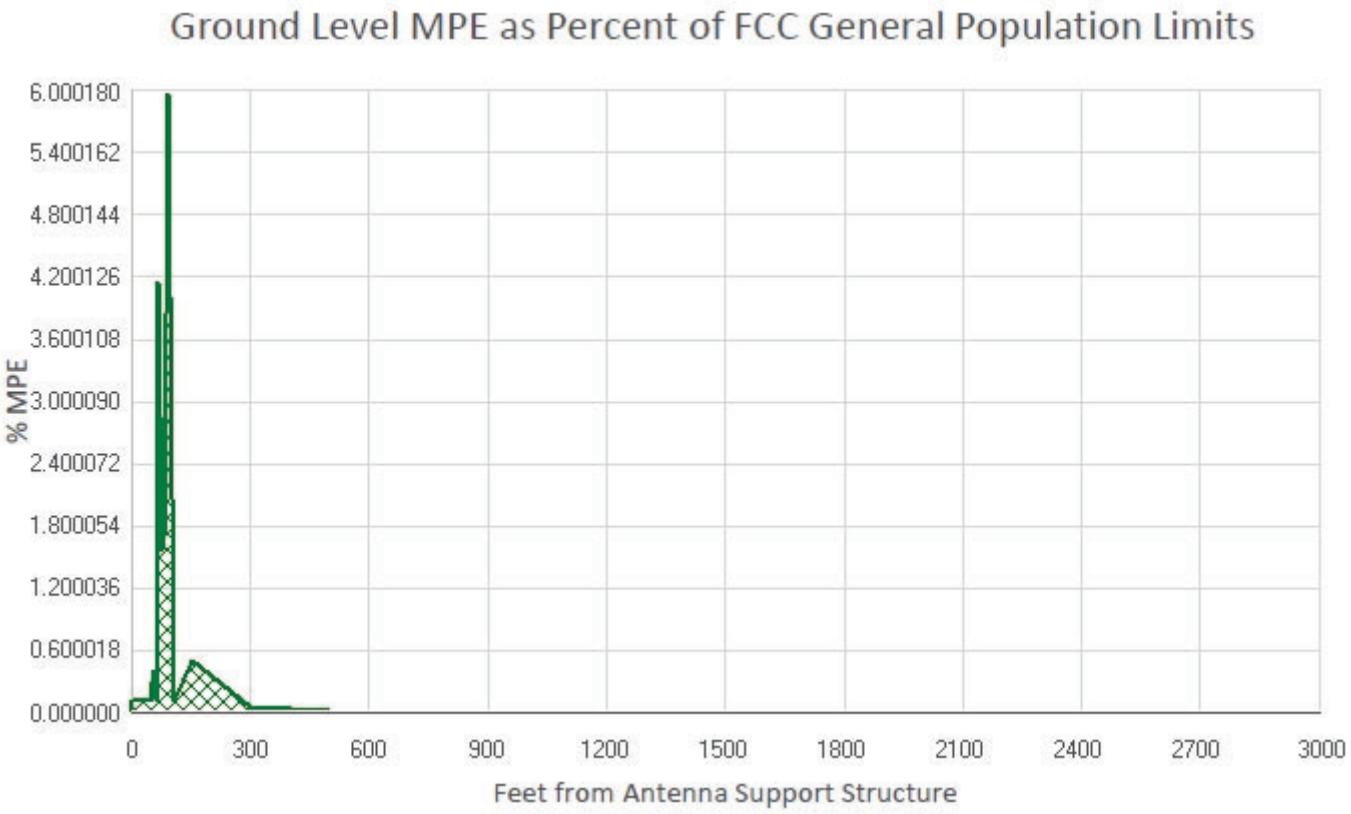
Highest percentage of Maximum Exposure Limit: 1.858 %

T-Mobile
HWY 17 & BELL VISTA RELO
RFS - APXVAALL18_43-U-NA20 02DT 2100 300° Sector

Maximum Exposure Limit - 2100 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	18756.400	(feet)	52.000	(Degrees)	0



Maximum power density at ground level: 59.852 µW/cm^2

Highest percentage of Maximum Exposure Limit: 5.985 %

SBA TOWERS XI, LLC
A DELAWARE LIMITED LIABILITY COMPANY
8051 CONGRESS AVE.
BOCA RATON, FL 33487
PHONE: 1-800-487-7483

SITE NAME
HWY 17 & BELL VISTA RELO

SITE I.D.
CA1B19C-S

E911 ADDRESS
APPROXIMATE TO 42 MILES AVE.
LOS GATOS, CA 95030

PROJECT TYPE
STEEL POLE REPLACEMENT

PROJECT DESCRIPTION

THE PROPOSED SCOPE OF WORK IS AS FOLLOWS:

1. (1) EXISTING SBA 645.0 SQ FT LEASE AREA WITH (1) 70.0' WOOD MONOPOLE. THE WOOD MONOPOLE TO BE REPLACED WITH (1) NEW 70.0' STEEL MONOPINE (76.0' AGL OVERALL). ALL EXISTING ANTENNAS & ANCILLARY EQUIPMENT & CABLES TO BE REMOVED. THE PROPOSED EXPANDED SBA LEASE AREA (745.0 SQ FT) TO INCLUDE THE NEW STEEL MONOPINE.
2. NEW 70.0' STEEL MONOPINE (76.0' AGL OVERALL) TO BE CONSTRUCTED FIRST. SOME EXISTING ANTENNAS & ANCILLARY EQUIPMENT FROM EXISTING WOOD POLE TO BE RELOCATED TO NEW MONOPINE. ONCE ALL ANTENNAS & ANCILLARY EQUIPMENT HAVE BEEN REMOVED. THE EXISTING 70.0' WOOD MONOPOLE WILL BE REPLACED W/ A NEW STEEL MONOPINE. TIME FOR CONSTRUCTION AND TESTING WILL BE APPROXIMATELY 4-6 WEEKS.
3. EXISTING RBS 6102 CABINET TO REMAIN. PROPOSED RBS 6160, B160 CABINETS, (6) PANEL ANTENNAS, (6) RRUS, (3) 6/24 4AWG HYBRID CABLES AND ANCILLARY EQUIPMENT TO BE INSTALLED.
4. NEW ELECTRICAL WORK WILL BE REQUIRED.
5. REPLACE WOOD FENCE WITH FIBER COMPOSITE FENCING.
6. PAINT WOOD PLATFORM WITH FIRE RETARDANT PAINT.
7. THERE WILL BE NO MORE THAN ONE TRIP PER MONTH TO THE SITE FOR CASUAL MAINTENANCE.
8. NO NEW NOISE GENERATING EQUIPMENT WILL BE ADDED TO THIS PROJECT.
9. NO NEW COMPOUND LIGHTING IS BEING PROPOSED WITH THIS PROJECT.

CONSULTING TEAM

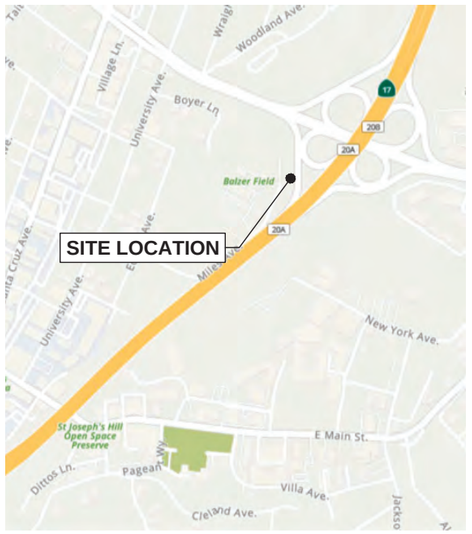
ARCHITECTURAL - ENGINEERING FIRM:
ACOM CONSULTING, INC
5200 SW MEADOWS RD, STE 150
LAKE OSWEGO, OR 97035
CONTACT: RICK MATTESON
PHONE: (425) 209-6723

ENGINEER OF RECORD:
KAID McKAY, P.E.
ACOM CONSULTING, INC
5200 SW MEADOWS RD, SUITE 150
LAKE OSWEGO, OR 97035
PHONE: (503) 828-8831
kmckay@acomconsultinginc.com

SURVEYING FIRM:
AMBIT CONSULTING
410 E. SOUTH AVE.
TEMPE, AZ 85282
CONTACT: PAT DONAHOE
PHONE: (480) 659-4072

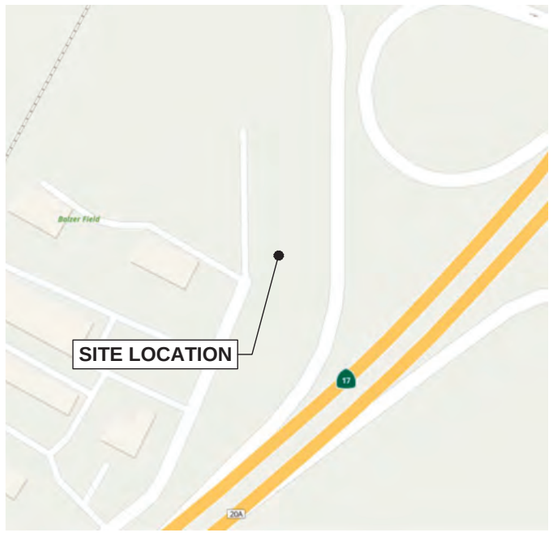
VICINITY MAP

N.T.S.



REGIONAL MAP

N.T.S.



PROJECT INFORMATION

SITE NUMBER:	CA1B19C-S
SITE NAME:	HWY 17 & BELL VISTA
SITE ADDRESS:	APPROXIMATE TO 42 MILES AVE. LOS GATOS, CA 95030
COUNTY:	SANTA CLARA
LAND OWNER	PACIFIC GAS AND ELECTRIC COMPANY 300 LAKESIDE DR OAKLAND, CA 94612
APPLICANT:	SBA TOWERS XI, LLC 8051 CONGRESS AVENUE BOCA RATON, FL 33487
CONTACT PERSON:	JAKE HAMILTON jake@virtualsitewalk.com
LATITUDE:	37° 13' 33.44" N (37.225956°) (FROM 1A)
LONGITUDE:	121° 58' 36.45" W (-121.976792°) (FROM 1A)
LAT/LONG TYPE:	DEGREES MINUTES AND SECONDS
GROUND ELEVATION:	338.5' AMSL
CURRENT ZONING:	R-M:5-12 (MULTIPLE- FAMILY RESIDENTIAL)
PARCEL #:	529-05-043

SHEET INDEX

SHEET	DESCRIPTION	REV.
T-1	TITLE SHEET	Q
LP-1	OVERALL SITE PLAN	Q
LP-2	ENLARGED LOCATION PLAN	Q
C-1	ENGINEERING SITE PLAN	Q
C-2	EXISTING ANTENNA SCHEDULE	Q
C-2.1	PROPOSED ANTENNA SCHEDULE	Q
C-3	SITE DETAILS AND SPECIFICATIONS	Q
C-4	DETAILS AND SPECIFICATIONS	Q
ANT-1	EXISTING NORTH ELEVATION	Q
ANT-2	PROPOSED NORTH ELEVATION	Q
ANT-3	EXISTING EAST ELEVATION	Q
ANT-4	PROPOSED EAST ELEVATION	Q
E-1	UTILITY ROUTING PLAN	Q
E-2	SITE GROUNDING PLAN	Q
E-3	ELECTRICAL & GROUND DETAILS	Q
E-4	SINGLE LINE DIAGRAM & PANEL SCHEDULE	Q
GN-1	GENERAL NOTES	Q
GN-2	GENERAL STRUCTURAL NOTES	Q
	FULL SCALE PRINT IS ON 22"x34" MEDIA	
	SURVEY ATTACHMENTS	
SHEET 1-3	PRELIMINARY SURVEY	

CALL FOR UNDERGROUND UTILITIES PRIOR TO DIGGING

811

48 HOURS BEFORE YOU DIG

DRIVING DIRECTIONS

FROM SACRAMENTO INTERNATIONAL AIRPORT:

DIRECTIONS: HEAD EAST TOWARD CONCORD AVE. TURN LEFT ONTO NEW DRIVE. TURN LEFT AT 1ST CROSS STREET ONTO CONCORD AVE. TURN RIGHT ONTO CONTRA COSTA BLVD. TURN RIGHT TO MERGE ONTO I-680 S. MERGE ONTO I-680 S. TAKE EXIT 12 TO MER ONTO CA-262 S/MISSION BLVD. MERGE ONTO CA-262 S/MISSION BLVD. TAKE THE EXIT ON THE LEFT ONTO I-880 S TOWARD SAN JOSE. KEEP LEFT TO STAY I-880 S. CONTINUE ONTO CA-17 S. TAKE EXIT 20B FOR STATE ROUTE 9 TOWARD LOS GATOS/SARATOGA. MERGE ONTO SARATOGA-LOS GATOS RD. TURN LEFT ONTO UNIVERSITY AVE. TURN LEFT ONTO MILES AVE.

HANDICAPPED REQUIREMENTS

HANDICAPPED REQUIREMENTS :
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
HANDICAPPED ACCESS REQUIREMENTS NOT REQUIRED

PLUMBING REQUIREMENTS :
FACILITY HAS NO PLUMBING

UTILITY CONTACT INFORMATION

PG&E

XFINITY
PHONE: (888) 744-1816

SBA TOWERS XI, LLC
A DELAWARE LIMITED LIABILITY COMPANY
8051 CONGRESS AVE.
BOCA RATON, FL 33487
PHONE: 1-800-487-7483

ACOM CONSULTING, INC

REVISIONS

NO.	DESCRIPTION	DATE	BY
J	SURVEY UPDATE	06/05/26	KM
K	CLIENT COMMENTS	06/19/26	KM
L	CLIENT COMMENTS	07/01/26	KM
M	CLIENT COMMENTS	07/09/26	KM
N	CLIENT COMMENTS	08/14/26	KM
P	REVIEW COMMENTS	08/17/26	KM
Q	REVIEW COMMENTS	10/15/26	DO

CA1B19C-S

HWY 17 & BELL VISTA RELO

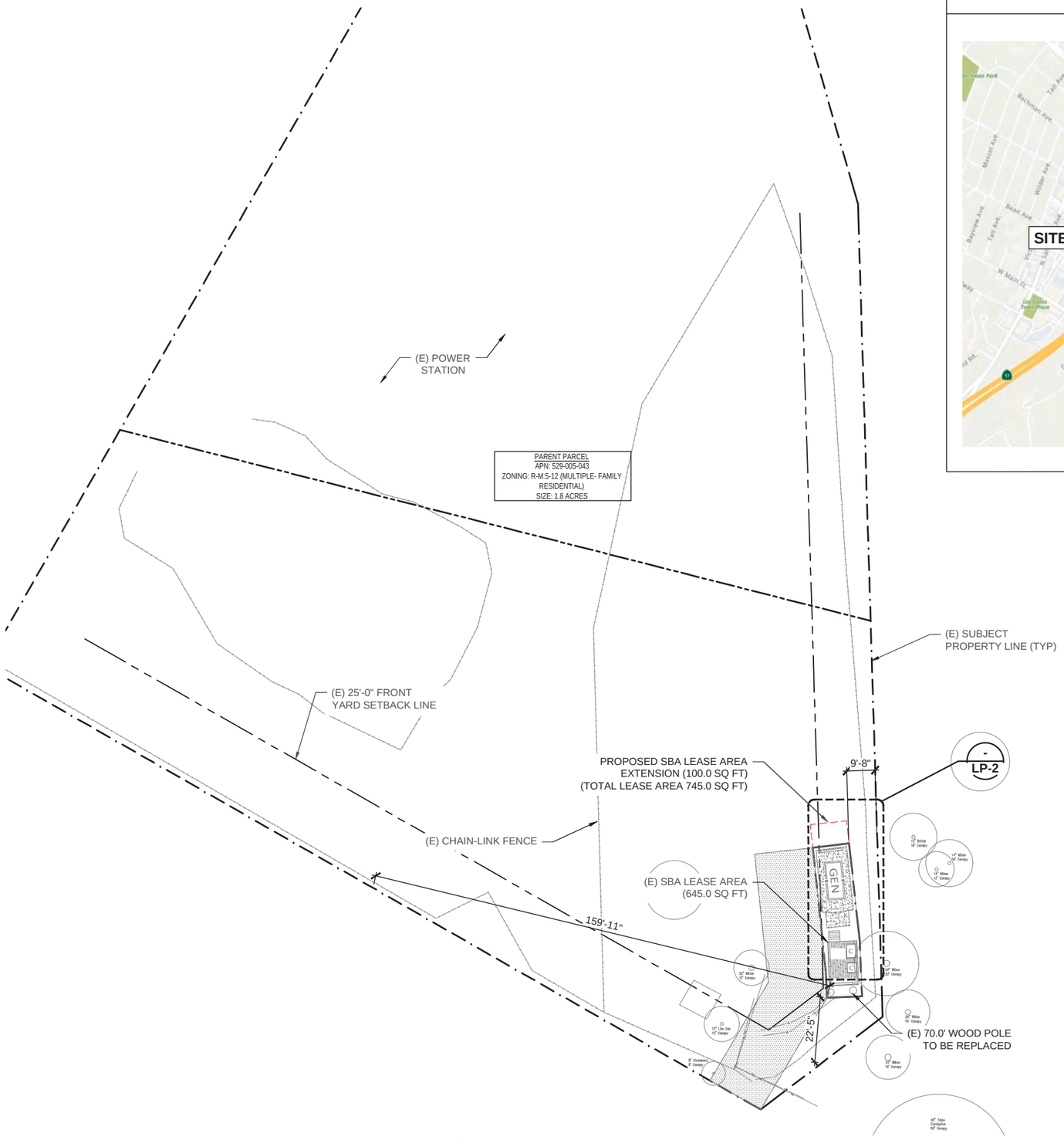
APPROXIMATE TO 42 MILES AVE. LOS GATOS, CA 95030

DRAWN BY:	KM
CHECKED BY:	RM
DATE:	07/15/24
PROJECT #:	-

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

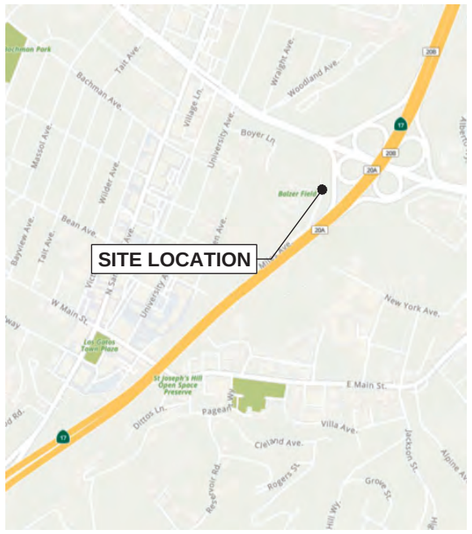
EXHIBIT 8



1 SURVEY PLAN

VICINITY MAP

N.T.S.



SCOPE OF WORK

THE PROPOSED SCOPE OF WORK IS AS FOLLOWS:

1. (1) EXISTING SBA 645.0 SQ FT LEASE AREA WITH (1) 70.0' WOOD MONOPOLE. THE WOOD MONOPOLE TO BE REPLACED WITH (1) NEW 70.0' STEEL MONOPINE (76.0' AGL OVERALL). ALL EXISTING ANTENNAS & ANCILLARY EQUIPMENT & CABLES TO BE REMOVED. THE PROPOSED EXPANDED SBA LEASE AREA (745.0 SQ FT) TO INCLUDE THE NEW STEEL MONOPINE.
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SBA TOWERS XI, LLC
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8051 CONGRESS AVE.
BOCA RATON, FL 33487
PHONE: 1-800-487-7483

Acom CONSULTING, INC

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CA1B19C-S

HWY 17 & BELL VISTA RELO

APPROXIMATE TO
42 MILES AVE.
LOS GATOS, CA 95030

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SHEET TITLE

SURVEY PLAN

SHEET NUMBER

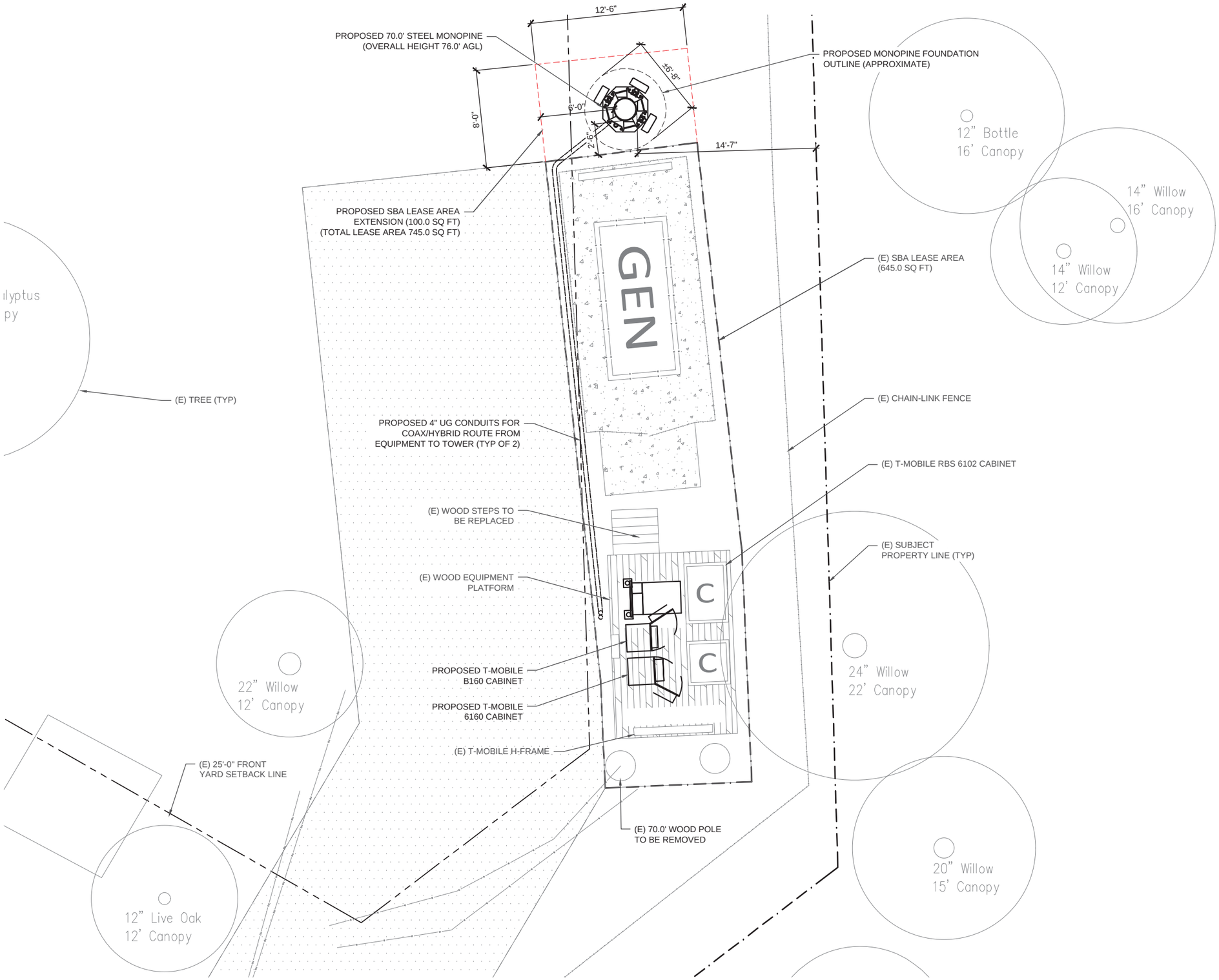
LP-1

NORTH

22"x34" SCALE: 1" = 10'-0"

10' 5' 0" 10'

22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.



NORTH

22"x34" SCALE: 1/32" = 1'-0"

32' 24' 16' 8' 0" 32'

22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.

1 ENLARGED LOCATION PLAN

SBA TOWERS XI, LLC
A DELAWARE LIMITED LIABILITY COMPANY
8051 CONGRESS AVE.
BOCA RATON, FL 33487
PHONE: 1-800-487-7483

Acom CONSULTING, INC

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CA1B19C-S

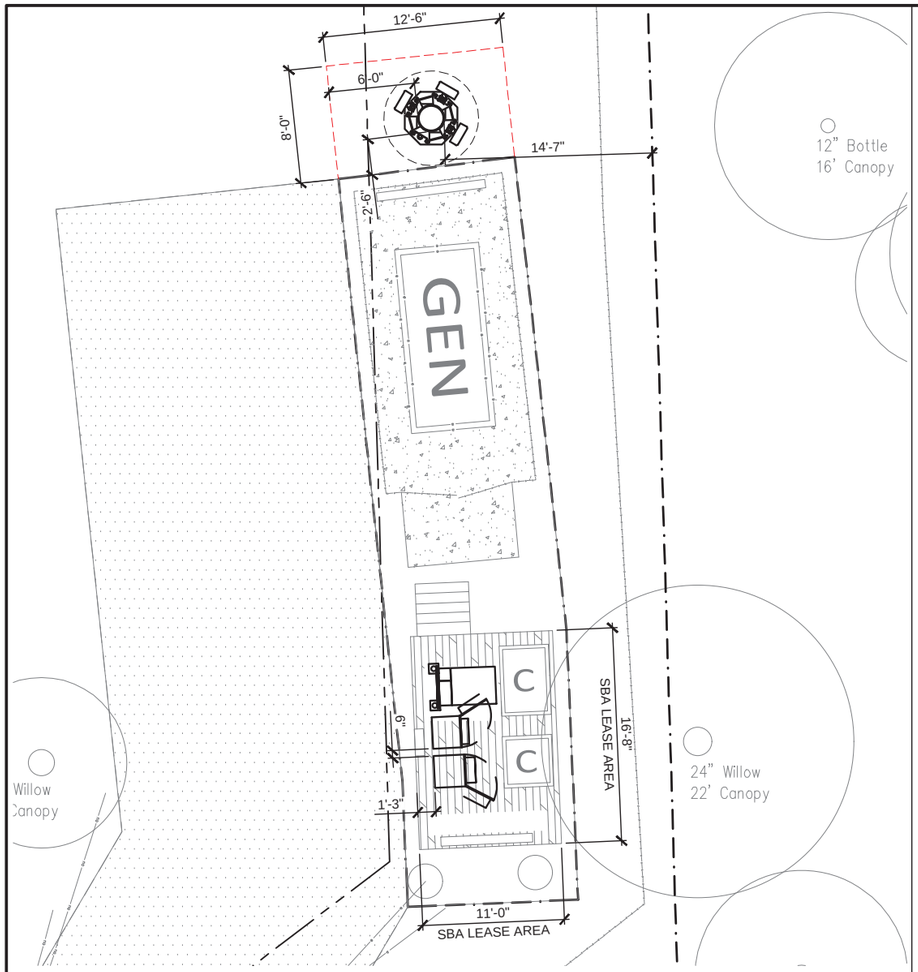
HWY 17 &
BELL VISTA
RELO

APPROXIMATE TO
42 MILES AVE.
LOS GATOS, CA 95030

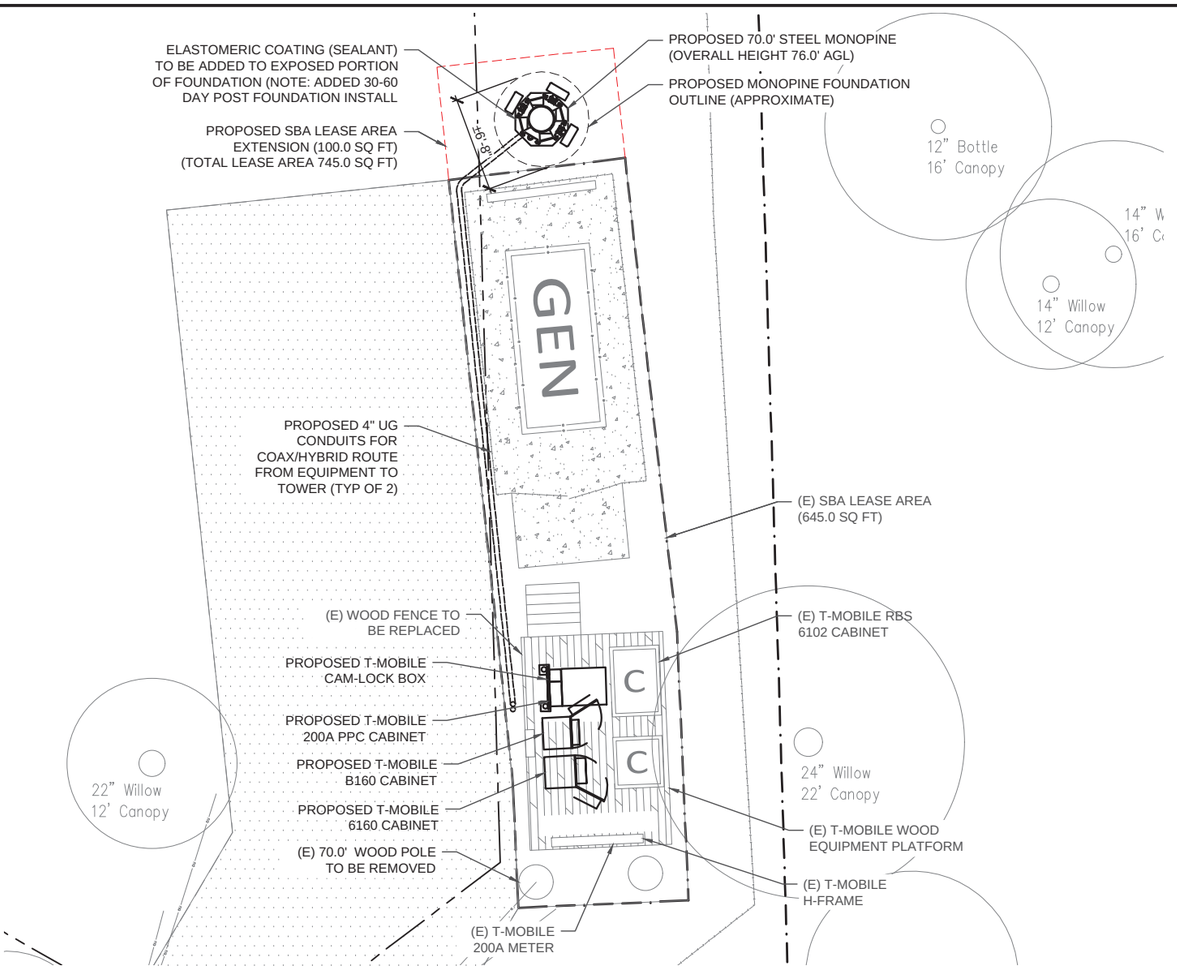
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CHECKED BY:	RM
DATE:	07/15/24
PROJECT #:	-

SHEET TITLE
ENLARGED
LOCATION
PLAN

SHEET NUMBER
LP-2



SITE DIMENSION PLAN



NOTE:
TOWER FACE WIDTH IS TO BE VERIFIED WITH TOWER MANUFACTURER DRAWINGS PRIOR TO LAYING OUT FOUNDATION.

PAVEMENT MATERIALS AND QUANTITIES

ACCESS ROAD: (EXISTING - NO WORK NEEDED)

LEASE AREA: (EXISTING - NO WORK NEEDED)

PROPOSED EXTENSION 8.0'x12.5' (100.0 SQ FT) TO ENCOMPASS THE NEW MONOPINE TO BE GRADED AND FILLED TO MATCH EXISTING LEASE AREA (TOTAL LEASE AREA 745.0 SQ FT)

NOTE:
IN THE EVENT OF SITE ABANDONMENT, THE CITY SHALL FOLLOW THE PROCEDURES OF FMC SECTION 15-5016 – REVOCATION OF PERMITS

NOTE:
EXISTING WOOD POLE TO BE REPLACED W/ A STEEL MONOPINE.
(OVERALL HEIGHT 76.0' AGL)

NOTE:
CONTRACTOR SHALL COORDINATE WITH THE CARRIER REGARDING EXTENDING ALL CABLING TO THE RELOCATED EQUIPMENT ON NEW MONO-PINETOWER

NOTE:
THE OWNER/APPLICANT SHALL MAINTAIN THE FENCE/WALL AND ENSURE THE FENCE/WALL IS KEPT FREE OF GRAFFITI AND VANDALISM, AND ANY VISIBLE STRUCTURAL DAMAGE

NORTH

22"x34" SCALE: 1/32" = 1'-0"

32' 24' 16' 8' 0" 32'

22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.

1 ENGINEERING SITE PLAN

SBA TOWERS XI, LLC
A DELAWARE LIMITED LIABILITY COMPANY
8051 CONGRESS AVE.
BOCA RATON, FL 33487
PHONE: 1-800-487-7483

Acom CONSULTING, INC

REVISIONS

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CA1B19C-S

HWY 17 & BELL VISTA RELO

APPROXIMATE TO
42 MILES AVE.
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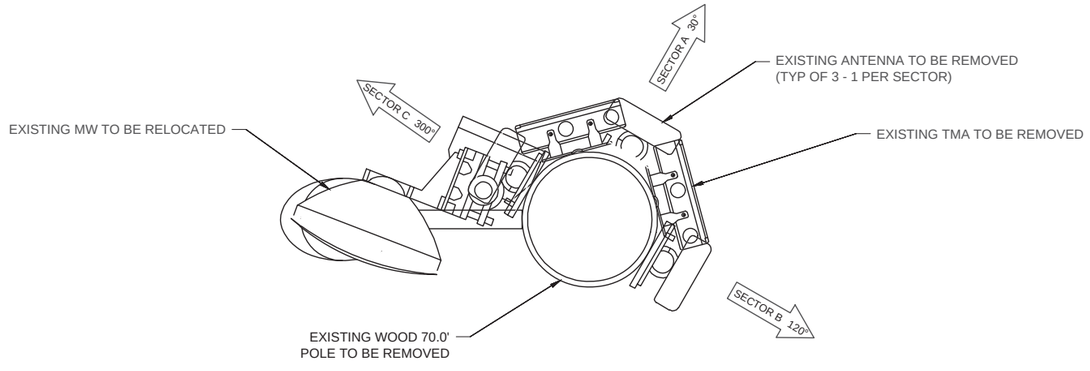
DRAWN BY:	KM
CHECKED BY:	RM
DATE:	07/15/24
PROJECT #:	-

SHEET TITLE
ENGINEERING SITE PLAN

SHEET NUMBER
C-1

EXISTING ANTENNA AND ANCILLARY EQUIPMENT SCHEDULE								
ALPHA SECTOR								
ANTENNA MODEL	AZIMUTH	RAD CENTER	TMA / RAYCAP / DIPLEXER MODEL	RRH / RRU MODEL	10' SUREFLEX JUMPER LENGTH	5M FIBER JUMPER LENGTH	CABLE TYPE	CABLE LENGTH
(1) RFS APXV18-206516S-C-A20	30°	58.0'	TMA	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
BETA SECTOR								
ANTENNA MODEL	AZIMUTH	RAD CENTER	TMA / RAYCAP / DIPLEXER MODEL	RRH / RRU MODEL	10' SUREFLEX JUMPER LENGTH	5M FIBER JUMPER LENGTH	CABLE TYPE	CABLE LENGTH
(1) RFS APXV18-206516S-C-A20	120°	58.0'	TMA	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
GAMMA SECTOR								
ANTENNA MODEL	AZIMUTH	RAD CENTER	TMA / RAYCAP / DIPLEXER MODEL	RRH / RRU MODEL	10' SUREFLEX JUMPER LENGTH	5M FIBER JUMPER LENGTH	CABLE TYPE	CABLE LENGTH
(1) RFS APXV18-206516S-C-A20	300°	58.0'	TMA	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

1 ANTENNA SCHEDULE



EXISTING 58.0' RAD CENTER

2 ANTENNA PLAN

NORTH

22"x34" SCALE: 1/16" = 1'-0"

16' 12' 8' 4' 0" 16'

22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.

SBA TOWERS XI, LLC
A DELAWARE LIMITED LIABILITY COMPANY
8051 CONGRESS AVE
BOCA RATON, FL 33487
PHONE: 1-800-487-7483

Acom CONSULTING, INC

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CA1B19C-S

HWY 17 & BELL VISTA RELO

APPROXIMATE TO
42 MILES AVE.
LOS GATOS, CA 95030

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DATE:	07/15/24
PROJECT #:	-

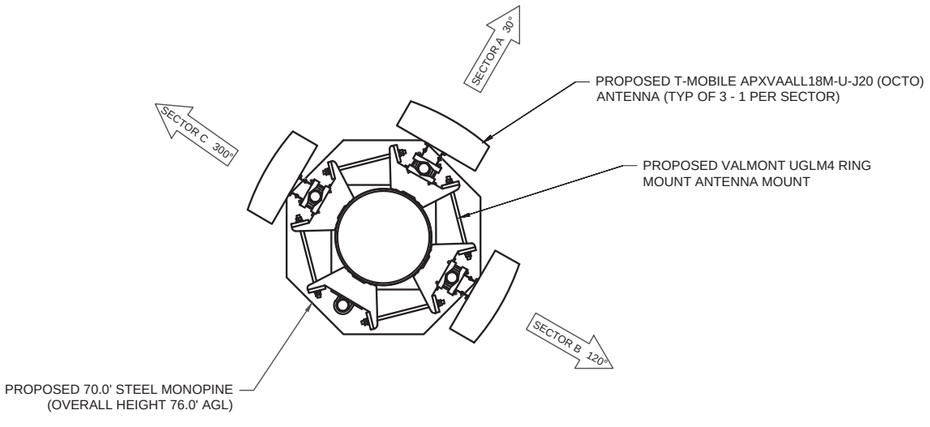
SHEET TITLE
ANTENNA SCHEDULE & PLAN

SHEET NUMBER
C-2

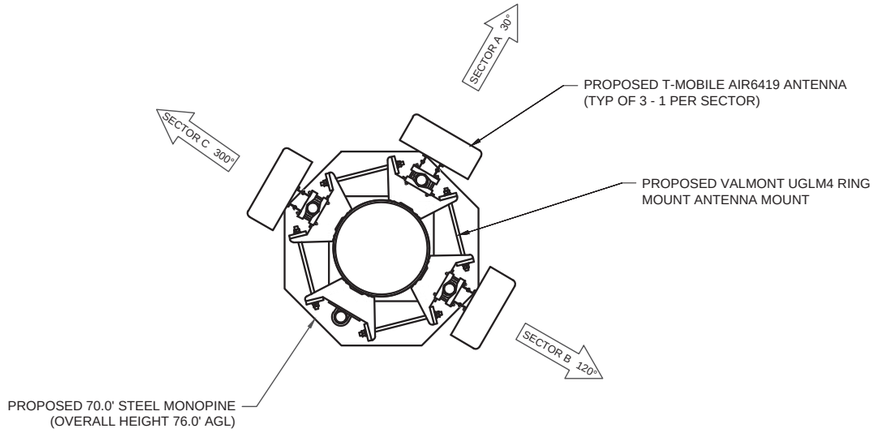
PROPOSED ANTENNA AND ANCILLARY EQUIPMENT SCHEDULE								
ALPHA SECTOR								
ANTENNA MODEL	AZIMUTH	RAD CENTER	TMA / RAYCAP / DIPLEXER MODEL	RRH / RRU MODEL	10' SUREFLEX JUMPER LENGTH	5M FIBER JUMPER LENGTH	CABLE TYPE	CABLE LENGTH
(1) AMPHENOL APXVAALL18M-U-J20 (OCTO)	30°	52.0'	-	ERICSSON 4480 & 4460	8	6	(1) 6/24 4AWG HYBRID TRUNK	99'
-	-	-	-	-	-	-	-	-
(1) ERICSSON AIR6419 (B41)	30°	58.0'	-	-	-	4	-	-
BETA SECTOR								
ANTENNA MODEL	AZIMUTH	RAD CENTER	TMA / RAYCAP / DIPLEXER MODEL	RRH / RRU MODEL	10' SUREFLEX JUMPER LENGTH	5M FIBER JUMPER LENGTH	CABLE TYPE	CABLE LENGTH
(1) AMPHENOL APXVAALL18M-U-J20 (OCTO)	120°	52.0'	-	ERICSSON 4480 & 4460	8	6	(1) 6/24 4AWG HYBRID TRUNK	99'
-	-	-	-	-	-		-	-
(1) ERICSSON AIR6419 (B41)	120°	58.0'	-	-	-	4	-	-
GAMMA SECTOR								
ANTENNA MODEL	AZIMUTH	RAD CENTER	TMA / RAYCAP / DIPLEXER MODEL	RRH / RRU MODEL	10' SUREFLEX JUMPER LENGTH	5M FIBER JUMPER LENGTH	CABLE TYPE	CABLE LENGTH
(1) AMPHENOL APXVAALL18M-U-J20 (OCTO)	300°	52.0'	-	ERICSSON 4480 & 4460	8	6	(1) 6/24 4AWG HYBRID TRUNK	99'
-	-	-	-	-	-		-	-
(1) ERICSSON AIR6419 (B41)	300°	58.0'	-	-	-	4	-	-

1 ANTENNA SCHEDULE

NOTE:
PASSING MOUNT ANALYSIS REQUIRED



PROPOSED 52.0' RAD CENTER



PROPOSED 58.0' RAD CENTER

2 ANTENNA PLAN

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SHEET TITLE
ANTENNA SCHEDULE & PLAN

SHEET NUMBER
C-2.1

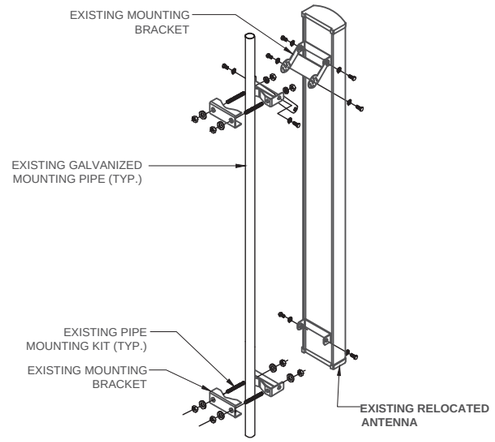
NORTH

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16' 12' 8' 4' 0" 16'

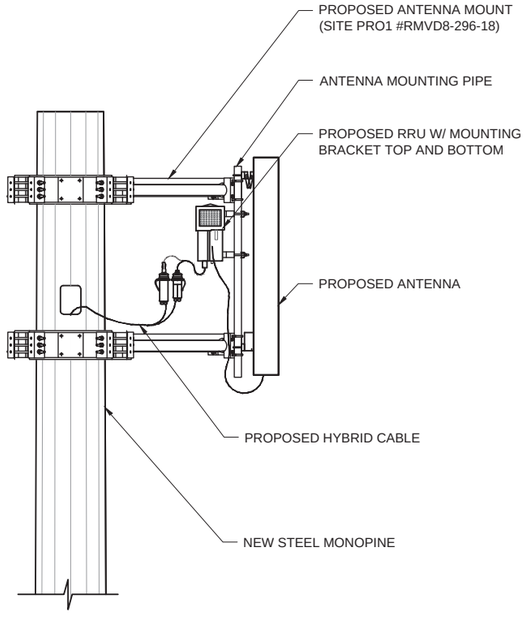
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1 NOT USED
N.T.S.

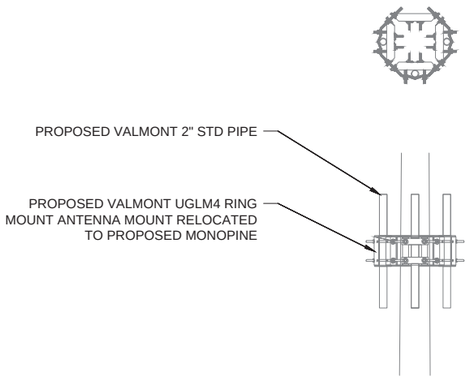


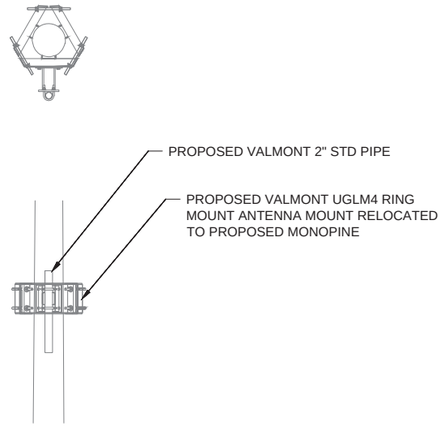
2 ANTENNA MOUNTING KIT DETAIL
N.T.S.

3 NOT USED
N.T.S.



4 ANTENNA MOUNTING KIT DETAIL
N.T.S.





5 PROPOSED T-MOBILE MOUNT
N.T.S.

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HWY 17 &
BELL VISTA
RELO

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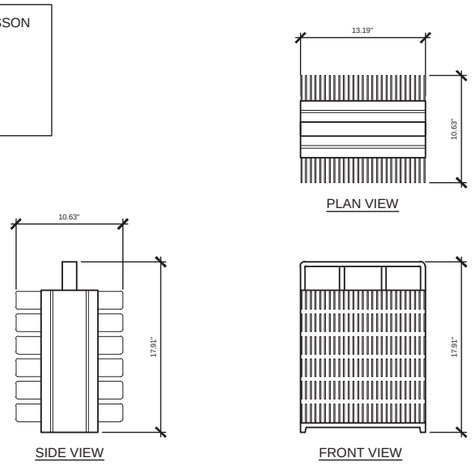
SHEET TITLE
SITE DETAILS
& SPECIFICATIONS

SHEET NUMBER
C-3

NOTE:

COMPLY WITH MANUFACTURER'S INSTRUCTIONS TO ENSURE THAT ALL RRH'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRH PACKAGES IN THE RAIN.

MANUFACTURER: ERICSSON
MODEL: RADIO 4480
HEIGHT: 17.91"
WIDTH: 13.19"
DEPTH: 10.63"
WEIGHT: 73.19 LBS
COLOR: OFF-WHITE

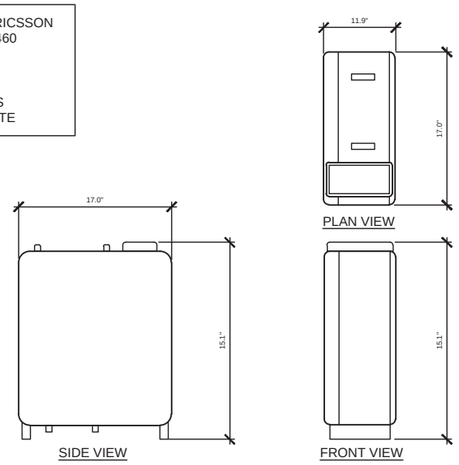


1 4480 RADIO DETAIL
N.T.S.

NOTE:

COMPLY WITH MANUFACTURER'S INSTRUCTIONS TO ENSURE THAT ALL RRH'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRH PACKAGES IN THE RAIN.

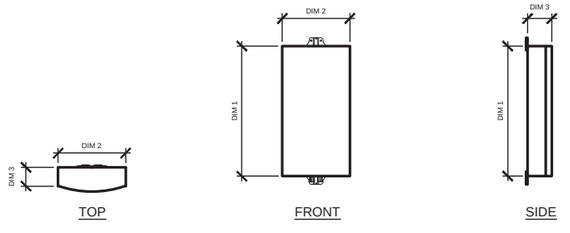
MANUFACTURER: ERICSSON
MODEL: RADIO 4460
HEIGHT: 15.1"
WIDTH: 17.0"
DEPTH: 11.9"
WEIGHT: 104.0 LBS
COLOR: OFF-WHITE



2 4460 RADIO DETAIL
N.T.S.

3 NOT USED
N.T.S.

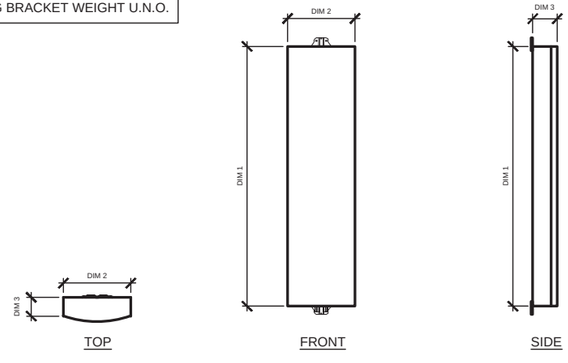
NOTES:
1. INSTALL ANTENNAS PER MANUFACTURER SPECIFICATIONS.
2. CONTRACTOR TO TORQUE ALL MOUNTING HARDWARE PER MANUFACTURER SPECIFICATIONS.
3. *ANTENNA WEIGHTS INCLUDE MOUNTING BRACKET WEIGHT U.N.O.



	QTY	DIM 1	DIM 2	DIM 3	*WEIGHT
ALPHA SECTOR					
ERICSSON AIR6449 (B41) ANTENNA	(1)	33.1"	20.6"	8.6"	104 LBS
BETA SECTOR					
ERICSSON AIR6449 (B41) ANTENNA	(1)	33.1"	20.6"	8.6"	104 LBS
GAMMA SECTOR					
ERICSSON AIR6449 (B41) ANTENNA	(1)	33.1"	20.6"	8.6"	104 LBS

4 ERICSSON AIR6419 (B41) MIMO ANTENNA
N.T.S.

NOTES:
1. INSTALL ANTENNAS PER MANUFACTURER SPECIFICATIONS.
2. CONTRACTOR TO TORQUE ALL MOUNTING HARDWARE PER MANUFACTURER SPECIFICATIONS.
3. *ANTENNA WEIGHTS INCLUDE MOUNTING BRACKET WEIGHT U.N.O.



	QTY	DIM 1	DIM 2	DIM 3	*WEIGHT
ALPHA SECTOR					
AMPHENOL APXVAALL18M-U-J20 (OCTO) ANTENNA	(1)	71.8"	19.7"	8.5"	57.5 LBS
BETA SECTOR					
AMPHENOL APXVAALL18M-U-J20 (OCTO) ANTENNA	(1)	71.8"	19.7"	8.5"	57.5 LBS
GAMMA SECTOR					
AMPHENOL APXVAALL18M-U-J20 (OCTO) ANTENNA	(1)	71.8"	19.7"	8.5"	57.5 LBS

5 AMPHENOL FFVV65C-R3-V1 OCTOPORT ANTENNA
N.T.S.

6 NOT USED
N.T.S.

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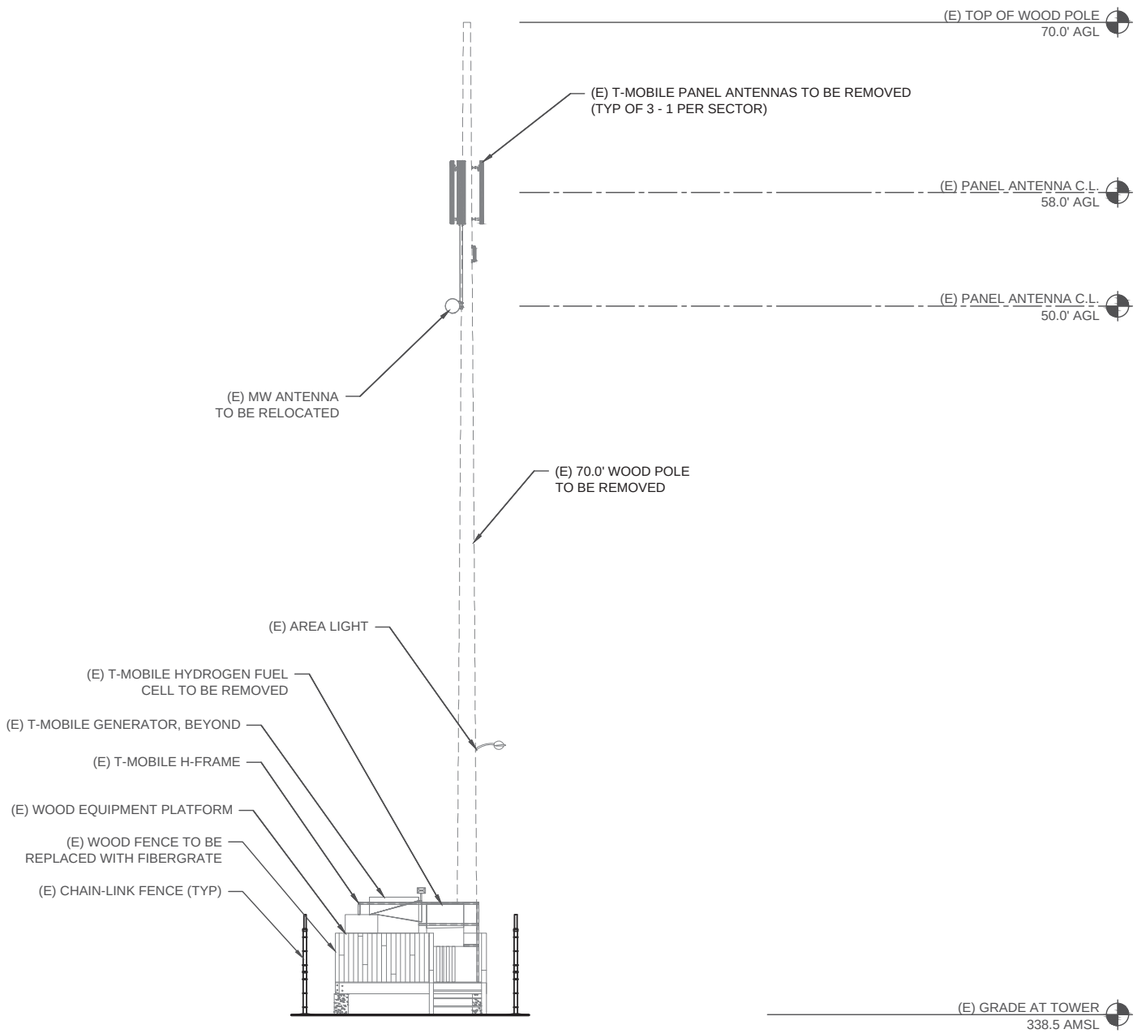
HWY 17 &
BELL VISTA
RELO

APPROXIMATE TO
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LOS GATOS, CA 95030

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SHEET TITLE
SITE DETAILS
& SPECIFICATIONS

SHEET NUMBER
C-4



1 EXISTING NORTH ELEVATION
SCALE: 3/16" = 1'-0"

22"x34" SCALE: 3/16" = 1'-0"

4' 2' 0" 4'

22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.

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HWY 17 &
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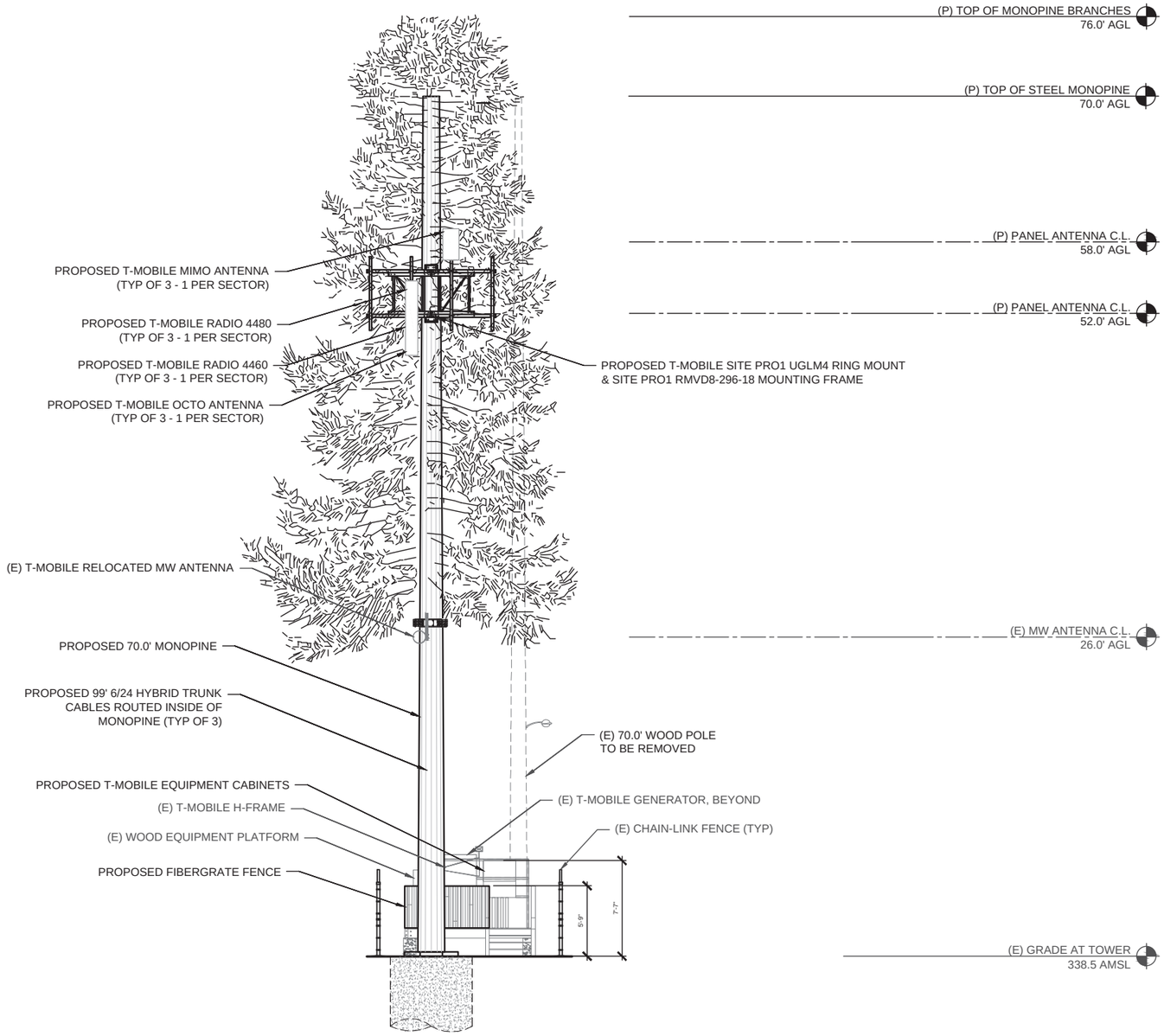
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SHEET TITLE
EXISTING
NORTH ELEVATION

SHEET NUMBER
ANT-1

NOTE:

1. NO WORK SHALL COMMENCE WITHOUT AN APPROVED STRUCTURAL ANALYSIS. FOR ALL STRUCTURAL ELEMENTS, INCLUDING THE MONO-PINE, FOUNDATION, MOUNT ASSEMBLIES, AND GROUND EQUIPMENT (EQUIPMENT PADS, CABINET ANCHORAGE, ICE BRIDGE, ETC.). THE CONTRACTOR SHALL REVIEW THE APPROVED STRUCTURAL ANALYSIS AND NOTIFY THE E.O.R. IF ANY MODIFICATIONS ARE REQUIRED OF STRUCTURAL MEMBERS OR APPURTENANCES PRIOR TO INSTALLATION OF ANTENNAS, ANCILLARY EQUIPMENT OR CABLING.
2. ALL FUTURE RADIOS, RAYCAPS, MICROWAVE ANTENNAS, EXPOSED CABLES, MOUNTING EQUIPMENT, AND OTHER ANCILLARY EQUIPMENT SHALL BE PAINTED TO MATCH THE MONOPINE.
3. ANTENNA MOUNT/PLATFORM ANALYSIS FOR THE PROPOSED LOADING CONFIGURATION TO BE COMPLETED BY OTHERS.
4. TOWER AND FOUNDATION STRUCTURAL ANALYSIS/DESIGN FOR THE PROPOSED LOADING CONFIGURATION TO BE COMPLETED BY OTHERS. FOR ALL STRUCTURAL ELEMENTS, INCLUDING THE MONOPINE, FOUNDATION, MOUNT ASSEMBLIES, AND GROUND EQUIPMENT (EQUIPMENT PADS, CABINET ANCHORAGE, ICE BRIDGE, ETC.).
5. CONTRACTOR TO VERIFY THE SUITABILITY OF ANTENNA MOUNT FOR PROPOSED LOADING CONFIGURATION.
6. THE OWNER/APPLICANT SHALL MAINTAIN THE FENCE / WALL AND ENSURE THE FENCE /WALL IS KEPT FREE OF GRAFFITI AND VANDALISM, AND ANY VISIBLE STRUCTURAL DAMAGE.



1 PROPOSED NORTH ELEVATION
SCALE: 3/16" = 1'-0"

22"x34" SCALE: 3/16" = 1'-0"

4' 2' 0" 4'

22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.

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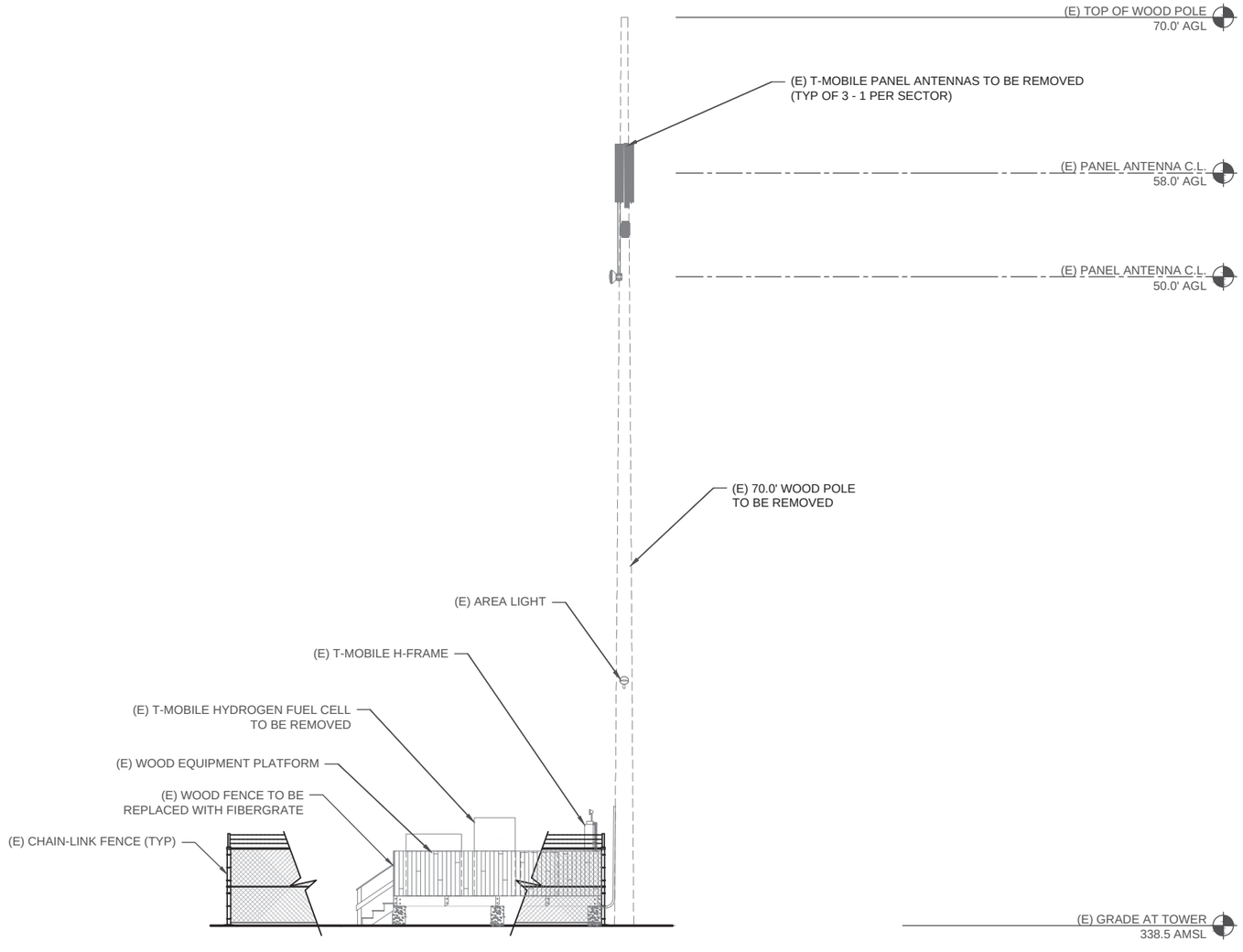
HWY 17 &
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RELO

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LOS GATOS, CA 95030

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SHEET TITLE
PROPOSED
NORTH ELEVATION

SHEET NUMBER
ANT-2



1 EXISTING EAST ELEVATION
SCALE: 3/16" = 1'-0"

22"x34" SCALE: 3/16" = 1'-0"

4' 2' 0" 4'

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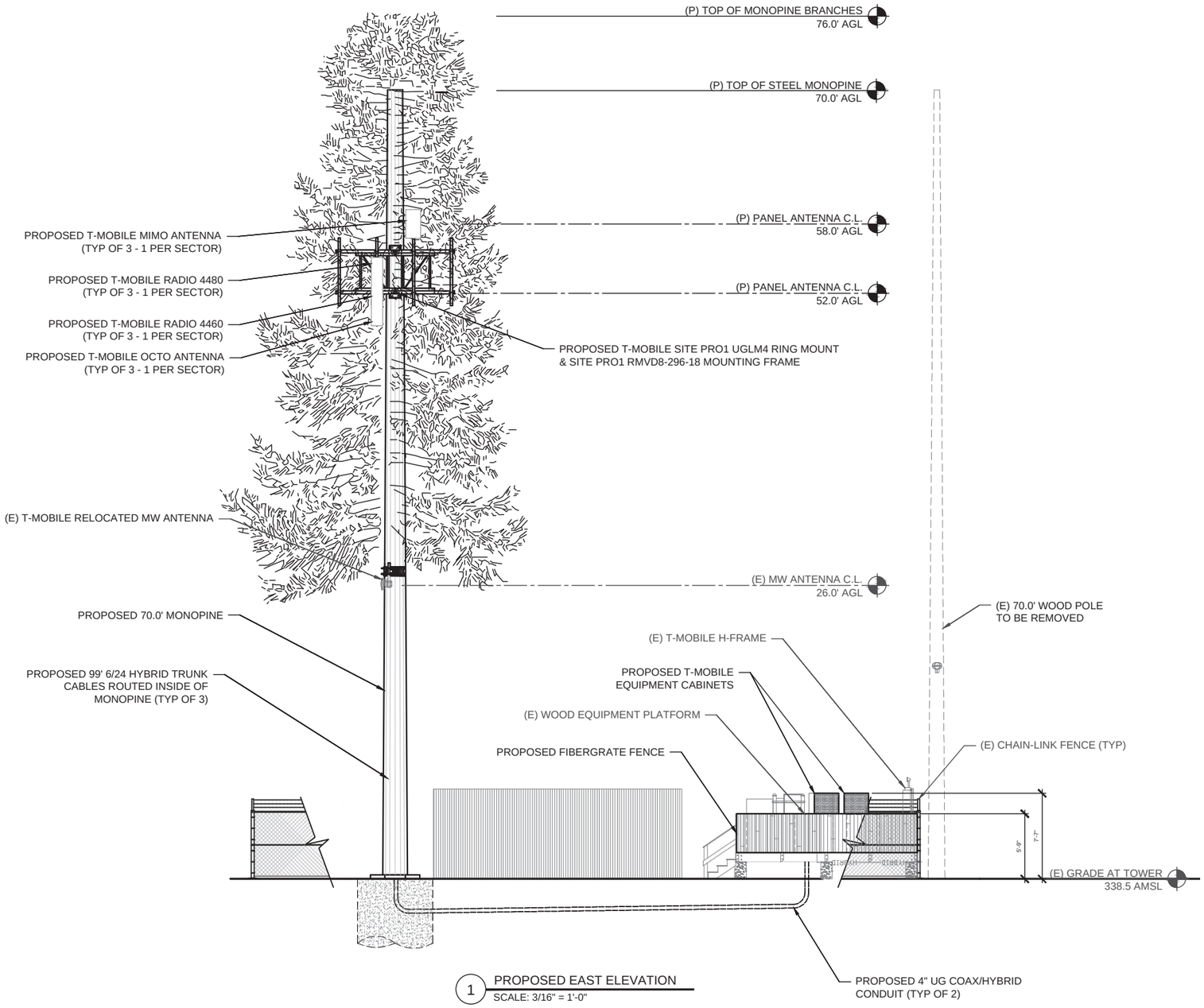
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SHEET TITLE
EXISTING
EAST ELEVATION

SHEET NUMBER
ANT-3

NOTE:

1. NO WORK SHALL COMMENCE WITHOUT AN APPROVED STRUCTURAL ANALYSIS. FOR ALL STRUCTURAL ELEMENTS, INCLUDING THE MONO-PINE, FOUNDATION, MOUNT ASSEMBLIES, AND GROUND EQUIPMENT (EQUIPMENT PADS, CABINET ANCHORAGE, ICE BRIDGE, ETC.). THE CONTRACTOR SHALL REVIEW THE APPROVED STRUCTURAL ANALYSIS AND NOTIFY THE E.O.R. IF ANY MODIFICATIONS ARE REQUIRED OF STRUCTURAL MEMBERS OR APPURTENANCES PRIOR TO INSTALLATION OF ANTENNAS, ANCILLARY EQUIPMENT OR CABLING.
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1 PROPOSED EAST ELEVATION
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HWY 17 &
BELL VISTA
RELO

APPROXIMATE TO
42 MILES AVE.
LOS GATOS, CA 95030

DRAWN BY:	KM
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SHEET TITLE
PROPOSED
EAST ELEVATION

SHEET NUMBER
ANT-4

GENERAL ELECTRICAL NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO NATIONAL ELECTRIC CODE, LATEST ADOPTED EDITION, AND LOCAL CODES. THE CONTRACTORS SHALL FURNISHED AND PAY FOR ALL PERMITS AND RELATED FEES.
2. ALL ELECTRICAL MATERIALS, EQUIPMENT AND INSTALLATION PROCEDURES TO CONFORM WITH SBA SPECIFICATIONS.
3. CONTRACTOR SHALL PERFORM ALL VERIFICATION TESTS AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ENGINEER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT & DISCREPANCIES.
4. ELECTRICAL PLANS, DETAILS, AND DIAGRAMS ARE DIAGRAMMATIC ONLY. FIELD CONDITIONS DICTATE THE AMOUNT AND LOCATION OF EQUIPMENT.
5. ALL MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, NFPA, AND "UL" LISTED.
6. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY THE NEC, AND ALL APPLICABLE LOCAL CODES.
7. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE A MINIMUM INTERRUPTING RATING GREATER THAN THE UTILITY FAULT CURRENT.
8. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO VENDOR PRINTS AND INSTRUCTIONS.
9. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
10. PROVIDE SBA WITH ONE SET OF COMPLETE ELECTRICAL "AS-BUILT" DRAWINGS AT THE COMPLETION OF THE JOB SHOWING ACTUAL ROUTINGS AND WIRING CONNECTIONS.
11. LABEL ALL ELECTRICAL EQUIPMENT PER SBA SPECIFICATIONS.
12. ALL SINGLE-PHASE SELF-CONTAINED METER CONNECTION DEVICES MUST INCLUDE HORN TYPE BY-PASS PROVISION SO THAT SERVICE WILL NOT BE INTERRUPTED WHEN A METER IS REMOVED FROM THE SOCKET.
13. ALL EQUIPMENT PUNCH OUTS AND CONDUITS (USED AND SPARE) TO BE "RODENT PROOFED" WITH CAPS, STEEL MESH, AND/OR FOAM FILL BY CONTRACTOR (AS NEEDED).
14. ALL INTERIOR CONDUITS AND BUSHINGS SHALL BE EMT. ALL EXTERIOR SHALL BE PVC UNLESS NOTED OTHERWISE. SEE SBA SPECIFICATIONS.
15. NO SPOILS TO BE LEFT ON SITE WITHOUT THE WRITTEN CONSENT OF THE LANDOWNER
16. CONTRACTOR TO PROVIDE 2 PHENOLIC LABELS AT METER. ONE TO IDENTIFY "SBA DISCONNECT" AND THE OTHER TO GIVE SITE ADDRESS.
17. ALL EQUIPMENT AND MATERIAL FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE UNDERWRITERS LABORATORIES (U.L.) LISTED, NEW, FREE FROM DEFECTS, AND SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER OR HIS REPRESENTATIVE. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT, THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS AND LABOR TO CORRECT THE TROUBLE WITHOUT COST TO THE OWNER.
18. ELECTRICAL WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE ELECTRICAL POWER AND LIGHTING SYSTEMS, TELEPHONE AND COMMUNICATION SYSTEMS, PANEL BOARDS, CONDUIT, CONTROL WIRING, GROUNDING, ETC. AS INDICATED ON ELECTRICAL DRAWINGS AND/OR AS REQUIRED BY GOVERNING CODES.
19. PRIOR TO INSTALLING ANY ELECTRICAL WORK, THE CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY EXISTING SITE LOCATIONS AND CONDITIONS AND UTILITY SERVICE REQUIREMENTS OF THE JOB, AND BY REFERENCE TO ARCHITECTURE AND EQUIPMENT SUPPLIERS DRAWINGS. SHOULD THERE BE ANY QUESTION OR PROBLEM CONCERNING THE NECESSARY PROVISIONS TO BE MADE, PROPER DIRECTIONS SHALL BE OBTAINED BEFORE PROCEEDING WITH ANY WORK.
20. PROVIDE POWER AND TELEPHONE TO SERVICE POINTS PER UTILITY COMPANY REQUIREMENTS. CONTRACTOR SHALL CONTACT UTILITY SERVICE PLANNERS AND OBTAIN ALL SERVICE REQUIREMENTS AND INCLUDE COSTS FOR SUCH IN HIS BID.
21. SERVICE EQUIPMENT SHALL HAVE A SHORT CIRCUIT WITHSTAND RATING EQUAL TO OR EXCEEDING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE SUPPLY TERMINAL. THE INSTALLATION SHALL BE FREE FROM ANY SHORT CIRCUITS AND GROUNDS.
22. ALL WIRING SHALL BE COPPER WITH THHN/THWN DUAL RATED 600 VOLTS INSULATION.
23. IN THE EVENT OF ANY CONFLICT OR INCONSISTENCY BETWEEN ITEMS SHOWN ON THE PLANS AND/OR SPECIFICATIONS, THE NOTE, SPECIFICATION OR CODE WHICH PRESCRIBES AND ESTABLISHES THE HIGHEST STANDARD OF PERFORMANCE SHALL PREVAIL.
24. SERVICE CONDUITS SHALL HAVE NO MORE THAN (2) -90° BENDS IN ANY SINGLE RUN. THE CONTRACTOR SHALL PROVIDE PULL BOXES AS NEEDED WHERE CONDUIT REQUIREMENTS EXCEED THESE CONDITIONS.
25. ALL ELECTRICAL EQUIPMENT SHALL BE ANCHORED TO WITHSTAND 100 M.P.H. WIND SPEED AND DESIGNED FOR EXPOSURE C.
26. ALL COAX, POWER AND TELEPHONE SYSTEM CONDUITS SHALL HAVE A MINIMUM 24" RADIUS SWEEPS TO EQUIPMENT, PULLBOXES, MONOPOLE, ETC., UNLESS OTHERWISE NOTED, OR AS REQUIRED BY UTILITY COMPANIES.
27. FUSE TYPE SHALL BE BUSSMAN RKI LOW PEAK FUSE (LPU-RK-100).
28. CONTRACTOR TO PROVIDE GUTTER TAP(S) AS REQUIRED.
29. CONTRACTOR TO COLOR PHASE CONDUCTORS BLACK (B PHASE), RED (A PHASE), WHITE (NEUTRAL), AND GREEN (GROUND).

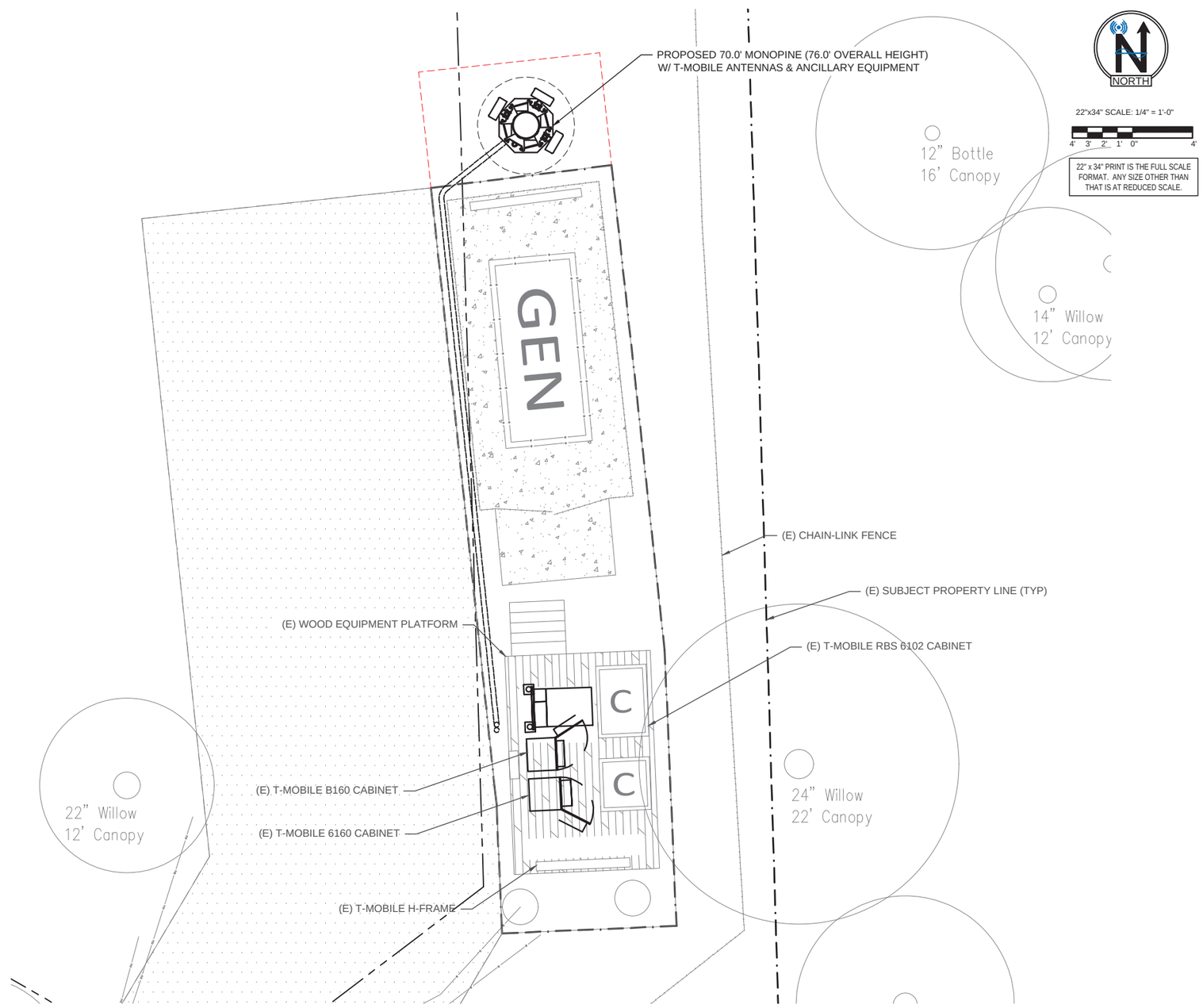
CODES AND STANDARDS

ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
NEC	NATIONAL ELECTRICAL CODE, LATEST ADOPTED EDITION
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
UL	UNDERWRITERS LABORATORIES, INC.

UTILITY PROVIDE INFORMATION

POWER COMPANY: N/A
CONTACT: N/A
PHONE: N/A

FIBER COMPANY: N/A
CONTACT: N/A
PHONE: N/A



NOTE:
ALL UTILITIES ARE EXISTING AND SHALL NOT BE MODIFIED

UTILITY NOTES:

1. POWER IS EXISTING AND WILL NOT BE MODIFIED

FIBER NOTES

1. FIBER IS EXISTING AND WILL NOT BE MODIFIED

NOTE:
LINES SHOWN DO NOT REPRESENT THE EXACT LOCATION OF THE CONDUIT RUNS CONTRACTOR TO VERIFY SERVICE LOCATIONS w/ACTUAL FIELD CONDITIONS.

1 UTILITY ROUTING PLAN

SBA TOWERS XI, LLC
A DELAWARE LIMITED LIABILITY COMPANY
8051 CONGRESS AVE
BOCA RATON, FL 33487
PHONE: 1-800-487-7483

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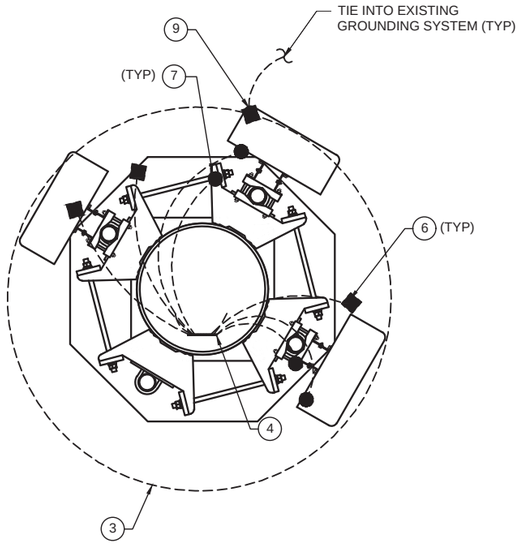
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LOS GATOS, CA 95030

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SHEET TITLE
UTILITY ROUTING PLAN

SHEET NUMBER
E-1



1 SITE GROUNDING PLAN
SCALE: N.T.S.

NOTE:
THE GROUNDING SYSTEM IS EXISTING. CONTRACTOR SHALL TIE THE NEW TOWER GROUND RING INTO THE EXISTING SYSTEM PER SBA GROUNDING STANDARDS

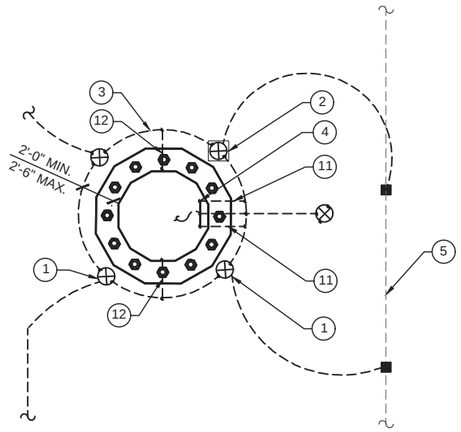
NORTH

BALLOON REFERENCE NOTES:

1. 5/8"Øx8' COPPER CLAD GROUND ROD BURIED 42" BELOW GRADE (MIN.)
2. GROUND ROD ACCESS WELL (MIN. OF 2 EACH PER COMPOUND)
3. #2 SOLID, TINNED, BARE COPPER WIRE TOWER GROUND RING (CONTINUOUS STRAND). TOWER GROUND RING SHOULD BE INSTALLED A MINIMUM TWO FEET OFF OF ANY STRUCTURE
4. 1/4"X4"X20" TINNED COPPER GROUND BAR. 2 TYP, AT BASE AND TOP OF TOWER. MOUNT DIRECT TO TOWER, DO NOT ISOLATE.
5. EXISTING COMPOUND GROUND RING
6. PROVIDE #2 SBTC BOND FROM ANTENNA GROUND BAR TO ANTENNA
7. PROVIDE #2 SBTC BOND FROM ANTENNA GROUND BAR TO RRU
8. PROVIDE #2 SBTC BOND FROM ANTENNA GROUND BAR TO OVP'S
9. PROVIDE (1) #2 SBTC GROUND LEAD FROM PROPOSED MONO-BROADLEAF TOWER RING TO STEEL ICE BRIDGE POST PER GROUNDING STANDARDS. BOND ALL ADJACENT POSTS.
10. PROVIDE #2 SBTC BOND FROM ANTENNA GROUND BAR TO DIPLEXERS
11. #2 SOLID, TINNED, BARE COPPER GROUND LEAD FROM GROUND BAR AT MONO-EUCOLYPTUS TOWER BASE TO GROUND RING. ROUTE IN 3/4" FLEX CONDUIT AND WEATHERPROOF OPEN END. (2 TYPICAL)
12. #2 SOLID, TINNED, BARE COPPER GROUND LEAD FROM MONO-BROADLEAF TOWER BASE TO GROUND RING. (2 TYPICAL, 180° SEPARATION)
13. PROVIDE #2 SBTC BOND FROM ANTENNA GROUND BAR TO TMA'S

SYMBOLS LEGEND

GROUND ROD WITH ACCESS	MECHANICAL CONNECTION
GROUND ROD	GROUND BAR
EXOTHERMIC CONNECTION	GROUND WIRE



2 TOWER GROUNDING PLAN
SCALE: N.T.S.

Intersect Cam-Lok Generator Connector

UL 1008 Listed to 200 A



New, light weight, corrosion-resistant aluminum enclosure with three mounting options reduces inventory and improves installation and cost efficiencies

The Intersect Cam-Lok Generator Connector (ICGC) Series enclosures replace commonly used generator connectors. Three mounting options are provided with knockouts on the left, right, and back side of the enclosure. The panels are listed to the UL 1008 Transfer Switch Power Inlet Standard. Their 10 kA short circuit rating is appropriate for new and retrofit applications without requiring any labeling changes or derating of 10 kA-rated emergency power systems. Each enclosure features Cam-Lok style connectors in an outdoor Type 3R enclosure. The ICGC enclosures may be ordered with a unique Deutsch receptacle for wiring alarm and auto-start/stop features of an engine generator set (from the automatic transfer switch connections).

Connect or disconnect Cam Lok-style connectors without tools—just a 180° turn assures a high-pressure contact with minimum resistance. Proven to provide optimal electrical and mechanical connections in numerous power applications, even severe operating conditions do not impact contacts which will withstand a pulling force of 1,000 lbs. Cam Lok-style connectors are single-pole plugs and receptacles, insulated for watertight integrity and safety. Male and female connectors provide insulated, recessed contacts. The insulators are molded from colorfast materials, with five different colors providing fast, easy phase identification. Male and female connectors are designed for safety. With no moving contact surfaces, there is no arcing or burning. Electrically insulated jackets extend past the ends of the connectors, ensuring safety of personnel. The design is impervious to vibration, preventing inadvertent disconnects.

The NEMA Type 3R outdoor powder-coated aluminum enclosure is lightweight (less than 15 pounds) and corrosion resistant. The ICGC may be wall-mounted, H-Frame mounted, or installed as a new or retrofit engine generator connector to shelters or cabinets. One design with three knockouts allows buyers to mount the enclosure on the left or right, or from the back. A gasket ships with each ICGC to insure a watertight seal. The enclosure ships with the door mounted to open to the left, yet the door hinges are easily moved by the installer (from the left side of the panel to the right) so that the door may open to the right. You inventory only one enclosure, yet have three options for installation.

For a quotation, contact Intersect at **solutions@intersectinc.com.**

Intersect, Inc.™

Quality products. Premium customer care. Integrated solutions.

3 CAM-LOK DETAIL
SCALE: N.T.S.

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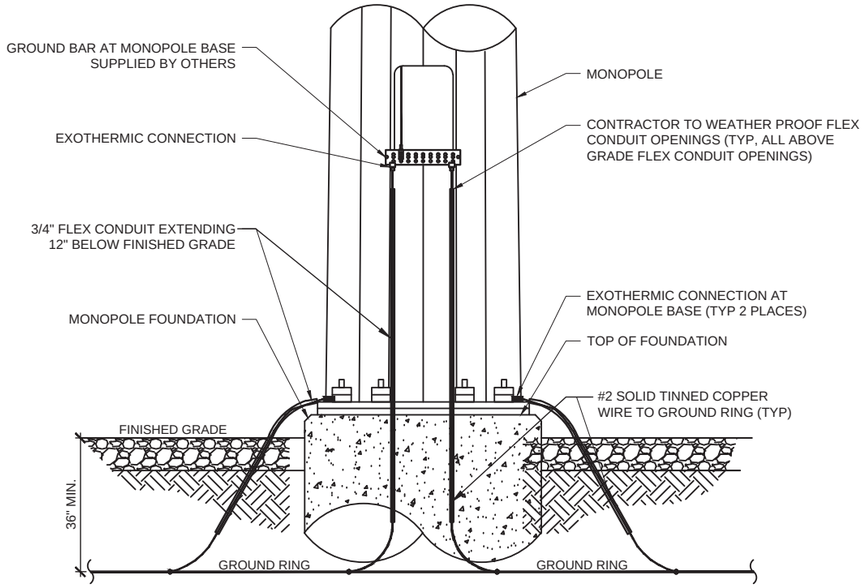
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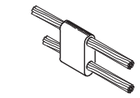
SHEET TITLE
SITE GROUNDING PLAN

SHEET NUMBER
E-2

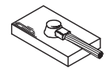


1 GROUNDING @ TOWER BASE
N.T.S.

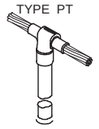
CADWELD CONNECTIONS
(OR APPROVED EQUAL)



PARALLEL HORIZONTAL CONDUCTORS
PARALLEL THROUGH CONNECTION OF HORIZONTAL CABLES TYPE PT



HORIZONTAL STEEL SURFACE
TO FLAT STEEL SURFACE OR HORIZONTAL PIPE TYPE HS



THROUGH CABLE TO GROUND ROD
THROUGH CABLE TO TOP OF GROUND ROD TYPE GT



VERTICAL STEEL SURFACE
CABLE DOWN AT 45° TO VERTICAL STEEL SURFACE INCLUDING PIPE TYPE VS

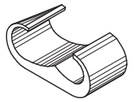


HORIZONTAL SPLICE
SPLICE OF HORIZONTAL CABLES



VERTICAL PIPE
CABLE DOWN AT 45° TO RANGE OF VERTICAL PIPES TYPE VS

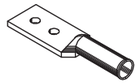
BURNDY CONNECTIONS
(OR APPROVED EQUAL)



"C" CONNECTOR
HYPRESS TYPE YGHC

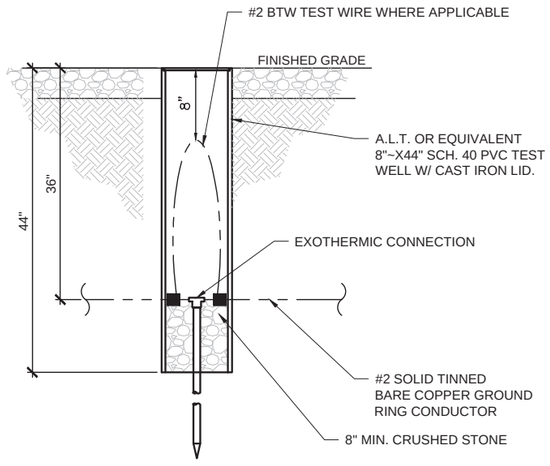


BOND JUMPER
FIELD FABRICATED GREEN STRANDED INSULATED TYPE 2-YA-2

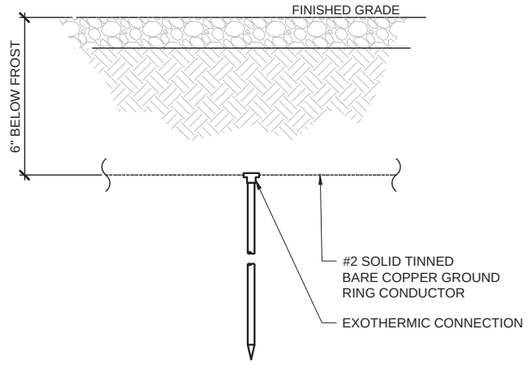


COPPER LUGS
TWO HOLE - LONG BARREL LENGTH TYPE YA-2

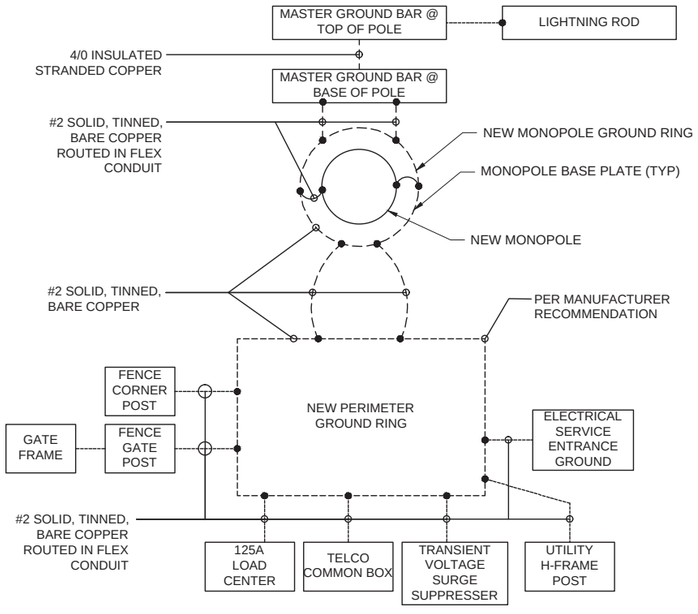
2 TYPICAL WELDING CONNECTIONS
N.T.S.



3 ACCESS WELL DETAIL
N.T.S.



4 GROUNDING ROD DETAIL
N.T.S.



5 GROUNDING SCHEMATIC
N.T.S.

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HWY 17 & BELL VISTA RELO

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LOS GATOS, CA 95030

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SHEET TITLE
ELECTRICAL AND GROUNDING DETAILS

SHEET NUMBER
E-3

NOTE:

ELECTRICIANS MUST BE "CERTIFIED" BY THE STATE OF CALIFORNIA.
NON-COMPLIANT VIOLATION OF THIS REQUIREMENT BY EITHER ELECTRICIANS OR WORKING CONTRACTORS SHALL BE REPORTED TO THE BOARD AS REQUIRED UNDER THE EXITING LABOR CODE SECTION 108.2 & 3099.2 & THE DEPARTMENT OF INDUSTRIAL RELATIONS, AS WELL AS NEC/CEC 705.6
(NO EXCEPTIONS WILL BE ALLOWED)

120/240V 1Ø 3-WIRE
MAIN CB: 2P/200A

EXISTING DISTRIBUTION PANEL

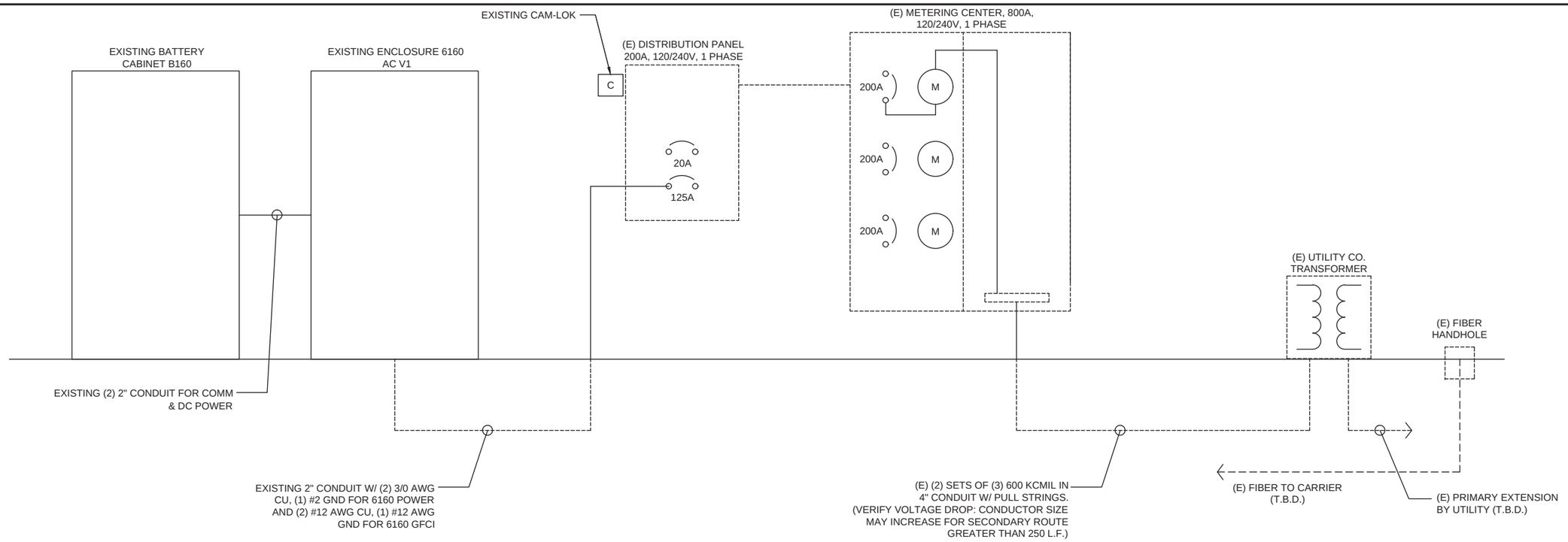
MOUNTING: SURFACE
NEMA: 3R
LOCATION: LEASE AREA

VOLT AMPS PHASE A	VOLT AMPS PHASE B	DESCRIPTION	POLE	BRKR.	CIRCUIT			CIRCUIT	BRKR.	POLE	DESCRIPTION	VOLT AMPS PHASE A	VOLT AMPS PHASE B
-		SERVICE DISCONNECT	2	200					200	2	GEN. SERVICE DISCONNECT	-	
	-												-
200	-	SITE LIGHT	1	20	1	●		2	15	1	RECEPTACLES	180	-
-	7560	RBS 6102	2	60	3		●	4	125	2	RBS 6160	-	8640
7560	-				5	●		6				8640	-
-	-	SPACE	1	-	7		●	8	20	1	RECEPTACLE TO 6160	-	180
-	-	SPACE	1	-	9	●		10	-	1	SPACE	-	-
-	-	SPACE	1	-	11		●	12	-	1	SPACE	-	-
-	-	SPACE	1	-	13	●		14	-	1	SPACE	-	-
-	-	SPACE	1	-	15		●	16	-	1	SPACE	-	-
-	-	SPACE	1	-	17	●		18	-	1	SPACE	-	-
-	-	SPACE	1	-	19		●	20	-	1	SPACE	-	-
-	-	SPACE	1	-	21	●		22	-	1	SPACE	-	-
-	-	SPACE	1	-	23		●	24	-	1	SPACE	-	-
7,760	7,560					VA/LINE						8,820	8,820

PHASE A = 16,580 PHASE B = 16,380

TOTAL CONNECTED LOAD: 32,960 VA
TOTAL DESIGN AMPS: 160A

1 PANEL SCHEDULE
N.T.S.



2 ELECTRICAL SINGLE-LINE DIAGRAM
N.T.S.

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SHEET TITLE
SINGLE LINE DIAGRAM & PANEL SCHEDULE

SHEET NUMBER
E-4

GENERAL NOTES

1. ALL REFERENCES TO OWNER HEREIN SHALL BE CONSTRUED TO MEAN SBA OR IT'S DESIGNATED REPRESENTATIVE.
2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY. THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE AND/OR COUNTY IN WHICH IT IS TO BE PERFORMED.
3. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
4. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERCEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
5. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
6. ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND THE TESTING AGENCY PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES.
7. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
9. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST EDITION OF THE LOCAL BUILDING CODE.
10. ALL PROPOSED CELLULAR EQUIPMENT AND FIXTURES SHALL BE FURNISHED BY OWNER FOR INSTALLATION BY THE CONTRACTOR, UNLESS SPECIFICALLY NOTED OTHERWISE HEREIN.
11. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
12. RADIO EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
13. CONTRACTOR TO VERIFY ALL ASPECTS OF THE EXISTING SITE, INCLUDING THE EXISTING MONOPOLE FOUNDATION AND ANCHOR RODS, TO VERIFY THE CONDITION AND SIZE OF ALL EXISTING ELEMENTS AND SHALL NOTIFY THE EOR SHOULD ANY DAMAGE OR DETERIORATION, OR DISCREPANCIES BETWEEN THE EXISTING STRUCTURE AND THAT SHOWN ON THE APPROVED STUCTURAL DRAWINGS BE FOUND.

STRUCTURAL NOTES

1. DESIGN REQUIREMENTS PER LOCAL BUILDING CODE AND THE E1A/TIA-222-GH STRUCTURAL STANDARDS FOR STEEL ANTENNAS TOWERS AND SUPPORTING STRUCTURES.
2. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF A.I.S.C. SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS-ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN INCLUDING THE COMMENTARY AND THE A.I.S.C. CODE OF STANDARD PRACTICE.

STRUCTURAL NOTES

2. STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO ASTM A36. ALL STRUCTURAL STEEL PIPES SHALL CONFORM TO ASTM A53 GRADE 8. ALL STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500 GRACE 8. ALL STRUCTURAL STEEL COMPONENTS AND FABRICATED ASSEMBLIES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
3. WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) D.1.1-96. STRUCTURAL WELDING CODE-STEEL WELD ELECTRODES SHALL BE E70XX.
4. ALL COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE AS SPECIFIED BY THE OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL FURNISH ALL CONNECTION HARDWARE REQUIRED TO SECURE THE CABLES. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
5. NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY NORTH AND INFORM OWNER OF ANY DISCREPANCY BEFORE STARTING CONSTRUCTION.
6. ALL CAST IN PLACE CONCRETE SHALL BE MIXED AND PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318 AND AC1 301, AND SHALL HAVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI (U.O.N.). CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL UNLESS OTHERWISE NOTED. MINIMUM CONCRETE COVER SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
7. ALL REINFORCING STEEL SHALL CONFORM TO ASTM 615 GRADE 80, DEFORMED BILLET STEEL BARS. WELDED WIRE FABRIC REINFORCING SHALL CONFORM TO ASTM A185.
8. THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE LATEST A.I.S.C. SPECIFICATIONS.
9. ALL CONNECTIONS NOT FULLY DETAILED ON THESE PLANS SHALL BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.
10. HOT-DIP GALVANIZE ITEMS SPECIFIED TO BE ZINC-COATED. AFTER FABRICATION WHERE PRACTICAL. GALVANIZING: ASTM A 123, ASTM A 153/A 153M OR ASTM A 653/A 653M, G90, AS APPLICABLE.
11. REPAIR DAMAGED SURFACES WITH GALVANIZING REPAIR METHOD AND PAINT' CONFORMING TO ASTM A 780 OR BY APPLICATION OF STICK OR THICK PASTE MATERIAL SPECIFICALLY DESIGNED FOR REPAIR OF GALVANIZING. CLEAN AREAS TO BE REPAIRED, AND REMOVE SLAG FROM WELDS. HEAT SURFACES TO WHICH STICK OR PASTE MATERIAL IS APPLIED WITH A TORCH TO A TEMPERATURE SUFFICIENT TO MELT THE METALLICS. IN STICK OR PASTE, SPREAD MOLTEN MATERIAL UNIFORMLY OVER SURFACES TO BE COATED AND WIPE OFF EXCESS MATERIAL.
12. CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S INSTRUCTIONS/ SPECIFICATIONS IF NO INFORMATION IS CONTAINED IN THESE PLANS OR IF THE MANUFACTURER'S SPECIFICATIONS ARE STRICTER.

SPECIAL INSPECTION

1. IF REQUIRED, SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT SPECIAL INSPECTOR PER CODE FOR THE FOLLOWING ITEMS:
   A. CONTINUOUS DURING THE INSTALLATION OF EXPANSION AND/OR ADHESIVE ANCHORS, IF UTILIZED: INSPECT HOLE SIZE, DEPTH, CLEANLINESS, AND INSTALLATION PER ICC REPORT.
   B. PERIODIC FOR HIGH STRENGTH BOLT INSTALLATIONS (A325), IF UTILIZED.
   C. ADDITIONAL SPECIAL INSPECTIONS AS REQUIRED FOR FABRICATION AND INSTALLATION OF THE NEW MONO-PINE AND FOUNDATION OR VERIFICATION OF THE EXISTING MONOPOLE FOUNDATION AS SHOWN ON THE APPROVED STRUCTURAL CALCULATIONS AND DRAWINGS FOR THE MONO-PINE (BY OTHERS). FOR NEW FOUNDATIONS, SPECIAL INSPECTION SHALL INCLUDE, BUT NOT BE LIMITED TO:
      -EXCAVATIONS
      -REINFORCEMENT AND FORM PLACEMENT
      -ANCHOR ROD PLACEMENT
      -CONCRETE PLACEMENT, MIX DESIGN REVIEW, AND CONCRETE TESTING

2. THE SPECIAL INSPECTOR SHALL PROVIDE A COPY OF THEIR REPORT TO THE OWNER, ARCHITECT, STRUCTURAL ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL AS EACH TEST IS COMPLETED. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION; THEN, IF UNCORRECTED, TO THE PROPER DESIGN AUTHORITY AND THE BUILDING OFFICIAL.

3. ANY MATERIAL WHICH FAILS TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.

4. INSPECTION FOR PREFABRICATION CONSTRUCTION SHALL BE THE SAME AS FOR THE MATERIAL USED IF THE CONSTRUCTION TOOK PLACE ON SITE. CONTINUOUS INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE.

5. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT SIGNED BY BOTH HE AND HIS SUPERVISOR STATING WHETHER THE WORK REQUIRING SPECIAL INSPSECTION WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.

UTILITIES

1. CONTRACTOR SHALL CONTACT A SUBSURFACE UTILITY LOCATOR FOR LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
   LOCATION OF EXISTING SEWER, WATER LINES, GAS LINES, CONDUITS OR OTHER STRUCTURES ACROSS, UNDERNEATH, OR OTHERWISE ALONG THE LINE OF PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS, AND IF SHOWN ARE ONLY APPROXIMATELY CORRECT. CONTRACTOR ASSUMES SOLE RESPONSIBILITY FOR VERIFYING LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES (INCLUDING TEST PITS BY HAND IF NECESSARY) IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION DR ELEVATI0N IS DIFFERENT FROM THAT SHOWN ON THE PLANS, OR IF THERE APPEARS TO BE A CONFLICT.

2. CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS WITH APPROPRIATE UTILITY OWNERS AND CONSTRUCTION MANAGER.

3. DAMAGE BY THE CONTRACTOR TO UTILITIES OR PROPERTY OF OTHERS, INCLUDING EXISTING PAVEMENT AND OTHER SURFACES DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO PRE CONSTRUCTION CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CLIENT. FOR GRASSED AREAS, SEED AND MULCH SHALL BE ACCEPTABLE..

4. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER THE REQUIREMENTS FOR AND LIMITS OF OVERHEAD AND/OR UNDERGROUND ELECTRICAL SERVICE.

5. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF NEW UNDERGROUND TELEPHONE SERVICE WITH THE TELEPHONE UTILITY AND THE OWNER'S REQUIREMENTS.

6. ALL UNDERGROUND UTILITIES SHALL BE INSTALLED AND TESTED SATISFACTORY PRIOR TO COMMENCING ANY PAVING OPERATIONS WHERE SUCH UTILITIES ARE WITHIN THE LIMITS OF PAVEMENT.

PERMITS

1. CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS FOR THIS PROJECT FROM ALL APPLICABLE GOVERNMENTAL AGENCIES. (NOT SUPPLIED BY OWNER)

2. ANY PERMITS WHICH MUST BE OBTAINED SHALL BE THE CONTRACTORS RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS. (NOT SUPPLIED BY OWNER)

3. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND THE LATEST APPLICABLE CODES AND STANDARDS.

4. THE CONTRACTOR SHALL NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY, OR CITY) ENGINEER 24 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.

5. CONTRACTOR RESPONSIBLE FOR CLOSING AND FILING ALL PERMITS ASSOCIATED WITH SITE.

GRADING

1. THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC...) ALL MATERIAL NOT SUITABLE FOR SUB GRADE IN ITS PRESENT STATE. IF THE MATERIAL, AFTER REWORKING, REMAINS UNSUITABLE THEN THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL AT HIS EXPENSE. ALL SUB GRADES SHALL BE PROOF ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFT MATERIAL SHALL BE REWORKED OR REPLACED.

2. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL DITCHES, PIPES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTABLE BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURES IN OPERABLE CONDITION.

3. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE.

4. ALL DIMENSIONS SHALL BE VERIFIED WITH THE PLANS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE OWNER IMMEDIATELY IF DISCREPANCIES ARE DISCOVERED. THE CONTRACTOR SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHEN WORK IS BEING PRE FORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.

PAINTING

1. CONTRACTOR TO COORDINATE PAINTING REQUIREMENTS WITH OWNER.

2. PAINT COLORS SHALL BE SELECTED TO MATCH EXISTING COLORS AND TEXTURES.

3. PROVIDE THE BEST QUALITY GRADE OF COATINGS AS REGULARLY MANUFACTURED BY APPROVED PAINT MATERIAL MANUFACTURERS. MATERIALS NOT DISPLAYING THE MANUFACTURER'S IDENTIFICATION AS A STANDARD, BEST-GRADE PRODUCT WILL NOT BE ACCEPTABLE.

4. PROVIDE UNDERCOAT PAINT PRODUCED BY THE SAME MANUFACTURER AS THE FINISH COATS. USE ONLY THINNERS APPROVED BY THE PAINT MANUFACTURER AND USE ONLY WITHIN RECOMMENDED LIMITS.

5. COMPLETELY COVER TO PROVIDE AN OPAQUE, SMOOTH SURFACE OF UNIFORM FINISH, COLOR, APPEARANCE, AND COVERAGE. CLOUDINESS, SPOTTINGS, HOLIDAYS, LAPS, BRUSH MARKS, RUNS, SAGS, ROPINESS, OR OTHER SURFACE IMPERFECTIONS WILL NOT BE ACCEPTABLE.

6. ALL GRAFFITI ON ANY COMPONENT OF THE FACILITY SHALL BE REMOVED PROMPTLY IN ACCORDANCE WITH COUNTY REGULATIONS.

7. THIS WIRELESS FACILITY SHALL BE KEPT CLEAN AND FREE OF LITTER.

8. ALL EQUIPMENT CABINETS SHALL DISPLAY A LEGIBLE OPERATOR'S CONTACT NUMBER FOR REPORTING MAINTENANCE PROBLEMS.

9. ALL SUPPORTING EQUIPMENT IN THE LEASE AREA WILL BE PAINTED / TEXTURED TO MATCH PROPOSED FAUX MONO-PINE.

FERROUS METALS
SHOP PRIMED
TOUCH-UP COAT - RED OXIDE METAL PRIMER
FINISH COATS - SEMI-GLOSS-ALKYD ENAMEL

SBA CONSTRUCTION REQUIREMENTS

1. AWARDED CONTRACTOR WILL BE REQUIRED TO SIGN AND RETURN A COPY OF AN AWARD LETTER FOR SBA'S FILE.
2. CONTRACTOR WILL BE REQUIRED TO PROVIDE PROOF OF LICENSE TO PERFORM WORK IN JURISDICTION AT TIME OF BID AWARD.
3. CONTRACTOR WILL PROVIDE A CONSTRUCTION SCHEDULE PRIOR TO CONSTRUCTION STARTING AND WILL PROVIDE UPDATE/CHANGES (WITH EXPLANATIONS) TO THAT SCHEDULE WHEN/IF ITEMS ARE DELAYED OR PUSHED OUT.
4. CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONCRETE COMPRESSIVE TESTING AND REQUIRED TO SUBMIT FINAL TEST RESULTS WITH CLOSE OUT BOOK.
5. CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE SBA PROJECT MANAGERS WITH PHOTOS OF THE MAJOR CONSTRUCTION MILESTONES AS THEY OCCUR.
6. CONTRACTOR WILL BE RESPONSIBLE TO ASSIST IN COORDINATING AND OBTAINING PRIMARY POWER TO THE SITE PRIOR TO TOWER ERECTION, AS WELL AS TELCO SERVICE BEFORE PROJECT COMPLETION. (ON SITE VISITS WITH UTILITY COMPANY REPRESENTATIVES AS NECESSARY, ETC....).
7. CONTRACTOR WILL HAVE A REPRESENTATIVE ON A WEEKLY CONFERENCE CALL TO PROVIDE SBA WITH SITE SPECIFIC UPDATES. CURRENTLY, THIS CONFERENCE CALL IS HELD EACH AND EVERY THURSDAY AT 4 PM (EASTERN TIME).
8. CONTRACTOR SHOULD BE PREPARED FOR RANDOM SBA SAFETY INSPECTIONS AT ALL TIMES.
9. CONTRACTOR IS EXPECTED TO MAINTAIN PROPER WORKING CONDITIONS AND PROCEDURES PER OSHA STANDARDS AT ALL TIMES.
10. CONTRACTOR WILL BE REQUIRED TO OBTAIN THE NECESSARY ELECTRICAL PERMITS AND INSPECTIONS AS REQUIRED BY JURISDICTION.
11. CONTRACTOR IS EXPECTED TO CLOSE-OUT THE JOB SITE AS QUICKLY AS POSSIBLE (OBTAINING A CERTIFICATE OF OCCUPANCY AND GETTING SBA'S REGIONAL SITE MANAGER'S SIGN-OFF/CHECKLIST APPROVAL ON THE SITE).
12. CONTRACTOR WILL PROVIDE A COMPLETED TOWER HEIGHT VERIFICATION FORM AND TAPE DROP WITHIN 24 HOURS OF REACHING OVERALL HEIGHT.
13. CONTRACTOR WILL UTILIZE ALL OF THE SBA PROVIDED DOCUMENTATION INCLUDING BUT NOT LIMITED TO: TOWER CONSTRUCTION ACCEPTANCE CHECKLIST, CONSTRUCTION SCHEDULE, CONSTRUCTION CLOSE-OUT LIST & TOWER HEIGHT VERIFICATION.
14. CONTRACTOR IS RESPONSIBLE FOR CONCRETE COMPRESSION TESTING.
15. CONTRACTOR IS RESPONSIBLE FOR GROUND MEG TESTING.

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REVISIONS

NO.	DESCRIPTION	DATE	BY
J	SURVEY UPDATE	06/05/26	KM
K	CLIENT COMMENTS	06/19/26	KM
L	CLIENT COMMENTS	07/01/26	KM
M	CLIENT COMMENTS	07/09/26	KM
N	CLIENT COMMENTS	08/14/26	KM
P	REVIEW COMMENTS	08/17/26	KM
Q	REVIEW COMMENTS	10/15/26	DO

CA1B19C-S

HWY 17 &
BELL VISTA
RELO

APPROXIMATE TO
42 MILES AVE.
LOS GATOS, CA 95030

DRAWN BY:	KM
CHECKED BY:	RM
DATE:	07/15/24
PROJECT #:	-

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
2. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON DRAWINGS.
3. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODE. THE 2018 EDITION OF THE INTERNATIONAL BUILDING CODE, AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
4. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURE SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE STRUCTURAL MEMBERS.
5. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
6. DESIGN CRITERIA:
   - CODE:
     - STRUCTURAL DESIGN IS BASED ON THE CALIFORNIA BUILDING CODE, 2019 EDITION (2018 IBC) AND THE ASCE 7-16 STANDARD.
   - WIND:
     - VELOCITY 94 MPH (3 SEC. GUST)
     - EXPOSURE "C"
     - RISK CATEGORY = II
   - SEISMIC:
     - SEISMIC IMPORTANCE FACTOR, I = 1
     - RISK CATEGORY = II
     - MAPPED SPECTRAL ACCELERATIONS: SS = 0.560G S1 = 0.221G
     - SITE CLASS: D
     - SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.505G SD1 = 0.318G
     - SEISMIC DESIGN CATEGORY: D
     - ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

FOUNDATION

1. FOOTINGS ARE DESIGNED BASED ON AN ALLOWABLE SOIL PRESSURE OF 1000 PSFVECTOR STRUCTURAL ENGINEERING STRONGLY RECOMMENDS INDEPENDENT SOILS TESTING BE PERFORMED BY A LICENSED GEOTECHNICAL ENGINEER TO VERIFY SOIL BEARING CAPACITY, SLOPE STABILITY, AND ANY OTHER RELATED SOIL PARAMETERS, AS REQUIRED.
2. CONTRACTOR SHALL PROVIDE FOR PROPER DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER, SEEPAGE, ETC.
3. FOOTINGS SHALL BE PLACED ACCORDING TO DEPTHS SHOWN ON THE DRAWINGS.
4. FOOTING BACK FILL AND UTILITY TRENCH BACK FILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS. FLOODING WILL NOT BE PERMITTED.
5. ALL ABANDONED FOOTINGS, UTILITIES, ETC. THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.

CONCRETE

1. ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318 LATEST APPROVED EDITION) WITH MODIFICATIONS AS NOTED IN THE DRAWINGS AND SPECIFICATIONS.
2. REINFORCED CONCRETE DESIGN IS BY THE "ULTIMATE STRENGTH DESIGN METHOD", ACI 318-(LATEST EDITION)
3. SCHEDULE OF STRUCTURAL CONCRETE 28-DAY STRENGTHS AND TYPES:

LOCATION IN STRUCTURE	STRENGTH PSI	TYPE
SLABS ON GRADE	4500	HARD ROCK
FOOTINGS	4500	HARD ROCK

   DESIGN BASED ON 2500 PSI, 28-DAY STRENGTH, SPECIAL INSPECTION IS NOT REQUIRED.
4. CONCRETE MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL WITH THE FOLLOWING REQUIREMENTS:
   a. COMPRESSIVE STRENGTH AT AGE 28 DAYS AS SPECIFIED ABOVE.
   b. LARGE AGGREGATE-HARDROCK, ¾" MAXIMUM SIZE CONFORMING TO ASTM C-33
   c. CEMENT-ASTM C-150, TYPE V PORTLAND CEMENT
   d. MAXIMUM SLUMP 5-INCHES, MAX WATER CEMENT RATIO: 0.45
   e. NO ADMIXTURES, EXCEPT FOR ENTRAINED AIR, AND AS APPROVED BY THE ENGINEER.

REINFORCING STEEL

1. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615 GRADE 60.
2. ALL REINFORCING BAR BENDS SHALL BE MADE COLD
3. MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6 INCHES OR ONE FULL MESH AND ONE HALF, WHICH EVER IS GREATER.
4. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
5. REBAR SPLICES ARE TO BE: CLASS "B"
6. REINFORCING SPLICES SHALL BE MADE ONLY WHERE INDICATED ON THE DRAWINGS.
7. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY.

CONCRETE MASONRY UNITS (CMU)

1. MASONRY UNITS SHALL BE GRADE N-II UNITS, 1500 PSI, CONFORMING TO THE LATEST ASTM DESIGNATION C-90 & IN ADDITION, THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION OF CALIFORNIA & NEVADA.
2. PORTLAND CEMENT SHALL CONFORM TO ASTM DESIGNATION C-150 & BE AS SPECIFIED FOR CONCRETE.
3. MORTAR MIX SHALL CONFORM TO THE REQUIREMENTS OF IBC TABLE 2103.7, TYPE S, & PROJECT SPECIFICATIONS. MORTAR SHALL ATTAIN A COMPRESSIVE STRENGTH OF 1500 PSI AT 28 DAYS.
4. GROUT SHALL CONFORM TO THE REQUIREMENTS OF SECTION 2103 OF IBC FOR COARSE GROUT. USE SUFFICIENT WATER FOR GROUT TO FLOW INTO ALL JOINTS OF THE MASONRY WITHOUT SEGRETION. GROUT SHALL ATTAIN A COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
5. PROVIDE A MINIMUM OF 1/2" GROUT BETWEEN MAIN REINFORCING & MASONRY UNITS.
6. LOW LIFT CONSTRUCTION, MAXIMUM GROUT POUR HEIGHT IS 4 FEET.
7. CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CORES CONTAINING REINFORCING STEEL.
8. REFER TO ARCHITECTURAL DRAWINGS FOR SURFACE & HEIGHT OF UNITS, LAYING PATTERN & JOINT TYPE.

SPECIAL INSPECTION / QUALITY ASSURANCE PLAN

1. SPECIAL INSPECTIONS SHALL BE REQUIRED:
   a. LEVEL B SPECIAL INSPECTION REQUIRED FOR ALL CMU CONSTRUCTION.
   b. THE OWNERS SHALL EMPLOY SPECIAL INSPECTORS WHO SHALL PROVIDE ADDITIONAL INSPECTIONS DURING CONSTRUCTION IN ACCORDANCE WITH IBC SECTION 17.
   c. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT CERTIFIED INSPECTOR FROM AN ESTABLISHED TESTING AGENCY, LICENSED AND APPROVED BY THE BUILDING DEPARTMENT.
   d. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO VECTOR STRUCTURAL ENGINEERING AND ALL INTERESTED PARTIES.
3. STRUCTURAL TESTING IS NOT REQUIRED.
4. ALL REPORTS SHALL BE DISTRIBUTED ON A MONTHLY BASIS TO THE ENGINEER OF RECORD, OWNER, CONTRACTOR, AND TO THE BUILDING OFFICIAL.
5. NO STRUCTURAL OBSERVATION IS REQUIRED. HOWEVER, THE ENGINEER OF RECORD RESERVES THE RIGHT TO MAKE FIELD OBSERVATIONS DURING CONSTRUCTION APPROXIMATELY ONCE PER WEEK.

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REVISIONS

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CA1B19C-S

HWY 17 & BELL VISTA RELO

APPROXIMATE TO
42 MILES AVE.
LOS GATOS, CA 95030

DRAWN BY:	KM
CHECKED BY:	RM
DATE:	07/15/24
PROJECT #:	-

SHEET TITLE
GENERAL STRUCTURAL NOTES

SHEET NUMBER
GN-2

PROPOSED LEASE AREA (AS SURVEYED)

Situated in the County of Santa Clara, and State of California. Known as being a 645 square foot Proposed Lease Area over and upon a parcel of land now or formerly conveyed to Pacific Gas and Electric Company, a corporation as recorded in Book 2811 at Page 557 and in Book 2773 at Page 253, all of Santa Clara County Records and being more particularly described as follows:

COMMENCING and BEGINNING at a point on the Northerly right-of-way of Miles Avenue with the westerly right-of-way of State Route 17; Thence North 30°41'37" East a distance of 44.47 feet to the POINT OF BEGINNING;

Thence North 02°27'27" West a distance of 8.82 feet; Thence North 06°04'10" West a distance of 42.65 feet; Thence North 82°50'53" East a distance of 12.51 feet; Thence South 06°14'56" East a distance of 33.54 feet; Thence South 02°27'27" East a distance of 18.94 feet; Thence South 87°32'33" West a distance of 12.00 feet to the POINT OF BEGINNING.

The Proposed Lease Area contains 0.015 acres, or 645 square feet, of land.

PROPOSED 20' WIDE NON-EXCLUSIVE ACCESS & UTILITY EASEMENT (AS SURVEYED)

Situated in the County of Santa Clara, and State of California. Known as being a 1,790 square foot Non-Exclusive Access & Utility Easement over and upon a parcel of land now or formerly conveyed to Coast Counties Gas and Electric Company, a corporation as recorded in Book 791 at Page 363 of Santa Clara County Records and being more particularly described as follows:

COMMENCING and BEGINNING at a point on the Northerly right-of-way of Miles Avenue with the westerly right-of-way of State Route 17; Thence North 60°16'00" West a distance of 20.00 feet; Thence North 30°41'37" East a distance of 39.09 feet; Thence North 06°04'10" West a distance of 44.06 feet; Thence North 83°55'50" East a distance of 20.00 feet; Thence South 06°04'10" East a distance of 42.65 feet; Thence South 02°27'27" East a distance of 8.82 feet; Thence South 30°41'37" West a distance of 44.47 feet to the POINT OF BEGINNING.

The 20' Wide Non-Exclusive Access & Utility Easement contains 0.041 acres, or 1,790 square feet, of land.

PARENT PARCEL DESCRIPTION (AS PROVIDED)

SITUATE IN THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA:

BEGINNING AT A POINT WHICH BEARS N. 89° 44' 30" E. 333.8 FEET AND N. 29° 44' 30" E. 92.08 FEET FROM A 3/4 INCH IRON PIPE MARKING THE MOST EASTERLY CORNER OF LOT 1, BLOCK 9, AS SHOWN UPON THE MAP OF VINEYARD LOTS IN THE TOWN OF LOS GATOS, WHICH SAID MAP WAS FILED FOR RECORD APRIL 21, 1888 IN BOOK "C" OF MAPS, AT PAGE 87, SANTA CLARA COUNTY RECORDS, SAID POINT OF BEGINNING ALSO BEING AT A POINT IN THE SOUTHERLY BOUNDARY LINE OF THAT CERTAIN PARCEL OF LAND CONVEYED BY ALEXANDER ENGLISH TO THE TOWN OF LOS GATOS, A MUNICIPAL CORPORATION, BY DEED DATED APRIL 7, 1890 AND RECORDED APRIL 24, 1890 IN BOOK 125 OF DEEDS AT PAGE 190, SANTA CLARA COUNTY RECORDS, DISTANT THEREON S. 64° 55' 30" E. 117.32 FEET FROM THE SOUTHWESTERLY CORNER OF SAID PARCEL OF LAND, SAID POINT OF BEGINNING ALSO BEING THE MOST WESTERLY CORNER OF THE PARCEL OF LAND CONVEYED BY THE TOWN OF LOS GATOS, A MUNICIPAL CORPORATION TO PACIFIC GAS AND ELECTRIC COMPANY, A CORPORATION, BY DEED DATED NOVEMBER 16, 1953 AND RECORDED DECEMBER 10, 1953 IN BOOK 2773 OF OFFICIAL RECORDS, PAGE 253, SANTA CLARA COUNTY RECORDS, THENCE FROM SAID POINT OF BEGINNING RUNNING S. 29° 44' 30" W. 92.08 FEET TO A ONE INCH IRON PIPE; THENCE S. 60° 15' 30" E. 305.65 FEET TO THE SOUTHEASTERLY LINE OF THE 7.69 ACRE TRACT OF LAND DESCRIBED IN THE DECREE MADE DECEMBER 31, 1953 IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF SANTA CLARA, QUIETING TITLE TO SAID 7.69 ACRE TRACT IN TOWN OF LOS GATOS, A MUNICIPAL CORPORATION, A CERTIFIED COPY OF WHICH DECREE WAS RECORDED JANUARY 4, 1954 IN BOOK 2787 OF OFFICIAL RECORDS, PAGE 433, SANTA, CLARA COUNTY RECORDS, (RECORDER'S FILE NO. 940305), THENCE RUNNING ALONG SAID LINE OF SAID 7.69 ACRE TRACT, N. 52° 44' 30" E. 52.44 FEET TO THE POINT OF INTERSECTION OF SAID LINE OF SAID 7.69 ACRE TRACT WITH THE SOUTHEASTERLY PROLONGATION OF THE NORTHEASTERLY LINE OF SAID PARCEL OF LAND CONVEYED TO PACIFIC GAS AND ELECTRIC COMPANY, A CORPORATION, ABOVE REFERRED TO, THENCE LEAVING SAID LINE OF SAID 7.69 ACRE TRACT AND RUNNING. ALONG SAID PROLONGED LINE OF SAID PARCEL OF LAND SO CONVEYED TO SAID COMPANY, N. 4° 12' 30" W. 80.49 FEET TO THE MOST EASTERLY CORNER OF SAID PARCEL OF LAND SO CONVEYED TO SAID PACIFIC GAS AND ELECTRIC COMPANY, A CORPORATION, THENCE RUNNING ALONG THE SOUTHWESTERLY LINE OF SAID PARCEL OF LAND AND ALONG SAID SOUTHERLY LINE OF THE PARCEL OF LAND CONVEYED TO THE TOWN OF LOS GATOS, A MUNICIPAL CORPORATION, ABOVE REFERRED TO, N. 64° 55' 30" W. 282.13 FEET TO THE POINT OF BEGINNING AND BEING A PORTION OF LOT 2 AS SHOWN UPON THE MAP OF THE SUBDIVISION OF THE EASTERLY PARTY OF THE MASON TRACT, PART OF THE RINOCONADA DE LOS GATOS RANCHO, WHICH SAID MAP WAS FILED FOR RECORD DECEMBER 14, 1863 IN BOOK "B" OF MAPS, AT PAGE 4, SANTA CLARA COUNTY RECORDS.

LESS AND EXCEPT THAT PROPERTY CONVEYED IN DEED I929-581 RECORDED 10/02/1984 IN THE SANTA CLARA COUNTY RECORDS.
TAX ID NO: 529-05-043

DERIVATION CLAUSE

BEING THE SAME PROPERTY CONVEYED TO PACIFIC GAS AND ELECTRIC COMPANY, A CORPORATION, GRANTEE, FROM THE TOWN OF LOS GATOS, A MUNICIPAL CORPORATION OF THE SIXTH CLASS, GRANTOR RECORDED 02/10/1954, AS BOOK 2811 PAGE 557 OF SANTA CLARA COUNTY RECORDS.

BEING THE SAME PROPERTY CONVEYED TO PACIFIC GAS AND ELECTRIC COMPANY, A CORPORATION, GRANTEE, FROM THE TOWN OF LOS GATOS, A MUNICIPAL CORPORATION OF THE SIX CLASS, GRANTOR RECORDED 12/18/1953, AS BOOK 2773 PAGE 253 OF SANTA CLARA COUNTY RECORDS.



LOCATION MAP
NO SCALE

BASIS OF BEARINGS

The basis for all bearings shown hereon is the State of California Grid, Zone 3, NAD 83 (2011).

FLOOD ZONE

By scaled map location and graphic plotting only, the subject property appears to lie entirely in Zone X-Shaded (Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood) according to the Flood Insurance Rate Map for the County of Santa Clara, Community Panel No. 06085C0376H, Effective Date May 18, 2009.

ENCROACHMENTS

At the time of survey there were no visible encroachments onto or beyond the subject property.

CERTIFICATION

I, Casey Wayne Lowry, CA-PLS, a California State Registered Professional Land Surveyor, License No. 8154, hereby certify to Golden State Licensing, LLC and Old Republic National Title Insurance Company the following:

Latitude and Longitude values for the center of the above-referenced tower are accurate to within +/- 15 feet horizontally:

HORIZONTAL DATUM: NAD83

	EXISTING TOWER	PROPOSED TOWER
LATITUDE	NORTH 37° 13' 33.43"	NORTH 37° 13' 33.44"
LONGITUDE	WEST -121° 58' 36.54"	WEST -121° 58' 36.45"

This surveyor has received and reviewed that certain Limited Title Report No. 01-24027040-01S issued by Old Republic National Title Insurance Company with search date of June 07, 1984 through June 07, 2024 through which proposes to insure the lands described under its Schedule A.

The surveyor has reviewed and determined that the lands described under said Schedule A of the Title Commitment contain or include the lands as depicted on this survey.

The surveyor has reviewed and determined that the items of record as identified under Schedule B-II of said Title Commitment do encumber the lands as described on this survey, but that said items will not interfere with the location of the insured lands, including the Proposed Lease Area, and any and all access and utility easement areas.

By: _____
Casey Wayne Lowry, CA-PLS
California Professional Land Surveyor No. 8154
Date of Survey: 06.11.2024

PRELIMINARY SURVEY
Approx. to 42 Miles Avenue
Los Gatos, California 95030

SITE ID#: CA1B19C-S
SITE NAME: Hwy 17 & Bell Vista Relo

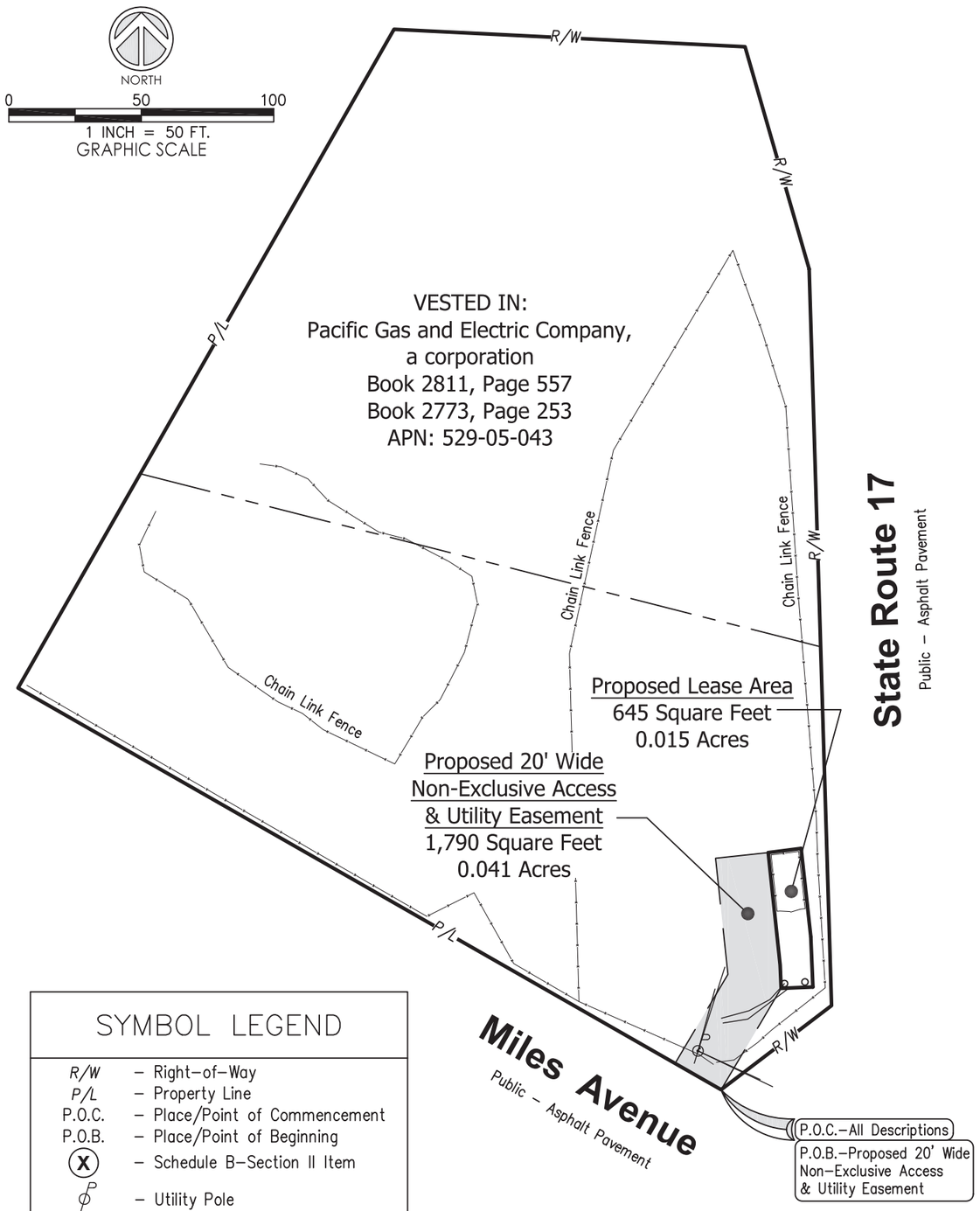
SBA
SBA Towers IX, LLC
8051 Congress Avenue
Boca Raton, FL 33487-1307

CERTA TOWER SERVICES LLC
2926 State Road, #135
Cuyahoga Falls, OH 44223-1244
330.295.3673
orders@certasite.com
www.certasite.com

BCP-3D Inc.
Land Services • BIM • Permitting
997 Embarcadero Dr. Ste 102
El Dorado Hills, CA 95762
888.791.5520
www.bcp3d.net

Note: This survey does not represent a boundary survey of the parent parcel.

Drawn By: DLV | Scale: None
Date: 06.03.26 | Sheet: 1 of 3
Certa Project No. 2563



SYMBOL LEGEND

R/W	– Right-of-Way
P/L	– Property Line
P.O.C.	– Place/Point of Commencement
P.O.B.	– Place/Point of Beginning
(X)	– Schedule B-Section II Item
ϕP	– Utility Pole
—X—	– Fence (As Noted)
—e—	– Underground Electric
—ou—	– Overhead Utilities
	– Shaded Easement Area

OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
LIMITED TITLE REPORT NO. 01-24027040-01S
DATED 06.07.1984 through 06.07.2024:

Numbers correspond with survey-related Schedule B exception items contained in the above referenced Title Commitment.

(1) INDENTURE OF MORTGAGE TO SECURE AN INDEBTEDNESS OF THE AMOUNT STATED BELOW AND ANY OTHER AMOUNTS PAYABLE UNDER THE TERMS HEREOF,

AMOUNT: NOT STATED
MORTGAGOR: PACIFIC GAS AND ELECTRIC COMPANY
MORTGAGEE: THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.
DATED: 06/19/2020
RECORDED: 07/07/2020
DOC#: 24528422

NOTE: MEMORANDUM OF SUPPLEMENTAL FIRST MORTGAGE INDENTURES, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY, A CALIFORNIA CORPORATION, MORTGAGOR, AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., A NATIONAL BANKING ASSOCIATION, RECORDED 08/19/2020 AS INSTRUMENT NO. 24580344 OF SANTA CLARA COUNTY RECORDS.
NOTE: SEVENTH SUPPLEMENTAL INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY, MORTGAGOR, AND THE BANK OF NEW YORK MELLON TRUST COMPANY, NA., TRUSTEE, RECORDED 02/24/2021 AS INSTRUMENT NO. 24845255 OF SANTA CLARA COUNTY RECORDS.
NOTE: MEMORANDUM OF SUPPLEMENTAL FIRST MORTGAGE INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., RECORDED 06/15/2021 AS INSTRUMENT NO. 24996810 OF SANTA CLARA COUNTY RECORDS.
NOTE: MEMORANDUM OF SUPPLEMENTAL FIRST MORTGAGE INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., RECORDED 09/22/2021 AS INSTRUMENT NO. 25109534 OF SANTA CLARA COUNTY RECORDS.
NOTE: MEMORANDUM OF SUPPLEMENTAL FIRST MORTGAGE INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., RECORDED 01/24/2022 AS INSTRUMENT NO. 25224313 OF SANTA CLARA COUNTY RECORDS.
NOTE: CERTIFICATE OF PARTIAL RELEASE OF LIEN, RECORDED 04/07/2022, AS INSTRUMENT NO. 25277354 OF SANTA CLARA COUNTY RECORDS.
NOTE: MEMORANDUM OF SUPPLEMENTAL FIRST MORTGAGE INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., RECORDED 05/18/2022 AS INSTRUMENT NO. 25304880 OF SANTA CLARA COUNTY RECORDS.
NOTE: SIXTEENTH SUPPLEMENTAL INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY, ISSUER AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., TRUSTEE, RECORDED 08/08/2022 AS INSTRUMENT NO. 25354494 OF SANTA CLARA COUNTY RECORDS.
NOTE: MEMORANDUM OF SUPPLEMENTAL FIRST MORTGAGE INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., RECORDED 11/16/2022 AS INSTRUMENT NO. 25400909 OF SANTA CLARA COUNTY RECORDS.
NOTE: MEMORANDUM OF SUPPLEMENTAL FIRST MORTGAGE INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., RECORDED 03/13/2023 AS INSTRUMENT NO. 25448609 OF SANTA CLARA COUNTY RECORDS.
NOTE: NINETEENTH SUPPLEMENTAL INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY, MORTGAGOR, AND THE BANK OF NEW YORK MELLON TRUST COMPANY, NA., TRUSTEE RECORDED 06/05/2023 AS INSTRUMENT NO. 25483457 OF SANTA CLARA COUNTY RECORDS.
NOTE: TWENTIETH SUPPLEMENTAL INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY, ISSUER, AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., TRUSTEE, RECORDED 08/17/2023 AS INSTRUMENT NO. 25519458 OF SANTA CLARA COUNTY RECORDS.
NOTE: MEMORANDUM OF SUPPLEMENTAL FIRST MORTGAGE INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., RECORDED 01/18/2024 AS INSTRUMENT NO. 25587760 OF SANTA CLARA COUNTY RECORDS.
NOTE: TWENTY-FOURT SUPPLEMENTAL INDENTURE, BY AND BETWEEN PACIFIC GAS AND ELECTRIC COMPANY, ISSUER, AND THE BANK OF NEW YORK MELLON TRUST COMPANY, NA., TRUSTEE, RECORDED 05/06/2024 AS INSTRUMENT NO. 25632491 OF SANTA CLARA COUNTY RECORDS.
(AFFECTS THE PARENT PARCEL – BLANKET IN NATURE)

OTHER ITEMS OF RECORD

(2) SBE MAP, AS RECORDED IN BOOK 0135, PAGE 43 OF SANTA CLARA COUNTY RECORDS.
(PLAT ESTABLISHES THE PARENT PARCEL)

(3) MAP OF MASON TRACT AS RECORDED IN BOOK B, PAGE 4 OF SANTA CLARA COUNTY RECORDS.
(PLAT ESTABLISHES THE ORIGINAL PARENT PARCEL)

(4) NOTICE OF THE TOWN OF LOS GATOS REGARDING ADOPTION OF ORDINANCE 1882 APPROVING THE REDEVELOPMENT PLAN FOR THE CENTRAL LOS GATOS REDEVELOPMENT PROJECT, RECORDED 12/05/1991 AS BOOK L955, PAGE 1734 OF SANTA CLARA COUNTY RECORDS.
(AFFECTS THE PARENT PARCEL – BLANKET IN NATURE)

(5) STATEMENT OF INSTITUTION OF REDEVELOPMENT PLAN AMENDMENT BY REDEVELOPMENT AGENCY OF THE TOWN OF LOS GATOS, RECORDED 10/28/2003 AS INSTRUMENT NO. 17444059 OF SANTA CLARA COUNTY RECORDS.
(AFFECTS THE PARENT PARCEL – BLANKET IN NATURE)

PRELIMINARY SURVEY
Approx. to 42 Miles Avenue
Los Gatos, California 95030

SITE ID#: CA1B19C-S
SITE NAME: Hwy 17 & Bell Vista Relo

SBA

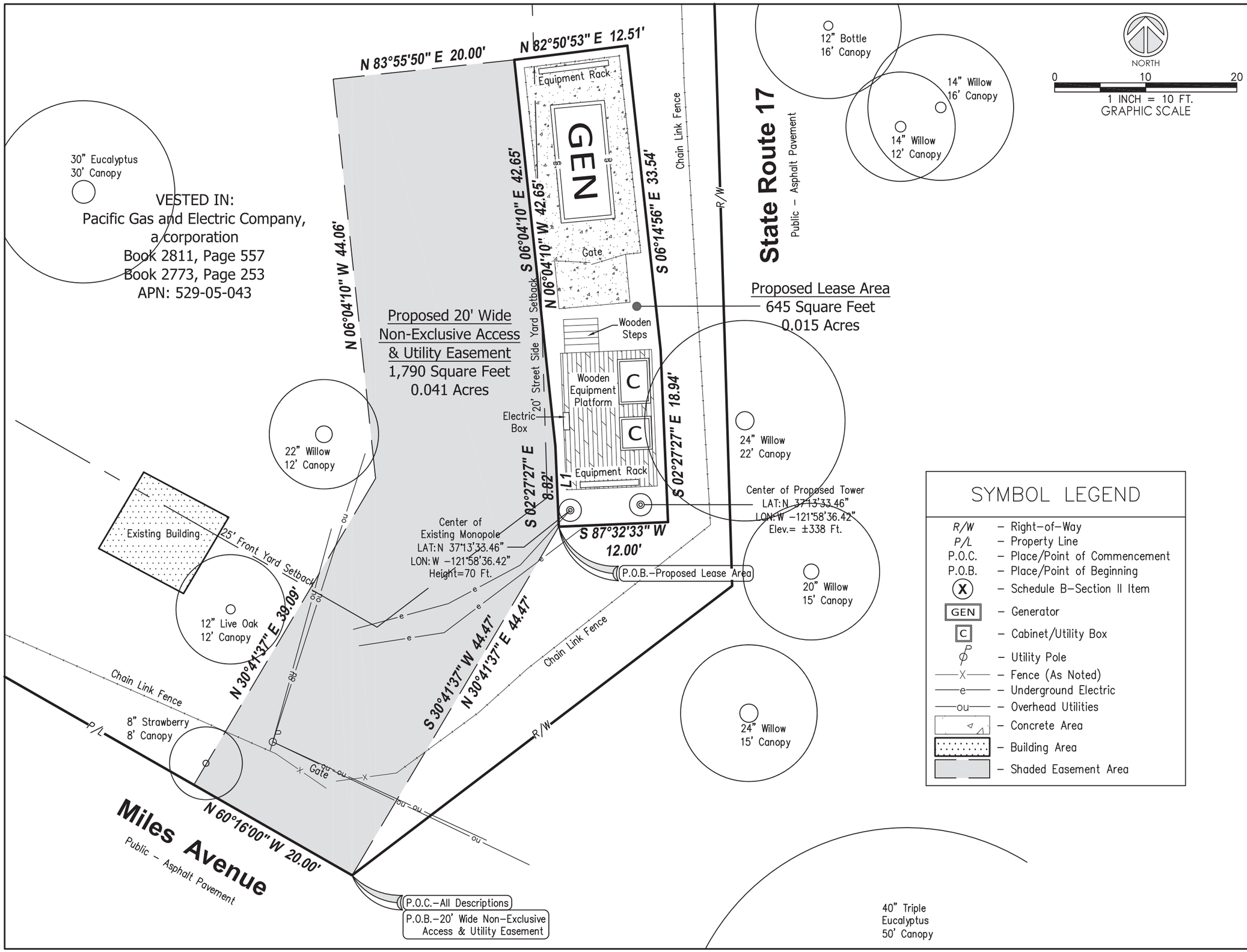
SBA Towers IX, LLC
8051 Congress Avenue
Boca Raton, FL 33487-1307

CERTA TOWER SERVICES LLC
2926 State Road, #135
Cuyahoga Falls, OH 44223-1244
330.295.3673
orders@certasite.com
www.certasite.com

BCP-3D Inc.
Land Services • BIM • Permitting
997 Embarcadero Dr. Ste 102
El Dorado Hills, CA 95762
888.791.5520
www.bcp3d.net

Note: This survey does not represent a boundary survey of the parent parcel.

Drawn By: DLV | Scale: 1"=50'
Date: 06.03.26 | Sheet: 2 of 3
Certa Project No. 2563



SYMBOL LEGEND

R/W	– Right-of-Way
P/L	– Property Line
P.O.C.	– Place/Point of Commencement
P.O.B.	– Place/Point of Beginning
(X)	– Schedule B–Section II Item
GEN	– Generator
C	– Cabinet/Utility Box
	– Utility Pole
—X—	– Fence (As Noted)
—e—	– Underground Electric
—ou—	– Overhead Utilities
	– Concrete Area
	– Building Area
	– Shaded Easement Area

PRELIMINARY SURVEY
Approx. to 42 Miles Avenue
Los Gatos, California 95030

SITE ID#: CA1B19C-S
SITE NAME: Hwy 17 & Bell Vista Relo

SBA

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El Dorado Hills, CA 95762
888.791.5520
www.bcp3d.net

Note: This survey does not represent a boundary survey of the parent parcel.

Drawn By: DLV | Scale: 1"=10'
Date: 06.03.26 | Sheet: 3 of 3
Certa Project No. 2563

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DATE: November 6, 2026

TO: Planning Commission

FROM: Joel Paulson, Community Development Director

SUBJECT: Forward a Recommendation to the Town Council on an Ordinance Amending Chapter 29 (Zoning Regulations) of the Town Code Regarding Prohibited Uses, Definitions, and Appeals for Data Centers. The Proposed Amendments are Not Subject to CEQA Review Pursuant to CEQA, Section 15061 (b)(3), Because it can be Seen with Certainty that they will not Significantly Affect the Physical Environment in that they Add Data Centers to the List of Prohibited Uses and Make Minor Changes to Prohibited Uses, Definitions, and Appeals. Town Code Amendment Application A-26-007. **Project Location: Town Wide**. Applicant: Town of Los Gatos.

RECOMMENDATION:

Forward a recommendation to the Town Council on amendments to Chapter 29 (Zoning Regulations) of the Town Code regarding prohibited uses, definitions, appeals for data centers.

CEQA:

The proposed amendments are not subject to CEQA review, pursuant to CEQA Section 15061(b)(3), because it can be seen with certainty that they will not significantly affect the physical environment in that they add a use, data centers, to the list of prohibited uses and make minor changes to definitions and appeals.

FINDINGS:

- The proposed amendments are not subject to CEQA review pursuant to the adopted Guidelines for the Implementation of the California Environmental Quality Act, Section 15061(b)(3); and
- The amendments to Chapter 29 of the Town Code are consistent with the General Plan, including but not limited to the following Goals: LU-1, LU-4, LU-6, CD-1, CD-2, PFS-6, PFS-7,

PREPARED BY: Sean Mullin, AICP
Planning Manager

Reviewed by: Community Development Director, and Town Attorney

ENV-8, ENV-11 and ENV-18.

BACKGROUND:

Data centers have operated in California for many years, supporting the demands of the online ecosystem. The recent and rapid rise of artificial intelligence (AI) development over the past five years has dramatically accelerated demand for new and larger data centers to train and support AI. This trend is expected to continue throughout the decade. As data center development expands, so does the associated energy demand, contributing to higher electricity consumption, increased carbon emissions, greater water usage, and elevated public health costs linked to air pollution.

Development of large-scale data centers would negatively impact the small-town residential character and suburban roots of the Town. To mitigate the impacts resulting from a land use incompatible with others within the Town, staff has prepared a draft Ordinance that would prohibit data centers within the Town's boundaries.

DISCUSSION:

Town Code Section 29.10.045 (b) prohibits specified uses in the Town. To better maintain community character and resource stewardship, the proposed amendments would identify dedicated data centers as a distinct land use prohibited in every zoning district, while preserving the legality of ordinary computing equipment and technology work that is accessory and subordinate to another authorized principal activity. Specifically, the draft Ordinance included as Exhibit 2 would do the following:

- Add data centers as a prohibited use in Section 29.10.245;
- Define data centers in Section 29.10.020;
- Revise the definition of office activities in Section 29.10.020 to exclude data centers; and
- Amend section 29.20.255 to allow an appeal of the Planning Director's classification.

Exhibit 3 includes a strikethrough and underline version of the affected sections of the Town Code.

PUBLIC COMMENTS:

Staff conducted outreach through the following media and social media resources, as well as direct communication with stakeholders as summarized below:

- The Town's website home page, What's New;
- The Town's Facebook page;
- The Town's Twitter account;
- The Town's Instagram account;

- The Town's NextDoor page; and
- Direct email communication to local architects and designers.

At the time this report was published, no public comments were received.

ENVIRONMENTAL ASSESSMENT:

The proposed amendments are not subject to CEQA review, pursuant to CEQA Section 15061(b)(3), because it can be seen with certainty that they will not significantly affect the physical environment in that they add a use, data centers, to the list of prohibited uses and make minor changes to definitions and appeals.

CONCLUSION:

A. Summary

The draft Ordinance makes changes to the definitions and appeals sections, and adds data centers to the list of prohibited uses in Chapter 29 (Zoning Ordinance).

B. Recommendation

Staff recommends that the Planning Commission review the information included in the staff report and forward a recommendation to the Town Council for approval of the amendments to Chapter 29 of the Town Code in the draft Ordinance (Exhibit 2). The Planning Commission should also include any comments or recommended changes to the draft Ordinance in taking the following actions:

1. Make the finding that the proposed amendments are not subject to CEQA pursuant to CEQA, Section 15061(b)(3), because it can be seen with certainty that they will not significantly affect the physical environment in that they add data centers to the list of prohibited uses and make minor changes to definitions and appeals (Exhibit 1);
2. Make the required finding that the amendments to Chapter 29 of the Town Code in the draft Ordinance are consistent with the General Plan (Exhibit 1); and
3. Forward a recommendation to the Town Council for approval of the amendments to Chapter 29 of the Town Code in the draft Ordinance (Exhibit 2).

C. Alternatives

Alternatively, the Commission can:

1. Forward a recommendation to the Town Council for approval of the draft Ordinance with modifications; or
2. Continue the matter to a date certain with specific direction.

EXHIBITS:

1. Required Findings
2. Draft Ordinance
3. Town Code sections in track changes
4. An Assessment of California Data Centers' Environmental and Public Health Impacts, UC Riverside, Next 10, Nov 2025

PLANNING COMMISSION – *November 12, 2026*
REQUIRED FINDINGS FOR:

Town Code Amendment Application A-26-007
Forward a Recommendation to the Town Council on an Ordinance Amending Chapter 29 (Zoning Regulations) of the Town Code Regarding Prohibited Uses, Definitions, and Appeals for Data Centers. The Proposed Amendments are Not Subject to CEQA Review Pursuant to CEQA, Section 15061 (b)(3), Because it can be Seen with Certainty that they will not Significantly Affect the Physical Environment in that they Add Data Centers to the List of Prohibited Uses and Make Minor Changes to Definitions and Appeals.

FINDINGS

Required Findings for CEQA:

- The proposed amendments are not subject to CEQA review, pursuant to CEQA Section 15061(b)(3), because it can be seen with certainty that they will not significantly affect the physical environment in that add a use to the list of prohibited uses, data centers, and make minor changes to definitions and appeals.

Required Findings for General Plan:

- The amendments to Chapter 29 of the Town Code regarding prohibited uses, definitions, and appeals are consistent with the General Plan, including but not limited to the following Goals: LU-1, LU-4, LU-6, CD-1, CD-2, PFS-6, PFS-7, ENV-8, ENV-11 and ENV-18.

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Draft Ordinance to be modified by Town Council deliberations and direction.

DRAFT ORDINANCE

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF LOS GATOS AMENDING CHAPTER 29, ZONING REGULATIONS, OF THE TOWN CODE REGARDING PROHIBITED USES, DEFINITIONS, APPEALS FOR DATA CENTERS.

WHEREAS, the Town of Los Gatos is a general law town and Government Code Section 65850 authorizes regulation of the use of land and buildings, subject to applicable state and federal law; and

WHEREAS, Town Code Sections 29.10.030 and 29.10.045 address land use compatibility and identify specified uses prohibited in all zones; and

WHEREAS, this Ordinance adds a defined land use to that list while preserving existing entries; and

WHEREAS, the proposed amendments would identify dedicated data centers as a distinct land use prohibited in every zoning district, while preserving the legality of ordinary computing equipment and technology work that is accessory and subordinate to another authorized principal activity; and

WHEREAS, Town Code Section 29.10.020 currently includes technology incubator facilities and certain biotechnology dry lab facilities within Office activities; and

WHEREAS, the Town intends to preserve such lawful activities where operating a data center is not the predominant use of the building or separately occupiable tenant space; and

WHEREAS, on April 2, 2024, the Town Council rescinded the 2040 Land Use and Community Design Elements. The 2020 Land Use and Community Design Elements remain operative, together with the other elements of the 2040 General Plan; and

WHEREAS, the Town Council has considered the goals and policies of the operative General Plan, including policies relating to community character, infrastructure, protection of residential areas, and the availability of commercial and industrial services and employment; and

WHEREAS, the amendments included herein are consistent with the General Plan, including but not limited to the following Goals: LU-1, LU-4, LU-6, CD-1, CD-2, PFS-6, PFS-7, ENV-8, ENV-11 and ENV-18; and

WHEREAS, the November 2025 Next 10 assessment, An Assessment of California Data Centers' Environmental and Public Health Impacts, by Rui Liu, Zhifeng Wu, and Shaolei Ren (University of California, Riverside), estimates increasing electricity use, water consumption, and air pollution related public health costs attributable to California data centers; and

WHEREAS, the Next 10 assessment estimates California data center electricity

consumption at 5.54 terawatt hours in 2019 and 10.82 terawatt hours in 2023; total water consumption, including water used for offsite electricity generation, at 25.42 billion and 49.91 billion liters respectively; and statewide monetized air pollution related health costs at $44.68 million and $155.44 million respectively; and

WHEREAS, the Town Council intends to distinguish a building or independently occupiable tenant space predominantly operated to supply data hosting, processing, storage, colocation, or computational capacity from offices, software engineering, artificial intelligence model development, research laboratories, professional services, and other otherwise lawful businesses using computing infrastructure to accomplish their principal activity; and

WHEREAS, state law regulates certain aspects of data centers, including water, energy, and CEQA matters; and

WHEREAS, this Ordinance regulates land use only to the extent permitted by controlling state and federal law and does not replace independent statutory requirements; and

WHEREAS, the amendments are consistent with the General Plan and its Elements; and

WHEREAS, the amendments are consistent with Chapter 29, "Zoning Regulations" of the Town Code; and

WHEREAS, this matter was regularly noticed in conformance with state and Town law and came before the Planning Commission for public hearing on November 12, 2026; and

WHEREAS, on November 12, 2026, the Planning Commission reviewed and commented on the proposed amendments regarding prohibited uses, definitions, appeals and forwarded a recommendation to the Town Council for approval of the proposed amendments; and

WHEREAS, this matter was regularly noticed in conformance with state and Town law and came before the Town Council for public hearing on _____; and

WHEREAS, on _____, the Town Council reviewed and commented on the proposed amendments regarding accessory dwelling units and the Town Council voted to introduce the Ordinance.

NOW, THEREFORE, BE IT ORDAINED by the Town Council of the Town of Los Gatos as follows:

SECTION I. Section 29.10.020, "Definitions," of Division 1, "Miscellaneous," of Article I, "In General," of Chapter 29, "Zoning Regulations," is amended to add the following between the definitions of "*Court*" and "*Demolition (historic structures)"* to read as follows:

Data center means a building, structure, or separately occupiable tenant space whose actual predominant land use or occupancy is the operation of dedicated computing infrastructure, including servers, processors, storage systems, networking systems, and related electrical and cooling systems, to provide electronic data processing, storage, remote hosting, colocation, or computational capacity. The determination shall be made by evaluating the

building, structure, or tenant space as a whole, not by isolating an interior server room, equipment area, or a component of a different lawful principal use.

Data center does not include computing, networking, cybersecurity, data storage, communications, or artificial intelligence equipment used as an accessory and subordinate component of a lawful principal activity such as software or product development, research and development, engineering, office activities, manufacturing, retail, health care, scientific, educational, governmental, or other lawful activity. This exclusion includes supporting affiliated operations, employees, clients, or business locations on or off the premises. The mere use of large quantities of computing equipment, a particular business name or industry, or provision of software or technology services does not, by itself, establish a data center use. A separately occupiable space or building used predominantly to provide dedicated data processing, hosting, colocation, storage, or computing capacity may qualify notwithstanding common ownership with other businesses. Telecommunications switching or routing and utility control facilities are not data centers unless the predominant occupancy otherwise satisfies this definition.

SECTION II. Section 29.10.020, "Definitions," of Division 1, "Miscellaneous," of Article I, "In General," of Chapter 29, "Zoning Regulations," the definition of "Office activities" is amended to read as follows:

Office activities means office uses, including, but not limited to: administrative; professional; medical; dental; optical; real estate; insurance; financial and investment services; venture capital; technology incubator facilities; biotechnology incubator facilities, including dry-lab facilities where testing and analyses is performed using data, coding, and computer systems and excluding wet-lab facilities where testing and analyses are performed using physical samples, biological matter, chemicals, and/or hazardous substances; and other similar office uses characterized by an absence of retail sales. Office activities do not include a data center as defined in this Section.

SECTION III. Section 29.10.045, "Uses prohibited," of Division 1, "Miscellaneous," of Article I, "In General," of Chapter 29, "Zoning Regulations," is amended to read as follows:

(a) *Generally*. All uses which are not authorized by this chapter either by specific listing or by category are prohibited.

(b) *Listed*. Notwithstanding the provisions of this chapter concerning categories of allowed uses, the following uses are prohibited in all zones:

Junkyard;

Drive-in restaurant;

Cemetery;

Sex shop;

Sex studio;

Mobile home occupied as a dwelling except in a mobile home park and except as a temporary structure and approved by the deciding body, and except when placed on a lot zoned for single-family dwelling, subject to all applicable ordinances and regulations affecting single-family dwellings;

Mobile home occupied for any purpose other than as a dwelling, except temporarily as an office in connection with and during construction work;

Heavy industry;

Airport;

Solid waste disposal site;

Sales of distilled spirits at a service station;

Data center.

The intent of this section is to prohibit uses which might appear to be included in an allowed category. Omission of a use from this section is not intended as an indication that the omitted use is allowed in some zones.

SECTION IV. Section 29.20.255, "Appeals from the decision by the Planning Director," of Division 4, "Post-Approval Actions," of Article II, "Administration and Enforcement," of Chapter 29, "Zoning Regulations," is amended to read as follows:

Any interested person as defined in section 29.10.020 may appeal to the Planning Commission any decision of the Planning Director:

(1) Determining an application for a horse permit, for an amateur horse event or animal permit, for a home occupation permit, for a tree removal permit, for a sign permit, for a minor residential development permit, or denying a certificate of use and occupancy on the ground that the use is not allowed in the zone.

(2) Granting or denying an extension of time related to one (1) of the foregoing transactions.

(3) Revoking or modifying one (1) of the foregoing approval of permits.

(4) Determination of an unlawful demolition and/or the penalty and the cost assessment for the unlawful demolition.

(5) Determining a request for reasonable accommodation.

(6) Determining matters pertaining to historic preservation.

(7) Determining whether a use constitutes a data center.

SECTION V. California Environmental Quality Act (CEQA) Considerations.

The Town Council finds that the proposed amendments are not subject to CEQA review pursuant to CEQA, Section 15061 (b)(3), because it can be seen with certainty that they will not significantly affect the physical environment in that they add a use, data centers, to the list of prohibited uses and make minor changes to definitions and appeals.

SECTION IV. Severability.

In the event that a court of competent jurisdiction holds any Section, subsection, paragraph, sentence, clause, or phrase in this Ordinance unconstitutional, preempted, or otherwise invalid, the invalid portion shall be severed from this Ordinance and shall not affect the validity of the remaining portions of this Ordinance. The Town hereby declares that it would have adopted each Section, subsection, paragraph, sentence, clause, or phrase in this Ordinance irrespective of the fact that any one or more Sections, subsections, paragraphs, sentences, clauses or phrases in this Ordinance might be declared unconstitutional, preempted, or otherwise invalid.

SECTION V. Publication.

In accordance with Section 63937 of the Government Code of the State of California, this Ordinance takes effect 30 days from the date of its passage. The Town Council hereby directs the Town Clerk to cause this Ordinance or a summary thereof to be published or posted in accordance with Section 36933 of the Government Code of the State of California.

DRAFT

SECTION VI. Effective Date.

This Ordinance was introduced at a regular meeting of the Town Council of the Town of Los Gatos on the __th day of _____ 2026, and adopted by the Town Council of the Town of Los Gatos at its regular meeting on the ____ day of _____ 2026, by the following vote:

COUNCIL MEMBERS:

AYES:

NAYS:

ABSENT:

ABSTAIN:

SIGNED:

_____
MAYOR OF THE TOWN OF LOS GATOS
LOS GATOS, CALIFORNIA

ATTEST:

_____
TOWN CLERK OF THE TOWN OF LOS GATOS
LOS GATOS, CALIFORNIA

DRAFT

Sec. 29.10.020. Definitions.

For the purposes of this chapter, the following words and phrases shall have the meanings ascribed to them in this section unless the context clearly indicates otherwise:

[…]

Data center means a building, structure, or separately occupiable tenant space whose actual predominant land use or occupancy is the operation of dedicated computing infrastructure, including servers, processors, storage systems, networking systems, and related electrical and cooling systems, to provide electronic data processing, storage, remote hosting, colocation, or computational capacity. The determination shall be made by evaluating the building, structure, or tenant space as a whole, not by isolating an interior server room, equipment area, or a component of a different lawful principal use.

Data center does not include computing, networking, cybersecurity, data storage, communications, or artificial intelligence equipment used as an accessory and subordinate component of a lawful principal activity such as software or product development, research and development, engineering, office activities, manufacturing, retail, health care, scientific, educational, governmental, or other lawful activity. This exclusion includes supporting affiliated operations, employees, clients, or business locations on or off the premises. The mere use of large quantities of computing equipment, a particular business name or industry, or provision of software or technology services does not, by itself, establish a data center use. A separately occupiable space or building used predominantly to provide dedicated data processing, hosting, colocation, storage, or computing capacity may qualify notwithstanding common ownership with other businesses. Telecommunications switching or routing and utility control facilities are not data centers unless the predominant occupancy otherwise satisfies the preceding definition.

[…]

Office activities means office uses, including, but not limited to: administrative; professional; medical; dental; optical; real estate; insurance; financial and investment services; venture capital; technology incubator facilities; biotechnology incubator facilities, including dry-lab facilities where testing and analyses is performed using data, coding, and computer systems and excluding wet-lab facilities where testing and analyses are performed using physical samples, biological matter, chemicals, and/or hazardous substances; and other similar office uses characterized by an absence of retail sales. Office activities do not include a data center as defined in this section.

Sec. 29.10.045. Uses prohibited.

(a) *Generally.* All uses which are not authorized by this chapter either by specific listing or by category are prohibited.

(b) *Listed.* Notwithstanding the provisions of this chapter concerning categories of allowed uses, the following uses are prohibited in all zones:

Junkyard;

Drive-in restaurant;

Cemetery;

Sex shop;

Sex studio;

Mobile home occupied as a dwelling except in a mobile home park and except as a temporary structure and approved by the deciding body, and except when placed on a lot zoned for single-family dwelling, subject to all applicable ordinances and regulations affecting single-family dwellings;

Mobile home occupied for any purpose other than as a dwelling, except temporarily as an office in connection with and during construction work;

Heavy industry;

Airport;

Solid waste disposal site;

Sales of distilled spirits at a service station~~.~~;

Data Center.

The intent of this section is to prohibit uses which might appear to be included in an allowed category. Omission of a use from this section is not intended as an indication that the omitted use is allowed in some zones.

Sec. 29.20.255. Appeals from the decision by the Planning Director.

Any interested person as defined in section 29.10.020 may appeal to the Planning Commission any decision of the Planning Director:

(1) Determining an application for a horse permit, for an amateur horse event or animal permit, for a home occupation permit, for a tree removal permit, for a sign permit, for a minor residential development permit, or denying a certificate of use and occupancy on the ground that the use is not allowed in the zone.

(2) Granting or denying an extension of time related to one (1) of the foregoing transactions.

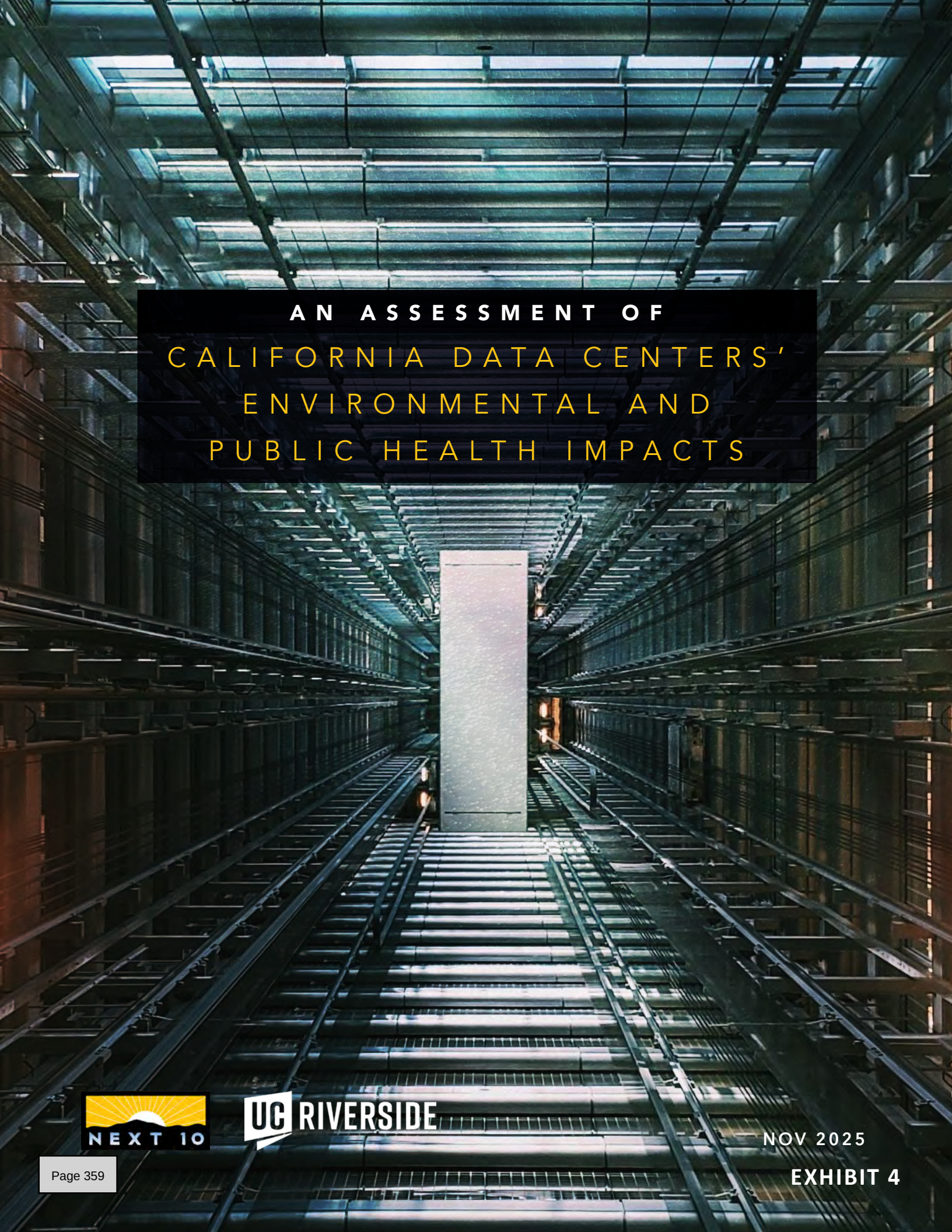
(3) Revoking or modifying one (1) of the foregoing approval of permits.

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(5) Determining a request for reasonable accommodation.

(6) Determining matters pertaining to historic preservation.

(7) Determining whether a use constitutes a data center.



AN ASSESSMENT OF CALIFORNIA DATA CENTERS' ENVIRONMENTAL AND PUBLIC HEALTH IMPACTS

NEXT 10

UC RIVERSIDE

NOV 2025

EXHIBIT 4

NEXT 10 is an independent nonpartisan organization that educates, engages and empowers Californians to improve the state's future.

Next 10 is focused on innovation and the intersection between the economy, the environment, and quality of life issues for all Californians. We provide critical data to help inform the state's efforts to grow the economy and reduce greenhouse gas emissions. Next 10 was founded in 2003 by businessman and philanthropist F. Noel Perry.

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Executive Summary

While data centers have long existed in California, the rise of artificial intelligence (AI) has significantly increased demand for new data centers over the last five years, and the pace is expected to increase through the rest of the decade. This explosive growth has led to a corresponding increase in energy demand which has led to increased electricity consumption, carbon emissions, water usage, and public health costs arising from air pollution. Since the frenetic pace of data center expansion shows no sign of slowing, it is important to understand the full extent of the environmental and public health impacts on California communities and implement appropriate strategies for sustainable development.

This report presents a quantitative assessment of the environmental and public health impacts of California's data centers between 2019 and 2023. In that time, electricity usage, carbon emissions and water consumption all nearly doubled, while public health impacts more than tripled. For each of the indicators assessed, we also present projections for 2028.

Large-scale data center facilities in California routinely deploy backup generators to maintain uninterrupted service during grid outages. These generators often burn diesel fuel, which releases greenhouse gas emissions and other pollutants such as fine particulate matter ($PM_{2.5}$) and nitrogen oxides (NO_x). Since 2017, California has approved over 1 gigawatt (GW) of diesel-fueled emergency power for data centers [1]. One GW of capacity is enough to power 750,000 homes.

According to a recent Lawrence Berkeley National Laboratory (LBNL) report [2], data centers in the U.S. consumed approximately 4.4% of national electricity in 2023, compared with roughly 3% in 2013. By 2028, the surging demand for AI is expected to result in data centers consuming between 6.7% and 12% of the nation's electricity [2].

Both carbon emissions and water consumption experienced similar growth trajectories over this time interval. The economic burden of public health impacts from California's data centers is also projected to rise significantly. The quantitative results for all environmental and health indicators across the study period are summarized in Table 1.

Table 1. Environmental and health impact metrics of California data centers (2019-2028)

Year	Electricity Consumption (TWh)	Carbon Emissions (million short tons)	Water Consumption (billion liters)	Health Costs (million $)
2019	5.54	1.24	25.42	44.68
2020	6.48	1.60	29.73	60.45
2021	7.84	1.97	36.00	82.10
2022	9.29	2.23	42.71	111.21
2023	10.82	2.38	49.91	155.44
2028 (low)	16.16	3.55	74.54	167.14
2028 (high)	25.28	5.56	116.63	266.57

Key Findings:

Electricity Consumption

- From 2019 to 2023, the electricity consumption in California data centers increased from 5.54 TWh to 10.82 TWh, almost a 95% increase.
  - » California's data center electricity consumption represented 6.13% of the national total in 2023—behind only Virginia and Texas.
- This 5.28 TWh increase represents significant additional demand on the state's electricity grid, equivalent to the annual electricity consumption of approximately 490,000 average U.S. households [3].
- Unless this demand is mitigated, there is an urgent need for improved grid capacity and integration of renewable energy to support sustainable expansion.
- The projections further indicate that electricity consumption by data centers in California will grow to between 16.16 and 25.28 TWh by 2028—which corresponds to an increase of 49.2% to 133.6% compared to 2023.
  - » 25.28 TWh is equivalent to the annual electricity consumption of approximately 2.4 million average U.S. households.

Carbon Emissions

- Data centers consume vast amounts of electricity and produce carbon emissions in three distinct categories: on-site emissions (Scope 1), indirect emissions from purchased electricity (Scope 2) and value-chain emissions (Scope 3). We focus on location-based Scope 2 carbon emissions in this report.
- Carbon emissions from data centers in California almost doubled from 1.24 million short tons (one short ton is equivalent to 2,000 lbs and slightly less than a metric ton which is 1,000 kg) in 2019 to 2.38 million in 2023.
- Carbon emissions from data centers in the state are projected to span roughly 3.55 to 5.56 million short tons by 2028—an increase of 49.4% to 133.6% compared to 2023.

- The "CA-US Ratio" metric reveals that in 2019 California data centers emitted just 48.43% of the carbon they would have under the national average intensity. The figure peaks at 57.89% in 2020, then drops back to 54.52% by 2023.
  - » The post-2020 decrease suggests that California's carbon emission advantage diminished slightly over time, probably driven by changes in renewable energy penetration, use of natural gas during low solar output, and other temporary shifts in the fuel mix.
  - » These trends underscore the need for ongoing investment in clean energy and demand management if California is to maintain its grid advantage over the national average.
- The data center share of statewide electricity-related emissions (DC Emission % of CA Total) grows steadily from 2.21% in 2019 to 4.52% in 2023, showing that even as the grid becomes cleaner, data center operations are making up an ever-larger portion of the state's total emissions.

Water Consumption

- This report follows a three-scope framework categorizing water usage into distinct pathways: direct on-site consumption for cooling (Scope 1), indirect consumption from off-site electricity generation (Scope 2), and embodied water within the supply chain (Scope 3). We focus on Scope 1 and Scope 2 water consumption in this report.
- The total water consumption by data centers in California increased from 25.42 billion liters in 2019 to 49.91 billion liters in 2023 – a 96.4% increase. The amounts are equivalent to approximately 10,000 and 20,000 Olympic swimming pools, respectively [4].
- On-site water consumption grew from 1.33 billion liters in 2019 to 2.84 billion liters in 2023—a 113% increase. The year-over-year increases range from 17% to 23%, suggesting a stable relationship between facility expansion and cooling water requirements.
- Off-site water consumption dominates the total operational water footprint, accounting for more than 90% of the total, while demonstrating substantial growth trajectories that nearly double consumption from 2019 to 2023.
- For each TWh of total electricity consumed, based on the U.S. average, California data centers indirectly drive approximately 4.35 billion liters of water consumption through power generation processes.
- Total water consumption by California data centers is forecast to range from 74.54 to 116.63 billion liters by 2028, equivalent to approximately 30,000 and 47,000 Olympic swimming pools, respectively.
  - » This corresponds to an increase of 49.3% to 133.7% compared to 2023.

Health Costs

- This report follows a three-scope framework categorizing criteria air pollutant emissions: direct on-site emission by backup generators (Scope 1), indirect emission from off-site electricity generation (Scope 2), and embodied emission within the supply chain (Scope 3). We focus on Scope 1 and Scope 2 air pollutant emission and public health impacts in this report.
- Regions with a high concentration of data centers experience disproportionately high health burdens related to Scope 1, driven in part by elevated emissions of nitrogen oxides (NO_X) from on-site generators.
  - » Silicon Valley, within Santa Clara County, has the highest concentration of data centers in California and lies within the Bay Area Air Quality Management District (BAAQMD) [5, 6].
  - » According to a 2023 CPUC analysis, BAAQMD reported 8,722 backup generators in 2021 (nearly 90% were diesel-fueled), including gensets deployed at data centers and other large facilities [7].
- Health costs associated with data centers in California surged from $44.68 million in 2019 to $155.44 million in 2023, with Scope 2 (indirect emissions from fossil fuel power plants that generate electricity) costs remaining the dominant contributor.
- Taking 2028 as an example, the Scope 2 health costs of $108.05 million under the low-growth scenario translate to health outcomes, including approximately 3,900 asthma symptom cases and 490 lost workdays per year.

- Projections indicate that by 2028 the public health burden will increase further to between $167.14 million and $266.57 million, which corresponds to an increase of 7.5% and 71.5% compared to the 2023 basis.
- This lower growth rate in health costs relative to electricity consumption is likely due to California's stringent air quality regulations and projected cleaner grid, resulting in fewer emissions than in other states.

Drawing on these quantitative results and forecasts, this report outlines a set of recommendations designed to support the sustainable development of data centers in California.

Recommendations

- **Unified Reporting of Comprehensive Metrics:** Standardize reporting protocols for electricity consumption, carbon emissions, water consumption, and associated public health impacts in different regions of California, so that we could create a consistent, high-quality comparative base to inform targeted policy interventions and enhance transparency.
  - » **Carbon:** Carbon governance could be strengthened through the integration of frameworks such as the GHG Protocol with interoperable, real time carbon tracking platforms; aligning compute workloads with periods of lower grid carbon intensity; and advancing circular infrastructure measures including waste heat recovery, component remanufacturing, and extended hardware lifetimes to address both operational and embodied carbon.
  - » **Water:** Implement context-relevant efficiency measures to reduce water consumption, relieve regional water stress, and benefit communities facing scarcity. Integrating advanced cooling technologies with water recycling and reuse systems can lower freshwater withdrawals, while monitoring platforms and predictive analytics enable continuous optimization of water use and protection of local resources.
  - » **Health Costs:** Strengthening public health protection can involve integrating health impact assessments into site selection and infrastructure upgrades, with buffer zones around sensitive receptors such as schools and hospitals.
- **Accelerating Clean Energy Integration with Equity Considerations:** Accelerating clean energy integration can help to shift marginal demand growth to low carbon, fuel-free renewable resources rather than fossil-based generation to some extent. For instance, organizations could prioritize long-term power purchase agreements (PPAs) with reputable providers of clean energy, thereby securing stable electricity prices and offering wind and solar developers the predictable revenue streams required to attract investment capital. Besides, organizations could integrate renewable electricity sourced from the grid and on-site generation with advanced battery or thermal storage, so that excess daytime production can be shifted to evening demand peaks, extracting the full value of intermittent resources while preserving a high level of supply reliability.

  The environmental and public health impact of data center operations in California is often unevenly distributed between different counties and communities, often disproportionately affecting low-income communities and potentially exacerbating socioeconomic disparities. Procurement strategies should be informed by the geographic and temporal characteristics of regional energy mixes and explicitly consider greenhouse gas emissions, water consumption, and localized health risks, particularly in communities experiencing disproportionate environmental burdens. Siting evaluations should incorporate water resource safeguards and public health criteria, preventing new exposures in already overburdened areas. Developers could also structure Community Benefit Agreements that provide tangible investments for the host community.
- **Institutionalizing Community Science and Cross-Sector Impact Research:** California should institutionalize sustained, community-based monitoring and interdisciplinary policy evaluation to ensure that data center operations transparently account for their social, environmental, and economic impacts. This necessitates empowering expert institutions and local authorities to undertake comprehensive cross-sector research. At the same time, targeted grant programs can equip residents with required knowledge to serve as citizen scientists, contributing to

air quality monitoring, health assessment, and data analysis. Subsequently, disseminating these findings through accessible reports and structured public workshops would enhance community capacity to evaluate risks and collaborate with researchers and regulators in developing context-specific strategies.

- **Modernizing Backup Power Systems:** Data center operators should transition from conventional diesel generators to cleaner and more sustainable backup options, such as battery energy storage systems, fuel cells, and other advanced alternative fuels. Such transitions can substantially reduce emissions of criteria air pollutants, which in turn improves ambient air quality and alleviates associated health risks, particularly in communities already subject to significant environmental pressures. These benefits can be further enhanced by integrating cleaner technologies with intelligent energy management systems that monitor performance in real time, apply predictive analytics to anticipate demand, and automatically adjust operations to minimize environmental impacts.

  Accordingly, California should establish clear regulatory frameworks that enable operators to invest in advanced backup systems in a cost-effective manner. In parallel, collaboration among industry leaders, researchers, and policymakers will be essential to develop robust performance standards and practical implementation guidelines.

- **Strengthen California's National Leadership in Sustainable Data Center Development:** California should advance policies that streamline the permitting process for energy efficient and water resilient data centers located in regions with abundant clean power and stable water supplies, while ensuring strong safeguards against local impacts such as water scarcity, grid stress, and pollution. This approach should include the establishment of transparent and standardized environmental performance reporting, including disclosure of hourly PUE and WUE, to facilitate early identification of inefficiencies. Moreover, targeted investments should be directed toward technologies that reduce carbon, water, and energy footprints while improving public health outcomes.

As California continues to lead in both technological innovation and environmental protection, understanding the relationship between data center operations and their environmental and public health impacts becomes increasingly critical for informed decision-making. This report seeks to bridge the gap between technological advancement and environmental stewardship, providing policymakers and industry stakeholders with the information needed to make informed decisions about future data center development and operation. Through these joint efforts, we can collaboratively maintain the long-term viability and social benefits of our digital infrastructure, concurrently minimizing its ecological footprint.

1 Introduction

Data centers have long helped form the backbone of California's digital economy. However, with the rise of artificial intelligence (AI), significantly more data centers have been built over the last five years, and the pace is expected to increase through the rest of the decade. This explosive growth has led to a corresponding increase in energy demand which has led to increased electricity consumption, carbon emissions, water usage, and public health costs arising from air pollution. Due to the rapid expansion of data centers, it is important to understand the full extent of the environmental and public health impacts on California communities and implement appropriate strategies for sustainable development.

The digital transformation of society has placed data centers as critical infrastructure in our increasingly interconnected world. These facilities serve as the backbone of modern information technology, supporting everything from basic Internet services to advanced artificial intelligence (AI) applications. In this context, AI presents significant opportunities to tackle pressing societal issues, including air quality management, climate change, pandemic preparedness and disease prevention [8-11]. However, the growing demand for digital services and AI, particularly with the rise of generative AI applications such as large language models (LLMs), has led to an increased reliance on computational resources, accelerating the expansion of energy-intensive data centers.

According to the recent Lawrence Berkeley National Laboratory (LBNL) report [2], data centers in the U.S. consumed approximately 4.4% of national electricity in 2023, compared with roughly 3% in 2013. However, due to the surging demand for AI, the U.S. data centers are projected to account for between 6.7% and 12.0% of the national electricity consumption in 2028 [2]. Specifically, the annual electricity consumption by the U.S. data centers increased from about 58 TWh in 2014 to 176 TWh in 2023, with projections of national consumption ranging from approximately 325 to 580 TWh in 2028 [2].

Globally, the International Energy Agency (IEA) reports that data centers consumed approximately 415 TWh of electricity in 2024 (or roughly 1.5% of worldwide electricity demand), and have been growing at approximately 12% per year over the past five years [12]. In its base case scenario, the IEA projects that electricity consumption will nearly double to 945 TWh by 2030, representing close to 3% of global electricity usage. This is driven by a 30% annual increase in AI-optimized server workloads along with a 9% annual increase in conventional operations, such as standard cloud services or enterprise computing [12].

Meeting AI-driven computing needs would require data center construction at an unprecedented scale and speed. In certain regions, the surge in AI data centers has strained power grid capacity and even threatens the grid stability [13, 14] while potentially amplifying environmental concerns through rising carbon emissions [15, 16] and increased water consumption [17]. As highlighted in recent industry reports [18], the rapid proliferation of AI products and services is a primary driver of these challenges. Addressing these impacts necessitates a multifaceted approach, including grid-integrated data centers, [14, 19] advancements in energy-efficient hardware and software [20- 22], and the implementation of carbon-aware and water-efficient computing practices [17, 23- 25]. Without proactive measures, the sustainability implications of AI's growth will continue to escalate, reinforcing the need for innovative strategies to balance technological advancement with environmental responsibility.

Given California's prominent role in the data center industry and its substantial economic scale, this report focuses on the impacts of data centers in this state. California's leadership in the data center sector underscores the economic benefits and infrastructural challenges associated with the rapid expansion of AI-driven workloads. Since 2017, California has approved over 1 gigawatt (GW) of diesel-fueled emergency power for data centers [1]. The state's economic stature, with a GDP of nearly $3.9 trillion in 2023 [26] and the fourth-largest global economy, underscores the high stakes of sustaining its growing digital infrastructure. Home to one in nine U.S. residents and second only to Texas in total energy consumption [27], California must contend with data centers' intensifying power demands.

Despite ranking third in absolute electricity consumption, California's data centers play a critical role in the national digital infrastructure.

- **Technology Ecosystem Leadership:** California, particularly the Silicon Valley region, hosts the headquarters and primary data centers where major technology companies including Google, Meta, Apple, and numerous cloud service providers deploy their servers. These facilities support not only regional operations but serve as critical nodes in global digital infrastructure.
- **Innovation Hub for AI and Advanced Computing:** The EPRI report [13] notes that California's "robust technological ecosystem" positions it at the forefront of AI development and deployment. Many of the most computationally intensive AI training and inference workloads originate from California-based facilities.
- **Gateway to Asia-Pacific Markets:** California's data centers serve as crucial connection points for trans-Pacific data flows, making them essential for international digital commerce and communications.

In Santa Clara, one of the main power centers in Silicon Valley, more than 50 hyperscale data centers collectively account for approximately 60% of municipal utility electricity demand [28, 29], prompting Silicon Valley Power to implement a rate increase 5% effective January 1, 2025 to fund upgrades to transmission lines, substations, and battery storage systems [30]. Moreover, California's largest utility, Pacific Gas and Electric Company (PG&E), reported a significant surge in data center power requests across the northern part of the state [31]. This surge included new AI-focused facilities in Contra Costa and Fresno counties and injected approximately 4.1 GW additional demand into a pipeline that was already at 8.7 GW [31, 32]. In May 2022, a large technology company executed a 20 year power purchase agreement (PPA) to acquire 110 MW of solar photovoltaic generation capacity, supplemented by a battery energy storage system rated 55 MW with an energy capacity of 220 MWh, dedicated exclusively to its data centers in California [33]. Likewise, another technology company committed to a 25 year contract to procure the full 130 MW output of the California Flats Solar Project in Monterey County [34] and installed a 60 MW battery system on site [35]. Together, these rapid expansions and mounting costs underscore the imperative for policy measures that simultaneously uphold California's role as a leader in AI innovation and ensure sustainable resource management and economic resilience.

The data center landscape in California presents unique characteristics that distinguish it from other regions worldwide. In particular, the state infrastructure operates predominantly under the colocation model, where multiple organizations house their own servers in a shared facility while the data center operator is mainly responsible for providing facility services such as reliable power and cooling [36]. This approach has proven particularly effective in California's context, enabling consolidated resource utilization and serving diverse data center needs from the state's high-tech sector.

Despite California's leadership in addressing climate change and sustainability challenges, the environmental and public health implications of data center operations warrant rigorous quantitative assessment. As among the largest consumers of electricity, data centers exert multifaceted impacts that extend well beyond their physical boundaries. In regions still dependent on fossil fuel-based generation, the powering of AI workloads contributes substantially to greenhouse gas emissions, air and water pollution, and broader ecosystem degradation. In addition, the full hardware lifecycle, including the production, transport, and end-of-life disposal of servers, networking equipment, and cooling systems, demands large quantities of raw materials (e.g., cobalt, silicon, and various metals). Improper recycling of electronic waste can release toxic contaminants into soil and water, further amplifying the environmental burden.

A data center's carbon footprint, expressed as carbon dioxide equivalent (CO_2e), encompasses direct emissions (Scope 1) alongside indirect emissions from electricity consumption (Scope 2) and broader value- chain activities (Scope 3) [37]. Scope 1 emissions arise from on-site fuel combustion (e.g., backup generators) and cooling-related chemical processes such as refrigerant leakage. Scope 2 covers grid electricity used to power servers and cooling systems, while Scope 3 includes upstream manufacturing, transportation, and end-of-life disposal of IT hardware. Quantifying and mitigating these emissions is vital for sustainable data center growth amid rising AI workloads. Consequently, strategies such as shifting to renewable energy, improving energy efficiency, and enhancing hardware lifecycle management are essential to minimize environmental impacts and protect public health.

Beyond the water footprint incurred during the construction of data centers and the procurement of materials, operational water usage can be categorized into two primary areas: direct and indirect consumption. Direct water consumption is largely attributed to data center cooling needs, with minor contributions from facility maintenance and humidification. By raising allowable operating temperatures, installing water efficient cooling systems, or adopting innovative cooling technologies such as immersion or direct-to-chip cooling, data centers can substantially reduce direct water consumption. Indirect water consumption can account for a large fraction of a data center's total operational water consumption, especially in areas that extensively depend on water-intensive electricity generation [38]. By curbing both direct and indirect water consumption, data centers can effectively mitigate their overall environmental impact and conserve valuable water resources.

Parallel to these environmental concerns are the public health implications [39]. Data centers contribute to public health impacts through various pathways, including the

emission of criteria air pollutants from backup generators and associated power generation facilities. These health effects can be quantified in economic terms through established public health assessment methodologies [40]. While data centers are essential for technological progress, their growing footprint in both environmental and public health spheres necessitates comprehensive analysis and strategic planning to ensure sustainable development.

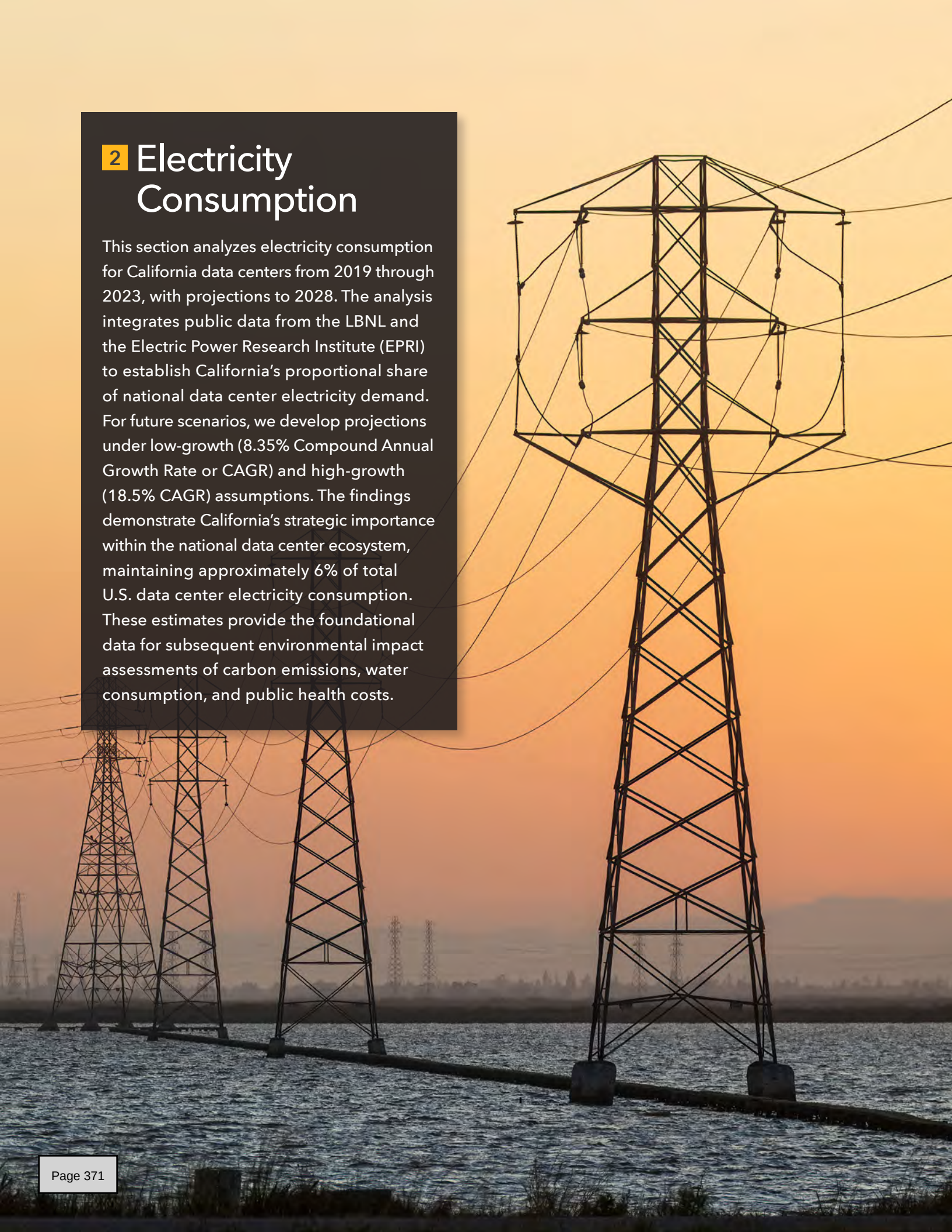
As California continues to lead in both technological innovation and environmental protection, understanding the relationship between data center operations and their environmental and public health impacts becomes increasingly critical for informed decision-making. This study seeks to bridge the gap between technological advancement and environmental stewardship, providing policymakers and industry stakeholders with the information needed to make informed decisions about future data center development and operation.

This report develops methodologies for California-specific environmental and public health impact assessment, and quantifies the multifaceted impacts of California's data centers from 2019 to 2023, with projections through 2028. We show that the energy consumption by California's data centers is projected to reach 16.16-25.28 TWh in 2028. The analysis also reveals that carbon emissions attributed to California's data centers were estimated at 2.38 million short tons in 2023, nearly double the 2019 level, and are projected to range between 3.55 and 5.56 million short tons in 2028. Moreover, the total water consumption by California's data centers reached 49.91 billion liters in 2023 (including off-site water consumption for generating electricity) and is projected to range between 74.54 and 116.63 billion liters by 2028. As for the public health impact, the total public health cost of California's data centers was estimated at $155.44 million in 2023 and is projected to range between $167.14 million and $266.57 million by 2028. This partial decoupling between the growth of data center electricity consumption and the associated health impacts is mainly attributable to the state's clean energy transition and strict environment laws.

Section 2 focuses on detailed energy consumption trends and carbon emissions are examined in Section 3. Section 4 addresses the operational water consumption, including both the direct demands of cooling systems and the indirect consumption embedded in power generation. Section 5 quantifies public health impacts, considering both immediate and longer-term community outcomes. In Section 6, we offer policy recommendations aimed at promoting sustainable data center development while protecting public health.

2 Electricity Consumption

This section analyzes electricity consumption for California data centers from 2019 through 2023, with projections to 2028. The analysis integrates public data from the LBNL and the Electric Power Research Institute (EPRI) to establish California's proportional share of national data center electricity demand. For future scenarios, we develop projections under low-growth (8.35% Compound Annual Growth Rate or CAGR) and high-growth (18.5% CAGR) assumptions. The findings demonstrate California's strategic importance within the national data center ecosystem, maintaining approximately 6% of total U.S. data center electricity consumption. These estimates provide the foundational data for subsequent environmental impact assessments of carbon emissions, water consumption, and public health costs.



2.1 Calculating the Annual Electricity Consumption of California Data Centers in 2019-2023

2.1.1 Methodology

To estimate the annual electricity consumption of California data centers from 2019 to 2023, this study employs a proportional allocation approach that combines national-level electricity data with state-level distribution estimates. This methodology leverages two prominent data sources from LBNL and EPRI to derive estimates for California's data center electricity consumption.

The methodology consists of three primary steps:

1. **National Data Center Electricity Consumption:** The total U.S. data center electricity consumption data for 2019-2023 is obtained from the recent LBNL report [41]. The LBNL report provides comprehensive estimates based on bottom-up modeling that incorporates server shipment data, equipment efficiency trends, and infrastructure energy requirements. Despite the intrinsic uncertainties associated with predictions, these estimates are considered highly reliable due to LBNL's extensive methodology that accounts for various server types, storage systems, network equipment, and cooling infrastructure.

2. **State-Level Distribution Analysis:** The state-specific data center electricity consumption estimates are derived from the EPRI report [13]. The EPRI analysis provides state-level breakdowns of data center electricity consumption, including specific estimates for California. These estimates are based on facility counts, regional capacity data, and industry growth patterns.

3. **Proportional Allocation Calculation:** California's proportion of total U.S. data center electricity consumption is calculated using the EPRI state-level data. This proportion is then applied to the LBNL national totals to derive California-specific electricity estimates for each year from 2019 to 2023.

2.1.2 Data Sources and Calculations

According to the LBNL report, the U.S. data center electricity consumption exhibited a steady growth during the study period of 2019-2023. The report indicates that data center energy use increased from approximately 90 TWh in 2019 to 176 TWh in 2023, representing 4.4% of total U.S. electricity consumption in 2023. This growth trajectory reflects the combined impact of expanding cloud services, increased digitalization accelerated by the COVID-19 pandemic, and the emergence of AI workloads.

The EPRI report [13] provides detailed state-level analysis, indicating that California data centers consumed 9,331,619 MWh (approximately 9.33 TWh) in 2023. California ranks third among U.S. states in terms of the absolute data center electricity consumption, following Virginia (33.85 TWh) and Texas (21.81 TWh). Note that while EPRI provides direct state-level electricity consumption data, our analysis employs a calibrated approach based on California's proportional share of LBNL national totals. This methodological choice provides a more robust foundation for longitudinal analysis, as the LBNL data represents one of the most comprehensive and rigorously validated national electricity figures available in the public domain.

To calculate California's share of national data center electricity consumption, we first calculate the following:

$$P_{CA} = \frac{E_{CA,EPRI}}{E_{US,EPRI}}$$

where P_{CA} represents California's proportion of U.S. data center electricity consumption, $E_{CA,EPRI}$ is California's data center electricity consumption from EPRI data, and $E_{US,EPRI}$ is the total U.S. data center electricity consumption implied by EPRI's state-level estimates. Based on the EPRI data, California's proportion can be calculated as:

$$P_{CA} = \frac{9.33\ \text{TWh}}{152\ \text{TWh}} \approx 0.061 \text{ or } 6.1\%$$

Subsequently, California's annual data center electricity consumption is calculated as:

$$E^t_{CA} = P_{CA} \times E^t_{US,LBNL}$$

where E^t_{CA} is California's estimated data center electricity consumption for year t, and $E^t_{US,LBNL}$ is the total U.S. data center electricity consumption from LBNL for that year.

This proportional approach ensures that California's estimates remain consistent with the most reliable national totals provided by the LBNL report [41] while accounting for the state's significant role in the U.S. data center ecosystem. The combination of California's technological leadership, concentration of major tech companies, and strategic geographic position underscores why understanding its data center electricity consumption patterns is crucial for both state and national energy planning.

2.1.3 Key Considerations and Uncertainties

Several important factors influence the accuracy of these estimates:

- **Regional Growth Variations:** The EPRI report [13] notes that data center growth rates could vary significantly by region. As a consequence, California's growth may differ from the national average due to factors such as high real estate costs, stringent environmental regulations, and the state's robust technology ecosystem.
- **Data Uncertainty for 2021-2023:** Both the LBNL and EPRI reports acknowledge increased uncertainty in estimates for the 2021-2023 period, particularly due to rapid changes in AI workload adoption and pandemic-related shifts in digital service demand.
- **Facility Type Distribution:** California hosts a diverse mix of data center types, including enterprise facilities, colocation centers, and hyperscale facilities. The EPRI report indicates that this mix influences overall efficiency and electricity patterns.
- **Efficiency Improvements:** The LBNL report [41] documents that Power Usage Effectiveness (PUE) has been continuously improving for the industry average. The national average PUE decreased from 1.6 in 2014 to 1.4 in 2023 and is projected to further improve to between 1.15 and 1.35 by 2028. This improvement is primarily driven by the shift toward larger, more efficient hyperscale and colocation facilities. By 2023, the average PUE across hyperscale and colocation data centers was under 1.4. California facilities may achieve different efficiency levels due to the state's moderate climate and adoption of advanced cooling technologies.

This methodology provides a systematic approach to estimating California's data center electricity consumption by leveraging the strengths of both national-level modeling (LBNL) and state-specific analysis (EPRI). The use of LBNL's total U.S. electricity consumption figures as the baseline ensures consistency with the most comprehensive bottom-up modeling available, while EPRI's state-level insights enable accurate proportional allocation to California.

2.2 Projected Annual Electricity Consumption of California Data Centers in 2028

This section outlines the methodology used to project the annual electricity consumption of data centers in California for the year 2028. The projection extends the historical analysis from 2019-2023 by employing a forecasting model that integrates growth scenarios from two important sources: the LBNL report [41] and the EPRI report [13]. This approach is designed to provide a plausible range of future electricity consumption levels, reflecting the significant uncertainties and dynamic factors shaping the data center industry, most notably the rapid expansion of AI workloads. The forecast establishes a quantitative basis for the subsequent analysis of carbon emissions and public health impacts.

2.2.1 Forecasting Methodology

The projection for 2028 is derived from a multi-step process that combines a validated 2023 baseline with a set of CAGRs representing low-growth and high-growth scenarios.

First, we establish the 2023 electricity consumption of California data centers as the baseline for our projection. Based on the proportional allocation methodology detailed previously, this value is estimated to be 10.82 TWh. Second, to project future demand, we consider growth forecasts from both LBNL [41] and EPRI [13] for the 2023-2028 period. This method aims to balance LBNL's bottom-up, technology-driven projections with EPRI's top-down, tempered demand projections.

- The LBNL report projects a low-growth rate of 13% and a high-growth rate of 27% for U.S. data centers between 2023 and 2028, driven largely by the proliferation of AI servers.

- The EPRI report provides more conservative estimates, with a low-growth scenario of 3.7% and a high-growth scenario of 10% from 2023 to 2030, reflecting factors like grid limitations and efficiency improvements.

To create a balanced forecast, we calculate the arithmetic mean of these corresponding low- and high- growth rates. This approach yields a plausible range that accounts for both the technological push and the infrastructural pull factors influencing data center energy demand.

The low-growth rate (r_{low}) and high-growth rate (r_{high}) are calculated as follows:

$$r_{low} = \frac{13\%\ (\text{lbnl}) + 3.7\%\ (\text{EPRI})}{2} = 8.35\%$$

$$r_{high} = \frac{27\%\ (\text{LBNL}) + 10\%\ (\text{EPRI})}{2} = 18.5\%$$

These averaged growth rates of 8.35% and 18.5% serve as the basis for our low- and high- projection scenarios for 2028, respectively.

2.2.2 2028 Electricity Consumption Projections

The projected electricity consumption for 2028 is calculated by applying the derived compound annual growth rates to the 2023 baseline electricity consumption figure over a five-year period (2024-2028). The formula for this projection is:

$$E_{2028} = E_{2023} \times (1+r)^5$$

Where E_{2023} = 10.82 TWh and *r* is the respective annual growth rate.

- **Low-Growth Scenario Projection:**

  $E_{2028,low} = 10.82\ \text{TWh} \times (1 + 0.0835)^5 \approx \mathbf{16.16\ TWh}$

  This scenario anticipates a more moderate expansion trajectory, where efficiency gains and potential market saturation temper the growth driven by new technologies.

- **High-Growth Scenario Projection:**

  $E_{2028,high} = 10.82\ \text{TWh} \times (1 + 0.185)^5 \approx \mathbf{25.28\ TWh}$

  This scenario reflects a more aggressive expansion, driven by the unabated and rapid deployment of energy-intensive AI applications and a significant increase in the installed base of accelerated servers. Therefore, our model projects that the annual electricity consumption of data centers in California will range between **16.16 TWh and 25.28 TWh** in 2028, as seen in Figure 1. This significant increase from the 2023 baseline underscores the escalating energy demands of the state's digital infrastructure. The wide range between the low and high scenarios highlights the considerable uncertainty in the sector, influenced by factors such as the pace of AI demand, advances in hardware efficiency, grid capacity constraints, and the adoption of best practices for managing data centers.

2.3 California Data Center Electricity Consumption Results

This section presents the results of our analysis regarding California data center electricity consumption from 2019 through 2023, with projections extending to 2028. The findings integrate historical data analysis with forward-looking projections under both low-growth and high-growth scenarios.

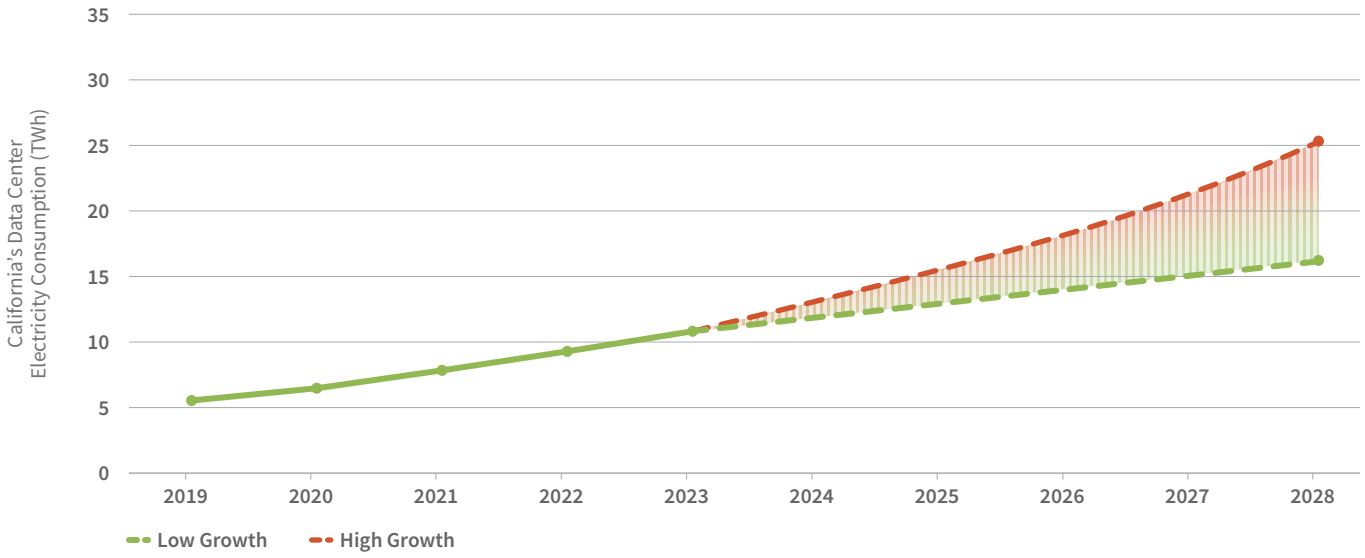
Figure 1 illustrates the evolution of California data center electricity consumption. The historical data from 2019 to 2023 demonstrates a consistent upward trajectory, with electricity consumption nearly doubling from 5.54 TWh to 10.82 TWh, a 95% increase that reflects the state's expanding digital infrastructure and growing computational demands. The projection period (2024-2028) presents two distinct growth scenarios, with the shaded region between them representing the uncertainty band associated with different assumptions about technology adoption rates, efficiency improvements, and market dynamics.

Table 2 provides a detailed comparison of California's data center electricity consumption within the national context. The data reveals California's substantial contribution to the U.S. total data center electricity demand, underscoring the state's critical role in supporting national digital infrastructure.

The results reveal several critical insights regarding California's position as a cornerstone of the U.S. data center ecosystem.

First, between 2019 and 2023, California's data centers consumed approximately 6% of the total national data center electricity, consistently placing the state among the top three consumers, behind only Virginia and Texas. This substantial and sustained share underscores California's large role in powering America's

Figure 1. California data center electricity consumption (2019-2028)



Note: Historical electricity consumption data (2019-2023) shown with actual values, while projections (2024-2028) present low-growth and high-growth scenarios with associated uncertainty bands.

digital infrastructure amid rapidly growing demand.

Second, the absolute growth in California's data center electricity consumption is substantial, increasing from 5.54 TWh in 2019 to 10.82 TWh in 2023. This 5.28 TWh increase represents significant additional demand on the state's electricity grid, equivalent to the annual electricity consumption of approximately 490,000 average U.S. households [3]. This growth underscores the urgent need for improved grid capacity and integration of renewable energy to support sustainable expansion.

Third, the 2028 projections illustrate the magnitude of future challenges and opportunities. Under the low-growth scenario, California's data center electricity consumption would reach 16.16 TWh, while the high-growth scenario projects 25.28 TWh, which represents increases of 49% and 134% respectively from 2023 levels. These projections suggest that California data centers could require between 5.3 TWh and 14.5 TWh of additional electricity within five years.

Importantly, California's role extends beyond mere electricity consumption metrics. As the home to Silicon Valley and major technology corporations, California data centers serve as critical nodes in the global digital infrastructure, supporting innovation in AI, cloud computing, and emerging technologies. The state's data centers process workloads that drive technological advancement nationwide, making their reliable operation essential for maintaining U.S. competitiveness in the global digital economy.

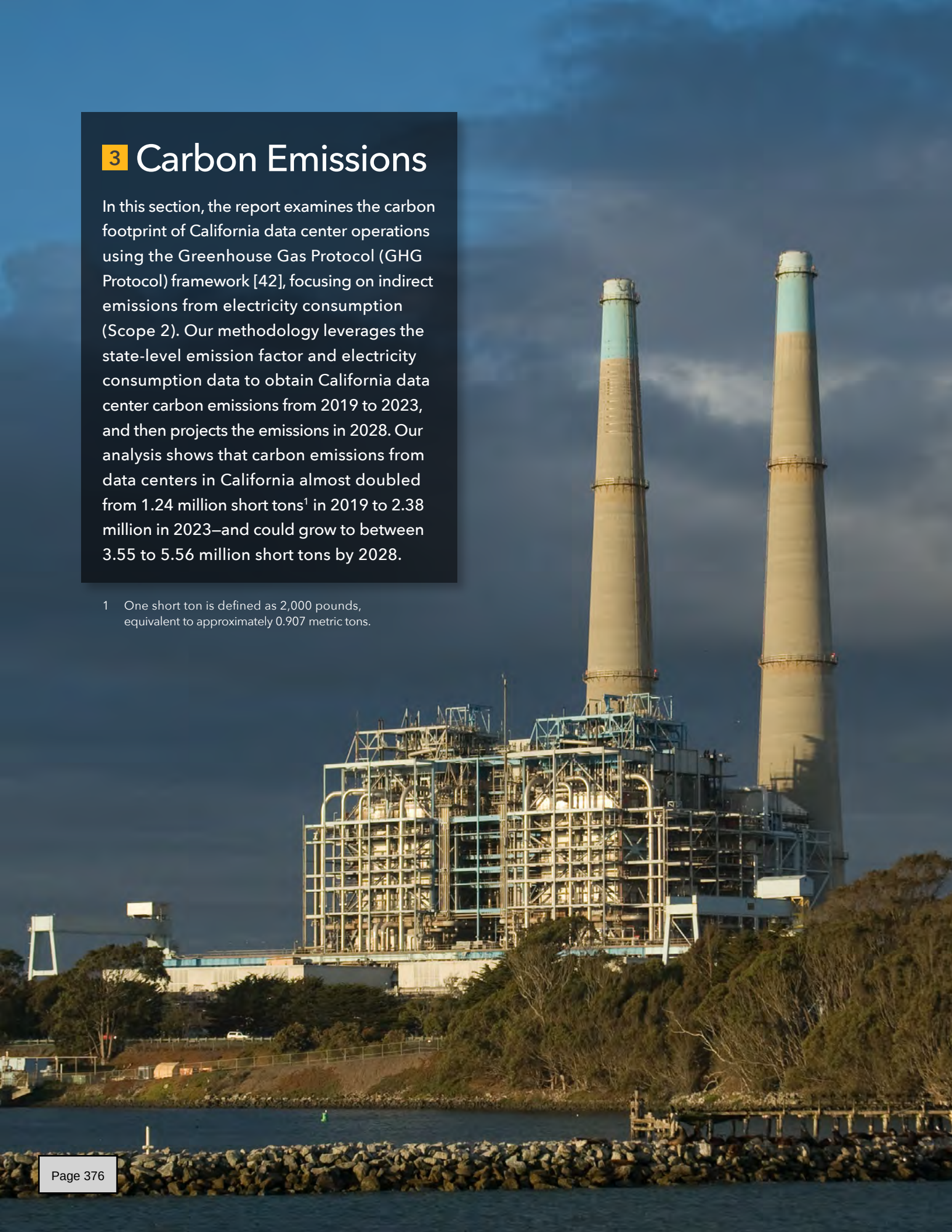
Table 2. California data center electricity consumption in national context

Year	CA Data Center Electricity (TWh)	U.S. Data Center Electricity (TWh)
2019	5.54	90.28
2020	6.48	105.56
2021	7.84	127.78
2022	9.29	151.39
2023	10.82	176.39
2028 (low)	16.16	263.40
2028 (high)	25.28	412.16

3 Carbon Emissions

In this section, the report examines the carbon footprint of California data center operations using the Greenhouse Gas Protocol (GHG Protocol) framework [42], focusing on indirect emissions from electricity consumption (Scope 2). Our methodology leverages the state-level emission factor and electricity consumption data to obtain California data center carbon emissions from 2019 to 2023, and then projects the emissions in 2028. Our analysis shows that carbon emissions from data centers in California almost doubled from 1.24 million short tons[1] in 2019 to 2.38 million in 2023–and could grow to between 3.55 to 5.56 million short tons by 2028.

1 One short ton is defined as 2,000 pounds, equivalent to approximately 0.907 metric tons.



3.1 Overview of Scope 1, 2 and 3 Emissions

As the foundational infrastructure of the modern digital economy, data centers are coming under intensified scrutiny for their significant and multifaceted carbon emissions. Given the accelerating pace of technological innovation and the increasing imperatives of environmental stewardship, it is critical that policymakers, industry executives, and stakeholders adopt a comprehensive framework for evaluating and mitigating these emissions [43]. This section provides an in-depth analysis of the carbon emissions associated with data center operations, examining the three primary emission scopes: Scope 1, Scope 2, and Scope 3 according to the GHG Protocol [42].

Accurate quantification and ongoing monitoring of carbon emissions underpin any successful strategy to reduce greenhouse gas output. The GHG Protocol delineates emissions into three distinct categories: Scope 1 emissions, which are direct GHG emissions from sources that are owned or controlled by an organization [44]; Scope 2 emissions, representing indirect emissions from the generation of purchased energy such as electricity, steam, heat, or cooling [44]; and Scope 3 emissions, which include all other indirect emissions associated with a company's operations and value chain activities [45].

In data centers, Scope 1 emissions generally encompass direct emissions from on-site energy generation and related combustion processes, including fuel combustion in boilers, furnaces, and backup generators, as well as emissions from maintenance vehicles used in facility operations. Given that data centers often require uninterrupted power and climate control, reliance on on-site combustion systems, particularly during peak demand or emergency situations, can result in direct emissions. However, Scope 1 emissions are often orders of magnitude smaller than Scope 2 emissions [18] and therefore are excluded from our analysis in this report.

Scope 2 emissions represent indirect releases from off-site energy generation. Data centers are highly energy-intensive, requiring continuous power for servers, cooling, and support systems. Although these emissions occur in the plants where electricity is produced, they are attributed to the data center because they stem directly from its electricity consumption. Electricity generation contributes a large share of global greenhouse-gas emissions, and with governments tightening regulations while economic incentives increasingly favor renewable power, data center operators now face growing pressure to adopt clean-energy strategies and curb their Scope 2 emissions.

Scope 3 emissions extend beyond the immediate operational limits of the facility and encompass the entire value chain, from the production of hardware and other capital goods to the end-of-life disposal of electronic equipment. Scope 3 emissions are often subdivided into upstream and downstream categories [45]. Upstream emissions include those related to the extraction, manufacturing, and transportation of components and materials that eventually form the data center infrastructure. For instance, the production of servers, cooling units, and other critical components involves significant electricity consumption and material processing, which in turn generate considerable GHG emissions. Downstream emissions, on the other hand, refer to those that result from the data center's services, such as the energy consumed by end users when interacting with cloud-based services or the emissions associated with the disposal and recycling of outdated hardware. Public data on Scope 3 emissions often has high degrees of uncertainties, and Scope 3 emissions are not directly related to data center operation. Thus, it is also excluded from this report.

3.2 Carbon Emissions by California Data Centers

Drawing on state-level electricity profiles and carbon emission factors from the U.S. Energy Information Administration (EIA) [46], this analysis assesses carbon emissions from California data centers. From 2019 through 2023, we calculate their annual emissions and benchmark these figures against both California's total carbon output and the U.S. average emission factor. We anticipate that these calculations will elucidate temporal trends and provide substantive insights to underpin our policy recommendations.

According to the EIA State Electricity Profiles, the U.S. utility-scale power plants produced roughly 4.18 trillion kWh of net electricity in 2023. That resulted in approximately 1.69 billion short tons of carbon, yielding an average emission factor of 0.81 pounds of carbon per kWh [47]. Both total generation and emission intensity vary considerably from state to state and among different energy sources.

3.2.1 Data Sources and Emission Factors

We utilize data from the U.S. EIA, which publishes annual carbon emission factors for each state in units of pounds per megawatt hour (lbs/MWh), as well as a national average in pounds per megawatt hour (lbs/MWh). The resulting emission factors for California and for the entire United States from 2019 to 2023 are shown in Table 3.

3.2.2 Methodology

In general, the Scope 2 carbon emissions attributable to data center electricity consumption are calculated using the following formula:

$$\text{Total Emissions (lbs)} = \begin{matrix}\text{Emission Factor (lbs/MWh)} \\ \times \\ \text{Electricity Consumption (MWh)}\end{matrix}$$

Table 4 summarizes annual electricity consumption and Scope 2 carbon emissions for California data centers over 2019–2023. The detailed calculation methodology appears in Appendix B. Below we present definitions of the variables referenced in the table:

- **CA DC Electricity (TWh):** Total annual electricity consumption of California data centers.
- **CA Total Electricity (TWh):** Total annual electricity consumption for the entire state of California.
- **CA DC Emission (million short tons):** Carbon emissions attributable to California data centers.
- **DC Emission of CA Total (%):** The proportion of data center carbon emissions relative to statewide electricity-related emissions.
- **CA–US Ratio (%):** The percentage of California data center carbon emissions relative to the emissions that would result from the same electricity consumption evaluated at the U.S. national average emission intensity.

3.2.3 Results

Table 4 presents our results for the carbon emissions of California data centers from 2019 to 2023. While EIA's electricity consumption data captures utility-metered usage, it excludes behind-the-meter generation (e.g., onsite solar). Note that our analysis assumes static boundaries for Scope 2 accounting under the "location-based" method, which does not adjust for contractual instruments like renewable energy credits (RECs). This choice may understate market-based emissions reductions achieved by operators purchasing bundled renewable power, which may have private contracts not available to the public. Nonetheless, location-based emissions are considered "essential" and allows the accounting of physical carbon emissions associated with electricity consumption [50].

As shown in Table 2, California data centers exhibit a pronounced increase in electricity consumption over the 2019–2023 period, rising from 5.54 TWh in 2019 to 10.82 TWh in 2023. Consequently, estimated carbon emissions

Table 3. Carbon emission factors for California and the United States

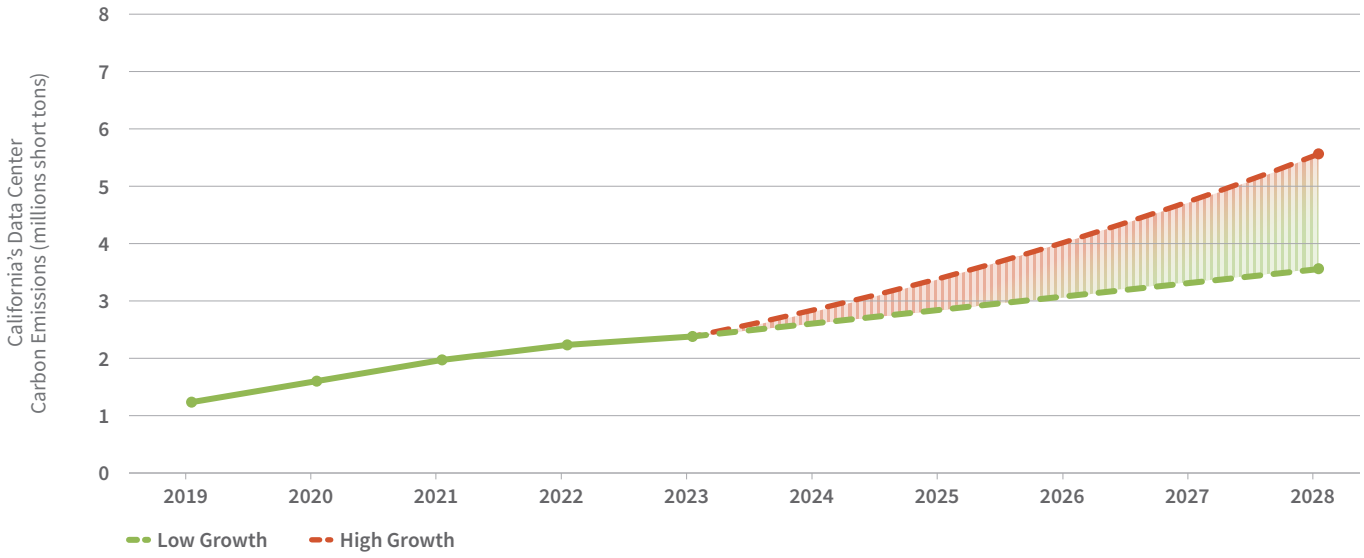
Year	CA Emissions Factor (lbs/MWh)	U.S. Emission Factor (lbs/MWh)
2019	446	921
2020	495	855
2021	503	886
2022	481	860
2023	440	807

Note: The CA Emission Factor is obtained from [46] and the US Emission Factor is from [47].

Table 4. Electricity consumption (total retail sales) and carbon emissions for California data centers (2019-2023) [46]

Year	CA DC Electricity (TWh)	CA Total Electricity (TWh)	CA DC Emission (million short tons)	DC Emission of CA Total (%)	CA-US Ratio (%)
2019	5.54	250.38	1.24	2.21	48.43
2020	6.48	250.17	1.60	2.59	57.89
2021	7.84	247.25	1.97	3.17	56.77
2022	9.29	251.87	2.23	3.69	55.93
2023	10.82	239.48	2.38	4.52	54.52

Figure 2. California data center carbon emissions (2019-2028)



nearly double, increasing from 1.24 million short tons to 2.38 million short tons over the same interval. This trend underscores the rapid expansion of data center capacity in California and its impact on carbon emissions.

Furthermore, the data center share of statewide electricity-related emissions (DC Emission % of CA Total) grows steadily from 2.21% in 2019 to 4.52% in 2023, showing that even as the grid becomes cleaner, data center operations are making up an ever-larger portion of the state's total emissions.

The "CA-US Ratio" metric reveals that California data centers emitted just 48.43% of the carbon they would have under the national average intensity in 2019. The figure peaks at 57.89% in 2020, then drops back to 54.52% by 2023. The post-2020 decrease suggests that California's carbon emission advantage diminished slightly over time, probably driven by changes in renewable energy penetration, greater use of natural gas during low solar output, and other temporary shifts in the fuel mix. These trends underscore the need for ongoing investment in clean energy and demand management if California is to maintain its grid advantage over the national average.

3.2.4 Projection of Carbon Emissions by California Data Centers in 2028

To derive future growth scenarios for California data center carbon emissions between 2023 and 2028, with the assumption that the carbon emission factor remains the same as in 2023 (440 lbs/MWh), we leverage the two average growth rates introduced in Section 2, serving as the basis for our low- and high-projection scenarios. We assume that the California grid's carbon emission factor in 2028 will remain at the 2023 level, primarily due to the relatively stable carbon emission factors observed in California from 2019 to 2023 and the potential challenges associated with further decarbonizing the grid by 2028.

Figure 2 shows the historical and projected carbon emissions of California data centers between 2019 and 2028. The solid green line with round markers represents actual emissions from 2019 through 2023, rising from approximately 1.24 million short tons in 2019 to 2.38 million short tons in 2023. Beginning in 2023, two projection scenarios are shown: the dashed green line corresponds to the "Low Growth" trajectory (annual growth rate of 8.35%), while the dash–dot red line represents the "High Growth" trajectory (annual growth rate of 18.5%). By 2028, the Low Growth scenario yields roughly 3.55 million short tons, whereas the High Growth scenario reaches about 5.56 million short tons. The shaded area between the two projection curves highlights the uncertainty band associated with these different growth assumptions.

3.3 Discussion

California's experience underscores both the magnitude of the challenge and the potential pathways toward more sustainable data center operations. From 2019 to 2023, the electricity consumption of state data centers nearly doubled, from 5.54 TWh to 10.82 TWh, driving carbon emissions from 1.24 to 2.38 million short tons. By 2023, data centers were responsible for 4.52% of California's total electricity-related emissions. Looking ahead, projections suggest that emissions could rise to between 3.55 and 5.56 million short tons by 2028, depending on future growth rates, highlighting the sector's rapidly expanding carbon footprint.

Reversing this trajectory demands coordinated action across three mutually enhancing domains. First, grid-responsive operations, such as carbon-aware scheduling and demand-side coordination, can reduce marginal emissions by timing compute workloads to coincide with cleaner energy availability. Second, circular infrastructure strategies that include the recovery of waste heat and a longer lifetime of hardware help reduce embodied emissions and ease the burden on energy systems. Third, value chain transparency is crucial for carbon emissions governance, as organizations must have clear insight into the emissions generated during raw material extraction, component manufacturing, logistics, assembly, use and end of life disposal to ensure that upstream carbon impacts do not overshadow efficiency improvements in operations.

California's regulatory leadership as well as ongoing grid decarbonization efforts offers a strong foundation for sustainability. However, achieving a net zero data center infrastructure will require a shift away from traditional success metrics (e.g., delivered teraflops) to carbon intensity-aware benchmarks (e.g., avoided teraflops per ton of CO_2). Standardized accounting frameworks such as the GHG Protocol, paired with interoperable public-private carbon emission tracking platforms, can help reframe carbon data as a strategic asset, fueling better grid integration, sustainable procurement, and climate-aligned innovation.

4 Water Consumption

This section provides an assessment of water consumption associated with California data center operations, including both direct on-site cooling water consumption and indirect electricity-related water consumption. We first establish a three-scope framework categorizing water usage into distinct pathways: direct on-site consumption for cooling (Scope 1), indirect consumption from off-site electricity generation (Scope 2), and embodied water within the supply chain (Scope 3). We provide a methodology for quantifying these impacts and present an analysis of water consumption from 2019 through 2023, with projections to 2028 under various growth scenarios. The findings reveal that off-site water consumption dominates the total operational water footprint, accounting for more than 90% of the total, while demonstrating substantial growth trajectories that nearly double consumption from 2019 to 2023. These results underscore the critical importance of integrated water-energy planning in California's digital infrastructure development.



4.1 Background and Context

4.1.1 Understanding the Distinction: Water Withdrawal and Water Consumption

A precise accounting of a data center's hydrological impact requires a clear delineation between two key metrics: water withdrawal and water consumption [51, 52]: Water withdrawal encompasses all freshwater extracted from local sources, while water consumption represents the portion that is evaporated, transpired, or permanently removed from the immediate water environment [52].

Water consumption provides a measure of environmental impact since it reflects the actual reduction in locally available water resources, whereas withdrawn water may be returned to local watersheds. While both metrics are important, water consumption is often the default metric in environmental impact assessments [17].

Throughout this report, "water footprint" refers specifically to water consumption unless otherwise noted, consistent with established industry practice and environmental assessment methodologies.

4.1.2 Overview of Data Center Water Footprint

The water footprint of data centers extends across three distinct scopes or pathways, each representing different mechanisms through which data centers impact water resources. Understanding these pathways enables a comprehensive assessment of the total impact of water on data centers.

Scope 1: Direct On-site Water Consumption

Server operations generate substantial heat, which requires active removal through facility cooling systems. While server-level cooling (air- or liquid- based) does not directly consume water, facility-level heat rejection to the external environment represents the primary source of direct water consumption. Specifically, cooling towers are commonly used and evaporate water to dissipate heat through open-loop systems. The evaporated portion of water withdrawal is considered water consumption. Importantly, cooling towers primarily use drinking water to keep the optimal efficiency. For each kWh of server energy, a cooling tower can evaporate 1 L of water for efficient operations [53] to 9L of water in hot climates [54]. Evaporative-assisted natural cooling leverages ambient air when temperatures permit, while requiring water evaporation when the ambient air is above a threshold (say, 85°F) and for humidity control. These systems consume less water on average than cooling towers, although hot weather creates peak demand periods that may stress local water supplies. Closed-loop dry cooling could eliminate on-site water consumption but often increases cooling energy requirements compared to water evaporation-based heat rejection mechanisms [55], potentially escalating total environmental impact through higher Scope 2 consumption.

Scope 2: Electricity-Related Water Consumption

Electricity generation constitutes a major water consumption pathway, with thermoelectric power ranking among the most water-intensive sectors [56]. Data centers bear responsibility for water consumed during power generation, similar to their accountability for carbon emissions. Power generation technologies exhibit vastly different water intensities. Thermoelectric facilities (coal, natural gas, nuclear) require substantial water for steam production and cooling, consuming significant portions through evaporative processes. Renewable sources vary considerably: solar photovoltaic and wind require minimal water, while hydroelectric generation incurs substantial evaporative losses from reservoir operations. The U.S. electricity generation averages approximately 43.8 L/kWh for withdrawal [57] and 3.1 L/kWh for consumption [56], with substantial regional variation based on generation mixes. Some technology companies have begun incorporating Scope 2 water consumption into sustainability reporting [58].

Scope 3: Supply Chain Water Requirements

Hardware manufacturing represents the least transparent yet potentially largest component of total water footprint [59]. Semiconductor production demands vast quantities of ultrapure water for wafer fabrication, with each manufacturing layer requiring multiple cleaning processes. Despite recycling capabilities, industry practices achieve only 45-50% water reuse rates [60], while discharged water contains toxic chemicals requiring specialized treatment [61]. Supply chain consumption often dominates total footprint. One technology company reports about 99% of its water impact originates from supply chain operations rather than direct facilities [62]. In contrast to agricultural water use that primarily

draws from natural precipitation, data centers depend mostly on freshwater supplies from surface and subsurface water bodies. This reliance may intensify competition for finite freshwater resources that serve multiple human needs in certain regions.

4.2 Methodology for Water Consumption

4.2.1 Water Consumption Calculation Framework

While we categorize data center water consumption into three distinct scopes, we focus on Scope 1 and Scope 2 water consumption, which is more relevant to the operation of data centers in California since Scope 3 water consumption comes from the supply chain that is often not located in California.

Scope 1: Direct Facility Water Usage
Direct water consumption accounts for on-site cooling and facility operations. We calculate this using time-varying water usage effectiveness (WUE) metrics that reflect environmental conditions such as temperature and humidity.

Scope 2: Grid-Based Water Usage
Indirect water consumption results from electricity generation required to power data centers. We estimate this using regional Electricity Water Intensity Factors (EWIF) that account for California's diverse energy generation mix and seasonal variations.

Our analysis employs annualized average WUE and EWIF values to estimate total water consumption by California data centers. Detailed methodological calculations and technical specifications are provided in Appendix C.

Table 5. Annual WUE and PUE values used in calculations (2019-2028)

Year	WUE (L-kWh)	PUE
2019	0.36	1.51
2020	0.36	1.49
2021	0.36	1.47
2022	0.36	1.46
2023	0.37	1.42
2028	0.37	1.42

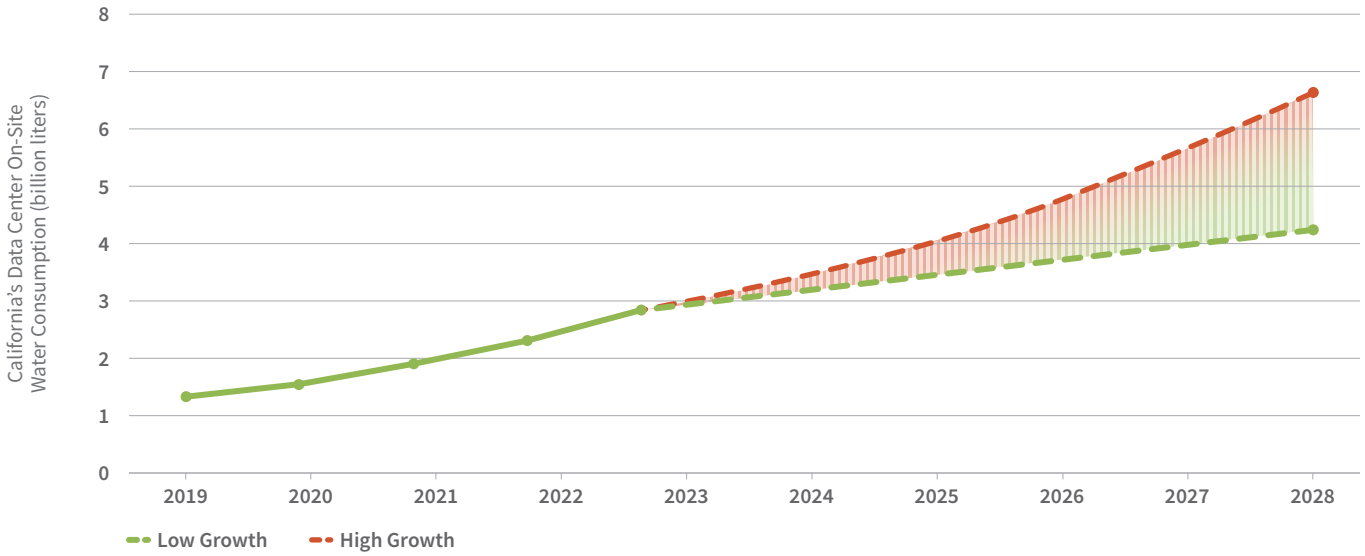
4.2.2 Data Inputs and Parameters

This section outlines the key parameters and data sources utilized in our water consumption calculations for California data centers. We select appropriate values based on public sources while considering California's specific operational characteristics.

For Scope 1 on-site water consumption, we use the national average WUE from the LBNL report [41] as a proxy for California's data center WUE (Table 5). We also assume that California's data center WUE in 2028 will remain the same as the 2023 WUE, although the LBNL report projects a growing trend of data center WUE for U.S. average. Note that this is a conservative estimate as the onsite WUE for California data centers is potentially higher than the national average due to its relatively hotter and dry climate.

For Scope 2 off-site water consumption, two parameters are particularly critical: Power Usage Effectiveness (PUE) and EWIF. We apply the average PUE from the LBNL report (Table 5) due to its comprehensive, multi-year analysis [41]. Regarding the EWIF, which quantifies water consumption per unit of electricity, both the World Resources Institute (WRI) and LBNL provide projections. The WRI figure is approximately 5.18 L/kWh [56]. In contrast, LBNL provides the U.S. average value of 4.35 L/kWh without showing the specific EWIF for California. Between these two values, we select the more conservative LBNL estimate of the U.S. average 4.35 L/kWh as California's EWIF. For our 2028 projections, we maintain the same WUE, PUE, and EWIF values as established for 2023.

Figure 3. California data center on-site water consumption (2019-2028)



Note: Historical data (2019-2023) shown with solid line and square markers; projections (2024-2028) presented with dashed lines for low-growth and dash-dot lines for high-growth scenarios. The shaded area represents the uncertainty range between growth scenarios.

4.3 Results

Our analysis of California data center water consumption from 2019 to 2028 reveals substantial growth patterns across both historical and projected periods. The analysis, presented in Figure 3 for on-site water consumption, Figure 4 for total water consumption, and Table 6 for detailed breakdowns, demonstrates that water consumption has nearly doubled during the historical period (2019-2023) and is projected to potentially more than double again by 2028 under high-growth scenarios. The data consistently shows that off-site water consumption associated with electricity generation dominates the total water footprint, accounting for approximately 94-95% of total water consumption throughout the entire study period.

On-site Water Consumption

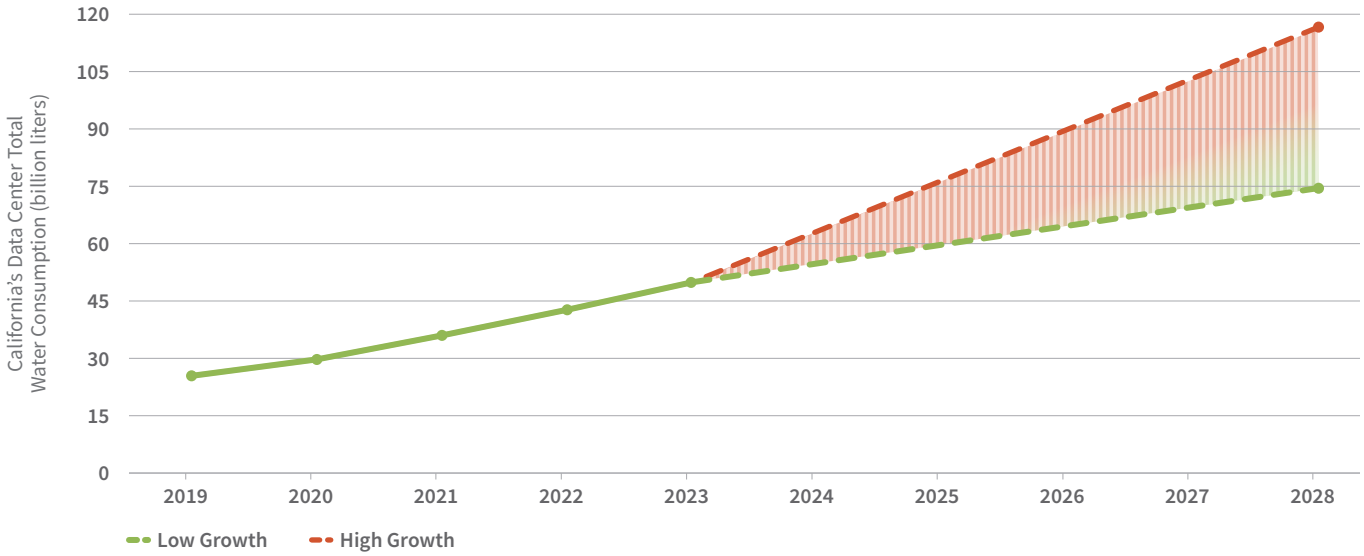
Figure 3 illustrates the evolution of on-site water consumption across the decade-long study period. The historical data (2019-2023) exhibits a strong upward trajectory, with water consumption increasing from 1.33 billion liters in 2019 to 2.84 billion liters in 2023, representing a 113% increase. This growth pattern demonstrates consistency, with year-over-year increases ranging from 17% to 23%, suggesting a stable relationship between facility expansion and cooling water requirements.

The projection period (2024-2028) introduces significant uncertainty, as evidenced by the diverging growth scenarios. Under the low-growth scenario, on-site water consumption reaches 4.24 billion liters by 2028, while the high-growth scenario projects 6.64 billion liters. This represents a 57% difference between scenarios, highlighting the sensitivity of water demand to underlying electricity consumption growth rates. The widening uncertainty band visible in the figure underscores the compounding effects of different growth assumptions over the five-year projection horizon.

Total Water Consumption

Figure 4 presents the total water footprint, revealing patterns that closely mirror on-site water consumption but with substantially larger magnitudes. The total water consumption increased from 25.42 billion liters in 2019 to 49.91 billion liters in 2023, a 96.4% increase that corresponds to a CAGR of 18.4%. The 2028 projections show a total water consumption ranging from 74.54 billion liters (low growth) to 116.63 billion liters (high growth), representing potential increases of 49% to 134% from 2023 levels. Our projection aligns with the 100–300% increase in total U.S. data center on-site water consumption from 2023 to 2028, as estimated by the LBNL report [41].

Figure 4. California data center total water consumption (2019-2028)



Note: Total water consumption encompasses both on-site cooling water usage and off-site water consumption associated with electricity generation. Historical trends and projection scenarios follow the same visualization scheme as Figure 3.

Electricity-Water Nexus

The relationship between electricity consumption and water usage emerges as a fundamental driver of data centers' water footprint. As shown in Table 6, electricity consumption growth from 5.54 TWh in 2019 to 10.82 TWh in 2023 (95% increase) closely tracks total water consumption growth (96% increase). This near-unity correlation extends into the projection period, where both low and high growth scenarios maintain proportional relationships between electricity and water consumption.

Table 6. California data center water consumption breakdown (2019-2028)

Year	Electricity Consumption (TWh)	On-Site Water Consumption (billion liters)	Off-Site Water Consumption (billion liters)	Total Water Consumption (billion liters)
2019	5.54	1.33	24.09	25.42
2020	6.48	1.56	28.17	29.73
2021	7.84	1.90	34.10	36.00
2022	9.29	2.31	40.40	42.71
2023	10.82	2.84	47.07	49.91
2028 (low)	16.16	4.24	70.29	74.54
2028 (high)	25.28	6.64	109.99	116.63

The dominance of off-site water consumption reveals the critical importance of electricity generation in the overall water footprint. For every TWh of total electricity consumed (including both server and non-server energy), California data centers indirectly drive approximately 4.35 billion liters of water consumption through power generation processes. This electricity-water intensity factor, combined with modest on-site water consumption, results in a total water intensity of approximately 4.61 billion liters per TWh across the study period.

Growth Trajectory Implications

The divergence between low and high growth scenarios becomes increasingly pronounced over time, with the uncertainty range expanding to 42.09 billion liters by 2028. This expanding uncertainty reflects not only different assumptions about data center growth rates but also the cumulative impacts of technological adoption, policy interventions, and market dynamics. The low-growth scenario's 8.35% CAGR represents a

continuation of data center efficiency improvements and measured expansion, while the high-growth scenario's 18.5% CAGR reflects potential rapid AI adoption and computational demand surge.

Discussion

The analysis reveals three critical findings regarding California data center water consumption. First, the sector's water footprint has experienced and will likely continue to experience substantial growth, with total water consumption potentially reaching 74.54 to 116.63 billion liters by 2028—representing up to a 4.6-fold increase from 2019 levels. Second, the overwhelming dominance of off-site water consumption (approximately 95% of total) indicates that addressing the water footprint of data centers requires systemic interventions at the electricity generation level rather than focusing solely on facility-level cooling efficiency. Third, the strong coupling between electricity consumption and water usage suggests that without breakthrough innovations in cooling technology or fundamental shifts in electricity generation methods, water consumption will continue to scale up with computational and energy demand.

These findings underscore the urgent need for integrated water-energy planning amid California's digital infrastructure development. The substantial uncertainty in future projections—ranging from moderate growth requiring an additional 24.63 billion liters annually to aggressive growth demanding 66.72 billion liters more by 2028—highlights the profound impact that policy decisions, technological innovations, and market dynamics will have on the state's water resources. As California faces ongoing water scarcity challenges, the exponential growth in data center water consumption presents an emerging sustainability challenge that requires careful attention through comprehensive policy frameworks, technological innovation, and adaptive resource management strategies.



5 Public Health Cost

This section quantifies the economic burden of public health impacts attributable to California data center operations, encompassing direct emissions from on-site backup generators (Scope 1) and indirect emissions from electricity generation (Scope 2). Employing established health impact assessment methodologies and the EPA's COBRA model [65], this section estimates the economic costs of adverse health outcomes (including respiratory and cardiovascular illnesses and premature mortality) and assess historical health costs from 2019-2023 with projections to 2028 under different growth scenarios. The findings demonstrate substantial cost escalation from $44.68 million in 2019 to $155.44 million in 2023, with Scope 2 emissions consistently accounting for most of the total impacts. Notably, California's aggressive clean energy transition and air quality policies exhibit a decoupling effect between electricity consumption growth and proportional health cost increases.

5.1 Scope 1 Health Cost

5.1.1 Background on Health Cost Metrics for Scope 1 Emissions in California

Scope 1 emissions consist of direct releases of criteria air pollutants from on-site combustion sources and represent a key determinant of ambient air quality and public health outcomes [66, 67]. In California, large-scale data center facilities routinely deploy backup generators, typically burning diesel fuels, to maintain uninterrupted service during grid outages. When these backup generators are initiated or cycled, they emit fine particulate matter ($PM_{2.5}$), sulfur dioxide (SO_2), nitrogen oxides (NO_x) and volatile organic compounds (VOCs) [68]. These co-pollutants disperse into surrounding neighborhoods, potentially elevating local concentrations well above regulatory thresholds, particularly under atmospheric inversion conditions.

Epidemiological evidence robustly associates elevated $PM_{2.5}$ concentrations with increased incidence of respiratory and cardiovascular morbidity and mortality. Specifically, large-scale cohort studies and meta- analyses show that each 10 µg/m3 increase in long-term $PM_{2.5}$ exposure is linked to a 6-8 % rise in all-cause mortality [69]. Children, older adults, and individuals with preexisting cardiopulmonary conditions consistently experience equal or greater risk increases under the same exposure increments [70].

Mechanistically, $PM_{2.5}$ particles penetrate deep into the alveolar region, translocate into the systemic circulation, and provoke inflammatory and oxidative stress pathways that precipitate acute events such as myocardial infarction and heart failure [71]. Concurrently, chronic exposure to NOx and VOCs exacerbates asthma, chronic obstructive pulmonary disease (COPD), and other lower-respiratory-tract conditions by promoting airway inflammation and hyperresponsiveness [72].

California's distinctive climate and dense population magnify the health impacts of localized backup generator emissions. Many residents live near data center facilities in California's densely populated metropolitan counties such as Los Angeles and Santa Clara [74]. As a result, even modest increases in Scope 1 emissions can lead to significant public health impacts.

Despite these known health hazards, California's regulatory framework administered by the California Air Resources Board (CARB) allows certain "emergency" exemptions for backup generators during grid stress events, thus creating episodic spikes in pollutant levels [76]. Although CARB's ambient air quality standards cap the annual average $PM_{2.5}$ concentration at 12 µg/m3 (since June 2003), they rely on the federal NAAQS 24-hour limit of 35 µg/m3 rather than setting a separate short-term $PM_{2.5}$ threshold [77]. As a result, during heat waves and other high-demand periods, multiple diesel generators operating under these waivers can produce sharp spikes in NOx and particulate emissions, exacerbating acute respiratory and cardiovascular risks in nearby communities [68].

In real-world settings such as Silicon Valley, this may translate into elevation in local pollution. During a simulated fire prevention grid shut off assessed by the South Coast Air Quality Management District (SCAQMD), 523 emergency diesel generators operated continuously for 24 hours and emitted over 36 tons of NO_x in a single day [68], exceeding the typical daily NO_x output of major industrial sources in the region and imposing severe acute respiratory and cardiovascular health risks on adjacent communities.

In addition to NO_x, such grid stress events also produce acute $PM_{2.5}$ increases. Epidemiological evidence shows that a 10 µg/m3 same-day increase in $PM_{2.5}$ is associated with a 1.28% increase in heart failure hospitalizations among Medicare beneficiaries [78], a 0.71% increase in overall cardiovascular admissions in 108 US counties [79] and a 2.12% increase in hospitalization for heart failure or mortality in a global meta-analysis [80].

At the county level, regions with a high concentration of data center clusters may experience disproportionately high health burdens related to Scope 1. These adverse outcomes are driven in part by elevated emissions of nitrogen oxides (NO_x) from on-site diesel generators. Specifically, in California, the density of data centers is highest in Silicon Valley (Santa Clara County), which lies within the Bay Area Air Quality Management District (BAAQMD) [5, 6]. According to a 2023 CPUC analysis of the M.Cubed survey, BAAQMD reported 8,722 backup generators in 2021, of which nearly 90% were diesel gensets, including gensets deployed at data centers and other large facilities [7]. When aggregated across the Bay Area and South Coast Air Quality Management Districts, backup generators

emitted almost 1,000 metric tons of NOx in 2021 [81]. Notably, Santa Clara County's unique topography, a low-lying basin surrounded by coastal ranges, promotes the trapping of pollutants under weak synoptic winds, causing NO_x and VOC from backup generators to undergo rapid photochemical conversion to ozone during clear summer days [5, 82-83].

Seasonal heat waves may further amplify this problem by driving up electricity demand and the use of backup generators [84]. During July and August, the average daytime highs in Sacramento and throughout the Central Valley routinely exceed 90°F (daily maxima ≈93°F), driving up air-conditioning load and stressing the grid [85]. Under the resulting hot, stagnant conditions, ozone is more readily formed on warm, sunny days when the winds are light [86]. Regional photochemical modeling by the BAAQMD shows that a temperature-driven increase in photochemical reaction rates can increase the peak ozone by up to 8 ppb [87].

Stagnant late summer high pressure systems drive strong subsidence aloft, producing extended periods of intense solar insolation and suppressing vertical mixing [88,89]. In such stable conditions, ozone precursors accumulate and photochemical reactions accelerate. As the CEQA guidelines of the Bay Area Air Quality Management District note, "pollutants emitted into a stable air mass will travel downwind with little dispersion", allowing ozone to peak on hot and calm days [90]. Indeed, from 2012 through 2016 the neighboring San Joaquin Valley averaged 115 annual exceedances of the eight hour NAAQS ozone standard (70 ppb), underscoring how routinely summer stagnation drives unhealthy ozone spikes [91]. Furthermore, CAISO's 2022 Summer Market Performance Report indicates that backup diesel generators are regularly dispatched during afternoon peak load hours exactly when insolation and stagnation coincide, potentially further amplifying local ozone formation [92].

Similarly, ambient ozone and $PM_{2.5}$ levels are already high in Southern California cities, particularly in Los Angeles County, because heavy traffic, industrial emissions and the surrounding terrain prevent pollutants from dispersing. According to U.S. EPA three-year design values for 2020–2022, Los Angeles County's annual mean $PM_{2.5}$ concentration is 13.4 μg/m3, exceeding the 12 μg/m3 NAAQS threshold [93]. Furthermore, according to the South Coast Air Quality Management District 2022 Air Quality Management Plan Technical Support Document, based on the monitoring data for 2019-2021, the ozone design value of the South Coast Air Basin's 8 hour ozone design value was 114 ppb, nearly 63% above the 70 ppb NAAQS [94]. In 2020 alone, there were 157 days in which the 8-hour average exceeded the standard [95].

In this context, even modest emissions from data center backup generator cycling may push local pollutant concentrations above health-based thresholds, thereby exacerbating acute respiratory episodes (e.g., asthma exacerbations) and increasing hospital admissions for cardiovascular events.

To quantify the social costs associated with these localized emissions for policy analysis, researchers can employ the U.S. Environmental Protection Agency's COBRA model [65]. COBRA converts county-level emission inventories into corresponding changes in pollutant concentrations and applies concentration–response functions to estimate economic impacts such as hospital expenditures, lost workdays, and valuations of premature mortality. For example, a continuous 24 hours' operation of a data center backup generator can result in tens of thousands of dollars in combined hospitalization and emergency department costs [68,71].

5.1.2 Methodology for Estimating Scope 1 Health Costs in California

Given the limited public data on Scope 1 emissions from California data centers, we leverage Virginia's pollutant emission and electricity consumption data as a reference to get the emission rates for different pollutants. Then we could combine the emission rates with California's data center electricity consumption and derive California's annual pollutant-specific emission vector. The main tool for calculating the Scope 1 health cost is the EPA's COBRA model [65], which takes county-level emission changes as input and generates state-level health-cost estimates. In total, the whole process can be summarized into the following four steps:

Step 1: Derivation of Emission Rates from Virginia Data. We collect the total annual emissions of four pollutants: $PM_{2.5}$, SO_2, NO_x and VOCs permitted for Virginia data centers and apply a 10% scaling factor to the permitted emission levels as a reference level. Then divide by the same facilities' total electricity consumption to derive pollutant-specific emission rates (ton/MWh). Note that

the actual emissions levels could vary from 10%, depending on the frequency of demand response events, backup generator maintenance schedule, etc.

Step 2: Estimation of California's Statewide Emissions. We apply the four pollutants' emission rates to California's data centers and get the annual pollutant-specific emission for $PM_{2.5}$, SO_2, NO_x and VOCs (ton).

Step 3: Allocation to Principal Counties. As we leverage the EPA's COBRA model [65] to calculate the Scope 1 health cost, we need to take the county-level emission change for the four pollutants as input. In our research, we focus on major counties, including Los Angeles and Santa Clara, which host a large number of data centers in California according to publicly available maps [99].

Step 4: Conversion to State-Level Health Costs via COBRA. In the last step, we apply the EPA's COBRA model [65] to obtain California's Scope 1 health cost. A detailed exposition of the model's underlying principles and computational methodology for projecting Scope 1 health costs is provided in the Appendix D.

5.2 Scope 2 Health Cost

5.2.1 Background and Significance of Scope 2 Health Costs

Scope 2 public health costs refer to the health impacts and associated economic losses caused by pollutant emissions from electricity generation required to power data center operations. Unlike Scope 1 emissions that originate directly from on-site backup generators at data centers, Scope 2 emissions occur at power plants supplying electricity to the grid, yet their environmental and health impacts are equally profound and more geographically dispersed.

In the U.S. electricity system, despite the continued growth in renewable energy share, fossil fuel generation still maintains a significant position. As of 2023, natural gas generation accounts for approximately 43% of total U.S. electricity generation, while coal generation comprises about 16% [100]. These fossil fuel power plants release substantial quantities of pollutants during combustion, including NO_x, SO_2, and $PM_{2.5}$. These pollutants can affect areas far from emission sources through atmospheric transport, causing regional air quality degradation. According to U.S. EPA estimates, the power sector causes thousands of premature deaths annually due to air pollution, with related medical expenditures and productivity losses reaching billions of dollars [101].

California's rapidly growing data center electricity demand has indirect public health impacts that cannot be overlooked. Although California's grid has a relatively high proportion of clean energy, it still relies on natural gas generation during peak demand periods, and interstate electricity trading might also import some power from regions with high-emission sources.

The Scope 2 public health costs are also irregularly dispersed among geographic regions, often with economically disadvantaged areas shouldering a greater share of these health burdens [103]. Therefore, accurately quantifying data center Scope 2 health costs is crucial for developing fair energy policies and corporate social responsibility strategies that address substantial health impact disparities across communities.

5.2.2 Methodology for Estimating Scope 2 Health Costs in California

To assess public health costs indirectly caused by California data centers through electricity consumption, we apply a five-step quantification framework:

Step 1: Estimate annual electricity consumption of California data centers based on LBNL and EPRI reports [13, 41].

Step 2: Extract California's total electricity consumption from U.S. EIA state-level database [104].

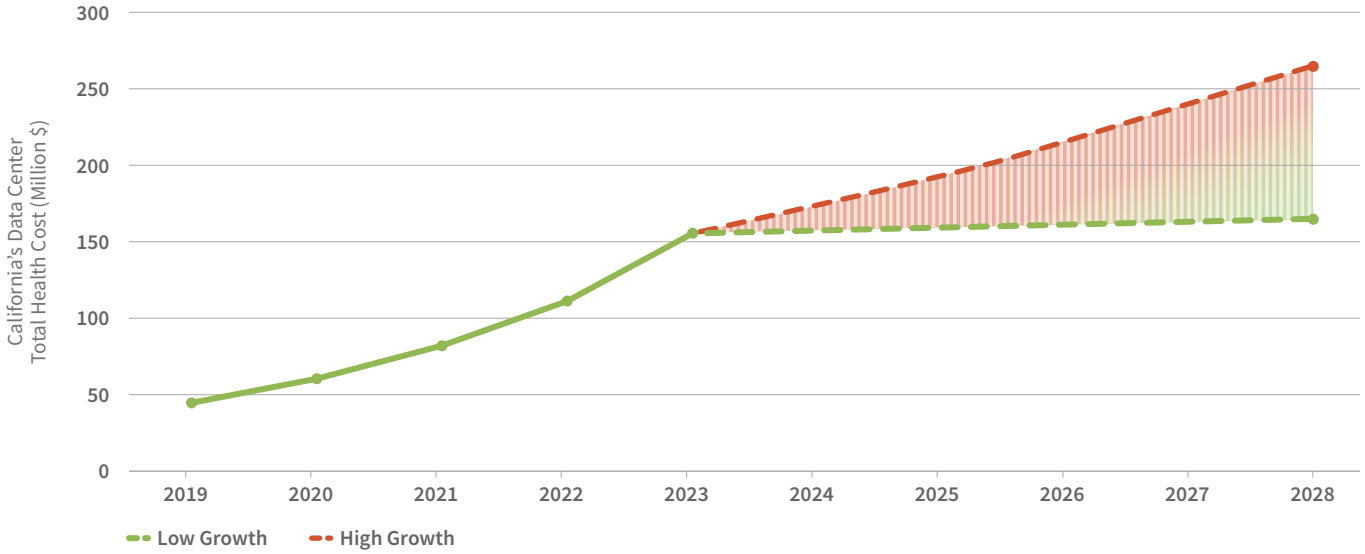
Step 3: Calculate the proportion of data center electricity consumption to total state consumption ($\boldsymbol{\alpha}_t$).

Step 4: Estimate data center-related pollutant emissions by applying this proportion to EPA's emission inventories for California, covering NO_x, SO_2, $PM_{2.5}$, and VOCs.

Step 5: Input calculated emission data into EPA's COBRA model to assess health impacts and monetized losses.

Detailed methodological specifications for projecting Scope 2 health costs for 2028 are provided in Appendix D.

Figure 5. Temporal evolution of total health costs attributable to California data centers (2019-2028)



Note: The historical period shows actual costs from 2019-2023, while the projection period (2024-2028) presents low-growth and high-growth scenarios with uncertainty bands.

5.3 Public Health Impacts' Results

We present the public health impacts of California data centers from 2019 to 2028, integrating both historical assessments and future projections under different growth scenarios. While COBRA provides both high and low health cost estimates for each emission change scenario, we use the midpoint as a single representative value. The health costs expressed in dollars represent the monetized value of adverse health outcomes attributed to data centers, including premature mortality, asthma symptoms, emergency room visits, hospitalizations, work loss days, and school absence days [65].

Table 7. California data center health costs by scope (2019-2028)

Year	Electricity (TWh)	Scope-1 Health Cost (million $)	Scope-2 Health Cost (million $)	Total Health Cost (million $)
2019	5.54	7.27	37.41	44.68
2020	6.48	10.47	49.99	60.45
2021	7.84	13.08	69.02	82.10
2022	9.29	21.38	89.84	111.21
2023	10.82	33.31	122.12	155.44
2028 (low)	16.16	59.09	108.05	167.14
2028 (high)	25.28	97.36	169.21	266.57

Figure 5 illustrates the temporal evolution of total health costs attributable to California data centers. The historical period (2019–2023) demonstrates a steep upward trajectory, with total health costs rising from $44.68 million in 2019 to $155.44 million in 2023, representing a 248% increase over five years. This substantial growth reflects the rapid expansion of data center operations and their associated environmental externalities.

For the projection period (2024–2028), we present two scenarios bounded by uncertainty bands. Under the low-growth scenario, total health costs are projected to reach $167.14 million by 2028, while the high-growth scenario estimates $266.57 million. The shaded area between these trajectories visualizes the range of potential outcomes depending on industry growth rates and policy interventions.

Notably, the projected growth rate of health costs from 2023 to 2028 (7.5% to 71.5% depending on the scenario) is substantially lower than the corresponding increase in electricity consumption (49.4% to 133.6%). This decoupling phenomenon can be attributed to California's aggressive clean energy transition and implementation of stricter environmental regulations. The emission intensity per unit of electricity generation decreases, thereby mitigating the health impacts escalation that would otherwise accompany increased power demand.

This decoupling is quantitatively supported by EPA projections for California's electricity utility sector emissions. According to EPA's COBRA [65], significant reductions in key pollutants are anticipated between 2023 and 2028. Specifically, $PM_{2.5}$ emissions from fuel combustion in electricity utilities are projected to decrease from 4,917.13 tons in 2023 to 2,745.26 tons in 2028 (a 44% reduction), while SO_2 emissions are expected to decline dramatically from 2,108.34 tons to 259.75 tons (an 88% reduction). Similarly, NO_x emissions are projected to fall from 10,041.72 tons to 5,228.89 tons (a 48% reduction), and VOC emissions from 2,367.45 tons to 1,433.04 tons (a 39% reduction). These substantial emission intensity improvements, driven by clean energy deployment, fossil fuel retirement and strict environmental protection, explain how California can accommodate growing data center electricity demand while achieving relative stabilization in associated health costs.

Table 7 provides a detailed decomposition of health costs by scope and year, revealing several critical insights. First, Scope 2 health costs consistently dominate total health impacts during the historical period (2019-2023), accounting for approximately 78–84% of the total costs. However, this dominance decreases significantly in the 2028 projections, dropping to approximately 63–65% of total costs. This shift underscores the significance of indirect emissions from electricity generation relative to direct on-site emissions, while also highlighting how California's clean energy transition and environmental policies affect the relative contribution of different emission sources.

Second, the temporal patterns differ markedly between Scope 1 and Scope 2 costs. Scope 1 health costs exhibit an accelerating growth pattern, increasing by 358% from 2019 to 2023, with particularly sharp increases in 2022 and 2023. This acceleration likely reflects increased reliance on backup generators during grid stress events and the expansion of data center facilities requiring emergency power systems.

Third, the 2028 projections reveal an interesting divergence in scope-specific trajectories. Under the low-growth scenario, Scope 2 costs actually decrease from $122.12 million in 2023 to $108.05 million in 2028, despite a 49.4% increase in electricity consumption. This counterintuitive result directly reflects California's renewable portfolio standard implementation and the retirement of fossil fuel generation capacity. Conversely, Scope 1 costs continue to increase across both scenarios, suggesting that on-site emission sources remain a persistent challenge requiring targeted mitigation strategies.

The ratio of Scope 1 to Scope 2 costs also shifts over time, rising from 0.19 in 2019 to 0.27 in 2023, and potentially reaching 0.55–0.58 by 2028. This trend indicates that as the electricity grid becomes cleaner, the relative importance of addressing direct emissions from backup generators and other on-site sources increases substantially.

These results underscore the effectiveness of California's clean energy and environmental policies in decoupling data center growth from proportional health impacts, while highlighting the need for complementary measures targeting on-site emission sources to achieve comprehensive public health protection.

6 Recommendations

Given the increasing electricity consumption, carbon emissions, water consumption, and health costs associated with data centers in California, we make the following recommendations.



Recommendation 1: Unified Reporting of Comprehensive Metrics

Despite the immediate impacts of California data centers on electricity grids, carbon emissions, water resources, and public health, comprehensive and standardized reporting for these metrics, especially the water resources and health impacts, has often been overlooked in official documents and sustainability reports published by data centers operating in California [106-108]. This reporting gap makes it difficult to pinpoint which facilities are the largest contributors to regional environmental impacts and the associated health risks. To address this shortfall and support truly responsible data center management, we recommend the standardization of reporting protocols for electricity consumption, carbon emissions, water consumption, and associated public health impacts in different regions of California. These protocols should build on existing environmental accounting frameworks but be calibrated to California's regulatory requirements and its most pressing environmental priorities.

Building on this, effective carbon governance requires targeted coordination across three interrelated domains. First, grid responsive operations, such as carbon aware scheduling and demand side management, could be adopted to align compute workloads with periods of lower grid carbon intensity, thereby minimizing marginal emissions. Second, circular infrastructure strategies, including waste heat recovery, component remanufacturing, and extended hardware lifetimes, should be implemented to curb embodied carbon and relieve systemic energy burdens. Third, value chain transparency is essential: comprehensive life cycle accounting of emissions from raw material extraction, component manufacture, logistics, assembly, operation, and end of life disposal ensures that upstream carbon impacts do not negate downstream efficiency gains. Moreover, the integration of standardized accounting frameworks such as the GHG Protocol with interoperable public private carbon emission tracking platforms will transform carbon data into a strategic asset, enabling real time insights, optimizing grid integration, informing sustainable procurement, and driving innovation fully aligned with California's climate objectives.

Furthermore, robust water stewardship requires context-based efficiency measures to reduce consumption, alleviate regional water stress, and deliver benefits to communities facing scarcity. Data center operators should prioritize the deployment of cutting-edge cooling technologies—such as advanced cooling systems, liquid immersion cooling, or other water-efficient solutions, alongside state-of-the-art water recycling and reuse systems to achieve reductions in potable water consumption. In addition, the deployment of advanced monitoring platforms and predictive analytics will enable continuous optimization of water use and minimize potential impacts on local water resources.

Effective public health governance requires proactive engagement with community health determinants and the integration of health impact assessments into every phase of data center development and operation. Health impact assessments can inform site selection and infrastructure upgrades, with buffer zones established around sensitive receptors such as schools and hospitals.

In addition, we recommend embedding adaptive performance indicators into reporting protocols to enable real-time responses across efficiency, resource use and emissions. For example, data centers should monitor their hourly PUE and WUE to identify and address operational inefficiencies. Similarly, Scope 2 carbon emissions could be updated automatically using live grid emission factors combined with renewable procurement records, providing an immediate view of carbon performance as the grid mix shifts; rolling averages of $PM_{2.5}$ and NO_x from nearby monitors would enforce stricter limits in communities that already exceed health standards. Data centers can use the data to optimize operations and reduce environmental and health impacts in real time.

Recommendation 2: Accelerating Clean Energy Integration with Equity Considerations

California data centers, including those operated by major technology companies, should accelerate the integration of clean energy into their overall energy procurement strategies, while simultaneously addressing the equitable distribution of environmental and public health impacts across all California communities. Given that electricity generation significantly impacts data centers' carbon emissions, water consumption, and localized public health outcomes, increased adoption of clean energy can directly alleviate these environmental burdens, especially for communities disproportionately affected by existing environmental challenges.

To achieve this, data center operators can prioritize long-term power purchase agreements (PPAs) with clean energy providers, invest in on-site generation, and enhance energy storage to maximize the use of intermittent resources. Crucially, these strategies should explicitly weigh the regional energy source and its broader impacts on both nearby and distant communities. Advanced forecasting should guide procurement and storage, ensuring energy sourcing minimizes burdens on vulnerable communities. California policy makers and data centers should integrate equity considerations into every stage of data center planning and operations.

Data centers should select sites that avoid exacerbating existing vulnerabilities and, whenever feasible, deliver tangible community benefits through various programs such as funding for local environmental and health initiatives. Meaningful engagement with disadvantaged communities should be prioritized throughout the lifecycle of data center projects. Robust oversight, including transparent reporting of clean energy utilization rates, community impact assessments, and equity metrics, along with community benefits, will help ensure that the transition to clean energy benefits all Californians equitably, distributing economic gains fairly and mitigating disproportionate environmental and public health burdens.

Recommendation 3: Institutionalizing Community Science and Cross-Sector Impact Research

California should institutionalize sustained, community-based monitoring and interdisciplinary policy evaluation to ensure that data center operations transparently account for their social and environmental externalities. Delivering study findings through clear, accessible reports and public workshops will equip community members with the knowledge needed to assess exposure risks and work alongside researchers and regulators to craft customized mitigation measures.

Similarly, California should empower think tanks and academic consortiums to carry out comprehensive cross-sector analyses of data center operations, measuring their effects on local employment and tax revenue, their demands on grid stability, and their consequences for community health. Integrating economic simulations with infrastructure stress testing and epidemiological forecasting will pinpoint the most effective points of intervention. To ensure real-world adoption, matching grants and streamlined regulatory approvals can support pilot projects that translate lab findings into operational practice.

Recommendation 4: Modernizing Backup Power Systems

Traditional backup systems, typically powered by diesel generators, significantly contribute to localized air pollution, potentially exacerbating public health issues in surrounding communities, especially those already facing environmental vulnerabilities. Moreover, the adoption of diesel backup generators for demand response could further worsen the air quality and increase the public health risks.

To address this, data center operators should transition from conventional diesel generators to cleaner backup solutions, including integrating battery energy storage systems (BESS), fuel cells, and other alternative fuels. Adopting these modern alternatives will significantly reduce the emissions of criteria air pollutants, substantially improving air quality and public health outcomes in nearby communities.

In addition, operators should implement intelligent energy management systems to improve the efficiency and reliability of backup power resources. These systems, capable of real-time monitoring, predictive analytics, and automatic demand response, will enable the optimized deployment of backup resources with minimal environmental impact.

California policymakers should establish clear regulatory frameworks and encourage advanced backup power technologies. Policymakers and industry stakeholders must collaborate on rigorous standards and guidelines to promote modernization of backup power infrastructure. This collaborative approach will ensure backup systems not only provide operational resilience but also align with California's broader environmental sustainability and public health objectives, delivering long-term benefits to all communities.

Recommendation 5: Strengthen California's National Leadership in Sustainable Data Center Development

While data centers have impacts on the electric grid, carbon emissions, water resources, and public health, it is notable that California's data centers generally perform better than those in many other states, due in large part to the state's high share of clean energy, strict environmental regulations, and progressive climate policies. This leadership demonstrates that it is possible to expand digital infrastructure in ways that align with aggressive climate and sustainability goals. To maintain this national leadership and help meet the growing demand for digital services, California should adopt policies that continue to streamline the development and permitting of new, energy-efficient and sustainable data centers within the state, particularly in areas with access to abundant clean power and resilient water supplies.

At the same time, it is critical to ensure that local communities are protected from potential negative impacts, such as potential competition for limited water resources, strain on local grids, or air and noise pollution from backup generators and construction. State and local governments should establish clear, transparent guidelines for environmental performance reporting, including requirements for facilities to track and publicly disclose hourly PUE and WUE, to identify and mitigate inefficiencies early.

Policymakers should also promote investments in technologies that reduce water, carbon, and energy footprints and public health impacts. By taking these steps, California can continue to demonstrate that economic growth in the digital sector can be compatible with ambitious climate action and community well-being, setting a model for other states and regions to follow.



7 Conclusion

This report has delivered a quantitative evaluation of the environmental and public health implications associated with California's data center operations spanning the period from 2019 through 2023, incorporating forward-looking projections through 2028. The findings illuminate both the scale of contemporary challenges and the imperative for immediate, evidence-based policy interventions to ensure the sustainable development of digital infrastructure. Given California's position as the one of the largest data center markets among U.S. states, the approaches adopted in California carry profound implications for national policy frameworks.

Our analysis reveals that California's data center electricity consumption experienced an approximate doubling between 2019 and 2023, escalating from 5.54 TWh to 10.82 TWh. This significant growth in energy demand has precipitated commensurate increases in environmental footprints. For example, Scope 2 carbon emissions attributable to data center operations expanded from 1.24 million to 2.38 million short tons during this period, while the total water consumption increased from 25.42 billion to 49.91 billion liters. Prospective modeling for 2028 indicates continued trajectories, with electricity consumption projected to reach 16.16–25.28 TWh and carbon emissions potentially escalating to 3.55–5.56 million short tons. Concurrently, the total water consumption is anticipated to range between 74.54 and 116.63 billion liters by 2028. As for the public health impact, the total public health cost of California's data centers was estimated at $155.44 million in 2023 and is projected to range between $167.14 million and $266.57 million by 2028.

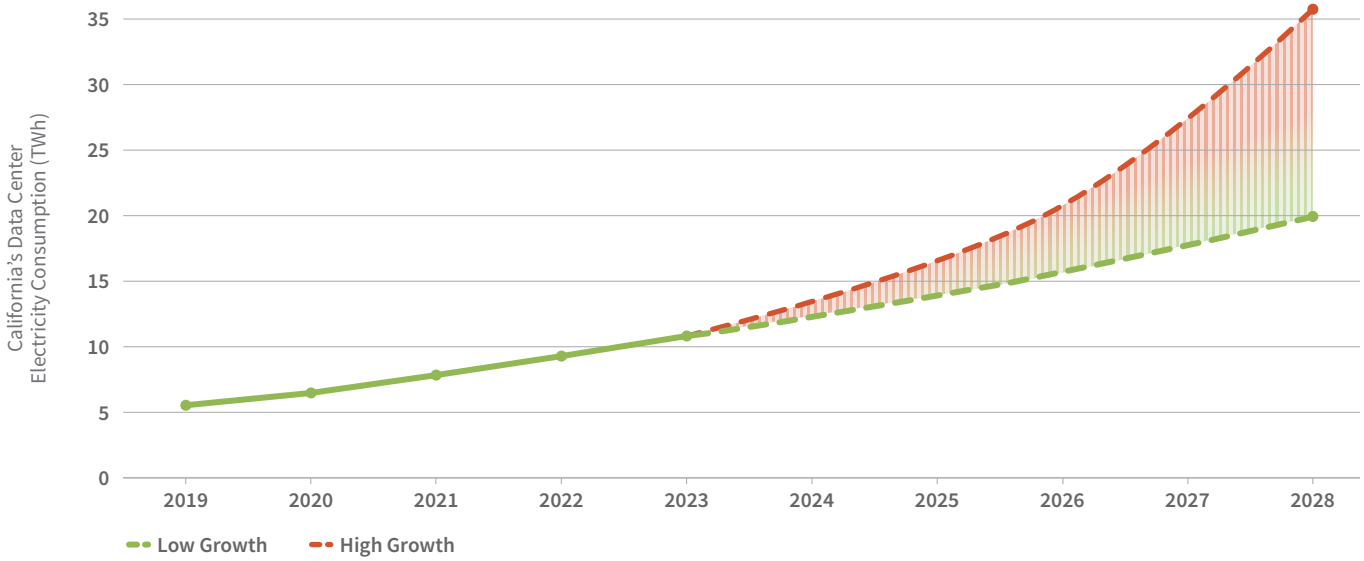
Notwithstanding these challenges, our study highlights viable pathways for impact mitigation. California's proactive clean energy policies and strict air quality standards have generated a notable "decoupling effect", whereby growth in electricity consumption does not translate into directly proportional increases in public health damages. Furthermore, the state's grid decarbonization initiatives have yielded carbon emission intensities below the national average, with projections indicating continued reductions in key pollutants from the electricity sector through 2028. This decoupling phenomenon is most evident in projections suggesting that Scope 2 health costs may stabilize or experience marginal decreases by 2028 under conservative growth scenarios, despite substantial increases in electricity demand.

Despite the encouraging progress, significant challenges persist for sustainable data centers in California. The projected growth of electricity demand, even under optimistic scenarios, will impose considerable strain on California's grid and water infrastructure, emit a growing amount of carbon emissions, and create a substantial public health impact. Thus, California's path to truly sustainable data center growth must be based on a set of holistic efforts and policies, including unified reporting of comprehensive environmental metrics and health impacts, accelerating clean energy integration with equity considerations and community engagement, modernizing backup power systems, and keeping California's national leadership in sustainable data centers.

In summary, California's dual roles as a technology leader and environmental pioneer are being tested by the unprecedented resource demands of the AI-centered digital economy. While the challenges are significant, the findings presented in this report suggest that through strategic, data-driven, and integrated policy interventions, California can continue to advance both technological innovation and sustainable, climate-resilient development. The path forward necessitates coordinated efforts among policymakers, industry stakeholders, and civil society to ensure that digital infrastructure expansion does not exact an untenable toll on environmental integrity and collective community well-being.

Appendix

Figure A1. California data center energy consumption, LBNL scenarios (2023-2028) [41]



Note: This figure was created by applying LBNL's projected national annual growth rates of 13% (low) and 27% (high) to California's baseline electricity consumption.

A Energy Consumption Projections and Analysis

This appendix presents detailed energy consumption projections and comparative analysis from the LBNL and EPRI sources that have informed our modeling approach.

A.1 Projections Based on Lawrence Berkeley National Laboratory (LBNL) Scenarios

This section utilizes the U.S. national growth rate scenarios published by the LBNL [41] to project California's data center energy consumption. LBNL's national analysis, which incorporates bottom-up modeling, projects annual growth rates of 13% to 27% for 2023-2028. Figure A1 applies these national growth scenarios to California's baseline to create a state-specific forecast.

A.2 Projections Based on Electric Power Research Institute (EPRI) Scenarios

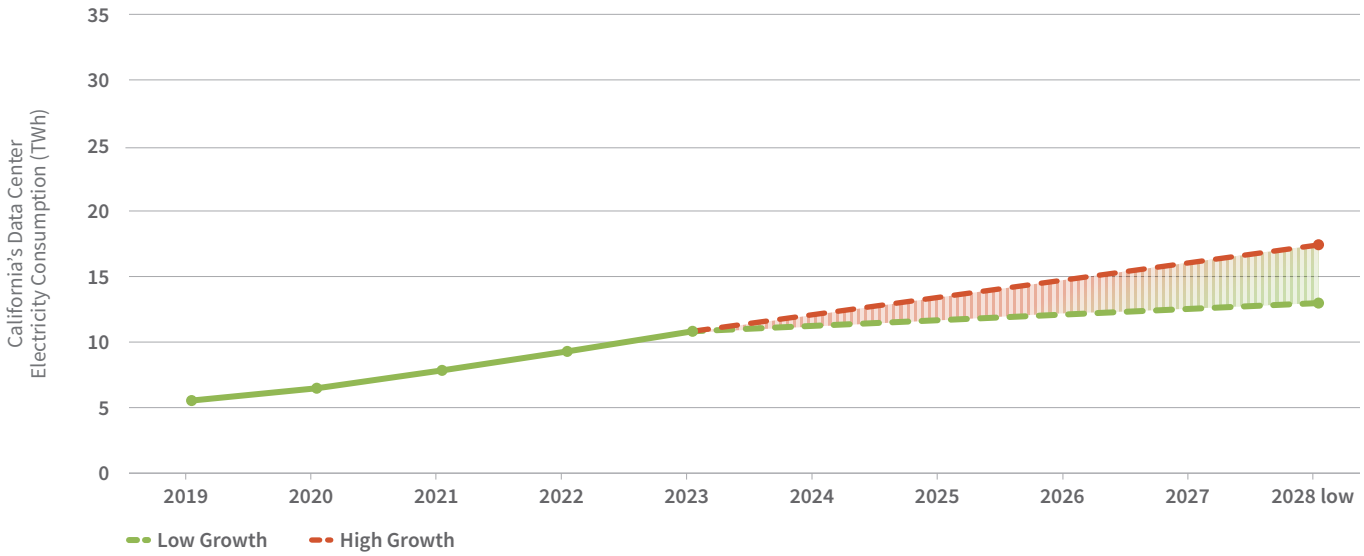
The EPRI provides a more conservative perspective on national data center growth, with projected annual growth rates of 3.7% (low growth) to 10.0% (high growth) for 2023-2030. These scenarios incorporate factors like efficiency improvements and grid integration challenges. Figure A2 illustrates a California-specific projection created by applying these national scenarios.

A.3 Integrated Projection Model

Building upon the methodologies and data from both LBNL and EPRI, we developed an integrated projection model that balances the different growth scenarios through arithmetic averaging. Figure A3 presents our synthesized projections, which form the basis for the environmental and health impact assessments presented in the main text.

The divergence between LBNL and EPRI projections reflects different assumptions about technological adoption rates, policy effectiveness, and market dynamics.

Figure A2. California data center energy consumption, EPRI scenarios (2023-2028) [13]



Note: This analysis for California (2023-2028) was created by applying EPRI's projected national annual growth rates of 3.7% (low) and 10% (high).

LBNL's higher growth estimates emphasize the rapid expansion of AI and machine learning applications, while EPRI's conservative approach accounts for grid constraints and efficiency improvements.

Our integrated approach provides:

- Lower bound: EPRI-influenced scenario (8.35% annual growth)
- Upper bound: LBNL-influenced scenario (18.5% annual growth).

Table A1. Comparison of energy projection methodologies

Parameter	LBNL	EPRI	Integrated Model
Growth Rate (Low)	13%	3.7%	8.35%
Growth Rate (High)	27%	10%	18.5%
Primary Drivers	AI/ML expansion	Demand Growth + Efficiency	Balanced Approach
Time Horizon	2023-2028	2023-2030	2023-2028
Methodology	Bottom-up	Top-down	Arithmetic Mean

B Carbon Emission Estimates

In this section, we provide a mathematical account of the methodologies used to compute each column in Table 4. First, the fundamental formula for Scope 2 carbon emissions is given by

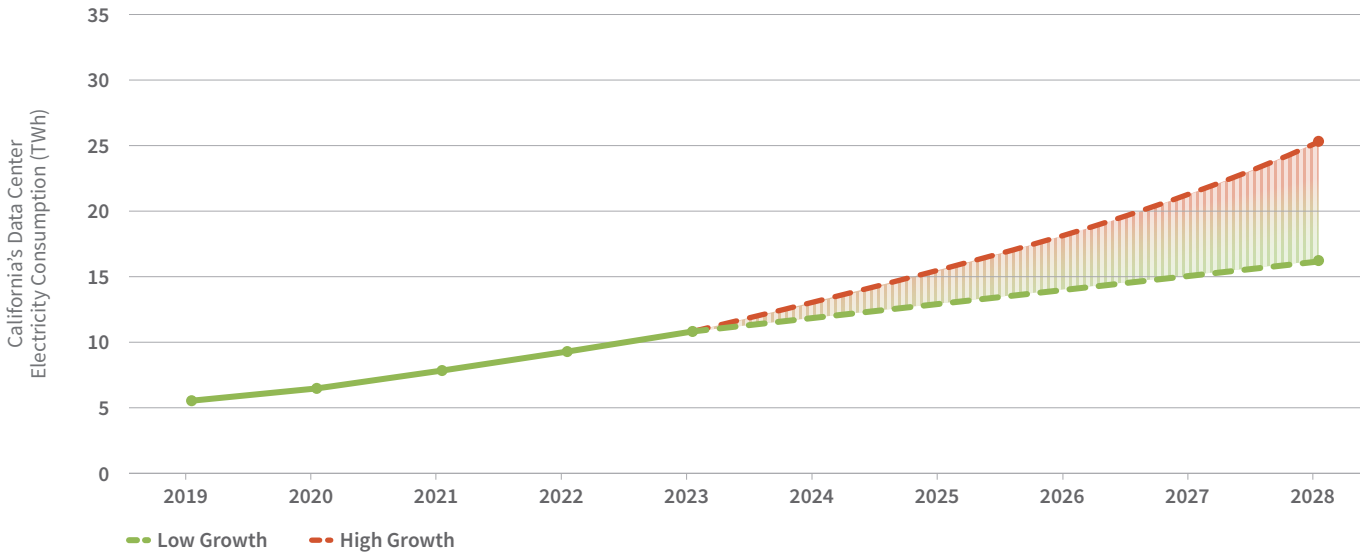
$$\text{Total Emissions (lbs)} = \text{Emission Factor (lbs/MWh)} \times \text{Electricity Consumption (MWh)}$$

In addition, we report the following metrics.

- **CA DC Electricity (TWh):** Total annual electricity consumption of California data centers, measured in terawatt-hours (TWh).
- **CA Total Electricity (TWh):** Total annual electricity consumption for the entire state of California, measured in TWh.
- **CA DC Emission (million short tons):** Carbon emissions attributable to California data centers. Computed by (CA Emission Factor (lbs/MWh)) × (CA DC Electricity (MWh)), then converted from pounds to million short tons (1 short ton = 2,000 lbs).
- **DC Emission of CA Total:** The share of data-center emissions relative to California's total electricity-related emissions, calculated as:

$$\frac{\text{CA DC Emission}}{\text{CA Total Emission}} \times 100\%.$$

Figure A3. Integrated energy consumption projection model for California data centers (2019-2028)



Note: The model combines LBNL and EPRI forecasts using arithmetic mean calculations, resulting in low-growth (8.35%) and high-growth (18.5%) scenarios. Historical data (2019-2023) is shown for validation, with projections extending to 2028.

- **CA-US Ratio:** The ratio of actual California data center emissions (using California's emission factor) to the hypothetical emissions if California data centers were operated at the U.S. average emission intensity, computed by

$$\frac{\text{CA Emission Factor} \times \text{CA DC Consumption}}{\text{US Emission Factor} \times \text{CA DC Consumption}} \times 100\%.$$

C Water Consumption Estimates

Here is a more detailed description of the water consumption calculation framework below.

Scope 1: On-site Water Usage Methodology

We quantify direct water consumption through facility-level water efficiency metrics denoted as $\rho_{s1,t}$ representing the volumetric water requirement per unit of computational energy. Environmental factors including ambient temperature and relative humidity influence this efficiency parameter. The total on-site water demand is computed by integrating server energy consumption with the corresponding temporal efficiency coefficients across the analysis period.

Scope 2: Electricity-Associated Water Usage

For indirect water consumption, we employ a regional approach based on California's electricity generation portfolio. Our calculation uses grid-specific water consumption factors $\rho_{s2,t}$ derived through generation-weighted methodology:

$$\rho_{s2,t} = \frac{\sum_k b_{k,t} \times \text{EWIF}_k}{\sum_k b_{k,t}}$$

where $b_{k,t}$ represents electricity output from generation source k at time t, and EWIFk denotes the water intensity factor for each generation technology. This approach captures both the temporal dynamics of California's energy mix and spatial variations in water requirements across different power generation facilities.

To estimate aggregate water consumption by California data centers, we apply time-averaged efficiency parameters for both direct facility operations and grid-associated water usage.

D Health Cost Estimates

D.1 Scope 1 Health Cost: Methodology (2019-2023)

There is limited public data available for Scope 1 emissions by California data centers. Thus, to estimate annual Scope 1 public health costs of California data centers, we follow a four-step procedure that takes advantage of pollutant emission and electricity consumption data from Virginia as a reference. The rationale is that Virginia has published permitted Scope 1 emissions for the largest number of data center backup generators, and thus its statewide average Scope 1 emission rate can reasonably serve as a proxy for other states.

Step 1: Derivation of Emission Rates from Virginia Data. Let $E^{\mathrm{VA}}_{p,year}$ denote the total annual emissions (in tons) of pollutant $p \in \{PM_{2.5}, SO_2, NO_x, VOC\}$ permitted for Virginia data centers, and let C^{VA}_{year} denote the corresponding total electricity consumption (in MWh) of those same facilities. We compute the emission rate for each pollutant p as

$$r_p = \frac{C^{VA}_{p,year}}{C^{VA}_{year}} \ [\mathrm{ton/MWh}],$$

Each r_p represents the average mass of pollutant p emitted per unit of data center electricity use in Virginia. We assume that these rates apply to the California data center operating profile. Note that the actual emissions are scaled down to 10% of the total permitted emission levels. This 10% factor is supported by both real-world data and recent policy developments: (1) a recent report indicates that backup generators at Virginia's data centers emitted about 7% of their permitted levels in 2023 [109], while actual emissions accounted for 3%–12% of permitted levels at several data centers in Quincy, Washington [110]; and (2) the EPA recently issued guidance allowing data center backup generators to operate for up to 50 hours per year (out of the typical 500 permitted hours) for demand response [111]. Thus, our choice of 10% serves as a reference case that reasonably reflects the potential health impacts given real-world schedules for operating backup generators and future demand response events.

Step 2: Estimation of California's Statewide Emissions. Using the emission rates math r_p from Step 1 and the previously obtained total annual electricity consumption of California data centers, C^{CA}_{year} (in MWh), we estimate the annual California emissions of each pollutant p as

$$E^{\mathrm{CA}}_{p,t} = r_p \times C^{\mathrm{CA}}_{year} \ [\mathrm{ton}],$$

where t indexes the calendar year. Here, $E^{\mathrm{CA}}_{p,t}$ aggregates the annual mass (in tons) of the pollutant p emitted by all data centers in California. By performing this calculation for p = $PM_{2.5}$, SO_2, NO_x, and VOC, we obtain California's annual pollutant-specific emission vector $\{E^{\mathrm{CA}}_{p,t}\}_p$.

Step 3: Allocation to Principal Counties. To assess localized health impacts, statewide emissions were allocated to individual counties based on the geographic distribution of data center facilities, as detailed in publicly available maps [99]. For the purposes of this assessment and to simplify the analysis, the study focuses on the major counties such as Los Angeles and Santa Clara with the highest concentration of data centers, as these areas represent the primary sources of Scope 1 emissions and their corresponding public health burdens.

Step 4: Conversion to State-Level Health Costs via COBRA. In this step, we use the EPA's COBRA model [65] to translate county-level emissions into a California-level health cost estimate. The workflow is as follows:

a. **County-level emission changes as input.** We input the county-level emission change values for each pollutant directly into COBRA.

b. **Apply the Source–Receptor (S–R) matrix for air quality response.** COBRA uses a reduced-form air quality model with a precomputed source-receptor matrix. Each element $S_{(c,r),p}$ of this matrix indicates the marginal change in the ambient concentration of pollutant p in the receptor county r (in $\mu g/m^3$ for $PM_{2.5}$ or ppb for ozone precursors) resulting from a change in the emission unit (1 ton) in the source county c. For each year t, COBRA multiplies the emission change of each county by the corresponding S–R coefficients $S_{(c,r),p}$ and sums the contributions between sources to produce concentration increases $\Delta C_{p,r,t}$ in each county r.

c. **Estimate incremental health outcomes via Concentration–Response Functions (CRFs).** For each receptor county *r* and pollutant *p*, COBRA applies epidemiologically derived CRFs of the form

$$\Delta H_{h,r,t} = \beta^{(h,p)} \Delta C_{p,r,t} \times I_r^{(h)} \times P_r,$$

where $\Delta H_{h,r,t}$ is the incremental number of cases for health endpoint *h* (e.g., respiratory hospitalizations, cardiovascular hospitalizations, asthma exacerbations, lost work-days, premature mortality) in county *r* during year *t*; $\beta^{(h,p)}$ is the CRF coefficient (cases per μg/m³ or ppb change) for endpoint *h* and pollutant *p*; $Ir^{(h)}$ is the baseline incidence rate (cases per person per year) for endpoint *h* in county *r*; and P_r is the population of county *r*. Summing $\Delta H_{h,r,t}$ across all pollutants yields annual county-level cases $\{H_{h,r,t}\}$.

d. Monetize health impacts using economic valuations.

$$\text{Cost}_{h,r,t} = v^{(h)} \times \Delta H_{h,r,t}$$

Each incremental health outcome $\Delta H_{h,r,t}$ is multiplied by a unit cost parameter $v^{(h)}$, such as the average cost of a hospitalization, the economic value of a work-day lost, and the Value of Statistical Life (VSL). Specifically, COBRA then sums these costs over all health endpoints *h* and counties *r* included in the analysis.

e. Generate California-level health-cost estimate. Finally, COBRA aggregates the county-level health cost components to produce

$$\text{Cost}_t^{\text{CA}} = \sum_{r \in \{\text{COUNTIES}\}} \sum_{h} \text{Cost}_{h,r,t}$$

D.2 Scope 1 Health Cost: Projection (2028)

To extend our Scope 1 health cost estimates to 2028, we adopt a procedure analogous to that used for historical years, incorporating projected growth in California data center electricity consumption. The key assumptions and steps are as follows:

1. Projecting California Data Center Electricity Consumption. Let C_{2023}^{CA} denote the total California data center electricity consumption in 2023 (in TWh), as used in Section 2 of our baseline methodology. Based on published forecasts from the LBNL and the EPRI reports,13,41 we define a low-growth rate rlow = 8.35% and a high-growth rate rhigh = 18.5% for the 2023–2028 interval. The details are available in Section 2.

2. Assuming Constant Emission Factors. Following our baseline approach (Step 1), we assume that pollutant-specific emission rates r_p (in tons per MWh) remain unchanged between 2023 and 2028. That is,

$$r_p^{2028} = r_p^{2023}, p \in \{\text{PM}_{2.5}, \text{SO}_2, \text{NO}_x, \text{VOC}\}.$$

Under this assumption, California's statewide 2028 emissions for pollutant p in scenario α (i.e., high or low growth rates) are given by

$$E_{p,2028,\alpha}^{\text{CA}} = r_p^{2023} \times C_{2028,\alpha}^{\text{CA}}$$

Thus, for each α, we compute

$$\{E_{p,2028,\alpha}^{\text{CA}}\}_p = \{r_p^{2023} \times C_{2028,\alpha}^{\text{CA}}\}_p$$

3. County-Level Allocation for 2028. As in Step 3, we distribute emissions according to the data center geographic distribution, focusing on the major counties with a large number of data centers for analytical simplicity.

4. Input to COBRA and 2028 Health-Cost Estimation. COBRA provides the 2028 data, including baseline emission, health valuation, and population [65]. We apply COBRA for the year of 2028 as follows:

   a. Input the county-level emission change values for each pollutant directly into COBRA.

   b. The model's Source–Receptor (S–R) matrix translates these emission changes into 2028 concentration increments ΔCp,r,2028 for each recipient county r.

   c. COBRA then applies its concentration–response functions (CRFs) using 2028 county demographics and baseline incidence rates, thereby estimating incremental cases of respiratory and cardiovascular hospitalizations, asthma exacerbations, lost work-days, and premature mortality for 2028.

   d. Finally, COBRA multiplies each incremental health outcome by its unit economic cost and aggregates across both counties to yield California's 2028 Scope 1 health cost estimate, $\text{Cost}_{2028,\alpha}^{\text{CA}}$.

By carrying out these four sub-steps for both the low-growth and high-growth scenarios (α = low, high), we obtain a range for 2028 Scope 1 health-cost values, represented by

$$\text{Cost}^{\text{CA}}_{2028,\text{low}} \quad \text{and} \quad \text{Cost}^{\text{CA}}_{2028,\text{high}}$$

These projected values can then be compared with historical estimates (2019-2023) to assess the trajectory of health costs directly related to data center backup generators in California.

D.3 Scope 2 Health Cost: Methodology (2019-2023)

Here is a more detailed description of the methodology for calculating scope 2 health costs from 2019 to 2023 below.

To assess the public health costs indirectly caused by California data centers through electricity consumption, we apply a multi-step quantification framework integrating electricity consumption data, emission factors, and health impact models.

Step 1: Calculate Annual Electricity Consumption of California Data Centers

We estimate the electricity consumption of California data centers based on the LBNL and EPRI reports [13, 41]. The annual electricity consumption of California data centers from 2019-2023 is denoted as $C^{CA}_{DC,year}$. The details are available in Section 2.

Step 2: Obtain California Total Electricity Consumption Data

We extract California's total electricity consumption from 2019-2023 (denoted as $C^{CA}_{total,year}$) from the U.S. EIA state-level electricity profile database [104]. We adopt end-use electricity consumption rather than generation to more accurately reflect actual electricity demand and associated emission responsibilities.

Step 3: Calculate Data Center Electricity Consumption Proportion

Based on data obtained from the previous two steps, we calculate the proportion of California data center electricity consumption to total C^{CA} state electricity consumption for each year: $\alpha_t = \frac{C^{CA}_{DC,year}}{C^{US}_{total,year}}$. This proportion reflects the relative share of data centers in California's electricity demand and provides the basis for subsequent emission allocation.

Step 4: Estimate Data Center-Related Pollutant Emissions

The EPA regularly publishes power sector pollutant emission inventories by state, including annual emissions of NO_x, SO_2, $PM_{2.5}$, and VOCs. These inventories provide emissions data for each state based on electricity generation within that state. To estimate emissions attributable to California data centers, we use the following approach:

1. We obtain EPA's emission inventories for California.
2. We multiply California's emissions by the proportion of data center electricity consumption to California's total electricity consumption. This choice is the same as "location-based" carbon accounting and excludes market-based mechanisms such as purchasing bundled renewable power. Nonetheless, location-based emissions are considered "essential" and allows the accounting of physical emissions associated with electricity consumption [50].

Therefore, the emissions of each pollutant caused by California data centers are:

$$E^{t}_{pollutant,DC,CA} = E^{t}_{pollutant,CA} \times \alpha_t,$$

Where $E^{t}_{pollutant,CA}$ represents EPA's reported emissions for California, and α_t is the ratio of data center electricity consumption to total California electricity consumption in year *t*. Our calculation covers four major pollutants–NO_x, SO_2, $PM_{2.5}$, and VOCs–yielding emission inventories attributable to California data centers for each year from 2019-2023.

Step 5: Apply COBRA Model to Assess Health Impacts

Finally, we input the calculated pollutant emission data into the EPA's COBRA model and estimate health outcomes and monetized losses.

D.4. Scope 2 Health Cost: Projection (2028)

To assess potential future public health impacts from California data centers, we perform a projection for 2028 that maintains methodological consistency while incorporating dynamic forecasts of future data center electricity demand in California.

California Data Center Electricity Demand Projection

The electricity projection specific calculation methods have already been introduced in Section 2. We restate these here briefly. Using 2023 California data center electricity consumption as the baseline, we project 2028 demand based on growth scenarios from LBNL (13-27% annual growth) and EPRI (3.7-10% annual growth). To balance these projections, we adopt the arithmetic mean, yielding low-growth (8.35%) and high-growth (18.5%) scenarios.

The 2028 California data center electricity demand projection is $C^{CA}_{DC,2028} = C^{CA}_{DC,2023} \times (1+r)^5$ where r takes values of 8.35% and 18.5%, corresponding to the respective growth scenarios.

California Total Electricity Demand Projection

For projecting 2028 California total electricity consumption, we apply the Reference case from the Annual Energy Outlook 2025 published by the U.S. Energy Information Administration [105]. The Reference case represents business-as-usual trends under laws and regulations current as of December 2024, assuming a 1.8% annual GDP growth rate through 2050. This baseline scenario provides detailed projections of 2028 electricity demand across U.S. sectors based on macroeconomic forecasts, population growth, electrification trends, and energy efficiency policies.

Since the 2023 state electricity consumption proportions are also obtained from U.S. EIA data and the U.S. EIA 2025 outlook does not provide state-level electricity consumption ratios, we use the 2023 proportions for estimation. Considering the relative stability of state-level electricity demand structures, we assume that the relative proportions of electricity consumption across states in 2028 remain consistent with 2023. Therefore:

$$C^{CA}_{total,2028} = C^{US}_{total,2028} \times \frac{C^{CA}_{total,2023}}{C^{US}_{total,2023}}$$

While this approach simplifies dynamic changes in state-level differences, it is reasonable for medium- term projections, particularly considering California's relatively stable position in the U.S. economy.

Uncertainty Considerations in Health Impact Projections

By utilizing COBRA's pre-configured 2028 scenario, our analysis maintains consistency with established EPA modeling tools while avoiding the methodological complexity and potential inconsistencies associated with independently modifying multiple demographic and economic variables. This approach ensures that our health impact projections capture not only the direct effects of pollutant emission changes attributable to data center growth, but also incorporate the model's built-in adjustments for anticipated changes in population characteristics and economic valuation parameters that influence health outcome monetization.

It should be acknowledged that this methodology inherently incorporates the uncertainties and assumptions embedded within COBRA's 2028 baseline scenario, including projections of population growth patterns, health baseline conditions, and economic valuation metrics. The resulting health impact estimates therefore represent point projections based on COBRA's integrated modeling parameters rather than comprehensive uncertainty ranges spanning alternative demographic and economic assumptions. While this approach provides reproducible results, we should interpret the findings within the context of the underlying model assumptions and parameter uncertainties.

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