COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: June 21, 2023

TO: Planning Commission

FROM: Planning Staff

SUBJECT: SUPPLEMENTAL STAFF REPORT: Consideration of the adoption of an Initial Study/Mitigated Negative Declaration, pursuant to the California Environmental Quality Act, the approval of a Design Review Permit, pursuant to Section 6565.3 of the Zoning Regulations, and Grading Permit, pursuant to Section 9283 of the County Ordinance Code, to allow the construction of a new three-story, 4,249 sq. ft. single-family residence, on a 18,122 sq. ft. legal parcel in the unincorporated Palomar Park area of San Mateo County. The property would be accessed from an improved existing gravel driveway located on 636 Palomar Drive and APN 051-022-470. The project involves 880 cubic yards (c.y.) of cut and 90 c.y. of fill and the removal of 2 significant trees.

County File Number: PLN 2020-00251 (De Gans/Thalapaneni Jackson)

PROPOSAL

The applicant proposes construction of a new three-story, 4,249 sq. ft. single-family residence, 315 sq. ft. covered terrace, a 155 sq. ft. deck, and a 554 sq. ft. attached garage, on a 18,122 sq. ft. legal parcel (Lot Line Adjustment recorded on April 26, 1983). The property would be accessed from an improved existing gravel driveway and access easement located on 636 Palomar Drive and an undeveloped parcel (APN 051-022-470). The project involves 880 cubic yards (c.y.) of cut and 90 c.y. of fill and the removal of two (2) significant trees. The property is located within an existing residential neighborhood and adjoins developed parcels on the east, south, and southwest sides. The property slopes upward from Los Cerros Road with an average slope of approximately 34 percent.

RECOMMENDATION

That the Planning Commission adopt the Initial Study/Mitigated Negative Declaration, and approve the Design Review Permit and Grading Permit, by making findings and adopting the conditions of approval in Attachment A.

BACKGROUND

Planning Commission Review of the Project at its March 8, 2023 Meeting

The Planning Commission reviewed the project at its meeting of March 8, 2023. Planning staff provided a staff report with attachments to the Planning Commission (Attachment B) and sent a public notice to the property owners within 300 feet of the subject property and interested members of the public. At the hearing, members of the public expressed concerns regarding potential project impacts, mainly concerns regarding site stability due to a history of land sliding in the area which could be exacerbated by project construction, site drainage, and septic system construction, as well as proposed tree removal.

Staff responded at the hearing that site conditions related to geology are described in Section 7 of the Initial Study/Mitigated Negative Declaration (IS/MND), and are summarized in the March 8, 2023 Planning Commission staff report (Attachment B). The site has experienced land sliding in the past, with slope repair completed in 2020. The applicant has submitted reports prepared by the Project Geologist and Project Geotechnical Engineers, which note past landslides and landslide repair at the property. As stated in their 2020 Geotechnical Report Update, it is the opinion of Atlas Technical Consultants, LLC (Project Geologist and Geotechnical Engineer), that the residential development as planned is feasible from a geotechnical standpoint. Compliance with the recommendations of the Project Geologist and Geotechnical Engineer is a standard building requirement and required by Mitigation Measure 9 of the IS/MND. The project, including the proposed residence and septic system, has been thoroughly reviewed by the County's Geotechnical Consultant, Cotton Shires and Associates, Inc. (CSA). CSA reviewed the project, including the house and septic system, and associated studies on behalf of the County and has provided preliminary approval. All mitigation measures of the IS/MND have been added as conditions of approval in Attachment A.

At the hearing, Mark Haesloop (on behalf of Denise Enea Charlebois at 738 Loma Court), and Barry Hecht from Balance Hydrologics presented a letter, dated March 7, 2023 (referred to in this report as Balance Hydrologics Letter), including analysis pertaining to site hydrology, past land sliding in the area, and concerns regarding potential land instability resulting from project grading.

Based on the foregoing, members of the Planning Commission expressed concerns regarding potential project impacts related to site stability. Additionally, to allow time for the applicant's team and County staff to review the Balance Hydrologics Letter, the Planning Commission continued its review of the project to a date uncertain.

SUPPLEMENTAL DISCUSSION

In addition to the analysis contained in the IS/MND and the March 8, 2023 Planning Commission staff report, staff has provided additional analysis based on additional letters and reports submitted after the Mach 8, 2023 meeting.

County Review of New Information Provided by Denise Enea Charlebois

Planning staff forwarded the Balance Hydrologics Letter, as well as additional documentation from the Project Geologist and Civil Engineer to CSA for their review (see letters under Attachment C). In a letter dated April 20, 2023, CSA states that they have reviewed the recently submitted letter reports and concluded that, "based on the data and conclusions presented in the reports, combined with our knowledge of the site geology, [CSA] finds that there is no new information that would compel us to modify our opinion that the Project Geologist and Geotechnical Engineer have: 1) investigated the site in accordance with the standards of practice in the County, 2) identified the significant geologic and geotechnical hazards at the site; 3) recommended suitable mitigation measures to address those hazards; and 4) adequately addressed CSA's previously provided comments and concerns". In conclusion, the letter states that "CSA has no objection to the County granting approval for the subject planning permit."

Additional Letters and Correspondence from Denise Enea Charlebois

Staff has received the following additional correspondence from Denise Enea Charlebois (included in Attachment D):

- Focused Site Drainage Assessment, prepared by Geotechnical Construction & Design, Inc. (GCD Inc.), 738 Loma Court, Redwood City, CA, dated April 13, 2023

- Letter from Black Cat Construction, dated March 5, 2020, re: dewatering the property at 738 Loma Court [Provided previously by the Applicant; included for review by the Planning Commission]

- Tree Recommendations, Arborist Report for Denise Enea, prepared by Richard Smith ISA Certified Arborist No. WE-8745A, based on an inspection on October 21, 2022 [Provided previously by the Applicant; included for review by the Planning Commission]

Staff has reviewed the above listed documents. Regarding the drainage and dewatering letters, these reports describe conditions at 738 Loma Court and the vacant property to the east (also owned by Denise Enea Charlebois) and do not pertain to the subject site.

The 2022 arborist report expresses concern that the removal of trees at the subject site would further decrease the stability of the slope and hillside of the subject property. The applicant has submitted a revised design where only 2 significant trees, which are in the building or septic field footprint, are now proposed for removal, where the removal of seven (7) significant trees was initially proposed. The applicant also proposes to remove a 5.14-inch California bay tree (not a significant tree) that is a carrier of Sudden Oak Death. Mitigation Measure 1 of the IS/MND requires the applicant to replace the three (3) indigenous trees with a minimum of three (3), 24-inch box Oak trees. Regarding slope stability, as previously discussed, CSA reviewed the project and associated geologic and geotechnical studies on behalf of the County and has found them to be sufficient.

Additionally, in a letter dated April 5, 2023, Denise Enea Charlebois notified the Property Owners of 634 Palomar Drive, regarding emergency measures taken under a building permit at 738 Loma Court, including installation of subdrain lines, in response to 2 potential new landslides. No information from a geotechnical or engineering professional was submitted as part of the April 5, 2023 letter or the building permit records (BLD 2023-00624) for the emergency work. The work was undertaken under a plumbing permit; no technical plans or analysis was provided to the County and no review of the work was performed by the County. The Project Geologist and CSA have reviewed and responded to this letter (see notice letter, response, and review letters, as well as permit records, under Attachment E). Based on staff's review of these documents, staff has concluded that there is no formal documentation or evidence of any potential new landslides.

Based on staff's review of the additional information provided and discussed above, staff concludes that the analysis, findings, and conditions, of the March 8, 2023 staff report and IS/MND remain accurate and sufficient for the Planning Commission to approve the project. Therefore, no substantive changes to the findings or conditions of Attachment A were necessary, only updates and minor corrections, as shown in ~~strikethough~~ (deletions) and <u>underline</u> (additions), in Attachment A

ATTACHMENTS

A. Recommended Conditions of Approval

B. Staff Report to Planning Commission, dated March 8, 2023

C. Balance Hydrologics Letter, Review, Responses, and Rebuttals:

1. Letter from Balance Hydrologics, dated March 7, 2023
2. Letter from Cotton Shires and Associates, dated April 20, 2023
3. Letter from Project Geologist, Atlas Technical Consultants, LLC, March 31, 2023
4. Response Letter from Project Civil Engineer, Lea & Braze, April 4, 2023

D. Correspondence and letters submitted by Denise Enea Charlebois for 738 Loma Court:

1. Focused Site Drainage Assessment, prepared by Geotechnical Construction & Design, Inc. (GCD Inc.), 738 Loma Court, Redwood City, CA, dated April 13, 2023.
2. Letter from Black Cat Construction dated March 5, 2020, re: dewatering the property at 738 Loma Court.
3. Tree Recommendations, Arborist Report for Denise Enea, prepared by Richard Smith ISA Certified Arborist #WE-8745A, based on an inspection on October 21, 2022.

E. Letter from Denise Enea Charlebois re: Potential New Landslide(s):

1. Letter to Property Owners of 634 Palomar Drive from Denise Charlebois, dated April 5, 2023, regarding notice of emergency measures taken under a building permit at 738 Loma Court, including installation of subdrain lines, in response to 2 potential new landslides.
2. BLD 2023-00624 permit records for the emergency work at 738 Loma Court.
3. Rebuttal Letter from Project Geologist, Atlas Technical Consultants, LLC, April 18, 2023.
4. CSA Email dated April 20, 2023.

CML:mda – CMLHH0181_WMU.DOCX

Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Project File Number: PLN 2020-00251 Hearing Date: ~~March 8~~June 21, 2023

Prepared By: Camille Leung, Project Planner For Adoption By: Planning Commission

RECOMMENDED FINDINGS

Regarding the Initial Study/Mitigated Negative Declaration, Find:

1. That the Planning Commission does hereby find that the Initial Study/Mitigated Negative Declaration reflects the independent judgment of San Mateo County.

2. That the Initial Study/Mitigated Negative Declaration is complete, correct, and adequate and prepared in accordance with the California Environmental Quality Act (CEQA) and applicable State and County Guidelines.

3. That on the basis of the Initial Study/Mitigated Negative Declaration, comments received hereto, testimony presented and considered at the public hearing, and based on analysis contained in the staff report prepared for the Planning Commission, there is no substantial evidence that the project will have a significant effect on the environment.

4. That the Mitigation Measures (numbered 1 through 22) in the Initial Study/Mitigated Negative Declaration and agreed to by the owner and placed as conditions on the project address the Mitigation Monitoring and Reporting Plan requirements of California Public Resources Code Section 21081.6.1. The Mitigation Measures have been included as conditions of approval in this attachment. This attachment shall serve as the Mitigation Monitoring and Reporting Plan. Edits made to mitigation measures are used to strengthen and clarify mitigation measures and do not reduce the level of required mitigation.

Regarding the Design Review, Find:

5. After consideration of project plans and public testimony, the project, as proposed and conditioned on October 26, 2022, is in compliance with the Design Review Standards based on the site planning and colors and materials which provide compatibility with surrounding residences.

    a. Section 6565.16 G. Materials and Colors - Make varying architectural styles compatible by using similar materials and colors which blend with the natural setting and the immediate area. Avoid the use of building materials

and colors which are highly reflective and contrasting by requiring them to blend and harmonize with the natural woodland environment and vegetation of the area. The proposed colors and materials comply with this standard. Reduce the amount of glass windows on eastern and northern facades (dining and living room), by eliminating the middle window and replacing it with a wall segment.

b. Section 6565.16 F. Roofs - Design buildings using primarily pitched roofs. Design buildings with roofs that reflect the predominant architectural styles of the immediate area. Replace low-slope hip roof design with low-slope shed roof. Apply roof changes to all roof elements, including 3rd level roof, and 2nd level roof, all sides as appropriate, for consistent applications around the home. Include overhangs on the uphill side, back side, and upper deck areas with overhangs not to exceed 4 feet.

c. Section 6565.16 J. Lighting – All overhangs to have soffits with a minimal number of lights.

d. Section 6565.16 A. Site Planning – Minimize alteration of the natural topography; respect the privacy of neighboring houses and outdoor living areas; and minimize tree removal. Site planning is compliant with this standard and the elevation of the building has been kept low to protect views. The project has been modified to save as many existing trees as possible.

Regarding the Grading Permit, Find:

6. That the granting of the permit will not have a significant adverse effect on the environment. The project, as proposed and conditioned, has been reviewed and preliminarily approved by the Planning and Building Department's Geotechnical Section and the Department of Public Works, with conditions incorporated into Attachment A of the staff report. As analyzed in the staff report, with imposition of the conditions of approval, the project would not have a significant adverse effect on the environment.

7. That this project, as conditioned, conforms to the criteria of the San Mateo County Grading Regulations and is consistent with the General Plan. The project, as it will be conditioned, conforms to the criteria for review contained in the Grading Regulations, including an erosion and sediment control plan and dust control measures. The project conforms to the applicable components of the County's General Plan.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. The project shall be constructed in compliance with the plans approved by the Planning Commission on ~~March 8~~June 21, 2023, and in compliance with the plans reviewed by the Bayside Design Review Committee (BDRC) on October 26, 2022.

Any changes or revisions to the approved plans shall be submitted for review by the Community Development Director to determine if they are in substantial compliance with the approved plans, prior to being incorporated into the building plans. Adjustments to the design of the project may be approved by the Design Review Officer if they are consistent with the intent of and are in substantial conformance with this approval. Adjustments to the design during the building permit stage may result in the requirement for additional plan resubmittal or assessment of revision fees. Alternatively, the Design Review Officer may refer consideration of the adjustments, if they are deemed to be major, to a new BDRC public hearing which requires payment of an additional fee of $1,500.

2. The design review and grading permit shall be valid for five (5) years from the date of final approval, in which time a building permit shall be issued, and a completed inspection (to the satisfaction of the building inspector) shall have occurred within 180 days of its issuance. The design review approval may be extended by one time for a one (1) year increment with submittal of an application for permit extension and payment of applicable extension fees 60 days prior to the expiration date.

3. The applicant shall indicate the following on plans submitted for a building permit, as stipulated by the Bayside Design Review Committee:

    a. Reduce the amount glass windows on eastern and northern facades (dining and living room), by eliminating the middle window and replacing it with a wall segment.

    b. Replace low-slope hip roof design with low-slope shed roof. Apply roof changes to all roof elements, including 3rd level roof, and 2nd level roof, all sides as appropriate, for consistent applications around the home. Include overhangs on the uphill side, back side, and upper deck areas with overhangs not to exceed 4 feet.

    c. All overhangs to have soffits with a minimal number of lights.

4. At the time of building permit application, the applicant shall submit a tree protection plan for any work within tree driplines or adjacent to off-site trees, including the following:

    a. Identify, establish, and maintain tree protection zones throughout the entire duration of the project.
    b. Isolate tree protection zones using 5-foot tall, orange plastic fencing supported by poles pounded into the ground, located at the driplines as described in the arborist's report.

    c. Maintain tree protection zones free of equipment and materials storage; contractors shall not clean any tools, forms, or equipment within these areas.

d. If any large roots or large masses of roots need to be cut, the roots shall be inspected by a certified arborist or registered forester prior to cutting as required in the arborist's report. Any root cutting shall be undertaken by an arborist or forester and documented. Roots to be cut shall be severed cleanly with a saw or toppers. A tree protection verification letter from the certified arborist shall be submitted to the Planning Department within five (5) business days from site inspection following root cutting.

e. Prior to Issuance of a building permit, the Planning and Building Department shall complete a pre-construction site inspection, as necessary, to verify that all required tree protection and erosion control measures are in place.

5. The approved exterior colors and materials shall be verified prior to final approval of the building permit. The applicant shall provide photographs to the Design Review Officer to verify adherence to this condition prior to a final building permit approval by the Current Planning Section.

6. Prior to the Current Planning Section approval of the building permit application, the applicant shall also have the licensed land surveyor or engineer indicate on the construction plans: (1) the natural grade elevations at the significant corners (at least four) of the footprint of the proposed structure on the submitted site plan, and (2) the elevations of proposed finished grades. In addition, (1) the natural grade elevations at the significant corners of the proposed structure, (2) the finished floor elevations, (3) the topmost elevation of the roof, and (4) the garage slab elevation must be shown on the plan, elevations, and cross-section (if one is provided).

7. Once the building is under construction, prior to the below floor framing inspection or the pouring of the concrete slab (as the case may be) for the lowest floor(s), the applicant shall provide to the Building Inspection Section a letter from the licensed land surveyor or engineer certifying that the lowest floor height, as constructed, is equal to the elevation specified for that floor in the approved plans. Similarly, certifications on the garage slab and the topmost elevation of the roof are required.

8. If the actual floor height, garage slab, or roof height, as constructed, is different than the elevation specified in the plans, then the applicant shall cease all construction and no additional inspections shall be approved until a revised set of plans is submitted to and subsequently approved by both the Building Official and the Community Development Director.

9. The applicant shall adhere to all requirements of the Building Inspection Section, the Department of Public Works, and San Mateo County Fire.

10. No site disturbance shall occur, including any grading or tree/vegetation removal, until a building permit has been issued. Once a building permit has been issued for the residence, the applicant may remove only Trees 13, 14, and 15. All other trees must be protected during grading and construction in accordance with the

Arborist Report. Compliance with Tree Protection Plan of the Arborist Report shall be demonstrated on plans submitted for the building permit application.

11. To reduce the impact of construction activities on neighboring properties, comply with the following:

    a. All debris shall be contained on-site; a dumpster or trash bin shall be provided on-site during construction to prevent debris from blowing onto adjacent properties. The applicant shall monitor the site to ensure that trash is picked up and appropriately disposed of daily.

    b. The applicant shall remove all construction equipment from the site upon completion of the use and/or need of each piece of equipment which shall include but not be limited to tractors, back hoes, cement mixers, etc.

    c. The applicant shall ensure that no construction-related vehicles impede through traffic along the right-of-way on Palomar Drive. All construction vehicles shall be parked on-site outside the public right-of-way or in locations which do not impede safe access on Palomar Drive. There shall be no storage of construction vehicles in the public right-of-way.

12. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m., weekdays, and 9:00 a.m. to 5:00 p.m., Saturdays. Said activities are prohibited on Sundays, Thanksgiving, and Christmas (San Mateo County Ordinance Code Section 4.88.360).

13. At the building permit application stage, the project shall demonstrate compliance with the Water Efficient Landscape Ordinance (WELO), including requirements for final inspection.

14. Add notes to plans submitted for a building permit with the following minimum dust control measures:

    a. Water all construction and grading areas at least twice daily.

    b. Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least 2 feet of freeboard.

    c. Apply water two times daily or apply (non-toxic) soil on all unpaved access roads, parking areas, and staging areas at the project site.

    d. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

    e. Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).

Mitigation Measures of the Initial Study/Mitigated Negative Declaration: Edits made to mitigation measures, as shown in ~~strikethough~~ (deletions) and underline (additions), are used to strengthen and clarify mitigation measures and do not reduce the level of required mitigation.

15. **Mitigation Measure 1**: The applicant shall replace the ~~2 significant exotic trees and 5~~2 significant indigenous trees proposed for removal with a total of ~~5 replacement trees, to include minimum of~~ three (3), 24-inch box Oak trees, to be planted in the right-side setback ~~with the remaining trees to be a minimum of 15 gallon in size~~. Prior to the issuance of the building permit for the residence, the Planting Plan shall be reviewed and subject to the approval of the Project Arborist and project planner.

16. **Mitigation Measure 2**: Prior to any land disturbance and throughout the grading operation, the applicant shall implement the tree protection measures consistent with the County's Significant Tree Ordinance in addition to the construction procedures and tree protection measures provided by the Project Arborist.

17. **Mitigation Measure 3**: Upon the start of excavation activities and through to the completion of the project, the applicant shall be responsible for ensuring that the following dust control guidelines are implemented:

    a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

    b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

    c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

    d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

    e. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

    f. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

    g. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

h. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

i. Construction-related activities shall not involve simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously).

18. **Mitigation Measure 4**: Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic monofilament netting (erosion control matting) or similar material shall not be used. The applicant shall demonstrate compliance with this requirement in plans submitted at the time of building permit application.

19. **Mitigation Measure 5**: A pre-construction, migratory bird nesting survey shall be conducted prior to any proposed construction-related activities during the nesting bird season (February 1 to August 31). The survey shall be performed both in and within 250 feet of the proposed development area and the results reported to the County. If, for any reason, construction activities do not commence within 10 days of completion of the survey, the survey shall be repeated, and results reported to the County. If active nests are discovered, no construction-related activities, including grading and tree removal, are allowed until birds have fledged from nests, as confirmed by a biologist.

20. **Mitigation Measure 6**: Although proposed project area itself has low possibility of containing unrecorded archaeological site(s), it is possible that subsurface deposits may yet exist or that evidence of such resources has been obscured by more recent natural or cultural factors such as downslope aggradation and alluviation and the presence of non-native trees and vegetation. Archaeological and historical resources and human remains are protected from unauthorized disturbance by State law, and supervisory and construction personnel therefore must notify the County and proper authorities if any possible archaeological or historic resources or human remains are encountered during construction activities and halt construction to allow qualified Archaeologists to identify, record, and evaluate such resources and recommend an appropriate course of action.

21. **Mitigation Measure 7**: In the event that cultural, paleontological, or archeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery and the project sponsor shall immediately notify the Community Development Director of the discovery. The applicant shall be required to retain the services of a qualified archeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The cost of the qualified archeologist and any recording, protecting, or curating shall be borne solely by the project sponsor. The archeologist shall be required to submit to the Community Development Director for review and approval a report of the findings and methods of curation or protection of the resources. No further grading or site work within the area of discovery shall be allowed until the preceding has

occurred. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e).

22. **Mitigation Measure 8**: The applicants and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains, whether historic or prehistoric, during grading and construction. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately, and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

23. **Mitigation Measure 9**: Prior to the issuance of a building permit for site development, the applicant shall demonstrate compliance with the recommendations of the Project Geologist and Geotechnical Engineer, including but not limited to those pertaining to: 1) mitigation of undocumented fill in the proposed house development area, 2) treatment of fill along the proposed/improved driveway in accordance with the recommendations for grading and/or retaining wall construction presented in Appendix A of the 2020 Geotechnical Report Update and 3) supplemental recommendations to accommodate design and construction of the proposed swimming pool (Source: 2020 Atlas Geosphere Consultants, Inc., Geotechnical Report Update).
24. **Mitigation Measure 10**: Prior to the issuance of a building permit for site development, the applicant shall demonstrate compliance with the recommendations of the County's Geologist and Geotechnical Engineer, including but not limited to those pertaining to: 1) Close coordination with the Project Geotechnical Consultant in design of proposed foundations, retaining walls, drainage improvements, and landscape irrigation which may benefit project performance; 2) Submittal of an updated geotechnical report with supplemental recommendations, design criteria, and supporting data, as appropriate; and 3) Project design and final plans should incorporate geotechnical recommendations and design criteria to mitigate site constraints as identified by the Project Geotechnical Consultant (Source: Craig Stewart, CSA, email to County, dated August 28, 2020).

25. **Mitigation Measure 11**: Prior to issuance of the grading permit hard card, the applicant shall demonstrate that all cut spoils will be hauled off-site to a County-approved location.

26. **Mitigation Measure 12**: Prior to the issuance of the building permit for the residence, the applicant shall revise the Erosion Control Plan to include the additional measure as follows, subject to the review and approval of the Community Development Director:

    Construction Entrance: The Project Civil Engineer shall propose a method for stabilizing the area of the existing driveway (access easement) that will be re-graded on APN 051-022-250, while still allowing access over the driveway by the

neighbors. The applicant shall move the temporary parking area, storage container, construction office, and sanitation unit to an area which does not block the construction entrance.

27. **Mitigation Measure 13**: The applicant shall adhere to the San Mateo County-wide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including, but not limited to, the following:

    a. Delineation with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses within the vicinity of areas to be disturbed by construction and/or grading.

    b. Protection of adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

    c. Performing clearing and earth moving activities only during dry weather.

    d. Stabilization of all denuded areas (on and off-site) and maintenance of erosion control measures continuously between October 1 and April 30. Stabilization shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as re-vegetating disturbed areas with plants propagated from seed collected in the immediate area.

    e. Storage, handling, and disposal of construction materials and wastes properly, so as to prevent their contact with stormwater.

    f. Control and prevention of the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

    g. Use of sediment controls or filtration to remove sediment when dewatering site and obtain all necessary permits.

    h. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

    i. Limiting and timing applications of pesticides and fertilizers to prevent polluted runoff.

    j. Limiting construction access routes and stabilization of designated access points.

    k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. Training and providing instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.

m. Additional Best Management Practices in addition to those shown on the plans may be required by the Building Inspector to maintain effective stormwater management during construction activities. Any water leaving site shall be clear and running slowly at all times.

28. **Mitigation Measure 14**: Once approved, erosion and sediment control measures of the revised Erosion Control Plan shall be installed prior to beginning any site work and maintained throughout the term of grading and construction, until all disturbed areas are stabilized. Failure to install or maintain these measures will result in stoppage of construction until corrections have been made and fees paid for staff enforcement time. Revisions to the approved erosion control plan shall be prepared and signed by the engineer and submitted to the Building Inspection Section.

29. **Mitigation Measure 15**: It shall be the responsibility of the engineer of record to regularly inspect the erosion control measures for the duration of all grading remediation activities, especially after major storm events, and determine that they are functioning as designed and that proper maintenance is being performed. Deficiencies shall be immediately corrected, as determined by and implemented under the observation of the engineer of record.

30. **Mitigation Measure 16**: At the time of building permit application, the applicant shall demonstrate compliance with the measures indicated on the applicant completed EECAP Development Checklist (Attachment H) or equivalent measures~~, to the extent feasible~~. Such measures shall be shown on building plans.

31. **Mitigation Measure 17**: At the time of building permit application, the applicant shall demonstrate compliance with the following measures, ~~to the extent feasible,~~ or equivalent measures, where such measures shall be shown on building plans:

    a. BAAQMD BMP: Use alternative fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15% of the fleet.

    b. BAAQMD BMP: Use local building materials of at least 10 percent.

    c. BAAQMD BMP: Recycle or reuse at least 50% of construction waste.

32. **Mitigation Measure 18**: Any and all project-related on-street construction parking is subject to review and approval by the Project Planner and the County Department of Public Works. Prior to issuance of the building permit, the applicant shall show location of all on-street construction parking on plans submitted for the building permit application.

33. **Mitigation Measure 19**: The project shall not use a pile-driven pier foundation.

34. **Mitigation Measure 20**: Should any traditionally or culturally affiliated Native American tribe respond to the County's issued notification for consultation, such process shall be completed and any resulting agreed upon measures for avoidance and preservation of identified resources be taken prior to implementation of the project.

35. **Mitigation Measure 21**: Any inadvertently discovered tribal cultural resources shall be treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

36. **Mitigation Measure 22**: In the event that cultural, paleontological, or archeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery, County staff shall be notified, and the applicant shall be required to retain the services of a qualified archeologist for the purpose of recording, protecting, or curating the discovery as appropriate.

County Arborist

37. At the time of building permit application, please submit an updated construction entrance detail to include use of Tensar geogrid (or equivalent), per Project Arborist recommendations.

Building Inspection Section

38. A building permit is required.

Drainage Section

39. At the time of the building permit submittal, the project shall be required to comply with the County's "prescriptive" drainage review requirements and provide the following:

    a. Final Drainage Report stamped and signed by a registered Civil Engineer.

    b. Final Grading and Drainage Plan stamped and signed by a registered Civil Engineer depicting a storage and metering stormwater retention system and subdrain system(s) consistent with the requirements in the County's current Drainage Manual.

    c. Final C.3 and C.6 Development Review Checklist.

Geotechnical Section

40. In plans submitted for the building permit application, the project design team shall demonstrate close coordination with the Project Geotechnical Consultant in the design of proposed foundations, retaining walls, and drainage improvements.

41. An updated geotechnical report with supplemental recommendations, design criteria, and supporting data, as appropriate, should be submitted at the time of building permit application for final peer review along with project plans.

42. In plans submitted for the building permit application, project design and final plans should incorporate anticipated geotechnical recommendations and design criteria to mitigate site constraints as identified by the Project Geotechnical Consultant.

San Mateo County Fire Department

All fire conditions and requirements must be incorporated into your building plans, (see attached conditions) prior to building permit issuance. It is your responsibility to notify your contractor, architect and engineer of these requirements

43. Add Note to plans: New residential buildings shall have internally illuminated address numbers contrasting with the background so as to be seen from the public way fronting the building. The letters/numerals for permanent address signs shall be 4 inches in height with a minimum 1/2-inch stroke. Residential address numbers shall be at least 6 feet above the finished surface of the driveway. Where buildings are located remotely to the public roadway, additional signage at the driveway/roadway entrance leading to the building and/or on each individual building shall be required. This remote signage shall consist of a 6-inch by 18-inch green reflective metal sign with 3 inch reflective Numbers/ Letters similar to Hy-Ko 911 or equivalent. (TEMPORARY ADDRESS NUMBERS SHALL BE POSTED PRIOR TO COMBUSTIBLES BEING PLACED ON SITE).

44. Vegetation Management (LRA) – Add note to plans: A fuel break of defensible space is required around the perimeter of all structures to a distance of not less than 30 feet and may be required to a distance of 100 feet or to the property line. This is neither a requirement nor an authorization for the removal of living trees. Trees located within the defensible space shall be pruned to remove dead and dying portions, and limbed up 6 feet above the ground. New trees planted in the defensible space shall be located no closer than 10 feet to adjacent trees when fully grown or at maturity. Remove that portion of any existing trees, which extends within 10 feet of the outlet of a chimney or stovepipe or is within 5 feet of any structure. Maintain any tree adjacent to or overhanging a building free of dead or dying wood.

45. Add Note to plans: The building is in a Very High Fire Hazard Severity Zone and will require a Class A roof.

46. Add Note to plans: Smoke alarms and carbon monoxide detectors shall be installed in accordance with the California Building and Residential Codes. As per the California Building Code, and State Fire Marshal regulations, the applicant is required to install State Fire Marshal approved and listed smoke detectors which are hard wired, interconnected, and have battery backup. These detectors are required to be placed in each new and recondition sleeping room and at a point

centrally located in the corridor or area giving access to each separate sleeping area. In existing sleeping rooms, areas may have battery powered smoke alarms. A minimum of one detector shall be placed on each floor. Smoke detectors shall be tested and approved prior to the building final. Date of installation must be added to exterior of the smoke alarm and will be checked at final. Smoke alarms to be installed per manufactures instruction and NFPA 72.

47. Add Note to plans: Escape or rescue windows shall have a minimum net clear openable area of 5.7 sq. ft., 5.0 sq. ft. allowed at grade. The minimum net clear openable height dimension shall be 24 inches. The net clear openable width dimension shall be 20 inches. Finished sill height shall be not more than 44 inches above the finished floor. (CFC 2019 section 1030.2).

48. Identify rescue windows in each bedroom and verify that they meet all requirements. Add this to plans.

49. A plan and profile of the driveway/ roadway will be needed. Add to the plans.

50. Add Note to plans: Dead end emergency access exceeding 150 feet shall be provided with width and turnaround provisions meeting California Fire Code Appendix D.

51. Add Note to plans: Fire apparatus access roads to be an approved all-weather surface. Grades 15% or greater to be surfaced w/ asphalt, or brushed concrete. Grades 15 % or greater shall be limited to 150 feet in length with a minimum of 500 feet between the next section. For roads approved less than 20 feet, 20 feet wide turnouts shall be on each side of 15% or greater section. No grades over 20 percent. (Plan and profile required) CFC 503.

52. A Knox padlock or key switch will be required if there is limited access to property. CFC 506.1. For application and instructions please contact Smcfdfiremarshal@fire.ca.gov, mailto:if you need further assistance, please contact the County Fire Department at 650/726-5213.

53. Gates shall be a minimum of 2 feet wider than the access road/driveway they serve. Overhead gate structures shall have a minimum of 15 feet of vertical clearance. Locked gates shall be provided with a Knox Box or Knox Padlock. Electric gates shall have a Knox Key Switch. Electric gates shall automatically open during power failures. CFC 503.6, 506.

54. Add Note to plans: Fire Hydrant: Due to the size of the structure (over 3600 sq. ft.), as per 2019 CFC, Appendix B and C, an approved fire hydrant (Clow 960) shall be located within 500 feet of the proposed single-family dwelling unit measured by way of drivable access with a minimum fire flow of 875 per minute at 20 pounds per square inch. Contact the local purveyor for water flow details.

55. Show location of fire hydrant on a site plan. A fire hydrant is required within 500 feet of the building and flow a minimum of 875 gpm at 20 psi. This information is to be verified by the water purveyor in a letter initiated by the applicant and sent to

San Mateo County Fire/CAL Fire. If there is not a hydrant within 500 feet with the required flow, one will have to be installed at the applicant's expense.

56. Add Note to plans: Automatic Fire Sprinkler System: (Fire Sprinkler plans will require a separate permit). The applicant is required to install an automatic fire sprinkler system throughout the proposed or improved dwelling and garage. All attic access locations will be provided with a pilot head on a metal upright. Sprinkler coverage shall be provided throughout the residence to include all bathrooms, garages, and any area used for storage. The only exception is small linen closets less than 24 sq. ft. with full depth shelving. The plans for this system must be submitted to the San Mateo County Planning and Building Department. A building permit will not be issued until plans are received, reviewed and approved. Upon submission of plans, the County will forward a complete set to the County Fire Department for review.

57. Installation of underground sprinkler pipe shall be flushed and visually inspected by Fire District prior to hook-up to riser. Any soldered fittings must be pressure tested with trench open. Please call the San Mateo County Fire Marshal's office to schedule an inspection.

58. Exterior bell: is required to be wired into the required flow switch on your fire sprinkler system.

59. Add note to the title page that the building will be protected by an automatic fire sprinkler system.

Department of Public Works

60. Prior to the issuance of the building permit, the applicant shall submit a driveway "Plan and Profile," to the Department of Public Works, showing the driveway access to the parcel (garage slab) complying with County Standards for driveway slopes (not to exceed 20%) and to County Standards for driveways (at the property line) being the same elevation as the center of the access roadway. When appropriate, as determined by the Department of Public Works, this plan and profile shall be prepared from elevations and alignment shown on the roadway improvement plans. The driveway plan shall also include and show specific provisions and details for both the existing and the proposed drainage patterns and drainage facilities.

61. No proposed construction work within the County right-of-way shall begin until County requirements for the issuance of an encroachment permit, including review of the plans, have been met and an encroachment permit issued. Applicant shall contact a Department of Public Works Inspector 48 hours prior to commencing work in the right-of-way.

62. Prior to the issuance of the Building Permit, the applicant will be required to provide payment of "roadway mitigation fees" based on the square footage (assessable space) of the proposed building per Ordinance No. 3277.

63. Should the access shown on the plans go through neighboring properties, the applicant shall provide documentation that "ingress and egress" easements exist providing for this access, prior to issuance of ~~planning~~ building permit.

County Environmental Health Services

64. At the building permit application stage, the applicant shall submit plans consistent with the On-site Wastewater Treatment System (OWTS) design that has been reviewed and preliminarily approved by Environmental Health Services.

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COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: March 8, 2023

TO: Planning Commission

FROM: Planning Staff

SUBJECT: EXECUTIVE SUMMARY: Consideration of the adoption of an Initial Study/Mitigated Negative Declaration and the approval of Design Review and Grading Permits, to allow the construction of a new three-story, 4,249 sq. ft. single-family residence, 315 sq. ft. covered terrace, a 155 sq. ft. deck, and a 554 sq. ft. attached garage, on a 18,122 sq. ft. legal parcel in the unincorporated Palomar Park area of San Mateo County.

County File Number: PLN 2020-00251 (De Gans/Thalapaneni Jackson)

PROPOSAL

The applicant proposes construction of a new three-story, 4,249 sq. ft. single-family residence, 315 sq. ft. covered terrace, a 155 sq. ft. deck, and a 554 sq. ft. attached garage, on a 18,122 sq. ft. legal parcel (Lot Line Adjustment recorded on April 26, 1983). The property would be accessed from an improved existing gravel driveway and access easement located on 636 Palomar Drive and APN 051-022-250. The project involves 880 cubic yards (c.y.) of cut and 90 c.y. of fill; the project involves the removal of two (2) significant trees. The property is located within an existing residential neighborhood and adjoins developed parcels on the east, south, and southwest sides. The property slopes upward from Los Cerros Road with an average slope of approximately 34 percent.

RECOMMENDATION

That the Planning Commission certify the Initial Study/Mitigated Negative Declaration, and approve the Design Review Permit and Grading Permit, by making findings and adopting the conditions of approval in Attachment A.

SUMMARY

Compliance with Zoning Regulations: The project complies with the development standards of the S-91 Zoning District. At its October 26, 2022 meeting, the Bayside Design Review Committee (BDRC) recommended approval of the project subject to conditions requiring further reduction in the use of glass on the eastern and northern facades and change to roof design, included as Condition 3 of Attachment A of the staff

report, as well as to minimize tree removal which has been complied with. The applicant has revised his initial proposal to remove seven (7) significant trees to remove only two (2) significant trees (Trees 14, and 15), which conflict with proposed development. The applicant also proposes to remove a 5.14-inch California bay tree (Tree No. 13) which is not a significant tree and could be a carrier for the pathogen causing sudden oak death. As proposed, mitigated, and conditioned, the applicant is required to replace the trees with a minimum of three (3), 24-inch box Oak trees.

Conformance with the General Plan: Natural Hazards policies require detailed analysis of hazard risk and design of appropriate mitigation when development is proposed in these areas, including assessment of hazardous conditions. Site conditions related to geology are described in detail in Section 7 of the IS/MND. The site has experienced land sliding in the past (slope repair completed in 2020). The applicant has submitted reports prepared by the Project Geologist and Project Geotechnical Engineers, which note past landslides and landslide repair at the property. In an email dated May 13, 2022, the Project Geotechnical Engineer states that there are no unmitigated landslides within the area of influence to the site. As stated in their 2020 Geotechnical Report Update, it is the opinion of Atlas Geosphere Consultants, Inc. (Project Geologist and Geotechnical Engineer), that the residential development as planned is feasible from a geotechnical standpoint. Compliance with the recommendations of the Project Geologist and Geotechnical Engineer is a standard requirement and required by Mitigation Measure 9. In a letter dated August 2020 from Cotton, Shires and Associates, Inc. (CSA), CSA reviewed the project and associated studies on behalf of the County and has provided preliminary approval. All mitigation measures of the IS/MND have been added as conditions of approval in Attachment A of the staff report.

Environmental Review: An Initial Study/Mitigated Negative Declaration was prepared and circulated for public review from July 2, 2022, to July 22, 2022. The County received three (3) comment letters (included in Attachment F of the staff report), including a letter from the Palomar Park Owners' Association and neighbor, expressing concern with the land stability and the trees to be removed (discussed above), as well as potential springs on the property which may contribute to land instability, amongst other concerns. Regarding potential springs, the Project Geologist has stated that numerous borings encountered no ground water to support pervasive springs on the project site.

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COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: March 8, 2023

TO: Planning Commission

FROM: Planning Staff

SUBJECT: Consideration of the adoption of an Initial Study/Mitigated Negative Declaration, pursuant to the California Environmental Quality Act, the approval of a Design Review Permit, pursuant to Section 6565.3 of the Zoning Regulations, and Grading Permit, pursuant to Section 9283 of the County Ordinance Code, to allow the construction of a new three-story, 4,249 sq. ft. single-family residence, 315 sq. ft. covered terrace, a 155 sq. ft. deck, and a 554 sq. ft. attached garage, on a 18,122 sq. ft. legal parcel in the unincorporated Palomar Park area of San Mateo County. The property would be accessed from an improved existing gravel driveway located on 636 Palomar Drive and APN 051-022-250. The project involves 880 cubic yards (c.y.) of cut and 90 c.y. of fill and the removal of 2 significant trees.

County File Number: PLN 2020-00251 (De Gans/Thalapaneni Jackson)

PROPOSAL

The applicant proposes construction of a new three-story, 4,249 sq. ft. single-family residence, 315 sq. ft. covered terrace, a 155 sq. ft. deck, and a 554 sq. ft. attached garage, on a 18,122 sq. ft. legal parcel (Lot Line Adjustment recorded on April 26, 1983). The property would be accessed from an improved existing gravel driveway and access easement located on 636 Palomar Drive and APN 051-022-250. The project involves 880 cubic yards (c.y.) of cut and 90 c.y. of fill and the removal of two (2) significant trees. The property is located within an existing residential neighborhood and adjoins developed parcels on the east, south, and southwest sides. The property slopes upward from Los Cerros Road with an average slope of approximately 34 percent.

RECOMMENDATION

That the Planning Commission adopt the Initial Study/Mitigated Negative Declaration, and approve the Design Review Permit and Grading Permit, by making findings and adopting the conditions of approval in Attachment A.

BACKGROUND:

Report Prepared By: Camille Leung, Senior Planner

Applicant: Maurits de Gans, Senior Associate, M Designs Architects

Owner: Anusha Thalapaneni and David E. Jackson

Public Notification: Ten (10) day advanced notification for the hearing was mailed to property owners within 300 feet of the project parcel and a notice for the hearing posted in the San Mateo Times newspaper.

Location: Development of vacant parcel located at Palomar Drive and Los Cerros Road (Subject Property), and minor associated work at 636 Palomar Drive and APN 051-022-250, located in the unincorporated Palomar Park area of San Mateo County.

APN(s) and Property Size: APN 051-022-380 (18,122 sq. ft.; Subject Parcel). Project also involves work on APN 051-022-360 (Approx. 0.359 Acres) at 636 Palomar Drive, the adjoining parcel to east which uses a shared driveway and APN 051-022-250, as well as a vacant parcel to east of 636 Palomar Drive which also uses the shared driveway.

Existing Zoning: One-Family Residential/Combining District (Minimum Lot Size 10,000 sq. ft.)/Design Review (R-1/S-91/DR)

General Plan Designation: Medium Low Density Residential; Urban

Existing Land Use: Undeveloped

Water Supply: California Water Service - San Carlos

Sewage Disposal: Proposed septic system

Flood Zone: Flood Zone X (Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level), per FEMA Panel No. 06081C0282E, effective October 16, 2012.

Environmental Evaluation: An Initial Study/Mitigated Negative Declaration was prepared and circulated for public review from July 2, 2022, to July 22, 2022. The County received three (3) comment letters expressing concern with the land stability, drainage, house size and design, and trees to be removed, amongst other concerns. See Section B of this report for more further discussion.

Setting: The property is located within an existing residential neighborhood and adjoins developed parcels on the east, south, and southwest sides. Access is proposed via an access easement and an improved existing gravel driveway on 636 Palomar Drive and APN 051-022-250. The property slopes upward from Los Cerros Road with an average slope of approximately 34 percent.

Chronology:

Date		Action
April 2020	-	Completion of emergency slope repair of the front portion of the parcel along Los Cerros Road.
July 2, 2022	-	An Initial Study/Mitigated Negative Declaration was prepared and released for public review from July 2, 2022, to July 22, 2022. The County received several comment letters expressing concern with the land stability, drainage, house size and design, and trees to be removed, amongst other concerns. See Section B of this report for further discussion.
August 3, 2022	-	At a public meeting, the Bayside Design Review Committee (BDRC) continues its review of the project to address concerns expressed regarding the compatibility of the architectural style with the area; design of house to further step down with natural topography; and change color palette to comply with the design review standards.
October 26, 2022	-	At a public meeting, the BDRC recommends approval of the project subject to conditions requiring further reduction in the use of glass on the eastern and northern facades, change to roof design, and minimize tree removal.
December 2022/ January 2023	-	Applicant submits a revised design to address BDRC conditions and to demonstrate the preservation of 4 significant trees, where only 2 significant trees are now proposed for removal.
March 8, 2023	-	Planning Commission public hearing for Grading Permit.

DISCUSSION

A. KEY ISSUES

1. Conformance with the General Plan

a. Soil Resources

Policy 2.23 *(Regulate Excavation, Grading, Filling, and Land Clearing Activities Against Accelerated Soil Erosion)* calls for the County to regulate excavation, grading, filling, and land clearing activities to protect against accelerated soil erosion and sedimentation. The project includes earthwork of 880 c.y. of cut and 90 c.y. of fill, with a total area of land disturbance of 14,369 square feet. The applicant proposes an Erosion Control Plan which includes measures that would contain and slow run-off, while allowing for natural infiltration. Due to the potential for erosion and sedimentation during land disturbing and earth-moving activities, the IS/MND included Mitigation Measures 11 through 15, which are included as conditions of approval in Attachment A. As proposed, mitigated, and conditioned, the applicant would off-haul all cut spoils and implement stormwater pollution prevention measures, and the Project Engineer would regularly inspect the erosion control measures for the duration of all grading remediation activities, especially after major storm events, and determine that they are functioning as designed and that proper maintenance and corrections are performed.

b. Wastewater

Policy 11.5 *(Wastewater Management in Urban Areas)* calls for the County to: a. Consider sewerage systems as the appropriate method of wastewater management in urban areas; b. Encourage the extension of sewerage systems to serve unincorporated urban areas presently using individual sewage disposal systems where warranted by public health concerns, environmental pollution or the planned density of development; and c. Continue the use of existing individual sewage disposal systems in urban areas where lot sizes, site conditions, and planned densities are appropriate for these systems and where individual sewage disposal systems have functioned satisfactorily in the past. The site is not located within the service area of any sewer provider; the applicant proposes a septic system (also referred to as an on-site wastewater treatment system, OWTS). The applicant has submitted comprehensive, site-specific reports, including subsurface exploration and testing, for the project, which have been reviewed by the Project Geologist and Geotechnical Engineer as well as by the County's Geologist and Geotechnical Engineer, and

received preliminary approval from County Environmental Health Services.

c. Natural Hazards

Policy 15.12 *(Locating New Development in Areas Which Contain Natural Hazards)* calls for the County to: a. As precisely as possible, determine the areas of the County where development should be avoided or where additional precautions should be undertaken during review of development proposals due to the presence of natural hazards; b. Give preference to land uses that minimize the number of people exposed to hazards in these areas; c. Determine appropriate densities and development; and d. Require detailed analysis of hazard risk and design of appropriate mitigation when development is proposed in these areas, including assessment of hazardous conditions expected to be exacerbated by climate change, such as increased risks of fire, flooding, and sea level rise.

Site conditions related to geology are described in detail in Section 7 of the IS/MND. The site has experienced land sliding in the past (slope repair completed in 2020). The applicant has submitted reports prepared by the Project Geologist and Project Geotechnical Engineers, which note past landslides and landslide repair at the property. In an email dated May 13, 2022, the Project Geotechnical Engineer states that there are no unmitigated landslides within the area of influence to the site. As stated in their 2020 Geotechnical Report Update, it is the opinion of Atlas Geosphere Consultants, Inc. (Project Geologist and Geotechnical Engineer), that the residential development as planned is feasible from a geotechnical standpoint. Compliance with the recommendations of the Project Geologist and Geotechnical Engineer is a standard requirement and required by Mitigation Measure 9. In a letter dated August 2020 from Cotton, Shires and Associates, Inc. (CSA), CSA reviewed the project and associated studies on behalf of the County and has provided preliminary approval. All mitigation measures of the IS/MND have been added as conditions of approval in Attachment A.

2. COMPLIANCE WITH COUNTY ZONING REGULATIONS

The property is zoned One-Family Residential/Combining District (Minimum Lot Size 10,000 sq. ft.)/Design Review (R-1/S-91/DR). The proposed single-family residential use is allowed in the R-1 Zoning District.

a. Project Compliance with the Development Standards of the S-91 Zoning District

As shown in the table below, the project complies with the development standards of the S-91 Zoning District.

Development Standards	S-91 Zoning District	Proposed
Building Site Area	10,000 sq. ft.	18,122 sq. ft.
Maximum Building Site Coverage	30%	17.3% (3,131 sq. ft.)
Maximum Building Floor Area Ratio	5,036 sq. ft.	5,034 sq. ft.
Minimum Front Setback	20 ft.	54 ft. -9 in.
Minimum Rear Setback	20 ft.	49 ft.- 5 in.
Minimum Right Side Setback	10 ft.	15 ft.
Minimum Left Side Setback	10 ft.	11 ft.- 5 in.
Maximum Building Height	28 ft.	26 ft.-11 in.
Minimum Covered Parking Spaces	2 covered parking spaces	2 covered parking spaces

b. Project Compliance with Design Review Standards of the DR Zoning District:

At its August 3, 2022, and October 26, 2022 meetings, the Bayside Design Review Committee (BDRC) reviewed the project. Many emails were received, and many members of the public spoke at the public hearing. Concerns expressed by the members of the public focused on project design compatibility with existing houses in the neighborhood, privacy impacts, glare from windows, tree removal relative to slope stability, geological/hydrological concerns, and concerns regarding potential stormwater pollution from the proposed septic system. Staff clarified that the BDRC's review is limited to project compliance with design standards and that other issues are discussed in the IS/MND which will be reviewed by the Planning Commission. The BDRC recommended approval of the project subject to conditions requiring further reduction in the use of glass on the eastern and northern facades and change to roof design, included

as Condition 3 of Attachment A, as well as to minimize tree removal which has been complied with. The applicant has revised the proposal to remove only 2 significant trees (Trees14 and 15), described further in Section B, below.

3. COMPLIANCE WITH COUNTY GRADING REGULATIONS

The proposed project requires approximately 880 c.y. of cut and 90 c.y. of fill to accommodate the proposed building. Planning and Geotechnical staff have reviewed the proposal and submitted documents and determined that the project conforms to the criteria for review contained in the Regulations for Excavating, Grading, Filling and Clearing on Lands in Unincorporated San Mateo County (referred to in this report as "Grading Regulations"). The findings and supporting evidence are outlined below:

a. **That the granting of the permit will not have a significant adverse effect on the environment.**

The project will have a less-than-significant impact on the environment with the implementation of standard conditions of approval which will require excavated earth to be off-hauled and deposited to an approved disposal location, require application of erosion control measures prior to and during project grading and construction, place limitations on grading during the wet season, and require the Project Engineer to submit written certification that all grading has been completed in conformance with the approved plans, conditions of approval, and the Grading Regulations.

b. **That the project conforms to the criteria of the San Mateo County Grading Ordinance.**

The project, as it will be conditioned, conforms to the criteria for review contained in the Grading Regulations, including an erosion and sediment control plan and dust control measures.

c. **That the project is consistent with the General Plan.**

As outlined earlier in Section A of this report, the project conforms to applicable components of the County's General Plan.

B. ENVIRONMENTAL REVIEW

An Initial Study/Mitigated Negative Declaration was prepared and circulated for public review from July 2, 2022, to July 22, 2022. The County received three (3) comment letters (included in Attachment F), including a letter from the Palomar Park Owners' Association, expressing concern with the land stability, drainage,

house size and design, and trees to be removed, amongst other concerns. The main concerns are summarized below, followed by staff's response.

Main Concerns:

1. Trees: The Palomar Park Owners' Association and Denise Enea at 738 Loma Court submitted letters stating that the initially proposed tree removal of seven (7) significant trees would negatively impact the stability of the property, due to the stabilization and drainage benefits provided by the root systems of the trees. The Palomar Park Owners' Association also stated that the trees provide an aesthetic benefit. The applicant has revised the proposal to remove only 2 significant trees (Trees 14 and 15) and a 5.14-inch California bay tree (which is not a significant tree), described below, which are located in the right-side setback.

Trees Proposed for Removal							
Tree No.	*Genus Species*	*Common Name*	*Diameter*	*Height*	*Spread*	*Condition*	*Reason for Removal*
13	Umbellularia californica	California bay	5.1 in.*	12 ft.	12 ft.	Good	Sudden oak death carrier
14	Quercus agrifolia	Coast live oak	21.1 in., 17.5 in.	40 ft.	60 ft.	Good	Within footprint of house
15	Aesculus californica	California buckeye	10.0 in.,6.4 in.	20 ft.	30 ft.	Good	Within leach field footprint
Source Arborist Report, dated December 12, 2020 (Attachment G of IS/MND) *Diameter of Tree No. 13 has been recently updated by the Project Arborist per their email of January 26, 2023. Tree No. 13 is not a significant tree as its diameter is less than 6-inch d.b.h.							

Staff has revised Mitigation Measure 1 of the IS/MND, as shown in Attachment A, to eliminate the requirement to replace exotic trees previously proposed for removal and to require the applicant to replace the three (3) indigenous trees with a minimum of three (3), 24-inch box Oak trees. The applicant proposes to plant these trees in the right-side setback to provide screening of the residence in the same location as the above listed trees proposed for removal.

2. Geology: A letter from Denise Enea states that the IS/MND significantly underplays and leaves out critical information regarding the long history of dangerous and destructive landslides on and directly adjacent to this parcel

and references letters from Kilik General Engineering, GeoForensics, Inc., Steven Connelly C.E.G., and Jeff Lea of Lea & Braze, which are included and analyzed in the IS/MND. As stated in Section 7 of the IS/MND, with the exception of the 2021 Connelly letter, the referenced letters describe recommendations based on brief reviews of the adjoining off-site properties. It is unclear if the letters represent a study of the project site, as they make only general reference to the site address, with no enclosed maps and no mention of specific site locations or the site APN. The 2021 Connelly report includes a review of the subject site but does not include subsurface exploration and testing. The applicant has submitted comprehensive, site-specific reports, including subsurface exploration and testing, for the proposed residence and septic system, which have been reviewed by and received preliminary approval from the County Environmental Health Services and the County's Geologist and Geotechnical Engineer, and staff's recommendation of approval is based on the analysis and conditions of approval recommended in those reports.

3. Hydrology: Ms. Enea states that *"ground water is the basis for the instability of the all the parcels"* and that the IS/MND *"does not include a vital report which I submitted to you. The hydrology report by Balance Hydrologic of 2014 examines and lays out the existence of a significant ground water supply which runs from the top of Loma Court thru the 634 Palomar parcel as well as the 738 Loma Court and 0 Los Cerros parcel. Page 20 of the IS/MND cites the report titled "Spring Source and Protection Reconnaissance, prepared by Balance Hydrologics, Inc., for APN 051-022-310, dated April 16, 2014".* This report maps spring areas on the two parcels, APNs 051-022-310 and 051-022-180, but does not map any springs on the subject parcel. A landslide that was repaired in April 2020 is mapped at the front of the subject property.

   Ms. Enea states that past drilling at the property by a previous owner caused water from an underground spring to flood the street and eroded the pavement. She states that, if grading and pier drilling are attempted on this parcel, there is a high chance that flooding of roadways would occur, resulting in traffic impacts.

   As stated in the IS/MND, and in an email dated May 13, 2022, the Project Geotechnical Engineer states that the 2013 Earth Investigations Consultants Geotechnical Investigation mentions no observed seepage from the ground surface (i.e., spring), and all the borings drilled on 634 Palomar Drive site encountered no ground water, with the exception of in the 2017 Earth Investigations Consultants Geotechnical Investigation when slight seepage perched at the top of bedrock 3 feet below the ground surface B-2 in the lower northeast corner (approx. site elevation 68). Numerous other borings encountered no ground water to support a conclusion that pervasive springs exist on the project site.

As stated in their 2020 Geotechnical Report Update, it is the opinion of the Project Geologist and Geotechnical Engineer, that the residential development as planned is feasible from a geotechnical standpoint. Compliance with the recommendations of the Project Geologist and Geotechnical Engineer is a standard requirement and required by Mitigation Measure 9. The County's Geotechnical Section has reviewed the project and associated studies and has provided preliminary approval.

4. Traffic: Ms. Enea states that a past pier drilling project at the site caused flooding and associated damage to neighborhood driveways and roadways, due to water run-off from on-site springs. Please see the above section regarding minimal springs found at the property. Additionally, as proposed and conditioned, run-off from the property would be minimized by erosion control measures. Additionally, road repair of damage caused by the project is required per Condition 62.

5. Aesthetics: Ms. Enea states that the proposed residence will affect the views of properties at 730 Loma Court and 722 Palomar Drive. As discussed in the IS/MND, the site is visible from adjoining areas within the residential area in which it is located. As the new residence and driveway would abut developed residential property and blend in with other houses and driveways in the area, the project would not have a significant adverse effect on views from existing residential areas.

C. REVIEWING AGENCIES

Building Inspection's Drainage Section
Building Inspection Geotechnical Section
County Environmental Health Services
County Department of Public Works
County Arborist
San Mateo County Fire
California Water Service – San Carlos

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Vicinity Map
C. Project Plans
D. Design Review Recommendation Letter
E. Initial Study/Mitigated Negative Declaration (Attachments excluded here; Available at: https://www.smcgov.org/planning/mitigated-negative-declaration-thalapanenijackson-residence-septic-system-and-improved)
F. Comment letters received for IS/MND

CML:mda – CMLHH0040_WMU.DOCX

Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Project File Number: PLN 2020-00251 Hearing Date: March 8, 2023

Prepared By: Camille Leung, Project Planner For Adoption By: Planning Commission

RECOMMENDED FINDINGS

Regarding the Initial Study/Mitigated Negative Declaration, Find:

1. That the Planning Commission does hereby find that the Initial Study/Mitigated Negative Declaration reflects the independent judgment of San Mateo County.

2. That the Initial Study/Mitigated Negative Declaration is complete, correct, and adequate and prepared in accordance with the California Environmental Quality Act (CEQA) and applicable State and County Guidelines.

3. That on the basis of the Initial Study/Mitigated Negative Declaration, comments received hereto, testimony presented and considered at the public hearing, and based on analysis contained in the staff report prepared for the Planning Commission, there is no substantial evidence that the project will have a significant effect on the environment.

4. That the Mitigation Measures (numbered 1 through 22) in the Initial Study/Mitigated Negative Declaration and agreed to by the owner and placed as conditions on the project address the Mitigation Monitoring and Reporting Plan requirements of California Public Resources Code Section 21081.6.1. The Mitigation Measures have been included as conditions of approval in this attachment. This attachment shall serve as the Mitigation Monitoring and Reporting Plan. Edits made to mitigation measures are used to strengthen and clarify mitigation measures and do not reduce the level of required mitigation.

Regarding the Design Review, Find:

5. After consideration of project plans and public testimony, the project, as proposed and conditioned on October 26, 2022, is in compliance with the Design Review Standards based on the site planning and colors and materials which provide compatibility with surrounding residences.

a. Section 6565.16 G. Materials and Colors - Make varying architectural styles compatible by using similar materials and colors which blend with the natural setting and the immediate area. Avoid the use of building materials and colors which are highly reflective and contrasting by requiring them to blend and harmonize with the natural woodland environment and vegetation of the area. The proposed colors and materials comply with this standard. Reduce the amount of glass windows on eastern and northern facades (dining and living room), by eliminating the middle window and replacing it with a wall segment.

b. Section 6565.16 F. Roofs - Design buildings using primarily pitched roofs. Design buildings with roofs that reflect the predominant architectural styles of the immediate area. Replace low-slope hip roof design with low-slope shed roof. Apply roof changes to all roof elements, including 3rd level roof, and 2nd level roof, all sides as appropriate, for consistent applications around the home. Include overhangs on the uphill side, back side, and upper deck areas with overhangs not to exceed 4 feet.

c. Section 6565.16 J. Lighting – All overhangs to have soffits with a minimal number of lights.

d. Section 6565.16 A. Site Planning – Minimize alteration of the natural topography; respect the privacy of neighboring houses and outdoor living areas; and minimize tree removal. Site planning is compliant with this standard and the elevation of the building has been kept low to protect views. The project has been modified to save as many existing trees as possible.

<u>Regarding the Grading Permit, Find:</u>

6. That the granting of the permit will not have a significant adverse effect on the environment. The project, as proposed and conditioned, has been reviewed and preliminarily approved by the Planning and Building Department's Geotechnical Section and the Department of Public Works, with conditions incorporated into Attachment A of the staff report. As analyzed in the staff report, with imposition of the conditions of approval, the project would not have a significant adverse effect on the environment.

7. That this project, as conditioned, conforms to the criteria of the San Mateo County Grading Regulations and is consistent with the General Plan. The project, as it will be conditioned, conforms to the criteria for review contained in the Grading Regulations, including an erosion and sediment control plan and dust control measures. The project conforms to the applicable components of the County's General Plan.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. The project shall be constructed in compliance with the plans approved by the Planning Commission on March 8, 2023, and in compliance with the plans reviewed by the Bayside Design Review Committee (BDRC) on October 26, 2022. Any changes or revisions to the approved plans shall be submitted for review by the Community Development Director to determine if they are in substantial compliance with the approved plans, prior to being incorporated into the building plans. Adjustments to the design of the project may be approved by the Design Review Officer if they are consistent with the intent of and are in substantial conformance with this approval. Adjustments to the design during the building permit stage may result in the requirement for additional plan resubmittal or assessment of revision fees. Alternatively, the Design Review Officer may refer consideration of the adjustments, if they are deemed to be major, to a new BDRC public hearing which requires payment of an additional fee of $1,500.

2. The design review and grading permit shall be valid for five (5) years from the date of final approval, in which time a building permit shall be issued, and a completed inspection (to the satisfaction of the building inspector) shall have occurred within 180 days of its issuance. The design review approval may be extended by one time for a one (1) year increment with submittal of an application for permit extension and payment of applicable extension fees 60 days prior to the expiration date.

3. The applicant shall indicate the following on plans submitted for a building permit, as stipulated by the Bayside Design Review Committee:

    a. Reduce the amount glass windows on eastern and northern facades (dining and living room), by eliminating the middle window and replacing it with a wall segment.

    b. Replace low-slope hip roof design with low-slope shed roof. Apply roof changes to all roof elements, including 3rd level roof, and 2nd level roof, all sides as appropriate, for consistent applications around the home. Include overhangs on the uphill side, back side, and upper deck areas with overhangs not to exceed 4 feet.

    c. All overhangs to have soffits with a minimal number of lights.

4. At the time of building permit application, the applicant shall submit a tree protection plan for any work within tree driplines or adjacent to off-site trees, including the following:

    a. Identify, establish, and maintain tree protection zones throughout the entire duration of the project.

b. Isolate tree protection zones using 5-foot tall, orange plastic fencing supported by poles pounded into the ground, located at the driplines as described in the arborist's report.

c. Maintain tree protection zones free of equipment and materials storage; contractors shall not clean any tools, forms, or equipment within these areas.

d. If any large roots or large masses of roots need to be cut, the roots shall be inspected by a certified arborist or registered forester prior to cutting as required in the arborist's report. Any root cutting shall be undertaken by an arborist or forester and documented. Roots to be cut shall be severed cleanly with a saw or toppers. A tree protection verification letter from the certified arborist shall be submitted to the Planning Department within five (5) business days from site inspection following root cutting.

e. Prior to Issuance of a building permit, the Planning and Building Department shall complete a pre-construction site inspection, as necessary, to verify that all required tree protection and erosion control measures are in place.

5. The approved exterior colors and materials shall be verified prior to final approval of the building permit. The applicant shall provide photographs to the Design Review Officer to verify adherence to this condition prior to a final building permit approval by the Current Planning Section.

6. Prior to the Current Planning Section approval of the building permit application, the applicant shall also have the licensed land surveyor or engineer indicate on the construction plans: (1) the natural grade elevations at the significant corners (at least four) of the footprint of the proposed structure on the submitted site plan, and (2) the elevations of proposed finished grades. In addition, (1) the natural grade elevations at the significant corners of the proposed structure, (2) the finished floor elevations, (3) the topmost elevation of the roof, and (4) the garage slab elevation must be shown on the plan, elevations, and cross-section (if one is provided).

7. Once the building is under construction, prior to the below floor framing inspection or the pouring of the concrete slab (as the case may be) for the lowest floor(s), the applicant shall provide to the Building Inspection Section a letter from the licensed land surveyor or engineer certifying that the lowest floor height, as constructed, is equal to the elevation specified for that floor in the approved plans. Similarly, certifications on the garage slab and the topmost elevation of the roof are required.

8. If the actual floor height, garage slab, or roof height, as constructed, is different than the elevation specified in the plans, then the applicant shall cease all construction and no additional inspections shall be approved until a revised set of plans is submitted to and subsequently approved by both the Building Official and the Community Development Director.

9. The applicant shall adhere to all requirements of the Building Inspection Section, the Department of Public Works, and San Mateo County Fire.

10. No site disturbance shall occur, including any grading or tree/vegetation removal, until a building permit has been issued. Once a building permit has been issued for the residence, the applicant may remove only Trees 13, 14, and 15. All other trees must be protected during grading and construction in accordance with the Arborist Report. Compliance with Tree Protection Plan of the Arborist Report shall be demonstrated on plans submitted for the building permit application.

11. To reduce the impact of construction activities on neighboring properties, comply with the following:

    a. All debris shall be contained on-site; a dumpster or trash bin shall be provided on-site during construction to prevent debris from blowing onto adjacent properties. The applicant shall monitor the site to ensure that trash is picked up and appropriately disposed of daily.

    b. The applicant shall remove all construction equipment from the site upon completion of the use and/or need of each piece of equipment which shall include but not be limited to tractors, back hoes, cement mixers, etc.

    c. The applicant shall ensure that no construction-related vehicles impede through traffic along the right-of-way on Palomar Drive. All construction vehicles shall be parked on-site outside the public right-of-way or in locations which do not impede safe access on Palomar Drive. There shall be no storage of construction vehicles in the public right-of-way.

12. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m., weekdays, and 9:00 a.m. to 5:00 p.m., Saturdays. Said activities are prohibited on Sundays, Thanksgiving, and Christmas (San Mateo County Ordinance Code Section 4.88.360).

13. At the building permit application stage, the project shall demonstrate compliance with the Water Efficient Landscape Ordinance (WELO), including requirements for final inspection.

14. Add notes to plans submitted for a building permit with the following minimum dust control measures:

    a. Water all construction and grading areas at least twice daily.

    b. Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least 2 feet of freeboard.

    c. Apply water two times daily or apply (non-toxic) soil on all unpaved access roads, parking areas, and staging areas at the project site.

    d. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

    e. Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).

Mitigation Measures of the Initial Study/Mitigated Negative Declaration: Edits made to mitigation measures, as shown in ~~strikethough~~ (deletions) and underline (additions), are used to strengthen and clarify mitigation measures and do not reduce the level of required mitigation.

15. **Mitigation Measure 1**: The applicant shall replace the~~ 2 significant exotic trees and 5~~2 significant indigenous trees proposed for removal with a total of~~ 5 replacement trees, to include minimum of~~ three (3), 24-inch box Oak trees, to be planted in the right-side setback~~ with the remaining trees to be a minimum of 15 gallon in size~~. Prior to the issuance of the building permit for the residence, the Planting Plan shall be reviewed and subject to the approval of the Project Arborist and project planner.

16. **Mitigation Measure 2**: Prior to any land disturbance and throughout the grading operation, the applicant shall implement the tree protection measures consistent with the County's Significant Tree Ordinance in addition to the construction procedures and tree protection measures provided by the Project Arborist.

17. **Mitigation Measure 3**: Upon the start of excavation activities and through to the completion of the project, the applicant shall be responsible for ensuring that the following dust control guidelines are implemented:

    a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

    b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

f. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

g. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

h. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

i. Construction-related activities shall not involve simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously).

18. **Mitigation Measure 4**: Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic monofilament netting (erosion control matting) or similar material shall not be used. The applicant shall demonstrate compliance with this requirement in plans submitted at the time of building permit application.

19. **Mitigation Measure 5**: A pre-construction, migratory bird nesting survey shall be conducted prior to any proposed construction-related activities during the nesting bird season (February 1 to August 31). The survey shall be performed both in and within 250 feet of the proposed development area and the results reported to the County. If, for any reason, construction activities do not commence within 10 days of completion of the survey, the survey shall be repeated, and results reported to the County. If active nests are discovered, no construction-related activities, including grading and tree removal, are allowed until birds have fledged from nests, as confirmed by a biologist.

20. **Mitigation Measure 6**: Although proposed project area itself has low possibility of containing unrecorded archaeological site(s), it is possible that subsurface deposits may yet exist or that evidence of such resources has been obscured by more recent natural or cultural factors such as downslope aggradation and alluviation and the presence of non-native trees and vegetation. Archaeological and historical resources and human remains are protected from unauthorized disturbance by State law, and supervisory and construction personnel therefore must notify the County and proper authorities if any possible archaeological or historic resources or human remains are encountered during construction activities and halt construction to allow qualified Archaeologists to identify, record, and evaluate such resources and recommend an appropriate course of action.

21. **Mitigation Measure 7**: In the event that cultural, paleontological, or archeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery and the project sponsor shall immediately notify the Community Development Director of the discovery. The applicant shall be required to retain the services of a qualified archeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The cost of the qualified archeologist and any recording, protecting, or curating shall be borne solely by the project sponsor. The archeologist shall be required to submit to the Community Development Director for review and approval a report of the findings and methods of curation or protection of the resources. No further grading or site work within the area of discovery shall be allowed until the preceding has occurred. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e).

22. **Mitigation Measure 8**: The applicants and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains, whether historic or prehistoric, during grading and construction. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately, and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

23. **Mitigation Measure 9**: Prior to the issuance of a building permit for site development, the applicant shall demonstrate compliance with the recommendations of the Project Geologist and Geotechnical Engineer, including but not limited to those pertaining to: 1) mitigation of undocumented fill in the proposed house development area, 2) treatment of fill along the proposed/improved driveway in accordance with the recommendations for grading and/or retaining wall construction presented in Appendix A of the 2020 Geotechnical Report Update and 3) supplemental recommendations to accommodate design and construction of the proposed swimming pool (Source: 2020 Atlas Geosphere Consultants, Inc., Geotechnical Report Update).

24. **Mitigation Measure 10**: Prior to the issuance of a building permit for site development, the applicant shall demonstrate compliance with the recommendations of the County's Geologist and Geotechnical Engineer, including but not limited to those pertaining to: 1) Close coordination with the Project Geotechnical Consultant in design of proposed foundations, retaining walls, drainage improvements, and landscape irrigation which may benefit project performance; 2) Submittal of an updated geotechnical report with supplemental recommendations, design criteria, and supporting data, as appropriate; and 3) Project design and final plans should incorporate geotechnical recommendations and design criteria to mitigate site constraints as identified by the Project Geotechnical Consultant (Source: Craig Stewart, CSA, email to County, dated August 28, 2020).

25. **Mitigation Measure 11**: Prior to issuance of the grading permit hard card, the applicant shall demonstrate that all cut spoils will be hauled off-site to a County-approved location.

26. **Mitigation Measure 12**: Prior to the issuance of the building permit for the residence, the applicant shall revise the Erosion Control Plan to include the additional measure as follows, subject to the review and approval of the Community Development Director:

    Construction Entrance: The Project Civil Engineer shall propose a method for stabilizing the area of the existing driveway (access easement) that will be re-graded on APN 051-022-250, while still allowing access over the driveway by the neighbors. The applicant shall move the temporary parking area, storage container, construction office, and sanitation unit to an area which does not block the construction entrance.

27. **Mitigation Measure 13**: The applicant shall adhere to the San Mateo County-wide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including, but not limited to, the following:

    a. Delineation with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses within the vicinity of areas to be disturbed by construction and/or grading.

    b. Protection of adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

    c. Performing clearing and earth moving activities only during dry weather.

d. Stabilization of all denuded areas (on and off-site) and maintenance of erosion control measures continuously between October 1 and April 30. Stabilization shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as re-vegetating disturbed areas with plants propagated from seed collected in the immediate area.

e. Storage, handling, and disposal of construction materials and wastes properly, so as to prevent their contact with stormwater.

f. Control and prevention of the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

g. Use of sediment controls or filtration to remove sediment when dewatering site and obtain all necessary permits.

h. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

i. Limiting and timing applications of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilization of designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. Training and providing instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.

m. Additional Best Management Practices in addition to those shown on the plans may be required by the Building Inspector to maintain effective stormwater management during construction activities. Any water leaving site shall be clear and running slowly at all times.

28. **Mitigation Measure 14**: Once approved, erosion and sediment control measures of the revised Erosion Control Plan shall be installed prior to beginning any site work and maintained throughout the term of grading and construction, until all disturbed areas are stabilized. Failure to install or maintain these measures will result in stoppage of construction until corrections have been made and fees paid for staff enforcement time. Revisions to the approved erosion control plan shall be prepared and signed by the engineer and submitted to the Building Inspection Section.

29. **Mitigation Measure 15**: It shall be the responsibility of the engineer of record to regularly inspect the erosion control measures for the duration of all grading remediation activities, especially after major storm events, and determine that they are functioning as designed and that proper maintenance is being performed. Deficiencies shall be immediately corrected, as determined by and implemented under the observation of the engineer of record.

30. **Mitigation Measure 16**: At the time of building permit application, the applicant shall demonstrate compliance with the measures indicated on the applicant completed EECAP Development Checklist (Attachment H) or equivalent measures~~, to the extent feasible~~. Such measures shall be shown on building plans.

31. **Mitigation Measure 17**: At the time of building permit application, the applicant shall demonstrate compliance with the following measures, ~~to the extent feasible,~~ or equivalent measures, where such measures shall be shown on building plans:

    a. BAAQMD BMP: Use alternative fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15% of the fleet.

    b. BAAQMD BMP: Use local building materials of at least 10 percent.

    c. BAAQMD BMP: Recycle or reuse at least 50% of construction waste.

32. **Mitigation Measure 18**: Any and all project-related on-street construction parking is subject to review and approval by the Project Planner and the County Department of Public Works. Prior to issuance of the building permit, the applicant shall show location of all on-street construction parking on plans submitted for the building permit application.

33. **Mitigation Measure 19**: The project shall not use a pile-driven pier foundation.

34. **Mitigation Measure 20**: Should any traditionally or culturally affiliated Native American tribe respond to the County's issued notification for consultation, such process shall be completed and any resulting agreed upon measures for avoidance and preservation of identified resources be taken prior to implementation of the project.

35. **Mitigation Measure 21**: Any inadvertently discovered tribal cultural resources shall be treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

36. **Mitigation Measure 22**: In the event that cultural, paleontological, or archeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery, County staff shall be notified, and the applicant shall be required to retain the services of a qualified archeologist for the purpose of recording, protecting, or curating the discovery as appropriate.

County Arborist

37. At the time of building permit application, please submit an updated construction entrance detail to include use of Tensar geogrid (or equivalent), per Project Arborist recommendations.

Building Inspection Section

38. A building permit is required.

Drainage Section

39. At the time of the building permit submittal, the project shall be required to comply with the County's "prescriptive" drainage review requirements and provide the following:

    a. Final Drainage Report stamped and signed by a registered Civil Engineer.

    b. Final Grading and Drainage Plan stamped and signed by a registered Civil Engineer depicting a storage and metering stormwater retention system and subdrain system(s) consistent with the requirements in the County's current Drainage Manual.

    c. Final C.3 and C.6 Development Review Checklist.

Geotechnical Section

40. In plans submitted for the building permit application, the project design team shall demonstrate close coordination with the Project Geotechnical Consultant in the design of proposed foundations, retaining walls, and drainage improvements.

41. An updated geotechnical report with supplemental recommendations, design criteria, and supporting data, as appropriate, should be submitted at the time of building permit application for final peer review along with project plans.

42. In plans submitted for the building permit application, project design and final plans should incorporate anticipated geotechnical recommendations and design criteria to mitigate site constraints as identified by the Project Geotechnical Consultant.

San Mateo County Fire Department

All fire conditions and requirements must be incorporated into your building plans, (see attached conditions) prior to building permit issuance. It is your responsibility to notify your contractor, architect and engineer of these requirements

43. Add Note to plans: New residential buildings shall have internally illuminated address numbers contrasting with the background so as to be seen from the public way fronting the building. The letters/numerals for permanent address signs shall be 4 inches in height with a minimum 1/2-inch stroke. Residential address numbers shall be at least 6 feet above the finished surface of the driveway. Where buildings are located remotely to the public roadway, additional signage at the driveway/roadway entrance leading to the building and/or on each individual building shall be required. This remote signage shall consist of a 6 inch by 18 inch green reflective metal sign with 3 inch reflective Numbers/ Letters similar to Hy-Ko 911 or equivalent. (TEMPORARY ADDRESS NUMBERS SHALL BE POSTED PRIOR TO COMBUSTIBLES BEING PLACED ON SITE).

44. Vegetation Management (LRA) – Add note to plans: A fuel break of defensible space is required around the perimeter of all structures to a distance of not less than 30 feet and may be required to a distance of 100 feet or to the property line. This is neither a requirement nor an authorization for the removal of living trees. Trees located within the defensible space shall be pruned to remove dead and dying portions, and limbed up 6 feet above the ground. New trees planted in the defensible space shall be located no closer than 10 feet to adjacent trees when fully grown or at maturity. Remove that portion of any existing trees, which extends within 10 feet of the outlet of a chimney or stovepipe or is within 5 feet of any structure. Maintain any tree adjacent to or overhanging a building free of dead or dying wood.

45. Add Note to plans: The building is in a Very High Fire Hazard Severity Zone and will require a Class A roof.

46. Add Note to plans: Smoke alarms and carbon monoxide detectors shall be installed in accordance with the California Building and Residential Codes. As per the California Building Code, and State Fire Marshal regulations, the applicant is required to install State Fire Marshal approved and listed smoke detectors which are hard wired, interconnected, and have battery backup. These detectors are required to be placed in each new and recondition sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. In existing sleeping rooms, areas may have battery powered smoke alarms. A minimum of one detector shall be placed on each floor. Smoke detectors shall be tested and approved prior to the building final. Date of installation must be added to exterior of the smoke alarm and will be checked at final. Smoke alarms to be installed per manufactures instruction and NFPA 72.

47. Add Note to plans: Escape or rescue windows shall have a minimum net clear openable area of 5.7 sq. ft., 5.0 sq. ft. allowed at grade. The minimum net clear openable height dimension shall be 24 inches. The net clear openable width dimension shall be 20 inches. Finished sill height shall be not more than 44 inches above the finished floor. (CFC 2019 section 1030.2).

48. Identify rescue windows in each bedroom and verify that they meet all requirements. Add this to plans.

49. A plan and profile of the driveway/ roadway will be needed. Add to the plans.

50. Add Note to plans: Dead end emergency access exceeding 150 feet shall be provided with width and turnaround provisions meeting California Fire Code Appendix D.

51. Add Note to plans: Fire apparatus access roads to be an approved all-weather surface. Grades 15% or greater to be surfaced w/ asphalt, or brushed concrete. Grades 15 % or greater shall be limited to 150 feet in length with a minimum of 500 feet between the next section. For roads approved less than 20 feet, 20 feet wide turnouts shall be on each side of 15% or greater section. No grades over 20 percent. (Plan and profile required) CFC 503.

52. A Knox padlock or key switch will be required if there is limited access to property. CFC 506.1. For application and instructions please contact Smcfdfiremarshal@fire.ca.gov, if you need further assistance, please contact the County Fire Department at 650/726-5213.

53. Gates shall be a minimum of 2 feet wider than the access road/driveway they serve. Overhead gate structures shall have a minimum of 15 feet of vertical clearance. Locked gates shall be provided with a Knox Box or Knox Padlock. Electric gates shall have a Knox Key Switch. Electric gates shall automatically open during power failures. CFC 503.6, 506.

54. Add Note to plans: Fire Hydrant: Due to the size of the structure (over 3600 sq. ft.), as per 2019 CFC, Appendix B and C, an approved fire hydrant (Clow 960) shall be located within 500 feet of the proposed single-family dwelling unit measured by way of drivable access with a minimum fire flow of 875 per minute at 20 pounds per square inch. Contact the local purveyor for water flow details.

55. Show location of fire hydrant on a site plan. A fire hydrant is required within 500 feet of the building and flow a minimum of 875 gpm at 20 psi. This information is to be verified by the water purveyor in a letter initiated by the applicant and sent to San Mateo County Fire/CAL Fire. If there is not a hydrant within 500 feet with the required flow, one will have to be installed at the applicant's expense.

56. Add Note to plans: Automatic Fire Sprinkler System: (Fire Sprinkler plans will require a separate permit). The applicant is required to install an automatic fire sprinkler system throughout the proposed or improved dwelling and garage. All attic access locations will be provided with a pilot head on a metal upright. Sprinkler coverage shall be provided throughout the residence to include all bathrooms, garages, and any area used for storage. The only exception is small linen closets less than 24 sq. ft. with full depth shelving. The plans for this system must be submitted to the San Mateo County Planning and Building Department. A building permit will not be issued until plans are received, reviewed and approved. Upon submission of plans, the County will forward a complete set to the County Fire Department for review.

57. Installation of underground sprinkler pipe shall be flushed and visually inspected by Fire District prior to hook-up to riser. Any soldered fittings must be pressure tested with trench open. Please call the San Mateo County Fire Marshal's office to schedule an inspection.

58. Exterior bell: is required to be wired into the required flow switch on your fire sprinkler system.

59. Add note to the title page that the building will be protected by an automatic fire sprinkler system.

Department of Public Works

60. Prior to the issuance of the building permit, the applicant shall submit a driveway "Plan and Profile," to the Department of Public Works, showing the driveway access to the parcel (garage slab) complying with County Standards for driveway slopes (not to exceed 20%) and to County Standards for driveways (at the property line) being the same elevation as the center of the access roadway. When appropriate, as determined by the Department of Public Works, this plan and profile shall be prepared from elevations and alignment shown on the roadway improvement plans. The driveway plan shall also include and show specific provisions and details for both the existing and the proposed drainage patterns and drainage facilities.

61. No proposed construction work within the County right-of-way shall begin until County requirements for the issuance of an encroachment permit, including review of the plans, have been met and an encroachment permit issued. Applicant shall contact a Department of Public Works Inspector 48 hours prior to commencing work in the right-of-way.

62. Prior to the issuance of the Building Permit, the applicant will be required to provide payment of "roadway mitigation fees" based on the square footage (assessable space) of the proposed building per Ordinance No. 3277.

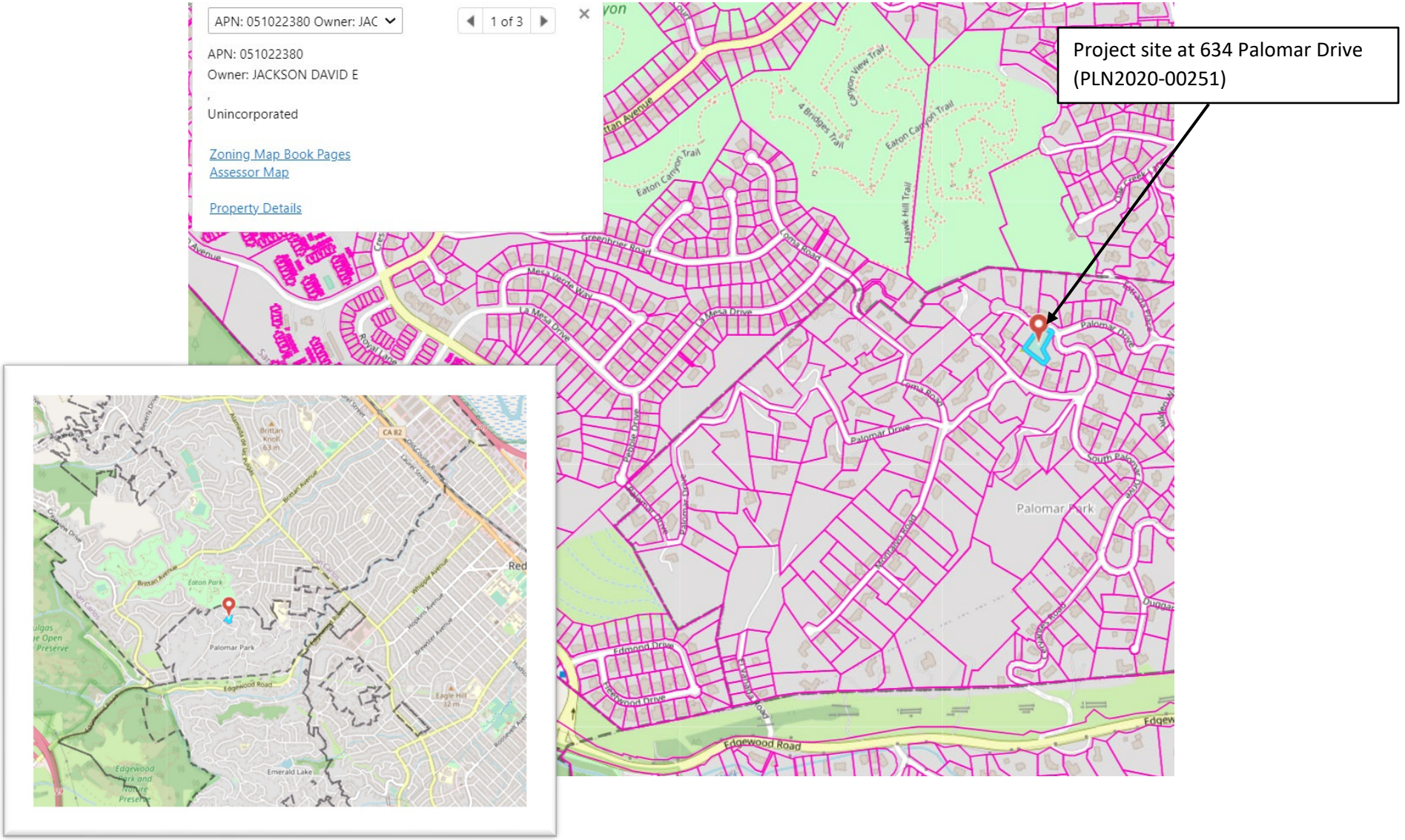
63. Should the access shown on the plans go through neighboring properties, the applicant shall provide documentation that "ingress and egress" easements exist providing for this access, prior to issuance of planning permit.

County Environmental Health Services

64. At the building permit application stage, the applicant shall submit plans consistent with the On-site Wastewater Treatment System (OWTS) design that has been reviewed and preliminarily approved by Environmental Health Services.

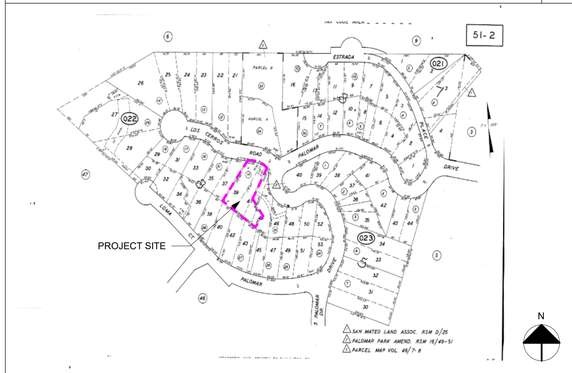
CML:mda – CMLHH0040_WMU.DOCX

ATTACHMENT B – VICINITY MAP

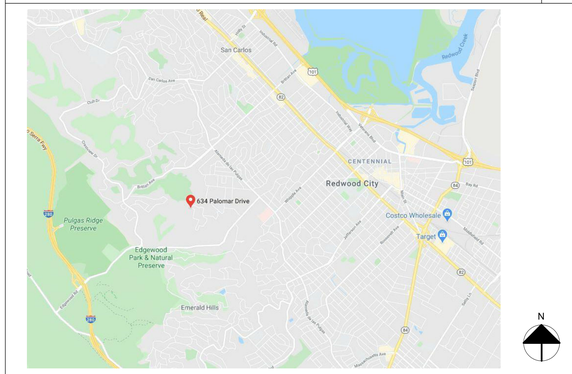


NEW RESIDENCE AT
634 PALOMAR DRIVE
REDWOOD CITY, CA 94062

PARCEL MAP 1



VICINITY MAP 2



SHEET INDEX 3

CODE COMPLIANCE 4

APPLICABLE CODES
2019 CALIFORNIA BUILDING CODE
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE
2019 CALIFORNIA ELECTRICAL CODE
2019 CALIFORNIA MECHANICAL CODE
2019 CALIFORNIA PLUMBING CODE
2019 CALIFORNIA FIRE CODE
2019 CALIFORNIA ENERGY CODE
2019 CALIFORNIA RESIDENTIAL CODE
REDWOOD CITY MUNICIPAL CODE

CODE SUMMARY

OCCUPANCY:	R3/U
OCCUPANT LOAD:	200 GROSS
TYPE OF CONSTRUCTION:	V-B
FIRE SUPPRESSION:	SPRINKLED
OCCUPANCY SEPARATION:	1-HOUR
HEIGHT MAXIMUM:	28'-0"
ALLOWABLE FLOOR AREA RATIO:	5,036.73 SF
ALLOWABLE COVERAGE:	5,436.73 SF

DEFFERED SUBMITTALS
- POOL
- PRE-MANUFACTURED GUARDRAILS & HANDRAILS
- PRE-MANUFACTURED STAIRWAY
- POTABLE WATER
- GAS LINE DIAGRAM
- LANDSCAPING
- FIRE SUPPRESSION SYSTEM
  - THE BUILDING SHALL BE PROTECTED BY AN AUTOMATIC FIRE SPRINKLER SYSTEM.
- FIRE ALARM SYSTEM

PROJECT TEAM 5

OWNERS
634 PALOMAR DRIVE
REDWOOD CITY, CA 94062
CONTACT: ANUSHA THALAPANENI
DAVID JACKSON

PROJECT MANAGER
M DESIGNS ARCHITECTS
4131 W. EL CAMINO REAL, STE 200
PALO ALTO, CA 94306
CONTACT: MAURITS A.V. DE GANS
PHONE: 650.565.9036 x. 109
CELL: 650.946.6490
EMAIL: maurits@mdesignsarchitects.com

ARCHITECT
M DESIGNS ARCHITECTS
4131 W. EL CAMINO REAL, STE 200
PALO ALTO, CA 94306
CONTACT: ALPHEUS W. JESSUP
PHONE: 650.565.9036
FAX: 949.625.7869
EMAIL: ajw@mdesignsarchitects.com

SURVEYOR
GIULIANI & KULL, INC.
4980 STEVENS CREEK BLVD, STE 205
SAN JOSE, CA 95129
CONTACT: MARK HELTON
PHONE: 408.615.4000
EMAIL: mhelton@gkengineers.com

CIVIL ENGINEER
LEA & BRAZE ENGINEERING, INC.
1723 HAMILTON AVENUE, STE 101
SAN JOSE, CA 95125
CONTACT: PETE CARLINO
PHONE: 510.887.4086 x.117
EMAIL: pcarlino@leabraze.com

LANDSCAPE
CONTACT: YANIV SHMELZER
PHONE: 408.702.5141
EMAIL: yaniv@visiontocompletion.com

GENERAL CONTRACTOR
CONTACT: TBD
PHONE:
EMAIL:

GEOTECHNICAL SERVICE
GEOSPHERE CONSULTANTS, INC.
CONTACT: JOEL BALDWIN
PHONE: 650.557.0262
EMAIL: earthinvestigations@comcast.net

ARBORIST
TREE MANAGEMENT EXPERTS
3109 SACRAMENTO STREET
SAN FRANCISCO, CA 94115
CONTACT: ROY C. LEGGITT, III
PHONE: 415.921.3610
EMAIL: RCL3@mindspring.com

PROJECT DATA TABLES 6

ZONING SUMMARY

ZONE:	R-1,S-91 COMBINING DISTICT, DR - PALOMAR PARK
APN:	051-022-380
FLOOD ZONE:	X
PUBLIC R.O.W.:	NA
CONFORMITY:	VACANT LOT
LOT DIMENSIONS:	+/- 18,122 SF (VERIFY SURVEY)
SCOPE OF WORK:	NEW RESIDENCE ON A VACANT LOT BASEMENT + TWO-STORIES AND OUTDOOR SWIMMING POOL

LOT AREA SUMMARY

DESCRIPTION	EXISTING	PROPOSED	ALLOWED
FLOOR AREA RATIO	NA	4873.00 SF	5036.73 SF
LOT COVERAGE	NA	3131.00 SF	5436.6 SF
LANDSCAPE AREA	NA	####SF	####SF

FAR BREAKDOWN	EXISTING	PROPOSED	ALLOWED
BASEMENT	N/A	1041.00 SF	
FIRST FLOOR	N/A	2491.00 SF	
SECOND FLOOR	N/A	1340.00 SF	
TOTAL	N/A	5034.00 SF	5036.73 SF

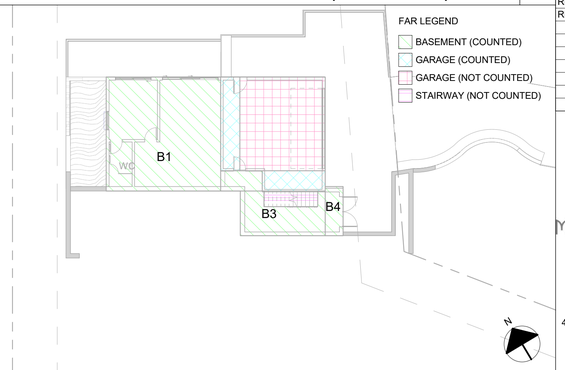
HEIGHT			
DESCRIPTION	EXISTING	PROPOSED	ALLOWED
HEIGHT	NA	27'-2"	28'-0"
DAYLIGHT PLANE	NA	20'-0" 45d	20'-0" 45d

SETBACK LINES			
DESCRIPTION	EXISTING	PROPOSED	ALLOWED
FRONT	NA	61'-10"	20'-0"
REAR	NA	50'-1"	20'-0"
LEFT SIDE	NA	15'-8"	10'-0"
RIGHT SIDE	NA	10'-0"	10'-0"

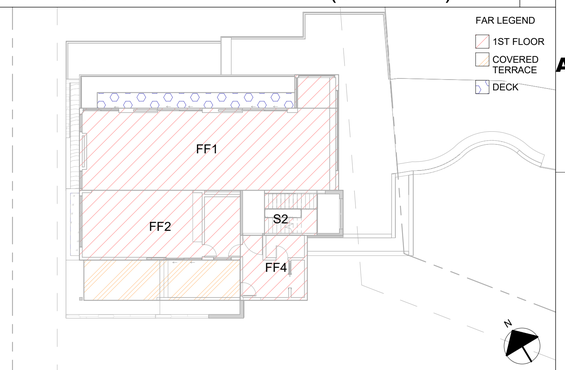
PARKING SUMMARY			
DESCRIPTION	EXISTING	PROPOSED	REQUIRED
ENCLOSED PARKING	NA	2	2
OPEN PARKING OR CARPORT	NA	1	1
EV CHARING STATIONS	NA	2	NA

DRIVEWAY			
DESCRIPTION	EXISTING	PROPOSED	ALLOWED
NUMBER OF CURB CUTS	NA	NA	
CURB CUT WIDTH	NA	NA	
DRIVEWAY WIDTH	NA	16'-0"	
DRIVEWAY LENGTH	NA	10'-0"	

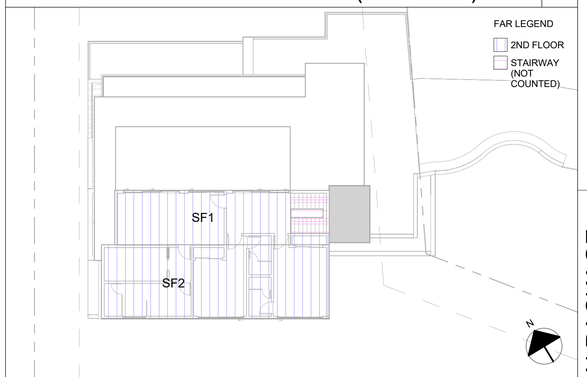
FAR - BASEMENT DIAGRAM (SEE A1.2) 7



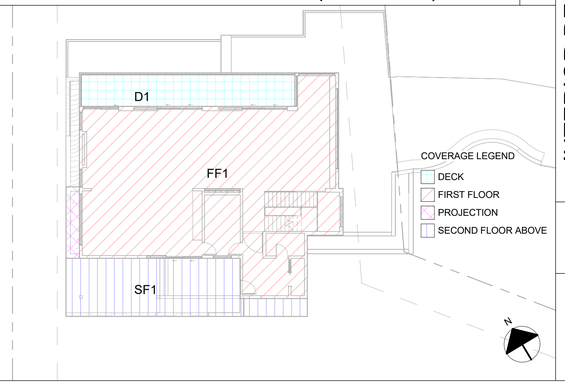
FAR - 1ST FLOOR DIAGRAM (SEE A1.2) 8



FAR - 2ND FLOOR DIAGRAM (SEE A1.2) 9



LOT COVERAGE DIAGRAM (SEE A1.3) 10



Description	Date
REVISION 1	12/18/2020
REVISION 3	12/20/2021
REVISION 4	11/17/2022

M DESIGNS ARCHITECTS
4131 WEST EL CAMINO REAL, SUITE 200, PALO ALTO CA 94306

www.mdesignsarchitects.com
Email: info@mdesignsarchitects.com
Phone: 650-565-9036
Fax: 949-625-7869

ATTACHMENT C

NEW RESIDENCE AT
634 PALOMAR DRIVE
REDWOOD CITY, CA 94062

INTERIOR DESIGN PACKAGE

TITLE SHEET

12/12/2022

T0.1

San Mateo County

Planning and Building Department

Planning Permit Application Form

455 County Center, 2nd Floor • Redwood City CA 94063
Mail Drop: PLN 122 • TEL (650) 363-4161 • FAX (650) 363-4849
www.co.sanmateo.ca.us/planning

PLN:

BLD:

Applicant/Owner Information

Applicant: Maurits de Gans

Mailing Address: 4131 W. El Camino Real Suite 200.

Palo Alto, CA Zip: 94306

Phone,W: 6505659036 H:

E-mail Address: maurits@mdesignsarchitects.com FAX:

Name of Owner (1): Anusha Thalapaneni	Name of Owner (2): David Jackson
Mailing Address: 634 Palomar Drive	Mailing Address: 634 Palomar Drive
Redwood City, CA	Redwood City, CA
Zip: 94062	Zip: 94062
Phone,W: 6507960800	Phone,W: 6502239468
H:	H:
E-mail Address: athalapa@gmail.com	E-mail Address: djackson52@gmail.com

Project Information

Project Location (address): 634 Palomar Drive, Redwood City, CA

Zoning: R-1/S-91/DR

Assessor's Parcel Numbers: 51 — 22 — 380

Parcel/lot size: 18,295 SF (Square Feet)

List all elements of proposed project: (e.g. access, size and location, primary and accessory structures, well, septic, tank)

Shared access driveway on existing easement. Primary 4269 sf residence with 4 bedrooms, 4 bathrooms, and pool incorporated into footprint. Septic field and tank behind house.

Describe Existing Site Conditions/Features (e.g. topography, water bodies, vegetation):

Existing site is moderately sloped vacant lot with natural vegetation including healthy trees and native grasses.

Describe Existing Structures and/or Development:

Vacant lot

Signatures

We hereby certify that the information stated above and on forms, plans and other materials submitted herewith in support of the application is true and correct to the best of our knowledge. It is our responsibility to inform the County of San Mateo through our assigned project planner of any changes to information represented in these submittals.

Owner's signature: Anusha Thalapaneni

Owner's signature: David Jackson

Applicant's signature:

County of San Mateo

Environmental Information Disclosure Form

Planning and Building Department

PLN

BLD

Project Address: 634 Palomar Drive
Redwood City, CA

Assessor's Parcel No.: 51 — 22 — 380

Zoning District: R-1/S-91/DR

Name of Owner: Anusha Thalapaneni & David Jack
Address: 634 Palomar Drive
Redwood City, CA Phone:

Name of Applicant: Maurits de Gans
Address: 4131 W. El Camino Real Suite 200
Palo Alto, CA Phone: 6505659036

Existing Site Conditions

Parcel size: 18,295

Describe the extent and type of all existing development and uses on the project parcel, including the existence and purpose of any easements on the parcel, and a description of any natural features on the project parcel (i.e. steep terrain, creeks, vegetation). Existing property is a vacant lot in Palomar Park region of SMC. 12' easement provides access from the south-

Existing property is a vacant lot in Palomar Park region of SMC. 12' easement provides access from the south-east. Scattered trees noted in Arborist report amongst native grasses.

Environmental Review Checklist

1. California Environmental Quality Act (CEQA) Review

Yes	No	Will this project involve:
☐	■	a. Addition to an existing structure > 50% of the existing area OR > 2,500 sq. ft?
☐	■	b. Construction of a new multi-family residential structure having 5 or more units?
☐	■	c. Construction of a commercial structure > 2,500 sq.ft?
■	☐	d. Removal of mature tree(s) (≥ 6" d.b.h. in Emerald Lake Hills area or ≥ 12" d.b.h. in any residential zoning district)? If yes, how many trees to be removed? 3
■	☐	e. Land clearing or grading? If yes, please state amount in cubic yards (c.y.): Excavation : _____ c.y. Fill: _____ c.y.
☐	■	f. Subdivision of land into 5 or more parcels?
☐	■	g. Construction within a State or County scenic corridor?
☐	■	h. Construction within a sensitive habitat?
☐	■	i. Construction within a hazard area (i.e. seismic fault, landslide, flood)?
☐	■	j. Construction on a hazardous waste site (check with Co. Env. Health Division)?

Please explain all "Yes" answers:

Home is placed on site to minimize disturbing natural trees, footprint encroaches on one mature Coast Live Oak, this placement preserves majority of trees on site. Septic field requires area occupied by 2 Tasmanian Blue Gum trees in fair condition. Slope will be graded minimally to allow for footprint of building at least sloped area of site.

Signature required on reverse →

2. National Marine Fisheries Rule 4(d) Review

Yes	No	Will the project involve:
☐	■	a. Construction outside of the footprint of an existing, legal structure?
☐	■	b. Exterior construction within 100-feet of a stream?
☐	■	c. Construction, maintenance or use of a road, bridge, or trail on a stream bank or unstable hill slope?
☐	■	d. Land-use within a riparian area?
☐	■	e. Timber harvesting, mining, grazing or grading?
☐	■	f. Any work inside of a stream, riparian corridor, or shoreline?
☐	■	g. Release or capture of fish or commerce dealing with fish?

Please explain any "Yes" answers:

3. National Pollutant Discharge Elimination System (NPDES) Review

Yes	No	Will the project involve:
☐	■	a. A subdivision or Commercial / Industrial Development that will result in the addition or replacement of **10,000 sq. ft.** or more of impervious surface? If yes, Property Owner may be required to implement appropriate source control and site design measures and to design and implement stormwater treatment measures, to reduce the discharge of stormwater pollutants. Please consult the Current Planning Section for necessary forms and both construction and post-construction requirements.
☐	■	b. Land disturbance of **1 acre** or more of area? If yes, Property Owner must file a Notice of Intent (NOI) to be covered under the statewide General Construction Activities Storm Water Permit (General Permit) prior to the commencement of construction activity. Proof of coverage under State permit must be demonstrated prior to the issuance of a building permit.

Certification

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and the facts, statements and information presented are true and correct to the best of my knowledge and belief. **If any of the facts represented here change, it is my responsibility to inform the County.**

Signed: Date: July 12, 2020

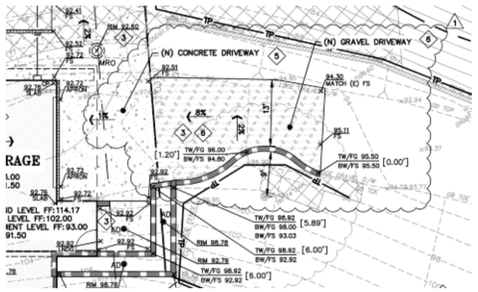
(Applicant may sign)

DATE: 12/10/2020

County of San Mateo
Planning & Building Department
455 County Center, 2nd Floor
Redwood City, CA 94063

To Whom It May Concern,

As the owner of 636 Palomar Drive Redwood City (unincorporated San Mateo County) We are aware and approve of the proposed development at 634 Palomar Drive and the work proposed to encroach onto our property. This work as we understand it will include the construction of a new retaining wall and grading of the roadway along our western property line. The retaining wall adjacent to the driveway has been revised from its original proposed location to help maintain the heath of the existing 14" Oak tree. Below is an image of the proposed work we approve of to be conducted on our property at 636 Palomar Drive.



Sincerely,

June 29, 2020

San Mateo County Planning Department
455 County Center
Redwood City, California 94063
Attn: Camille Leung -clueng@smcgov.org

Subject: **Letter of Concurrence**
Regarding Property: 634 Palomar Drive
Redwood City, California 94063
County's Permit #: Unknown

To Whom it May Concern:

We, Anusha Thalapaneni & David Jackson, hereby authorize M Designs Architects to take over the authority of information and relevant documents regarding our property at 634 Palomar Drive, Redwood City, CA in an unincorporated area of San Mateo County. They will be responsible for collecting official documents, receiving them, and signing papers related to Planning and Building Department Applications. This right is effective from June 29, 2020.

Very truly yours,

DocuSigned by: Anusha Thalapaneni — Anusha Thalapaneni — July 9, 2020

DocuSigned by: David Jackson — David Jackson — July 9, 2020

Description	Date

M DESIGNS ARCHITECTS
4131 WEST EL CAMINO REAL, SUITE 200, PALO ALTO CA 94306

www.mdesignsarchitects.com
Email: info@mdesignsarchitects.com
Phone: 650-565-9036
Fax: 949-625-7869

NEW RESIDENCE AT
634 PALOMAR DRIVE
REDWOOD CITY, CA 94062

INTERIOR DESIGN PACKAGE

EXHIBITS

12/12/2022

T0.2

A. GENERAL NOTES

1. ALL HARDWOOD FLOORING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST NOFMA SPECIFICATIONS AND RECOMMENDATIONS.
2. ALL CERAMIC OR STONE TILE WORK TO BE INSTALLED IN ACCORDANCE WITH THE LATEST TILE COUNCIL OF AMERICA SPECIFICATIONS AND RECOMMENDATIONS.
3. WALL FRAMING - ALL WALLS HOUSING PLUMBING PIPES SHALL BE 2X6 STUDS MIN. @ 16" O.C. ALL EXTERIOR WALLS OVER 10-FEET IN HEIGHT TO BE 2X6 STUDS @ 16" O.C.
4. INSULATION PER TITLE 24.
5. DISPOSAL OF CONSTRUCTION AND DEMOLITION DEBRIS. FOR ALL DEBRIS BOXES, CONTACT RECOLOGY. USING ANOTHER HAULER MAY VIOLATE CITY CODE AND RESULT IN CODE ENFORCEMENT ACTION.
6. THIS PROJECT MUST COMPLY WITH THE CITY'S CONSTRUCTION AND DEMOLITION ORDINANCE.

B. GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL DEMOLISH PER CBC CHAPTER 33 AND/OR LOCAL CODE REQUIREMENTS. DEMOLISH ONLY THOSE AREAS AFFECTED BY WORK.
2. CONTRACTOR SHALL INFORM ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
3. CONTRACTOR SHALL PROVIDE PROPER SHORING OF EXISTING STRUCTURE(S) AS REQUIRED FOR CBC AND/OR LOCAL CODE PRIOR TO ROOF AND WALL REMOVAL.
4. CONTRACTOR SHALL VERIFY WITH PLAN(S) AND FIELD INSPECTS ALL WINDOWS, FLOORS AND WALLS TO BE REMOVED.
5. CONTRACTOR SHALL FIELD VERIFY EXISTING ELECTRICAL, MECHANICAL AND PLUMBING AND REMOVE AS REQUIRED.
6. ALL HAZARDOUS MATERIALS MUST BE DISPOSED OF PER LOCAL, STATE AND FEDERAL REGULATIONS.
7. CONTRACTOR SHALL COVER AND PROTECT EXISTING FLOORING, WALLS, ETC. THAT ARE TO REMAIN.
8. CONTRACTOR SHALL REUSE EXISTING WATER LINES AND SANITARY SEWER LINES UNDER EXISTING FLOOR IF AT ALL POSSIBLE.
9. CONTRACTOR SHALL PROVIDE THE ARCHITECT IN WRITING A DETAILED OUTLINE OF DEMOLITION PROCEDURES PRIOR TO COMMENCEMENT OF DEMOLITION WORK.
10. CONTRACTOR SHALL LEGALLY DISPOSE OF DEMOLISHED MATERIAL AND EQUIPMENT OFF-SITE.
11. BIDDERS MUST VISIT THE SITE AND VERIFY CONDITIONS BEFORE SUBMITTING BIDS.
12. ALL STATIONARY NOISE-GENERATING EQUIPMENT SHALL BE LOCATED AS FAR AWAY AS POSSIBLE FROM NEIGHBORING PROPERTY LINES.
13. NO WORK SHALL COMMENCE ON THE JOB SITE PRIOR TO CONTRACTOR VERIFYING ALLOWABLE CONSTRUCTION HOURS WITH LOCAL AGENCY.
14. DUST PROOF CHUTES SHALL BE USED FOR LOADING CONSTRUCTION DEBRIS ONTO TRUCKS.
15. STOCKPILES OF DEBRIS, SOIL, SAND, OR MATERIAL THAT COULD BE BLOWN BY THE WIND SHALL BE WATERED OR COVERED.
16. SWEEP DAILY ALL PAVED ACCESS ROAD'S, PARKING AREAS AND STAGING AREA AT THE CONSTRUCTION SITE.
17. CONTRACTOR TO COMPLY WITH THE CITY'S CONSTRUCTION AND DEMOLITION DEBRIS RECYCLING AND DIVERSION PROGRAM IF APPLICABLE.
18. CONTRACTOR SHALL VERIFY W/ OWNER, PRIOR TO DEMOLITION, IF ANY ITEMS ARE TO BE SALVAGED.

CALGREEN NOTES

C. CGBC 4.106 - SITE DEVELOPMENT

1. CGBC 4.106.2.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION - WHERE STORM WATER IS CONVEYED TO A PUBLIC DRAINAGE SYSTEM, COLLECTION POINT, GUTTER OR SIMILAR DISPOSAL METHOD, WATER SHALL BE FILTERED BY USE OF A BARRIER SYSTEM, WATTLE OR OTHER METHOD APPROVED BY THE ENFORCING AGENCY.
2. CGBC 4.106.2.3 DISPLACED TOPSOIL SHALL BE STOCKPILED FOR REUSE IN A DESIGNATED AREA AND COVERED OR PROTECTED FROM EROSION.
3. CGBC 4.106.3 GRADING AND PAVING - CONSTRUCTION PLANS SHALL INDICATE HOW THE SITE GRADING OR DRAINAGE SYSTEM WILL MANAGE ALL SURFACE WATER FLOWS TO KEEP WATER FROM ENTERING BUILDINGS. EXAMPLES OF METHODS TO MANAGE SURFACE WATER INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: 1.SWALES, 2.WATER COLLECTION AND DISPOSAL SYSTEMS, 3.FRENCH DRAINS, 4.WATER RETENTION GARDENS, 5.OTHER WATER MEASURES WHICH KEEP SURFACE WATER AWAY FROM BUILDINGS AND AID IN GROUNDWATER RECHARGE.
4. CGBC 4.106.4.1 - NEW ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES WITH ATTACHED PRIVATE GARAGES FOR EACH DWELLING UNIT, INSTALL A LISTED RACEWAY TO ACCOMMODATE A DEDICATED 208/240-VOLT BRANCH CIRCUIT. THE RACEWAY SHALL NOT BE LESS THAN TRADE SIZE 1 (NOMINAL 1-INCH INSIDE DIAMETER). THE RACEWAY SHALL ORIGINATE AT THE MAIN SERVICE OR SUBPANEL AND SHALL TERMINATE INTO A LISTED CABINET, BOX OR OTHER ENCLOSURE IN CLOSE PROXIMITY TO THE PROPOSED LOCATION OF AN EV CHARGER. RACEWAYS ARE REQUIRED TO BE CONTINUOUS AT ENCLOSED, INACCESSIBLE OR CONCEALED AREAS AND SPACES. THE SERVICE PANEL AND/OR SUBPANEL SHALL PROVIDE CAPACITY TO INSTALL A 40-AMPERE MINIMUM DEDICATED BRANCH CIRCUIT AND SPACE(S) RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE.

D. CGBC SECTION 4.303 - INDOOR WATER USE

1. CGBC 4.303.1.1 WATER CLOSETS - THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR TANK-TYPE TOILETS.
2. CGBC 4.303.1.2 URINALS - THE EFFECTIVE FLUSH VOLUME OF WALL-MOUNTED URINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH. THE EFFECTIVE FLUSH VOLUME OF ALL OTHER URINALS SHALL NOT EXCEED 0.5 GALLONS PER FLUSH.
3. CGBC 4.303.1.3.1 SINGLE SHOWERHEAD SHOWERHEADS - SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE AT 80 PSI. SHOWERHEADS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR SHOWERHEAD.
4. CGBC 4.303.1.3.2 MULTIPLE SHOWERHEADS SERVING ONE SHOWER - WHEN A SHOWER IS SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL SHOWERHEADS AND/OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER OUTLET TO BE IN OPERATION AT A TIME.
5. CGBC 4.303.1.4.1 RESIDENTIAL LAVATORY FAUCETS - THE MAXIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT EXCEED 1.2 GALLONS PER MINUTE AT 60 PSI. THE MINIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT BE LESS THAN 0.8 GALLONS PER MINUTE AT 20 PSI.
6. CGBC 4.303.1.4.4 KITCHEN FAUCETS - THE MAXIMUM FLOW RATE OF KITCHEN FAUCETS SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 60 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE THE FLOW ABOVE THE MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT 60 PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI.

E. CGBC SECTION 4.304 - OUTDOOR WATER USE

CGBC 4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS - AFTER DECEMBER 1, 2015, NEW RESIDENTIAL DEVELOPMENTS WITH AN AGGREGATE LANDSCAPE AREA EQUAL TO OR GREATER THAN 500 SQUARE FEET SHALL COMPLY WITH ONE OF THE FOLLOWING OPTIONS: 1. A LOCAL WATER EFFICIENT LANDSCAPE ORDINANCE OR THE CURRENT CALIFORNIA DEPARTMENT OF WATER RESOURCES' MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO), WHICHEVER IS MORE STRINGENT; OR 2. PROJECTS WITH AGGREGATE LANDSCAPE AREAS LESS THAN 2,500 SQUARE FEET MAY COMPLY WITH THE MWELO'S APPENDIX D PRESCRIPTIVE COMPLIANCE OPTION.

F. CGBC 4.406 - ENHANCED DURABILITY AND REDUCED MAINTENANCE

CGBC 4.406.1 RODENT PROOFING - ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN SOLE/BOTTOM PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR A SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY.

G. CGBC 4.408 - CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

1. CGBC 4.408.1 CONSTRUCTION WASTE MANAGEMENT - RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65 PERCENT OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE IN ACCORDANCE WITH EITHER SECTION 4.408.2, 4.408.3 OR 4.408.4, OR MEET A MORE STRINGENT LOCAL CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE.
2. CGBC 4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN - SUBMIT A CONSTRUCTION WASTE MANAGEMENT PLAN IN CONFORMANCE WITH ITEMS 1 THROUGH 5. THE CONSTRUCTION WASTE MANAGEMENT PLAN SHALL BE UPDATED AS NECESSARY AND SHALL BE AVAILABLE DURING CONSTRUCTION FOR EXAMINATION BY THE ENFORCING AGENCY. 1. IDENTIFY THE CONSTRUCTION AND DEMOLITION WASTE MATERIALS TO BE DIVERTED FROM DISPOSAL BY RECYCLING, REUSE ON THE PROJECT OR SALVAGE FOR FUTURE USE OR SALE. 2. SPECIFY IF CONSTRUCTION AND DEMOLITION WASTE MATERIALS WILL BE SORTED ON-SITE (SOURCE-SEPARATED) OR BULK MIXED (SINGLE STREAM). 3. IDENTIFY DIVERSION FACILITIES WHERE THE CONSTRUCTION AND DEMOLITION WASTE MATERIAL WILL BE TAKEN. 4. IDENTIFY CONSTRUCTION METHODS EMPLOYED TO REDUCE THE AMOUNT OF CONSTRUCTION AND DEMOLITION WASTE GENERATED. 5. SPECIFY THAT THE AMOUNT OF CONSTRUCTION AND DEMOLITION WASTE MATERIALS DIVERTED SHALL BE CALCULATED BY WEIGHT OR VOLUME, BUT NOT BY BOTH.
3. CGBC 4.408.3 WASTE MANAGEMENT COMPANY - UTILIZE A WASTE MANAGEMENT COMPANY, APPROVED BY THE ENFORCING AGENCY, WHICH CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH SECTION 4.408.1.
4. CGBC 4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR] - PROJECTS THAT GENERATE A TOTAL COMBINED WEIGHT OF CONSTRUCTION AND DEMOLITION WASTE DISPOSED OF IN LANDFILLS, WHICH DO NOT EXCEED 3.4 POUNDS PER SQUARE FOOT OF THE BUILDING AREA SHALL MEET THE MINIMUM 65 PERCENT CONSTRUCTION WASTE REDUCTION REQUIREMENT IN SECTION 4.408.1.

H. CGBC 4.410 - BUILDING MAINTENANCE AND OPERATION

CGBC 4.410.1 OPERATION AND MAINTENANCE MANUAL - AT THE TIME OF FINAL INSPECTION, A MANUAL, COMPACT DISC, WEB-BASED REFERENCE OR OTHER MEDIA ACCEPTABLE TO THE ENFORCING AGENCY WHICH INCLUDES ALL OF THE FOLLOWING SHALL BE PLACED IN THE BUILDING: 1. DIRECTIONS TO THE OWNER OR OCCUPANT THAT THE MANUAL SHALL REMAIN WITH THE BUILDING THROUGHOUT THE LIFE CYCLE OF THE STRUCTURE. 2. OPERATION AND MAINTENANCE INSTRUCTIONS FOR THE FOLLOWING: A. EQUIPMENT AND APPLIANCES, INCLUDING WATER-SAVING DEVICES AND SYSTEMS, HVAC SYSTEMS, PHOTOVOLTAIC SYSTEMS, ELECTRIC VEHICLE CHARGERS, WATER-HEATING SYSTEMS AND OTHER MAJOR APPLIANCES AND EQUIPMENT B. ROOF AND YARD DRAINAGE, INCLUDING GUTTERS AND DOWNSPOUTS. C. SPACE CONDITIONING SYSTEMS, INCLUDING CONDENSERS AND AIR FILTERS. D. LANDSCAPE IRRIGATION SYSTEMS. E. WATER REUSE SYSTEMS. 3. INFORMATION FROM LOCAL UTILITY, WATER AND WASTE RECOVERY PROVIDERS ON METHODS TO FURTHER REDUCE RESOURCE CONSUMPTION, INCLUDING RECYCLE PROGRAMS AND LOCATIONS. 4. PUBLIC TRANSPORTATION AND/OR CARPOOL OPTIONS AVAILABLE IN THE AREA. 5. EDUCATIONAL MATERIAL ON THE POSITIVE IMPACTS OF AN INTERIOR RELATIVE HUMIDITY BETWEEN 30–60 PERCENT AND WHAT METHODS AN OCCUPANT MAY USE TO MAINTAIN THE RELATIVE HUMIDITY LEVEL IN THAT RANGE. 6. INFORMATION ABOUT WATER-CONSERVING LANDSCAPE AND IRRIGATION DESIGN AND CONTROLLERS WHICH CONSERVE WATER. 7. INSTRUCTIONS FOR MAINTAINING GUTTERS AND DOWNSPOUTS AND THE IMPORTANCE OF DIVERTING WATER AT LEAST 5 FEET AWAY FROM THE FOUNDATION. 8. INFORMATION ON REQUIRED ROUTINE MAINTENANCE MEASURES, INCLUDING, BUT NOT LIMITED TO, CAULKING, PAINTING, GRADING AROUND THE BUILDING, ETC. 9. INFORMATION ABOUT STATE SOLAR ENERGY AND INCENTIVE PROGRAMS AVAILABLE. 10. A COPY OF ALL SPECIAL INSPECTION VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY OR THIS CODE.

I. CBGC 4.503 - FIREPLACES

CGBC 4.503.1 GENERAL - ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE. ANY INSTALLED WOOD STOVE OR PELLET
STOVE SHALL COMPLY WITH U.S. EPA NEW SOURCE PERFORMANCE STANDARDS (NSPS) EMISSION LIMITS AS APPLICABLE, AND SHALL HAVE A PERMANENT
LABEL INDICATING THEY ARE CERTIFIED TO MEET THE EMISSION LIMITS. WOODSTOVES, PELLET STOVES AND FIREPLACES SHALL ALSO COMPLY WITH
APPLICABLE LOCAL ORDINANCES.

J. CBGC 4.504 - POLLUTANT CONTROL

1. CGBC 4.504.1 COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION - AT THE TIME OF ROUGH INSTALLATION, DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF WATER, DUST AND DEBRIS, WHICH MAY ENTER THE SYSTEM.
2. CGBC 4.504.2.1 ADHESIVES, SEALANTS AND CAULKS - ADHESIVES, SEALANTS AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS UNLESS MORE STRINGENT LOCAL OR REGIONAL AIR POLLUTION OR AIR QUALITY MANAGEMENT DISTRICT RULES APPLY: 1. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS, AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN TABLE 4.504.1 OR 4.504.2, AS APPLICABLE. SUCH PRODUCTS ALSO SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICHLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS, AS SPECIFIED IN SUBSECTION 2 BELOW. 2. AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN 1 POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.
3. CGBC 4.504.2.2 PAINTS AND COATINGS - ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH VOC LIMITS IN TABLE 1 OF THE ARB ARCHITECTURAL SUGGESTED CONTROL MEASURE, AS SHOWN IN TABLE 4.504.3, UNLESS MORE STRINGENT LOCAL LIMITS APPLY. THE VOC CONTENT LIMIT FOR COATINGS THAT DO NOT MEET THE DEFINITIONS FOR THE SPECIALTY COATINGS CATEGORIES LISTED IN TABLE 4.504.3 SHALL BE DETERMINED BY CLASSIFYING THE COATING AS A FLAT, NONFLAT OR NONFLAT-HIGH GLOSS COATING, BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS 4.21, 4.36, AND 4.37 OF THE 2007 CALIFORNIA AIR RESOURCES BOARD, SUGGESTED CONTROL MEASURE, AND THE CORRESPONDING FLAT, NONFLAT OR NONFLAT-HIGH GLOSS VOC LIMIT IN TABLE 4.504.3 SHALL APPLY.
4. CGBC 4.504.2.3 AEROSOL PAINTS AND COATINGS - AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC IN SECTION 94522(A)(2) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(E)(1) AND (F)(1) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520; AND IN AREAS UNDER THE JURISDICTION OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT ADDITIONALLY COMPLY WITH THE PERCENT VOC BY WEIGHT OF PRODUCT LIMITS OF REGULATION 8, RULE 49.
5. CGBC 4.504.2.4 VERIFICATION - VERIFICATION OF COMPLIANCE WITH THIS SECTION SHALL BE PROVIDED AT THE REQUEST OF THE ENFORCING AGENCY. DOCUMENTATION MAY INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING: 1. MANUFACTURER'S PRODUCT SPECIFICATION. 2. FIELD VERIFICATION OF ON-SITE PRODUCT CONTAINERS.
6. CGBC 4.504.3 CARPET SYSTEMS - ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE TESTING AND PRODUCT REQUIREMENTS OF ONE OF THE FOLLOWING: 1. CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS PROGRAM. 2. CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350.) 3. NSF/ANSI 140 AT THE GOLD LEVEL. 4. SCIENTIFIC CERTIFICATIONS SYSTEMS INDOOR ADVANTAGE™ GOLD.
7. CGBC 4.504.4 RESILIENT FLOORING SYSTEMS - WHERE RESILIENT FLOORING IS INSTALLED, AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL COMPLY WITH ONE OR MORE OF THE FOLLOWING: 1. PRODUCTS COMPLIANT WITH THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350), CERTIFIED AS A CHPS LOW-EMITTING MATERIAL IN THE COLLABORATIVE FOR HIGH PERFORMANCE SCHOOLS (CHPS) HIGH PERFORMANCE PRODUCTS DATABASE. 2. PRODUCTS CERTIFIED UNDER UL GREENGUARD GOLD (FORMERLY THE GREENGUARD CHILDREN & SCHOOLS PROGRAM). 3. CERTIFICATION UNDER THE RESILIENT FLOOR COVERING INSTITUTE (RFCI) FLOORSCORE PROGRAM. 4. MEET THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350).
8. CGBC 4.504.5 COMPOSITE WOOD PRODUCTS - HARDWOOD PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXIC CONTROL MEASURE FOR COMPOSITE WOOD (17 CCR 93120 ET SEQ.), BY OR BEFORE THE DATES SPECIFIED IN THOSE SECTIONS, AS SHOWN IN TABLE 4.504.5.

K. CGBC 4.505 INTERIOR MOISTURE CONTROL

1. CGBC 4.505.2 CONCRETE SLAB FOUNDATIONS - CONCRETE SLAB FOUNDATIONS REQUIRED TO HAVE A VAPOR RETARDER BY THE CALIFORNIA BUILDING CODE CHAPTER 19 OR CONCRETE SLAB-ON-GROUND FLOORS REQUIRED TO HAVE A VAPOR RETARDER BY THE CALIFORNIA RESIDENTIAL CODE, CHAPTER 5, SHALL ALSO COMPLY WITH THIS SECTION.
2. CGBC 4.505.2.1 CAPILLARY BREAK - A CAPILLARY BREAK SHALL BE INSTALLED IN COMPLIANCE WITH AT LEAST ONE OF THE FOLLOWING: 1. A 4-INCH-THICK (101.6 MM) BASE OF 1/2 INCH (12.7 MM) OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR RETARDER IN DIRECT CONTACT WITH CONCRETE AND A CONCRETE MIX DESIGN, WHICH WILL ADDRESS BLEEDING, SHRINKAGE, AND CURLING, SHALL BE USED. FOR ADDITIONAL INFORMATION, SEE AMERICAN CONCRETE INSTITUTE, ACI 302.2R-06. 2. OTHER EQUIVALENT METHODS APPROVED BY THE ENFORCING AGENCY. 3. A SLAB DESIGN SPECIFIED BY A LICENSED DESIGN PROFESSIONAL.
3. CGBC 4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS - BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19-PERCENT MOISTURE CONTENT. MOISTURE CONTENT SHALL BE VERIFIED IN COMPLIANCE WITH THE FOLLOWING: 1. MOISTURE CONTENT SHALL BE DETERMINED WITH EITHER A PROBE-TYPE OR CONTACT-TYPE MOISTURE METER. EQUIVALENT MOISTURE VERIFICATION METHODS MAY BE APPROVED BY THE ENFORCING AGENCY AND SHALL SATISFY REQUIREMENTS FOUND IN SECTION 101.8 OF THIS CODE. 2. MOISTURE READINGS SHALL BE TAKEN AT A POINT 2 FEET (610 MM) TO 4 FEET (1219 MM) FROM THE GRADE STAMPED END OF EACH PIECE TO BE VERIFIED. 3. AT LEAST THREE RANDOM MOISTURE READINGS SHALL BE PERFORMED ON WALL AND FLOOR FRAMING WITH DOCUMENTATION ACCEPTABLE TO THE ENFORCING AGENCY PROVIDED AT THE TIME OF APPROVAL TO ENCLOSE THE WALL AND FLOOR FRAMING.

L. CGBC 4.506 INDOOR AIR QUALITY AND EXHAUST

CGBC 4.506.1 BATHROOM EXHAUST FANS - EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING: 1. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING. 2. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL. A. HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF ≤ 50 PERCENT TO A MAXIMUM OF 80 PERCENT. B. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT. 3. A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL (I.E., BUILT-IN).

M. CGBC 4.507 ENVIRONMENTAL COMFORT

CGBC 4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN - HEATING AND AIR-CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELECTED USING THE FOLLOWING METHODS: 1. THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J—2011 (RESIDENTIAL LOAD CALCULATION), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS. 2. DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D—2014 (RESIDENTIAL DUCT SYSTEMS), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS. 3. SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S—2014 (RESIDENTIAL EQUIPMENT SELECTION) OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

N. FIRE-RESISTANT CONSTRUCTION

1. R302.6 DWELLING/GARAGE AND/OR CARPORT FIRE SEPARATION - THE GARAGE AND/OR CARPORT SHALL BE SEPARATED AS REQUIRED BY TABLE R302.6. OPENINGS IN GARAGE WALLS SHALL COMPLY WITH SECTION R302.5. ATTACHMENT OF GYPSUM BOARD SHALL COMPLY WITH TABLE R702.3.5.
2. R302.11 FIREBLOCKING - IN COMBUSTIBLE CONSTRUCTION, FIREBLOCKING SHALL BE PROVIDED TO CUT OFF BOTH VERTICAL AND HORIZONTAL CONCEALED DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE.

O. FENESTRATIONS AND GLAZING

1. CRC 308.1 IDENTIFICATION - EXCEPT AS INDICATED IN SECTION R308.1.1 EACH PANE OF GLAZING INSTALLED IN HAZARDOUS LOCATIONS AS DEFINED IN SECTION R308.4 SHALL BE PROVIDED WITH A MANUFACTURER'S DESIGNATION SPECIFYING WHO APPLIED THE DESIGNATION, DESIGNATING THE TYPE OF GLASS AND THE SAFETY GLAZING STANDARD WITH WHICH IT COMPLIES, WHICH IS VISIBLE IN THE FINAL INSTALLATION. THE DESIGNATION SHALL BE ACID ETCHED, SANDBLASTED, CERAMIC-FIRED, LASER ETCHED, EMBOSSED, OR BE OF A TYPE THAT ONCE APPLIED CANNOT BE REMOVED WITHOUT BEING DESTROYED. A LABEL SHALL BE PERMITTED IN LIEU OF THE MANUFACTURER'S DESIGNATION.
2. CRC 310.2.1 MINIMUM OPENING AREA - EMERGENCY AND ESCAPE RESCUE OPENINGS SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5.7 SQUARE FEET (0.530 M2). THE NET CLEAR OPENING DIMENSIONS REQUIRED BY THIS SECTION SHALL BE OBTAINED BY THE NORMAL OPERATION OF THE EMERGENCY ESCAPE AND RESCUE OPENING FROM THE INSIDE. THE NET CLEAR HEIGHT OPENING SHALL BE NOT LESS THAN 24 INCHES (610 MM) AND THE NET CLEAR WIDTH SHALL BE NOT LESS THAN 20 INCHES (508 MM).
3. CRC 310.2.2 WINDOW SILL HEIGHT - WHERE A WINDOW IS PROVIDED AS THE EMERGENCY ESCAPE AND RESCUE OPENING, IT SHALL HAVE THE BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44 INCHES (1118 MM) MEASURED FROM THE FLOOR; WHERE THE SILL HEIGHT IS BELOW GRADE, IT SHALL BE PROVIDED WITH A WINDOW WELL IN ACCORDANCE WITH SECTION R310.2.3.
4. ALL EXTERIOR WINDOWS SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, AND BEAR A LABEL IDENTIFYING MANUFACTURER, PERFORMANCE CHARACTERISTICS AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH AAMA/WDMA/CSA 101/I.S.2/A440.
5. ALL EXTERIOR SLIDING DOORS SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, AND BEAR A LABEL IDENTIFYING MANUFACTURER, PERFORMANCE CHARACTERISTICS AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH AAMA/WDMA/CSA 101/I.S.2/A440. EXTERIOR SIDE-HINGED DOORS SHALL BE TESTED AND LABELED AS CONFORMING TO AAMA/WDMA/CSA 101/I.S.2/A440 OR COMPLY WITH CRC R609.5

P. VENTILATION

1. CRC 408.1 VENTILATION - THE UNDER-FLOOR SPACE BETWEEN THE BOTTOM OF THE FLOOR JOISTS AND THE EARTH UNDER ANY BUILDING (EXCEPT SPACE OCCUPIED BY A BASEMENT) SHALL HAVE VENTILATION OPENINGS THROUGH FOUNDATION WALLS OR EXTERIOR WALLS. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL BE NOT LESS THAN 1 SQUARE FOOT (0.0929 M2) FOR EACH 150 SQUARE FEET (14 M2) OF UNDER-FLOOR SPACE AREA, UNLESS THE GROUND SURFACE IS COVERED BY A CLASS 1 VAPOR RETARDER MATERIAL. WHERE A CLASS 1 VAPOR RETARDER MATERIAL IS USED, THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL BE NOT LESS THAN 1 SQUARE FOOT (0.0929 M2) FOR EACH 1,500 SQUARE FEET (140 M2) OF UNDER-FLOOR SPACE AREA. ONE SUCH VENTILATING OPENING SHALL BE WITHIN 3 FEET (914 MM) OF EACH CORNER OF THE BUILDING.
2. CRC 806.2 MINIMUM VENT AREA - THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE.
3. BATHROOM EXHAUST FANS: ENERGY STAR COMPLIANT. PROVIDE 50CFM MIN INTERMITTENT AIRFLOW OR 20CFM MIN CONTINUOUS AIRFLOW. TIME SWITCH TO PROVIDE 90CFM MIN OR 5 CHANGES OF AIR PER HOUR. TERMINATE VENT THRU ROOF 3'-0"MIN FROM ANY OPERABLE FENESTRATION.
4. BATHROOM EXHAUST FAN AND WHOLE HOUSE INDOOR AIR QUALITY VENTILATION FAN. FAN SHALL BE EQUIPPED W/ 60CFM ALWAYS ON OR TIME CLOCK TO PROVIDE 1,440CF DAILY. TERMINATE VENT THRU ROOF 3'-0"MIN FROM ANY OPERABLE FENESTRATION.
5. RANGE HOOD EXHAUST: IN-WALL APPROVED DUAL WALL 26GA METAL: PROVIDE 100CFM MIN INTERMITTENT AIRFLOW OR 5 AIR CHANGES PER HOUR. TERMINATE THRU ROOF 3'-0" MIN FROM ANY OPERABLE FENESTRATION.
6. HVAC SYSTEM: DIRECT VENT, HIGH EFFICIENCY, VERTICAL DRAW. PROVIDE GAS SHUT OFF VALVE IN ACCESSIBLE LOCATION. PROVIDE FIBERGLASS DRAIN PAN, CONNECT TO SANITARY SEWER. TERMINATE VENT MIN 3'-0" FROM PROPERTY LINE OR OPERABLE FENESTRATION. FILTRATION: MERV 6 OR BETTER. PROVIDE MAKE-UP OUTSIDE AIR PER CEC 150(O) AND WHOLE HOUSE VENTILATION FAN. HVAC SHALL COMPLY W/ CGBS 4.507.2 HVAC SYSTEM INSTALLERS WILL BE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS INCLUDING DUCTS AND EQUIPMENT BY A RECOGNIZED TRAINING/CERTIFICATION PROGRAM.
7. CMC 502.2.1 ENVIRONMENTAL AIR DUCTS - ENVIRONMENTAL AIR DUCT EXHAUST SHALL TERMINATE NOT LESS THAN 3 FEET (914 MM) FROM A PROPERTY LINE, 10 FEET (3048 MM) FROM A FORCED AIR INLET, AND 3 FEET (914 MM) FROM OPENINGS INTO THE BUILDING. ENVIRONMENTAL EXHAUST DUCTS SHALL NOT DISCHARGE ONTO A PUBLIC WALKWAY.

Description	Date

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INTERIOR DESIGN PACKAGE

GENERAL NOTES

12/12/2022

T0.3

Q. ACCESS

1. CRC 408.4 ACCESS - ACCESS SHALL BE PROVIDED TO ALL UNDER-FLOOR SPACES. ACCESS OPENINGS THROUGH THE FLOOR SHALL BE A MINIMUM OF 18 INCHES BY 24 INCHES (457 MM BY 610 MM). OPENINGS THROUGH A PERIMETER WALL SHALL BE NOT LESS THAN 16 INCHES BY 24 INCHES (407 MM BY 610 MM). WHERE ANY PORTION OF THE THROUGH-WALL ACCESS IS BELOW GRADE, AN AREAWAY NOT LESS THAN 16 INCHES BY 24 INCHES (407 MM BY 610 MM) SHALL BE PROVIDED.
2. CRC 807.1 ATTIC ACCESS - BUILDINGS WITH COMBUSTIBLE CEILING OR ROOF CONSTRUCTION SHALL HAVE AN ATTIC ACCESS OPENING TO ATTIC AREAS THAT HAVE A VERTICAL HEIGHT OF 30 INCHES (762 MM) OR GREATER OVER AN AREA OF NOT LESS THAN 30 SQUARE FEET (2.8 M2). THE VERTICAL HEIGHT SHALL BE MEASURED FROM THE TOP OF THE CEILING FRAMING MEMBERS TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS.THE ROUGH-FRAMED OPENING SHALL BE NOT LESS THAN 22 INCHES BY 30 INCHES (559 MM BY 762 MM) AND SHALL BE LOCATED IN A HALLWAY OR OTHER READILY ACCESSIBLE LOCATION. WHERE LOCATED IN A WALL, THE OPENING SHALL BE NOT LESS THAN 22 INCHES WIDE BY 30 INCHES HIGH (559 MM WIDE BY 762 MM HIGH). WHERE THE ACCESS IS LOCATED IN A CEILING, MINIMUM UNOBSTRUCTED HEADROOM IN THE ATTIC SPACE SHALL BE 30 INCHES (762 MM) AT SOME POINT ABOVE THE ACCESS MEASURED VERTICALLY FROM THE BOTTOM OF CEILING FRAMING MEMBERS. SEE THE CALIFORNIA MECHANICAL CODE FOR ACCESS REQUIREMENTS WHERE MECHANICAL EQUIPMENT IS LOCATED IN ATTICS.

R. KITCHEN AND BATHROOM

1. DISHWASHER: PROVIDE DIRECT CONNECTION TO WASTE WATER LINE OR GARBAGE DISPOSAL OR AN APPROVED AIR GAP FITTING ON THE DISCHARGE SIDE OF THE DISHWASHER MACHINE PER CPC 807.3.
2. GAS FIRED COOKTOP: PROVIDE GAS SHUT OFF VALVE IN APPROVED ACCESSIBLE LOCATION.
3. WATER CLOSETS: 30"W X 24"D CLEAR SPACE FRONT OF TOILET.
4. R307.2 - BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6' ABOVE THE FLOOR.
5. R308.4.5 - GLAZING IN WALLS, ENCLOSURES OF FENCES CONTAINING OR FACING HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION. THIS SHALL APPLY TO SINGLE GLAZING AND EACH PANE IN MULTIPLE GLAZING.

S. STAIR NOTES

1. R311.7.1 WIDTH - STAIRWAYS SHALL BE NOT LESS THAN 36 INCHES (914 MM) IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. HANDRAILS SHALL NOT PROJECT MORE THAN 4 1/2 INCHES (114 MM) ON EITHER SIDE OF THE STAIRWAY AND THE CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL BE NOT LESS THAN 31 1/2 INCHES (787 MM) WHERE A HANDRAIL IS INSTALLED ON ONE SIDE AND 27 INCHES (698 MM) WHERE HANDRAILS ARE PROVIDED ON BOTH SIDES.
2. R311.7.2 HEADROOM - THE HEADROOM IN STAIRWAYS SHALL BE NOT LESS THAN 6 FEET 8 INCHES (2032 MM) MEASURED VERTICALLY FROM THE SLOPED LINE ADJOINING THE TREAD NOSING OR FROM THE FLOOR SURFACE OF THE LANDING OR PLATFORM ON THAT PORTION OF THE STAIRWAY.
3. R311.7.5.1 RISERS - THE RISER HEIGHT SHALL BE NOT MORE THAN 7 3/4 INCHES (196 MM). THE RISER SHALL BE MEASURED VERTICALLY BETWEEN LEADING EDGES OF THE ADJACENT TREADS. THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM). RISERS SHALL BE VERTICAL OR SLOPED FROM THE UNDERSIDE OF THE NOSING OF THE TREAD ABOVE AT AN ANGLE NOT MORE THAN 30 DEGREES (0.51 RAD) FROM THE VERTICAL. OPEN RISERS ARE PERMITTED PROVIDED THAT THE OPENINGS LOCATED MORE THAN 30 INCHES (762 MM), AS MEASURED VERTICALLY, TO THE FLOOR OR GRADE BELOW DO NOT PERMIT THE PASSAGE OF A 4-INCH-DIAMETER (102 MM) SPHERE.
4. R311.7.5.2 TREADS - THE TREAD DEPTH SHALL BE NOT LESS THAN 10 INCHES (254 MM). THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE. THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM).
5. R311.7.8.1 HEIGHT - HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34 INCHES (864 MM) AND NOT MORE THAN 38 INCHES (965 MM).
6. R312.1.2 HEIGHT - REQUIRED GUARDS AT OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, PORCHES, BALCONIES OR LANDINGS, SHALL BE NOT LESS THAN 42 INCHES (1067 MM) IN HEIGHT AS MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE OR THE LINE CONNECTING THE LEADING EDGES OF THE TREADS.

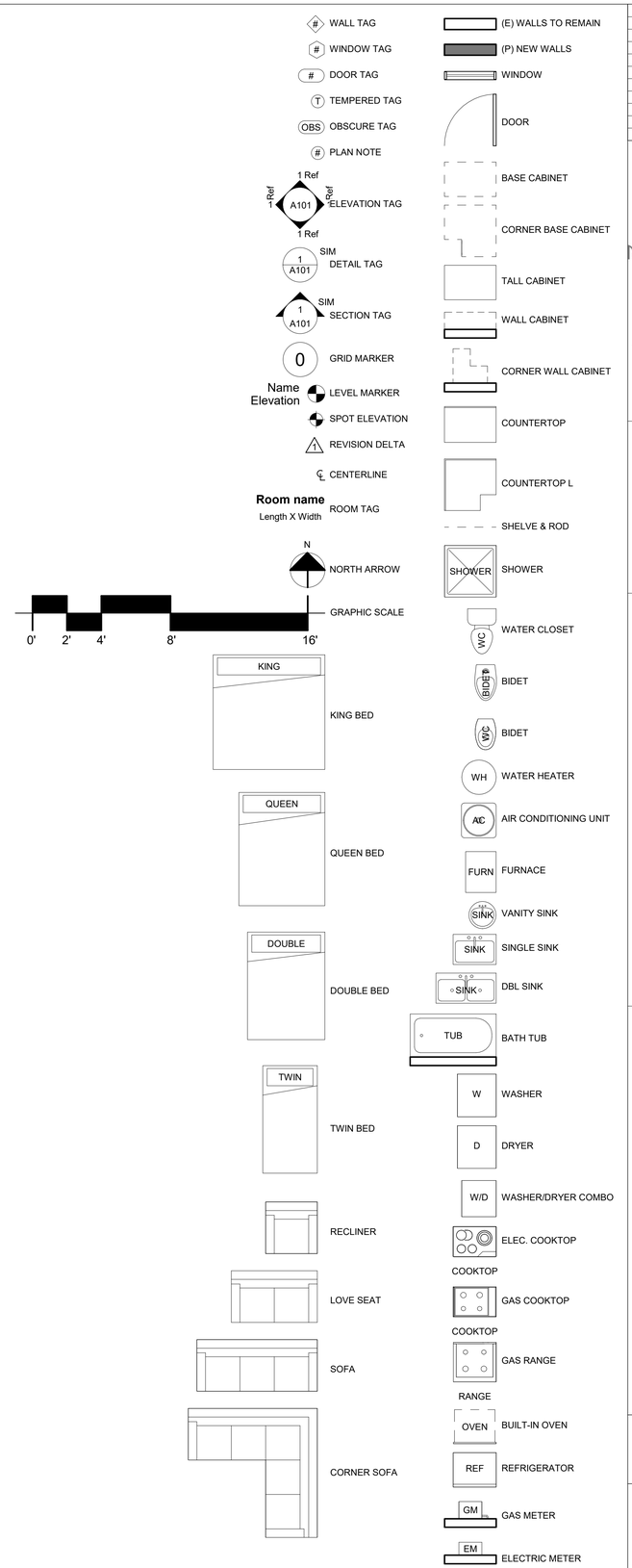
T. ADDRESS

R319.1 ADDRESS IDENTIFICATION - BUILDINGS SHALL BE PROVIDED WITH APPROVED ADDRESS IDENTIFICATION. THE ADDRESS IDENTIFICATION SHALL BE LEGIBLE AND PLACED IN A POSITION THAT IS VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBERS SHALL NOT BE SPELLED OUT. EACH CHARACTER SHALL BE NOT LESS THAN 4 INCHES (102 MM) IN HEIGHT WITH A STROKE WIDTH OF NOT LESS THAN 0.5 INCH (12.7 MM). WHERE REQUIRED BY THE FIRE CODE OFFICIAL, ADDRESS IDENTIFICATION SHALL BE PROVIDED IN ADDITIONAL APPROVED LOCATIONS TO FACILITATE EMERGENCY RESPONSE. WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD AND THE BUILDING ADDRESS CANNOT BE VIEWED FROM THE PUBLIC WAY, A MONUMENT, POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. ADDRESS IDENTIFICATION SHALL BE MAINTAINED.

U. CITY PRACTICES

1. ALL ENGINEERING INSPECTIONS REQUIRE 24-HOUR NOTICE
2. WORK HOURS: NO WORK SHALL COMMENCE ON THE JOB SITE PRIOR TO 7:00 A.M. NOR CONTINUE LATER THAN 6:00 P.M., MONDAY THROUGH FRIDAY. EXCEPTION WITH WRITTEN PERMISSION FROM THE CITY
3. ROADWAYS SHALL BE MAINTAINED CLEAR OF CONSTRICTION MATERIALS AND DEBRIS AT ALL TIMES. DAILY ROAD CLEAN UP WILL BE ENFORCED.
4. TRENCHES OR HOLES WITHIN THE PUBLIC RIGHT OF WAY MUST BE BACK FILLED BEFORE LEAVING EACH NIGHT UNLESS WRITTEN PERMISSION IS PROVIDED BY THE CITY ENGINEER, WITCH MUST BE REQUESTED 24 HOURS IN ADVANCE.
5. ALL RECORDED SURVEY POINTS, WHETHER WITHIN PRIVATE PROPERTY OR PUBLIC RIGHT OF WAY SHALL BE PROTECTED AND PRESERVED. IF SURVEY POINTS ARE ALTERED REMOVED OR DESTROYED, THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING THE SERVICES OF A LICENSED SURVEYOR OR CIVIL ENGINEER TO RESTORE OR REPLACE THE THE SURVEY POINTS PRIOR AND RECORD THE REQUIRED MAP PRIOR TO COMPLETION OF THE BUILDING PERMIT.
6. AN ENCROACHMENT PERMIT WILL BE REQUIRED FOR ANY WORK WITHIN THE CITY RIGHT OF WAY
7. AN ENCROACHMENT BOND (OR CASH OR CERTIFICATE OF DEPOSIT) WILL BE REQUIRED FOR ANY WORK WITHIN THE CITY OF RIGHT OF WAY
8. ALL IMPROVEMENTS IN THE CITY RIGHT OF WAY OR PUBLIC EASEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF SPECIFICATIONS AND WILL BE SUBJECT TO INSPECTION AND APPROVAL BY THE THE CITY.
9. EXISTING SIDEWALK, CURB, GUTTER OR STREET ADJACENT TO PROPERTY FRONTAGE THAT IS DAMAGED OR DISPLACED SHALL BE REPAIRED OR REPLACED EVEN IF THE DAMAGE OR DISPLACEMENT OCCURRED PRIOR TO ANY WORK PERFORMED FOR THIS PROJECT.
10. ANY DAMAGE TO IMPROVEMENTS WITHIN CITY RIGHT OF WAY OR TO ANY PRIVATE PROPERTY, WHETHER ADJACENT TO SUBJECT PROPERTY OR NOT, THAT IS DETERMINED BY THE CITY ENGINEER TO HAVE RESULTED FROM CONSTRUCTION ACTIVITIES RELATED TO THIS PROJECT, SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE CITY ENGINEER.
11. THERE SHALL SHALL BE NO STRUCTURAL ENCROACHMENT IN THE PUBLIC RIGHT OF WAY.
12. TRENCHES OR HOLES IN THE STREET OR SIDEWALK AREAS MUST HAVE A 6" SHOULDER ON ALL SIDES (2 6" TEE-CUT) AT LEAST 16" BELOW THE FINISHED SURFACE. FROM THAT LEVEL UP TO THE UNDERSIDE

&	AND	FPRF.	FIREPROOF	PNL.	PANEL
∠	ANGLE	FRM.	FRAMING	PR.	PAIR
@	AT	FT.	FOOR OF FEET	PT.	POINT
℄	CENTERLINE	FTG.	FOOTING	PTD.	PAINTED
*	PHASABLE @ (E) BLDG	FURR.	FURRING	PTN.	PARTITION
#	POUND OF NUMBER	FUT.	FUTURE		
℗	PROPERTY LINE	G.C.	GENERAL CONTRACTOR	Q.T.	QUARRY TILE
A.B.	ANCHOR BOLT	G.F.R.C.	GLASS FIBER REIN. CONC.		
A.F.F	ABOVE FINISHED FLOOR	G.F.R.G.	GLASS FIBER REIN. GYP.	R	RISER
A.P.L.	ASSUMED PROPERTY LINE	G.I.	GALVANIZED IRON	R.D.	ROOF DRAIN
A/C	AIR CONDITIONING	G.L.B.	GLUE-LAMINATED BEAM	R.H.	ROBE HOOK
AC.	ACOUSTICAL	GA.	GAUGE	R.O.	ROUGH OPENING
ADD'L	ADDITIONAL	G.B.	GRADE BEAM	R.T.	RESILENT TILE
ADDN.	ADDITION	GALV.	GALVANIZED	R.W.L.	RAIN WATER LEADER
ADJ.	ADJUSTABLE	GEN.	GENERAL	RAD.	RADIUS
AGG.	AGGREGATE	GL.	GLASS	RD.	ROUND
AL.	ALUMINUM	GND.	GROUND	REF.	REFERENCE
ATL.	ALTERNATE	GR.	GRADE	REFG.	REFRIGERATOR
APPROX.	APPROXIMATE	GYP.	GYPSUM	REG.	REGISTER
ARCH.	ARCHITECTURAL	GYP. BD.	GYPSUM BOARD	REINF.	REINFORCEMENT
B.M.	BENCH MARK	H.A.	HANDICAP ACCESSIBLE	REQ'D	REQUIRED
B.O.B.	BOTTOM OF BEAM	H.B.	HOSE BIBB	RESIL.	RESILIENT
BD.	BOARD	H.C.	HOLLOW CORE	REV.	REVISION
BITUM.	BITUMINOUS	H.D.	HOLD DOWN	RFG.	ROOFING
BLDG.	BUILDING	H.S.B.	HIGH-STRENGTH BOLT	RGH.	ROUGH
BLKG.	BLOCKING	H.M.	HOLLOW METAL	RM.	ROOM
BM.	BEAM	H.W.	HOT WATER	RWD.	REDWOOD
BOT.	BOTTOM	HD.	HEAD		
BTWN.	BETWEEN	HDR.	HEADER	S.A.D.	SEE ARCH. DRAWINGS
C.B.	CATCH BASIN	HDW.	HARDWARE	S.C.	SOLID CORE
C.C.T.	CUBICLE CURTAIN TRACK	HDWD.	HARDWOOD	S.C.D.	SEAT COVER DISPENSER
C.D.U.	COMB. DISPENSING UNIT	HK.	HOOK	S.D.	SOAP DISPENSER
C.I.	CAST IRON	HORIZ.	HORIZONTAL	S.J.	SAWCUT JOIST
C.J.	CONTROL JOINT	HR.	HOUR	S.M.D.	SEE MECH. DRAWINGS
C.L.P	CENTERLINE OF PIER	HT.	HEIGHT	S.M.S.	SHEET METAL SCREW
C.M.U.	CONCRETE MASONRY UNIT	HTR.	HEATER	S.O.G.	SLAB ON GRADE
C.O.	CLEAN OUT	I.D.	INSIDE DIAMETER	S.S.	STAINLESS STEEL
C.T.	CERAMIC TILE	I.F.	INSIDE FACE	S-S	SERVICE SINK
CAB.	CABINET	I.J.	ISOLATION JOINT	S.W.	SHEAR WALL
CEM.	CEMENT	IN.	INCH	SCHED.	SCHEDULE
CER.	CERAMIC	INSUL.	INSULATION	SCR.	SCREW
CLG.	CEILING	INT.	INTERIOR	SDG.	SIDING
CLR.	CLEAR	INV.	INVERT	SECT.	SECTION
COL.	COLUMN	INT.	INTRAVENOUS TRACK	SEL.	SELECT
COMB.	COMBINATION	JAN.	JANITOR	SEL. STR.	SELECT STRUCTURAL
CONC.	CONCRETE	JST.	JOIST	SH.	SHELF
CONN.	CONNECTION	JT.	JOINT	SHT.	SHEET
CONST.	CONSTRUCTION	KIT.	KITCHEN	SHWR.	SHOWER
CONT.	CONTINUOUS	L.P.	LAMINATED PLASTIC	SIM.	SIMILAR
CONTR.	CONTRACTOR	LAM.	LAMINATE	SLDG.	SLIDING
CORR.	CORRIDOR	LAV.	LAVATORY	SM.	SMOOTH
CTR.	CENTER	LB.	POUND	SPEC.	SPECIFICATION
CTSK.	COUNTERSUNK	LDGR.	LEDGER	SPL.	SPLASH
D.B.A.	DEFORMED BAR ANCHOR	LGTH.	LENGTH	SQ.	SQUARE
D.D.	DECK DRAIN	LT.	LIGHT	STD.	STANDARD
D.F.	DOUGLAS FIR	M	MIRROR	STGR.	STAGGER
D.O.	DO OVER	M.B.	MACHINE BOLT	STIFF.	STIRRUP
D.P.	DAMP PROOFING	M.B.H.	MOP AND BROOM HOLDER	STL.	STEEL
DRK. FTN.	DRINKING FOUNTAIN	M.C.	MEDICINE CABINET	STOR.	STORAGE
D.S.	DOWNSPOUT	M.E.	MATCH EXISTING	STRUCT.	STRUCTURAL
DB.	DECIBEL	M.G.P.	MEDICAL GAS PANEL	SUSP.	SUSPENDED
DBL.	DOUBLE	M.H.	MANHOLE	SW. BD.	SWITCH BOARD
DEPT.	DEPARTMENT	M.K.	MARKER BOARD	SYM.	SYMMETRICAL
DET.	DETAIL	M.O.	MASONRY OPENING		
DIA.	DIAMETER	MAT.	MATERIAL	T	TREAD
DIAG.	DIAGONAL	MAX.	MAXIMUM	T&B	TOP AND BOTTOM
DIM.	DIMENSION	MECH.	MECHANICAL	T&G	TONGUE AND GROOVE
DISP.	DISPENSER	MEMB.	MEMBRANE	T.B.	TOWEL BAR
DN.	DOWN	MEZZ.	MEZZANINE	T.D.	TRENCH DRAIN
DR.	DOOR	MFR.	MANUFACTURER	T.O.	TOP OF
DWG.	DRAWING	MIN.	MINIMUM	T.O.C.	TOP OF CURB/CONC.
(E)	EXISTING	MISC.	MISCELLANEOUS	T.O.F.	TOP OF FOOTING
E.F.	EACH FACE	MLDG.	MOULDING	T.O.P.	TOP OF PLATE
E.I.F.S.	EXT. INSUL. & FIN. SYSTEM	MTD.	MOUNTED	T.O.S.	TOP OF STEEL
E.J.	EXPANSION JOINT	MTL.	METAL	T.O.W.	TOP OF WALL
E.N.	EDGE NAIL	MUL.	MULLION	T.P.	TOP OF PAVEMENT
E.O.R.	ENGINEER OF RECORD	(N)	NEW	T.P.D.	TOILET PEPER DISPENSER
E.W.	EACH WAY	N.F.	NEAR FACE	TEL.	TELEPHONE
E.W.C.	ELECTRIC WATER COOLER	N.G.	NATURAL GRADE	TER.	TERRAZZO
EA.	EACH	N.I.C.	NOT IN CONTRACT	THK.	THICK
EL.	ELEVATION	N.T.S.	NOT TO SCALE	TK. BD.	TACKBOARD
ELEC.	ELECTRICAL	NO.	NUMBER	TV.	TELEVISION
ELEV.	ELEVATOR	NOM.	NOMINAL	TYP.	TYPICAL
EMERG.	EMERGENCY	O.A.	OVERALL		
ENCL.	ENCLOSURE	O.C.	ON CENTER	V.C.T.	VINYL COMPOSITION TILE
EQ.	EQUAL	O.D.	OUTSIDE DIAMETER	V.C.P.	VITREOUS CLAY PIPE
EQPT.	EQUIPMENT	O.F.	OUTSIDE FACE	V.D.U.	VISUAL DISPLAY UNIT
EXH.	EXHAUST	O.F.C.I.	OWNER FURNISHED, CONTR. INSTALLED	V.G.	VERTICAL GRAIN
EXP.	EXPANSION			V.T.	VINYL TILE
EXT.	EXTERIOR	O.F.D.	OVERFLOW DRAIN	V.T.R.	VENT THROUGH ROOF
F.A.	FIRE ALARM	O.F.S.	OVERFLOW SCUPPER	VERT.	VERTICAL
F.B.	FLAT BAR	O.H.	OPPOSITE HAND	VEST.	VESTIBULE
F.C.O.	FLOOR CLEAN OUT	O.L.	OVERALL LENGTH	V.I.F.	VERIFY IN FIELD
F.D.	FLOOR DRAIN	O.S.B.	ORIENTED STRAND BOARD		
F.E.	FIRE EXTINGUISHER	O/	OVER	W/	WITH
F.E.C.	FIRE EXTINGUISHER CAB.	OBS.	OBSCURE	W/O	WITHOUT
F.F.	FAR FACE	OPP.	OPPOSITE	W.C.	WATER CLOSET
F.G.	FINSHED GRADE	OPNG.	OPENING	W.F.	WIDE FLANGE
F.H.C.	FIRE HOUSE BABINET	P.A.D.	POWER ACTUATED DEVICE	W.H.	WATER HEATER
F.H.S.	FLAT HEAD SCREW	P.C.	PRECAST CONCRETE	W.H.S.	WELDED HEAD STUDS
F.L.	FLOW LINE	P.I.P.	POURED-IN-PLACE	W.P.	WATERPROOF
F.N.	FIELD NAIL	P.J.	TILT-UP PANEL JOIST	W.S.P.	WOOD STRUCT. PANEL
F.O.C.	FACE OF CONCRETE	P.L.	PROPERTY LINE	W.R.	WASTE RECEPTACLE
F.O.F.	FACE OF FINISH	P.O.C.	POINT OF CONNECTION	W.W.F.	WELDED WIRE MESH
F.O.M.	FACE OF MASONRY	P.S.F.	POUNDS PER SQ. FOOT	WD.	WOOD
F.O.S.	FACE OF STUD	P.S.I.	POUNDS PER SQ. INCH	WK. PT.	WORK POINT
F.R.	FIRE RETARDANT	P.T.	PRESSURE TREATED	WT.	WEIGHT
F.S.	FLR. SINK/FOOD SERVICE	P.T.D.	PAPER TOWEL DISPENSER		
F.S.E.C.	FOOD SERVICE EQUIPMENT CONTR.	P.W.	PLATE WASHER		
		PEN.	PENETRATION(S)		
		PERP.	PERPENDICULAR		
F.S.S.	FOLDING SHOWER SEAT	PG.	PAGE		
FDN.	FOUNDATION	PLAM.	PLASTIC LAMINATE		
FIN.	FINISH	PL.	PLATE		
FIXT.	FIXTURE	PLAST.	PLASTER		
FL.	FLOOR	PLBG.	PLUMBING		
FLUOR.	FLUORESCENT	PLYWD.	PLYWOOD		



Description	Date

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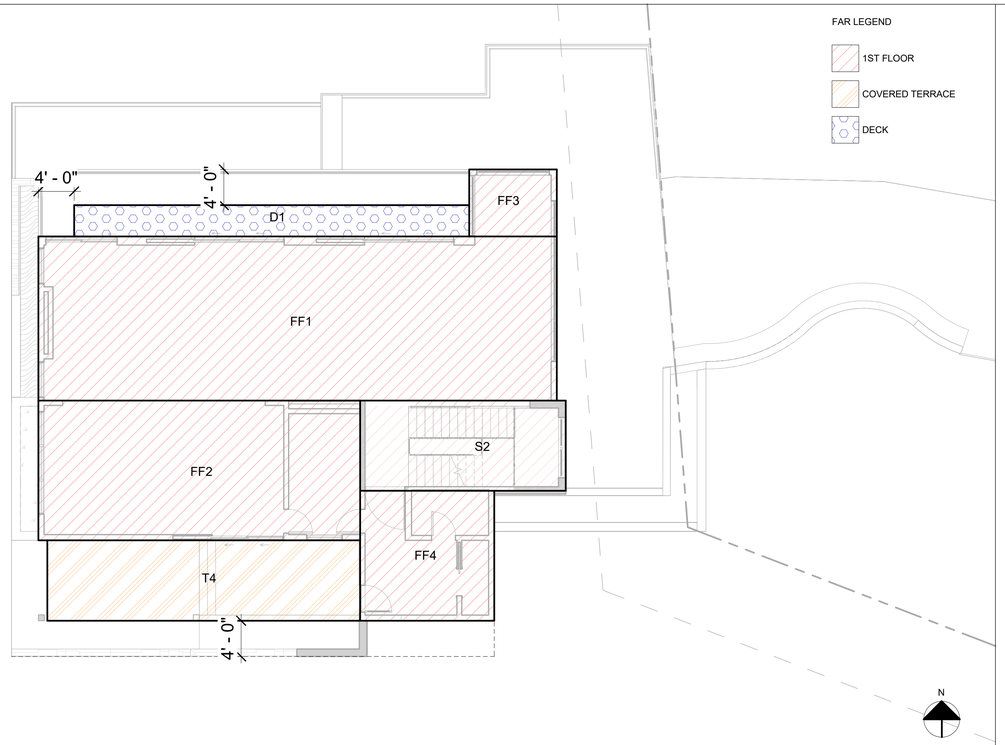
NEW RESIDENCE AT
634 PALOMAR DRIVE
REDWOOD CITY, CA 94062

INTERIOR DESIGN PACKAGE

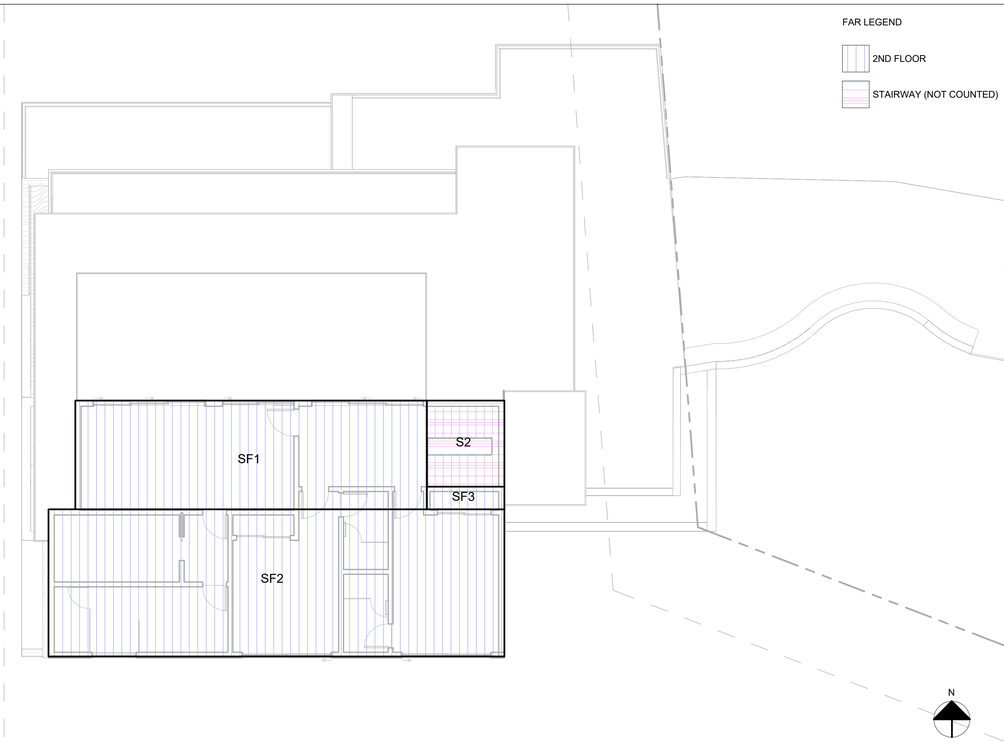
ABBREVIATIONS AND GRAPHIC SYMBOLS

12/12/2022

T0.4



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



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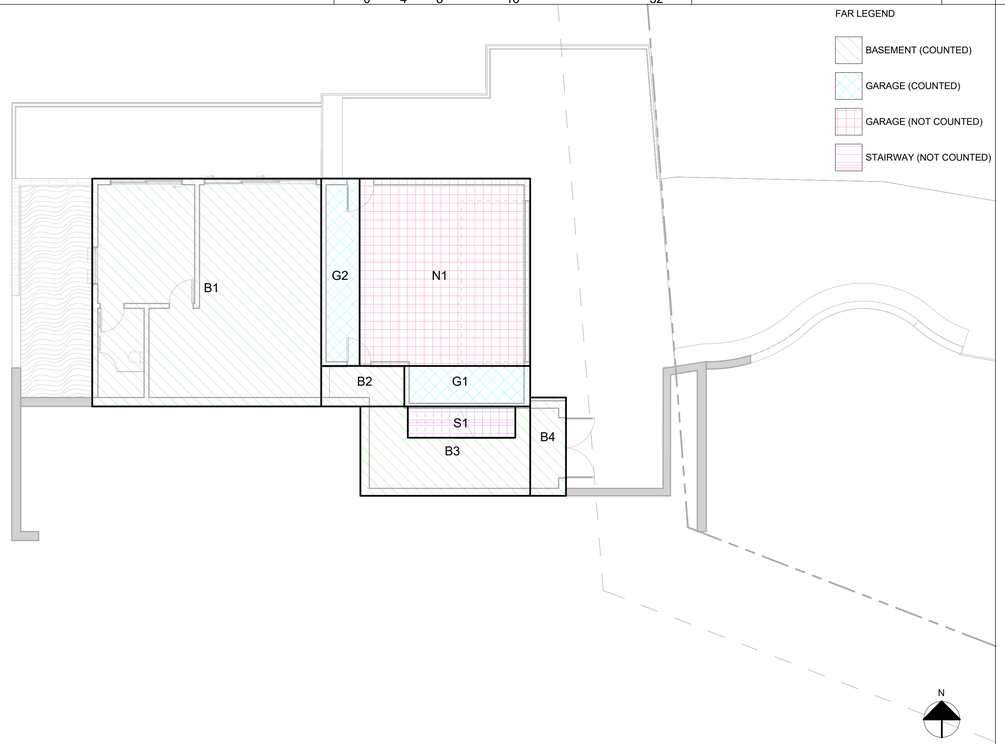

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(P) FLOOR AREA RATIO

NO.	WIDTH	LENGTH	AREA
BASEMENT (COUNTED)			
B1	25' - 7"	25' - 6"	653 SF
B2	9' - 4"	4' - 6"	42 SF
B3	27' - 0"	5' - 6"	148 SF
B4	11' - 0"	4' - 0"	44 SF
			887 SF
GARAGE (COUNTED)			
G1	14' - 1"	4' - 6"	64 SF
G2	21' - 0"	4' - 4"	90 SF
			154 SF
BASE FLR			1041 SF
1ST FLOOR			
FF1	58' - 0"	18' - 4"	1065 SF
FF2	36' - 0"	15' - 8"	563 SF
FF3	9' - 10"	7' - 6"	74 SF
FF4	15' - 0"	14' - 7"	218 SF
S2	26' - 2"	3' - 11"	102 SF
			2022 SF
COVERED TERRACE			
T4	35' - 0"	9' - 0"	315 SF
			315 SF
DECK			
D1	44' - 2"	3' - 6"	155 SF
			155 SF
1ST FLR			2491 SF
2ND FLOOR			
SF1	39' - 4"	12' - 2"	479 SF
SF2	51' - 0"	16' - 6"	840 SF
SF3	8' - 8"	2' - 6"	22 SF
			1340 SF
2ND FLR			1340 SF
TOTAL			4873 SF
ALLOWED			5036.73 SF

(P) FLOOR AREA RATIO (NOT COUNTED)

NO.	WIDTH	LENGTH	AREA
GARAGE (NOT COUNTED)			
N1	21' - 0"	19' - 1"	400 SF
			400 SF
STAIRWAY (NOT COUNTED)			
S1	12' - 0"	3' - 6"	42 SF
			42 SF
BASE FLR			442 SF
STAIRWAY (NOT COUNTED)			
S2	9' - 8"	8' - 8"	84 SF
			84 SF
2ND FLR			84 SF
TOTAL			526 SF

Description	Date
REVISION 1	12/18/2020
REVISION 3	12/20/2021

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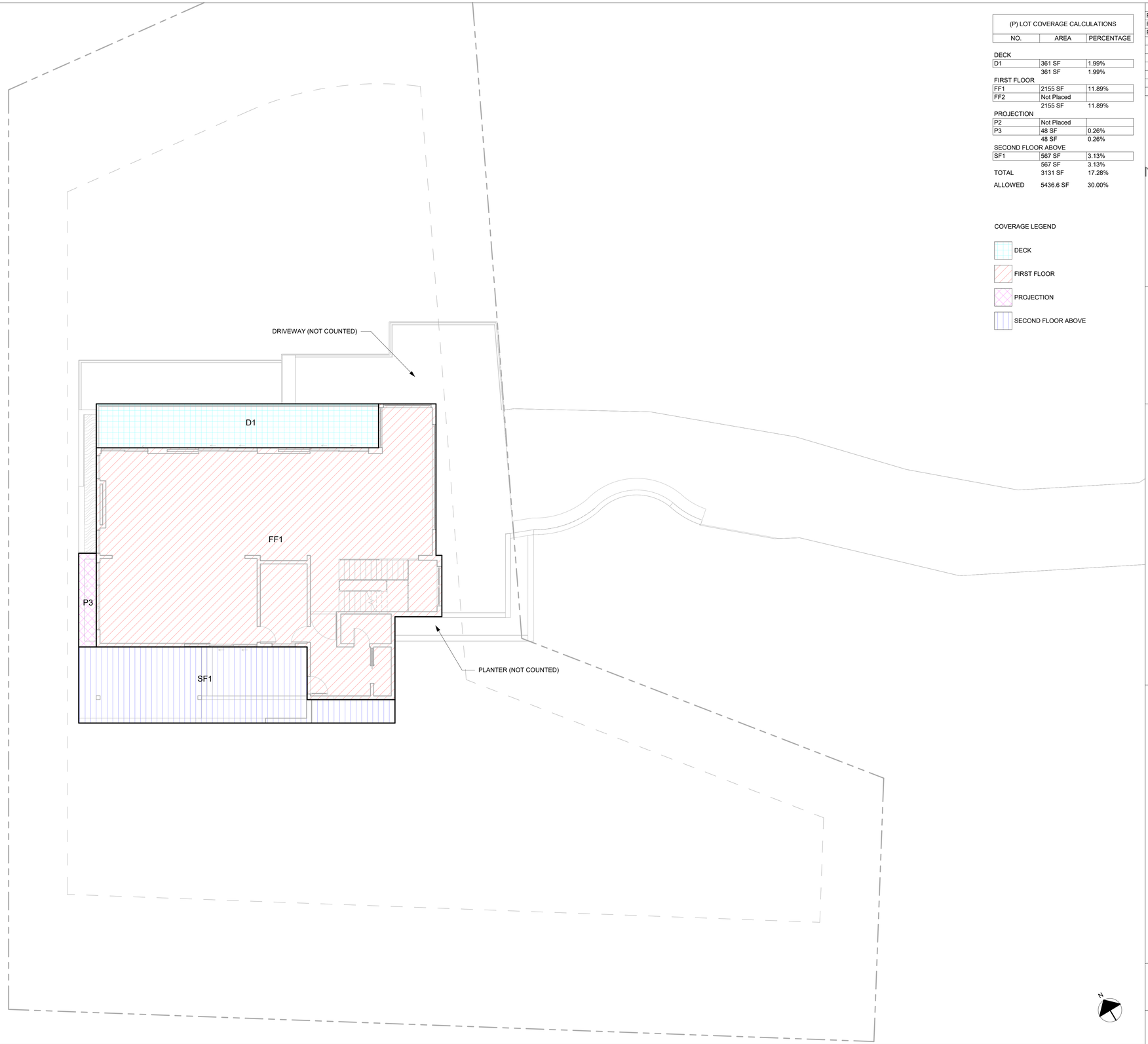
NEW RESIDENCE AT
634 PALOMAR DRIVE
REDWOOD CITY, CA 94062

INTERIOR DESIGN PACKAGE

(P) FLOOR AREA DIAGRAMS

12/12/2022

T1.2



(P) LOT COVERAGE CALCULATIONS

NO.	AREA	PERCENTAGE
DECK		
D1	361 SF	1.99%
	361 SF	1.99%
FIRST FLOOR		
FF1	2155 SF	11.89%
FF2	Not Placed	
	2155 SF	11.89%
PROJECTION		
P2	Not Placed	
P3	48 SF	0.26%
	48 SF	0.26%
SECOND FLOOR ABOVE		
SF1	567 SF	3.13%
	567 SF	3.13%
TOTAL	3131 SF	17.28%
ALLOWED	5436.6 SF	30.00%

COVERAGE LEGEND

- DECK
- FIRST FLOOR
- PROJECTION
- SECOND FLOOR ABOVE

Description	Date
REVISION 1	12/18/2020
REVISION 2	04/19/2021
REVISION 3	12/20/2021

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NEW RESIDENCE AT
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INTERIOR DESIGN PACKAGE

(P) LOT COVERAGE CALCULATIONS

12/12/2022

T1.3

(P) LOT COVERAGE CALCULATIONS

0' 4' 8' 16' 32'

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

M-Design Architecture
4131 W. El Camino Real Suite 200
Palo Alto, CA 94306

RE: 634 Palomar Drive
Redwood City, CA 94062

Date: 12/12/20

ARBORIST REPORT

Assignment

Arborist Report and Tree Protection Plan

- Review pre-existing relevant work product, as provided: site survey, schematic drawings, grading plans, landscape plans, utilities plans, etc.
- Visit the project site to evaluate trees and develop the scope for the report.
- Provide an evaluation of soil physical, chemical and drainage properties to typify the site at large. An existing Geotechnical report, site observations, testing and/or research of soil survey data may be utilized.
- Inspect adjacent properties for both overhanging tree canopies and sensitivity of adjacent tree root structure to construction impacts. Provide recommendations, as necessary.
- From a site plan (to be provided by others), label each tree to match the Arborist Report and Tree Protection Plan.
- Provide a tree survey of all regulated trees on and adjacent to the project site. Provide data interpretation criteria.
- Identify potential construction impacts to trees and provide recommendations for modifications and/or mitigation to lessen these impacts.
- Develop tree recommendations for site utilization planning for staging and equipment access.
- Develop tree maintenance recommendations.

Background

The property at **634 Palomar Drive, Redwood City** currently has 12 trees on the property, and 7 trees near the driveway approach that crosses the neighbor's property, for a total of 19 trees affected. The new construction will impact various trees due to paving the driveway, the footprint for a new house, geotechnical stabilization of a relatively recent landslide and the installation of a septic system.

Lea & Braze Engineering has produced designs that show the landslide and septic system construction needs in detail, and the placement of the new home site and various retaining walls. Their utility plan sheet C-3.0 was used as the basis for the Site Plan with Additions that was created by us and is part of this report.

Tree Assessment

A total of 19 trees were found on this property and along the driveway approach. Tree numbers assigned to each tree below correspond to those used on the Site Plan with Additions. The data for tree identification, size and condition are listed below:

Tree No.	*Genus species*	Common Name	Diameter	Height	Spread	Condition
1	*Quercus agrifolia*	Coast live oak	5.5"	20'	10'	Fair
2	*Quercus agrifolia*	Coast live oak	13.0"	20'	30'	Good
3	*Quercus agrifolia*	Coast live oak	9.0"	20'	30'	Fair
4	*Quercus agrifolia*	Coast live oak	22.5"	30'	40'	Good
5	*Quercus agrifolia*	Coast live oak	16.0"	30'	40'	Good
6	*Quercus agrifolia*	Coast live oak	13.0"	20'	30'	Fair
7	*Quercus agrifolia*	Coast live oak	14.5",16.7",15.5"	25'	40'	Good
8	*Aesculus californica*	California buckeye	6.0"	12'	16'	Good
9	*Quercus agrifolia*	Coast live oak	11.5"	25'	25'	Good
10	*Quercus agrifolia*	Coast live oak	11.7"	30'	25'	Good
11	*Quercus agrifolia*	Coast live oak	7.3"	25'	15'	Good
12	*Quercus agrifolia*	Coast live oak	18.6"	30'	40'	Good
13	*Umbellularia californica*	California bay	4.8"	12'	12'	Good
14	*Quercus agrifolia*	Coast live oak	21.1",17.5"	40'	60'	Good
15	*Aesculus californica*	California buckeye	10.0",6.4"	20'	30'	Good
16	*Aesculus californica*	California buckeye	10" equivalent	12'	20'	Poor
17	*Quercus agrifolia*	Coast live oak	11.1",7.8"	12'	20'	Poor
18	*Eucalyptus globulus*	Tasmanian blue gum	25.7",17.0"	50'	50'	Fair
19	*Eucalyptus globulus*	Tasmanian blue gum	12.0",13.5",19.5", 14.0"	50'	50'	Fair

Table 1.0 – All Trees

Project Arborists

The *Project Arborist* referred to in this report is identified here as a Consulting Arborist from Tree Management Experts, and will be either Roy Leggitt or Aaron Wang. Roy Leggitt has more than 30 years of experience after obtaining a BS in Plant Science – Ornamental Horticulture from CSU-Fresno, is a Certified Arborist and is Tree Risk Assessment Qualified (TRAQ). Aaron Wang has more than 8 years of experience after obtaining a BS in Forestry and Natural Resources from UC-Berkeley, is a Certified Arborist and is Tree Risk Assessment Qualified.

Trees to be Removed

A total of 8 trees must be removed due to poor health or structure, for purposes of construction, or both poor condition and construction. California bay carries sudden oak death, and this small tree should be removed to protect the health of the nearby coast live oaks. See page 10.

Tree No.	*Genus species*	Common Name	Diameter	Removal Reason
8	*Aesculus californica*	California buckeye	6.0"	Within landslide repair
13	*Umbellularia californica*	California bay	4.8"	Sudden oak death carrier
14	*Quercus agrifolia*	Coast live oak	21.1",17.5"	Within footprint of house
15	*Aesculus californica*	California buckeye	10.0",6.4"	Within leach field footprint
16	*Aesculus californica*	California buckeye	10" equivalent	Poor structure
17	*Quercus agrifolia*	Coast live oak	11.1",7.8"	Poor structure, decayed trunk
18	*Eucalyptus globulus*	Tasmanian blue gum	25.7",17.0"	Too close to leach field, poor structure
19	*Eucalyptus globulus*	Tasmanian blue gum	12.0",13.5",19.5", 14.0"	Too close to leach field, poor structure

Table 2.0 – Tree Removals

Tree Impacts and Recommendations

Tree Protection Zones

Trees 1, 2, 3, 4, 5, 6, 7, 9, 10, 11 and 12

A Tree Protection Zone (TPZ) has been established for each remaining tree. Because of the landslide repairs, potential for grading, building footprint, leach field and retaining walls, all trees will be affected by construction, both along the driveway and on this property. The TPZ areas are graphically illustrated on the Tree Protection Plan (page 11), and the measured radius distances are shown in Table 3.0 below. If there is any difference, the measured radius distances in Table 3.0 will take precedence. Whenever

work is performed within the TPZ of a tree, the tree must have tree protection measures in place, per this Arborist Report. When any excavation, trenching, grading or vehicular access occurs within a TPZ, the Project Arborist must be on site.

Pre-construction Pruning

Trees 1, 2, 3, 4, 5, 6, 7 and 12

Table 3.0 also indicates pruning requirements for certain trees. Pruning as specified will remove branches proactively to prevent broken branches from trucks that would cause injury to the protected trees. The pruning must be completed before construction of any type begins since this is part of the tree protection.

In some cases, branches will be cut back part way, and in other cases lower branches will need to be removed entirely. The driveway will need truck access past trees 1, 2, 3, 4, 5 and 7. The area where the landslide occurred will need equipment access beneath tree 6. Clearances for construction of the house will need some pruning of tree 12. All pruning must be completed under the direction of the Project Arborist.

Tree No.	*Genus species*	Common Name	Diameter	Pre-construction Pruning Requirements	Tree Protection Zone Diameter
1	*Quercus agrifolia*	Coast live oak	5.5"	Driveway clearances	11'
2	*Quercus agrifolia*	Coast live oak	13.0"	Driveway clearances	26'
3	*Quercus agrifolia*	Coast live oak	9.0"	Driveway clearances	18'
4	*Quercus agrifolia*	Coast live oak	22.5"	Driveway clearances	45'
5	*Quercus agrifolia*	Coast live oak	16.0"	Driveway clearances	32'
6	*Quercus agrifolia*	Coast live oak	13.0"	Cut back northwest side	26'
7	*Quercus agrifolia*	Coast live oak	14.5",16.7",15.5"	Driveway clearances	54'
9	*Quercus agrifolia*	Coast live oak	11.5"	None	23'
10	*Quercus agrifolia*	Coast live oak	11.7"	None	24'
11	*Quercus agrifolia*	Coast live oak	7.3"	None	15'
12	*Quercus agrifolia*	Coast live oak	18.6"	South side clearances	37'

Table 3.0 – Tree Protection

Root Collar Protection and Root Collar Excavations

Trees 1, 2, 3, 4, 5, 6, 9 and 12

The root collars of trees 1, 2, 3, 4, 5 and 6 are currently partially buried under fill soil. The fill soil is either from grading or accumulation over time. The excess soil should be removed to a distance of 2 feet on all sides of each tree. The embankment created by

excavation should be supported by a dry stacked wall, similar to the wall currently in place, although materials may vary. This work must be completed under the direction of the Project Arborist.

Soil cannot be placed within any TPZ area at any time. The TPZ areas cannot be re-graded or raised to accommodate excess soil, tailings or fill soil.

Similarly, soil cannot be graded down, cut away, or otherwise moved or removed within any TPZ except as shown on the Lea & Braze utility plan sheet C-3.0 and as specified in this report,

Site and Soil Conditions

The site has soil conditions that are deep, sandy loam that has formed in place from native Franciscan sandstone. The soil has drainage, nutritional and chemical properties as necessary to support normal and healthy growth of all tree species found on the site. Of particular note, native tree species are normal and healthy, and appeared to be generally free of serious diseases that would indicate either a disease court, poor drainage or soil compaction, all of which are damaging to trees and to the horticultural properties of soil. Based on these observations, it appears that native species of coastal trees and shrubs are well-suited to the site and could be used in future landscaping.

To maintain favorable conditions for trees and landscaping, only native soil should be used in filled areas such as behind retaining walls near the leach field. To preserve horticultural properties of the soil, soil placed atop the leach field should be laid down without tamping, vibration, rolling, saturating or otherwise causing compaction that exceeds 85 percent.

Construction Footprints

Trees 7 and 12

Various construction footprints requiring excavation may affect remaining trees:

1. A retaining wall along the east edge of the new entry
2. Foundations for the house
3. Utility connections for the sanitary sewer system
4. Utility connections for water, gas and electrical
5. Driveway re-grading as part of new pavement

A new wall is needed to provide access to the front of the house at the driveway and security gate. This new wall has been pulled away from Tree 7 by 9 feet, and the grade of the driveway has been kept higher and close to the pre-construction grade to minimize root impacts. The TPZ of Tree 7 extends past the property lines and through

the nearby driveway areas. Since roots from Tree 7 are likely to be encountered, work must be done under the supervision of the Project Arborist.

Foundations for the new house will encroach on the southwest part of the TPZ for Tree 12. The tree protective fence must be placed and secured before excavation work begins. The root system extending up hill and toward the foundation excavation is likely fairly minimal, but could include some larger roots, and therefore must be done under the supervision of the Project Arborist.

Utility connections for the new sanitary sewer system will be placed outside the foundations and will further encroach on part of the TPZ for Tree 12. This trenching will require that excavation tailings be placed on a temporary root buffer, that all work be done by hand, that common trenches be used whenever possible, and that the work be done under the supervision of the Project Arborist.

Utility connections that are placed underground are to travel down the landslide area. Use of this area will avoid trenching damage to the roots of the neighbor's oak trees along the driveway.

Driveway re-grading and new gravel as designed will likely have little impact on tree roots, except at retaining wall footings.

- I recommend that the retaining wall near Tree 7 be supported on drilled piers with above grade beams tying them together to support the wall.
- I recommend that base rock and new pavement be placed atop the existing grades without disturbance of the sub-grade. To avoid the need for compaction, I recommend the use of a geo-grid membrane to distribute loads and stabilize the base rock without any compaction of the sub-grade.

The Project Arborist must provide oversight of all work on the retaining wall footings, sub-grade compaction or grading, and the installation of a geo-grid membrane.

Construction Procedures

EXCAVATION

All tree protective fencing, root buffers, mulch and irrigation must be in place prior to demolition.

At no time is any wheeled equipment, a Bobcat® or an excavator allowed to enter or cross over TPZ areas, except where existing road surfaces remain as a temporary root buffer during construction.

NEW DRIVEWAY CONSTRUCTION

Because of the Tree Protection Zones associated with the new driveway, the subgrade cannot be compacted or graded in any way.

The new driveway gravel will be laid atop a Tensar® geogrid (or equivalent) weight-disbursing membrane that is laid directly on uncompacted native soil and/or the existing gravel surface.

EXISTING DRIVEWAY AS A ROOT BUFFER

Retain the existing driveway as a temporary root buffer to protect Trees 1, 2, 3, 4, 5, 6 and 7 from soil compaction root damage.

If work occurs when rain is likely (November through April), additional protection is required in the TPZ of Tree 7. Place 1 1/8-inch thick sub-floor plywood over all soil areas, including the driveway, and secure the sheets together with clips or mending plates. This will offer further prevention of soil compaction and root damage.

The existing driveway will serve as the access point for all equipment and deliveries, and for staging of materials and debris.

STAGING AREAS

Staging areas are available in the areas of the existing driveway, and on the new leach field. Consult with Lea & Braze regarding protection needs for the leach field if it is used in this manner.

Any other or additional staging areas that are within TPZ areas will need to be placed on root buffers, subject to review and approval of the Project Arborist. The duration of root buffers within TPZ areas may be limited by the Project Arborist.

Tree Protection Implementation

Tree Protective Fencing

To implement tree protection measures effectively, precise measurement for fence locations is critical. Proper skills and equipment are required to place fences where they belong. It is essential that the fence installer refer to a copy of this Arborist Report and Table 3.0 at all times. Measurement of distances must be to within 6 inches, and cannot be completed properly by using either estimated or "paced off" distances. Required equipment will include an appropriate Engineer's scale and either a laser range finder or a 100-foot tape measure with a helper.

It is recommended that fence posts be installed first. Measure each Tree Protection Zone (TPZ) and marking the TPZ locations with marking paint. Measure fence locations at the appropriate distance away from each footing, as shown on the Site Plan.

Fence boundaries must meet, match and enclose areas defined by existing fences. The exact location of existing fences is not known and must be determined in the field.

Following surface installations, chain link fencing must be strung tightly and closed off at all locations, including where abutting existing wooden fences.

TREE PROTECTIVE FENCING AND WARNING SIGNS

Placement: all fence installation lines are indicated on the Site Plan. Trees affected will include Trees 1, 2, 3, 4, 5, 6, 7, 9, 10, 11 and 12.

Type and Size: 5 or 6-foot high chain link fencing shall be placed on 2 inch tubular galvanized iron posts driven a minimum of 2 feet into undisturbed soil and spaced not more than 10 feet on center.

Duration: Tree fencing shall be erected prior to any demolition activity, and shall remain in place for the duration of the project, except where a gap is needed for access to the detached garage.

'Warning' Signs: 'Warning' signs shall posted on Tree Protective Fencing not more than every 20 feet stating "WARNING – *Tree Protective Zone* – This fence shall not be removed"

Maintenance and Ongoing Care

Tree maintenance and ongoing care is necessary in preparation for construction, and throughout the entire timeline for construction. Anticipated needs include pruning, irrigation and tree protection during landscaping:

PRUNING

All pruning must be completed under the direction of the Project Arborist.

Pre-construction Pruning

Pre-construction pruning as specified above will remove limbs proactively to prevent broken branches and injury to the protected trees. This pruning will have some branches cut back part way, and trees will not necessarily be fully pruned or maintained as will ultimately be needed. Although the purpose of this pruning is to establish clearances for construction, it is also possible that some branch breakage will have occurred during the construction

Description	Date
REVISION 1	12/18/2020

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INTERIOR DESIGN PACKAGE

ARBORIST REPORT

12/12/2022

T2.1

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San Francisco, CA 94115
Member, American Society of Consulting Arborists
Certified Arborists, Tree Risk Assessment Qualified
Cell 415.606.3610 email roy@treemanagementexperts.com

process. In the event that small branches are damaged, re-pruning to repair or correct any issue will likely best be left until the close of construction. Any branches larger than 1-inch diameter that are damaged should be reported immediately to the Project Arborist for their evaluation.

Post-construction Pruning

Pruning for overall structural improvement of the protected trees should occur at the close of construction, and before landscape installation. The exact pruning needs will need to be determined at that time, but will include improving the balance of canopies, shortening branches that are end-heavy and prone to breakage, and re-cutting or removing any branches that were broken during construction.

IRRIGATION

No supplemental irrigation is needed for the protected trees. These are all native species that are adapted to summer drought conditions. Summer irrigation of oak trees would put the trees at risk of developing root rot diseases. Construction impacts to the root systems are not expected to be severe enough to warrant the risks posed by summer irrigation.

New landscaping will require irrigation, and the plans are subject to review and approval by the Project Arborist. As a guideline, the new irrigation system should be low water use, should only operate during the dry season, and should be set up for drought tolerant and low water use plant material. It is our recommendation that plants native to the area be used for landscape purposes, and that the new irrigation system be designed for use on a minimal level and such that it is not necessary during drought conditions.

LANDSCAPING

New landscape designs are subject to reviewed and approval by the Project Arborist.

The new irrigation system must be designed to avoid the use of trenches across existing TPZ areas. If sub-surface trenches must be installed, common trenches should be used and they should stay as far away from the trees as possible. A trench running along a radius line directly toward a tree is preferable to a cross trench. If extensive trenching is done, Air-spade® excavation will be required.

Care must be taken to keep mulch away from the base of all trees and other woody plants. Similarly, soil grades must be carefully monitored to keep excess soil from accumulating around the base of trees and shrubs.

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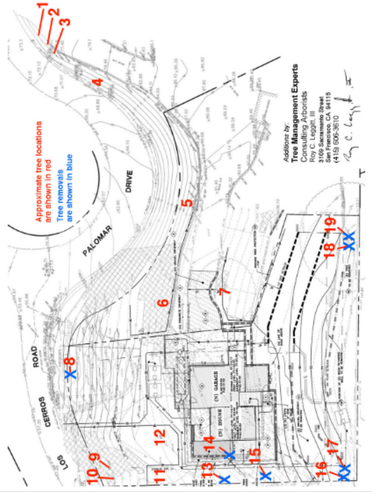
Tree Removal Plan



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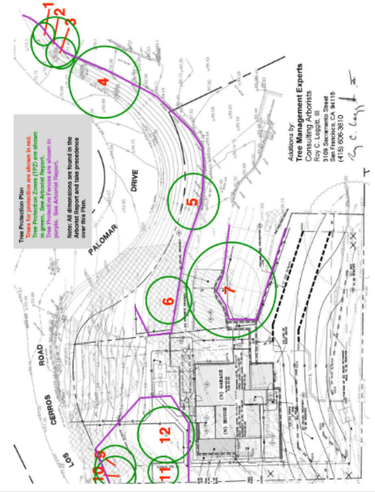
Tree Protection Plan



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Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Title and ownership of all property considered are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible. The consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
4. Various diagrams, sketches and photographs in this report are intended as visual aids and are not to scale, unless specifically stated as such on the drawing. These communication tools in no way substitute for nor should be construed as surveys, architectural or engineering drawings.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior written or verbal consent of the consultant.
7. This report is confidential and to be distributed only to the individual or entity to whom it is addressed. Any or all of the contents of this report may be conveyed to another party only with the express prior written or verbal consent of the consultant. Such limitations apply to the original report, a copy, facsimile, scanned image or digital version thereof.
8. This report represents the opinion of the consultant. In no way is the consultant's fee contingent upon a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. The consultant shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule, an agreement or a contract.
10. Information contained in this report reflects observations made only to those items described and only reflects the condition of those items at the time of the site visit. Furthermore, the inspection is limited to visual examination of items and elements at the site, unless expressly stated otherwise. There is no expressed or implied warranty or guarantee that problems or deficiencies of the plants or property inspected may not arise in the future.

Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

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Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. An arborist cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate the trees.

Certification of Performance

I, Roy C. Leggitt, III, Certify:

- That we have inspected the trees and/or property evaluated in this report. We have stated findings accurately, insofar as the limitations of the Assignment and within the extent and context identified by this report;
- That we have no current or prospective interest in the vegetation or any real estate that is the subject of this report, and have no personal interest or bias with respect to the parties involved;
- That the analysis, opinions and conclusions stated herein are original and are based on current scientific procedures and facts and according to commonly accepted arboricultural practices;
- That no significant professional assistance was provided, except as indicated by the inclusion of another professional report within this report;
- That compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I am a member in good standing of the American Society of Consulting Arborists and a member and Certified Arborist with the International Society of Arboriculture.

I have attained professional training in all areas of knowledge asserted through this report by completion of a Bachelor of Science degree in Plant Science, by routinely attending pertinent professional conferences and by reading current research from professional journals, books and other media.

I have rendered professional services in a full-time capacity in the field of horticulture and arboriculture for more than 30 years.

Signed: Roy C. Leggitt, III

Date: *12/12/20*

Description	Date
REVISION 1	12/18/2020

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INTERIOR DESIGN PACKAGE

ARBORIST REPORT

12/12/2022

T2.2

LEGEND

- PROPERTY LINES
- PROPERTY LINES
- BASEMENT OUTLINE
- 1ST FLOOR OUTLINE
- 2ND FLOOR OUTLINE
- ELEC. LINE
- GAS LINE
- SANITARY SEWER LINE
- WATER LINE
- FENCE LINE
- TPZ FENCING

TREES TO REMAIN

TREES TO BE REMOVED

Description	Date
REVISION 1	12/18/2020
REVISION 5	12/12/2022

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(E) SITE PLAN / TREE
PROTECTION MEASURES

12/12/2022

5

A1.1

(E) SITE PLAN / TREE PROTECTION MEASURES

0' 4' 8' 16' 32'

SCALE: 3/32" = 1'-0"

1

LOS CERROS ROAD

PALOMAR DRIVE

TREE PROTECTION MEASURES PER ARBORIST REPORT

3 PROPOSED 24" BOX LIVE OAK TREES

SEPTIC SYSTEM PER CIVIL SHEETS SS-1

(E) FIRE HYDRANT TO REMAIN

71' - 9" BLDG TO FIRE HYDRANT

54' - 9" (P) POOL SETBACK

(79' - 11") FRONT SETBACK

(P) SF FRONT SETBACK

(P) GARAGE FRONT SETBACK

20' - 0" REQD. FRONT SETBACK

10' - 0" REQD. SIDE SETBACK

15' - 0" (P) FF SIDE SETBACK

15' - 0" (P) SF SIDE SETBACK

49' - 5" (P) SF REAR SETBACK

54' - 9" (P) FF REAR SETBACK

20' - 0" REQD. REAR SETBACK

UPPER ROOF

UPPER ROOF DECK

LOWER ROOF

INTERM. ROOF

(P) DRIVEWAY (CONCRETE)

(P) DRIVEWAY (GRAVEL)

PROFILE OF (E) DRIVEWAY

11' - 5"

12' - 1"

20' - 6"

12' - 6"

12' - 0" (E) DRIVEWAY EASEMENT

(P) ELEC. METER

(P) GAS METER

GRAVEL D/W

LEGEND	
PROPERTY LINES	
SETBACK LINES	
BASEMENT OUTLINE	
1ST FLOOR OUTLINE	
2ND FLOOR OUTLINE	
POOL OUTLINE	
ELEC. LINE	E E E E
GAS LINE	G G G G
SANITARY SEWER LINE	SS SS SS SS
WATER LINE	W W W W
FENCE LINE	O O O O
TREE PROTECTION LINE	X X X X

NOTES:

1. DEAD END EMERGENCY ACCESS EXCEEDING 150 FEET SHALL BE PROVIDED WITH WIDTH AND TURNAROUND PROVISIONS MEETING CALIFORNIA FIRE CODE APPENDIX D.
2. FIRE APPARATUS ACCESS ROADS TO BE AN APPROVED ALL WEATHER SURFACE. GRADES 15% OR GREATER TO BE SURFACED W/ ASPHALT, OR BRUSHED CONCRETE. GRADES 15 % OR GREATER SHALL BE LIMITED TO 150 FT. IN LENGTH WITH A MINIMUM OF 500 FT. BETWEEN THE NEXT SECTION. FOR ROADS APPROVED LESS THAN 20 FT., 20 FT. WIDE TURNOUTS SHALL BE ON EACH SIDE OF 15% OR GREATER SECTION. NO GRADES OVER 20%. (PLAN AND PROFILE REQUIRED) CFC 503.
3. A KNOX PADLOCK OR KEY SWITCH WILL BE REQUIRED IF THERE IS LIMITED ACCESS TO PROPERTY PER CFC 506.1.
4. GATES SHALL BE A MINIMUM OF 2 FEET WIDER THAN THE ACCESS ROAD/DRIVEWAY THEY SERVE. OVERHEAD GATE STRUCTURES SHALL HAVE A MINIMUM OF 15 FEET OF VERTICAL CLEARANCE. LOCKED GATES SHALL BE PROVIDED WITH A KNOX BOX OR KNOX PADLOCK. ELECTRIC GATES SHALL HAVE A KNOX KEY SWITCH. ELECTRIC GATES SHALL AUTOMATICALLY OPEN DURING POWER FAILURES PER CFC 503.6, 506
5. DUE TO THE SIZE OF THE STRUCTURE (OVER 3600 SQUARE FEET), AS PER 2019 CFC, APPENDIX B AND C, AN APPROVED FIRE HYDRANT (CLOW 960) SHALL BE LOCATED WITHIN 500 FEET OF THE PROPOSED SINGLE-FAMILY DWELLING UNIT MEASURED BY WAY OF DRIVABLE ACCESS WITH A MINIMUM FIRE FLOW OF 875 PER MINUTE AT 20 POUNDS PER SQUARE INCH. CONTACT THE LOCAL PURVEYOR FOR WATER FLOW DETAILS.

Description	Date
REVISION 1	12/18/2020
REVISION 3	12/20/2021
REVISION 4	11/17/2022
REVISION 5	12/12/2022

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(P) SITE PLAN

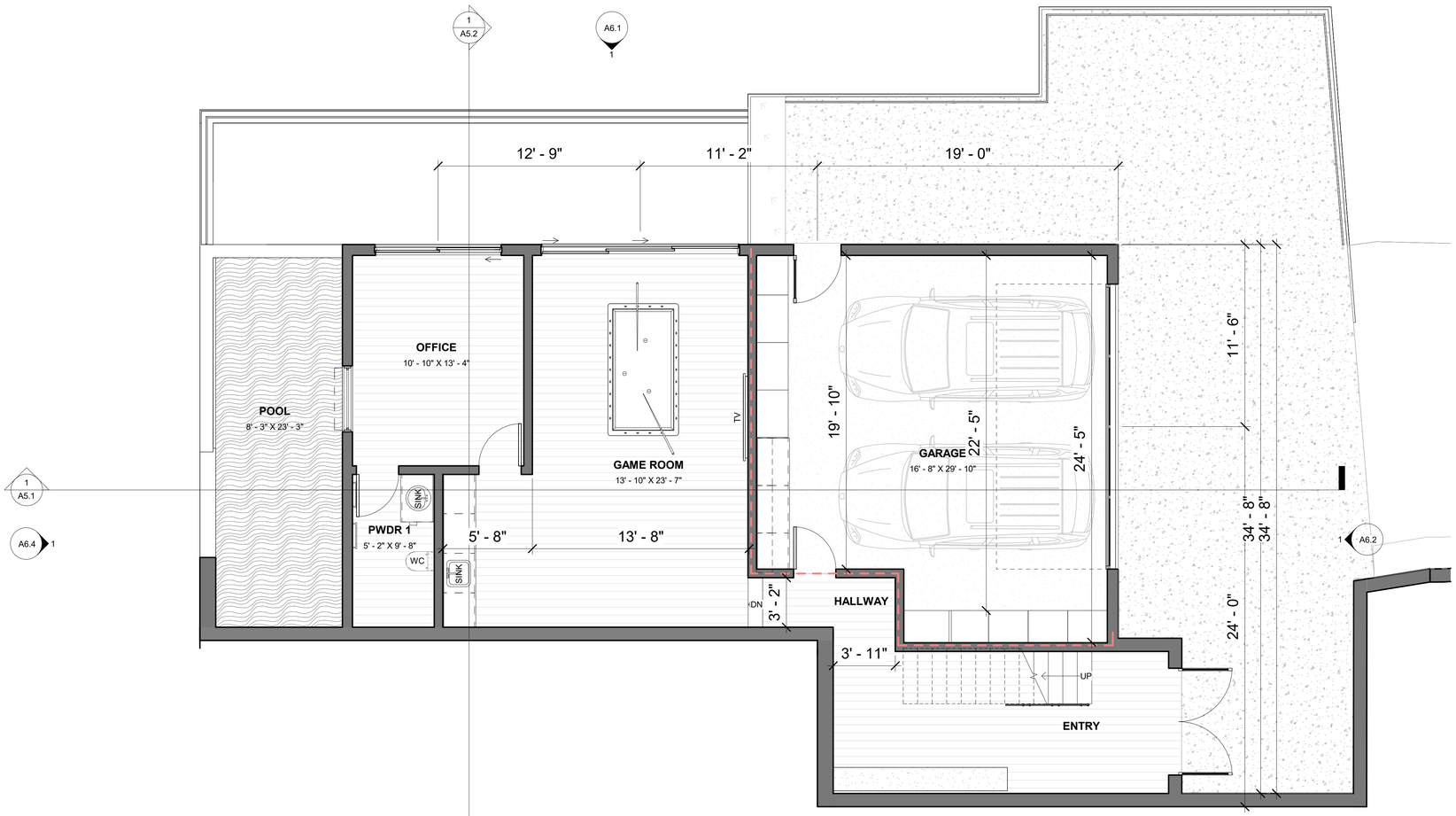
12/12/2022

A1.2

(P) SITE PLAN

0' 4' 8' 16' 32'

SCALE: 3/32" = 1'-0"



LEGEND

- (E) WALLS TO REMAIN
- (P) NEW WALLS
- 1-HOUR FIRE-RATED WALLS
- # WALL TAG
- # WINDOW TAG
- # DOOR TAG
- T TEMPERED TAG
- OBS OBSCURE TAG
- # PLAN NOTE
- SD SMOKE DETECTOR
- SD SMOKE & CARBON MONOXIDE DETECTOR
- EM ELECTRIC METER
- GM GAS METER

NOTES:

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2. SMOKE ALARMS TO BE INSTALLED PER MANUFACTURES INSTRUCTION AND NFPA 72
3. ESCAPE OR RESCUE WINDOWS SHALL HAVE A MINIMUM NET CLEAR OPENABLE AREA OF 5.7 SQUARE FEET, 5.0 SQ. FT. ALLOWED AT GRADE. THE MINIMUM ET CLEAR OPENABLE HEIGHT DIMENSION SHALL BE 24 INCHES. THE NET CLEAR OPENABLE WIDTH DIMENSION SHALL BE 20 INCHES. FINISHED SILL HEIGHT SHALL BE NOT MORE THAN 44 INCHES ABOVE THE FINISHED FLOOR. (CFC 2019 SECTION 1030.2).
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6. AN EXTERIOR BELL IS REQUIRED TO BE WIRED INTO THE REQUIRED FLOW SWITCH ON YOUR FIRE SPRINKLER SYSTEM

Description	Date
REVISION 1	12/18/2020
REVISION 3	12/20/2021

M DESIGNS ARCHITECTS
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Fax: 949-625-7869

NEW RESIDENCE AT
634 PALOMAR DRIVE
REDWOOD CITY, CA 94062

INTERIOR DESIGN PACKAGE

(P) BASE FLOOR PLAN

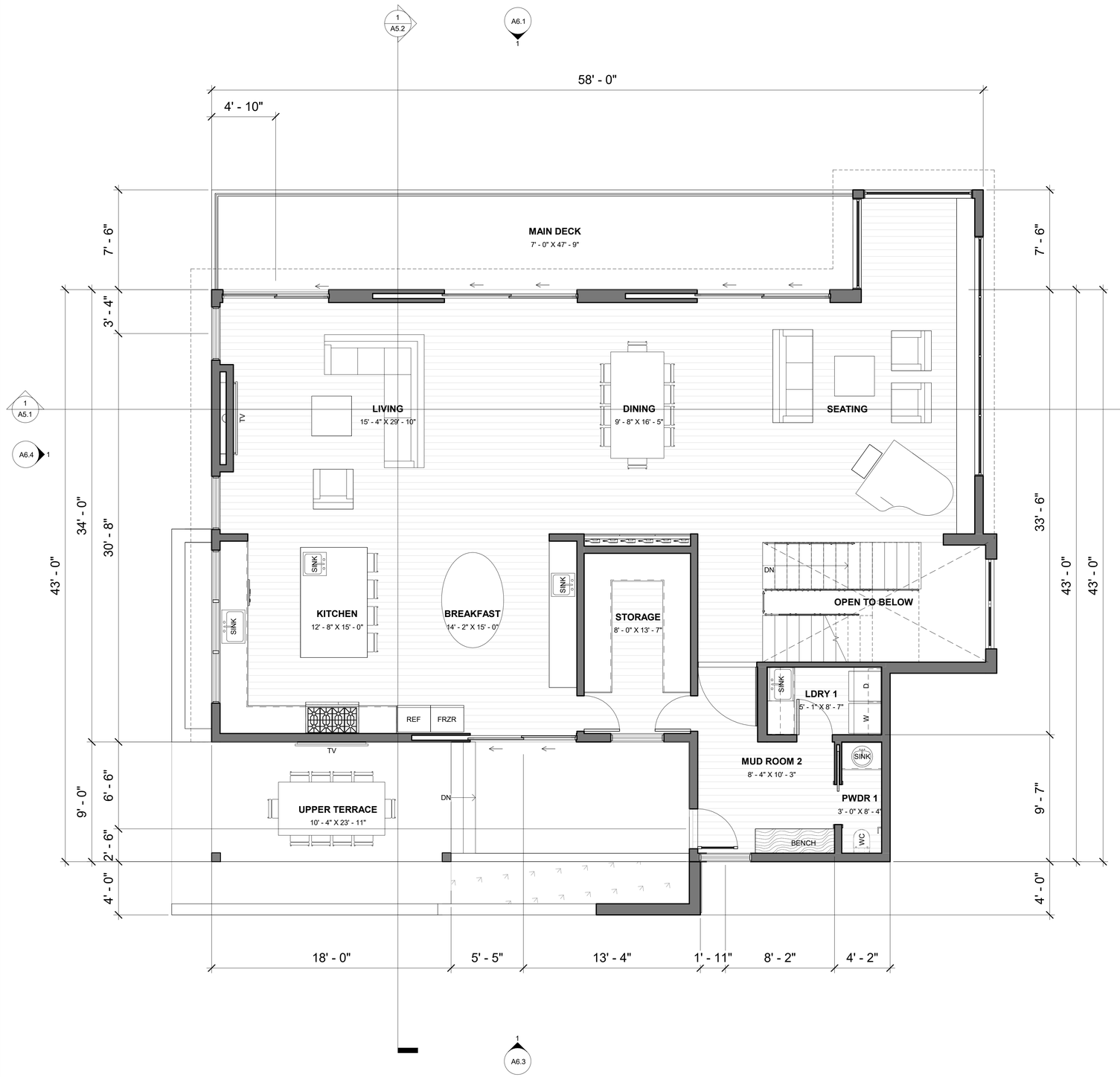
12/12/2022

A2.1

(P) BASE FLOOR PLAN

0' 2' 4' 8' 16'

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



LEGEND

- (E) WALLS TO REMAIN
- (P) NEW WALLS
- 1-HOUR FIRE-RATED WALLS
- # WALL TAG
- # WINDOW TAG
- # DOOR TAG
- T TEMPERED TAG
- OBS OBSCURE TAG
- # PLAN NOTE
- SD SMOKE DETECTOR
- SD SMOKE & CARBON MONOXIDE DETECTOR
- EM ELECTRIC METER
- GM GAS METER

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REVISION 4	11/17/2022

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NEW RESIDENCE AT
634 PALOMAR DRIVE
REDWOOD CITY, CA 94062

INTERIOR DESIGN PACKAGE

(P) 1ST FLOOR PLAN

12/12/2022

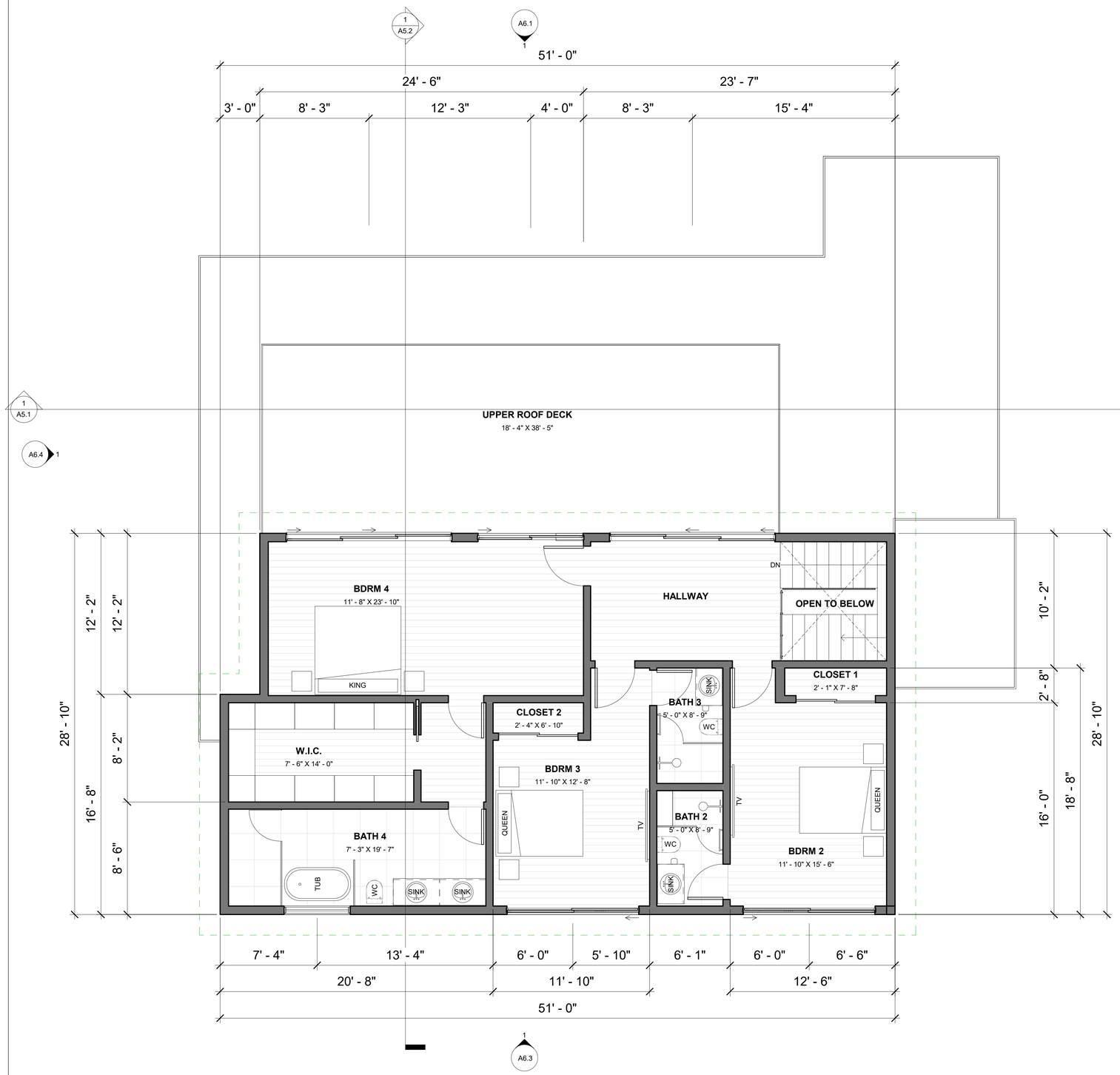
A2.2

(P) 1ST FLOOR PLAN

0' 2' 4' 8' 16'

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

1



LEGEND

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NEW RESIDENCE AT
634 PALOMAR DRIVE
REDWOOD CITY, CA 94062

INTERIOR DESIGN PACKAGE

(P) 2ND FLOOR PLAN

12/12/2022

A2.3

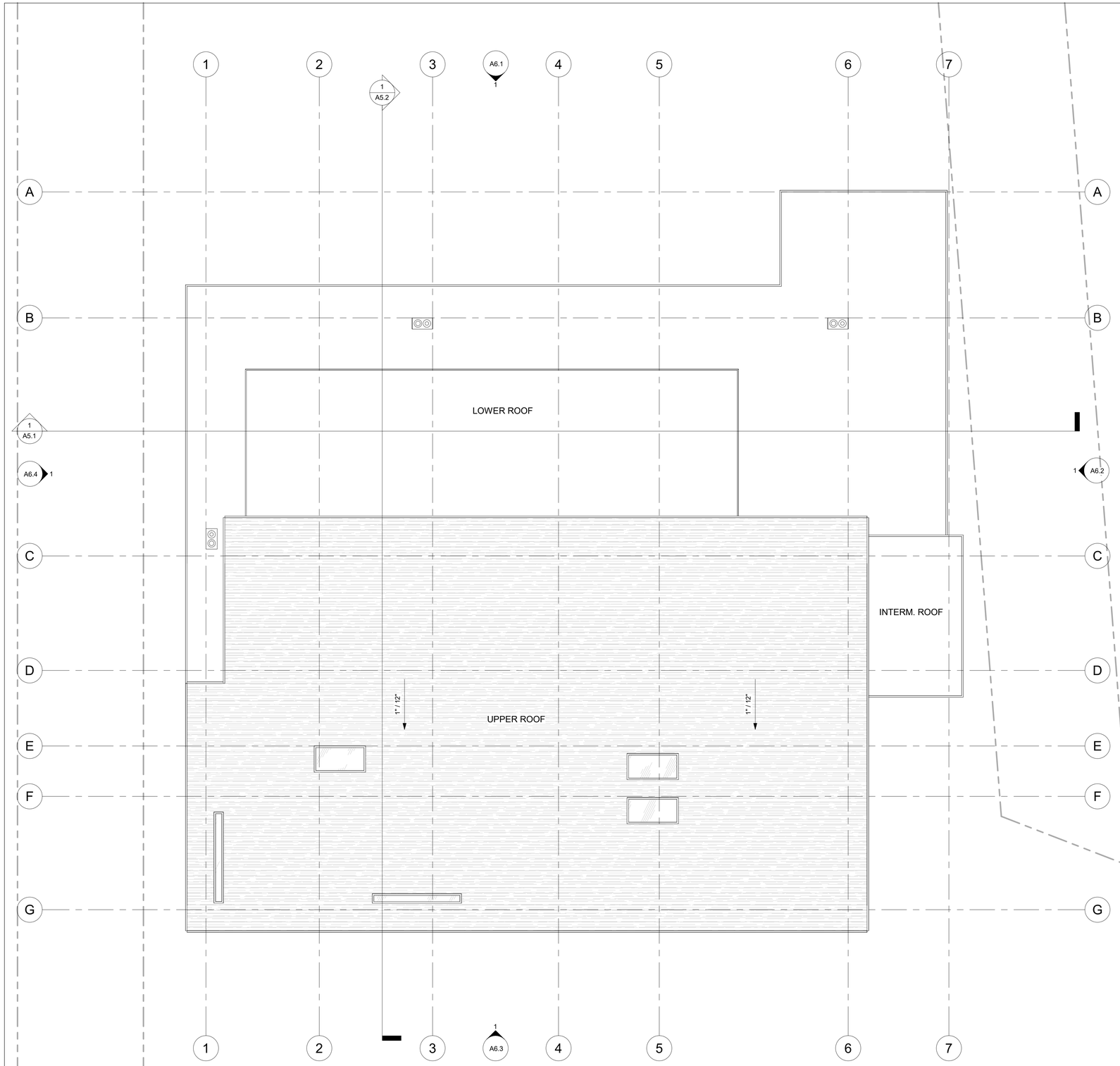
(P) 2ND FLOOR PLAN

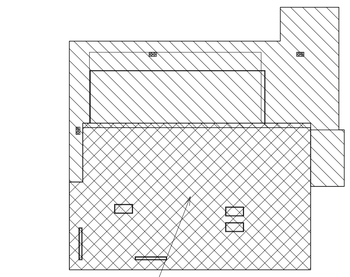
0' 2' 4' 8' 16'

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

1

NOTE: THE BUILDING IS IN A VERY HIGH FIRE HAZARD SEVERITY ZONE AND WILL REQUIRE A CLASS A ROOF.





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INTERIOR DESIGN PACKAGE

(P) ROOF PLAN

12/12/2022

A4.1

(P) ROOF PLAN

0' 2' 4' 8' 16'

SCALE: As indicated | 1

LEGEND

(E) WALLS, FLOORS, AND ROOFS TO REMAIN

LEGEND

(P) NEW WALLS, FLOORS AND ROOFS

WALL TAG

WALL TAG

WINDOW TAG

WINDOW TAG

DOOR TAG

DOOR TAG

T TEMPERED TAG

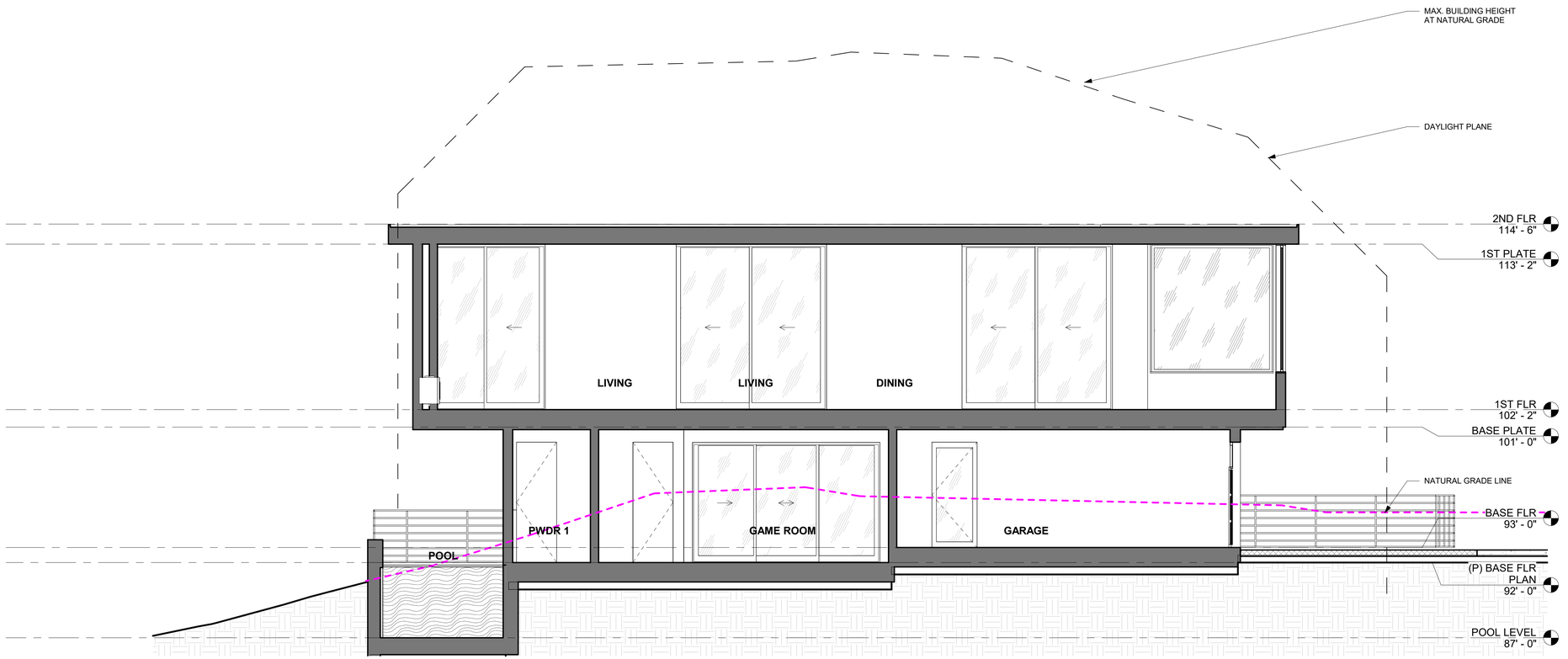
T TEMPERED TAG

OBS OBSCURE TAG

OBS OBSCURE TAG

PLAN NOTE

PLAN NOTE



Description	Date
REVISION 4	11/17/2022

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NEW RESIDENCE AT
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REDWOOD CITY, CA 94062

INTERIOR DESIGN PACKAGE

(P) A-A SECTION

12/12/2022

A5.1

(P) A-A SECTION

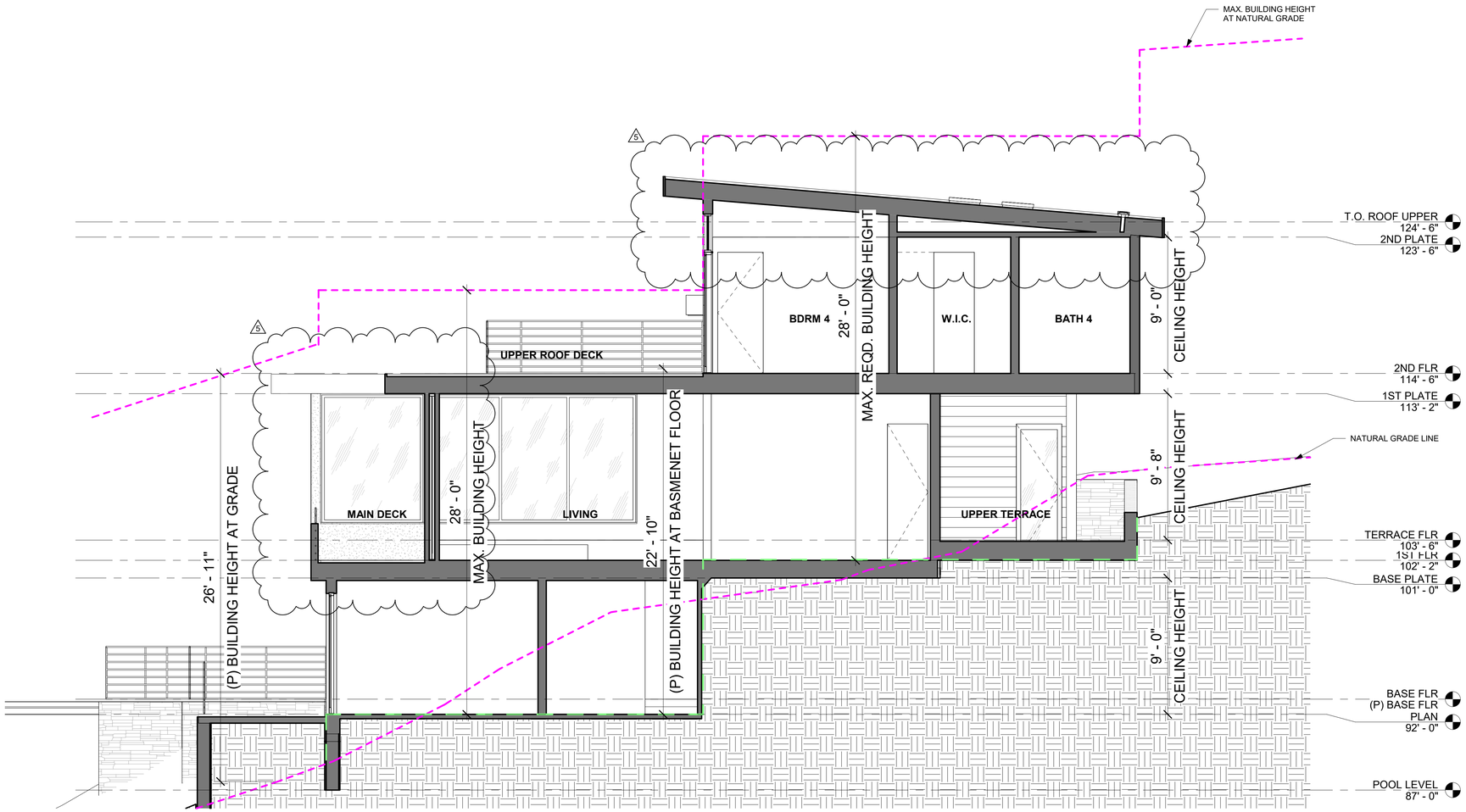
0' 2' 4' 8' 16'

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

1

LEGEND

- (#) WALL TAG
- (#) WINDOW TAG
- (#) DOOR TAG
- (T) TEMPERED TAG
- (OBS) OBSCURE TAG
- (#) PLAN NOTE



Description	Date
REVISION 5	12/12/2022

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INTERIOR DESIGN PACKAGE

(P) B-B SECTION

12/12/2022

A5.2

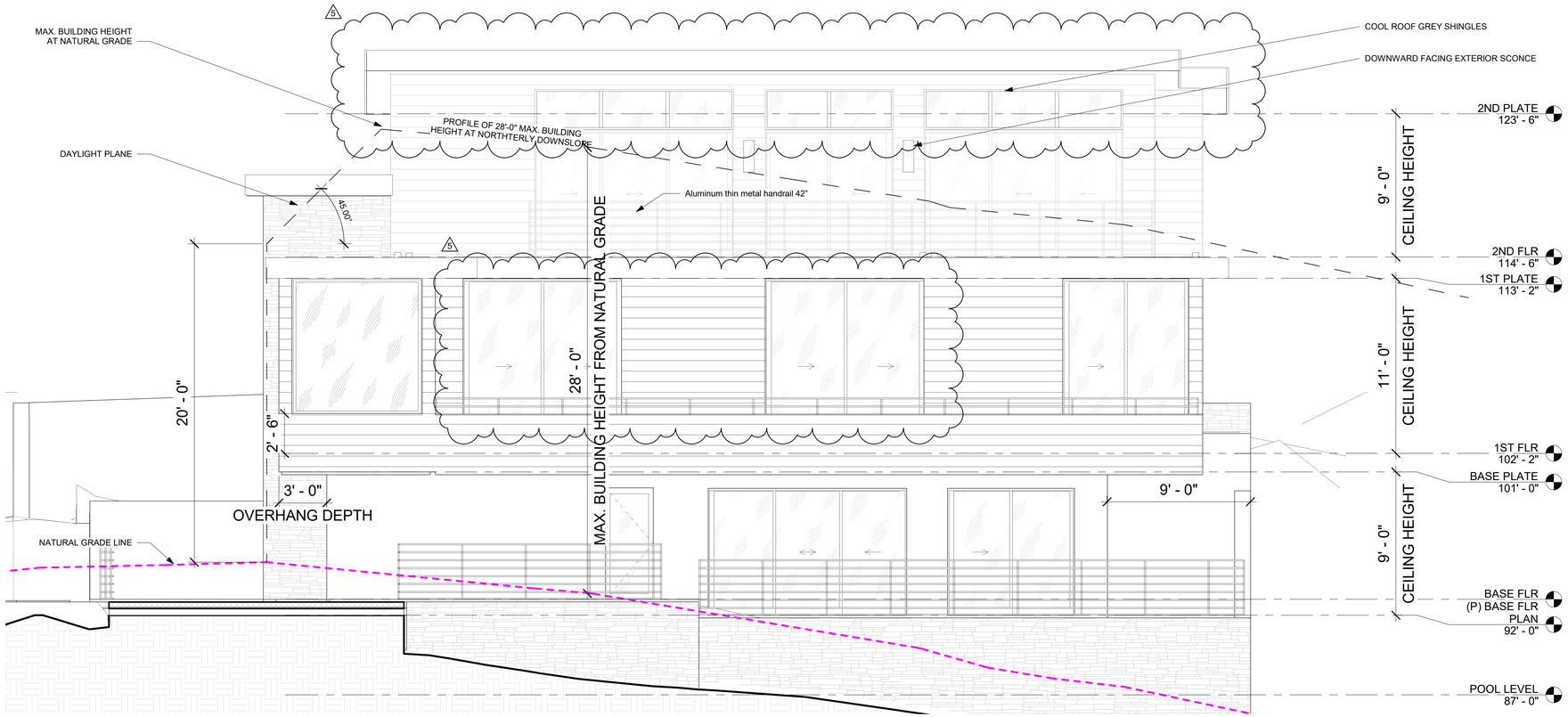
(P) B-B SECTION

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

LEGEND

- (#) WALL TAG
- (#) WINDOW TAG
- (#) DOOR TAG
- (T) TEMPERED TAG
- (OBS) OBSCURE TAG
- (#) PLAN NOTE

Description	Date
REVISION 4	11/17/2022
REVISION 5	12/12/2022



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INTERIOR DESIGN PACKAGE

(P) NORTH ELEVATIONS

12/12/2022

5

A6.1

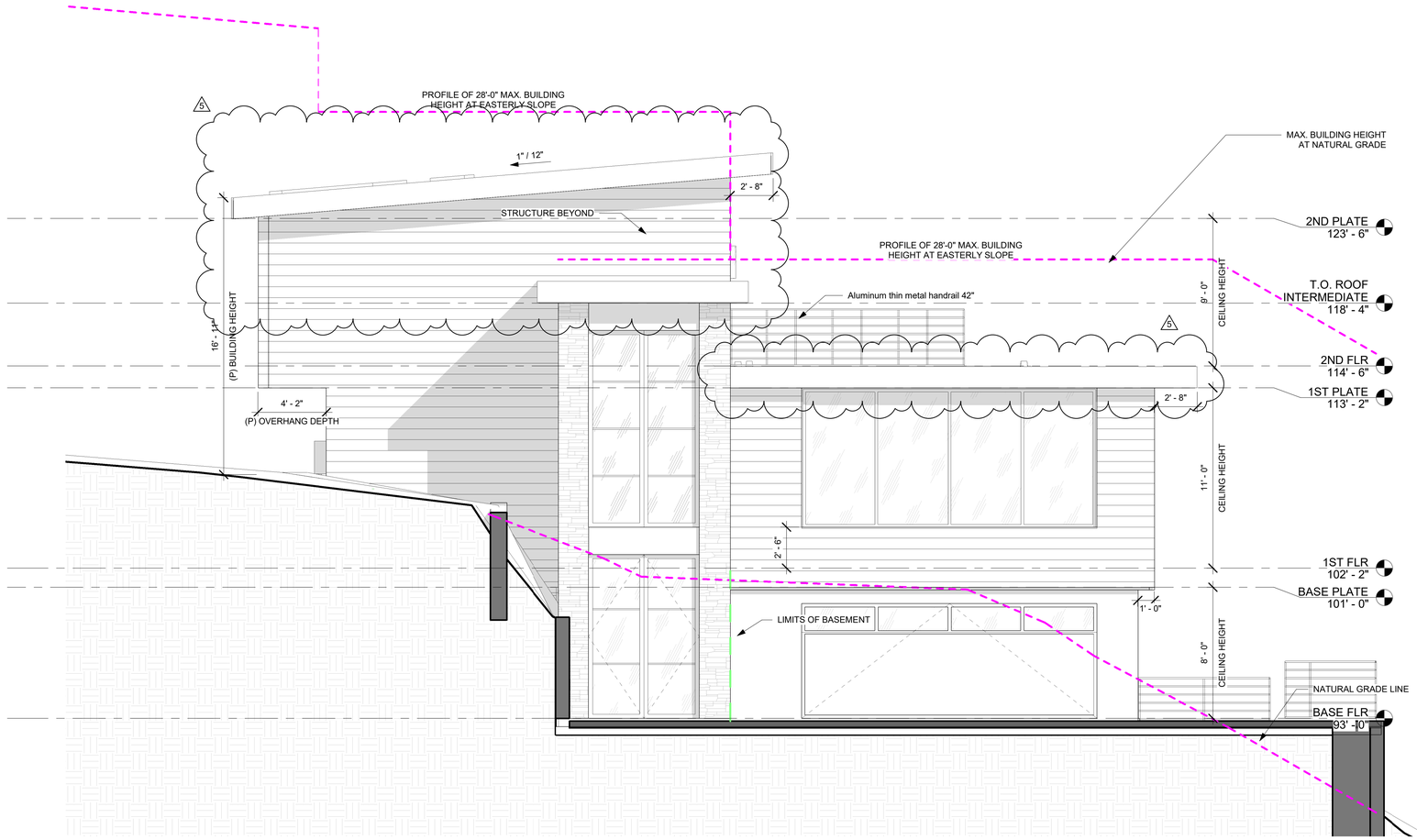
(P) NORTH ELEVATIONS

0' 2' 4' 8' 16'

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

LEGEND

- (#) WALL TAG
- (#) WINDOW TAG
- (#) DOOR TAG
- (T) TEMPERED TAG
- (OBS) OBSCURE TAG
- (#) PLAN NOTE



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INTERIOR DESIGN PACKAGE

(P) EAST ELEVATIONS

12/12/2022

5

A6.2

(P) EAST ELEVATIONS

0' 2' 4' 8' 16'

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

LEGEND

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- (#) WINDOW TAG
- (#) DOOR TAG
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- (OBS) OBSCURE TAG
- (#) PLAN NOTE

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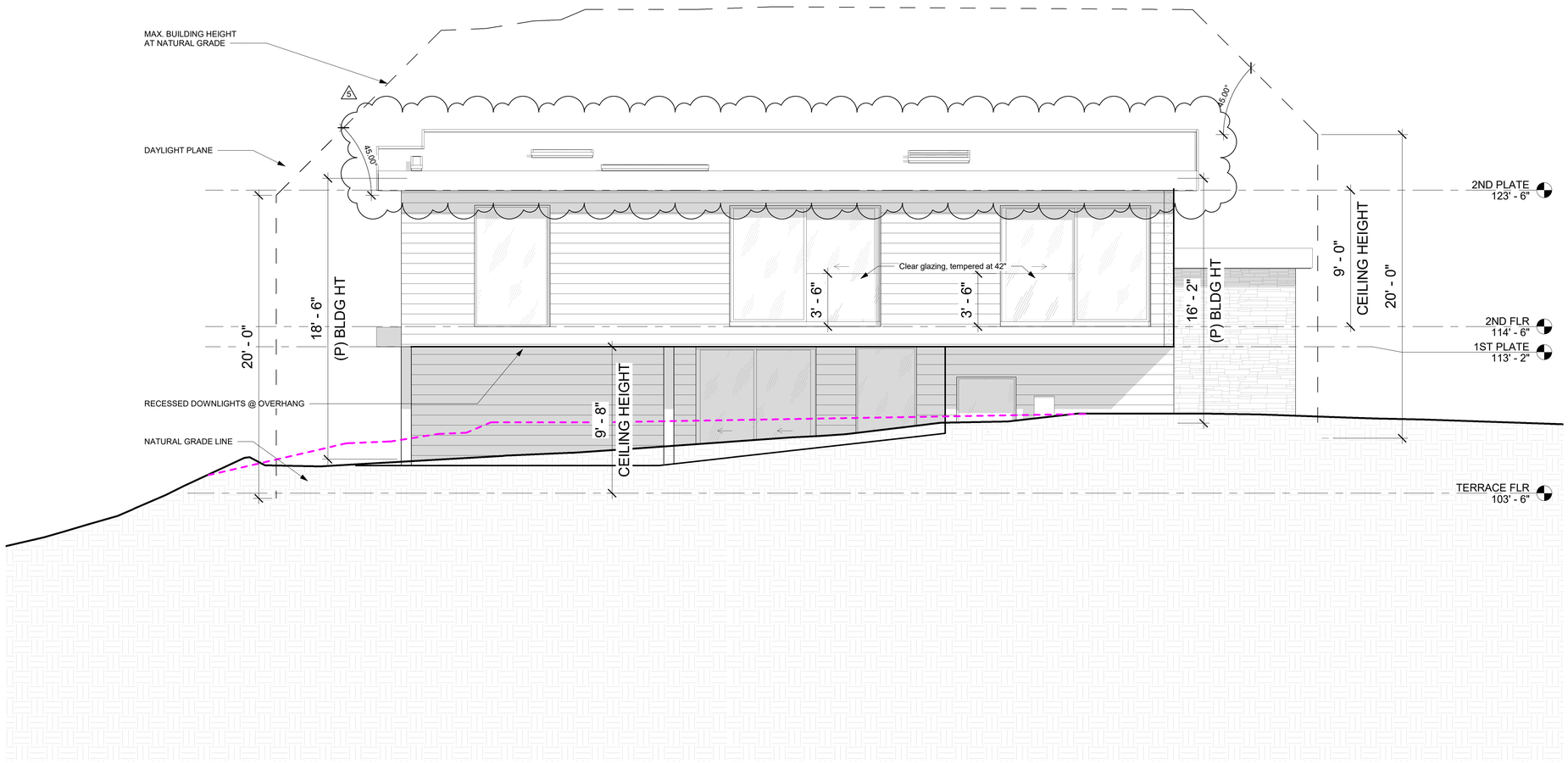

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INTERIOR DESIGN PACKAGE

(P) SOUTH ELEVATION

12/12/2022

5

A6.3

(P) SOUTH ELEVATION

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

LEGEND

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- (#) WINDOW TAG
- (#) DOOR TAG
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- (OBS) OBSCURE TAG
- (#) PLAN NOTE

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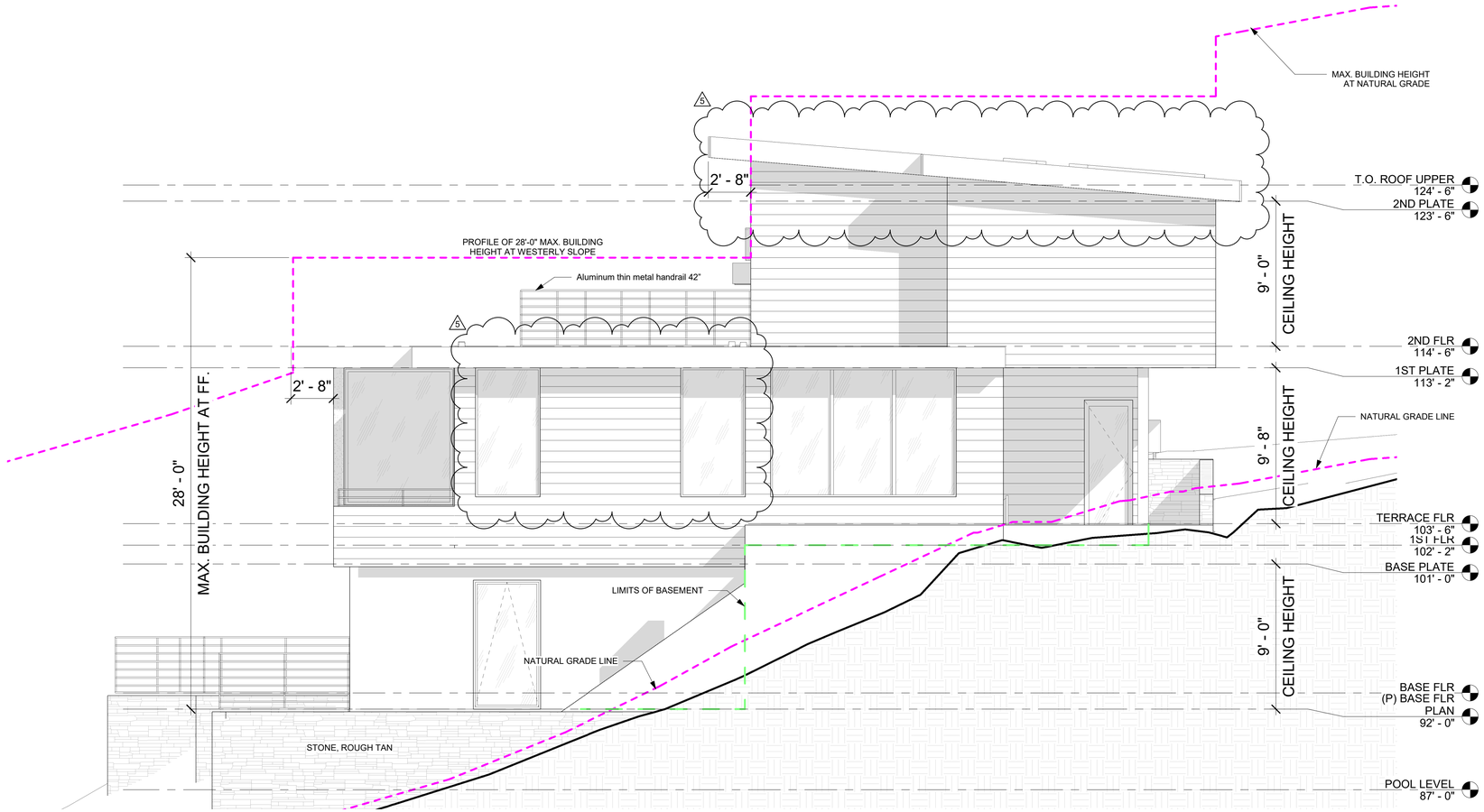

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INTERIOR DESIGN PACKAGE

(P) WEST ELEVATION

12/12/2022

5

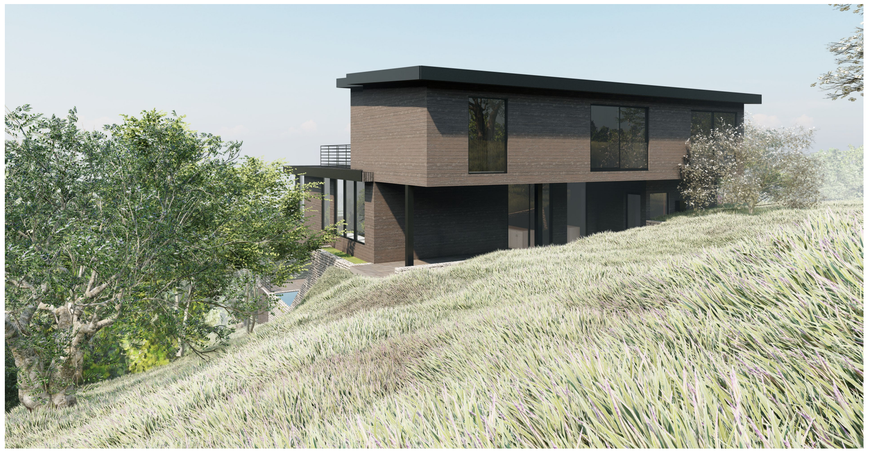
A6.4

(P) WEST ELEVATION

0' 2' 4' 8' 16'

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

FRONT VIEW



REAR VIEW

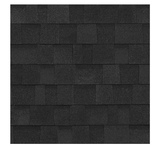
STREET VIEW

M·DESIGNS ARCHITECTS

September 26, 2022

Subject: MATERIALS BOARD

Re: 634 PALOMAR DRIVE
REDWOOD CITY, CA 94062

	
ROOF - MENARD BLACK SHINGLES	WINDOWS & DOORS TRIM- BLACK
	
STONE – CORONADO VEIJO RANCH BLEND	WOOD SIDING – POPULAR WOOD T&G

Description	Date
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M·DESIGNS ARCHITECTS

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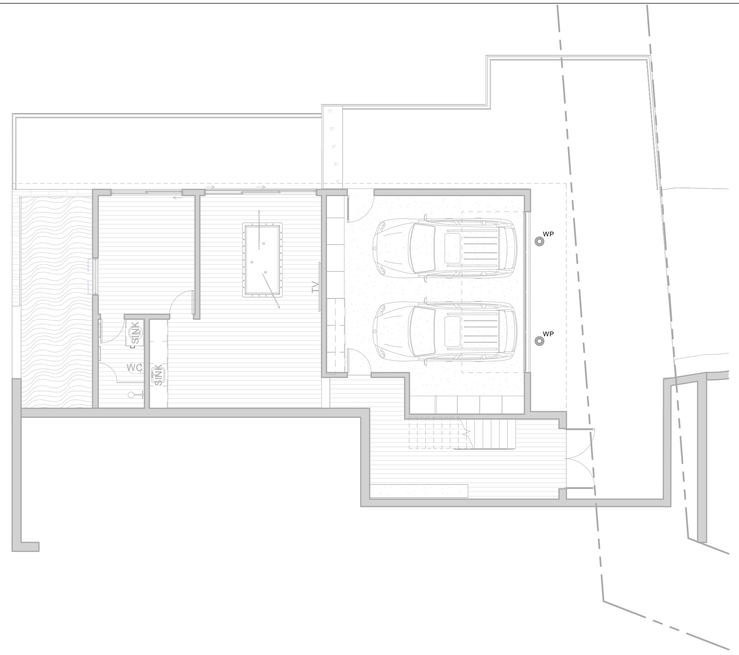
INTERIOR DESIGN PACKAGE

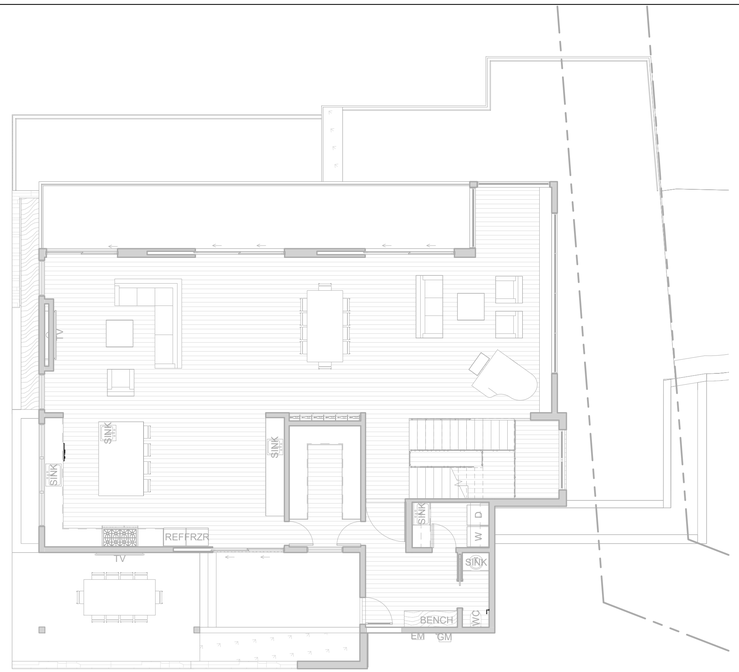
COLOR/MATERIAL BOARD

12/12/2022

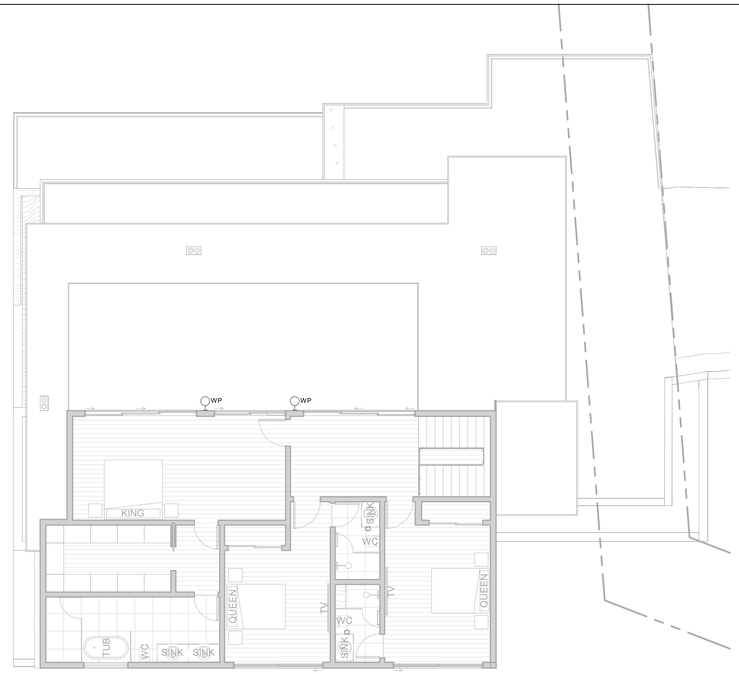
CB.1



BASEMENT FLLOR EXTERIOR LIGHTING PLAN



FIRST FLOOR EXTERIOR LIGHTING PLAN



SECOND FLOOR EXTERIOR LIGHTING PLAN

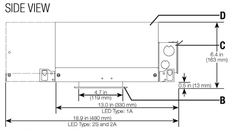
Finiré | 4" LED Recessed Lighting
17 W, 18 W, and 20 W IC LED Round Adjustable

LUTRON IVALO COLLECTION

367-2168x 1 07.08.2019

DIMENSIONS

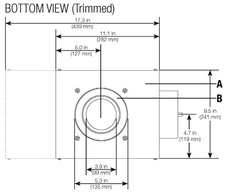
SIDE VIEW



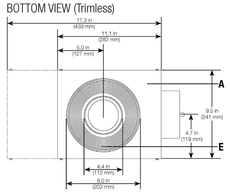
A Frame
B Trim
C Junction Box
D IC Housing
E Mud Ring†

Lutron Hi-lume 1% LED Driver not shown

BOTTOM VIEW (Trimmed)



BOTTOM VIEW (Trimless)



PRINCIPAL FEATURES

- Xicato LEDs: 83 CRI (typical) or 97 CRI, R9=95 (typical).
- 50,000 hours rated LED system life (LED and driver) at 77 °F (25 °C) ambient.
- Powerful adjustable LED module in efficient trim with excellent cutoff.
- Standard Lutron Hi-lume 1% LED Driver delivers continuous, flicker-free dimming from 100% down to 1% of measured light output.
- Hi-lume 1% EcoSystem LED Driver features Soft-on, Fade-to-Black technology.[1]
- 20°, 30°, 36°, 40° and 50° beam angles available.
- Trim supports a variety of lens/accessory options.
- IC fixtures must be used for installations containing insulating materials. Non-IC fixtures cannot be used in this type of application.
- IC fixtures meet airtight and Chicago plenum construction requirements for 2.0 CFM or less air leakage.
- Frame constructed of 20 gauge steel.
- UL® and cUL Listed.
- Supplied with 14 in to 24 in (356 mm to 610 mm) adjustable bar hangers.
- LED optics rotate 357° and tilt from 0° to 42°.
- Housings finished with reclaimed black powder coat.
- Adjustable mounting brackets can be mounted on any side of the fixture.
- Field replaceable components:
  - Beam angle reflector
  - Lutron LED driver
  - LED module with integrated heat sink
  - Decorative trim/lens
- 2-wire forward phase controls are generally for residential applications. EcoSystem controls are generally for commercial applications.

SPECIFICATIONS

Operating Temperature: 32 °F to 104 °F (0 °C to 40 °C)
Decibel Rating: Quiet in a 25 dB room
Max Ceiling Thickness: 2.0 in (50 mm)
Mud Ring Thickness†: 0.125 in (3 mm)
Ceiling Cutout: ø 4.8 in (ø 122 mm)
Fixture Weight: 4.0 lb (1.8 kg)
Fixture Size (by LED Type):
– 1A: 13.0 in x 9.5 in x 6.4 in (330 mm x 241 mm x 163 mm)
– 2S and 2A: 18.9 in x 9.5 in x 6.4 in (480 mm x 241 mm x 163 mm)
Junction Box Size: 4.9 in x 3.1 in x 1.75 in (124 mm x 79 mm x 44 mm). See NEC® chart 314.16A for box fill/wiring capacity.

COMPATIBLE CONTROLS

Visit www.lutron.com/finire

† Mud ring is for trimless fixtures only.
‡ PWM dimming below 5% for Hi-lume 1% EcoSystem drivers.

Slant LED Indoor & Outdoor Wall Light

By dwelLED

YLIGHTING
Call Us 866.428.9289

Product Options

Finish: Brushed Aluminum , Black

Details

- May be mounted on wall vertically or upside down
- ACLED driver
- Designed in 2019
- Material: Aluminum
- Dimmable when used with a Electronic low voltage (ELV) Dimmer (Not Included)
- Dimmer Range: ELV Dimming: 100 - 10%
- ADA compliant, Dark Sky compliant, Title 24 compliant
- ETL Listed Wet
- Warranty: 5 Years Functional, 2 Years Finish
- Made In China

Dimensions

Fixture: Length 5", Width 3.25", Height 10.63"

Lighting

- 7 Watt (440 Lumens) 120 Volt Integrated LED: CRI: 90 Color Temp: 3000K Lifespan: 50000 hours

Additional Details

Product URL:
https://www.ylighting.com/slant-led-indoor-and-outdoor-wall-light-by-dwelled-DWEP266554.html
Rating: ETL Listed Wet

Notes:

Product ID: DWEP266554

Prepared by:

Prepared for:
Project:
Room:
Placement:
Approval:

Created December 20th, 2021

Description	Date
REVISION 1	12/18/2020
REVISION 3	12/20/2021

M DESIGNS ARCHITECTS
4131 WEST EL CAMINO REAL, SUITE 200, PALO ALTO CA 94306
www.mdesignsarchitects.com
Email: info@mdesignsarchitects.com
Phone: 650-565-9036
Fax: 949-625-7869

NEW RESIDENCE AT
634 PALOMAR DRIVE
REDWOOD CITY, CA 94062

INTERIOR DESIGN PACKAGE

EXTERIOR LIGHTING

12/12/2022

E2.0

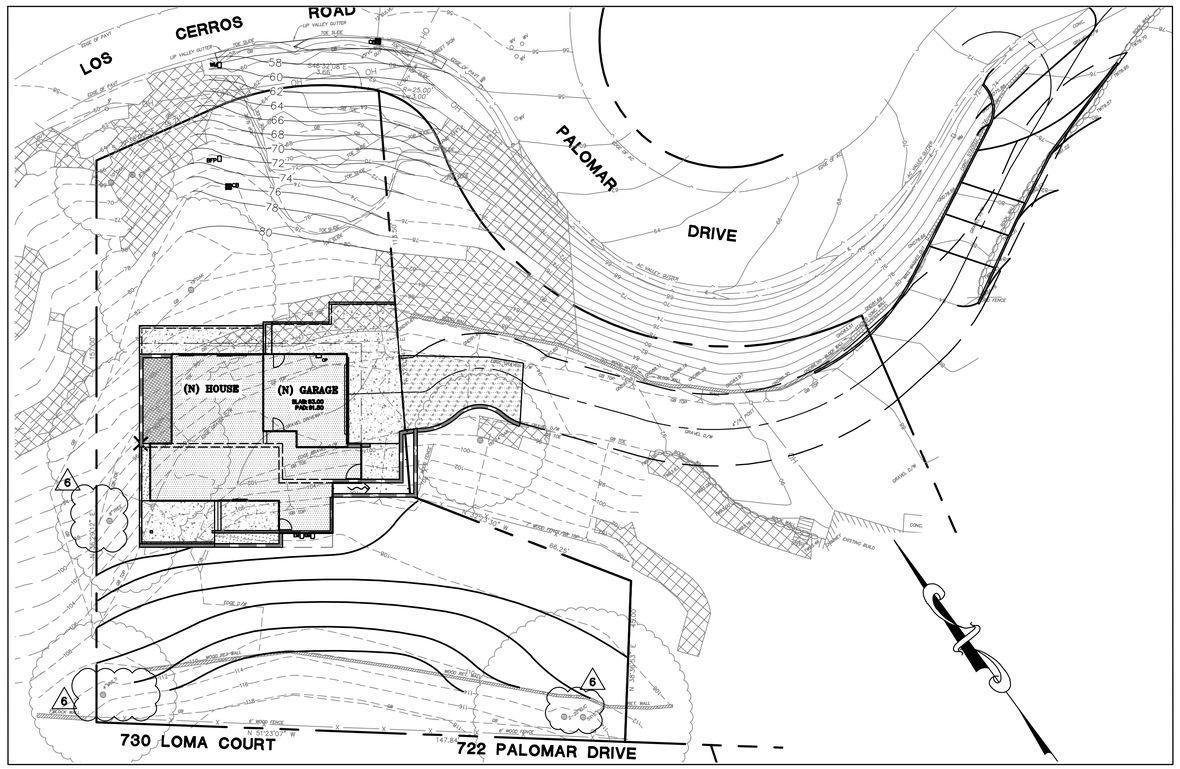
634 PALOMAR DRIVE
REDWOOD CITY, CALIFORNIA
UNINCORPORATED
SAN MATEO COUNTY

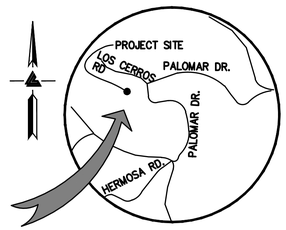
LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BOUNDARY
		PROPERTY LINE
		RETAINING WALL
		LANDSCAPE RETAINING WALL
RW RW	RW RW	RAINWATER TIGHTLINE
SUB	SUB	SUBDRAIN LINE
TL	TL	TIGHTLINE
SD	SD	STORM DRAIN LINE
SS	SS	SANITARY SEWER LINE
W	W	WATER LINE
G	G	GAS LINE
P	P	PRESSURE LINE
JT	JT	JOINT TRENCH
		SET BACK LINE
		CONCRETE VALLEY GUTTER
		EARTHEN SWALE
CB	CB	CATCH BASIN
JB	JB	JUNCTION BOX
AD	AD	AREA DRAIN
		CURB INLET
SDMH	SDMH	STORM DRAIN MANHOLE
		FIRE HYDRANT
SSMH	SSMH	SANITARY SEWER MANHOLE
		STREET SIGN
222.57 INV	222.57 INV	SPOT ELEVATION
		FLOW DIRECTION
	D	DEMOLISH/REMOVE
		BENCHMARK
200	200	CONTOURS
XX" TREE		TREE TO BE REMOVED

ABBREVIATIONS

AB	AGGREGATE BASE	LF	LINEAR FEET
AC	ASPHALT CONCRETE	MAX	MAXIMUM
ACC	ACCESSIBLE	MH	MANHOLE
AD	AREA DRAIN	MIN	MINIMUM
BC	BEGINNING OF CURVE	MON.	MONUMENT
B & D	BEARING & DISTANCE	(N)	NEW
BM	BENCHMARK	NO.	NUMBER
BW/FG	BOTTOM OF WALL/FINISH GRADE	NTS	NOT TO SCALE
CB	CATCH BASIN	O.C.	ON CENTER
C & G	CURB AND GUTTER	O/	OVER
℄	CENTER LINE	(PA)	PLANTING AREA
CPP	CORRUGATED PLASTIC PIPE (SMOOTH INTERIOR)	PED	PEDESTRIAN
		PIV	POST INDICATOR VALVE
		PSS	PUBLIC SERVICES EASEMENT
CO	CLEANOUT	ℙ	PROPERTY LINE
COTG	CLEANOUT TO GRADE	PP	POWER POLE
CONC	CONCRETE	PUE	PUBLIC UTILITY EASEMENT
CONST	CONSTRUCT or –TION	PVC	POLYVINYL CHLORIDE
CONC COR	CONCRETE CORNER	R	RADIUS
CY	CUBIC YARD	RCP	REINFORCED CONCRETE PIPE
D	DIAMETER	RIM	RIM ELEVATION
DI	DROP INLET	RW	RAINWATER
DIP	DUCTILE IRON PIPE	R/W	RIGHT OF WAY
EA	EACH	S	SLOPE
EC	END OF CURVE	S.A.D.	SEE ARCHITECTURAL DRAWINGS
EG	EXISTING GRADE	SAN	SANITARY
EL	ELEVATIONS	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	SDMH	STORM DRAIN MANHOLE
EQ	EQUIPMENT	SHT	SHEET
EW	EACH WAY	S.L.D.	SEE LANDSCAPE DRAWINGS
(E)	EXISTING	SPEC	SPECIFICATION
FC	FACE OF CURB	SS	SANITARY SEWER
FF	FINISHED FLOOR	SSCO	SANITARY SEWER CLEANOUT
FG	FINISHED GRADE	SSMH	SANITARY SEWER MANHOLE
FH	FIRE HYDRANT	ST.	STREET
FL	FLOW LINE	STA	STATION
FS	FINISHED SURFACE	STD	STANDARD
G	GAS	STRUCT	STRUCTURAL
GA	GAGE OR GAUGE	T	TELEPHONE
GB	GRADE BREAK	TC	TOP OF CURB
HDPE	HIGH DENSITY CORRUGATED POLYETHYLENE PIPE	TEMP	TEMPORARY
		TP	TOP OF PAVEMENT
HORIZ	HORIZONTAL	TW/FG	TOP OF WALL/FINISH GRADE
HI PT	HIGH POINT	TYP	TYPICAL
H&T	HUB & TACK	VC	VERTICAL CURVE
ID	INSIDE DIAMETER	VCP	VITRIFIED CLAY PIPE
INV	INVERT ELEVATION	VERT	VERTICAL
JB	JUNCTION BOX	W/	WITH
JT	JOINT TRENCH	W, WL	WATER LINE
JP	JOINT UTILITY POLE	WM	WATER METER
L	LENGTH	WWF	WELDED WIRE FABRIC
LNDG	LANDING		





VICINITY MAP
NTS

OWNER'S INFORMATION

OWNER:
DAVID JACKSON AND ANUSHA THALAPANENI
485 BRYANT STREET, APT. B
SAN FRANCISCO, CALIFORNIA

APN: 051–022–380

REFERENCES

THIS GRADING AND DRAINAGE PLAN IS SUPPLEMENTAL TO:

1. TOPOGRAPHIC SURVEY BY GIULIANI & KULL, INC., ENTITLED;
   "TOPOGRAPHIC SURVEY"
   634 PALOMAR DRIVE
   REDWOOD CITY, CALIFORNIA
   DATED: 3–24–17
   JOB#14144
2. ARCHITECTURAL AND SITE DESIGN PLANS BY M. DESIGN ARCHITECTS.
   ENTITLED:
   "NEW RESIDENCE AT 634 PALOMAR DRIVE"
   634 PALOMAR DRIVE
   REDWOOD CITY, CALIFORNIA
   DATED: 04–22–20
   JOB#:
3. SOIL REPORT BY ATLAS GEOSPHERE CONSULTANTS, INC.,
   ENTITLED:
   "PROPOSED RESIDENTIAL DEVELOPMENT"
   634 PALOMAR DRIVE
   REDWOOD CITY, CALIFORNIA
   DATE: 07–29–2020
   JOB# 91–55905–A

THE CONTRACTOR SHALL REFER TO THE ABOVE NOTED SURVEY AND PLAN, AND SHALL VERIFY BOTH EXISTING AND PROPOSED ITEMS ACCORDING TO THEM.

SITE DEVELOPMENT INFORMATION

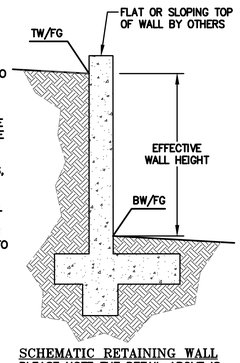
TOTAL SITE AREA: 18,129 SQFT / 0.42 ACRE
TOTAL DISTURBED AREA: 14,359 SQFT / 0.33 ACRE

KEY MAP

1" = 20'

RETAINING WALL NOTES

1. TW/FG REPRESENTS FINISHED EARTHEN GRADE OR PAVEMENT ELEVATION AT TOP OF WALL, NOT ACTUAL TOP OF WALL MATERIAL. BW/FG REPRESENTS FINISH EARTHEN GRADE OR PAVEMENT ELEVATION AT BOTTOM OF WALL NOT INCLUDING FILL FOUNDATION. GRADES INDICATED ON THESE PLANS REFER TO THE FINISHED GRADES ADJACENT TO THE RETAINING WALL, NOT INCLUDING FOOTING, FREEBOARD, ETC.
2. DIMENSIONS SHOWN IN BRACKETS SHOWN AS [X.X'] DENOTE THE EFFECTIVE WALL HEIGHT ONLY. THE ACTUAL WALL HEIGHT AND DEPTH MAY DIFFER DUE TO CONSTRUCTION REQUIREMENTS.
3. REFER TO SPECIFIC WALL CONSTRUCTION DETAIL FOR STRUCTURAL ELEMENTS, FREEBOARD, AND EMBEDMENT.
4. REFER TO ARCHITECTURAL, LANDSCAPE ARCHITECTURE, AND/OR STRUCTURAL PLANS FOR DETAILS, WALL ELEVATIONS, SUBDRAINAGE, WATERPROOFING, FINISHES, COLORS, STEEL REINFORCING, MATERIALS, ETC. PROVIDE CLIPS OR OTHER MEANS OF SECURING FINISH MATERIALS AS NECESSARY (WET SET INTO THE WALL).
5. ALL RETAINING WALLS SHOULD HAVE A BACK–OF–WALL SUB–SURFACE DRAINAGE SYSTEM INCLUDING WEEPHOLES TO PREVENT HYDROSTATIC PRESSURE.
6. SEE DETAIL SHEET FOR SPECIFIC INFORMATION.
7. PROVIDE GUARDRAIL (WHERE APPLICABLE AND DESIGNED BY OTHERS) AS REQUIRED FOR GRADE SEPARATION OF 30 INCHES OR MORE MEASURED 5' HORIZONTALLY FROM FACE OF WALL, PER CBC.



SCHEMATIC RETAINING WALL
PLEASE NOTE THE DETAIL ABOVE IS SCHEMATIC ONLY AND DOES NOT PERTAIN TO ANY SPECIFIC RETAINING WALL LOCATED ON–SITE.

* BUILDING PAD NOTE: ADJUST PAD LEVEL AS REQUIRED. REFER TO STRUCTURAL PLANS FOR SLAB SECTION OR CRAWL SPACE DEPTH TO ESTABLISH PAD LEVEL.

NOTE:
FOR CONSTRUCTION STAKING SCHEDULING OR QUOTATIONS PLEASE CONTACT ALEX ABAYA AT LEA & BRAZE ENGINEERING (510)887-4086 EXT 116. aabaya@leabraze.com

1–800–642–2444 CALL BEFORE YOU DIG 811 UNDERGROUND SERVICE ALERT

ESTIMATED EARTHWORK QUANTITIES

CUBIC YARDS	WITHIN BUILDING FOOTPRINT	OUTSIDE BUILDING FOOTPRINT	SWIMMING POOL(S) AND SPA(S)	OFFSITE/ ROADWAY	TOTAL CUBIC YARDS
CUT	525	290	35	30	880
FILL	0	90	0	0	90
EXPORT					790
NOTE:					

GRADING QUANTITIES REPRESENT BANK YARDAGE. IT DOES NOT INCLUDE ANY SWELLING OR SHRINKAGE FACTORS AND IS INTENDED TO REPRESENT IN–SITU CONDITIONS. QUANTITIES DO NOT INCLUDE OVER–EXCAVATION, TRENCHING, STRUCTURAL FOUNDATIONS OR PIERS, OR POOL EXCAVATION (IF ANY). NOTE ADDITIONAL EARTHWORKS, SUCH AS KEYWAYS OR BENCHING MAY BE REQUIRED BY THE GEOTECHNICAL ENGINEER IN THE FIELD AT TIME OF CONSTRUCTION. CONTRACTOR TO VERIFY QUANTITIES.

INSPECTIONS REQUIRED
THE COUNTY OF SAN MATEO REQUIRES LEA & BRAZE ENGINEERING, INC. TO INSPECT ALL STORM DRAINAGE AS IT IS INSTALLED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT LEA & BRAZE ENGINEERING, INC. PRIOR TO START OF CONSTRUCTION TO SET UP A PRE-CONSTRUCTION MEETING, AND TO CALL AT LEAST 48 HOURS IN ADVANCE OF ANY INSPECTIONS. PIPES ARE TO REMAIN UNCOVERED UNTIL AN INSPECTION PERFORMED BY LEA & BRAZE ENGINEERING, INC. OCCURS.
POINT OF CONTACT:
JIM TOBY
LEA & BRAZE ENGINEERING, INC.
(510)887-4086 jtoby@leabraze.com

SHEET INDEX

REGISTERED PROFESSIONAL ENGINEER JAMES TOBY No. 63127 CIVIL STATE OF CALIFORNIA ORIGINAL SIGNATURES IN BLUE INK

LEA & BRAZE ENGINEERING, INC.
CIVIL ENGINEERS • LAND SURVEYORS
MAIN OFFICE:
2495 INDUSTRIAL PKWY WEST
HAYWARD, CALIFORNIA 94545
(510) 887–4086
REGIONAL OFFICES:
ROSEVILLE
DUBLIN
SAN JOSE
WWW.LEABRAZE.COM

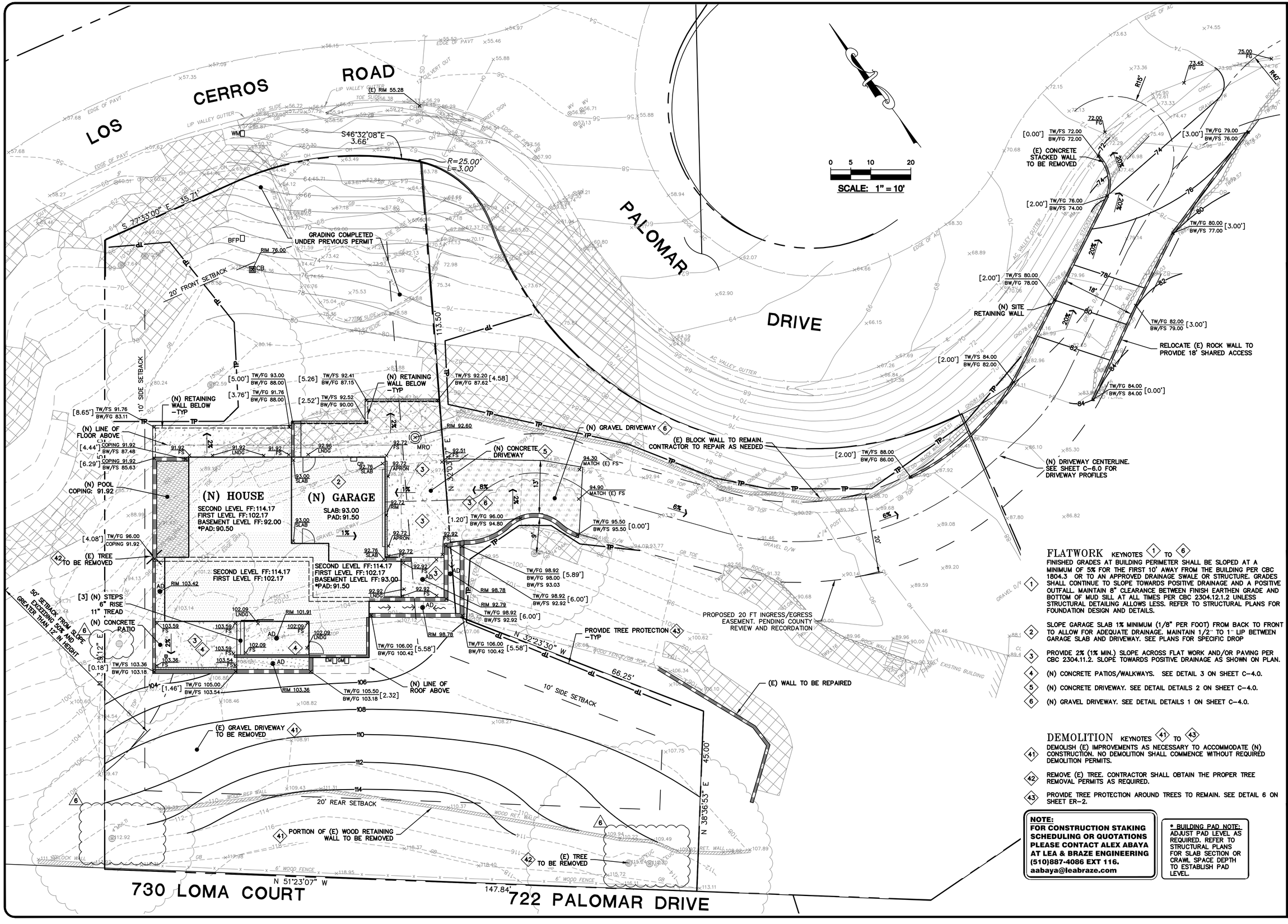
634 PALOMAR DRIVE
REDWOOD CITY,
CALIFORNIA
APN: 051–022–380
SAN MATEO COUNTY

TITLE SHEET

6	PLANCHECK 01–30–23	JOR
5	PLANCHECK 05–24–22	JOR
4	PLANCHECK 04–07–22	JOR
3	PLANCHECK 11–25–21	JOR
	REVISIONS	BY

JOB NO:	2200474
DATE:	07–17–20
SCALE:	1"=20'
DESIGN BY:	JOR
DRAWN BY:	JOR

SHEET NO:
C–1.0
1 OF 9 SHEETS



FLATWORK KEYNOTES 1 TO 6

1. FINISHED GRADES AT BUILDING PERIMETER SHALL BE SLOPED AT A MINIMUM OF 5% FOR THE FIRST 10' AWAY FROM THE BUILDING PER CBC 1804.3 OR TO AN APPROVED DRAINAGE SWALE OR STRUCTURE. GRADES SHALL CONTINUE TO SLOPE TOWARDS POSITIVE DRAINAGE AND A POSITIVE OUTFALL. MAINTAIN 8" CLEARANCE BETWEEN FINISH EARTHEN GRADE AND BOTTOM OF MUD SILL AT ALL TIMES PER CBC 2304.12.1.2 UNLESS STRUCTURAL DETAILING ALLOWS LESS. REFER TO STRUCTURAL PLANS FOR FOUNDATION DESIGN AND DETAILS.
2. SLOPE GARAGE SLAB 1% MINIMUM (1/8" PER FOOT) FROM BACK TO FRONT TO ALLOW FOR ADEQUATE DRAINAGE. MAINTAIN 1/2" TO 1" LIP BETWEEN GARAGE SLAB AND DRIVEWAY. SEE PLANS FOR SPECIFIC DROP
3. PROVIDE 2% (1% MIN.) SLOPE ACROSS FLAT WORK AND/OR PAVING PER CBC 2304.11.2. SLOPE TOWARDS POSITIVE DRAINAGE AS SHOWN ON PLAN.
4. (N) CONCRETE PATIOS/WALKWAYS. SEE DETAIL 3 ON SHEET C-4.0.
5. (N) CONCRETE DRIVEWAY. SEE DETAIL DETAILS 2 ON SHEET C-4.0.
6. (N) GRAVEL DRIVEWAY. SEE DETAIL DETAILS 1 ON SHEET C-4.0.

DEMOLITION KEYNOTES 41 TO 43

41. DEMOLISH (E) IMPROVEMENTS AS NECESSARY TO ACCOMMODATE (N) CONSTRUCTION. NO DEMOLITION SHALL COMMENCE WITHOUT REQUIRED DEMOLITION PERMITS.
42. REMOVE (E) TREE. CONTRACTOR SHALL OBTAIN THE PROPER TREE REMOVAL PERMITS AS REQUIRED.
43. PROVIDE TREE PROTECTION AROUND TREES TO REMAIN. SEE DETAIL 6 ON SHEET ER-2.

NOTE:
FOR CONSTRUCTION STAKING SCHEDULING OR QUOTATIONS PLEASE CONTACT ALEX ABAYA AT LEA & BRAZE ENGINEERING (510)887-4086 EXT 116. aabaya@leabraze.com

*** BUILDING PAD NOTE:** ADJUST PAD LEVEL AS REQUIRED. REFER TO STRUCTURAL PLANS FOR SLAB SECTION OR CRAWL SPACE DEPTH TO ESTABLISH PAD LEVEL.

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REGIONAL OFFICES: ROSEVILLE DUBLIN SAN JOSE
WWW.LEABRAZE.COM

634 PALOMAR DRIVE REDWOOD CITY, CALIFORNIA

APN: 051-022-380

SAN MATEO COUNTY

GRADING & DRAINAGE PLAN

REVISIONS	BY
6 PLANCHECK 01-30-23	JOR
5 PLANCHECK 05-24-22	JOR
4 PLANCHECK 04-07-22	JOR
3 PLANCHECK 11-25-21	JOR

JOB NO:	2200474
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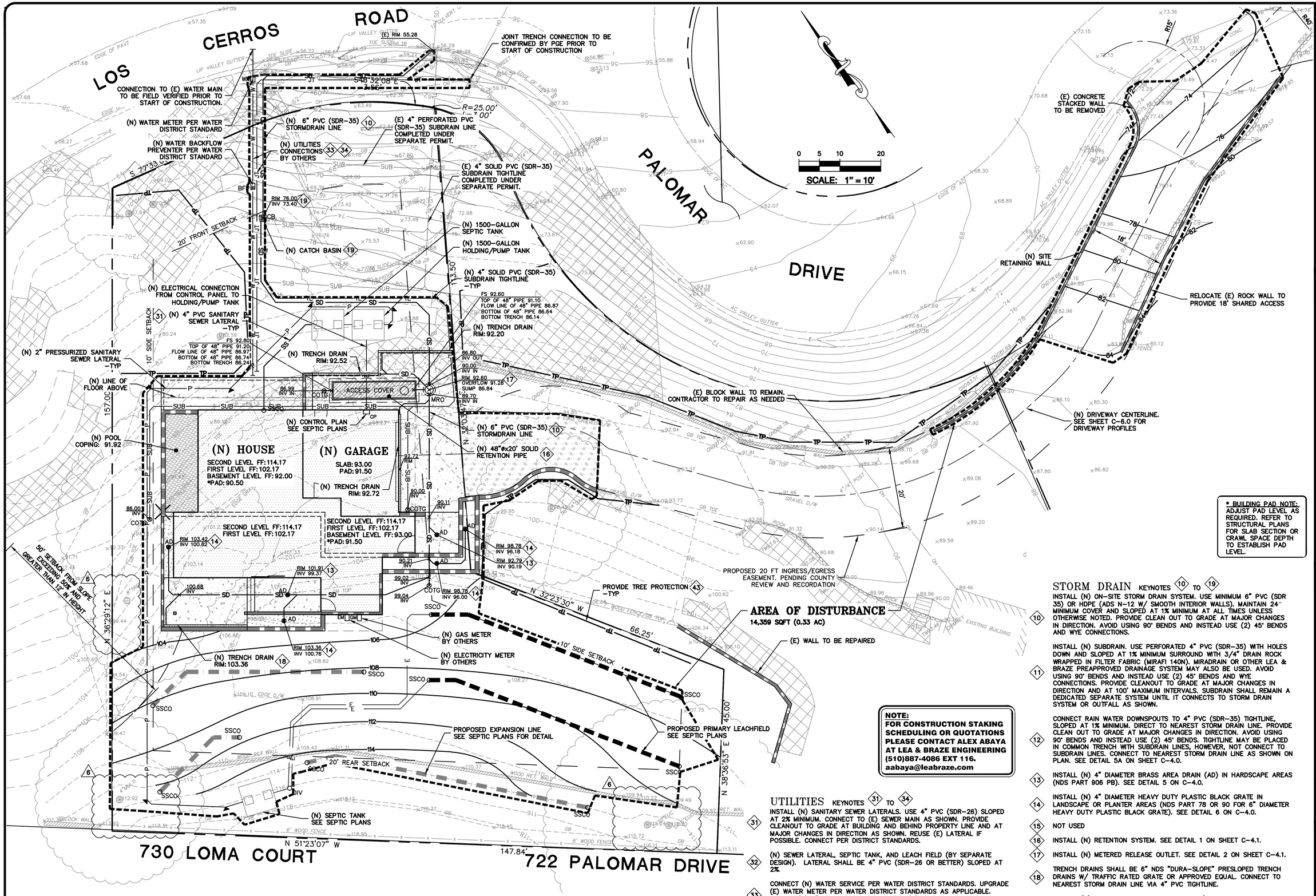
DESIGN BY:	JOR
DRAWN BY:	JOR
SHEET NO:	C-2.0

2 OF 9 SHEETS



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UTILITIES KEYNOTES 31 TO 34

31 INSTALL (N) SANITARY SEWER LATERALS. USE 4" PVC (SDR-26) SLOPED AT 2% MINIMUM. CONNECT TO (E) SEWER MAIN AS SHOWN. PROVIDE CLEANOUT TO GRADE AT BUILDING AND BEHIND PROPERTY LINE AND AT MAJOR CHANGES IN DIRECTION AS SHOWN. REUSE (E) LATERAL IF POSSIBLE. CONNECT PER DISTRICT STANDARDS.

32 (N) SEWER LATERAL, SEPTIC TANK, AND LEACH FIELD (BY SEPARATE DESIGN). LATERAL SHALL BE 4" PVC (SDR-26 OR BETTER) SLOPED AT 2%.

33 CONNECT (N) WATER SERVICE PER WATER DISTRICT STANDARDS. UPGRADE (E) WATER METER PER WATER DISTRICT STANDARDS AS APPLICABLE. INSTALL (N) 2" MINIMUM SERVICE LINE TO (N) RESIDENCE OR AS DIRECTED BY FIRE SPRINKLER DESIGNER.

34 INSTALL (N) JOINT TRENCH FOR SERVICES INCLUDING GAS, CATV & ELECTRIC FROM NEAREST POINT OF CONNECTION. DESIGN BY OTHERS.

STORM DRAIN KEYNOTES 10 TO 19

10 INSTALL (N) ON-SITE STORM DRAIN SYSTEM. USE MINIMUM 6" PVC (SDR 35) OR HDPE (ADS N-12 W/ SMOOTH INTERIOR WALLS). MAINTAIN 24" MINIMUM COVER AND SLOPED AT 1% MINIMUM AT ALL TIMES UNLESS OTHERWISE NOTED. PROVIDE CLEAN OUT TO GRADE AT MAJOR CHANGES IN DIRECTION. AVOID USING 90° BENDS AND INSTEAD USE (2) 45° BENDS AND WYE CONNECTIONS.

11 INSTALL (N) SUBDRAIN. USE PERFORATED 4" PVC (SDR-35) WITH HOLES DOWN AND SLOPED AT 1% MINIMUM SURROUND WITH 3/4" DRAIN ROCK WRAPPED IN FILTER FABRIC (MIRAFI 140N). MIRADRAIN OR OTHER LEA & BRAZE PREAPPROVED DRAINAGE SYSTEM MAY ALSO BE USED. AVOID USING 90° BENDS AND INSTEAD USE (2) 45° BENDS AND WYE CONNECTIONS. PROVIDE CLEANOUT TO GRADE AT MAJOR CHANGES IN DIRECTION AND AT 100' MAXIMUM INTERVALS. SUBDRAIN SHALL REMAIN A DEDICATED SEPARATE SYSTEM UNTIL IT CONNECTS TO STORM DRAIN SYSTEM OR OUTFALL AS SHOWN.

12 CONNECT RAIN WATER DOWNSPOUTS TO 4" PVC (SDR-35) TIGHTLINE, SLOPED AT 1% MINIMUM. DIRECT TO NEAREST STORM DRAIN LINE. PROVIDE CLEAN OUT TO GRADE AT MAJOR CHANGES IN DIRECTION. AVOID USING 90° BENDS AND INSTEAD USE (2) 45° BENDS. TIGHTLINE MAY BE PLACED IN COMMON TRENCH WITH SUBDRAIN LINES, HOWEVER, NOT CONNECT TO SUBDRAIN LINES. CONNECT TO NEAREST STORM DRAIN LINE AS SHOWN ON PLAN. SEE DETAIL 5A ON SHEET C-4.0.

13 INSTALL (N) 4" DIAMETER BRASS AREA DRAIN (AD) IN HARDSCAPE AREAS (NDS PART 908 PB). SEE DETAIL 5 ON C-4.0.

14 INSTALL (N) 4" DIAMETER HEAVY DUTY PLASTIC BLACK GRATE IN LANDSCAPE OR PLANTER AREAS (NDS PART 78 OR 90 FOR 6" DIAMETER HEAVY DUTY PLASTIC BLACK GRATE). SEE DETAIL 6 ON C-4.0.

15 NOT USED

16 INSTALL (N) RETENTION SYSTEM. SEE DETAIL 1 ON SHEET C-4.1.

17 INSTALL (N) METERED RELEASE OUTLET. SEE DETAIL 2 ON SHEET C-4.1.

18 TRENCH DRAINS SHALL BE 6" NDS "DURA-SLOPE" PRESLOPED TRENCH DRAINS W/ TRAFFIC RATED GRATE OR APPROVED EQUAL. CONNECT TO NEAREST STORM DRAIN LINE VIA 4" PVC TIGHTLINE.

19 INSTALL (N) "CHRISTY V-24" CATCH BASIN W/ CONCRETE BOTTOM FLUSH W/ LOWEST OUTGOING INVERT. PLACE BOX ON 6" CLASS 2 AGGREGATE BASE MATERIAL. SEE DETAIL 8 ON SHEET C-4.0.

REGISTERED PROFESSIONAL ENGINEER JAMES TORY No. 63127 CIVIL STATE OF CALIFORNIA ORIGINAL SIGNATURES IN BLUE INK

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634 PALOMAR DRIVE REDWOOD CITY, CALIFORNIA

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UTILITY PLAN

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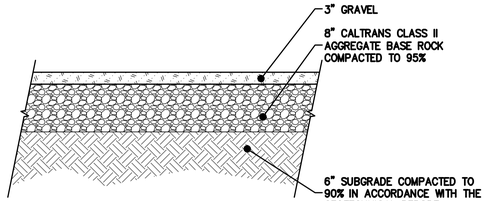
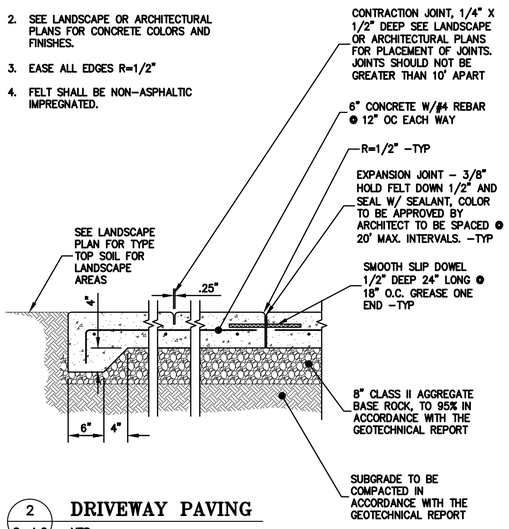
SHEET NO:	C-3.0

3 OF 9 SHEETS



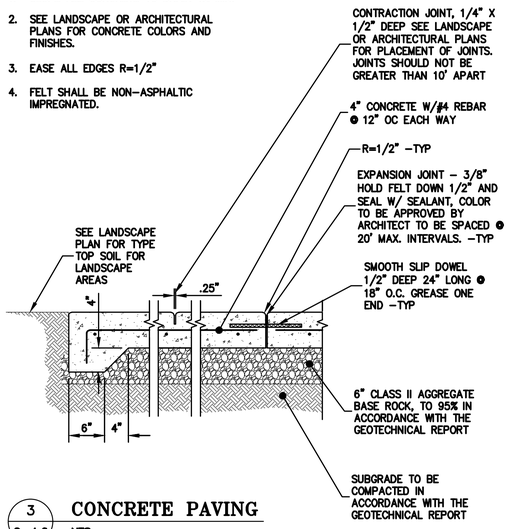
1 C-4.0 **GRAVEL DRIVEWAY SECTION**
NTS

NOTES:
1. SLOPE ALL CONCRETE TO DRAIN 1% MIN.
2. SEE LANDSCAPE OR ARCHITECTURAL PLANS FOR CONCRETE COLORS AND FINISHES.
3. EASE ALL EDGES R=1/2"
4. FELT SHALL BE NON-ASPHALTIC IMPREGNATED.

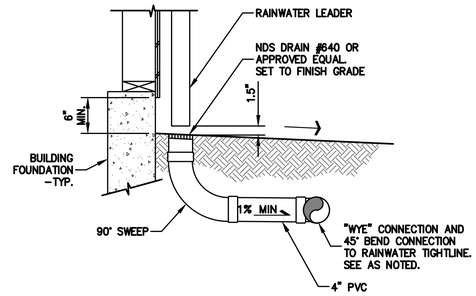


2 C-4.0 **DRIVEWAY PAVING**
NTS

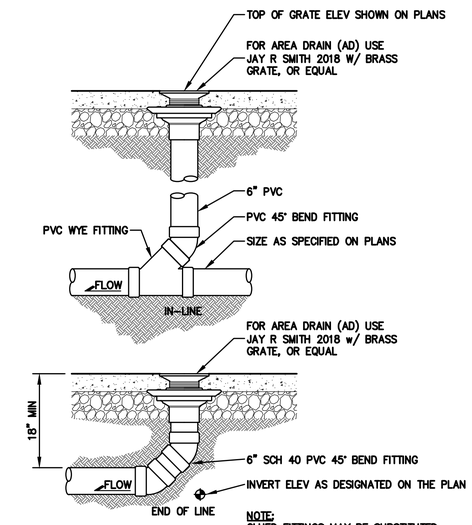
NOTES:
1. SLOPE ALL CONCRETE TO DRAIN 1% MIN.
2. SEE LANDSCAPE OR ARCHITECTURAL PLANS FOR CONCRETE COLORS AND FINISHES.
3. EASE ALL EDGES R=1/2"
4. FELT SHALL BE NON-ASPHALTIC IMPREGNATED.



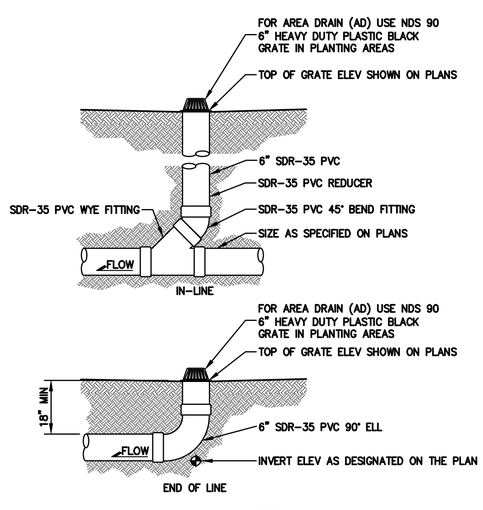
3 C-4.0 **CONCRETE PAVING**
NTS



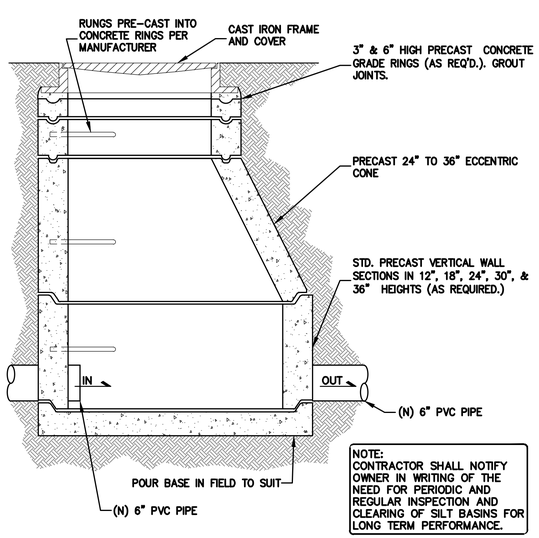
4 C-4.0 **RAIN WATER LEADER TO TIGHTLINE CONNECTION**
NTS



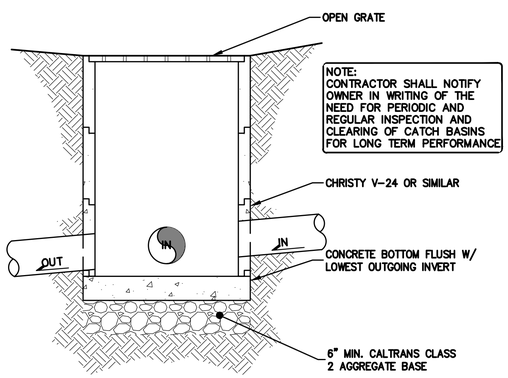
5 C-4.0 **FLATWORK DRAIN**
NTS



6 C-4.0 **AREA DRAIN**
NTS



7 C-4.0 **STORM DRAIN MANHOLE**
NTS



8 C-4.0 **CATCH BASIN**
NTS

LEA & BRAZE ENGINEERING, INC.
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REGISTERED PROFESSIONAL ENGINEER
JAMES TOSTI
No. 63127
CIVIL
STATE OF CALIFORNIA
ORIGINAL SIGNATURES IN BLUE INK

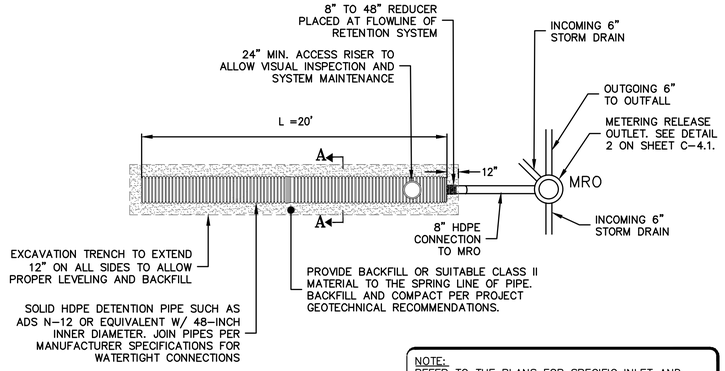
634 PALOMAR DRIVE
REDWOOD CITY, CALIFORNIA

APN: 051-022-380
SAN MATEO COUNTY

DETAILS

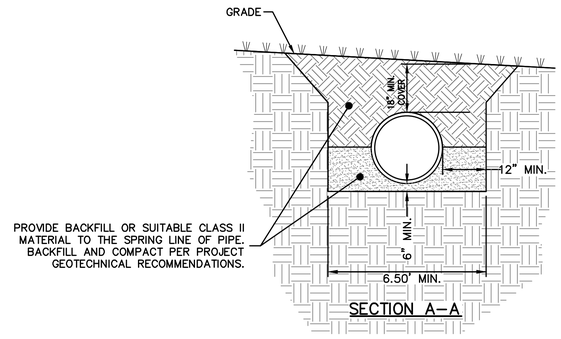
REVISIONS	BY
6 PLANCHECK 01-30-23	JOR
5 PLANCHECK 05-24-22	JOR
4 PLANCHECK 04-07-22	JOR
3 PLANCHECK 11-25-21	JOR

JOB NO:	2200474
DATE:	07-17-20
SCALE:	NTS
DESIGN BY:	JOR
DRAWN BY:	JOR
SHEET NO:	C-4.0



PLAN VIEW

NOTE:
REFER TO THE PLANS FOR SPECIFIC INLET AND OUTLET LOCATIONS.
REFER TO THE PLANS FOR SPECIFIC ACCESS COVER LOCATIONS.



SECTION A-A

STORAGE PIPE NOMINAL I.D.	NOMINAL O.D.	MIN. SIDE COVER
48" (1200 MM)	54" (1372 MM)	12" (292 MM)

1 C-4.1 **DETENTION SYSTEM DETAIL**
NTS

NOTES:

1. ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.

2. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.

3. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.

4. FILTER FABRIC: A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.

5. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

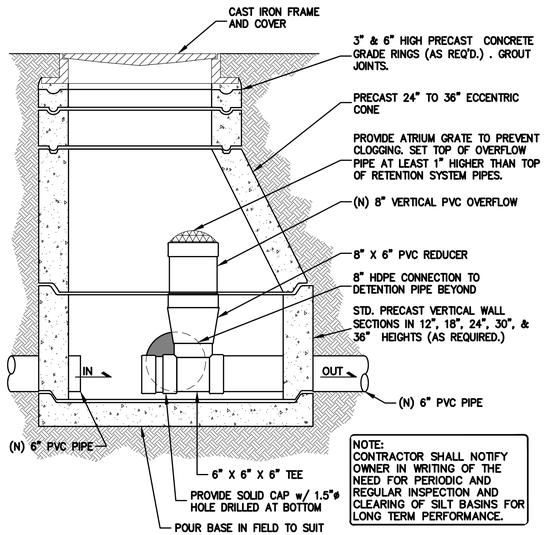
6. BEDDING: SUITABLE MATERIAL SHALL BE SAND OR CLASS II*. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 8" (150mm) FOR 30"-60" (750mm-900mm) COMPACTED TO 90% SPD.

7. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE SAND OR CLASS II*. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

8. MINIMUM COVER: MINIMUM COVER OVER ALL RETNETION/DETENTION SYSTEMS IN NON-TRAFFIC
APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 18" FROM TOP OF PIPE TO GROUND SURFACE, COMPACT AS RECOMMENDED BY THE SOILS ENGINEER. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 18" UP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" - 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

9. CONECTIONS: ALL CONNECTIONS FOR EACH SEGMENT SHALL BE WATER TIGHT.

* CLASS I BACKFILL REQUIRED AROUND 60" DIAMETER FITTINGS.



NOTE:
CONTRACTOR SHALL NOTIFY OWNER IN WRITING OF THE NEED FOR PERIODIC AND REGULAR INSPECTION AND CLEARING OF SILT BASINS FOR LONG TERM PERFORMANCE.

2 C-4.1 **METERED RELEASE OUTLET**
NTS

REGISTERED PROFESSIONAL ENGINEER JAMES TONG No. 63127 CIVIL STATE OF CALIFORNIA ORIGINAL SIGNATURES IN BLUE INK

LEA & BRAZE ENGINEERING, INC.
CIVIL ENGINEERS • LAND SURVEYORS
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JOB NO: 2200474
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DESIGN BY: JOR
DRAWN BY: JOR
SHEET NO:
C-4.1
5 OF 9 SHEETS

GENERAL NOTES

ALL GENERAL NOTES, SHEET NOTES, AND LEGEND NOTES FOUND IN THESE DOCUMENTS SHALL APPLY TYPICALLY THROUGHOUT. IF INCONSISTENCIES ARE FOUND IN THE VARIOUS NOTATIONS, NOTIFY THE ENGINEER IMMEDIATELY IN WRITING REQUESTING CLARIFICATION.

THESE DRAWINGS AND THEIR CONTENT ARE AND SHALL REMAIN THE PROPERTY OF LEA AND BRAZE ENGINEERING, INC. WHETHER THE PROJECT FOR WHICH THEY ARE PREPARED IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY ANY PERSONS ON OTHER PROJECTS OR EXTENSIONS OF THE PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO THE ENGINEER.

ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND TRADE STANDARDS WHICH GOVERN EACH PHASE OF WORK INCLUDING, BUT NOT LIMITED TO, CALIFORNIA MECHANICAL CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, CALTRANS STANDARDS AND SPECIFICATIONS, AND ALL APPLICABLE STATE AND/OR LOCAL CODES AND/OR LEGISLATION.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND ALL SUBCONTRACTORS TO CHECK AND VERIFY ALL CONDITIONS, DIMENSIONS, LINES AND LEVELS INDICATED. PROPER FIT AND ATTACHMENT OF ALL PARTS IS REQUIRED. SHOULD THERE BE ANY DISCREPANCIES, IMMEDIATELY NOTIFY THE ENGINEER FOR CORRECTION OR ADJUSTMENT THE EVENT OF FAILURE TO DO SO, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTION OF ANY ERROR.

ALL DIMENSIONS AND CONDITIONS SHALL BE CHECKED AND VERIFIED ON THE JOB BY EACH SUBCONTRACTOR BEFORE HE/SHE BEGINS HIS/HER WORK. ANY ERRORS, OMISSION, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER/CONTRACTOR BEFORE CONSTRUCTION BEGINS.

COMMENCEMENT OF WORK BY THE CONTRACTOR AND/OR ANY SUBCONTRACTOR SHALL INDICATE KNOWLEDGE AND ACCEPTANCE OF ALL CONDITIONS DESCRIBED IN THESE CONSTRUCTION DOCUMENTS, OR EXISTING ON SITE, WHICH COULD AFFECT THEIR WORK.

WORK SEQUENCE

IN THE EVENT ANY SPECIAL SEQUENCING OF THE WORK IS REQUIRED BY THE OWNER OR THE CONTRACTOR, THE CONTRACTOR SHALL ARRANGE A CONFERENCE BEFORE ANY SUCH WORK IS BEGUN.

SITE EXAMINATION: THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL THOROUGHLY EXAMINE THE SITE AND FAMILIARIZE HIM/HERSELF WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL VERIFY AT THE SITE ALL MEASUREMENTS AFFECTING HIS/HER WORK AND SHALL BE RESPONSIBLE FOR THE CORRECTIONS OF THE SAME. NO EXTRA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR EXPENSES DUE TO HIS/HER NEGLECT TO EXAMINE, OR FAILURE TO DISCOVER, CONDITIONS WHICH AFFECT HIS/HER WORK.

CONSTRUCTION IS ALWAYS LESS THAN PERFECT SINCE PROJECTS REQUIRE THE COORDINATION AND INSTALLATION OF MANY INDIVIDUAL COMPONENTS BY VARIOUS CONSTRUCTION INDUSTRY TRADES. THESE DOCUMENTS CANNOT PORTRAY ALL COMPONENTS OR ASSEMBLIES EXACTLY. IT IS THE INTENTION OF THESE ENGINEERING DOCUMENTS THAT THEY REPRESENT A REASONABLE STANDARD OF CARE IN THEIR CONTENT. IT IS ALSO PRESUMED BY THESE DOCUMENTS THAT CONSTRUCTION REVIEW SERVICES WILL BE PROVIDED BY THE ENGINEER. SHOULD THE OWNER NOT RETAIN THE ENGINEER TO PROVIDE SUCH SERVICES, OR SHOULD HE/SHE RETAIN THE ENGINEER TO PROVIDE ONLY PARTIAL OR LIMITED SERVICES, THEN IT SHALL BE THE OWNER'S AND CONTRACTOR'S RESPONSIBILITY TO FULLY RECOGNIZE AND PROVIDE THAT STANDARD OF CARE.

IF THE OWNER OR CONTRACTOR OBSERVES OR OTHERWISE BECOMES AWARE OF ANY FAULT OR DEFECT IN THE PROJECT OR NONCONFORMANCE WITH THE CONTRACT DOCUMENTS, PROMPT WRITTEN NOTICE THEREOF SHALL BE GIVEN BY THE OWNER AND/OR CONTRACTOR TO THE ENGINEER.

THE ENGINEER SHALL NOT HAVE CONTROL OF OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

SITE PROTECTION

PROTECT ALL LANDSCAPING THAT IS TO REMAIN. ANY DAMAGE OR LOSS RESULTING FROM EXCAVATION, GRADING, OR CONSTRUCTION WORK SHALL BE CORRECTED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING SITE UTILITIES AND SHALL COORDINATE THEIR REMOVAL OR MODIFICATIONS (IF ANY) TO AVOID ANY INTERRUPTION OF SERVICE TO ADJACENT AREAS. THE GENERAL CONTRACTOR SHALL INFORM HIM/HERSELF OF MUNICIPAL REGULATIONS AND CARRY OUT HIS/HER WORK IN COMPLIANCE WITH ALL FEDERAL AND STATE REQUIREMENTS TO REDUCE FIRE HAZARDS AND INJURIES TO THE PUBLIC.

STORMWATER POLLUTION PREVENTION NOTES

1) STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES PROPERLY, SO AS TO PREVENT THEIR CONTACT WITH STORMWATER.

2) CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING SOLID WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASH WATER OR SEDIMENT, AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATER COURSES.

3) USE SEDIMENT CONTROL OR FILTRATION TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.

4) AVOID CLEANING, FUELING, OR MAINTAINING VEHICLES ON SITE, EXCEPT IN A DESIGNATED AREA IN WHICH RUNOFF IS CONTAINED AND TREATED.

5) DELINEATE CLEARING LIMITS, EASEMENTS, SETBACKS, SENSITIVE OR CRITICAL AREAS, BUFFER ZONES, TREES AND DISCHARGE COURSE WITH FIELD MARKERS.

6) PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OF FILTERS, DIKES, MULCHING, OR OTHER MEASURES AS APPROPRIATE.

7) PERFORM CLEARING AND EARTH MOVING ACTIVITIES DURING DRY WEATHER TO THE MAXIMUM EXTENT PRACTICAL.

8) LIMIT AND TIME APPLICATIONS OF PESTICIDES AND FERTILIZERS TO PREVENT POLLUTED RUNOFF.

9) LIMIT CONSTRUCTION ACCESS ROUTES AND STABILIZE DESIGNATED ACCESS POINTS.

10) AVOID TRACKING DIRT OR MATERIALS OFF-SITE; CLEAN OFF-SITE PAVED AREAS AND SIDEWALKS USING DRY SWEEPING METHODS TO THE MAXIMUM EXTENT PRACTICAL.

SUPPLEMENTAL MEASURES

A. THE PHRASE "NO DUMPING – DRAINS TO BAY" OR EQUALLY EFFECTIVE PHRASE MUST BE LABELED ON STORM DRAIN INLETS (BY STENCILING, BRANDING, OR PLAQUES) TO ALERT THE PUBLIC TO THE DESTINATION OF STORM WATER AND TO PREVENT DIRECT DISCHARGE OF POLLUTANTS INTO THE STORM DRAIN.

B. USING FILTRATION MATERIALS ON STORM DRAIN COVERS TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.

C. STABILIZING ALL DENUDED AREAS AND MAINTAINING EROSION CONTROL MEASURES CONTINUOUSLY FROM OCTOBER 15 AND APRIL 15.

D. REMOVING SPOILS PROMPTLY, AND AVOID STOCKPILING OF FILL MATERIALS, WHEN RAIN IS FORECAST. IF RAIN THREATENS, STOCKPILED SOILS AND OTHER MATERIALS SHALL BE COVERED WITH A TARP OR OTHER WATERPROOF MATERIAL.

E. STORING, HANDLING, AND DISPOSING OF CONSTRUCTION MATERIALS AND WASTES SO AS TO AVOID THEIR ENTRY TO THE STORM DRAIN SYSTEMS OR WATER BODY.

F. AVOIDING CLEANING, FUELING, OR MAINTAINING VEHICLES ON-SITE, EXCEPT IN AN AREA DESIGNATED TO CONTAIN AND TREAT RUNOFF.

GRADING & DRAINAGE NOTES:

1. SCOPE OF WORK

THESE SPECIFICATIONS AND APPLICABLE PLANS PERTAIN TO AND INCLUDE ALL SITE GRADING AND EARTHWORK ASSOCIATED WITH THE PROJECT INCLUDING, BUT NOT LIMITED TO THE FURNISHING OF ALL LABOR, TOOLS AND EQUIPMENT NECESSARY FOR SITE CLEARING AND GRUBBING, SITE PREPARATION, DISPOSAL OF EXCESS OR UNSUITABLE MATERIAL, STRIPPING, KEYING, EXCAVATION, OVER EXCAVATION, RECOMPACTION PREPARATION FOR SOIL RECEIVING FILL, PAVEMENT, FOUNDATION OF SLABS, EXCAVATION, IMPORTATION OF ANY REQUIRED FILL MATERIAL, PROCESSING, PLACEMENT AND COMPACTION OF FILL AND SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING TO CONFORM TO THE LINES, GRADING AND SLOPE SHOWN ON THE PROJECT GRADING PLANS.

2. GENERAL

A. ALL SITE GRADING AND EARTHWORK SHALL CONFORM TO THE RECOMMENDATIONS OF THESE SPECIFICATIONS, THE SOILS REPORT BY EARTH INVESTIGATIONS CONSULTANTS; AND THE COUNTY OF SAN MATEO.

B. ALL FILL MATERIALS SHALL BE DENSIFIED SO AS TO PRODUCE A DENSITY NOT LESS THAN 90% RELATIVE COMPACTION BASED UPON ASTM TEST DESIGNATION D1557. FIELD DENSITY TEST WILL BE PERFORMED IN ACCORDANCE WITH ASTM TEST DESIGNATION 2922 AND 3017. THE LOCATION AND FREQUENCY OF THE FIELD DENSITY TEST WILL BE AS DETERMINED BY THE SOIL ENGINEER. THE RESULTS OF THESE TEST AND COMPLIANCE WITH THE SPECIFICATIONS WILL BE THE BASIS UPON WHICH SATISFACTORY COMPLETION OF THE WORK WILL BE JUDGED BY THE SOIL ENGINEER. ALL CUT AND FILL SLOPES SHALL BE CONSTRUCTED AS SHOWN ON PLANS, BUT NO STEEPER THAN TWO (2) HORIZONTAL TO ONE (1) VERTICAL.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF ALL THE EARTHWORK IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. NO DEVIATION FROM THESE SPECIFICATIONS SHALL BE MADE EXCEPT UPON WRITTEN APPROVAL BY THE SOILS ENGINEER. BOTH CUT AND FILL AREAS SHALL BE SURFACE COMPLETED TO THE SATISFACTION OF THE SOILS ENGINEER AT THE CONCLUSION OF ALL GRADING OPERATIONS AND PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL NOTIFY THE SOILS ENGINEER AT LEAST TWO (2) WORKING DAYS PRIOR TO DOING ANY SITE GRADING AND EARTHWORK INCLUDING CLEARING.

3. CLEARING AND GRUBBING

A. THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS PRESENT CONDITION. ALL EXISTING PUBLIC IMPROVEMENTS SHALL BE PROTECTED. ANY IMPROVEMENTS DAMAGED SHALL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE LOCAL JURISDICTION WITH NO EXTRA COMPENSATION.

B. ALL ABANDONED BUILDINGS AND FOUNDATIONS, TREE (EXCEPT THOSE SPECIFIED TO REMAIN FOR LANDSCAPING PURPOSES), FENCES, VEGETATION AND ANY SURFACE DEBRIS SHALL BE REMOVED AND DISPOSED OF OFF THE SITE BY THE CONTRACTOR.

C. ALL ABANDONED SEPTIC TANKS AND ANY OTHER SUBSURFACE STRUCTURES EXISTING IN PROPOSED DEVELOPMENT AREAS SHALL BE REMOVED PRIOR TO ANY GRADING OR FILL OPERATION. ALL APPURTENANT DRAIN FIELDS AND OTHER CONNECTING LINES MUST ALSO BE TOTALLY REMOVED.

D. ALL ABANDONED UNDERGROUND IRRIGATION OR UTILITY LINES SHALL BE REMOVED OR DEMOLISHED. THE APPROPRIATE FINAL DISPOSITION OF SUCH LINES DEPEND UPON THEIR DEPTH AND LOCATION AND THE METHOD OF REMOVAL OR DEMOLITION SHALL BE DETERMINED BY THE SOILS ENGINEER. ONE OF THE FOLLOWING METHODS WILL BE USED:

(1) EXCAVATE AND TOTALLY REMOVE THE UTILITY LINE FROM THE TRENCH.

(2) EXCAVATE AND CRUSH THE UTILITY LINE IN THE TRENCH.

(3) CAP THE ENDS OF THE UTILITY LINE WITH CONCRETE TO PREVENT THE ENTRANCE OF WATER. THE LOCATIONS AT WHICH THE UTILITY LINE WILL BE CAPPED WILL BE DETERMINED BY THE UTILITY DISTRICT ENGINEER. THE LENGTH OF THE CAP SHALL NOT BE LESS THAN FIVE FEET, AND THE CONCRETED MIX EMPLOYED SHALL HAVE MINIMUM SHRINKAGE.

4. SITE PREPARATION AND STRIPPING

A. ALL SURFACE ORGANICS SHALL BE STRIPPED AND REMOVED FROM BUILDING PADS, AREAS TO RECEIVE COMPACTED FILL AND PAVEMENT AREAS.

B. UPON THE COMPLETION OF THE ORGANIC STRIPPING OPERATION, THE GROUND SURFACE (NATIVE SOIL SUBGRADE) OVER THE ENTIRE AREA OF ALL BUILDING PADS, STREET AND PAVEMENT AREAS AND ALL AREAS TO RECEIVE COMPACTED FILL SHALL BE PLOWED OR SCARIFIED UNTIL THE SURFACE IS FREE OF RUTS, HUMMOCKS OR OTHER UNEVEN FEATURES WHICH MAY INHIBIT UNIFORM SOIL COMPACTION. THE GROUND SURFACE SHALL THEN BE DISCED OR BLADED TO A DEPTH OF AT LEAST 6 INCHES. UPON ENGINEER'S SATISFACTION, THE NEW SURFACE SHALL BE WATER CONDITIONED AND RECOMPACTED PER REQUIREMENTS FOR COMPACTING FILL MATERIAL.

5. EXCAVATION

A. UPON COMPLETION OF THE CLEARING AND GRUBBING, SITE PREPARATION AND STRIPPING, THE CONTRACTOR SHALL MAKE EXCAVATIONS TO LINES AND GRADES NOTED ON THE PLAN. WHERE REQUIRED BY THE SOILS ENGINEER, UNACCEPTABLE NATIVE SOILS OR UNENGINEERED FILL SHALL BE OVER EXCAVATED BELOW THE DESIGN GRADE. SEE PROJECT SOILS REPORT FOR DISCUSSION OF OVER EXCAVATION OF THE UNACCEPTABLE MATERIAL. RESULTING GROUND LINE SHALL BE SCARIFIED, MOISTURE-CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE.

B. EXCAVATED MATERIALS SUITABLE FOR COMPACTED FILL MATERIAL SHALL BE UTILIZED IN MAKING THE REQUIRED COMPACTED FILLS. THOSE NATIVE MATERIALS CONSIDERED UNSUITABLE BY THE SOILS ENGINEER SHALL BE DISPOSED OF OFF THE SITE BY THE CONTRACTOR.

6. PLACING, SPREADING AND COMPACTING FILL MATERIAL

A. FILL MATERIALS

THE MATERIALS PROPOSED FOR USE AS COMPACTED FILL SHALL BE APPROVED BY THE SOILS ENGINEER BEFORE COMMENCEMENT OF GRADING OPERATIONS. THE NATIVE MATERIAL IS CONSIDERED SUITABLE FOR FILL; HOWEVER, ANY NATIVE MATERIAL DESIGNATED UNSUITABLE BY THE SOILS ENGINEER SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. ANY IMPORTED MATERIAL SHALL BE APPROVED FOR USE BY THE SOILS ENGINEER, IN WRITING, BEFORE BEING IMPORTED TO THE SITE AND SHALL POSSESS SUFFICIENT FINES TO PROVIDE A COMPETENT SOIL MATRIX AND SHALL BE FREE OF VEGETATIVE AND ORGANIC MATTER AND OTHER DELETERIOUS MATERIALS. ALL FILL VOIDS SHALL BE FILLED AND PROPERLY COMPACTED. NO ROCKS LARGER THAN THREE INCHES IN DIAMETER SHALL BE PERMITTED.

B. FILL CONSTRUCTION

THE SOILS ENGINEER SHALL APPROVE THE NATIVE SOIL SUBGRADE BEFORE PLACEMENT OF ANY COMPACTED FILL MATERIAL. UNACCEPTABLE NATIVE SOIL SHALL BE REMOVED AS DIRECTED BY THE SOILS ENGINEER. THE RESULTING GROUND LINE SHALL BE SCARIFIED MOISTURE CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE. GROUND PREPARATION SHALL BE FOLLOWED CLOSELY BY FILL PLACEMENT TO PREVENT DRYING OUT OF THE SUBSOIL BEFORE PLACEMENT OF THE FILL.

THE APPROVED FILL MATERIALS SHALL BE PLACED IN UNIFORM HORIZONTAL LAYERS NO THICKER THAN 8" IN LOOSE THICKNESS. LAYERS SHALL BE SPREAD EVENLY AND SHALL BE THOROUGHLY BLADE MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. THE SCARIFIED SUBGRADE AND FILL MATERIAL SHALL BE MOISTURE CONDITIONED TO AT LEAST OPTIMUM MOISTURE. WHEN THE MOISTURE CONTENT OF THE FILL IS BELOW THAT SPECIFIED, WATER SHALL BE ADDED UNTIL THE MOISTURE DURING THE COMPACTION PROCESS. WHEN THE MOISTURE CONTENT OF THE FILL IS ABOVE THAT SPECIFIED, THE FILL MATERIAL SHALL BE AERATED BY BLADING OR OTHER SATISFACTORY METHODS UNTIL THE MOISTURE CONTENT IS AS SPECIFIED.

AFTER EACH LAYER HAS BEEN PLACED, MIXED, SPREAD EVENLY AND MOISTURE CONDITIONED, IT SHALL BE COMPACTED TO AT LEAST THE SPECIFIED DENSITY.

THE FILL OPERATION SHALL BE CONTINUED IN COMPACTED LAYERS AS SPECIFIED ABOVE UNTIL THE FILL HAS BEEN BROUGHT TO THE FINISHED SLOPES AND GRADES AS SHOWN ON THE PLANS. NO LAYER SHALL BE ALLOWED TO DRY OUT BEFORE SUBSEQUENT LAYERS ARE PLACED.

COMPACTION EQUIPMENT SHALL BE OF SUCH DESIGN THAT IT WILL BE ABLE TO COMPACT THE FILL TO THE SPECIFIED MINIMUM COMPACTION WITHIN THE SPECIFIED MOISTURE CONTENT RANGE. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER ITS ENTIRE AREA UNTIL THE REQUIRED MINIMUM DENSITY HAS BEEN OBTAINED.

7. CUT OR FILL SLOPES

ALL CONSTRUCTED SLOPES, BOTH CUT AND FILL, SHALL BE NO STEEPER THAN 2 TO 1 (HORIZONTAL TO VERTICAL). DURING THE GRADING OPERATION, COMPACTED FILL SLOPES SHALL BE OVERFILLED BY AT LEAST ONE FOOT HORIZONTALLY AT THE COMPLETION OF THE GRADING OPERATIONS, THE EXCESS FILL EXISTING ON THE SLOPES SHALL BE BLADED OFF TO CREATE THE FINISHED SLOPE EMBANKMENT. ALL CUT AND FILL SLOPES SHALL BE TRACK WALKED AFTER BEING BROUGHT TO FINISH GRADE AND THEN BE PLANTED WITH EROSION CONTROL SLOPE PLANTING. THE SOILS ENGINEER SHALL REVIEW ALL CUT SLOPES TO DETERMINE IF ANY ADVERSE GEOLOGIC CONDITIONS ARE EXPOSED. IF SUCH CONDITIONS DO OCCUR, THE SOILS ENGINEER SHALL RECOMMEND THE APPROPRIATE MITIGATION MEASURES AT THE TIME OF THEIR DETECTION.

8. SEASONAL LIMITS AND DRAINAGE CONTROL

FILL MATERIALS SHALL NOT BE PLACED, SPREAD OR COMPACTED WHILE IT IS AT AN UNSUITABLY HIGH MOISTURE CONTENT OR DURING OTHERWISE UNFAVORABLE CONDITIONS. WHEN THE WORK IS INTERRUPTED FOR ANY REASON THE FILL OPERATIONS SHALL NOT BE RESUMED UNTIL FIELD TEST PERFORMED BY THE SOILS ENGINEER INDICATE THAT THE MOISTURE CONDITIONS IN AREAS TO BE FILLED ARE AS PREVIOUSLY SPECIFIED. ALL EARTH MOVING AND WORKING OPERATIONS SHALL BE CONTROLLED TO PREVENT WATER FROM RUNNING INTO EXCAVATED AREAS. ALL EXCESS WATER SHALL BE PROMPTLY REMOVED AND THE SITE KEPT DRY.

9. DUST CONTROL

THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY FOR THE ALLEVIATION OR PREVENTION OF ANY DUST NUISANCE ON OR ABOUT THE SITE CAUSED BY THE CONTRACTOR'S OPERATION EITHER DURING THE PERFORMANCE OF THE GRADING OR RESULTING FROM THE CONDITION IN WHICH THE CONTRACTOR LEAVES THE SITE. THE CONTRACTOR SHALL ASSUME ALL LIABILITY INCLUDING COURT COST OF CO-DEFENDANTS FOR ALL CLAIMS RELATED TO DUST OR WIND-BLOWN MATERIALS ATTRIBUTABLE TO HIS WORK. COST FOR THIS ITEM OF WORK IS TO BE INCLUDED IN THE EXCAVATION ITEM AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

10. INDEMNITY

THE CONTRACTOR WILL HOLD HARMLESS, INDEMNIFY AND DEFEND THE ENGINEER, THE OWNER AND HIS CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS, FROM ANY AND ALL LIABILITY CLAIMS, LOSSES OR DAMAGE ARISING OR ALLEGED TO HEREIN, BUT NOT INCLUDING THE SOLE NEGLIGENCE OF THE OWNER, THE ARCHITECT, THE ENGINEER AND HIS CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS.

11. SAFETY

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE. INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

THE DUTY OF THE ENGINEERS TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.

12. GUARANTEE

NEITHER THE FINAL PAYMENT, NOR THE PROVISIONS IN THE CONTRACT, NOR PARTIAL, NOR ENTIRE USE OR OCCUPANCY OF THE PREMISES BY THE OWNER SHALL CONSTITUTE AN ACCEPTANCE OF THE WORK NOT DONE IN ACCORDANCE WITH THE CONTRACT OR RELIEVES THE CONTRACTOR OF LIABILITY IN RESPECT TO ANY EXPRESS WARRANTIES OR RESPONSIBILITY FOR FAULTY MATERIAL OR WORKMANSHIP.

THE CONTRACTOR SHALL REMEDY ANY DEFECTS IN WORK AND PAY FOR ANY DAMAGE TO OTHER WORK RESULTING THERE FROM WHICH SHALL APPEAR WITHIN A PERIOD OF ONE (1) CALENDAR YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK.

13. TRENCH BACKFILL

EITHER THE ON-SITE INORGANIC SOIL OR APPROVED IMPORTED SOIL MAY BE USED AS TRENCH BACKFILL. THE BACKFILL MATERIAL SHALL BE MOISTURE CONDITIONED PER THESE SPECIFICATIONS AND SHALL BE PLACED IN LIFTS OF NOT MORE THAN SIX INCHES IN HORIZONTAL UNCOMPACTED LAYERS AND BE COMPACTED BY MECHANICAL MEANS TO A MINIMUM OF 90% RELATIVE COMPACTION. IMPORTED SAND MAY BE USED FOR TRENCH BACKFILL MATERIAL PROVIDED IT IS COMPACTED TO AT LEAST 90% RELATIVE COMPACTION. WATER JETTING ASSOCIATED WITH COMPACTION USING VIBRATORY EQUIPMENT WILL BE PERMITTED ONLY WITH IMPORTED SAND BACKFILL WITH THE APPROVAL OF THE SOILS ENGINEER. ALL PIPES SHALL BE BEDDED WITH SAND EXTENDING FROM THE TRENCH BOTTOM TO TWELVE INCHES ABOVE THE PIPE. SAND BEDDING IS TO BE COMPACTED AS SPECIFIED ABOVE FOR SAND BACKFILL.

14. EROSION CONTROL

A. ALL GRADING, EROSION AND SEDIMENT CONTROL AND RELATED WORK UNDERTAKEN ON THIS SITE IS SUBJECT TO ALL TERMS AND CONDITIONS OF THE COUNTY GRADING ORDINANCE AND MADE A PART HEREOF BY REFERENCE.

B. THE CONTRACTOR WILL BE LIABLE FOR ANY AND ALL DAMAGES TO ANY PUBLICLY OWNED AND MAINTAINED ROAD CAUSED BY THE AFORESAID CONTRACTOR'S GRADING ACTIVITIES, AND SHALL BE RESPONSIBLE FOR THE CLEANUP OF ANY MATERIAL SPILLED ON ANY PUBLIC ROAD ON THE HAUL ROUTE.

C. THE EROSION CONTROL MEASURES ARE TO BE OPERABLE DURING THE RAINY SEASON, GENERALLY FROM OCTOBER FIRST TO APRIL FIFTEENTH. EROSION CONTROL PLANTING IS TO BE COMPLETED BY OCTOBER FIRST. NO GRADING OR UTILITY TRENCHING SHALL OCCUR BETWEEN OCTOBER FIRST AND APRIL FIFTEENTH UNLESS AUTHORIZED BY THE LOCAL JURISDICTION.

D. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED AND CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE SOILS ENGINEER.

E. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM.

F. ALL EROSION CONTROL FACILITIES MUST BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY DURING THE RAINY SEASON.

G. WHEN NO LONGER NECESSARY AND PRIOR TO FINAL ACCEPTANCE OF DEVELOPMENT, SEDIMENT BASINS SHALL BE REMOVED OR OTHERWISE DEACTIVATED AS REQUIRED BY THE LOCAL JURISDICTION.

H. A CONSTRUCTION ENTRANCE SHALL BE PROVIDED AT ANY POINT OF EGRESS FROM THE SITE TO ROADWAY. A CONSTRUCTION ENTRANCE SHOULD BE COMPOSED OF COARSE DRAIN ROCK (2" TO 3") MINIMUM DIAMETER) AT LEAST EIGHT INCHES THICK BY FIFTY (50) FEET LONG BY TWENTY (20) FEET WIDE UNLESS SHOWN OTHERWISE ON PLAN AND SHALL BE MAINTAINED UNTIL THE SITE IS PAVED.

I. ALL AREAS SPECIFIED FOR HYDROSEEDING SHALL BE NOZZLE PLANTED WITH STABILIZATION MATERIAL CONSISTING OF FIBER, SEED, FERTILIZER AND WATER, MIXED AND APPLIED IN THE FOLLOWING PROPORTIONS:

FIBER, 2000 LBS/ACRE
SEED, 200 LBS/ACRE (SEE NOTE J, BELOW)
FERTILIZER (11-8-4), 500 LBS/ACRE
WATER, AS REQUIRED FOR APPLICATION

J. SEED MIX SHALL BE PER CALTRANS STANDARDS.

K. WATER UTILIZED IN THE STABILIZATION MATERIAL SHALL BE OF SUCH QUALITY THAT IT WILL PROMOTE GERMINATION AND STIMULATE GROWTH OF PLANTS. IT SHALL BE FREE OF POLLUTANT MATERIALS AND WEED SEED.

L. HYDROSEEDING SHALL CONFORM TO THE PROVISIONS OF SECTION 20, EROSION CONTROL AND HIGHWAY PLANTING", OF THE STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, AS LAST REVISED.

M. A DISPERSING AGENT MAY BE ADDED TO THE HYDROSEEDING MATERIAL, PROVIDED THAT THE CONTRACTOR FURNISHES SUITABLE EVIDENCE THAT THE ADDITIVE WILL NOT ADVERSELY AFFECT THE PERFORMANCE OF THE SEEDING MIXTURE.

N. STABILIZATION MATERIALS SHALL BE APPLIED AS SOON AS PRACTICABLE AFTER COMPLETION OF GRADING OPERATIONS AND PRIOR TO THE ONSET OF WINTER RAINS, OR AT SUCH OTHER TIME AS DIRECTED BY THE COUNTY ENGINEER. THE MATERIAL SHALL BE APPLIED BEFORE INSTALLATION OF OTHER LANDSCAPING MATERIALS SUCH AS TREES, SHRUBS AND GROUND COVERS.

O. THE STABILIZATION MATERIAL SHALL BE APPLIED WITHIN 4-HOURS AFTER MIXING. MIXED MATERIAL NOT USED WITHIN 4-HOURS SHALL BE REMOVED FROM THE SITE.

P. THE CONTRACTOR SHALL MAINTAIN THE SOIL STABILIZATION MATERIAL AFTER PLACEMENT. THE COUNTY ENGINEER MAY REQUIRE SPRAY APPLICATION OF WATER OR OTHER MAINTENANCE ACTIVITIES TO ASSURE THE EFFECTIVENESS OF THE STABILIZATION PROCESS. APPLICATION OF WATER SHALL BE ACCOMPLISHED USING NOZZLES THAT PRODUCE A SPRAY THAT DOES NOT CONCENTRATE OR WASH AWAY THE STABILIZATION MATERIALS.

15. CLEANUP

THE CONTRACTOR MUST MAINTAIN THE SITE CLEAN, SAFE AND IN USABLE CONDITION. ANY SPILLS OF SOIL, ROCK OR CONSTRUCTION MATERIAL MUST BE REMOVED FROM THE SITE BY THE CONTRACTOR DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. COST FOR THIS ITEM OF WORK SHALL BE INCLUDED IN THE EXCAVATION AND COMPACTION ITEM AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

NOTE:
THESE NOTES ARE INTENDED TO BE USED AS A GENERAL GUIDELINE. THE REFERENCED SOILS REPORT FOR THE PROJECT AND GOVERNING AGENCY GRADING ORDINANCE SHALL SUPERSEDE THESE NOTES. THE SOILS ENGINEER MAY MAKE ON-SITE RECOMMENDATIONS DURING GRADING OPERATIONS.

REGISTERED PROFESSIONAL ENGINEER
JAMES TOBY
No. 63127
CIVIL
STATE OF CALIFORNIA
ORIGINAL SIGNATURES IN BLUE INK

LEA & BRAZE ENGINEERING, INC.
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634 PALOMAR DRIVE
REDWOOD CITY,
CALIFORNIA

APN: 051-022-380

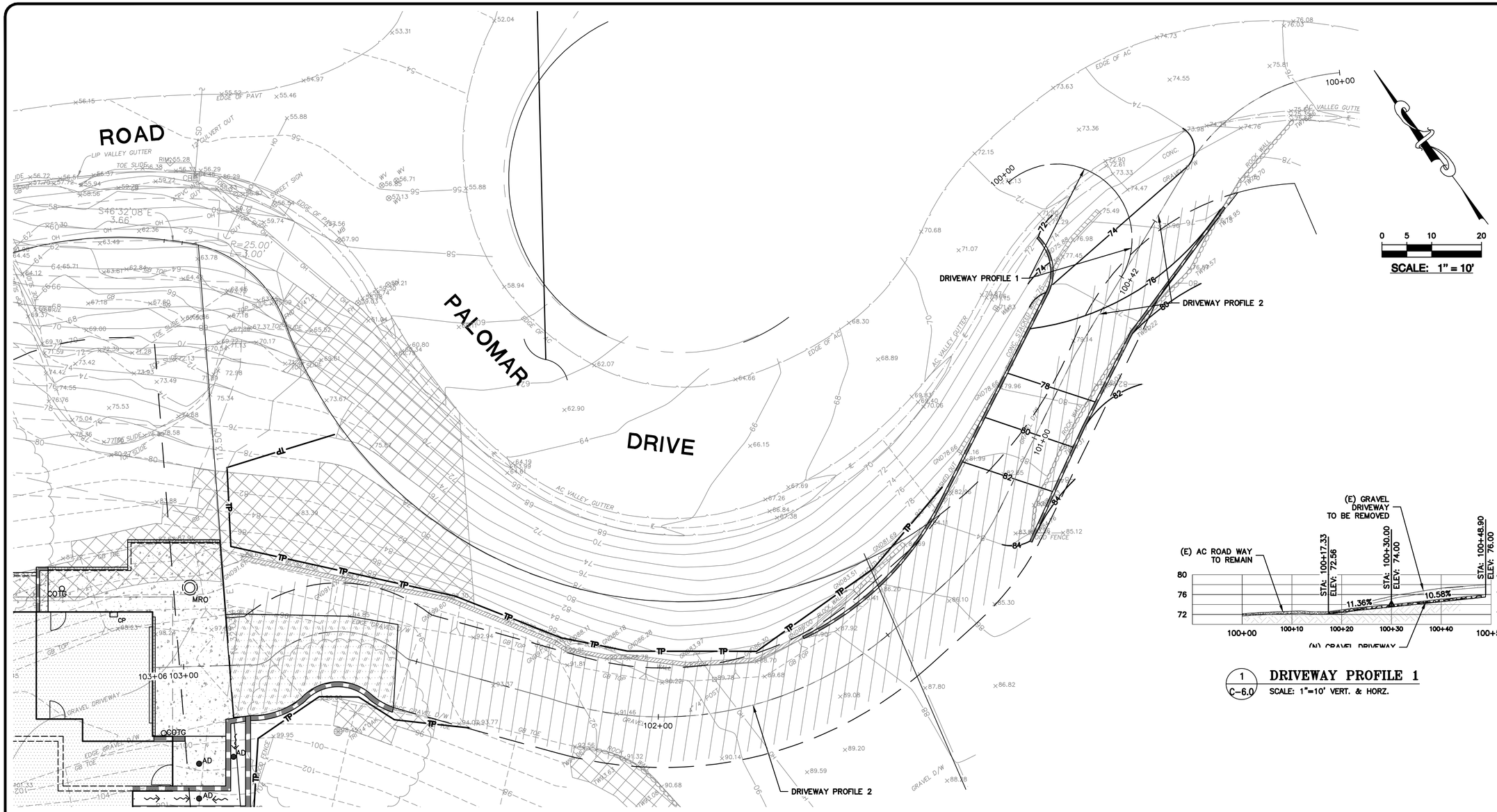
SAN MATEO COUNTY

GRADING
SPECIFICATIONS

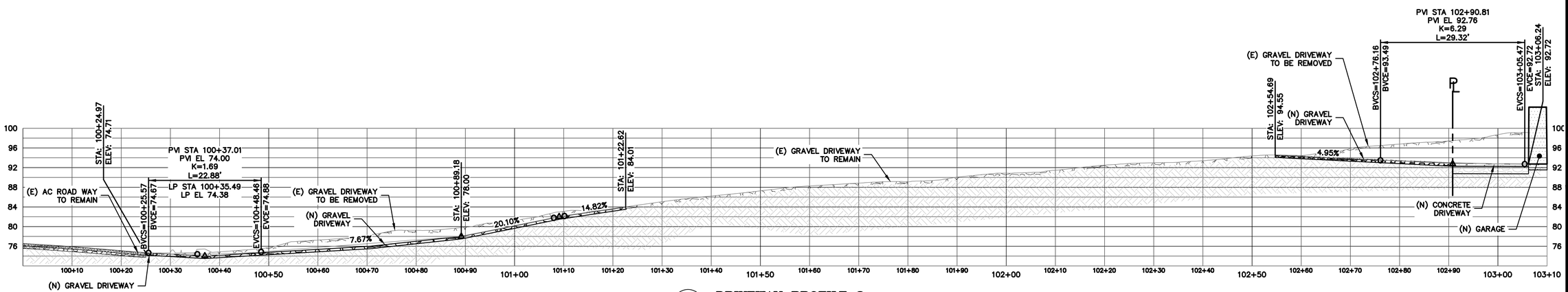
REVISIONS	BY
6 PLANCHECK 01-30-23	JOR
5 PLANCHECK 05-24-22	JOR
4 PLANCHECK 04-07-22	JOR
3 PLANCHECK 11-25-21	JOR

JOB NO: 2200474
DATE: 07-17-20
SCALE: NO SCALE
DESIGN BY: JOR
DRAWN BY: JOR
SHEET NO:

C-5.0



1 C-6.0 **DRIVEWAY PROFILE 1**
SCALE: 1"=10' VERT. & HORZ.



2 C-6.0 **DRIVEWAY PROFILE 2**
SCALE: 1"=10' VERT. & HORZ.

REGISTERED PROFESSIONAL ENGINEER
JAMES TOBY
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SAN MATEO COUNTY

DRIVEWAY PROFILE

6	PLANCHECK 01-30-23	JOR
5	PLANCHECK 05-24-22	JOR
4	PLANCHECK 04-07-22	JOR
3	PLANCHECK 11-25-21	JOR
	REVISIONS	BY

JOB NO:	2200474
DATE:	07-17-20
SCALE:	1"=10'
DESIGN BY:	JOR
DRAWN BY:	JOR
SHEET NO:	C-6.0

7 OF 9 SHEETS

PURPOSE:

THE PURPOSE OF THIS PLAN IS TO STABILIZE THE SITE TO PREVENT EROSION OF GRADED AREAS AND TO PREVENT SEDIMENTATION FROM LEAVING THE CONSTRUCTION AREA AND AFFECTING NEIGHBORING SITES, NATURAL AREAS, PUBLIC FACILITIES OR ANY OTHER AREA THAT MIGHT BE AFFECTED BY SEDIMENTATION. ALL MEASURES SHOWN ON THIS PLAN SHOULD BE CONSIDERED THE MINIMUM REQUIREMENTS NECESSARY. SHOULD FIELD CONDITIONS DICTATE ADDITIONAL MEASURES, SUCH MEASURES SHALL BE PER CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD'S FIELD MANUAL FOR EROSION AND SEDIMENTATION CONTROL AND THE CALIFORNIA STORM WATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICES HANDBOOK FOR CONSTRUCTION. LEA & BRAZE ENGINEERING SHOULD BE NOTIFIED IMMEDIATELY SHOULD CONDITIONS CHANGE.

EROSION CONTROL NOTES:

1. IT SHALL BE THE OWNER'S/CONTRACTOR'S RESPONSIBILITY TO MAINTAIN CONTROL OF THE ENTIRE CONSTRUCTION OPERATION AND TO KEEP THE ENTIRE SITE IN COMPLIANCE WITH THIS EROSION CONTROL PLAN.
2. THE INTENTION OF THIS PLAN IS FOR INTERIM EROSION AND SEDIMENT CONTROL ONLY. ALL EROSION CONTROL MEASURES SHALL CONFORM TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD'S FIELD MANUAL FOR EROSION AND SEDIMENTATION CONTROL, THE CALIFORNIA STORM WATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICES HANDBOOK FOR CONSTRUCTION, AND THE LOCAL GOVERNING AGENCY FOR THIS PROJECT.
3. OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO, DURING, AND AFTER STORM EVENTS. PERSON IN CHARGE OF MAINTAINING EROSION CONTROL MEASURES SHOULD WATCH LOCAL WEATHER REPORTS AND ACT APPROPRIATELY TO MAKE SURE ALL NECESSARY MEASURES ARE IN PLACE.
4. SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM, INCLUDING EXISTING DRAINAGE SWALES AND WATERCOURSES.
6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION WILL BE MINIMIZED. COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS CONCERNING POLLUTION SHALL BE MAINTAINED AT ALL TIMES.
7. CONTRACTOR SHALL PROVIDE DUST CONTROL AS REQUIRED BY THE APPROPRIATE FEDERAL, STATE AND LOCAL AGENCY REQUIREMENTS.
8. ALL MATERIALS NECESSARY FOR THE APPROVED EROSION CONTROL MEASURES SHALL BE IN PLACE BY OCTOBER 1ST.
9. EROSION CONTROL SYSTEMS SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE RAINY SEASON, OR FROM OCTOBER 1ST THROUGH APRIL 30TH, WHICHEVER IS LONGER.
10. IN THE EVENT OF RAIN, ALL GRADING WORK IS TO CEASE IMMEDIATELY AND THE SITE IS TO BE SEALED IN ACCORDANCE WITH THE APPROVAL EROSION CONTROL MEASURES AND APPROVED EROSION CONTROL PLAN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING AND REPAIRING EROSION CONTROL SYSTEMS AFTER EACH STORM.
12. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY LOCAL JURISDICTION'S ENGINEERING DEPARTMENT OR BUILDING OFFICIALS.
13. MEASURES SHALL BE TAKEN TO COLLECT OR CLEAN ANY ACCUMULATION OR DEPOSIT OF DIRT, MUD, SAND, ROCKS, GRAVEL OR DEBRIS ON THE SURFACE OF ANY STREET, ALLEY OR PUBLIC PLACE OR IN ANY PUBLIC STORM DRAIN SYSTEMS. THE REMOVAL OF AFORESAID SHALL BE DONE BY STREET SWEEPING OR HAND SWEEPING. WATER SHALL NOT BE USED TO WASH SEDIMENTS INTO PUBLIC OR PRIVATE DRAINAGE FACILITIES.
14. EROSION CONTROL MEASURES SHALL BE ON-SITE FROM SEPTEMBER 15TH THRU APRIL 30TH.
15. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE RAINY SEASON OR FROM OCTOBER 1ST THRU APRIL 30TH, WHICHEVER IS GREATER.
16. PLANS SHALL BE DESIGNED TO MEET C3 REQUIREMENTS OF THE MUNICIPAL STORMWATER REGIONAL PERMIT("MRP") NPDES PERMIT CAS 612008.
17. THE CONTRACTOR TO NPDES (NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM) BEST MANAGEMENT PRACTICES (BMP) FOR SEDIMENTATION PREVENTION AND EROSION CONTROL TO PREVENT DELETERIOUS MATERIALS OR POLLUTANTS FROM ENTERING THE TOWN OR COUNTY STORM DRAIN SYSTEMS.
18. THE CONTRACTOR MUST INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO THE INCEPTION OF ANY WORK ONSITE AND MAINTAIN THE MEASURES UNTIL THE COMPLETION OF ALL LANDSCAPING.
19. THE CONTRACTOR SHALL MAINTAIN ADJACENT STREETS IN A NEAT, CLEAN DUST FREE AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF THE TOWN INSPECTOR. THE ADJACENT STREET SHALL AT ALL TIMES BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCE BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR BE RESPONSIBLE FOR ANY CLEAN UP ON ADJACENT STREETS AFFECTED BY THE BY THEIR CONSTRUCTION, METHOD OF STREET CLEANING SHALL BE BY DRY SWEEPING OF ALL PAVED AREAS. NO STOCKPILING OF BUILDING MATERIALS WITHIN THE TOWN RIGHT-OF-WAY.
20. SEDIMENTS AND OTHER MATERIALS SHALL NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONTRACTOR SHALL INSTALL A STABILIZED CONSTRUCTION ENTRANCE PRIOR TO THE INSPECTION OF ANY WORK ONSITE AND MAINTAIN IT FOR THE DURATION OF THE CONSTRUCTION PROCESS SO AS TO NOT INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC RIGHT-OF-WAY UNTIL THE COMPLETION OF ALL LANDSCAPING.
21. THE CONTRACTOR SHALL PROTECT DOWN SLOPE DRAINAGE COURSES, STREAMS AND STORM DRAINS WITH ROCK FILLED SAND BAGS, TEMPORARY SWALES, SILT FENCES, AND EARTH PERMS IN CONJUNCTION OF ALL LANDSCAPING.
22. STOCKPILED MATERIALS SHALL BE COVERED WITH VISQUEEN OR A TARPAULIN UNTIL THE MATERIAL IS REMOVED FROM THE SITE. ANY REMAINING BARE SOIL THAT EXISTS AFTER THE STOCKPILE HAS BEEN REMOVED SHALL BE COVERED UNTIL A NATURAL GROUND COVER IS ESTABLISHED OR IT IS SEEDED OR PLANTED TO PROVIDE GROUND COVER PRIOR TO THE FALL RAINY SEASON.
23. EXCESS OR WASTE CONCRETE MUST NOT BE WASHED INTO THE PUBLIC RIGHT-OF-WAYOR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
24. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION AND DISPERSAL BY WIND

EROSION CONTROL NOTES CONTINUED:

24. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MUST NOT BE WASHED INTO THE DRAINAGE SYSTEM,
25. DUST CONTROL SHALL BE DONE BY WATERING AND AS OFTEN AS REQUIRED BY THE TOWN INSPECTOR.
26. SILT FENCE(S) AND/OR FIBER ROLL(S) SHALL BE INSTALLED PRIOR TO SEPTEMBER 15TH AND SHALL REMAIN IN PLACE UNTIL THE LANDSCAPING GROUND COVER IS INSTALLED. CONTRACTOR SHALL CONTINUOUSLY MONITOR THESE MEASURES, FOLLOWING AND DURING ALL RAIN EVENTS,TO PUBLIC OWNED FACILITIES.

EROSION CONTROL MEASURES:

1. THE FACILITIES SHOWN ON THIS PLAN ARE DESIGNED TO CONTROL EROSION AND SEDIMENT DURING THE RAINY SEASON, OCTOBER 1ST TO APRIL 30TH. EROSION CONTROL FACILITIES SHALL BE IN PLACE PRIOR TO OCTOBER 1ST OF ANY YEAR. GRADING OPERATIONS DURING THE RAINY SEASON WHICH LEAVE DENUDED SLOPES SHALL BE PROTECTED WITH EROSION CONTROL MEASURES IMMEDIATELY FOLLOWING GRADING ON THE SLOPES.
2. SITE CONDITIONS AT TIME OF PLACEMENT OF EROSION CONTROL MEASURES WILL VARY. APPROPRIATE ACTION INCLUDING TEMPORARY SWALES, INLETS, HYDROSEEDING, STRAW BALES, ROCK SACKS, ETC. SHALL BE TAKEN TO PREVENT EROSION AND SEDIMENTATION FROM LEAVING SITE. EROSION CONTROL MEASURES SHALL BE ADJUSTED AS THE CONDITIONS CHANGE AND THE NEED OF CONSTRUCTION SHIFT.
3. CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. ALL CONSTRUCTION TRAFFIC ENTERING ONTO THE PAVED ROADS MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCES. CONTRACTOR SHALL MAINTAIN STABILIZED ENTRANCE AT EACH VEHICLE ACCESS POINT TO EXISTING PAVED STREETS. ANY MUD OR DEBRIS TRACKED ONTO PUBLIC STREETS SHALL BE REMOVED DAILY AND AS REQUIRED BY THE GOVERNING AGENCY.
4. ALL EXPOSED SLOPES THAT ARE NOT VEGETATED SHALL BE HYDROSEEDED. IF HYDROSEEDING IS NOT USED OR IS NOT EFFECTIVE BY OCTOBER 1ST, THEN OTHER IMMEDIATE METHODS SHALL BE IMPLEMENTED, SUCH AS EROSION CONTROL BLANKETS, OR A THREE-STEP APPLICATION OF 1) SEED, MULCH, FERTILIZER 2) BLOWN STRAW 3) TACKIFIER AND MULCH. HYDROSEEDING SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF SECTION 20" EROSION CONTROL AND HIGHWAY PLANTING" OF THE STANDARD SPECIFICATION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, AS LAST REVISED. REFER TO THE EROSION CONTROL SECTION OF THE GRADING SPECIFICATIONS THAT ARE A PART OF THIS PLAN SET FOR FURTHER INFORMATION.
5. INLET PROTECTION SHALL BE INSTALLED AT OPEN INLETS TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. INLETS NOT USED IN CONJUNCTION WITH EROSION CONTROL ARE TO BE BLOCKED TO PREVENT ENTRY OF SEDIMENT. MINIMUM INLET PROTECTION SHALL CONSIST OF A ROCK SACKS OR AS SHOWN ON THIS PLAN
6. THIS EROSION AND SEDIMENT CONTROL PLAN MAY NOT COVER ALL THE SITUATIONS THAT MAY ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS AND ADDITIONS MAY BE MADE TO THIS PLAN IN THE FIELD. A REPRESENTATIVE OF LEA & BRAZE ENGINEERING SHALL PERFORM A FIELD REVIEW AND MAKE RECOMMENDATIONS AS NEEDED. CONTRACTOR IS RESPONSIBLE TO NOTIFY LEA & BRAZE ENGINEERING AND THE GOVERNING AGENCY OF ANY CHANGES.
7. THE EROSION CONTROL MEASURES SHALL CONFORM TO THE LOCAL JURISDICTION'S STANDARDS AND THE APPROVAL OF THE LOCAL JURISDICTION'S ENGINEERING DEPARTMENT.
8. STRAW ROLLS SHALL BE PLACED AT THE TOE OF SLOPES AND ALONG THE DOWN SLOPE PERIMETER OF THE PROJECT. THEY SHALL BE PLACED AT 25 FOOT INTERVALS ON GRADED SLOPES. PLACEMENT SHALL RUN WITH THE CONTOURS AND ROLLS SHALL BE TIGHTLY END BUTTED. CONTRACTOR SHALL REFER TO MANUFACTURES SPECIFICATIONS FOR PLACEMENT AND INSTALLATION INSTRUCTIONS.

REFERENCES:

1. CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD'S FIELD MANUAL FOR EROSION AND SEDIMENTATION CONTROL
2. CALIFORNIA STORM WATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICES HANDBOOK FOR CONSTRUCTION

PERIODIC MAINTENANCE:

1. MAINTENANCE IS TO BE PERFORMED AS FOLLOWS:
   - A. DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION SHALL BE REPAIRED AT THE END OF EACH WORKING DAY.
   - B. SWALES SHALL BE INSPECTED PERIODICALLY AND MAINTAINED AS NEEDED.
   - C. SEDIMENT TRAPS, BERMS, AND SWALES ARE TO BE INSPECTED AFTER EACH STORM AND REPAIRS MADE AS NEEDED.
   - D. SEDIMENT SHALL BE REMOVED AND SEDIMENT TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO A DEPTH OF 1' FOOT.
   - E. SEDIMENT REMOVED FROM TRAP SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
   - F. RILLS AND GULLIES MUST BE REPAIRED.
2. GRAVEL BAG INLET PROTECTION SHALL BE CLEANED OUT WHENEVER SEDIMENT DEPTH IS ONE HALF THE HEIGHT OF ONE GRAVEL BAG.
3. STRAW ROLLS SHALL BE PERIODICALLY CHECKED TO ASSURE PROPER FUNCTION AND CLEANED OUT WHENEVER THE SEDIMENT DEPTH REACHED HALF THE HEIGHT OF THE ROLL.
4. SILT FENCE SHALL BE PERIODICALLY CHECKED TO ASSURE PROPER FUNCTION AND CLEANED OUT WHENEVER THE SEDIMENT DEPTH REACHES ONE FOOT IN HEIGHT.
5. CONSTRUCTION ENTRANCE SHALL BE REGRAVELED AS NECESSARY FOLLOWING SILT/SOIL BUILDUP.
6. ANY OTHER EROSION CONTROL MEASURES SHOULD BE CHECKED AT REGULAR INTERVALS TO ASSURE PROPER FUNCTION

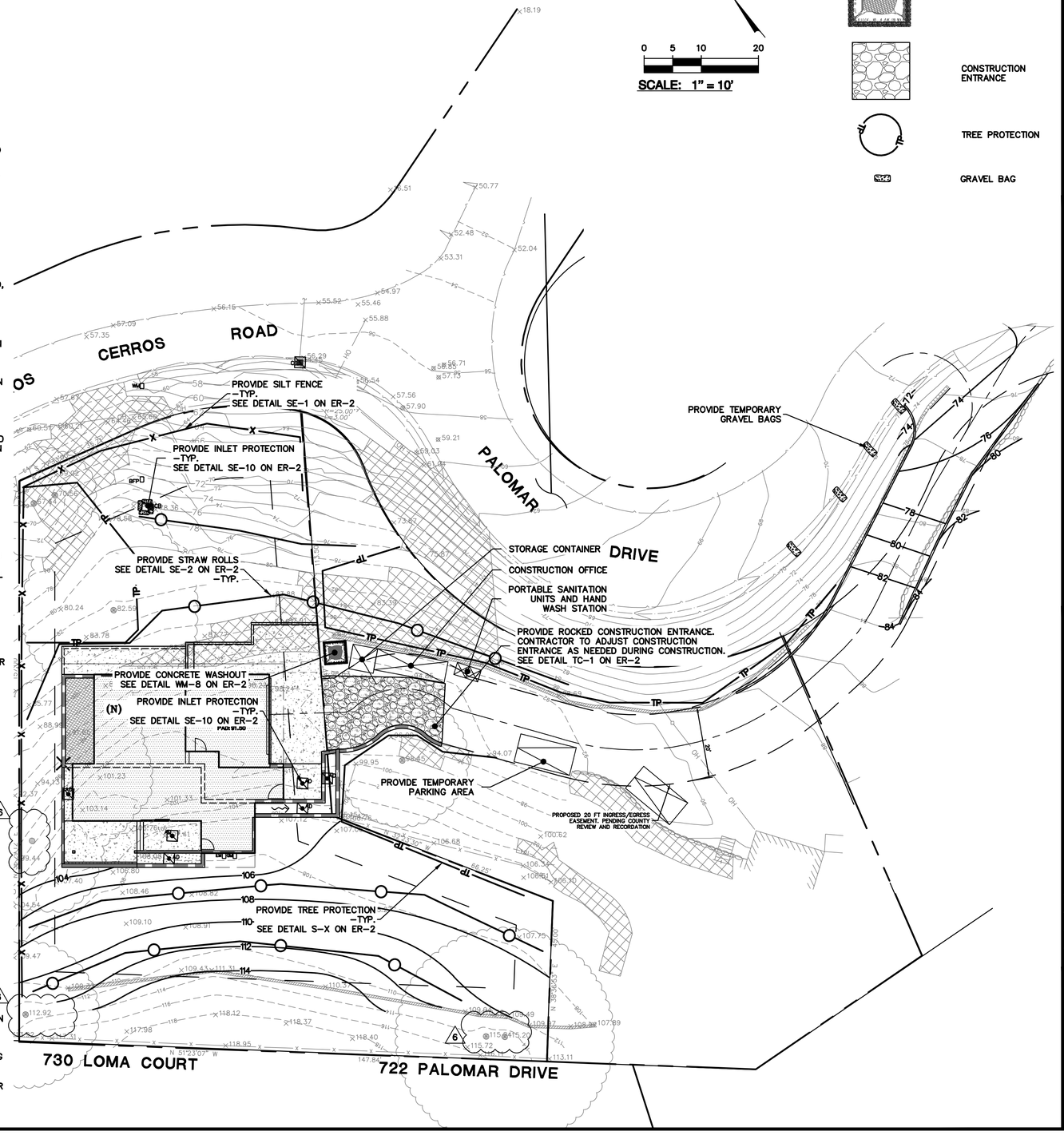
NOTE:
SEAL ALL OTHER INLETS NOT INTENDED TO ACCEPT STORM WATER AND DIRECT FLOWS TEMPORARILY TO FUNCTIONAL SEDIMENTATION BASIN INLETS. -TYP

NOTE:
ACCESS ROAD AND SITE WILL BE RESTORED TO NATURAL CONDITIONS ONCE THE STAGING WORK IS COMPLETED

EROSION CONTROL LEGEND

INLET PROTECTION
STRAW ROLL
SILT FENCE
CONCRETE WASHOUT
CONSTRUCTION ENTRANCE
TREE PROTECTION
GRAVEL BAG

0 5 10 20
SCALE: 1" = 10'



REGISTERED PROFESSIONAL ENGINEER JAMES TOTH No. 63127 CIVIL STATE OF CALIFORNIA ORIGINAL SIGNATURES IN BLUE INK

LEA & BRAZE ENGINEERING, INC.
CIVIL ENGINEERS • LAND SURVEYORS
MAIN OFFICE: 2495 INDUSTRIAL PKWY WEST HAYWARD, CALIFORNIA 94545 (510) 887-4086
REGIONAL OFFICES: ROSEVILLE DUBLIN SAN JOSE
WWW.LEABRAZE.COM

634 PALOMAR DRIVE REDWOOD CITY, CALIFORNIA

APN: 051-022-380
SAN MATEO COUNTY

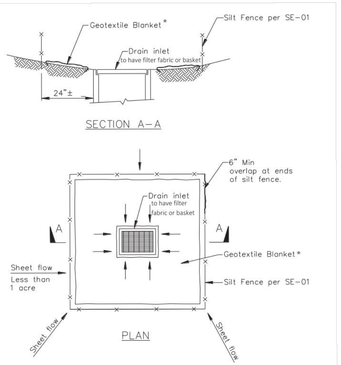
EROSION CONTROL PLAN

6	PLANCHECK 01-30-23	JOR
5	PLANCHECK 05-24-22	JOR
4	PLANCHECK 04-07-22	JOR
3	PLANCHECK 11-25-21	JOR
	REVISIONS	BY

JOB NO:	2200474
DATE:	07-17-20
SCALE:	1"=10'
DESIGN BY:	JOR
DRAWN BY:	JOR

SHEET NO:
ER-1
8 OF 9 SHEETS

Storm Drain Inlet Protection SE-10

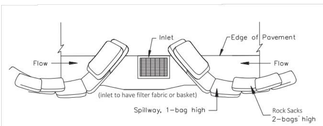


DI PROTECTION TYPE 1
NOT TO SCALE

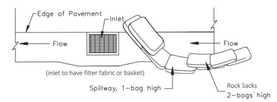
NOTES:

1. For use in areas where grading has been completed and final soil stabilization and seeding are pending.
2. Not applicable in paved areas.
3. Not applicable with concentrated flows.

Storm Drain Inlet Protection SE-10



TYPICAL PROTECTION FOR INLET ON SUMP

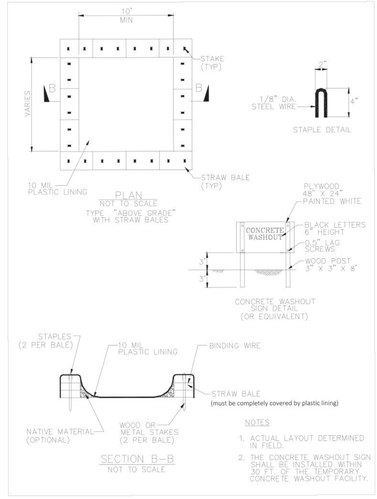


TYPICAL PROTECTION FOR INLET ON GRADE

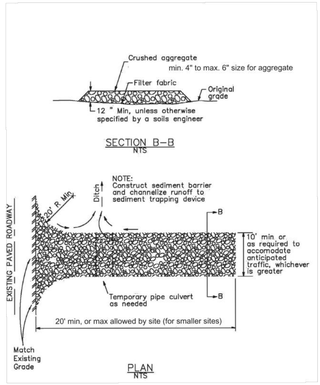
NOTES:

1. Intended for short–term use.
2. Use to inhibit non–storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.
6. Protection can be effective even if it is not immediately adjacent to the inlet provided that the inlet is protected from potential sources of pollution.

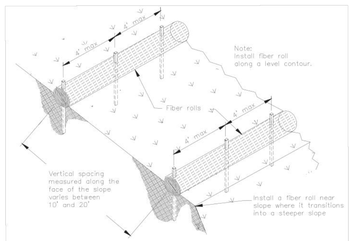
Concrete Waste Management WM-8



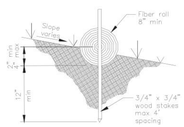
Stabilized Construction Entrance/Exit TC-1



Fiber Rolls SE-5

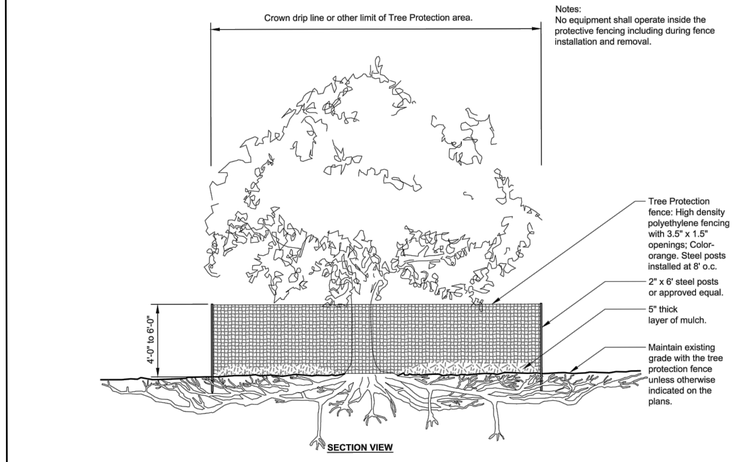


TYPICAL FIBER ROLL INSTALLATION
N.T.S.



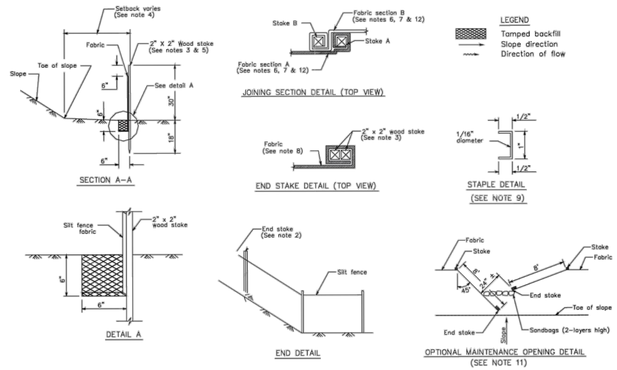
ENTRENCHMENT DETAIL
N.T.S.

NOTES:
If more than one fiber roll is placed in a row, the rolls must be overlapped, not abutted.
Turn the ends of the fiber roll up-slope to prevent runoff from going around the roll.



S-X TREE PROTECTION

SE-1 Silt Fence



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634 PALOMAR DRIVE
REDWOOD CITY,
CALIFORNIA
SAN MATEO COUNTY
APN: 051-022-380

EROSION CONTROL DETAILS

6	PLANCHECK 01-30-23	JOR
5	PLANCHECK 05-24-22	JOR
4	PLANCHECK 04-07-22	JOR
3	PLANCHECK 11-25-21	JOR
	REVISIONS	BY

JOB NO:	2200474
DATE:	07-17-20
SCALE:	AS NOTED
DESIGN BY:	JOR
DRAWN BY:	JOR
SHEET NO:	ER-2

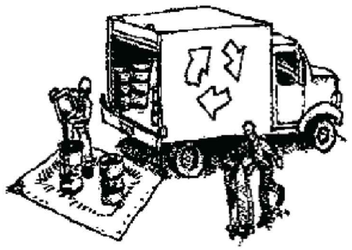
9 OF 9 SHEETS

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management



Non-Hazardous Materials

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- ❑ Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- ❑ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- ❑ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- ❑ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- ❑ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control

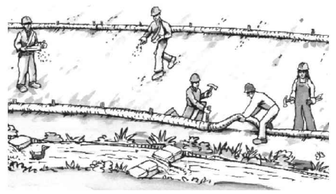
Maintenance and Parking

- ❑ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

Spill Prevention and Control

- ❑ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- ❑ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- ❑ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- ❑ Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving



- ❑ Schedule grading and excavation work during dry weather.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- ❑ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - Unusual soil conditions, discoloration, or odor.
  - Abandoned underground tanks.
  - Abandoned wells
  - Buried barrels, debris, or trash.

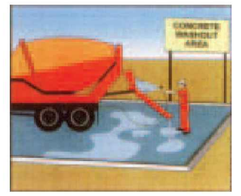
Paving/Asphalt Work

- ❑ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- ❑ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- ❑ Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal

- ❑ Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- ❑ Shovel, absorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ❑ If sawcut slurry enters a catch basin, clean it up immediately.

Concrete, Grout & Mortar Application

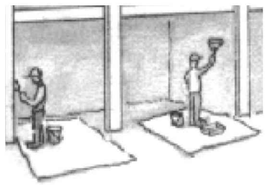


- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- ❑ When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

Landscaping

- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

Painting & Paint Removal



Painting Cleanup and Removal

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- ❑ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.

Dewatering

- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- ❑ Divert run-on water from offsite away from all disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

Storm drain polluters may be liable for fines of up to $10,000 per day!

ATTACHMENT D

COUNTY OF SAN MATEO
PLANNING AND BUILDING

County Government Center
455 County Center, 2nd Floor
Redwood City, CA 94063
650-363-4161 T
planning.smcgov.org

November 8, 2022

Maurits de Gans, Architect
M Designs Architects
4131 W. El Camino Real Suite 200
Palo Alto, CA 94306

Dear Mr. De Gans:

SUBJECT: Bayside Design Review Recommendation of Approval
634 Palomar Drive, Redwood City
APN 051-022-380; PLN2020-00251

At its October 26, 2022 meeting, Bayside Design Review Committee (Committee) considered your design review recommendation to allow the construction of a new 3-story, 4,282 sq. ft. single-family residence, 315 sq. ft. covered terrace, a 155 sq. ft. deck, and a 554 sq. ft. attached garage, on a 18,122 sq. ft. legal parcel (Lot Line Adjustment recorded on April 26, 1983). The property would be accessed from an improved existing gravel driveway located on 636 Palomar Drive and APN 051-022-250. The project is associated with a Grading Permit involving 880 cubic yards (c.y.) of cut and 90 c.y. of fill; the project involves the removal of 7 significant trees. An Initial Study/ Mitigated Negative Declaration (IS/MND) is available at https://www.smcgov.org/planning/project-ceqa-documents.

The BDRC's review of the project was continued from the August 3, 2022 meeting. During its review, the BDRC stated that the project complies with the design standards, with respect to colors and materials per Section 6565.16.G (Materials and Colors). The proposed colors and materials are consistent with those recommended in the standards and privacy for neighboring parcels is maintained.

All property owners within 300 feet of the subject property were notified a minimum of 10 days before the hearing date. Many emails of correspondence were received and many members of the public spoke at the public hearing. Concerns expressed by the members of the public focused on project design compatibility with existing houses in the neighborhood, privacy impacts, glare from windows, tree removal relative to slope stability, geological/hydrological concerns, and concerns regarding potential stormwater pollution from the proposed septic system. Staff clarified that the BDRC's review is

limited to project compliance with design standards and that other issues are discussed in the IS/MND which will be reviewed by the Planning Commission.

Based on the plans, application forms, and accompanying materials submitted, the BDRC recommended approval of the Design Review Permit, based on the findings and conditions as listed below.

FINDINGS

For the Design Review, Find:

1. After consideration of project plans and public testimony, the Bayside Design Review Committee found that the project, as proposed and conditioned on October 26, 2022, is in compliance with the Design Review Standards based on the site planning and colors and materials which provide compatibility with surrounding residences.

    A. Section 6565.16 G. Materials and Colors - Make varying architectural styles compatible by using similar materials and colors which blend with the natural setting and the immediate area. Avoid the use of building materials and colors which are highly reflective and contrasting by requiring them to blend and harmonize with the natural woodland environment and vegetation of the area. The proposed colors and materials comply with this standard. Reduce the amount glass windows on eastern and northern facades (dining and living room), by eliminating the middle window and replacing it with a wall segment.

    B. Section 6565.16 F. Roofs - Design buildings using primarily pitched roofs. Design buildings with roofs that reflect the predominant architectural styles of the immediate area. Replace low-slope hip roof design with low-slope shed roof. Apply roof changes to all roof elements, including 3rd level roof, and 2nd level roof, all sides as appropriate, for consistent applications around the home. Include overhangs on the uphill side, back side, and upper deck areas with overhangs not to exceed 4 feet.

    C. Section 6565.16 J. Lighting – All overhangs to have soffits with a minimal number of lights.

    D. Section 6565.16 A. Site Planning – Minimize alteration of the natural topography; respect the privacy of neighboring houses and outdoor living areas; and minimize tree removal. Site planning is compliant with this standard and the elevation of building has been kept low to protect views. Please work with your septic system engineer to see if proposed septic system can be modified to save existing trees.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. If and when the project is approved by the Planning Commission, the project shall be constructed in compliance with the plans reviewed by the Bayside Design Review Committee (BDRC) on October 26, 2022. Any changes or revisions to the approved plans shall be submitted for review by the Community Development Director to determine if they are in substantial compliance with the approved plans, prior to being incorporated into the building plans. Adjustments to the design of the project may be approved by the Design Review Officer if they are consistent with the intent of and are in substantial conformance with this approval. Adjustments to the design during the building permit stage may result in the assessment of additional plan resubmittal or revision fees. Alternatively, the Design Review Officer may refer consideration of the adjustments, if they are deemed to be major, to a new BDRC public hearing which requires payment of an additional fee of $1,500.

2. The applicant shall indicate the following on plans submitted for a building permit, as stipulated by the Bayside Design Review Committee:

    a. Reduce the amount glass windows on eastern and northern facades (dining and living room), by eliminating the middle window and replacing it with a wall segment.

    b. Replace low-slope hip roof design with low-slope shed roof. Apply roof changes to all roof elements, including 3rd level roof, and 2nd level roof, all sides as appropriate, for consistent applications around the home. Include overhangs on the uphill side, back side, and upper deck areas with overhangs not to exceed 4 feet.

    c. All overhangs to have soffits with a minimal number of lights.

    d. Minimize tree removal. Please work with your septic system engineer to see if the proposed septic system can be modified to save existing trees.

    e. Suggestion: Prepare a 3D model of the project showing neighboring buildings for the Planning Commission meeting.

3. At the time of building permit application, the applicant shall submit a tree protection plan for any work within tree driplines or adjacent to off-site trees, including the following:

a. Identify, establish, and maintain tree protection zones throughout the entire duration of the project.

b. Isolate tree protection zones using 5-foot tall, orange plastic fencing supported by poles pounded into the ground, located at the driplines as described in the arborist's report.

c. Maintain tree protection zones free of equipment and materials storage; contractors shall not clean any tools, forms, or equipment within these areas.

d. If any large roots or large masses of roots need to be cut, the roots shall be inspected by a certified arborist or registered forester prior to cutting as required in the arborist's report. Any root cutting shall be undertaken by an arborist or forester and documented. Roots to be cut shall be severed cleanly with a saw or toppers. A tree protection verification letter from the certified arborist shall be submitted to the Planning Department within five (5) business days from site inspection following root cutting.

e. Prior to Issuance of a building permit, the Planning and Building Department shall complete a pre-construction site inspection, as necessary, to verify that all required tree protection and erosion control measures are in place.

4. The approved exterior colors and materials shall be verified prior to final approval of the building permit. The applicant shall provide photographs to the Design Review Officer to verify adherence to this condition prior to a final building permit approval by the Current Planning Section.

5. Prior to the Current Planning Section approval of the building permit application, the applicant shall also have the licensed land surveyor or engineer indicate on the construction plans: (1) the natural grade elevations at the significant corners (at least four) of the footprint of the proposed structure on the submitted site plan, and (2) the elevations of proposed finished grades. In addition, (1) the natural grade elevations at the significant corners of the proposed structure, (2) the finished floor elevations, (3) the topmost elevation of the roof, and (4) the garage slab elevation must be shown on the plan, elevations, and cross-section (if one is provided).

6. Once the building is under construction, prior to the below floor framing inspection or the pouring of the concrete slab (as the case may be) for the lowest floor(s), the applicant shall provide to the Building Inspection Section a letter from the licensed land surveyor or engineer certifying that the lowest floor height, as constructed, is equal to the elevation specified for that floor in the approved plans. Similarly, certifications on the garage slab and the topmost elevation of the roof are required.

7. If the actual floor height, garage slab, or roof height, as constructed, is different than the elevation specified in the plans, then the applicant shall cease all construction and no additional inspections shall be approved until a revised set of plans is submitted to and subsequently approved by both the Building Official and the Community Development Director.

8 The applicant shall adhere to all requirements of the Building Inspection Section, the Department of Public Works, and San Mateo County Fire.

9. No site disturbance shall occur, including any grading or tree/vegetation removal, until a building permit has been issued.

10. To reduce the impact of construction activities on neighboring properties, comply with the following:

    a. All debris shall be contained on-site; a dumpster or trash bin shall be provided on-site during construction to prevent debris from blowing onto adjacent properties. The applicant shall monitor the site to ensure that trash is picked up and appropriately disposed of daily.

    b. The applicant shall remove all construction equipment from the site upon completion of the use and/or need of each piece of equipment which shall include but not be limited to tractors, back hoes, cement mixers, etc.

    c. The applicant shall ensure that no construction-related vehicles impede through traffic along the right-of-way on Palomar Drive. All construction vehicles shall be parked on-site outside the public right-of-way or in locations which do not impede safe access on Palomar Drive. There shall be no storage of construction vehicles in the public right-of-way.

11. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m., weekdays, and 9:00 a.m. to 5:00 p.m., Saturdays. Said activities are prohibited on Sundays, Thanksgiving, and Christmas (San Mateo County Ordinance Code Section 4.88.360).

12. At the building permit application stage, the project shall demonstrate compliance with the Water Efficient Landscape Ordinance (WELO), including requirements for final inspection.

County Arborist

13. At the time of Building permit application, please submit an updated construction entrance detail to include use of Tensar geogrid (or equivalent), per Project Arborist recommendations.

Building Inspection Section

14. A building permit is required.

Drainage Section

15. At the time of the building permit submittal, the project shall be required to comply with the County's "prescriptive" drainage review requirements and provide the following:

    a. Final Drainage Report stamped and signed by a registered Civil Engineer.
    b. Final Grading and Drainage Plan stamped and signed by a registered Civil Engineer depicting a storage and metering stormwater retention system and subdrain system(s) consistent with the requirements in the County's current Drainage Manual.
    c. Final C.3 and C.6 Development Review Checklist.

Geotechnical Section

16. In plans submitted for the building permit application, the project design team shall demonstrate close coordination with the Project Geotechnical Consultant in the design of proposed foundations, retaining walls, and drainage improvements.

17. An updated geotechnical report with supplemental recommendations, design criteria, and supporting data, as appropriate, should be submitted at the time of building permit application for final peer review along with project plans.

18. In plans submitted for the building permit application, project design and final plans should incorporate anticipated geotechnical recommendations and design criteria to mitigate site constraints as identified by the Project Geotechnical Consultant.

San Mateo County Fire

All fire conditions and requirements must be incorporated into your building plans, (see attached conditions) prior to building permit issuance. It is your responsibility to notify your contractor, architect and engineer of these requirements

19. Add Note to plans: New residential buildings shall have internally illuminated address numbers contrasting with the background so as to be seen from the public

way fronting the building. The letters/numerals for permanent address signs shall be 4 inches in height with a minimum 1/2-inch stroke. Residential address numbers shall be at least six feet above the finished surface of the driveway. Where buildings are located remotely to the public roadway, additional signage at the driveway/roadway entrance leading to the building and/or on each individual building shall be required. This remote signage shall consist of a 6 inch by 18 inch green reflective metal sign with 3 inch reflective Numbers/ Letters similar to Hy-Ko 911 or equivalent. (TEMPORARY ADDRESS NUMBERS SHALL BE POSTED PRIOR TO COMBUSTIBLES BEING PLACED ON SITE).

20. Vegetation Management (LRA) – Add note to plans: A fuel break of defensible space is required around the perimeter of all structures to a distance of not less than 30 feet and may be required to a distance of 100 feet or to the property line. This is neither a requirement nor an authorization for the removal of living trees. Trees located within the defensible space shall be pruned to remove dead and dying portions, and limbed up 6 feet above the ground. New trees planted in the defensible space shall be located no closer than 10’ to adjacent trees when fully grown or at maturity. Remove that portion of any existing trees, which extends within 10 feet of the outlet of a chimney or stovepipe or is within 5’ of any structure. Maintain any tree adjacent to or overhanging a building free of dead or dying wood.

21. Add Note to plans: The building is in a Very High Fire Hazard Severity Zone and will require a Class A roof.

22. Add Note to plans: Smoke alarms and carbon monoxide detectors shall be installed in accordance with the California Building and Residential Codes. As per the California Building Code, and State Fire Marshal regulations, the applicant is required to install State Fire Marshal approved and listed smoke detectors which are hard wired, interconnected, and have battery backup. These detectors are required to be placed in each new and recondition sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. In existing sleeping rooms, areas may have battery powered smoke alarms. A minimum of one detector shall be placed on each floor. Smoke detectors shall be tested and approved prior to the building final. Date of installation must be added to exterior of the smoke alarm and will be checked at final. Smoke alarms to be installed per manufactures instruction and NFPA 72.

23. Add Note to plans: Escape or rescue windows shall have a minimum net clear openable area of 5.7 square feet, 5.0 sq. ft. allowed at grade. The minimum net clear openable height dimension shall be 24 inches. The net clear openable width dimension shall be 20 inches. Finished sill height shall be not more than 44 inches above the finished floor. (CFC 2019 section 1030.2).

24. Identify rescue windows in each bedroom and verify that they meet all requirements. Add this to plans.

25. A plan and profile of the driveway/ roadway will be needed. Add to the plans.

26. Add Note to plans: Dead end emergency access exceeding 150 feet shall be provided with width and turnaround provisions meeting California Fire Code appendix D.

27. Add Note to plans: Fire apparatus access roads to be an approved all weather surface. Grades 15% or greater to be surfaced w/ asphalt, or brushed concrete. Grades 15 % or greater shall be limited to 150 ft. in length with a minimum of 500 ft. between the next section. For roads approved less than 20 ft., 20 ft. wide turnouts shall be on each side of 15% or greater section. No grades over 20%. (Plan and profile required) CFC 503.

28. A Knox padlock or key switch will be required if there is limited access to property. CFC 506.1. For application and instructions please cfpdfiremarshal@fire.ca.gov if you need further assistance please contact Coastside Fire Protection District at 650-726-5213.

29. Gates shall be a minimum of 2 feet wider than the access road/driveway they serve. Overhead gate structures shall have a minimum of 15 feet of vertical clearance. Locked gates shall be provided with a Knox Box or Knox Padlock. Electric gates shall have a Knox Key Switch. Electric gates shall automatically open during power failures. CFC 503.6, 506.

30. Add Note to plans: Fire Hydrant: Due to the size of the structure (over 3600 square feet), as per 2019 CFC, Appendix B and C, an approved fire hydrant (Clow 960) shall be located within 500 feet of the proposed single-family dwelling unit measured by way of drivable access with a minimum fire flow of 875 per minute at 20 pounds per square inch. Contact the local purveyor for water flow details.

31. Show location of fire hydrant on a site plan. A fire hydrant is required within 500 feet of the building and flow a minimum of 875 gpm at 20 psi. This information is to be verified by the water purveyor in a letter initiated by the applicant and sent to San Mateo County Fire/CAL Fire or Coastside Fire District. If there is not a hydrant within 500 feet with the required flow, one will have to be installed at the applicant's expense.

32. Add Note to plans: Automatic Fire Sprinkler System: (Fire Sprinkler plans will require a separate permit). The applicant is required to install an automatic fire sprinkler system throughout the proposed or improved dwelling and garage. All attic

access locations will be provided with a pilot head on a metal upright. Sprinkler coverage shall be provided throughout the residence to include all bathrooms, garages, and any area used for storage. The only exception is small linen closets less than 24 square feet with full depth shelving. The plans for this system must be submitted to the San Mateo County Planning and Building Department. A building permit will not be issued until plans are received, reviewed and approved. Upon submission of plans, the County will forward a complete set to the Coastside Fire District for review.

33. Installation of underground sprinkler pipe shall be flushed and visually inspected by Fire District prior to hook-up to riser. Any soldered fittings must be pressure tested with trench open. Please call the San Mateo County Fire Marshal's office to schedule an inspection.

34. Exterior bell: is required to be wired into the required flow switch on your fire sprinkler system.

35. Add note to the title page that the building will be protected by an automatic fire sprinkler system.

Department of Public Works

36. Prior to the issuance of the building permit, the applicant shall submit a driveway "Plan and Profile," to the Department of Public Works, showing the driveway access to the parcel (garage slab) complying with County Standards for driveway slopes (not to exceed 20%) and to County Standards for driveways (at the property line) being the same elevation as the center of the access roadway. When appropriate, as determined by the Department of Public Works, this plan and profile shall be prepared from elevations and alignment shown on the roadway improvement plans. The driveway plan shall also include and show specific provisions and details for both the existing and the proposed drainage patterns and drainage facilities.

37. No proposed construction work within the County right-of-way shall begin until County requirements for the issuance of an encroachment permit, including review of the plans, have been met and an encroachment permit issued. Applicant shall contact a Department of Public Works Inspector 48 hours prior to commencing work in the right-of-way.

38. Prior to the issuance of the Building Permit, the applicant will be required to provide payment of "roadway mitigation fees" based on the square footage (assessable space) of the proposed building per Ordinance #3277.

39. Should the access shown on the plans go through neighboring properties, the applicant shall provide documentation that "ingress and egress" easements exist providing for this access, prior to issuance of planning permit.

County Environmental Health Services

40. At the building permit application stage, the applicant shall submit plans consistent with the On-site Wastewater Treatment System (OWTS) design that has been reviewed and preliminarily approved by Environmental Health Services.

Please note that the decision of the Bayside Design Review Committee is a recommendation regarding the project's compliance with design review standards, not the final decision on this project, which requires a hearing-level Grading Permit. A hearing before the Planning Commission on the Initial Study/ Mitigated Negative Declaration, Design Review Permit, and Grading Permit will take place at a later date. The revised project plans, including the septic plans showing saving the tree(s) to the extent feasible, shall be submitted to Planning Staff. The revised septic plans will be reviewed by Environmental Health Services and subject to Environmental Health Services approval, prior to Planning Commission meeting. Staff will set a Planning Commission hearing date once the plans are preliminarily approved by Environmental Health Services.

For more information, please contact Camille Leung, Senior Planner, at cleung@smcgov.org or 650/363-1826, if you have any questions.

Sincerely,

Erica D, Adams
Bayside Design Review Officer

cc: Anusha Thalapaneni and David E. Jackson, Property Owners
Interested Members of the Public
Bayside Design Review Committee

Envelope:
/end

ATTACHMENT E

County of San Mateo
Planning and Building Department

INITIAL STUDY
ENVIRONMENTAL EVALUATION CHECKLIST
(To Be Completed by Planning Department)

1. **Project Title:** Thalapaneni/Jackson Residence, Septic System, and Improved Driveway

2. **County File Number:** PLN2020-00251

3. **Lead Agency Name and Address:** County of San Mateo, Planning and Building Department, 455 County Center, Second Floor, Redwood City, CA 94063

4. **Contact Person and Phone Number:** Camille Leung, Project Planner, 650/363-1826, cleung@smcgov.org (email is preferred method of communication)

5. **Project Location:** Development of vacant parcel located at Palomar Drive and Los Cerros Road (Subject Property), and minor associated work at 636 Palomar Drive and APN 051-022-250, located in the unincorporated Palomar Park area of San Mateo County.

6. **Assessor's Parcel Number and Size of Parcel:** APN 051-022-380 (18,122 sq. ft.; Subject Parcel). Project also involves work on APN 051-022-360 (Approx. 0.359 Acres) at 636 Palomar Drive, the adjoining parcel to east which uses a shared driveway and APN 051-022-250, as well as a vacant parcel to east of 636 Palomar Drive which also uses the shared driveway.

7. **Project Sponsor's Name and Address:** Maurits de Gans, Senior Associate, M Designs Architects, 4131 El Camino Real, Suite 200, Palo Alto, CA 94306

8. **Owner:** Anusha Thalapaneni and David E. Jackson, 3988 Sutherland Drive, Palo Alto, CA 94303

9. **General Plan Designation:** Medium Low Density Residential; Urban

10. **Zoning:** One-Family Residential/Combining District (Minimum Lot Size 10,000 sq. ft.)/Design Review (R-1/S-91/DR)

11. **Description of the Project:** The project requires a Design Review Permit and a Grading Permit for the construction of a new 3-story, 4,214 sq. ft. single-family residence plus a 566 sq. ft. attached garage, on a 18,122 sq. ft. legal parcel (Lot Line Adjustment recorded April 26, 1983). The project also includes a 315 sq. ft. covered terrace and a 324 sq. ft. deck. The property is at the intersection of Palomar Drive and Los Cerros Road and would be accessed from an improved existing gravel driveway located on 636 Palomar Drive and APN 051-022-250. The project includes earthwork of 880 cubic yards (c.y.) of cut and 90 c.y. of fill and the removal of 7 significant trees.

12. **Surrounding Land Uses and Setting:** The property is located within an existing residential neighborhood and adjoins developed parcels on the east, south, and southwest sides. Access is proposed via an access easement and an improved existing gravel driveway on 636

Palomar Drive and APN 051-022-250. The property slopes upward from Los Cerros Road with an average slope of approximately 34%.

13. **Other Public Agencies Whose Approval is Required:** None.

14. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?: No, consultation has not begun.** Planning staff has consulted with the following tribes, as identified by the Native American Heritage Commission (NAHC): Amah Mutsun Tribal Band of Mission San Juan, Coastanoan Rumsen Carmel Tribe, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the SF Bay Area, the Ohlone Indian Tribe, the Wuksasche Indian Tribe/Eschom Valley Band, and the Tamien Nation. On January 25, 2022, a letter was sent to each of the contact persons provided by the NAHC regarding the subject project requesting comment by February 25, 2022. No comments were received to date.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” or “Significant Unless Mitigated” as indicated by the checklist on the following pages.

X	Aesthetics		Energy		Public Services
	Agricultural and Forest Resources		Hazards and Hazardous Materials		Recreation
	Air Quality	X	Hydrology/Water Quality		Transportation/Traffic
X	Biological Resources		Land Use/Planning		Tribal Cultural Resources
	Cultural Resources		Mineral Resources		Utilities/Service Systems
X	Geology/Soils		Noise		Wildfire
	Climate Change		Population/Housing	X	Mandatory Findings of Significance

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in 5. below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c. Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources. Sources used or individuals contacted should be cited in the discussion.

1. AESTHETICS. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
1.a. Have a substantial adverse effect on a scenic vista, views from existing residential areas, public lands, water bodies, or roads?			X	
Discussion: The project is not located near any waterbody or scenic roads. The site is located over 2,000 feet north of Edgewood Road, a County-designated Scenic Route from Canada Road to Alameda de las Pulgas. The site is located 350 feet (as the crow flies) from Eaton Park in the City of San Carlos and may be minimally visible from some park trails, but only minimally due to intervening trees and distance. The site is visible from adjoining areas within the residential area in which it is located. As the new residence and driveway would abut developed residential property and blend in with other houses and driveways in the area, the project would not have a significant adverse effect on views from existing residential areas. Source: Site visit; County GIS Maps				
1.b. Substantially damage or destroy scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
Discussion: The project is not located within a designated scenic corridor, nor would it impact areas within a state scenic highway. The site is located over 2,000 feet north of Edgewood Road, a County-designated Scenic Route from Canada Road to Alameda de las Pulgas. Source: County GIS Maps				
1.c. In non-urbanized areas, significantly degrade the existing visual character or quality of the site and its surroundings, including significant change in topography or ground surface relief		X		

features, and/or development on a ridgeline? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				

Discussion: The site is located within an urban residential area. The project site is not located on a ridgeline.

The project would result in the removal of 7 significant trees (those over 6" inches in diameter), including:

- 2 multi-trunk Oak Trees (Tree #14: 21.1", 17.5" diameter at breast height (d.b.h.); Tree #17: 11.1", 7.8" d.b.h.),
- 3 Buckeye trees (Tree #8: 6"; Tree #15: 10", 6.4"; Tree #16: 10" d.b.h.), and
- 2 Eucalyptus trees (Tree # 18: 25.7", 17"; Tree #19: 12", 13.5", 19.5", 14" d.b.h.)

The applicant has submitted a report by Roy Leggitt, Certified Arborist (Project Arborist), dated December 12, 2020. The report states that Tree #8 should be removed as it is located within the area of the landslide repair, Tree #14 should be removed as it is within the footprint of the house, and Tree #15 should be removed as it is located within the area of the proposed leach field. All other trees to be removed have poor structure and, in the case of Tree #17, a decayed trunk.

The report states that another 12 trees would be impacted by the project. Mr. Leggitt includes a recommended construction procedures and a tree protection plan to protect the remaining trees. Mitigation Measure 2 requires project compliance with the recommendations of the Project Arborist.

Section 6565.21 of the Design Review (DR) Zoning District regulations requires replacement of a significant indigenous tree with three (3) or more trees of the same species using at least five (5) gallon size stock. For each loss of a significant exotic tree, there shall be a replacement with three (3) or more trees from a list maintained by the Planning Director. Section 6565.20(f) encourages planting of native and drought-tolerant plant tree species. The applicant proposes to plant two (2), 24" box Australian Willow trees at the front of the residence, as well as various shrubs surrounding the residence, as shown in the Planting Plan.

Staff has added Mitigation Measure 1 which requires the planting of 5 replacement trees, to include minimum of three (3), 24" box Oak trees, and requires the Planting Plan to be approved by the Project Arborist. The mitigation measure satisfies Section 6565.21 in that, while a fewer number of replacement trees is required (3 - 24" box oak trees and 2- 15 gallon trees, for the removal of 2 significant exotic trees and 5 significant indigenous trees), the sizes of the required replacement trees is much larger than the minimum 5 gallon stock required by Section 6565.21.

The project involves a significant amount of grading for the improved existing gravel driveway on 636 Palomar Drive and APN 051-022-250 and the construction of a new residence and septic system on the sloped parcel. However, the proposed grading would not result in a significant change in topography or ground surface relief features, as the existing driveway will be used to serve the project. The septic system would be underground with finished grades contoured to blend in with the natural topography. Also, a slope repair of the front portion of the parcel along Los Cerros Road has been completed and blends with natural topography of the site. As proposed in the Planting Plan, all portions of the property, excluding the area of the new house and driveway, will be planted or seeded.

As proposed and mitigated, the project would not significantly degrade the existing visual character or quality of the site and its surroundings.

Mitigation Measure 1: The applicant shall replace the 2 significant exotic trees and 5 significant indigenous trees proposed for removal with a total of 5 replacement trees, to include minimum of three (3), 24" box Oak trees, with the remaining trees to be a minimum of 15 gallon in size. Prior to the issuance of the building permit for the residence, the Planting Plan shall be reviewed and subject to the approval of the Project Arborist and project planner.

Mitigation Measure 2: Prior to any land disturbance and throughout the grading operation, the applicant shall implement the tree protection measures consistent with the County's Significant Tree Ordinance in addition to the construction procedures and tree protection measures provided by the Project Arborist.

Source: Site visit; County GIS Maps

1.d. Create a new source of significant light or glare that would adversely affect day or nighttime views in the area?			X	

Discussion: The project does not involve the introduction of significant light sources that would adversely affect day or nighttime views in the area, as the project involves the construction of a residence within an existing residential area. Additionally, design review standards of the Design Review (DR) District require downward-directed exterior light fixtures.

Source: Project plans

1.e. Be adjacent to a designated Scenic Highway or within a State or County Scenic Corridor?			X	

Discussion: The parcel is not located within a State or County Scenic Corridor and is not adjacent to a State Highway. The proposed improvements on the subject parcel would not be visible from Interstate-280 (Junipero Serra Freeway), located over 7,500 feet to the west, due to the distance of the property and proposed structures from the freeway.

Source: County GIS Maps

1.f. If within a Design Review District, conflict with applicable General Plan or Zoning Ordinance provisions?			X	

Discussion: The site is located in a Design Review District. The project will require a Design Review Permit and is required to comply with applicable design review standards. The project will be reviewed by the Bayside Design Review Committee for compliance with applicable design review standards. Planning staff has reviewed the proposal and found it to be in substantial compliance with the design review standards.

Source: County GIS Maps; County Zoning Regulations

1.g. Visually intrude into an area having natural scenic qualities?		X		

Discussion: Please see Section 1.c for discussion.

Source: Site visit; County GIS Maps

2. AGRICULTURAL AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forestland, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
2.a. For lands outside the Coastal Zone, convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
Discussion: The project is outside of the Coastal Zone and involves an urban, residential property located within a Single-Family Residential Zoning District within a developed area, which does not contain agricultural lands and is not farmed. There is no project impact to farmland, forestland or timberland. Source: Site visit; County GIS Maps				
2.b. Conflict with existing zoning for agricultural use, an existing Open Space Easement, or a Williamson Act contract?				X
Discussion: See discussion under Section 2.a. Source: County GIS Maps				
2.c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?				X
Discussion: See discussion under Section 2.a. Source: Project plans; County GIS Maps				

2.d. For lands within the Coastal Zone, convert or divide lands identified as Class I or Class II Agriculture Soils and Class III Soils rated good or very good for artichokes or Brussels sprouts?				X
Discussion: Project site is not located in the Coastal Zone. See discussion under Section 2.a. Source: County GIS Maps				
2.e. Result in damage to soil capability or loss of agricultural land?				X
Discussion: See discussion under Section 2.a. Source: County GIS Maps				
2.f. Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? *Note to reader: This question seeks to address the economic impact of converting forestland to a non-timber harvesting use.*				X
Discussion: See discussion under Section 2.a. Source: County GIS Maps				

3. **AIR QUALITY**. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
3.a. Conflict with or obstruct implementation of the applicable air quality plan?		X		
Discussion: The project involves tree removal, grading, and construction activities associated with house and driveway construction within a lower density developed residential area. The site is designated Medium Low Density Residential with a minimum parcel size of 10,000 sq. ft. in the S-91 Zoning District. While the project may result in dust and odors associated with the grading and construction process, these impacts would be temporary and would not affect a significant number of people due to required mitigation measures and intervening trees and the distance of the project site from other development.				

The Bay Area Air Quality Management District (BAAQMD) has established thresholds of significance for construction emissions and operational emissions. As described in the BAAQMD's 2017 California Environmental Quality Act (CEQA) Guidelines, the BAAQMD does not require quantification of construction emissions due to the number of variables that can impact the calculation of construction emissions. Instead, the BAAQMD emphasizes implementation of all control measures to minimize emissions from construction activities. The BAAQMD provides a list of construction-related control measures, *All Basic Construction Mitigation Measures,* and other criteria, that, when fully implemented, would significantly reduce construction-related air emissions to a less than significant level. Mitigation Measure 3.a- 3.i requires the applicant to comply with BAAQMD's *All Basic Construction Mitigation Measures*. Other applicable BAAQMD criteria requires that construction-related activities exclude the below listed activities (followed by staff's evaluation of project compliance):

a. Demolition: The project site is undeveloped and would not require demolition of any existing buildings.

b. Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously): Staff has added this as Mitigation Measure 3.i to require compliance with this criteria.

c. Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development): The project only involves the construction of a single-family residential use.

d. Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement): The project will not require extensive site preparation, and would disturb approximately 14,000 sq. ft.

e. Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity: The project will not extensive material transport requiring off haul of approximately 880 cubic yards (c.y.) of cut.

BAAQMD measures and compliance with criteria b. above are required by the mitigation measure provided below.

Mitigation Measure 3: Upon the start of excavation activities and through to the completion of the project, the applicant shall be responsible for ensuring that the following dust control guidelines are implemented:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d. All vehicle speeds on unpaved roads shall be limited to 15 mph.

e. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

f. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

g. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

h. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

i. Construction-related activities shall not involve simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously).

Source: Project Plans; Bay Area Air Quality Management District.

3.b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?		X		

Discussion: As of December 2012, San Mateo County is a non-attainment area for PM-2.5. On January 9, 2013, the Environmental Protection Agency (EPA) issued a final rule to determine that the Bay Area attains the 24-hour PM-2.5 national standard. However, the Bay Area will continue to be designated as "non-attainment" for the national 24-hour PM-2.5 standard until the BAAQMD submits a "re-designation request" and a "maintenance plan" to EPA and the proposed re-designation is approved by the EPA. A temporary increase in the project area is anticipated during construction since these PM-2.5 particles are a typical vehicle emission. The temporary nature of the proposed construction and California Air Resources Board vehicle regulations reduce the potential effects to a less than significant impact. Mitigation Measure 3 in Section 3.a will minimize increases in non-attainment criteria pollutants generated from project construction to a less than significant level.

Source: Project Plans; Bay Area Air Quality Management District.

3.c. Expose sensitive receptors to significant pollutant concentrations, as defined by Bay Area Air Quality Management District?		X		

Discussion: As proposed and mitigated, potential project-related air quality impacts to sensitive receptors (occupants of the surrounding residential area) would be reduced to a less-than-significant level. See discussion in Section 3.a.

Source: Project Plans; Bay Area Air Quality Management District.

3.d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Discussion: Project-related emissions would not adversely affect a substantial number of people due to the lower residential density of the area. As proposed and mitigated, potential project-related air quality impacts, including odor, to sensitive receptors (occupants of the surrounding residential area) would be reduced to a less-than-significant level. See discussion in Section 3.a.

Source: Project Plans; Bay Area Air Quality Management District.

4. BIOLOGICAL RESOURCES. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
4.a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service or National Marine Fisheries Service?		X		

Discussion: The project site is located within a developed residential area on a disturbed parcel (previous slope repair completed) and consists of steep grassland with many significant indigenous and exotic trees, as well as other non-significant trees. Due to the disturbed and developed nature of the site, the potential for the presence of protected plant species is low. While the potential for protected wildlife specifies to be present is also low, the following standard mitigation measures have been added to further reduce potential biological impacts of the projects.

Mitigation Measure 4: Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic monofilament netting (erosion control matting) or similar material shall not be used. The applicant shall demonstrate compliance with this requirement in plans submitted at the time of building permit application.

Mitigation Measure 5: A pre-construction, migratory bird nesting survey shall be conducted prior to any proposed construction-related activities during the nesting bird season (February 1 to August 31). The survey shall be performed both in and within 250 feet of the proposed development area and the results reported to the County. If, for any reason, construction activities do not commence within 10 days of completion of the survey, the survey shall be repeated and results reported to the County. If active nests are discovered, no construction-related activities, including grading and tree removal, are allowed until birds have fledged from nests, as confirmed by a biologist.

Sources: Standard biological mitigation measures.

4.b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	

Discussion: Please see the discussion in Section 4.a, above.

Sources: Standard biological mitigation measures.

4.c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
Discussion: The project site is located within a developed residential area on a disturbed parcel (previous slope repair completed) and consists of steep grassland with many significant indigenous and exotic trees, as well as other non-significant trees. There are no federally protected wetlands at the project site. Sources: Planning GIS Map.				
4.d. Interfere significantly with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
Discussion: Please see the discussion in Section 4.a, above. Sources: Planning GIS Map.				
4.e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (including the County Heritage and Significant Tree Ordinances)?			X	
Discussion: See Section 1.c. Sources: Project plans				
4.f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or State habitat conservation plan?				X
Discussion: The project site is not protected by an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or State habitat conservation plan. The proposed area of work is located adjacent to existing residential homes in an area zoned for residential land use. Source: County General Plan; County GIS Maps				
4.g. Be located inside or within 200 feet of a marine or wildlife reserve?				X

Discussion: The project site is not located inside or within 200 feet of a marine or wildlife reserve. Source: County General Plan; County GIS Maps				
4.h. Result in loss of oak woodlands or other non-timber woodlands?				X
Discussion: The project would not involve the removal of oak woodlands or other non-timber woodlands. Source: Site visit; County GIS Maps				

5. CULTURAL RESOURCES. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
5.a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?			X	

Discussion: The project involves earth-moving and construction impacts that could adversely affect archaeological resources should any exist in areas impacted by this project. The project was referred to the California Historical Resources Information System (CHRIS). In a letter dated February 1, 2022, CHRIS staff stated that, while the general area around the proposed project parcel has some archaeological sensitivity, the proposed project area itself, has a low possibility of containing unrecorded archaeological site(s). Therefore, no further study for archaeological resources is recommended by CHRIS. If archaeological resources are encountered during the project, work in the immediate vicinity of the finds should be halted until a qualified archaeologist has evaluated the situation.

The following standard measures have been incorporated below:

Mitigation Measure 6: Although proposed project area itself has low possibility of containing unrecorded archaeological site(s), it is possible that subsurface deposits may yet exist or that evidence of such resources has been obscured by more recent natural or cultural factors such as downslope aggradation and alluviation and the presence of non-native trees and vegetation. Archaeological and historical resources and human remains are protected from unauthorized disturbance by State law, and supervisory and construction personnel therefore must notify the County and proper authorities if any possible archaeological or historic resources or human remains are encountered during construction activities and halt construction to allow qualified Archaeologists to identify, record, and evaluate such resources and recommend an appropriate course of action.

Mitigation Measure 7: In the event that cultural, paleontological, or archeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery and the project sponsor shall immediately notify the Community Development Director of the discovery. The applicant shall be required to retain the services of a qualified archeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The cost of the qualified archeologist and any recording, protecting, or curating shall be borne solely by the project sponsor. The archeologist shall be required to submit to the Community

Development Director for review and approval a report of the findings and methods of curation or protection of the resources. No further grading or site work within the area of discovery shall be allowed until the preceding has occurred. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e).

Sources: Letter from California Historical Resources Information System (CHRIS), dated February 1, 2022.

5.b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?			X	

Discussion: Please see Section 5.a for discussion.

Sources: Letter from California Historical Resources Information System (CHRIS), dated February 1, 2022.

5.c. Disturb any human remains, including those interred outside of formal cemeteries?			X	

Discussion: To minimize potential impacts to human remains, the property owner shall implement the following standard mitigation measure:

Mitigation Measure 8: The applicants and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains, whether historic or prehistoric, during grading and construction. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Sources: Letter from California Historical Resources Information System (CHRIS), dated February 1, 2022.

6. ENERGY. Would the project:

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
6.a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	

Discussion: Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977 and are updated every 3 years (Title 24, Part 6, of the

California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

The County has adopted amendments to the 2019 Energy Code which require new buildings to be constructed without natural gas infrastructure and systems and meet solar photovoltaic system requirements, as well as amendments to the Green Building Code that require additional electric vehicle charging infrastructure (EVCI) for the construction of new buildings. The amendments would go into affect if and when the amendments are approved by California Energy Commission, which is pending.

At the time of building permit application, the project would be required to demonstrate compliance with the current Building Energy Efficiency Standards which would be verified by the San Mateo County Building Department prior to the issuance of the building permit. The project would also be required adhere to the provisions of CALGreen and GreenPoints, which establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.

Construction

The construction of the project would require the consumption of nonrenewable energy resources, primarily in the form of fossil fuels (e.g., fuel oil, natural gas, and gasoline) for automobiles (transportation) and construction equipment. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Most construction equipment during demolition and grading would be gas-powered or diesel powered, and the later construction phases would require electricity-powered equipment.

Operation

During operations, project energy consumption would be associated with resident and visitor vehicle trips and delivery trucks. The project is a residential development project served by existing road infrastructure and the improved driveway. Pacific Gas and Electric (PG&E) provides electricity to the project area. Due to the proposed construction of a single-family residence, project implementation would result in a permanent increase in electricity over existing conditions. However, such an increase to serve a single-family residence would represent an insignificant percent increase compared to overall demand in PG&E's service area. The nominal increased demand is expected to be adequately served by the existing PG&E electrical facilities and the projected electrical demand would not significantly impact PG&E's level of service. It is expected that nonrenewable energy resources would be used efficiently during operation and construction of the project given the financial implication of the inefficient use of such resources. As such, the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Impacts are less than significant, and no mitigation is required.

Source: California Building Code, California Energy Commission, Project Plans.

6.b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.				X

Discussion: The project design and operation would comply with State Building Energy Efficiency Standards, appliance efficiency regulations, and green building standards. Therefore, the project

does not conflict with or obstruct state or local renewable energy plans and would not have a significant impact. Furthermore, the development would not cause inefficient, wasteful and unnecessary energy consumption.

Source: Project Plans.

7. GEOLOGY AND SOILS. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
7.a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the following, or create a situation that results in:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? *Note: Refer to Division of Mines and Geology Special Publication 42 and the County Geotechnical Hazards Synthesis Map.*		X		

Discussion: The project, including associated studies prepared by the Project Geologist and Project Geotechnical Engineers, was reviewed by the County's Geologic and Geotechnical consultant, Cotton, Shires and Associates, Inc. (CSA), and preliminarily approved. Documentation of County review and approval is provided in the documents listed below:

- Geotechnical Peer Review, RE: Onsite Wastewater Treatment System (OWTS), PLN2020-00251, 634 Palomar Drive, prepared by Cotton, Shires and Associates, Inc, dated June 14, 2021
- Supplemental Geotechnical Peer Review, RE: Onsite Wastewater Treatment System (OWTS), PLN2020-00251, 634 Palomar Drive, prepared by Cotton, Shires and Associates, Inc, dated November 5, 2021 [*referred to in this report as "County approval of OWTS"].*
- Email from Craig Stewart, Cotton, Shires and Associates, Inc, to Sherry Liu (County Geotechnical Section), dated August 28, 2020.

The County's review included the following Geotechnical Reports and letters submitted by the applicant (Sources for this Section):

- Geotechnical Report Update, Proposed Residential Development, 634 Palomar Drive, Redwood City, California, prepared by Atlas Geosphere Consultants, Inc., dated July 29, 2020 *[referred to in this report as "2020 Atlas Geosphere Consultants, Inc., Geotechnical Report Update"].*

- Supplemental Geotechnical Investigation, Proposed Single Family Residence, 634 Palomar Drive, Redwood City, California, prepared by Earth Investigations Consultants, dated April 11, 2014.
- Geotechnical Investigation, Proposed Single Family Residence, 634 Palomar Drive, Redwood City, California, prepared by Earth Investigations Consultants, dated October 17, 2013 *[referred to in this report as "2013 Earth Investigations Consultants Geotechnical Investigation"].*
- Supplemental Engineering Geologic Study, Onsite Wastewater Treatment System (OWTS), Proposed Single-Family Residential Development, 634 Palomar Drive, Redwood City, California, prepared by Atlas Geosphere Consultants, Inc., dated October 4, 2021 *[referred to in this report as "2021 Atlas Geosphere Consultants, Inc., Supplemental Engineering Geologic Study, OWTS"].*
- Geotechnical Plan Review, Civil and Landscape (only), prepared by Atlas Geosphere Consultants, Inc., dated May 12, 2022.

Geologic Setting

The 2013 Earth Investigations Consultants (EIC) Geotechnical Investigation states that the site is at an approximate elevation of 450 feet above mean sea level on the northern flank of a dissected spur ridge (Plate 1). This area drains to a seasonal drainage channel tributary to Cordilleras Creek. According to Brabb and others (1998), this area is underlain by tightly folded, Jura-Cretaceous, Franciscan sandstone. In the site area, a strata dip steeply to the southwest. Leighton and Associates (1976) describe this bedrock material to include sandstone, siltstone and shale, and locally conglomerate. Relative stability of slopes ranged from poor to good depending on orientation of discontinuities relative to slopes. Earthquake stability is generally considered good relative to the capacity to support slopes. The site lies in a tectonic block between the active San Andreas fault, mapped approximately 2 miles to the southwest and the Hayward fault mapped approximately 18 miles to the northeast. The active San Gregorio fault is mapped approximately 9 miles to the southwest.

Site Characteristics

The 2013 EIC Geotechnical Investigation states that the site occupies a graded, moderately steep to steep northeasterly slope uphill of Palomar Drive (Plate 2, Site Plan). Undocumented grading that EIC understands occurred in 2012 created a benched topographic profile with an approximately 2-foot high vertical cut supported by post-supported plywood sheeting on the uphill margin of a gently sloping bench made for the proposed residence. A gently sloping gravel-surfaced bench separated from the upper bench by a steep fill slope (approx. 30 degrees) represents the proposed driveway extending across the eastern property line to the upper bench. There is another steep fill slope (approx. 25-35 degrees), which occurs on the downhill side of the driveway. Beyond the toe of the driveway fill slope, there is a steep, native slope (approx. 25 degrees) that extends to the northern property line adjoining Los Cerros Road.

The 2020 Atlas Geosphere Consultants, Inc., Geotechnical Report Update includes observations from recent reconnaissance which confirmed the proposed development area surface conditions at the top of the slope described in the EIC reports have remained generally the same. The report notes that in 2017 a landslide to an approximate depth of 10 feet and involving sheared Franciscan bedrock occurred on the native slope between the proposed development area and Los Cerros Road (Plate 1; Earth Investigations Consultants, Inc., 2017). Geotechnical course-of-construction grading, and drainage of the slope repair approximately delineated on Plate 1 was under the direction of Geosphere. The project was approved by Geosphere and finaled by the County of San Mateo Planning and Building Department in 2019.

As stated in their 2020 Geotechnical Report Update, it is the opinion of Atlas Geosphere Consultants, Inc. (Project Geologist and Geotechnical Engineer), that the area residential

development as planned is feasible from a geotechnical standpoint. It appears undocumented fill in the proposed house development area will be mitigated by grading and/or retaining walls. They state that fill along the proposed driveway should be treated in accordance with the recommendations grading and/or retaining wall recommendations presented in Appendix A of the 2020 Geotechnical Report Update. Also, they provide supplemental recommendations to accommodate design and construction of the proposed swimming pool.

Recommendations from CSA and Atlas Geosphere Consultants, Inc. are included as Mitigation Measures 9 and 10.

Mitigation Measure 9: Prior to the issuance of a building permit for site development, the applicant shall demonstrate compliance with the recommendations of the Project Geologist and Geotechnical Engineer, including but not limited to those pertaining to: 1) mitigation of undocumented fill in the proposed house development area, 2) treatment of fill along the proposed/improved driveway in accordance with the recommendations for grading and/or retaining wall construction presented in Appendix A of the 2020 Geotechnical Report Update and 3) supplemental recommendations to accommodate design and construction of the proposed swimming pool (Source: 2020 Atlas Geosphere Consultants, Inc., Geotechnical Report Update).

Mitigation Measure 10: Prior to the issuance of a building permit for site development, the applicant shall demonstrate compliance with the recommendations of the County's Geologist and Geotechnical Engineer, including but not limited to those pertaining to: 1) Close coordination with the Project Geotechnical Consultant in design of proposed foundations, retaining walls, drainage improvements, and landscape irrigation which may benefit project performance; 2) Submittal of an updated geotechnical report with supplemental recommendations, design criteria, and supporting data, as appropriate; and 3) Project design and final plans should incorporate geotechnical recommendations and design criteria to mitigate site constraints as identified by the Project Geotechnical Consultant (Source: Craig Stewart, CSA, email to County, dated August 28, 2020).

Sources: See sources listed in this Section.

ii. Strong seismic ground shaking?			X	

Discussion: Potential substantial adverse effects related to strong seismic ground shaking was not identified as a potential significant impact by the Project Geologist and Geotechnical Engineer. See Section 7.a.

Sources: Sources listed in Section 7.a.

iii. Seismic-related ground failure, including liquefaction and differential settling?			X	

Discussion: Potential substantial adverse effects related to seismic-related ground failure, including liquefaction and differential settling was not identified as a potential significant impact by the Project Geologist and Geotechnical Engineer. See Section 7.a.

Sources: Sources listed in Section 7.a.

iv. Landslides?		X		

Discussion: In an email dated May 13, 2022, the Project Geotechnical Engineer states that there are no unmitigated landslides within the area of influence to the site. The applicant has submitted reports (as listed in Section 7.a) prepared by the Project Geologist and Project Geotechnical Engineers, which notes past landslides and landslide repair at the property. As stated in their

2020 Geotechnical Report Update, it is the opinion of Atlas Geosphere Consultants, Inc. (Project Geologist and Geotechnical Engineer), that the area residential development as planned is feasible from a geotechnical standpoint. It appears undocumented fill in the proposed house development area will be mitigated by grading and/or retaining walls. They state that fill along the proposed driveway should be treated in accordance with the recommendations grading and/or retaining wall recommendations presented in Appendix A of the 2020 Geotechnical Report Update. Also, they provide supplemental recommendations to accommodate design and construction of the proposed swimming pool. Compliance with the recommendations of the Project Geologist and Geotechnical Engineer is a standard requirement and required by Mitigation Measure 9.

In a letter dated August 2020 from Cotton, Shires and Associates, Inc. (CSA), CSA reviewed the project and associated studies on behalf of the County Planning and Building Department and determined that they do not have geotechnical objections to planning project approval, subject to the following recommendations: 1) that the project performance may benefit greatly from close coordination with the Project Geotechnical Consultant in design of proposed foundations, retaining walls, and drainage improvements; 2) An updated geotechnical report with supplemental recommendations, design criteria, and supporting data, as appropriate, should be submitted at the building permit stage for final peer review along with project plans; and 3) Project design and final plans should incorporate anticipated geotechnical recommendations and design criteria to mitigate site constraints as identified by the Project Geotechnical Consultant. Compliance with the recommendations of the County Geologist and Geotechnical Engineer is required by Mitigation Measure 10.

Investigation of the Proposed Onsite Wastewater Treatment System (OWTS)

The design of the proposed OWTS and associated studies were reviewed by the County's Geologic and Geotechnical consultant, Cotton, Shires and Associates, Inc., on behalf of the Environmental Health Department.

The 2021 Atlas Geosphere Consultants, Inc., Supplemental Engineering Geologic Study, OWTS, includes a description of tasks undertaken to arrive at the findings, conclusions and recommendations presented in this report including the following:

- Review of pertinent in-house documents, and documents by San Mateo County Environmental Health Department files;

- Supplemental characterization of topo-morphology and engineering geology in the OWTS area of influence from supplemental reconnaissance mapping, interpretation of recent drone imagery, 1953 USGS topographic mapping (Plate 1), 1956 vertical, panchromatic stereo aerial photography, interactive Google Earth Pro imagery, and 2017 315-degree azimuth hillshade LiDAR imagery (Plate 3, Geomorphic Map; Plate 4, Photo Gallery);

- Supplemental subsurface exploration and sampling to characterize the geologic profile to a depth of 19 feet at the locations depicted on Plate 2 (Appendix A, Logs of Soil Exploration and Laboratory Test Results);

- Evaluation of the distribution and maintenance of California Water Service mains in the local area of influence (Appendix B, San Carlos District Water System Map and Legend)

- Review and preliminary analysis of available geotechnical, and geohydrologic data pertaining to seepage from perched ground water onto Los Cerros Road, and landsliding on neighboring 13 Los Cerros Road and 738 Loma Court (Appendix C, Evaluation of Seepage and 2017 Landsliding on 13 Los Cerros Road and 738 Loma Court).

The 2021 report states that the supplemental subsurface exploration and surface mapping revealed competent sandstone to be underlying the proposed leachfield. Sandstone exposed in the cut slope above Boring 1 exhibited a favorably steep inclination relative to slope stability, and steep closely spaced jointing relative to optimum OWTS performance over the project lifetime (Plate 2). The 2021 report states that, in the opinion of Atlas Geosphere Consultants, Inc., these findings buttress conclusions and recommendations pertaining to other principal geotechnical aspects of the project presented in their previous reports (Geosphere Consultants, Inc. 2019; Atlas Technical Consultants LLC, 2020).

In a letter dated November 5, 2021, from CSA, CSA reviewed the project and associated studies on behalf of the County Planning and Building Department and determined that they do not have engineering geologic or geotechnical engineering objections to approval of the subject OWTS application. The proposed OWTS has received preliminary approval from County Environmental Health Services.

The County's review also included the following Geotechnical Reports prepared for APN 051-022-310 (Vacant parcel that adjoins the project site to the northwest), provided by the property owner of 738 Loma Court (who also owns APN 051-022-310) and comment letter from the Palomar Park Owner's Association:

- Engineering Geologic Consultations, APN 051-022-180, 738 Loma Court, San Mateo County, California, prepared by Steven F. Connelly, C.E.G., dated August 10, 2021
- Comments on the Proposed Leach Field, Enea Property, 738 Loma Court, Redwood City, California, prepared by GeoForensics Inc., dated March 16, 2020
- Spring Source and Protection Reconnaissance, prepared by Balance Hydrologics, Inc., for APN 051-022-310, dated April 16, 2014
- Landslide Area, 0 Los Cerros APN 051-022-310, prepared by Kilik General Engineering, dated November 4, 2017.
- APN 051-022-301 (vacant) – Mueller, O'Neill, prepared by Lea & Braze Engineering, Inc., dated September 3, 2014
- Letter from Palomar Park Owner's Association, dated October 28, 2021.

Concerns are summarized below, with a response from Planning Staff:

Concern 1: General concern regarding historical landslides at the subject site and neighboring properties and why the County would allow the project site to be developed.

Staff's Response to Concern 1: As discussed in this Section, the applicant has submitted comprehensive, site-specific reports, including subsurface exploration and testing, for the proposed residence and septic system, which have reviewed by the Project Geologist and Geotechnical Engineer as well as by the County's Geologist and Geotechnical Engineer, and received preliminary approval from County Environmental Health Services.

Concern 2: A 2014 Balance Hydrologics, Inc. letter for APN 051-022-310 (undeveloped parcel to the immediate west of the subject site) has found near-surface groundwater and a flowing spring on that parcel, as well as on the parcel at 738 Loma Court (developed parcel which adjoins APN 051-022-310 to the west). A 2017 Kilik General Engineering letter also identifies subterranean water sources emanating from the subject site. In general, both letter recommend proceeding with caution as earthwork and additional water into the slope (such as from a septic system) could cause unstable conditions elsewhere. A 2020 letter from GeoForensics, Inc., the letter recommends that a leach field should be located no higher than 20 feet above the elevation of Los Cerros Road, with 50 feet of horizontal separation between the work conducted at the off-site properties listed. A 2014 Lea & Braze Engineering, Inc. letter also describes a spring and water seep in the area and warns against the removal of vegetation at the property which may contribute

to slope instability. A 2021 Engineering Geologic Consultation by Steven F. Connelly, C.E.G. of 738 Loma Court, APN 051-022-310, and the subject site includes a review of previous investigations at the site, as well as a 2021 Geotechnical Peer Review letter by CSA for the OWTS, and states that effluent from the adjacent proposed leachfield system should not be allowed to contribute to the drainage system of the landslide repair at 738 Loma Court and should be carefully assessed.

Staff's Response to Concern 2: With the exception of the 2021 Connelly letter, the letters by the listed firms describe recommendations based on brief reviews of the adjoining off-site properties at 738 Loma Court and APN 051-022-310. It is unclear if the letters represent a study of the project site, which make general reference to the site address, with no enclosed maps and no mention of specific site locations or the site APN. The 2021 Connelly report includes a review of the subject site but does not include subsurface exploration and testing.

The applicant has submitted comprehensive, site-specific reports, including subsurface exploration and testing, for the proposed residence and septic system, which have been reviewed by the Project Geologist and Geotechnical Engineer as well as by the County's Geologist and Geotechnical Engineer, and received preliminary approval from County Environmental Health Services. In an email dated May 13, 2022, the Project Geotechnical Engineer states that the 2013 Earth Investigations Consultants Geotechnical Investigation mentions no observed seepage from the ground surface (i.e., spring), and all the borings drilled on 634 Palomar Drive site encountered no ground water, with the exception of in the 2017 Earth Investigations Consultants Geotechnical Investigation when slight seepage perched at the top of bedrock 3' below the ground surface B-2 in the lower northeast corner (approx. site elevation 68), well below subdrains on neighboring property. Numerous other borings encountered no ground water to support pervasive springs on the project site.

As listed above, the Project Geotechnical Engineer has submitted a Geotechnical Plan Review letter (Attachment C6), dated May 12, 2022, stating that he has reviewed the geotechnical aspects of the Drainage Plan and Landscape Improvement Plan, and found the plans to be in general conformance with the recommendations presented in the geotechnical study report performed for the current project. Additionally, Mitigation Measure 10 requires, at the time of building permit application for final County peer review, that the Project Geotechnical Consultant review relevant aspects of the project, including drainage improvements, submit an updated geotechnical report with supplemental recommendations, design criteria, and supporting data, and for the applicant to incorporate geotechnical recommendations and design criteria into project plans to mitigate site constraints as identified by the Project Geotechnical Consultant. Therefore, as proposed and mitigated, potential substantial adverse effects related to landslides would be reduced to a less than significant level.

Sources: See sources listed in this Section.

v. Coastal cliff/bluff instability or erosion? *Note to reader: This question is looking at instability under current conditions. Future, potential instability is looked at in Section 7 (Climate Change).*				X
Discussion: The project site is not located on or adjacent to a coastal cliff or bluff. Source: County GIS Maps.				
7.b. Result in substantial soil erosion or the loss of topsoil?		X		

Discussion: In an email dated May 13, 2022, the Project Geotechnical Engineer states that there are no areas of existing significant unmitigated soil erosion within the area of influence to the project site.

The project includes earthwork of 880 cubic yards (c.y.) of cut and 90 c.y. of fill, with a total area of land disturbance of less than 1 acre (14,369 sq. ft.). The applicant proposes an Erosion Control Plan which includes measures that would contain and slow run-off, while allowing for natural infiltration. Due to the potential for erosion and sedimentation during land disturbing and earth-moving activities, the following mitigation measures have been included.

As stated above, the Project Geotechnical Engineer has submitted a Geotechnical Plan Review letter (Attachment C6), dated May 12, 2022, stating that he has reviewed the geotechnical aspects of the Drainage Plan and Landscape Improvement Plan, and found the plans to be in general conformance with the recommendations presented in the geotechnical study report performed for the current project. Staff has added Mitigation Measure 10 to require the Project Geotechnical Engineer to review proposed landscape irrigation at the site to minimize infiltration or drainage which may have a negative impact to site stability. To prevent unauthorized/unpermitted use of fill on the subject site or other off-site properties, staff has added Mitigation Measure 11. Mitigation Measures 12 and 13 require revision of the Erosion Control Plan to include additional stormwater pollution prevention measures and to require compliance with the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines." Mitigation Measures 14 and 15 require implementation and monitoring of erosion control measures throughout the term of the grading permit and building permit.

Mitigation Measure 11: Prior to issuance of the grading permit hard card, the applicant shall demonstrate that all cut spoils will be hauled off-site to a County-approved location.

Mitigation Measure 12: Prior to the issuance of the building permit for the residence, the applicant shall revise the Erosion Control Plan to include the additional measure as follows, subject to the review and approval of the Community Development Director:

Construction Entrance: The Project Civil Engineer shall propose a method for stabilizing the area of the existing driveway (access easement) that will be re-graded on APN 051-022-250, while still allowing access over the driveway by the neighbors. The applicant shall move the temporary parking area, storage container, construction office, and sanitation unit to an area which does not block the construction entrance.

Mitigation Measure 13: The applicant shall adhere to the San Mateo County-wide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including, but not limited to, the following:

a. Delineation with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses within the vicinity of areas to be disturbed by construction and/or grading.

b. Protection of adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

c. Performing clearing and earth moving activities only during dry weather.

d. Stabilization of all denuded areas (on and off-site) and maintenance of erosion control measures continuously between October 1 and April 30. Stabilization shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as re-vegetating disturbed areas with plants propagated from seed collected in the immediate area.

e. Storage, handling, and disposal of construction materials and wastes properly, so as to prevent their contact with stormwater.

f. Control and prevention of the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

g. Use of sediment controls or filtration to remove sediment when dewatering site and obtain all necessary permits.

h. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

i. Limiting and timing applications of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilization of designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. Training and providing instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.

m. Additional Best Management Practices in addition to those shown on the plans may be required by the Building Inspector to maintain effective stormwater management during construction activities. Any water leaving site shall be clear and running slowly at all times.

Mitigation Measure 14: Once approved, erosion and sediment control measures of the revised Erosion Control Plan shall be installed prior to beginning any site work and maintained throughout the term of grading and construction, until all disturbed areas are stabilized. Failure to install or maintain these measures will result in stoppage of construction until corrections have been made and fees paid for staff enforcement time. Revisions to the approved erosion control plan shall be prepared and signed by the engineer and submitted to the Building Inspection Section.

Mitigation Measure 15: It shall be the responsibility of the engineer of record to regularly inspect the erosion control measures for the duration of all grading remediation activities, especially after major storm events, and determine that they are functioning as designed and that proper maintenance is being performed. Deficiencies shall be immediately corrected, as determined by and implemented under the observation of the engineer of record.

Source: Project C3C6 form, Project Plans.

7.c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, severe erosion, liquefaction or collapse?		X		

Discussion: Regarding potential for landslide and erosion, see discussion in Sections 7.a and 7.b, above. Liquefaction, lateral spreading, subsidence, and collapse were not identified as potential geological concerns by the Project Geologist or Project Geotechnical Engineer.

Source: See source list in Section 7.a.

7.d. Be located on expansive soil, as defined in Table 18-1-B of Uniform Building Code, creating substantial direct or indirect risks to life or property?		X		

Discussion: The 2020 Geotechnical Report Update prepared by Atlas Geosphere Consultants, Inc., provide recommendations for construction as highly expansive colluvium and undocumented fill may be encountered. Recommendations from CSA and Atlas Geosphere Consultants, Inc. are included as Mitigation Measures 9 and 10.

Source: See source list in Section 7.a.

7.e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?			X	

Discussion: The 2021 Supplemental Engineering Geologic Study, OWTS, prepared by Atlas Geosphere Consultants, Inc., states that, given the apparent satisfactory OWTS performance on neighboring residential properties, it is their opinion that operation of the proposed OWTS over the project lifetime presents a Low Risk for surfacing of effluent on the descending site slope below the proposed/improved driveway. In addition, they judge the proposed OWTS presents a Low Risk for contaminating water quality in the site slope repair subdrain system adequately located approximately 70 feet downslope from the Primary Leachfield (PL) and approximately 80 feet from the Expansion Leachfield (EL) (Plates 2 and 3). Similarly, the proposed PL and EL are respectively located approximately 170 and 102 feet from the southern margin of the slope repair subdrain system spanning 13 Los Cerros into 738 Loma Court (Plate 3).

As discussed in Section 7.a, the proposed location of the septic system has been reviewed by the Project Geologist and Geotechnical Engineer as well as by the County's Geologist and Geotechnical Engineer, and received preliminary approval from County Environmental Health Services. With the implementation of mitigation measures as discussed in this Section, the potential for soils to be incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems is less than significant.

Source: Project plans

7.f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

Discussion: Mitigation Measure 22 requires that, in the event that cultural, paleontological, or archeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery, County staff shall be notified, and the applicant shall be required to retain the services of a qualified archeologist for the purpose of recording, protecting, or curating the discovery as appropriate. As mitigated, the project would result in less than significant impacts related to the direct or indirect destruction of a unique paleontological resource or site or unique geologic feature.

Sources: Standard condition.

8. CLIMATE CHANGE. Would the project:

	Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
8.a. Generate greenhouse gas (GHG) emissions (including methane), either directly or indirectly, that may have a significant impact on the environment?		X		

Discussion: Greenhouse Gas Emissions (GHG) include hydrocarbon (carbon monoxide; CO2) air emissions from vehicles and machines that are fueled by gasoline. Grading involves GHG emissions mainly from exhaust from vehicle trips (e.g., construction vehicles and personal cars of construction workers, and operation of grading equipment). Due to the site's hilly, suburban location and assuming construction vehicles and workers are based largely in city or larger urban areas, potential project GHG emission levels from construction would be increased from general levels.

The project includes earthwork of 880 cubic yards (c.y.) of cut and 90 c.y. of fill. Excavated materials would be hauled off-site to an approved location, requiring off-haul of 880 c.y. (approximately 88 truckloads). At this time, the applicant proposed to haul the spoils to Guadalupe Rubbish Disposal Facility in San Jose (approximately 34 miles from the project site). The project would also require importation of drain rock and aggregate rock, however the volume of imported rock is also anticipated to be small.

To ensure new development projects are compliant with the County's Energy Efficiency Climate Action Plan (EECAP), the County provides the EECAP Development Checklist. According to the Applicant-completed EECAP Development Checklist (Attachment H), the project incorporates several EECAP measures, including tree plantings to provide shade, non-propane heating, CALGreen Tier 1 efficiency standards, use of "cool" exterior surfaces, solar photovoltaic system, pre-wired solar, use of smart water meters, compliance of construction equipment with BAAQMD guidance for idling, and electrification of outdoor household equipment. The project would be required to comply with the California Green Building Standards Code (CALGreen).

While the above described measures would reduce GHG emissions associated with project construction and operation, the BAAQMD encourages lead agencies to incorporate Best Management Practices (BMPs) to reduce GHG emissions during construction, including, but are not limited to: using alternative fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet; using local building materials of at least 10 percent; and recycling or reusing at least 50 percent of construction waste or demolition materials. These Best Management Practices have been included in Mitigation Measure 17 in order to further reduce project-related GHG emissions.

Compliance with and/or consideration of EECAP and BAAQMD measures is required in order to reduce project-related GHG emissions.

Mitigation Measure 16: At the time of building permit application, the applicant shall demonstrate compliance with the measures indicated on the applicant-completed EECAP Development Checklist (Attachment H) or equivalent measures, to the extent feasible. Such measures shall be shown on building plans.

Mitigation Measure 17: At the time of building permit application, the applicant shall demonstrate compliance with the following measures, to the extent feasible, where such measures shall be shown on building plans:

a. BAAQMD BMP: Use alternative fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet;
b. BAAQMD BMP: Use local building materials of at least 10 percent;
c. BAAQMD BMP: Recycle or reuse at least 50 percent of construction waste.

Source: Project plans; San Mateo County Energy Efficiency Climate Action Plan (EECAP); Bay Area Air Quality Management District, California Environmental Quality Act, Air Quality Guidelines, Updated May 2011.

8.b. Conflict with an applicable plan (including a local climate action plan), policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

Discussion: The project involves construction of a single family residence and associated driveway. The Bay Area Air Quality Management District (BAAQMD) exempts construction and operation of residential uses from permit requirements (Regulation 2-1-113).

Source: Bay Area Air Quality Management District

8.c. Result in the loss of forestland or conversion of forestland to non-forest use, such that it would release significant amounts of GHG emissions, or significantly reduce GHG sequestering?				X

Discussion: The project would not result in the loss of forestland or conversion of forestland to non-forest use, as the project site does not contain forestland.

Sources: County GIS Maps; Project plans

8.d. Expose new or existing structures and/or infrastructure (e.g., leach fields) to accelerated coastal cliff/bluff erosion due to rising sea levels?				X

Discussion: The project is not located on or adjacent to a coastal cliff or bluff.

Source: County GIS Maps

8.e. Expose people or structures to a significant risk of loss, injury or death involving sea level rise?				X

Discussion: The project is not located on or adjacent to the San Francisco Bay or Pacific Ocean.

Source: County GIS Maps

8.f. Place structures within an anticipated 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
Discussion: The project site is located in Flood Zone X (Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level), per FEMA Panel No. 06081C0282E, effective October 16, 2012. Source: County GIS Maps				
8.g. Place within an anticipated 100-year flood hazard area structures that would impede or redirect flood flows?				X
Discussion: See discussion in Section 8.f. Source: County GIS Maps				

9. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
9.a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (e.g., pesticides, herbicides, other toxic substances, or radioactive material)?				X
Discussion: No such use is proposed. The project involves the construction and operation of a single-family residence. Source: Project plans				
9.b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
Discussion: No use involving the storage or release of hazardous materials is proposed. The project involves the construction and operation of a single-family residence. Source: Project plans				
9.c. Emit hazardous emissions or handle hazardous or acutely hazardous				X

materials, substances, or waste within one-quarter mile of an existing or proposed school?				
Discussion: No use involving the emission or handling of hazardous materials or waste is proposed. The project involves the construction and operation of a single-family residence. Source: Project plans; County GIS Maps				
9.d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
Discussion: The project site is not a listed hazardous materials site. Source: County GIS Maps				
9.e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?				X
Discussion: The project is not located within an airport land use plan or, where such a plan has not been adopted or within 2 miles of a public airport or public use airport. Source: County GIS Maps				
9.f. For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?				X
Discussion: The project site is located within a residential area and, based on a review of aerial satellite imagery, is not within the immediate vicinity of a private airstrip. Source: County GIS Maps				
9.g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		X		
Discussion: The project involves the construction and operation of a single-family residence only and would not permanently or significantly impede access on existing public roads. However, temporary construction street parking may impede pedestrian and vehicle access on nearby narrow, windy roads. Mitigation Measure 18 has been added should on-street construction vehicle parking become necessary.				

Mitigation Measure 18: Any and all project-related on-street construction parking is subject to review and approval by the Project Planner and the County Department of Public Works. Prior to issuance of the building permit, the applicant shall show location of all on-street construction parking on plans submitted for the building permit application. Sources: Project plans, County GIS Maps				
9.h. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	
Discussion: The project site is located within a designated State Responsibility Area (SRA) Very High fire hazard zone. Requirements pertaining to the fire rating of exterior building materials in fire severity zones are incorporated into the adopted Fire Code. Compliance with applicable requirements will be reviewed during the building permit application process and confirmed prior to issuance of a building permit. Source: County GIS Maps.				
9.i. Place housing within an existing 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
Discussion: The project site is located in Flood Zone X (Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level), per FEMA Panel No. 06081C0282E, effective October 16, 2012. Source: County GIS Maps.				
9.j. Place housing within an existing 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
Discussion: See discussion in Section 9.i. Source: County GIS Maps.				
9.k. Place within an existing 100-year flood hazard area structures that would impede or redirect flood flows?				X
Discussion: See discussion in Section 9.i. Source: County GIS Maps.				

10.	**HYDROLOGY AND WATER QUALITY**. Would the project:

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
10.a.	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality (consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash))?		X		
Discussion: Regarding the potential impact of construction-related erosion and sedimentation to water quality, please see discussion in Section 7.b, above. Regarding potential post-construction impacts to water quality, see Section 10.d, below. Source: Project plans; See Section 7.a for source list.					
10.b.	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X
Discussion: While the project would involve the construction of impervious surfaces, most of the project site will remain pervious. The project would be connected to public water system, California Water Service - San Carlos, for domestic water service and would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. Source: Project plans					
10.c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:				
	i. Result in substantial erosion or siltation on- or off-site;			X	
Discussion: According to the project Hydrology Study, the Gross Lot Area of the project site is 18,122 sq. ft. (0.416 acre). The Existing Site Impervious Area is 2,638 sq, ft. (0.061 acre). The Proposed Site Impervious Area is 4,294 sq. ft. (0.099 acre). The Net Change of Impervious Area is +1,656 sq. ft. (+ 0.038 acre).					

The project could potentially alter the existing drainage pattern of the site or area. The project proposes new drainage facilities, which have been reviewed by the County's Planning and Building Department's Drainage Section, to handle post-construction drainage from the house other new impervious surfaces. As a standard building permit requirement, a site drainage plan is required that demonstrates how roof drainage and site runoff will be directed to an approved location. In compliance with the County's Drainage Manual, this plan must demonstrate that post-development flows and velocities to adjoining private property and the public right-of-way shall not exceed those that existed in the pre-developed state.

Additionally, Mitigation Measure 10 requires, at the time of building permit application for final County peer review, that the Project Geotechnical Consultant review relevant aspects of the project, including drainage improvements, submit an updated geotechnical report with supplemental recommendations, design criteria, and supporting data, and for the applicant to incorporate geotechnical recommendations and design criteria into project plans to mitigate site constraints as identified by the Project Geotechnical Consultant.

Project compliance with these regulations would prevent the substantial alteration of existing drainage patterns of the site and area. The project does not involve alteration of the course of a stream or river.

Sources: Project C3C6 form, Project Site Plan and Drainage Plan.

	ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;			X	

Discussion: Please see Section 10.c.i for discussion. The project would not result in the alteration of the course of a stream or river.

Sources: Project plans

	iii. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	

Discussion: Please see Section 10.c.i, above, for discussion.

Sources: Project plans

10.d.	Significantly degrade surface or groundwater water quality?			X	

Discussion: An Engineering Geologic Consultation by Steven F. Connelly, C.E.G. of 738 Loma Court, APN 051-022-310, submitted by a neighbor, includes a review of previous investigations at the site, as well as a 2021 Geotechnical Peer Review letter by CSA for the OWTS, and states that effluent from the adjacent proposed leachfield system should not be allowed to contaminate natural spring water on 738 Loma Court or contribute to the drainage system of the landslide repair at 738 Loma Court and should be carefully assessed.

The 2021 Atlas Geosphere Consultants, Inc., Supplemental Engineering Geologic Study, OWTS, submitted by the applicant states that, given the apparent satisfactory OWTS performance on

neighboring residential properties, is their opinion operation of the proposed OWTS over the project lifetime presents a Low Risk for surfacing of effluent on the descending site slope below the proposed/improved driveway.

In addition, they judge the proposed OWTS presents a Low Risk for contaminating water quality in the site slope repair subdrain system adequately located approximately 70 feet downslope from the Primary Leachfield (PL) and approximately 80 feet from the Expansion Leachfield (EL) (Plates 2 and 3). Similarly, the proposed PL and EL are respectively located approximately 170 and 102 feet from the southern margin of the slope repair subdrain system spanning 13 Los Cerros into 738 Loma Court (Plate 3).

As discussed in Section 7a., the applicant has submitted comprehensive, site-specific reports, including subsurface exploration and testing, for the proposed residence and septic system, which have reviewed by the Project Geologist and Geotechnical Engineer as well as by the County's Geologist and Geotechnical Engineer, and received preliminary approval from County Environmental Health Services.

With the implementation of mitigation measures as discussed in Section 7, potential project impacts related to degraded surface or groundwater water quality is less than significant.

Sources: Project plans

10.e.	Result in increased impervious surfaces and associated increased runoff?			X	

Discussion: Please see Section 10.c.i for discussion.

Sources: Project plans

iv.	Impede or redirect flood flows?				X

Discussion: The project would not impede or redirect flood flows There is no work proposed within an existing drainage channel or creek.

Sources: Project plans

10.f.	In flood hazard, tsunami, or seiche zones, create or contribute runoff water which would risk release of pollutants due to project inundation?				X

Discussion: The site is not located within proximity of a flood hazard, tsunami, or seiche zone.

Sources: Project plans

10.g.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Discussion: The site is not located within the area of a water quality control plan or sustainable groundwater management plan. The proposed OWTS has received preliminary approval from County Environmental Health Services.

Sources: Project plans

11. LAND USE AND PLANNING. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
11.a. Physically divide an established community?				X
Discussion: The project proposes a new residential to be located within an existing residential neighborhood. Development of the property with a residential use would not result in the physical division of an established community. Sources: County GIS Maps				
11.b. Cause a significant environmental impact due to a conflict with any applicable land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X
Discussion: The project complies with the R-1/S-91/DR Zoning District, the County's Local Coastal Program, and the County's General Plan. Source: County GIS Maps				
11.c. Serve to encourage off-site development of presently undeveloped areas or increase development intensity of already developed areas (examples include the introduction of new or expanded public utilities, new industry, commercial facilities or recreation activities)?				X
Discussion: The site is a vacant parcel located at the end of an existing driveway. The site will be served from the water main in Los Cerros Road. The site would be served by an on-site wastewater treatment system, that would not be used by any other properties. Sources: Project plans; County GIS Maps				

12. MINERAL RESOURCES. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
12.a. Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?				X
Discussion: The project does not involve any mining or extraction of minerals. Sources: Project plans				
12.b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
Discussion: The project would not affect any nearby mineral resource recovery site, if such a site should exist nearby. Sources: Project plans; County GIS Maps				

13. NOISE. Would the project result in:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
13.a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
Discussion: The project will generate additional non-substantial, temporary noise associated with grading and construction. However, such noises will be temporary, where volume and hours are regulated by Section 4.88.360 (Exemptions) of the County Ordinance Code. Sources: Project plans				
13.b. Generation of excessive ground-borne vibration or ground-borne noise levels?			X	
Discussion: Per the 2013 Earth Investigations Consultants Geotechnical Investigation, the proposed foundation will be a drilled pier foundation, not a pile-driven pier foundation. Mitigation Measure 19 prohibits use of a pile-driven pier foundation. As proposed and mitigated, the project				

would not result in the generation of excessive ground-borne vibration or ground-borne noise levels.

Mitigation Measure 19: The project shall not use a pile-driven pier foundation.

Sources: Project plans

12.e. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure to people residing or working in the project area to excessive noise levels?				X

Discussion: The project site is not in the vicinity of a private airstrip. Please see discussion in Section 9.e, above.

Sources: Project plans; Planning GIS Map.

14. POPULATION AND HOUSING. Would the project:

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
14.a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X

Discussion: Please see discussion in Section 11.c, above.

Sources: Project plans

14.b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Discussion: The project site is an undeveloped, residential parcel and proposed improvements support this use. The project would provide one additional single-family residential unit of housing and would not displace any existing housing.

Sources: Project plans

15.	**PUBLIC SERVICES**. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
15.a.	Fire protection?			X	
15.b.	Police protection?			X	
15.c.	Schools?			X	
15.d.	Parks?			X	
15.e.	Other public facilities or utilities (e.g., hospitals, or electrical/natural gas supply systems)?			X	
Discussion: The project involves the construction of one single-family residence on a legal parcel within an existing residential neighborhood in unincorporated Palomar Park, California. The project has been reviewed and preliminarily approved by the County Fire Department. The project site is located in an established residential neighborhood, where police, school and park services presently exist in this area. Sources: Project plans					

16.	**RECREATION**. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
16.a.	Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
Discussion: The project involves the construction of one single-family residence on a legal parcel and would not significantly increase the use of existing neighborhood or regional parks or other recreational facilities. The parcel is legal, resulting from a Lot Line Adjustment (LLA 82-10) recorded on April 26, 1983. Sources: Project plans					
16.b.	Include recreational facilities or require the construction or expansion of				X

	recreational facilities which might have an adverse physical effect on the environment?				

Discussion: The project does not involve the construction of any recreational facilities. The project involves the construction of one single-family residence on a residential parcel and would not require the construction or expansion of existing recreational facilities.

Sources: Project plans

17. TRANSPORTATION/TRAFFIC. Would the project:

		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
17.a.	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, and parking?			X	

Discussion: The project involves the construction of one single-family residence and an associated driveway and would result in a temporary increase in traffic levels during construction and a negligible permanent increase in traffic levels after construction. The proposed use is a private single-family residential use and provides adequate on-site parking. Therefore, the project does not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system.

Sources: Project plans, Local Coastal Program (LCP)

17.b.	Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) *Criteria for Analyzing Transportation Impacts*? *Note to reader: Section 15064.3 refers to land use and transportation projects, qualitative analysis, and methodology.*			X	

Discussion: CEQA Guidelines Section 15064.3, Subdivision (b) *Criteria for Analyzing Transportation Impacts,* describes specific considerations for evaluating a project's transportation impacts. It states that, generally, vehicle miles traveled is the most appropriate measure of transportation impacts. “Vehicle miles traveled” refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. The project involves the construction of one single-family residence within an existing residential neighborhood. The project will result in a temporary increase in traffic levels during construction and a negligible permanent increase in traffic levels after construction. Therefore, the project does not conflict with CEQA Guidelines Section 15064.3.

Sources: Project plans

17.c. Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
Discussion: The project site involves the improvement of an existing gravel driveway accessed from Palomar Drive. The configuration of the driveway relative to Palomar Drive and two other properties which use the driveway would not change. Sources: Project plans				
17.d. Result in inadequate emergency access?		X		
Discussion: Mitigation Measure 12 requires the applicant to move the temporary parking area storage container, construction office and sanitation unit to an area which does not block the construction entrance. The project has been reviewed and preliminarily approved by the County Fire Department and would not result in inadequate emergency access. Sources: Project plans				

18. TRIBAL CULTURAL RESOURCES. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
18.a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				X
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)				X
Discussion: There are no structures on the property. The project site is not listed or eligible for listing in the California Register of Historical Resources. Furthermore, the project is not listed in a local register of historical resources, pursuant to any local ordinance or resolution as defined in Public Resources Code Section 5020.1(k).				

Sources: Letter from California Historical Resources Information System (CHRIS), dated February 1, 2022.				
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1. (In applying the criteria set forth in Subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)				

Discussion: Staff requested a Sacred Lands file search of the project vicinity, which was conducted by the Native American Heritage Council (NAHC), and resulted in no found records (Attachment F2). Planning staff has consulted with the following tribes, as identified by the NAHC:

- Amah MutsunTribal Band of Mission San Juan Bautista
- Costanoan Rumsen Carmel Tribe
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the SF Bay Area
- The Ohlone Indian Tribe
- Wuksache Indian Tribe/Eschom Valley Band

On January 25, 2022, a letter was sent to each of the contact persons provided by the NAHC regarding the subject project requesting comment by February 25, 2022. A letter was also sent to the Tamien Nation, a traditionally or culturally affiliated tribe, as the tribe has requested in writing to the County, to be informed of proposed projects in the geographic project area, per Assembly Bill 52 for California Native American tribal consultation requirements. No comments were received to date.

Based on the NAHC's recommended best practices, the following mitigation measures are recommended to minimize any potential significant impacts to unknown tribal cultural resources.

Mitigation Measure 20: Should any traditionally or culturally affiliated Native American tribe respond to the County's issued notification for consultation, such process shall be completed and any resulting agreed upon measures for avoidance and preservation of identified resources be taken prior to implementation of the project.

Mitigation Measure 21: Any inadvertently discovered tribal cultural resources shall be treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

Mitigation Measure 22: In the event that cultural, paleontological, or archeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery, County staff shall be notified, and the applicant shall be required to retain the services of a qualified archeologist for the purpose of recording, protecting, or curating the discovery as appropriate.

Source: Native American Heritage Council (NAHC) letter, dated January 21, 2022.

19. UTILITIES AND SERVICE SYSTEMS. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
19.a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?		X		
Discussion: The project is required to demonstrate compliance with the County's Drainage Policy and Provision C.3.i of the San Francisco Bay Region Municipal Regional Permit, which require the construction of new site design measures to reduce stormwater runoff and associated negative environmental impacts. The project proposes a new on-site wastewater treatment system (OWTS) which will only serve the subject site. Please see Section 7a.iv for potential significant unless mitigated impacts related to construction and operation of the OWTS. The project will connect to California Water Service - San Carlos for domestic water service. California Water Service - San Carlos has reviewed the project plans and the project will be subject to service requirements. Therefore, the project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Source: Project Plans; County Planning GIS Maps.				
19.b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X
Discussion: The project includes proposes to connect to the California Water Service - San Carlos for domestic water services. California Water Service - San Carlos has reviewed the project plans and the project will be subject to service requirements. Project landscape irrigation will be subject to the Water Efficiency Landscape Ordinance (WELO). Source: Project Plans				
19.c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
Discussion: Not applicable; Please see discussion in Section 19.a, above.				

Source: Project Plans				
19.d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				X
Discussion: The project involves the construction of one single-family residence and would result in a negligible increase in solid waste disposal needs. Source: Project Plans				
19.e. Comply with Federal, State, and local statutes and regulations related to solid waste?				X
Discussion: The project involves the construction of one single-family residence and would result in a negligible increase in solid waste disposal needs. Source: Project Plans				

20. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	***Potentially Significant Impacts***	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
20.a. Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
Discussion: The project site is located within a designated State Responsibility Area (SRA) in a Very High fire hazard severity zone. Requirements pertaining to the fire rating of exterior building materials in fire severity zones are incorporated into the adopted Fire Code. Compliance with applicable requirements will be reviewed during the building permit application process and confirmed prior to issuance of a building permit. Source: County GIS Map.				
20.b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
Discussion: The site is steeply sloped. Please see discussion in Section 20.a. Source: County GIS Map.				

20.c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
Discussion: The project would not require any new roads, fuel breaks, emergency water sources, power lines or other utilities. The site is located at the end of an existing driveway. Also, new electrical line will be undergrounded. Please see discussion in Sections 20.a and 20.b. Source: County GIS Map.				
20.d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X
Discussion: Please see discussion in Sections 20.a and 20.b. Source: County GIS Map.				

21. MANDATORY FINDINGS OF SIGNIFICANCE.				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
21.a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
Discussion: Yes, as discussed in this document, the project has the potential to result in environmental impacts as discussed in this report. Implementation of mitigation measures included in this document would adequately reduce project impacts to a less than significant level. Source: Subject document.				

21.b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
Discussion: The project involves the construction and operation of a single-family residence within an existing residential neighborhood on a previously undeveloped property, located at the end of an existing driveway. Due to the infill nature of the proposed residential construction, proposed OWTS, and existing water service in the area, the project is not likely to result in a cumulatively considerable impact when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. Source: Subject document.				
21.c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	
Discussion: As discussed in this document, the project could result in environmental impacts that could both directly and indirectly cause impacts on human beings. However, implementation of mitigation measures included in this document would adequately reduce project impacts to less than significant levels. Source: Subject document.				

RESPONSIBLE AGENCIES. Check what agency has permit authority or other approval for the project.

AGENCY	YES	NO	TYPE OF APPROVAL
Bay Area Air Quality Management District		X	
CalTrans		X	
City		X	
Coastal Commission		X	
County Airport Land Use Commission (ALUC)		X	
Other: None		X	
National Marine Fisheries Service		X	
Regional Water Quality Control Board		X	

AGENCY	YES	NO	TYPE OF APPROVAL
San Francisco Bay Conservation and Development Commission (BCDC)		X	
Sewer/Water District: MWSD		X	
State Department of Fish and Wildlife		X	
State Department of Public Health		X	
State Water Resources Control Board		X	

MITIGATION MEASURES

	Yes	No
Mitigation measures have been proposed in project application.	X	
Other mitigation measures are needed (as listed below):	X	

The following measures are included in the project plans or proposals pursuant to Section 15070(b)(1) of the State CEQA Guidelines:

Mitigation Measure 1: The applicant shall replace the 2 significant exotic trees and 5 significant indigenous trees proposed for removal with a total of 5 replacement trees, to include minimum of three (3), 24" box Oak trees, with the remaining trees to be a minimum of 15 gallon in size. Prior to the issuance of the building permit for the residence, the Planting Plan shall be reviewed and subject to the approval of the Project Arborist and project planner.

Mitigation Measure 2: Prior to any land disturbance and throughout the grading operation, the applicant shall implement the tree protection measures consistent with the County's Significant Tree Ordinance in addition to the construction procedures and tree protection measures provided by the Project Arborist.

Mitigation Measure 3: Upon the start of excavation activities and through to the completion of the project, the applicant shall be responsible for ensuring that the following dust control guidelines are implemented:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d. All vehicle speeds on unpaved roads shall be limited to 15 mph.

e. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

f. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control

measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

g. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

h. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

i. Construction-related activities shall not involve simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously).

Mitigation Measure 4: Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic monofilament netting (erosion control matting) or similar material shall not be used. The applicant shall demonstrate compliance with this requirement in plans submitted at the time of building permit application.

Mitigation Measure 5: A pre-construction, migratory bird nesting survey shall be conducted prior to any proposed construction-related activities during the nesting bird season (February 1 to August 31). The survey shall be performed both in and within 250 feet of the proposed development area and the results reported to the County. If, for any reason, construction activities do not commence within 10 days of completion of the survey, the survey shall be repeated and results reported to the County. If active nests are discovered, no construction-related activities, including grading and tree removal, are allowed until birds have fledged from nests, as confirmed by a biologist.

Mitigation Measure 6: Although proposed project area itself has low possibility of containing unrecorded archaeological site(s), it is possible that subsurface deposits may yet exist or that evidence of such resources has been obscured by more recent natural or cultural factors such as downslope aggradation and alluviation and the presence of non-native trees and vegetation. Archaeological and historical resources and human remains are protected from unauthorized disturbance by State law, and supervisory and construction personnel therefore must notify the County and proper authorities if any possible archaeological or historic resources or human remains are encountered during construction activities and halt construction to allow qualified Archaeologists to identify, record, and evaluate such resources and recommend an appropriate course of action.

Mitigation Measure 7: In the event that cultural, paleontological, or archeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery and the project sponsor shall immediately notify the Community Development Director of the discovery. The applicant shall be required to retain the services of a qualified archeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The cost of the qualified archeologist and any recording, protecting, or curating shall be borne solely by the project sponsor. The archeologist shall be required to submit to the Community Development Director for review and approval a report of the findings and methods of curation or protection of the resources. No further grading or site work within the area of discovery shall be allowed until the preceding has occurred. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e).

Mitigation Measure 8: The applicants and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains, whether historic or prehistoric, during grading and construction. In the event that any human remains are

encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Mitigation Measure 9: Prior to the issuance of a building permit for site development, the applicant shall demonstrate compliance with the recommendations of the Project Geologist and Geotechnical Engineer, including but not limited to those pertaining to: 1) mitigation of undocumented fill in the proposed house development area, 2) treatment of fill along the proposed/improved driveway in accordance with the recommendations for grading and/or retaining wall construction presented in Appendix A of the 2020 Geotechnical Report Update and 3) supplemental recommendations to accommodate design and construction of the proposed swimming pool (Source: 2020 Atlas Geosphere Consultants, Inc., Geotechnical Report Update).

Mitigation Measure 10: Prior to the issuance of a building permit for site development, the applicant shall demonstrate compliance with the recommendations of the County's Geologist and Geotechnical Engineer, including but not limited to those pertaining to: 1) Close coordination with the Project Geotechnical Consultant in design of proposed foundations, retaining walls, drainage improvements, and landscape irrigation which may benefit project performance; 2) Submittal of an updated geotechnical report with supplemental recommendations, design criteria, and supporting data, as appropriate; and 3) Project design and final plans should incorporate geotechnical recommendations and design criteria to mitigate site constraints as identified by the Project Geotechnical Consultant (Source: Craig Stewart, CSA, email to County, dated August 28, 2020).

Mitigation Measure 11: Prior to issuance of the grading permit hard card, the applicant shall demonstrate that all cut spoils will be hauled off-site to a County-approved location.

Mitigation Measure 12: Prior to the issuance of the building permit for the residence, the applicant shall revise the Erosion Control Plan to include the additional measure as follows, subject to the review and approval of the Community Development Director:

Construction Entrance: The Project Civil Engineer shall propose a method for stabilizing the area of the existing driveway (access easement) that will be re-graded on APN 051-022-250, while still allowing access over the driveway by the neighbors. The applicant shall move the temporary parking area, storage container, construction office, and sanitation unit to an area which does not block the construction entrance.

Mitigation Measure 13: The applicant shall adhere to the San Mateo County-wide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including, but not limited to, the following:

a. Delineation with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses within the vicinity of areas to be disturbed by construction and/or grading.

b. Protection of adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

c. Performing clearing and earth moving activities only during dry weather.

d. Stabilization of all denuded areas (on and off-site) and maintenance of erosion control measures continuously between October 1 and April 30. Stabilization shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as re-vegetating disturbed areas with plants propagated from seed collected in the immediate area.

e. Storage, handling, and disposal of construction materials and wastes properly, so as to prevent their contact with stormwater.

f. Control and prevention of the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

g. Use of sediment controls or filtration to remove sediment when dewatering site and obtain all necessary permits.

h. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

i. Limiting and timing applications of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilization of designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. Training and providing instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.

m. Additional Best Management Practices in addition to those shown on the plans may be required by the Building Inspector to maintain effective stormwater management during construction activities. Any water leaving site shall be clear and running slowly at all times.

Mitigation Measure 14: Once approved, erosion and sediment control measures of the revised Erosion Control Plan shall be installed prior to beginning any site work and maintained throughout the term of grading and construction, until all disturbed areas are stabilized. Failure to install or maintain these measures will result in stoppage of construction until corrections have been made and fees paid for staff enforcement time. Revisions to the approved erosion control plan shall be prepared and signed by the engineer and submitted to the Building Inspection Section.

Mitigation Measure 15: It shall be the responsibility of the engineer of record to regularly inspect the erosion control measures for the duration of all grading remediation activities, especially after major storm events, and determine that they are functioning as designed and that proper maintenance is being performed. Deficiencies shall be immediately corrected, as determined by and implemented under the observation of the engineer of record.

Mitigation Measure 16: At the time of building permit application, the applicant shall demonstrate compliance with the measures indicated on the applicant-completed EECAP Development Checklist (Attachment H) or equivalent measures, to the extent feasible. Such measures shall be shown on building plans.

Mitigation Measure 17: At the time of building permit application, the applicant shall demonstrate compliance with the following measures, to the extent feasible, where such measures shall be shown on building plans:

a. BAAQMD BMP: Use alternative fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet;
b. BAAQMD BMP: Use local building materials of at least 10 percent;
c. BAAQMD BMP: Recycle or reuse at least 50 percent of construction waste.

Mitigation Measure 18: Any and all project-related on-street construction parking is subject to review and approval by the Project Planner and the County Department of Public Works. Prior to issuance of the building permit, the applicant shall show location of all on-street construction parking on plans submitted for the building permit application.

Mitigation Measure 19: The project shall not use a pile-driven pier foundation.

Mitigation Measure 20: Should any traditionally or culturally affiliated Native American tribe respond to the County's issued notification for consultation, such process shall be completed and any resulting agreed upon measures for avoidance and preservation of identified resources be taken prior to implementation of the project.

Mitigation Measure 21: Any inadvertently discovered tribal cultural resources shall be treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

Mitigation Measure 22: In the event that cultural, paleontological, or archeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery, County staff shall be notified, and the applicant shall be required to retain the services of a qualified archeologist for the purpose of recording, protecting, or curating the discovery as appropriate.

DETERMINATION (to be completed by the Lead Agency).

On the basis of this initial evaluation:

	I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Planning Department.
X	I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because of the mitigation measures in the discussion have been included as part of the proposed project. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

(Signature)

July 2, 2022 — Camille Leung, Project Planner

Date — (Title)

ATTACHMENTS:

A. Vicinity Map

B. Project Plans

C. Geotechnical Reports provided by the Applicant:
   1. Supplemental Engineering Geologic Study, Onsite Wastewater Treatment System (OWTS), Proposed Single-Family Residential Development, 634 Palomar Drive, Redwood City, California, prepared by Atlas Geosphere Consultants, Inc., dated October 4, 2021.
   2. Geotechnical Report Update, Proposed Residential Development, 634 Palomar Drive, Redwood City, California, prepared by Atlas Geosphere Consultants, Inc., dated July 29, 2020.
   3. Geotechnical Investigation, Landslide Mitigation, Lower Slope at 634 & 636 Palomar Drive, Redwood City, California, prepared by Earth Investigations Consultants, Inc., dated June 16, 2017.
   4. Supplemental Geotechnical Investigation, Proposed Single Family Residence, 634 Palomar Drive, Redwood City, California, prepared by Earth Investigations Consultants, dated April 11, 2014.
   5. Geotechnical Investigation, Proposed Single Family Residence, 634 Palomar Drive, Redwood City, California, prepared by Earth Investigations Consultants, dated October 17, 2013.
   6. Geotechnical Plan Review, Civil and Landscape (only), prepared by Atlas Geosphere Consultants, Inc., dated May 12, 2022.

D. Reports and Comments provided by Neighbors:
   1. Letter from Palomar Park Owner's Association, dated October 28, 2021.
   2. Engineering Geologic Consultations, APN 051-022-180, 738 Loma Court, San Mateo County, California, prepared by Steven F. Connelly, C.E.G., dated August 10, 2021
   3. Comments on the Proposed Leach Field, Enea Property, 738 Loma Court, Redwood City, California, prepared by GeoForensics Inc., dated March 16, 2020
   4. Landslide Area, 0 Los Cerros APN 051-022-310, prepared by Kilik General Engineering, dated November 4, 2017.
   5. APN 051-022-301 (vacant) – Mueller, O'Neill, prepared by Lea & Braze Engineering, Inc., dated September 3, 2014

E. County Geotechnical Approval Letters
   1. Email from Craig Stewart, Cotton, Shires and Associates, Inc, to Sherry Liu (County Geotechnical Section), dated August 28, 2020.
   2. Supplemental Geotechnical Peer Review, RE: Onsite Wastewater Treatment System (OWTS), PLN2020-00251, 634 Palomar Drive, prepared by Cotton, Shires and Associates, Inc, dated November 5, 2021.

F. Cultural Resource Letters

1. Letter from California Historical Resources Information System, dated February 1, 2021.
2. Letter from Native American Heritage Council (NAHC), dated January 21, 2022.

G. Arborist Report for 634 Palomar Drive, Ca, prepared by Roy C. Leggit, III, dated December 12, 2020.

H. EECAP Development Checklist

ATTACHMENT F

Camille Leung

From: Denise Charlebois <decharlebois1@gmail.com>
Sent: Thursday, July 21, 2022 2:37 PM
To: Camille Leung
Subject: Mitigated Negative Declaration for 634 Palomar Dr (PLN2020-00251).

Dear Ms. Leung –

I have reviewed the prepared Neg Dec declaration for this project and have found it to be grossly lacking of critical and accurate information in multiple sections. I understand the County wants more housing however not all parcels in the County are buildable without significant neighborhood impacts and significant health and safety risks to surrounding properties and residents. Unfortunately, the County planners and geologists whom were most familiar with the volatility, hydrology and instability of this hillside have long retired an unable to provide special insight and knowledge of the area's dramatic history and unique issues.

I. Environmental Factors Potentially Affected

Traffic & Transportation

a. Your report leaves out the potential factor of a negative impact on traffic and transportation. Palomar Park has only one roadway into and out of the community. Traffic and the public roadway of Palomar Dr. was severely affected when pier drilling for a retaining wall was attempted by a previous owner on the hillside at 634 Palomar. The construction of the wall was abandon because so much water was erupting out of the hillside. The underground spring which runs through this parcel was diverted by the drilling and large amounts of water erupted out of the street and eroded the pavement. Multiple down hill driveways were also eroded. The water sheared across the roadway and even became icy is some instances. The water erupting out of the roadway effected traffic in a negative way and eroded private and public property for months. There are currently large cracks in Los Cerros which were not there before the attempted pier drilling on 634 Palomar. If grading and pier drilling is once again attempted on this parcel there is a 99% chance that a large amount of water will erupt again in the roadway and once again erode private driveways and become a traffic challenge and impact. There is no mitigation for this potential impact as the water flows underground and daylights off the subject property. The drainage swale in front of 634 Palomar currently has a visual flow of water running through it. This is a significant impact and potentially very dangerous and destructive to the entire neighborhood.

1. Aesthetics

a. Your report leaves out that the building of this house will affect the views of the property at 730 Loma Ct and 722 Palomar Dr.

7. Geology/Soils

a. Your CEQA declaration significantly underplays and leaves out critical information regarding the long history of dangerous and destructive landslides on and directly adjacent to this parcel. Three homes have been destroyed over the years at this hillside location. Your checklist report does not mention this. The past landslides have been repaired to only fail again. The most recent landslides were enormous and full mature trees were swept away with the lava like flow of mud. The public roadway of Los Cerros has been affected by each of these landslides. My house at 738 Loma Ct. also sustained foundation damage. There is a large retaining wall, (12' H x 50' W) above and slightly to the north of the 634 property. The wall retains the backyard soils and leach field of the property at 730 Loma Ct. The wall was damaged in the last series of landslides. Additional grading and subsequent disturbance of previous landslide sections as well as disrupting the underground spring will have a significant chance of impacting this wall. The impact of this wall failing is a major concern and would have a significant impact on the property at 730 Loma Ct. as well as the detached garage at 738 Loma Ct. Your report underplays and neglects to mention that Kilik Engineering, Geoforensics, Steven Connelly C.E.G. as well as Jeff Lea of Lea & Braze all warn of disturbance of soils and vegetation within 50ft of any of the previous landslides and the critical avoidance of adding any irrigation water or OWTS water to these hillsides above 20ft high from the level of Los Cerros. These professionals have first hand knowledge of the dangerous instability issues and hydrology and their opinions should be adhered to. The CEQA declaration also lacks critical information regarding the landslide at 634 Palomar Dr. Building over such significant hydrology will indeed have major impacts. We have already seen the impacts from other attempts to conduct limited grading and drilling with Cotton & Shires, Geosphere and Lea & Braze approved plans and engineering and it was a complete failure due to the heavy spring flow that is impossible to capture.

10. Hydrology

a. Your CEQA declaration does not include a vital report which I submitted to you. The hydrology report by

Balance Hydrologic of 2014 examines and lays out the existence of a significant ground water supply which runs

from the top of Loma Ct. thru the 634 Palomar parcel as well as the 738 Loma Ct and 0 Los Cerros parcel. This ground water is the basis for the instability of the all the parcels. The year round flow of spring water is critical and when altered by piers, grading drilling poses a significant impact to multiple surrounding structures, downhill properties, roadways. The spring daylights at Los Cerros and at 634 Palomar. This is clear pure Aquaphor water and potential contamination by the OWTS is predicted by Kilik Engineering, Jeff Lea of Lea & Braze, Geoforensics and Steven Connelly C.E.G. The constant flow of water is also a large issue because grading, drilling, piers, retaining walls alter the flow of the water. The water flows freely underground throughout the entire hillside of the 634 Palomar and 0 Los Cerros. The water cannot be all captured by drains. Altering the path of water can and will have negative impacts on all surrounding properties. There is current evidence that water is accumulating at the toe of the slide on 0 Los Cerros and another small landslide in 2022 occurred on 0 Los Cerros higher on the slope. This landslide is currently active and unmitigated. Your declaration states that the Geotechnical Engineer as of May 13, 2022 states there are no significant unmitigated soil erosion within the sphere of influence for the project site. This statement is untrue and only confirms that the Geologists and Engineers are not well versed with the current and most recent landslide, hydrology and instability issues of this area.

In the County's own document, it states that within the CEQA declaration; "All answers must take account of the whole action involved, including off-site as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts." The declaration prepared **does not** reflect the "whole action involved" in many sections of the checklist. Most of the checklist prepared seems to insert cookie cutter answers. There are no special mitigations inserted to mitigate the landslide and underground spring water flow. This CEQA checklist and its answers seem to deviate away from all the land instability issues, hydrology issues and actually has more information and content on the potential for archeological artifacts than it does on the multitude of significant landslides and the three homes that have been destroyed in the past.

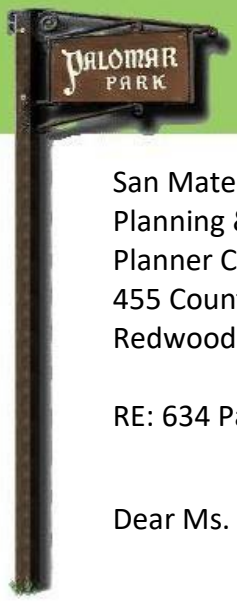
I understand the County would like to infill all vacant parcels with homes, however by underplaying the CEQA checklist declaration the County potentially exposes the neighborhood of Palomar Park (especially the 6-7 properties who are adjacent or downhill from this parcel. The ground instability and large volume of year round spring water can not be ignored. None of the mitigations the County has listed remove Potentially Significant Impact status of the environmental impact this project would have. This is why there are more than 5 professionals in the field of engineering and geology who warn against disturbing such a volatile hillside.

I feel the CEQA declaration is not accurate and needs to be recompleted in a more through and accurate way. I would like to know the exact next steps in having the County amend and edit the CEQA checklist declaration to reflect accurate answers and incorporate a "whole action involved" off site, on site, indirect, direct and cumulative impacts.

Denise Enea

738 Loma Ct.

650 740-9883



San Mateo County
Planning & Building Department
Planner Camille Leung
455 County Center
Redwood City, CA 94063

July 22, 2022

RE: 634 Palomar Dr. PLN-2020-00251 CEQA

Dear Ms. Leung,

The Palomar Park Owners' Association has reviewed the CEQA declaration prepared by SMC Planning. We are very disappointed at the lack luster detail and accuracy of the declaration and its answers. The Board and the Palomar Park residents have quite a bit of historical knowledge regarding Palomar Park. The volatile destructive history, ground instability and problematic hydrologic attributes of the Los Cerros/Palomar hillsides are something we have endured and are very familiar with.

In Summary the following sections of the CEQA declaration are either missing critical information or inaccurate.

- Traffic/Roadways/Transportation - Missing completely

- Aesthetics - The removal of so many trees is not only a major aesthetic issue it also becomes a Geology/Soils issue. Removing mature trees upsets the erosion/geology/hydrology balance. We know this because the adjacent vacant parcel had extensive mature vegetation removed and it triggered a large landslide in this hydrologic zone. This was warned against in a previous Lea & Braze Engineering letter and the County ignored the recommendation of the engineer and subsequently severe property and structure damage was incurred.

- Geology/Soils – This section of the CEQA declaration is very understated and does not provide the critical warnings by geologists and engineers who are very familiar with the area and conducted extensive projects. The declaration doesn't mention the numerous landslides along Los Cerros and the multitude of hydrologic issues at 634 Palomar Dr. It doesn't mention the multiple structures that have been destroyed due to large reoccurring landslides. There is SMC historical documentation that three homes have been previously destroyed on the 634 Palomar and Los Cerros parcels due to landslides.

- Hydrology - There is a documented prolific spring that flows from Loma Rd. down through the hillside of Palomar Park and daylights in various parcels along Loma Ct., Palomar Dr. and

Los Cerros. The prolific spring is flowing and visible throughout the entire year and even now during a drought there is active water flow. The County CEQA declaration ignores that disruption of the springs flow path will have a significant impact to multiple properties and the public roadway. The spring water flows underground like a river and daylights in various places. The CEQA declaration also does not address well enough the potential for OWTS contamination of this pure spring water which flows throughout the creeks, daylights into various drainage swales and which wildlife use as a source of water.

The Palomar Park Board has knowledge of the various professional engineers and geologists who warn against building at 634 Palomar or within 50 – 100 feet of any of the previous landslides in this area. We are disappointed that the County is ignoring this critical information and only depending on the applicant for information of potential significant impacts.

It seems unconceivable that with the knowledge of existing substantial documentation, reports, professional recommendations and historical SMC documentation of significant structure damage, that SMC Planning would even consider the development of a single-family home within such a volatile hillside and endanger and compromise further the surrounding properties.

We would like to understand your reasoning for ignoring the reports and not engaging to seek information with the engineers, geologists and hydrologic professionals who have actually conducted work on a multitude of these landslides and understand the magnitude of the instability due to the hydrologic factors.

Preparing a CEQA declaration that is not truthful, and which does not address all these well known issues is negligent and does not follow the legal CEQA process which is intended to review all the potential impacts of the **whole project**. This includes off site impacts, cumulative impacts, indirect, direct and project level impacts. The Palomar Park Board is deeply concerned that the County is turning a blind eye to obvious foreseeable significant impacts which will likely affect many neighboring structures and properties, contaminate and disrupt our native spring water flow and quality, our public roadways and our public safety.

The Palomar Park Owners' Association is not in agreement with many of the answers within this CEQA declaration and feel it is lacking quite a bit of pertinent informative data. This CEQA declaration should not be recorded due to lack of information and inaccuracies.

Please mail any responses, notices or project documentation to: PPO 419 Palomar Dr. Palomar Park, CA 94062 and email to Palomarnews@gmail.com

Sincerely,

Rich Landi, President
Palomar Park Owners' Association

Cc.

Steve Monowitz, Director of Planning
Don Horsley, SMC Board of Supervisors

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C

Balance Hydrologics

800 Bancroft Way • Suite 101 • Berkeley, CA 94710 • (510) 704-1000
931 Mission Street • Santa Cruz, CA 95060 • (831) 457-9900
12020 Donner Pass Road • Unit B1 • Truckee, CA 96161 • (530) 550-9776
www.balancehydro.com • email: office@balancehydro.com

UNDEVELOPED PARCEL EMBEDDED CHUTE DST. SPRINGS

March 7, 2023

Denise Enea
738 Loma Court, Redwood City, California
San Mateo, California
APN 051-022-180

Re: Comment letter on the proposed residential development at APN 051-022-380, 634 Palomar Drive, Redwood City, CA

Dear Denise Enea:

You have kindly asked us to assess the nature of risks posed by the proposed construction of a 4300-square foot home on a parcel adjoining your holdings at 738 Loma Court. You have asked that we consider, on a screening basis, the risks both to your property and to the larger community which has developed within a complex compound landslide which seems to encompass the Palomar Drive area in southern San Mateo. We find risks to slope stability, water quality, and wetland habitat. In our opinion, these should have been identified in an "Initial Study", and warrant consideration as part of an environmental document under CEQA focusing on these topics.

Work Conducted

We previously prepared a Spring Source and Protection Reconnaissance report (Woyshner and Hecht, 2014) during the extreme multi-year dry conditions of the 2014 drought. The two of us have since updated our understanding of conditions of the proposed project at APN 051-022-380, recent geologic mapping and planning geology of the Palomar Park area, obtained and analyzed additional historical aerial photography, and reviewed the hydrologic history of the area. We visited the site on March 2, 2023, and made measurements and drainage observations under the much wetter conditions that currently prevail. We measured setbacks from various proposed project features and walked the roads and throughout the neighborhood, mapping signs of springs, seeps or drainages or headwater streams on most roads near and uphill from the proposed project.

We considered the 70-year history of slope instability in light of rainfall history, identifying that (a) landsliding commenced with substantial settlement of Palomnar Park in the early 1950s, and that (b) nearly all landslides have occurred during periods of above-average seasonal rainfall, perhaps more so than particular storms. We have also prepared the attached review of our findings.

Hydrogeology of the Vicinity

We earlier (in 2014) conducted a study of the spring at the head of the landslide on APN 051-022-310, a parcel adjoining the project parcel to its west. We found that the spring is sourced from an aquifer not previously identified, marked by a distinctive water quality. Since we observed it during a third year of drought; since there was evidence of perennial flow, we hypothesized that the source was relatively large, extending beneath unspecified adjoining and nearby properties. Further, we tested the quality of the water, finding the spring to have a different water-quality fingerprint than the nearby stream at the north end of Los Cerros Road.

Field evidence led to the notion that the ground beneath the Enea home and its neighbors was in fact a large unstable mass or compound landslide capable of storing and transmitting a reliable source of water to the spring. We subsequently looked at aerial photos of decades past, all of which also hinted at a neighborhood-scale disturbed, hummocky ground which is part of a large area of fractured, weathered, and unstable Franciscan bedrock, where localized slippages should be expected (see Seismic Hazard Map in **Appendix A**). Our work occurred in the knowledge that there have been multiple home-damaging or home-destroying land instabilities beginning in the early 1950s in the Loma Court to Los Cerros Road area than had been destroyed or severely damaged by slope instabilities since settlement of the area in the 1950s.

We also learned that the entire subdivision is served by imported water (currently purveyed by California Water Service) with local sanitary disposal through septic systems. The combination of imported water with no sewer to drain it away inevitably leads to more groundwater recharge and usually rising groundwater because residents can freely apply water to landscaping and gardens and also for interior use (which generally ends up in the septic systems of the individual homes, thence percolating to groundwater. As a result, tens of additional acre feet of effluent and irrigation return flows are now percolating to the water table beneath the compound slide mass beyond what percolated 70 years ago. Furthermore, less water is being removed by woody vegetation, which is now sparser than it was prior to settlement of the neighborhood. Finally, the stabilizing influence of mature, equilibrium hillslopes which had not been graded prior to 1950 has now been disturbed by increasing cuts for roads, infrastructure, and buildings. The proposed project adds cumulatively to all three causes of instability; in light of its scale, size and weight, the cumulative effects are more than most other individual homes in the neighborhood.

Groundwater Flows from Water-Quality Data

Water levels and flow are one way of understanding groundwater movement and instability, but only give half of the picture. All natural waters have a water-quality story with evidence of how the water has moved, the paths of its flow, and how much has flowed and when. This section of the report helps explains the water quality side of the quantitative hydrology.

All natural waters carry dissolved solids, or salts. Generally, the longer water remains in the ground, the more salts it dissolves, and the types of salts tells us what kind of ground it has spent time in. The salt content of natural waters can be directly measured with a simple hand meter as conductivity, a measure of a liquid's ability to conduct a current. It is measured in units of "mhos", which is ohms (a measure of resistance), spelled backward. The International System of Units (SI) term for electrolyte conductivity is

siemens. Because it is salt ions that actually conduct the current, the higher the conductance, the more salt the liquid contains. Water can also be traced using its distinctive salt content. For example, we can tell in the field that a spring with a conductivity of 1,000 umhos makes up half of the flow downstream from whether spring enters a stream which has a conductivity of 600 downstream from the confluence but only 200 upstream of the spring. If a stream has a conductivity of 2,000 in the late summer and 200 at the same place after the winter, we can tell it is fed from the same sources but has been diluted nearly by 10 times as much rainfall with a conductivity of zero, the approximate conductance of rain. So, the stream crossing the north end of Los Cerros Road was measured to have a conductance of 2,000 in February 2014 (after three years of little or no recharge during a drought) and 650 in March 2023, after a wet winter which has recharged the soil draining to the stream, we can tell that much of the flow of the stream fell recently as rainfall. The 3:1 ratio of fresh recharge to older water is somewhat less than what hydrologists currently observe throughout San Mateo County, indicating more salts in the soils. Most streams contain about 10 to 15 percent of the conductivity measured late last summer. By contrast, the spring and subdrain discharge on APNs 051-022-310/380 with a conductivity of 1,200 during both wet and dry seasons suggest a larger body of groundwater, such that dilution by this years' rains has not made much difference in its composition.

Table A. Representative Ranges of Specific Conductance ("Conductivity") Measured in the Palomar and Los Cerros Road neighborhood, Palomar Park, Redwood City, California

Source	Wet Year (2023) (uS/cm@25C)	Dry Year (2014) (uS/cm@25C)
Rainfall (representative)	**10 – 40**	
Street and driveway runoff (representative)	**20 – 80**	
Tap water (Hetch Hetchy Reservoir)	**not measured**	**63**
Standing water and soil seepage to roads	**280 – 450**	**not present**
Canyon stream at Los Cerros Rd	**650**	**2,000**
Subdrain seepage from landslide areas on APNs 051-022-310/380	**1,100 – 1,300**	**subdrains not installed**
Spring on APN 051-022-310	**not present**	**1,200**

Notes: Conductivity is measured in units of microsiemens (uS) and adjusted to standard temperature of 25degC. All values shown are as measured in the field in Palomar Park, and all are temperature adjusted. Measurements were made in February 2014 in the third consecutive year of much-below-average rainfall regionally, and on March 2, 2023, during a year of substantially above average rainfall after 3 drought years.

Putting it all together, we believe that the irregular ground, with chaotic blocks of Franciscan bedrock is able to store a sizeable volume of groundwater intermixed with the blocks, which contributes to instability throughout the neighborhood. This groundwater pool probably existed before settlement of the neighborhood; the perennial spring may be the reason the first house in the neighborhood was built right next to it as a source of water. In the intervening years, we believe, the groundwater pool has expanded, as imported water has percolated from landscaping, gardens and septic systems, and as the larger native trees shown in the 1930 aerial photograph were gradually removed, reducing the total consumption of water by the trees tapping into the groundwater pool. The groundwater pool may still be growing, although absence of wells in the area makes it hard to discern whether that is the case.

At the same time, resistance of the slope to landsliding was diminished by numerous roadcuts, trenches, and cutbanks as homes and road were built. We can see evidence of no landsliding in the 1930 and 1941 aerial photographs but beginning with settlement of the area (in about 1950) slippage scars are evident (**Figure 2**). Further, we see that every one of the known landslides occurred during a period of wetter than normal rainfall (**Figure 1**), not so much from individual intense storms but from wet years, especially when these occurred periods of wet years, such as 1950 – 1952, 1982-3, or 1995-1999. And the regular slippages didn't commence until the slopes were disturbed after World War II by roadcuts, trenches, and cutbanks.

The proposed project is large and very heavy, with substantive cuts and trenches. It will be served by a leachfield which will be heavily loaded from a home nearly three times as large as the neighborhood norm. And there is little or no information about what direction the leachate will flow, or whether it will end up adding to the destabilizing groundwater pool. It will not be diminished by plant uptake, at least for the first decade or so, there is no guarantee that the roots will be as effective as the ones which have grown in place in response to a much more quiescent setting prior the 1950 (see further comments below). We do believe that no matter the stability of the proposed structure, the additional disturbance and uncontrolled increase in percolation will result in less slopes in the neighborhood at large.

We have thus far not discussed seismic instability. Again, the effect of this project will be adding water to the chaotic blocks and the aquifer in between them. When the shaking starts, the instabilities will likely begin propagating where there is excess water, which may be next to the proposed project or several hundred feet away. The evidence, if we will listen it, is one of multiple landslides in the same locations, and sometimes at different depths, in response to growing amounts of water entering the slope and being retained in it.

Contribution of Additional Percolate to the Larger Landslide Area

The State Water Resources Control Board has a policy statement governing the use of onsite wastewater disposal systems ("septic systems") which encourages that decisions regarding siting, use, and design are all based on the most current information. Specifically, when there is substantial new information which should be considered in the design or mitigation of septic systems, prior CEQA documents should be updated or amended to be consistent with the new information.

"…(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

A. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

B. Significant effects previously examined will be substantially more severe than shown in the previous EIR;

C. Mitigation measures or alternative previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative;

D. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce on or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative."

We take this policy to mean that identification of the spring and its attributes, the various geotechnical reports all identifying potential instabilities, and the presence of large compound landslide in the neighborhood are all substantive new information both individually and cumulatively, and warrant CEQA review of the proposed project, not solely based on the proposed septic system, but the slope stability and public safety associated with the compound slide which are linked to effluent discharge.

Inadequate Response to Third Party Review

The process of impact review and planning for suitable mitigation is also stymied by inadequate responses to the third-party review. As appropriate for a project of this complexity and a three-story residential structure three times the size typical of the Palomar Park area (and presumably much heavier and generating more effluent), the County commissioned a third-party review by the Cotton Shires firm, a suitable source, which requested identified gaps in the analysis. The Cotton Shires review plainly asked:

a. how much more water from site drainage and the leachfield will be put into the hillside?

b. in which direction(s) will it flow?

c. how deeply will it flow, given the hillside containing much water,

d. will the additional water and the grading for the structures affect the stability of the house or adjoining lots and structures.

The applicant was asked to drill as deeply as necessary and conduct tests to get the needed data.

Atlas responded with a 12-page letter which basically did not answer these questions.

The Planning Department and the community still have no calculations of how much effluent and drainage will enter the slope, whether the drainage and the effluent will surface and enter the surficial drainageways or the repaired landslide(s) or potential impacts to downslope drainageways and residents. The response hypothesizes that septic effluent will all flow into sandstone beds with 'adverse drainage' which seems inconsistent with their cross-section A-A', and contains no information about the depth or fluctuations of groundwater levels – information logically essential to answering the question of how much addition groundwater flow will result and which direction it will move, specifically toward known instabilities. There is no more information on depth of groundwater despite specific requests to drill deep enough to answer the questions of the third-party reviewers. The response also contends that runoff from the driveway and appurtenances at 738 Loma Court is responsible for much of the water in the slope, a contention which conflicts with the reality of our salinity measurements, as noted above. In our opinion, the impact review is not complete until these basic and reasonable questions have received a response.

Proposed Mitigation

Some of the measures proposed for mitigation by County staff seem to simply miss the point, not addressing the impact or potential threat.

Staff proposes to mitigate removal of several mature trees by post-construction replanting with:

a. Three 24-inch boxed oaks
b. Five 15-gallon oaks

The proposed mitigation does not immediately maintain or add to the slope stability subject to proposed removal of the trees. Additionally, there are no requirements for irrigation or maintenance of the replacement tress, or criteria for mitigation success. Such measures are standard for mitigation of aesthetic or habitat losses, but those are not particularly the issues raised in connection with these trees.

At issue are slope stability, which can be subdivided into (1) the stabilizing influence of their roots, and (2) the capability of these trees to dewater the slope through transpiration. At least four different knowledgeable professionals have strenuously cautioned against removal of these trees, generally independently of each other, declaring these two processes are key to the long- and short-term stability of the slopes. At some point, the planning staff must take notice of these calls from a range of registered professionals. How many such professionals can be ignored before the planning staff starts to substitute their own opinions for those of the professionals registered by the state to tender such opinions?

Expert	Partial quote	Source	Profession	State/Professional Registrat'n No.
Jeff Lea	"…given the need for root systems to help maintain a fragile ground surface and for transpiration to help remove subsurface water from the hillside"	Lea, 2014	Civil Engineer	CE31678
Richard Smith	"My concern is that the removal of these trees would further decrease the stability of the slope and hillside. . . Also, the amount of water that these trees uptake daily is significant in dewatering the hillside. Any moisture that can naturally be removed from these has a significant value. Trees are an integral part of slope stabilization alone, and with an already saturate soil environment year-round. It is my recommendation that these trees remain."	Smith, 2022	Arborist	ISA WE-87645A
Alan Kilik	". . .I advise extreme caution and believe that changing any of the surrounding uphill surface or underground conditions will have an effect on the water that exists in this slope and will negatively impact the longevity of the hillside repair."	Kilik, 2017	Engineering Contractor	CCL #A-928944
Joseph Michelucci	" . . .the existing ground cover, small trees, bushes . . .have enhanced the stability of the area."	Petroff and Michelucci, 2015	Geotechnical Engineer	GE593

We add our own concerns, for the same reasons, pleading for considering the role of the trees in stabilizing the slopes. We further note that replacing the stabilizing and dewatering functions is not a done deal. Given that these slopes seem to have accelerated activity during recent decades, how do we know that tree roots will establish themselves as well in the more-disturbed conditions which now may prevail? And what mitigates for the lost stabilizing influences of the existing trees while during the years while the new root systems grow in, and the transpiring crowns can replace the functions of the existing trees?

Further, we fail to see accountability for establishment of the proposed mitigation vegetation. Why not incorporate one of the typical conditions calling on the applicants to periodically report to the success of the mitigative growth after 5 or 10 years, or call for criteria for success (say, 100% survival of all trees after 5 years, and 10 years)? If the trees do not thrive, is there mitigation of any kind?

Finally, why haven't other mitigation approaches been considered. Ones which seem to address the concerns of the experts who have objected to tree removal might be (a) change the size or shape of the pool, (b) call for an arborist to trim or rebalance the trees to reduce stress, (c) limit the depth of excavation, or provide no-dig buffer within the tree's drip lines, or (d) simply move the location of the pool to a less impactful location. This the type of analysis seems needed in a neighborhood where slope stability has been diminishing.

Conclusions

1. The various parcels lie within a large, complex landslide area including about 20-30 homesites in Palomar Road and Los Cerros Road area of unincorporated San Mateo. The landslide, previously unmapped but consistent with evidence in the Seismic Safety element of the San Mateo County General Plan, showed evidence of stability over periods of decades prior to disturbance of construction of roads and homes during the early- to mid-1950s. Once the slide's profile was broken with excavations, landsliding has been chronic, occurring nearly every decade. Percolation for septic and drainage systems have added to local groundwater pool, and removal of larger trees seems to have further expanded it.

2. Landsliding is associated with wet years or periods of wet years. Nearly every year or years of above-average precipitation has resulted in at least one documented instability large enough to warrant a geotechnical report or road construction project. Most such wet periods were less profound than the pre-development wet periods of 1937-8 and 1940 - 1943, when no instabilities appear evident in aerial photographs. In its current configuration, slopes appear to go unstable when a relatively nominal amount of rainfall is added to the ground.

3. The proposed project requires substantial grading, cumulatively adding to post-development instability of the compound slide area. Additionally, it will be served by a septic system and leachfield, discharging a substantial amount of water to the landslide complex every year; it will also place a swimming pool at the head of one known near-surface slide, which if ruptures and drained suddenly will discharge many thousands of gallons of water aggravating even a minor instability associated with ongoing slope movement and/or ground shaking.

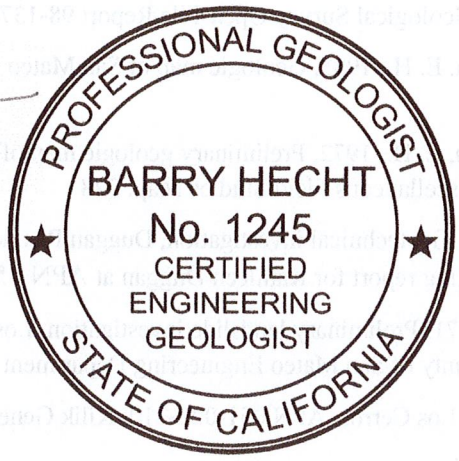
Closing

Thanks very much and kindly let us know whether any additional information might prove helpful in reaching resolution.

Sincerely,

BALANCE HYDROLOGICS, Inc.

Barry Hecht, CEG 1245, CHg. 50
Senior Principal



Mark Woyshner, M.Sc.Eng.
Principal

Enclosures: Table 1. Documented landslides near proposed project property.
Figure 1. Historical annual rainfall record.
Figure 2. Historical aerial photos.
Figure 3. Photos showing start of new landsliding at the property line.
Figure 4. Photos of other seeps and slumps along Palomar Dr.
Figure 5. Photos checked and patched asphalt indicating underlying water along Loma Rd.
Figure 6. Basemap noting indications of slope instability and evidence of water near the proposed project.
Appendix A. Seismic Hazard Map.

Please see references cited on the following page.

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Woyshner, M., and Hecht, B., 2014, Spring source and protection reconnaissance, APN 051-022-310: Balance Hydrologics letter report 214016, letter to Stan Low, San Mateo County Environmental Health Division, 8 p., 3 tables, 8 figs, 1 appendix.

TABLES

Table 1. Documented landslides near proposed project property, APN 051-022-380, San Mateo County, California

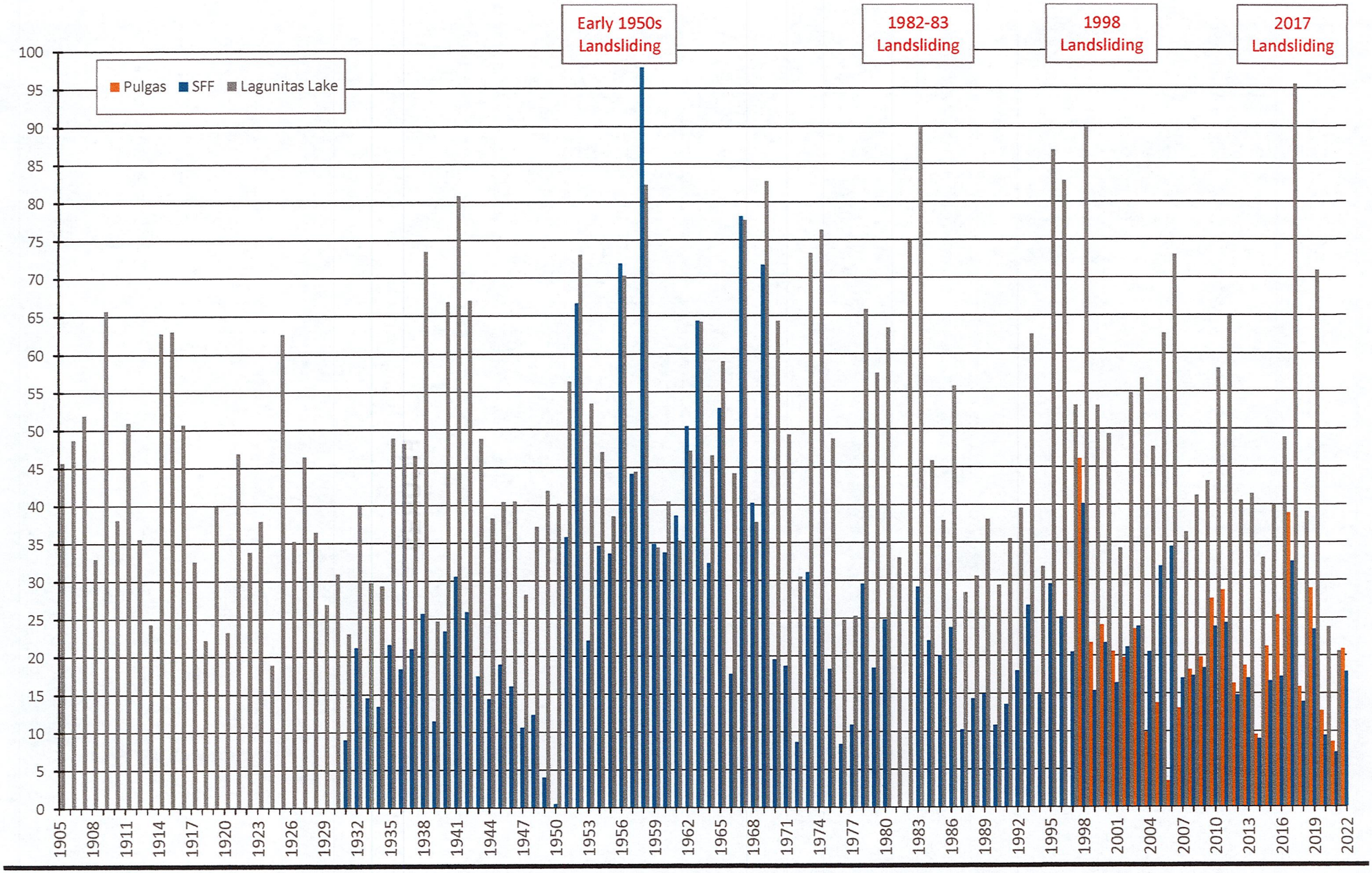
Year	Location	Source	Rainfall conditions	Remarks
Early 1950's	APN 051-022-310	Fowler & Associates, 1985	Water year 1952 was notably wet.	Existing house slid downhill towards Los Cerros Rd. Foundation rebuilt and septic field for home placed under Los Cerros Rd.
1955	APN 051-022-310 / Los Cerros Rd.	Fowler & Associates, 1985	December 1955 of water year 1956 was particularly wet.	Septic system removed under Los Cerros Rd. and shallow subdrain installed during road repair.
1971	APN 051-022-310 / Los Cerros Rd.	Jo Crosby & Associates, 1971	Water years 1969 and 1970 and the first have of water year 1971 were notably wet.	Abundant shallow groundwater noted in dark grey to reddish brown plastic clay overlying bedrock shale. Recent grading on APN 051-022-310 prior to slide. During road repair, subdrain under Los Cerros Rd. installed deeper than former drain.
1982-83	APN 051-022-310	Fowler & Associates, 1985	Extreme wet years of record	Slide destroyed house but did not involve Los Cerros Rd. House not rebuilt.
1998	not identified	Reported by neighbors.	Extreme wet year of record	Landslides not active on Los Cerros or Loma Ct. Other slides were in the neighborhood.
2006	APN 051-022-130	Verbal account by owner of property APN 051-022-120 adjacent to slide	Rainfall well above normal, especially during December	Slide associated with break in Cal Water main on Los Cerros Rd.
2017	APN 051-022-310, APN 051-022-380	Kilik Engineering, 2017 Geoforensic, 2020 Atlas Engineering, 2018	An extreme wet year of record	Slides recontoured and installed subdrains
2023	APN 051-022-310, APN 051-022-380	Balance Hydrologics, 2023	A wet year of record and still raining as of first week of March.	Two new small landslides forming along property line of two parcels

Notes:

APN 051-022-310 is adjacent to the Enea property, APN 051-022-180. APN 051-022-130 is across Los Cerros Rd. from Enea property.

Most hydrologic and geomorphic data characterizes a period defined as a water year, which begins on October 1 and ends on September 30 of the named year. For example, water year 2010 (WY2010) began on October 1, 2009 and ended on September 30, 2010.

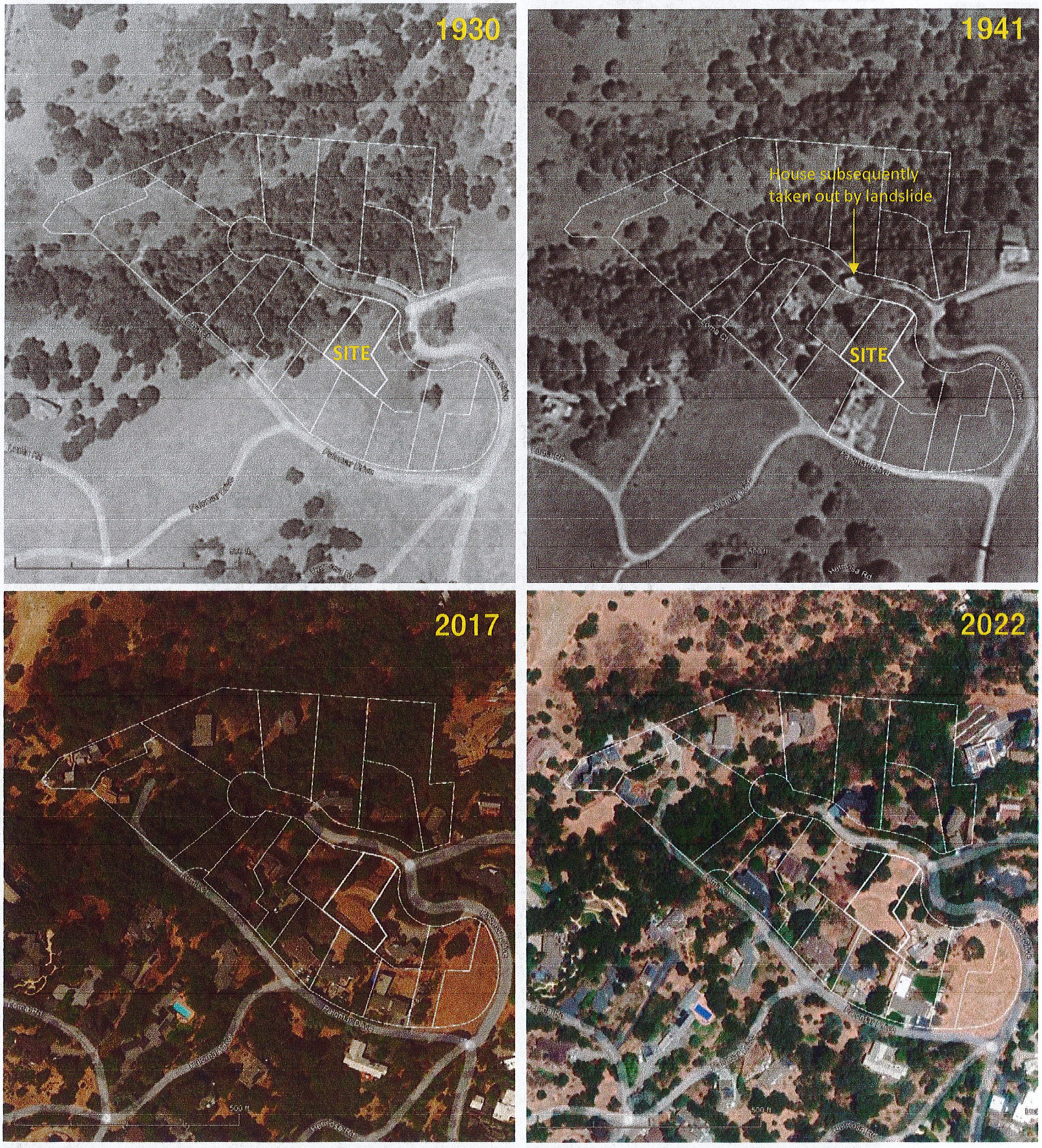
FIGURES



Balance Hydrologics

Figure 1. Historical annual rainfall record at SFPUC Pulgas station (PUL) near Woodside, CA as compared to the longer record at San Francisco Airport (SFF) and more complete record at Marin Water Lagunitas Lake station (LGT). Missing data: PUL WYs2005-06; SFF WYs1981-83 and WYs1949-50.
Data source: DWR California Data Exchange Center

All_Rainfall_Data.xlsx, annual rainfall chart



Balance Hydrologics

Figure 2. Historical aerial photos show increased home building, tree removal, and landsliding, Los Cerros Rd and Palomar Dr area, San Mateo County, CA. Major landsliding documented during wet years 2017, 1982-83, and 1950s.

Balance Hydrologics

Figure 3. Photos showing start of new landsliding at the property line of proposed project APN 051-022-380 and adjoining parcel APN 051-022-310, San Mateo County, CA. Note the importance of tree roots along the property line to contain landsliding.

Palomar Dr west of Loma Rd

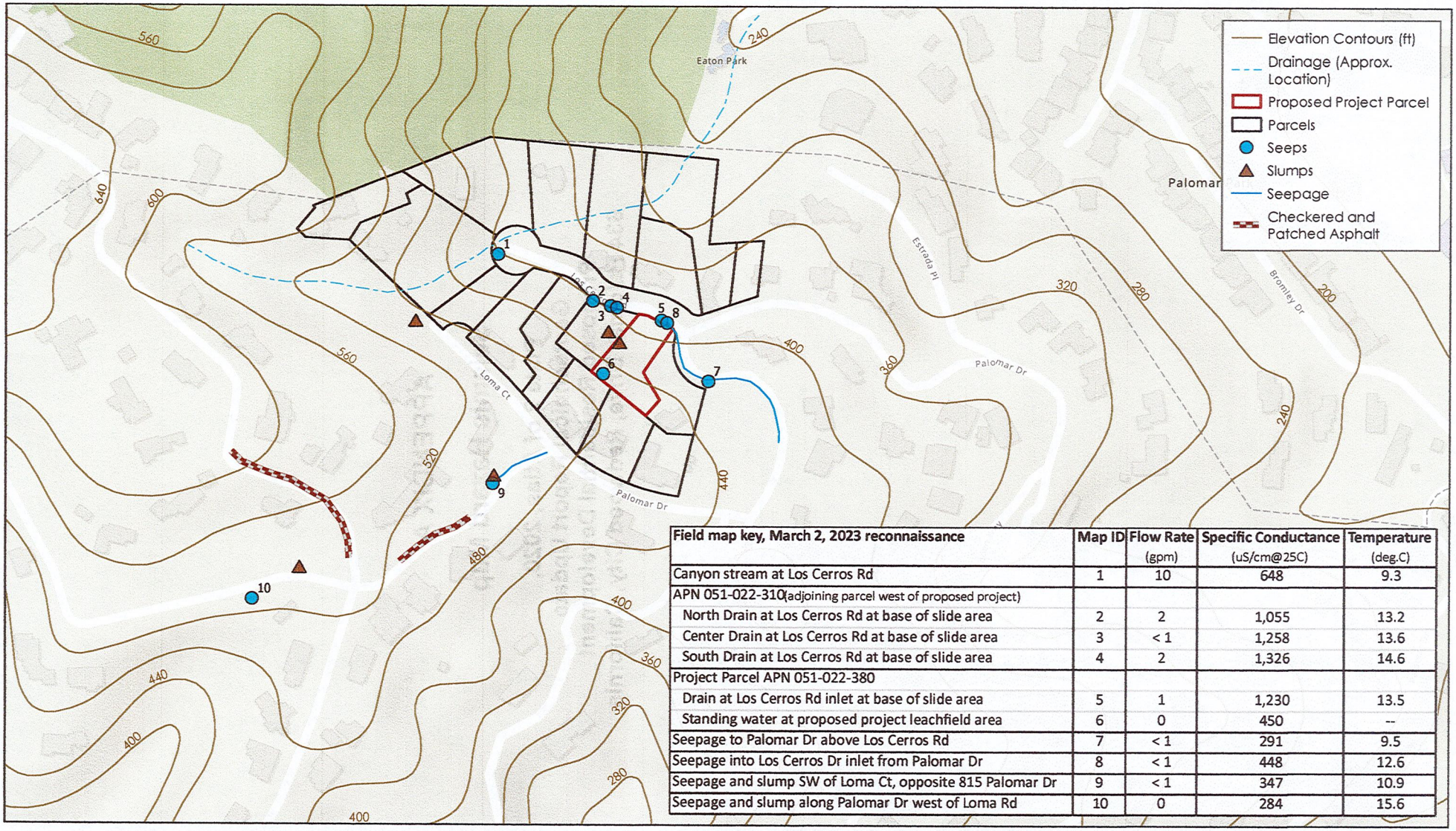
Southwest of Loma Ct, opposite 815 Palomar Dr

Balance Hydrologics

Figure 4. Photos of other seeps and slumps along Palomar Dr, San Mateo County, CA. Photos taken on March 2, 2023.

Balance Hydrologics

Figure 5. Photos checked and patched asphalt indicating underlying water along Loma Rd, San Mateo County, CA. Photos taken on March 2, 2023.



Field map key, March 2, 2023 reconnaissance	Map ID	Flow Rate (gpm)	Specific Conductance (uS/cm@25C)	Temperature (deg.C)
Canyon stream at Los Cerros Rd	1	10	648	9.3
APN 051-022-310 (adjoining parcel west of proposed project)				
North Drain at Los Cerros Rd at base of slide area	2	2	1,055	13.2
Center Drain at Los Cerros Rd at base of slide area	3	< 1	1,258	13.6
South Drain at Los Cerros Rd at base of slide area	4	2	1,326	14.6
Project Parcel APN 051-022-380				
Drain at Los Cerros Rd inlet at base of slide area	5	1	1,230	13.5
Standing water at proposed project leachfield area	6	0	450	--
Seepage to Palomar Dr above Los Cerros Rd	7	< 1	291	9.5
Seepage into Los Cerros Dr inlet from Palomar Dr	8	< 1	448	12.6
Seepage and slump SW of Loma Ct, opposite 815 Palomar Dr	9	< 1	347	10.9
Seepage and slump along Palomar Dr west of Loma Rd	10	0	284	15.6

Source Layer Credits: ESRI ArcGIS Online, USGS, City of San Mateo County, California State Parks, and others.

Balance Hydrologics

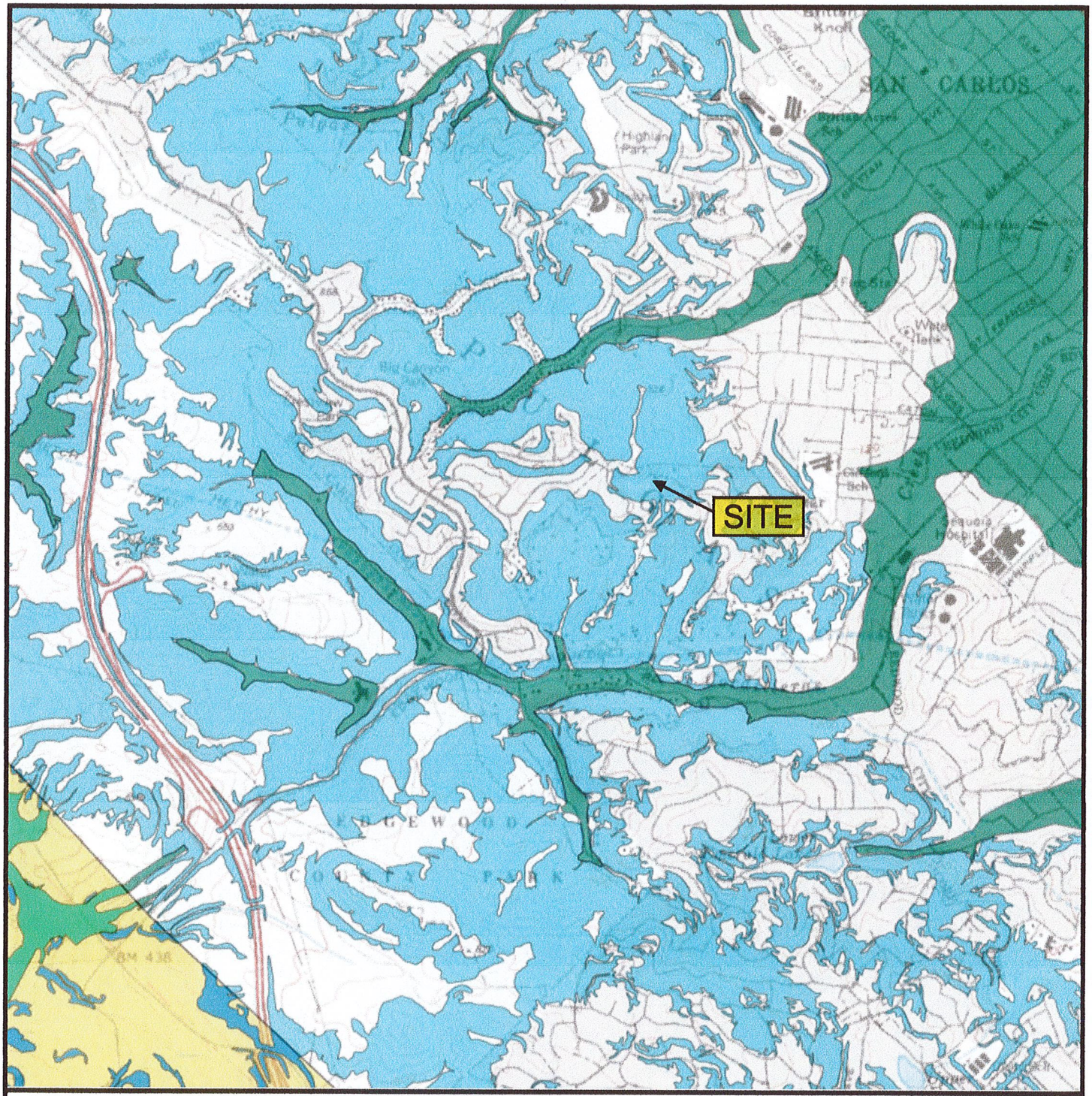
0 200 400 600
Feet

Figure 6. Basemap noting indications of slope instability and evidence of water near the proposed project at APN 051-022-380
636 Palomar Drive, Redwood City, San Mateo County, CA.

APPENDIX A

Seismic Hazard Map

Plate 2 of Atlas, 2020,
Geotechnical Report Update
Proposed Residential Development
634 Palomar Drive, Redwood City, California



EXPLANATION

EARTHQUAKE-INDUCED LANDSLIDES
Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

Overlap of Earthquake Fault Zone (yellow) and Earthquake Induced Landslide Zone (blue)

N

2000 ft.
Scale

LIQUEFACTION
Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground water conditions indicate a potential for permanent ground displacements such that mitigation would be required.

Overlap of Earthquake Fault Zone (yellow) and Liquefaction Zone (green)

California Geological Survey (2018)

Geosphere Consultants, Inc.

Job No.: 91-55905-A Approved: JEB Date: 06.21.2020	**SEISMIC HAZARD MAP** 634 Palomar Drive Woodside, California	**Plate** 2

SITE

EXPLANATION

Alquist-Priolo Earthquake Fault Zone (yellow)
and seismic hazard zone (blue)

Seismic Hazard Zone (yellow)
and Alquist-Priolo Earthquake Fault Zone (green)

Liquefaction
Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground water conditions indicate a potential for permanent ground displacements such that mitigation would be required

2010 B

Cadence

California Geological Survey (2018)

Job No	01 590B-A	SEISMIC HAZARD MAP
Approved: JEG		
Date: 08.21.2020		Plate

April 20, 2023
CSA Project No: SMC6427B

TO: Camille Leung
County Planner
San Mateo County Building and Planning Department
455 County Center, 2nd Floor
Redwood City, CA 94063

SUBJECT: **Supplemental Engineering Geologic and Geotechnical Peer Review**
RE: 624 Palomar Drive
Redwood City, San Mateo County, California
PLN2020-00251

At the County's request, we have completed a supplemental geologic and geotechnical peer review of the recently submitted documents regarding development and construction of a single family lot at 634 Palomar Drive including the following:

- Lea & Braze, 634 Palomar, Response to Report by balance Hydrologics, PLN 2020-2051 letter, dated April 4, 2023;
- Atlas, Geotechnical Peer Review, March 7, 2023 Hydrology Report Prepared for Denise Enea letter, dated March 31, 2023; and
- Balance Hydrologics, Comments on the proposed residential development at APN 051-022-380, 634 Palomar Drive, Redwood City, CA letter dated March 7, 2023.

In addition, we have reviewed pertinent reports and technical maps from our office files, and conducted a recent site visit.

In the following letter, Cotton, Shires and Associates, Inc., (CSA) provides the County of San Mateo with our conclusions of our peer review of the above referenced letter reports.

CONCLUSIONS

We have reviewed the above referenced, recently submitted letter reports and concluded that, based on the data and conclusions presented in the above referenced

reports, combined with our knowledge of the site geology, we find that there is no new information that would compel us to modify our opinion that the Project Geologist and Geotechnical Engineer have: 1) investigated the site in accordance with the standards of practice in the County, 2) identified the significant geologic and geotechnical hazards at the site; 3) recommended suitable mitigation measures to address those hazards; and 4) adequately addressed CSA's previously provided comments and concerns. In conclusion, CSA has no objection to the County granting approval for the subject planning permit.

LIMITATIONS

This supplemental geologic and geotechnical peer review has been performed to provide technical advice to assist the County with its discretionary permit decisions. Our services have been limited to an independent review the referenced geotechnical report to determine the adequacy of required State hazard zone evaluations and any associated mitigation measures. Our opinions and conclusions are made in accordance with generally accepted principles and practices of the geotechnical profession. This warranty is in lieu of all other warranties, either expressed or implied.

Respectfully submitted,

COTTON, SHIRES AND ASSOCIATES, INC.
COUNTY GEOLOGIC CONSULTANT

Andrew T. Mead
Principal Engineering Geologist
CEG 2560

David T. Schrier
Principal Geotechnical Engineer
GE 233

AM:DTS

March 31, 2023

Anusha Thalapaneni - athalapa@gmail.com
David Jackson - djackson52@gmail.com

RE: GEOTECHNICAL PEER REVIEW
March 7, 2023 Hydrology Report Prepared for Denise Enea
738 Loma Court
Redwood City, San Mateo County, California
ATLAS #91-55905-C (3067)

Dear Thalapaneni-Jackson Family:

INTRODUCTION

Purpose and Scope of Balance Hydrologics, Inc. (BHI) Report

The letter presents our engineering geologic our review of the Balance Hydrologics, Inc. (BHI) March 7, 2023, geohydrology report pertaining to perched ground water seepage on 13 Los Cerros Road and with respect to proposed development of a residence on your property at 634 Palomar Drive, Palomar Park, San Mateo County, California (see Figure 1, *Partial Parcel Index Map of Palomar Park*). This BHI report follows their April 16, 2014, report pertaining to a reconnaissance evaluation of occurrence and quality of perched ground water seepage in the headward reach of a broad topographic swale containing neighboring properties at 13 Los Cerros Road, and 738 Loma Court owned by Denise Enea. Incidentally, we are unaware as to whether BHI has tendered a formal erratum to validate their 2014 report by retracting misrepresentation of your property as having significant adverse geologic conditions that actually characterized the adjacent vacant parcel property at 13 Los Cerros Road.

The subject report is evidently an extension of a premise introduced in the 2014 report that the northwestern part of Palomar Park is constrained by a large, complex landslide within a broad, unconfined aquifer in Franciscan complex and sourcing widespread ground water seepage in the northwestern part of Palomar Park. The findings were based on reconnaissance-level tasks supplemental to their 2014 study, including review of regional geologic mapping, historic aerial photographs, and reconnaissance observations of the neighborhood following a period of prolonged heavy rainfall.

Conspicuously absent in the BHI report was reference/consideration of detailed geologic and geotechnical data presented in the two seminal peer reviewed geotechnical studies that characterize 2017 landsliding on 13 Los Cerros Road/738 Loma Court (Enea property; Geoforensics, Inc., 2017), and Atlas Technical Consultants' 2021 report to San Mateo County pertaining to *Reply to Geologic Peer Review* of feasibility for on-site waste water treatment system (OWTS; see attached County Geologist clearance letter)**.** We encourage the reader to review

the attached Atlas report for context of clearly differing geologic and hydrologic conditions in the area of BHI's study.

REPORT REVIEW COMMENTS

The following review comments are in the order of statements presented in BHA's March 7, 2023, report.

Hydrogeology of the Vicinity

Detailed site investigations of the site area and the resultant existing body of knowledge derived from the comprehensive geologic and geotechnical studies previously mentioned do not support BHI's hypothesized claim as fact that the northwest part of Palomar Park, including the site, is underlain by an unstable mass or compound landslide capable of storing and transmitting a reliable source of water and destabilizing slopes in the site area. The recurring unsupported threat of active landsliding and troublesome ground water conditions in the neighborhood in this section should be considered a highly irresponsible condemnation of the Palomar Park community.

Evidently, BHI relied on the regional California Geological Survey Seismic Hazard Zones map (BHI Appendix A) as representing active landslides to support the landslide claim above. The map is intended to delineate hillsides judged to have potential for landsliding from strong earthquake shaking in a major earthquake. A site within the zone is considered a candidate for geological investigation. The County Geologist, from data presented in our geologic reports, has cleared your property of potential landslide hazard concerns.

BHI employed interpretation high altitude aerial photography (it is not clear in their report whether they used single images or, optimally, 3D stereograms) for evaluation of landslides in the site area, although no landsliding mapping was contained in the report. It is apparent from the photos presented in the report, visibility of the ground surface was obscured by tree canopy leading to unreliable interpretations. The aerial photographs in their report revealed notable deforestation of the slope on the neighboring property over the past decade, and a general increase of trees growth on your property over approximately the past century.

Moreover, given the limitations imposed by vegetal cover LiDAR would have been the appropriate imagery for BHI to have utilized, and as an essential illustration for the reader, when characterizing surface conditions. (Note Atlas Technical Consultants' Plate 3, *Geomorphic Map, Cross Section X-X'*)

Ground Water Flows From Water-Quality Data

BHI had analytical lab testing conducted on 4 local water samples collected on 13 Los Cerros Road, and 1 water sample from an intermittent stream channel that intersects the north end of Los Cerros Road. Reconnaissance observations of the area topography and description of the area geology is misleading. BHI fails to mention anywhere in their report the contrasting geologic/geomorphic/geohydrologic significance of the broad deeply weathered, water-bearing, soft clayey sandstone swale containing 13 Los Cerros Road and 738 Loma Court, which is

abutting stable, resistant, dry, sandstone bedrock ridge flank representing the proposed development area of your property, and clearly illustrated in the attached 2021 report.

Nevertheless, the report describes the notion of chaotic blocks of Franciscan bedrock intermixed with a sizable volume of groundwater, which contributes to instability throughout the neighborhood. This characterization is based on unsubstantiated conjecture and is in conflict with the existing body of knowledge for this area. To model such a notion would necessarily require regional distribution of deep borings and ground water monitoring.

BHI characterizes the proposed development as large and heavy. Large is a relative matter for the Planning Department to assess. As for weight, keep in mind the proposed structures are wood-frame, commonly known as light-weight, and will be supported by drilled piers anchored in hard sandstone. The swimming pool soil and rock excavation will significantly reduce the imposed load relative to the weight of a thin reinforced gunite shell filled with water and anchored to bedrock with drilled piers. A swimming pool shell structurally designed for pier support, as with the other structures, in accordance with conservative geotechnical soil and earthquake parameters invalidates the notion of failure over the life of the project.

Good site seismic stability, found to be present in your proposed development site, is demonstrated by the absence of geomorphic evidence or reports of historic earthquake induced landslides.

Contribution of Additional Percolate to the Larger Landslide Area

Once again, there is no geologic evidence from our studies to indicate the risk of landsliding in the site area has been limited to the swale on the adjacent property. Relative to the ground water recharge of surfacing from operation of the OWTS has been deemed low based on data derived from boring and characterization of bedrock fabric exposed in adjacent road cuts.

It is our experience the 2016 version of the San Mateo County Guidelines pertaining to OWTS are of the most rigorous in the Bay Area. Percolation testing procedures are designed to characterize the sizing and distribution of dispersal trenches to prevent adverse conditions that can least to surfacing of effluent and slope instability.

Inadequate Response to Third Party Review

The notion our response to County Geologist Peer Review was inadequate if false (see attached Peer Review Letter).

The proposed OWTS and project drainage, along with our participation, has been rigorously designed by the Civil Engineer and approved as appropriate for the project.

Proposed Mitigation

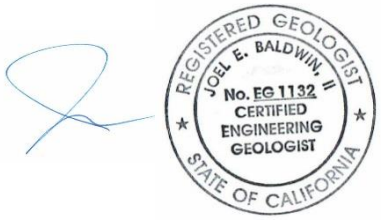
We agree that tree roots and especially tree canopy are effective in reducing runoff. It is unfortunate that so much tree canopy that used to protect 13 Los Cerros Road and the upper part of 738 Loma Road has been progressively removed over the years by apparent indiscriminate deforestation. It is notable your property has gained canopy protection over the years.

The table of professional's statements is inappropriate as they appear to be taken out of context of a broader statement. A professional isn't required to acknowledge a planted slope is better than a denuded slope.

Conclusions

Comments offered in the preceding sections of the BHI report adequately address the essence of their conclusions.

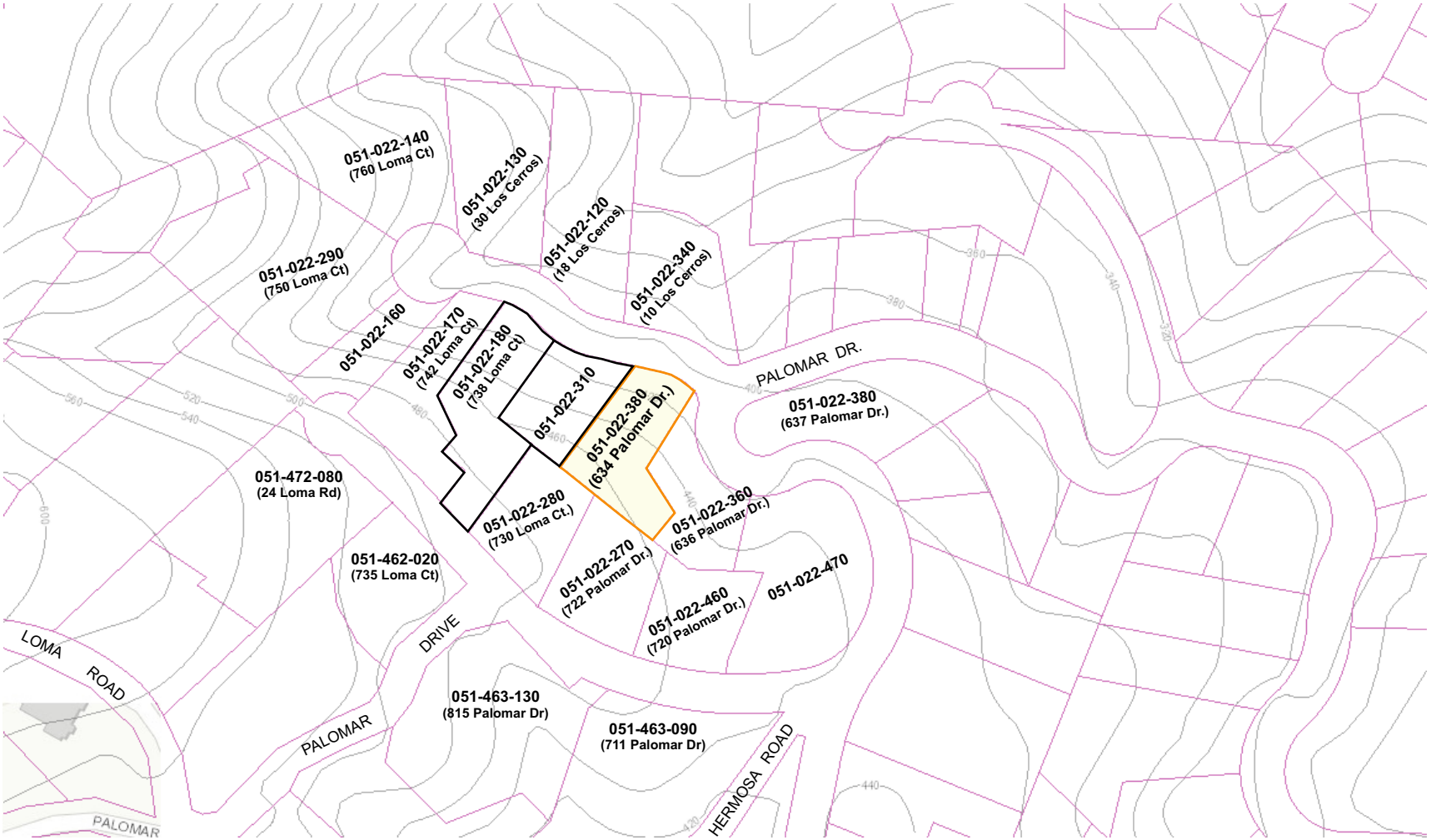
ATLAS TECHNICAL CONSULTANTS LLC



(Renewal date 02/28/2025)

Joel E. Baldwin, II, P.G., C.E.G.
Principal Engineering Geologist

Attachments: Figure 1. Partial Parcel Index Map of Palomar Park
Atlas Technical Consultants LLC October 4, 2021, Supplemental Engineering Geologic Reply to Peer Review
Cotton, Shires and Associates, Inc. November 5, 2021, Supplemental Geotechnical Peer Review



N

200 feet
Scale

"Applicant" Parcel

"Neighbor" Parcels

Source: County of San Mateo
https://gis.smcgov.org/Html5Viewer/
(03.17.2023)

ATLAS

Job No.:	91-55905-C
Approved:	JEB
Date:	03.27.2023

PARTIAL PARCEL INDEX MAP OF PALOMAR PARK

634 Palomar Drive
Redwood City, California

Figure 1

SUPPLEMENTAL ENGINEERING GEOLOGIC STUDY

Onsite Wastewater Treatment System (OWTS)

Proposed Single-Family Residential Development
634 Palomar Drive
Redwood City, California

Prepared for:

Anusha Thalapaneni (athalapa@gmail.com)
David Jackson (djackson52@gmail.com)

October 4, 2021
ATLAS Project No. 91-55905-C
(3067)

2001 Crow Canyon Road, Suite 210, San Ramon, CA 94583
925.314.7100 (Main); 650.557.0262 (D) | oneatlas.com

October 4, 2021

Anusha Thalapaneni - athalapa@gmail.com
David Jackson - djackson52@gmail.com

RE: SUPPLEMENTAL ENGINEERING GEOLOGIC STUDY
Onsite Wastewater Treatment System (OWTS)
Proposed Single-Family Residential Development
634 Palomar Drive
Redwood City, California
ATLAS #91-55905-C (3067)

Dear Thalapaneni-Jackson Family:

INTRODUCTION

In accordance with our Agreement, we have prepared this letter report in reply to the June 14, 2021 geotechnical peer review letter prepared by Cotton, Shires and Associates, Inc., on behalf of the Environmental Health Department's feasibility assessment of the proposed OWTS (aka, Leachfield) associated with your proposed development at the property in Palomar Park referenced above (Plate 1, *Vicinity Map*, Figure 1; Plate 2, *Site Plan, Cross Section A-A'*). This report follows the April 29, 2019 engineering geologic report by Geosphere Consultants, Inc., and our July 29, 2020 geotechnical update report for the proposed development.

Tasks undertaken to arrive at the findings, conclusions and recommendations presented in this report included:

- Review of pertinent in-house documents, and documents by San Mateo County Environmental Health Department files;
- Supplemental characterization of topo-morphology and engineering geology in the OWTS area of influence from supplemental reconnaissance mapping, interpretation of recent drone imagery, 1953 USGS topographic mapping (Plate 1), 1956 vertical, panchromatic stereo aerial photography, interactive Google Earth Pro imagery, and 2017 315-degree azimuth hillshade LiDAR imagery (Plate 3, *Geomorphic Map*; Plate 4, *Photo Gallery*);
- Supplemental subsurface exploration and sampling to characterize the geologic profile to a depth of 19 feet at the locations depicted on Plate 2 (Appendix A, *Logs of Soil Exploration and Laboratory Test Results*);
- Evaluation of the distribution and maintenance of California Water Service mains in the local area of influence (Appendix B, *San Carlos District Water System Map and Legend*)

- Review and preliminary analysis of available geotechnical, and geohydrologic data pertaining to seepage from perched ground water onto Los Cerros Road, and landsliding on neighboring 13 Los Cerros Road and 738 Loma Court (Appendix C, *Evaluation of Seepage and 2017 Landsliding on 13 Los Cerros Road and 738 Loma Court*).

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Figure 1. Westerly aerial drone view of proposed residential development area and adjoining area (09/25/2021). Arrow in lower left of view is recent replacement of Cal Water Service main that caused seepage onto Palomar Drive in winter of 2020.

REPLY TO PEER REVIEW COMMENTS

Following are comments presented in the peer review letter and our respective reply:

a) The Project Engineering Geologist should discuss and clarify the natural and proposed slope gradients in the vicinity of the proposed primary and expansion leachfield lines. They should also clarify whether all existing undocumented fill will be removed or replaced as engineered fill as part of proposed construction. If existing natural slopes or proposed final grades surrounding the OWTS are steeper than 35 percent, then we understand a slope stability analysis will be required. If a slope stability analysis is found to be necessary, we recommend completion of additional subsurface borings extending confidently below the elevation of proposed site improvements (e.g., excavations for the residence and foundations, and OWTS, etc.) to collect supplemental samples, laboratory testing to determine accurate shear strengths and unit weights of the soil and bedrock materials, and further evaluate other geotechnical or geologic site conditions (e.g., groundwater/phreatic surface, etc.).

The proposed OWTS is located near the crest of a graded east-west trending ridgeline in highly dissected foothills terrain initially mass graded in the early 1900's for residential subdivision development (fig. 2). The proposed leachfield layout will occupy a flat area at the end of a dirt driveway extending from Palomar Drive across the southwest margin of the site and initially graded sometime before 1948 contemporaneously with the driveway for 636 Palomar Drive (fig. 2).

Google Earth imagery reveals evidence of subsequent grading of the same area as late as Fall of 2016, leaving the flat area bordered on the southwest side by an approximately 10-foot high northeast facing 70% cut slope and an arcuate undocumented fill slope inclined approximately 70% to the north, and ranging from 8 to 10 feet high. Remnants of the native slope, both detected in the field and from topographic data, indicate the native northeast facing slope to be occupied by the proposed leachfield had gradients ranging from approximately 15% to 33%.

We understand that most, if not all, of the undocumented fill bordering the downhill side of the leachfield will be removed by reclining the slope to approximately 33%. Removal of most of the fill on the downslope side of the dirt road is expected to accommodate house development. If necessary, to avoid constraining the proposed leachfield, the fill on the downhill side of the dirt driveway should be similarly reclined to 33%.

Four additional borings were sampled to further evaluate the earth materials to a depth of 19 feet (Appendix A). In the proposed leachfield area, Borings 1 and 2 encountered hard, mainly closely fractured greywacke thinly interbedded in Boring 1 with Clayey Sandstone and Shale breccia. Borings 3 and 4, in the dirt road leading up to the proposed leachfield, encountered 4½ to 7 feet of surficial soil composed of dense to very dense Silty SAND with Gravel, and Gravelly SAND fill mantling approximately 2½ feet of medium dense, Clayey SAND colluvium over greywacke bedrock. Ground water was not encountered. The surficial soils were generally moist.

The supplemental subsurface exploration and surface mapping revealed competent sandstone to be underlying the proposed leachfield. Sandstone exposed in the cut slope above Boring 1 exhibited a favorably steep inclination relative to slope stability, and steep closely spaced jointing relative to optimum OWTS performance over the project lifetime (Plate 2).

In our opinion, these findings buttress conclusions and recommendations pertaining to other principal geotechnical aspects of the project presented in our previous reports (Geosphere Consultants, Inc. 2019; Atlas Technical Consultants LLC, 2020).

Figure 2. 1948 oblique Google Earth Pro image of site area. **A** is proposed leachfield site bordered by initial driveway grading across site; **B** is residence at 13 Los Cerros Rd. removed in 1982-83 due to reactivation of 1950's landslide (Michelucci & Assoc., 2015); **C** is incipient landslide that failed in 2017(white arrow points to scar of small cut slope failure); **D** is 738 LC garage at foot of steep descending driveway; **E** is approximate location of existing California Water Service tank; **F** is approximate location of approx. 30-foot high cut slope; – ·· → is concentrated runoff - note light tone on hillside above 711 Loma Ct. is interpreted as erosion/sedimentation from uncontrolled roadway runoff.

b) The Project Engineering Geologist should discuss the earth materials anticipated to be encountered during OWTS construction (e.g., undocumented fill, expansive colluvium, hard bedrock, etc.). The Consultant should clarify whether proposed leach line excavations, as proposed, will extend below surficial colluvium encountered at the site. We note the reported layers of high plasticity soils along the bedrock/colluvium contact. The applicant's Consultant should evaluate whether additional percolation testing or pits are appropriate to document the applicable percolation rates of earth materials at depth. The location of the prior 14-foot-deep pit advanced in November of 2000 should be clarified on project plans or within a figure provided by the applicant's Engineering Geologist. The Project Engineering Geologist should evaluate whether the depth of high groundwater at the site is a minimum of 5 feet below the base of the proposed OWTS excavations.

The boring data and exposed site conditions confirm the leachfield trenches will be in conventionally excavable sandstone bedrock. The thin layer of fill mantling the leachfleld site will be removed from the trench footprints.

The distribution of structurally-controlled seasonal drainage patterns depicted on Figure 1 suggests the subdued and locally steep hills that characterize Palomar Park are underlain by somewhat chaotically deformed Franciscan rock (Plate 4). Thus, the local geologic section would be unlikely to represent a sandstone-shale layer-cake assemblage as implied in letters contained in the compendium of documents submitted to the County Environmental Health Department from neighbors and other citizens concerned about local seepage mechanisms.

In our experience, the "A"-rating determined by previous percolation testing is consistent with the closely fractured nature of the bedrock encountered in the borings and exposed in graded slopes surrounding the site (Plate 4). We therefore judge supplemental percolation testing unnecessary.

The Civil Engineer will provide the location of the 14-foot deep observation pit excavated in November 2000 under the auspices of Langley Hill Quarry.

c) The Project Engineering Geologist should evaluate and discuss the potential for the proposed septic leachfield to impact existing subdrainage infrastructure at the site or neighboring properties. The Consultant should also discuss whether there is a potential for the proposed OWTS and proposed expansion lines to degrade water quality or daylight as a result of effluent surfacing in engineered cuts, very steep slopes, or into existing subdrains. An appropriate finding of risk (e.g., low medium, high, etc.) for water degradation and effluent surfacing should be provided. The Consultant should consider recommendations provided by GeoForensics in their letter dated March 16, 2020. The Consultant should also consider setback requirements within Chapter 4.84.120 of the County Code of Ordinances.

The bedrock encountered in exposures around the property is characterized by steep, closely spaced, joint sets that would encourage primarily vertical movement of effluent dispersed directly into the bedrock from the OWTS trenches to be constructed in strict accordance with the approved plans. This conclusion is supported by the absence of reported problems with OWTS operation in the immediate neighborhood; particularly with respect to the neighboring uphill properties on Loma Court constructed more than 6 decades ago, and the nearly century-old residential development at 738 Loma Court. Moreover, there is an absence of evidence of effluent seepage from the steep cut slope bordering the uphill side of the proposed OWTS.

Given the apparent satisfactory OWTS performance on neighboring residential properties, is our opinion operation of the proposed OWTS over the project lifetime presents a **Low Risk** for surfacing of effluent on the descending site slope below the proposed driveway.

In addition, we judge the proposed OWTS presents a **Low Risk** for contaminating water quality in the site slope repair subdrain system adequately located approximately 70 feet downslope from the Primary Leachfield (PL) and approximately 80 feet from the Expansion Leachfield (EL) (Plates 2 and 3). Similarly, the proposed PL and EL are respectively located approximately 170 and 102 feet from the southern margin of the slope repair subdrain system spanning 13 Los Cerros into 738 Loma Court (Plate 3).

It is noteworthy that the OWTS serving 738 Loma Court is apparently located on the descending slope behind the historic residence, estimated to be within approximately 20 feet of the 2017 landslide flank, and within approximately 50 feet of the slope repair subdrain system without detection of a fetid effluent odor from the currently minor subdrain

discharge of water into the Los Cerros Road storm drain system noted during field reconnaissance (Plate 4).

We are aware of a single OTWS failure, associated with a 1955 landslide event in northeast corner of 13 Los Cerros Road, approximately 150 feet from the proposed OTWS. According to Michelucci and Associates, Inc. (2015), the event damaged the historic house that had occupied the property since before 1948 (fig. 1). It was subsequently re-habilitated on a new foundation that encroached into the roadway, and the associated OTWS was relocated ***under the roadway***, and later removed due to subsequent roadway movement that we suspect simultaneously damaged the water main, which we learned from Cal Water Service had a history of breaks until it was replaced in 2006.

Subsequent landslide events in 1974 and 1982-83 on the same property resulted in removal of the house and infrastructure, and later removal of the foundation remnants and appurtenant structures concurrent with slope repair of the 2017 landslide event. There is no perceived potential adverse geologic impact to the proposed site development from the mitigated slope conditions on this property.

It is our opinion the conditions described above effectively obviate the concerns over operation of the proposed OWTS, and OTWS siting recommendations presented by Geoforensics, Inc. (2020).

We further understand retaining walls for the proposed house development will be designed for hydrostatic conditions to account for close proximity to the OTWS.

d) The Project Engineering Geologist should confirm the trench spacing is adequate from an engineering geologic perspective, or provide supplemental recommendations.

From an engineering geologic standpoint, we judge the proposed OWTS trench spacing is conservative based upon subsurface conditions and performance of the historic neighboring systems.

e) Typically, OWTS are set-back 100 feet from areas identified as landslides unless otherwise recommended or found appropriate by a Certified Engineering Geologist. We recommend the Project Engineering Geologist process and review hillshade topographic maps derived from publicly available LiDAR data-sets as well as review the results of their previous research to determine areas surrounding the site that have been subject to landsliding and subsequently clarify appropriate set-backs, as necessary.

There are no unmitigated landslides within 100 feet of the proposed OWTS (Plate 3). In our opinion, existing OWTS setbacks are sufficient.

Figure 2 depicts early residential development in Palomar Park featured by an array of roadways likely to have directed uncontrolled storm drainage to undeveloped slopes in the neighborhood causing erosion as well as landsliding from the over-steepened Los Cerros Road cut slope coincident with the location of the 2017 landslide event on the east side of the site. Hillshade LiDAR imagery highlights deflections from apparent roadway runoff erosion on slopes in the site area that would be otherwise obscured by vegetation. An example is an inactive erosional inflection from runoff extending onto the northwest corner of the site from 730 Loma Court that imposes no potential impact to performance of the OWTS site.

Uncontrolled runoff and associated seepage on 738 Loma Court has cast a shadow over the rest of the neighborhood relative to perception of slope stability. It is our opinion this seepage represents the principal mechanism for recurrent landsliding over the past decades, and is an issue introduced in our 2019 report.

From our studies we conclude for decades, since the property was developed in 1927 (Zillow.com), runoff from the descending driveway off Loma Court to the parking area, as well as garage and roof runoff, has historically been the principal sources for water to accumulate and overflow onto the adjoining slope. The condition was apparently mitigated in the recent past by installation of a trough drain across the paved surface and connecting roof downspouts to flexible plastic pipes. However, the location for discharge of the water is unknown as there is no evidence of a surface drain outfall onto Los Cerros Road.

Currently and apparently for a period of years a large catchment formed by an array of terrace surfaces bordered by retaining walls would tend to accumulate runoff (Appendix C). The source of a “spring” draining from the landscape terrace area would be perennially recharged by accumulation of rainfall runoff in the winter, followed by irrigation in the summer to maintain landscaping at the head of the retrogression landslide

complex.

To our knowledge, a detailed engineering geologic study to identify/mitigate the source of the "spring" has not been conducted. Balance Hydrologics, Inc. (2014) performed a reconnaissance-level evaluation of the spring and concluded, on the basis of water quality testing, the source was not local, as did Michelucci and Associates, Inc. (2015), but was instead derived from a broader "aquifer" to the south.

Both evaluations were apparently without consideration to the location of seepage issuing from the downslope side of the enclosed landscape terrace, or the relation of the seepage elevation relative to the opposing slope of the deeply eroded south ridge flank descending to Edgewood Road approximately 200 feet below Loma Court.

Nevertheless, the proposed OWTS is outside the area of influence of the adverse drainage and slope issues on 738 Loma Court.

We trust this supplemental engineering geologic study/reply to peer review provides you with the information required at this time. If you have any questions please contact Mr. Baldwin at 650.557.0262, or by e-mail joel.baldwin@oneatlas.com.

Sincerely,

ATLAS TECHNICAL CONSULTANTS LLC

(Renewal date 02/28/2023)

Joel E. Baldwin, II, P.G., C.E.G.
Principal Engineering Geologist

REFERENCES

Balance Hydrologics, Inc., 2014, Spring source and protection reconnaissance, APN 051-0220310 (360 Loma Court): Geologist's April 16 report, 8 pages with illustrations.

Geoforensics, Inc., 2020, Comments on Proposed Leachfield (on 634 Palomar Drive) Enea property, 738 Loma Court, Redwood City, California: Geotechnical consultant's March 16 letter, 1 page, File 217101.

Geosphere Consultants, Inc. Engineering geologic report, proposed leachfield constraint assessment, 634 Palomar Drive, Redwood City, California: Geotechnical consultant's April 29 report, GEO#-04214-B (2572.01), 5 pages with illustrations.

Atlas Technical Consultants LLC, Geotechnical report update, proposed residential development, 634 Palomar Drive, Redwood City, California: Geotechnical consultant's July 29 report, GEO Project No. 91-55905-A (3067.01.00 (5 pages with illustrations.

Michelucci and Associates, Inc., 2015, Preliminary geotechnical evaluation, property at 738 Loma Court, Redwood City, California: Geotechnical consultant's January 12 report, Job. 14-1422, 6 pages with site plan and pit log.

ILLUSTRATIONS

Figures

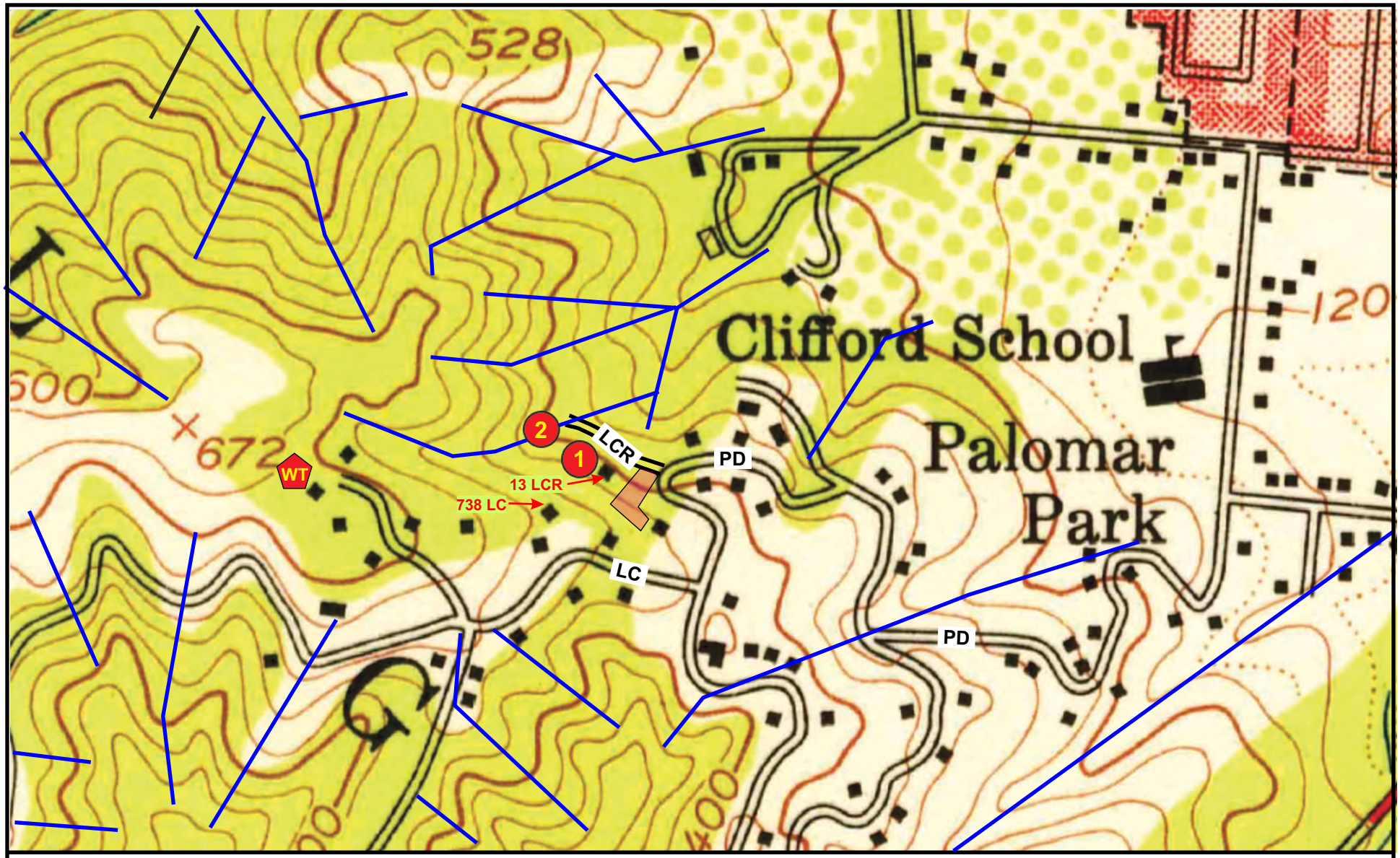
Figure 1 – Aerial Drone Site Overview
Figure 2 – 1948 Google Earth Oblique Aerial Image

Plates

Plate 1 – Vicinity Map
Plate 2 – Site Plan, Cross Section A-A'
Plate 3 – Geomorphic Map, Cross Section X-X'
Plate 4 – Photo Gallery

Appendices

Appendix A – Logs of Borings and Laboratory Test Results
Appendix B – California Water Service, San Carlos District Water System Map and Legend
Appendix C – Seepage and Landslide @ 738 Loma Court, Redwood City, CA



N

500 ft.
Scale
Contour Interval 40 ft.
Base Map after USGS Woodside 7½' quad. (1953)

EXPLANATION

- Site
- Structurally controlled seasonal drainage pattern
- 1 Seepage Location 1
- WT New Water Tank (Cal Water Service well pump site, Appendix C)

LC Loma Ct.
LCR Los Cerros Rd.
PD Palomar Dr.

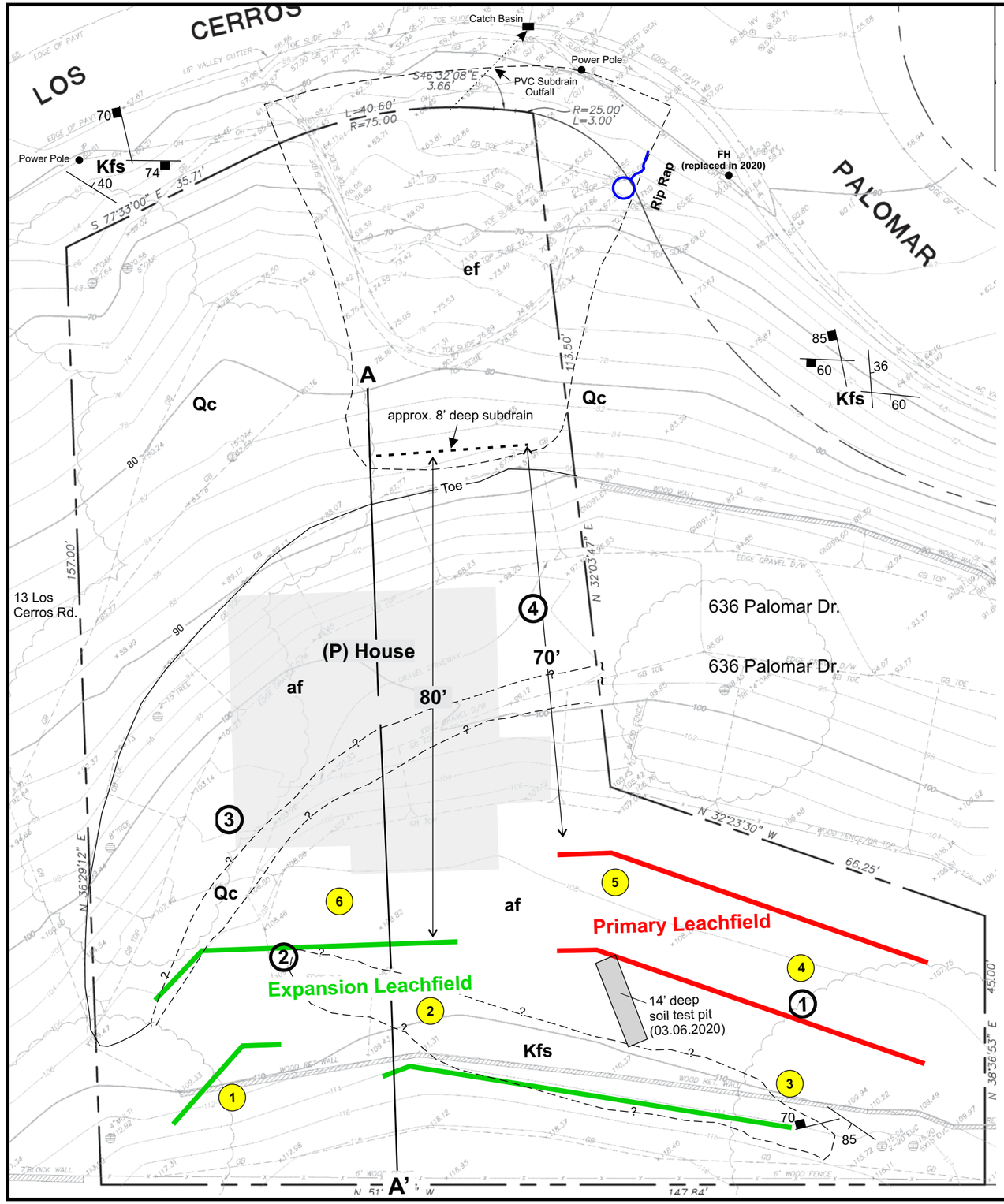
ATLAS

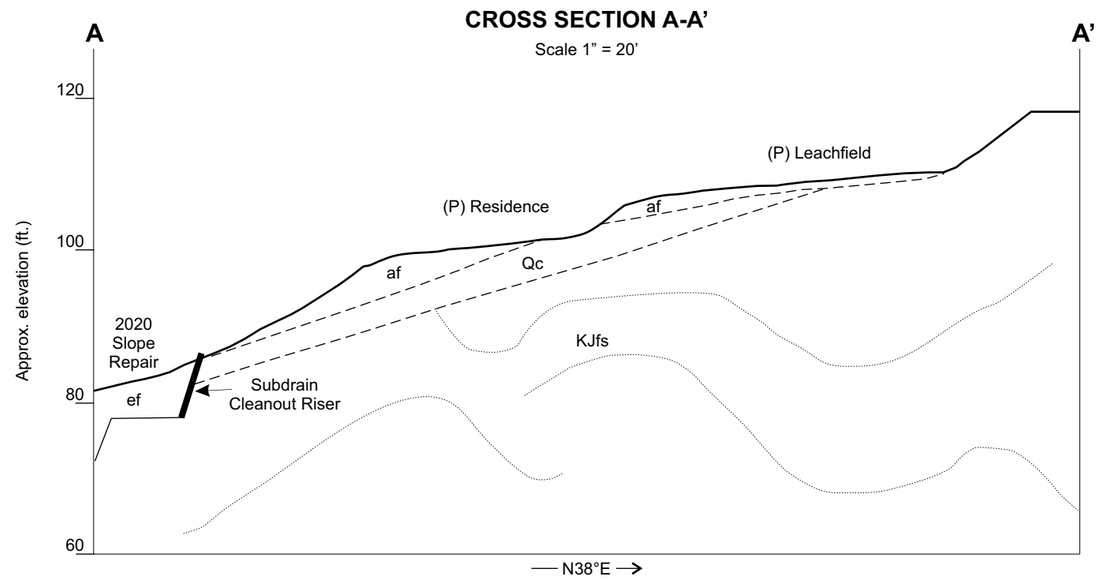
Job No.:	91-55905-C
Approved:	JEB
Date:	10.01.2021

VICINITY MAP

634 Palomar Drive
Redwood City, California

Plate 1





EXPLANATION

- **ef** Engineered Fill
- **af** Artificial Fill
- **Qc** Colluvium
- **Kfs** Sandstone
- —?— Inferred geologic contact
- 85 Strike & dip of bedding
- 70 Strike & dip of joint
- Extinct seep (active in 2019-2020)
- (1) Approx. Boring Location (08.2021)
- (4) Approx. Perc Test Location (11.2000, Langley Hill Quarry)
- A A' Line of Cross Section A-A'

N

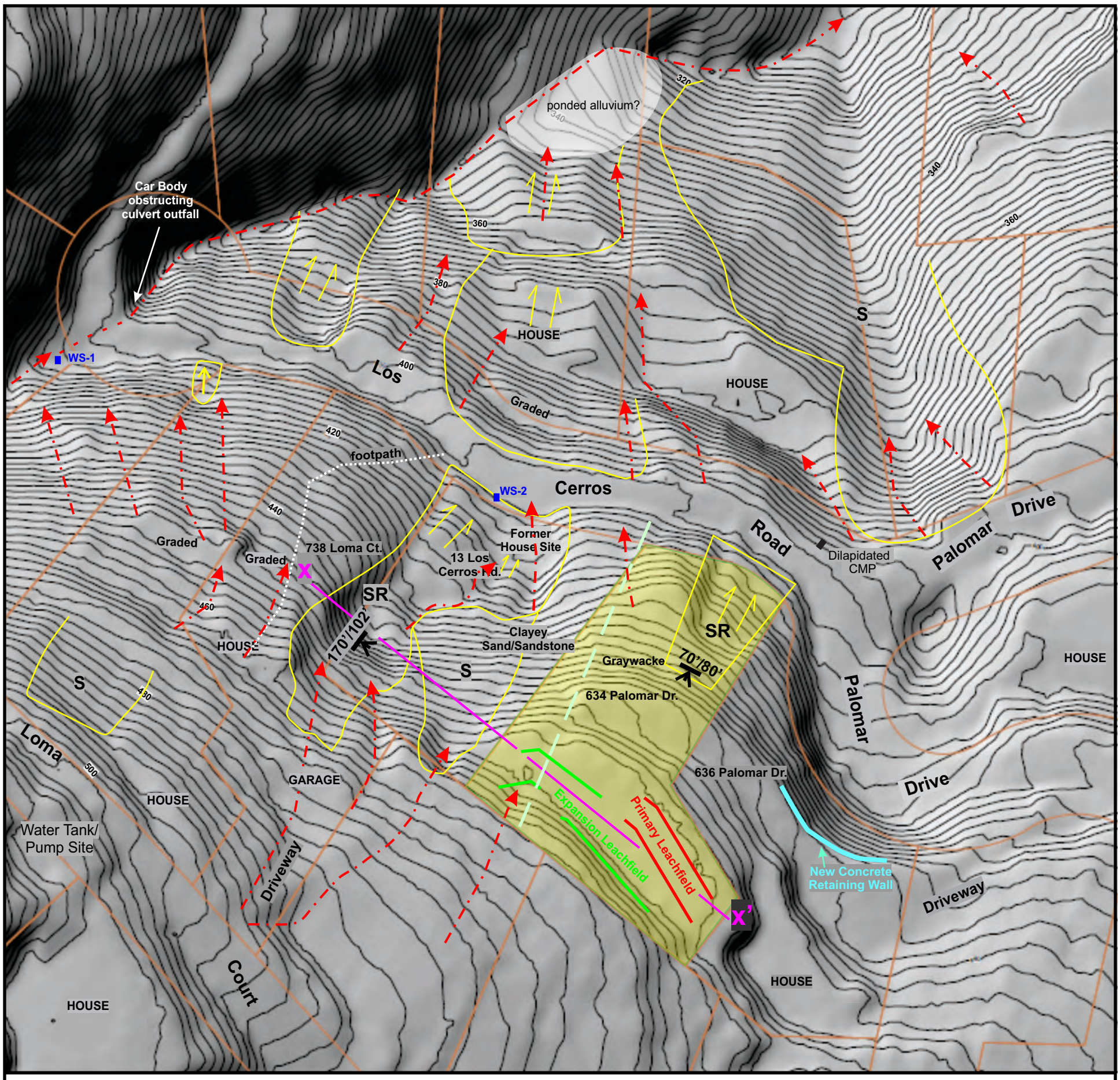
20 ft.
Scale

Sources:

Site Plan: Guiliani & Kull, Inc.
Sheet S1 Topographic Survey
Dated 03.24.2017

Leachfield: Lea & Braze Engineering, Inc.
Sheet SS-1, Septic Construction Plan
Job: 2200474, rev. date 12.10.2020

ATLAS	Job No.: 91-55905-C Approved: JEB Date: 09.27.2021	**SITE PLAN, CROSS SECTION A-A'** 634 Palomar Drive Redwood City, California	**Plate 2**



EXPLANATION

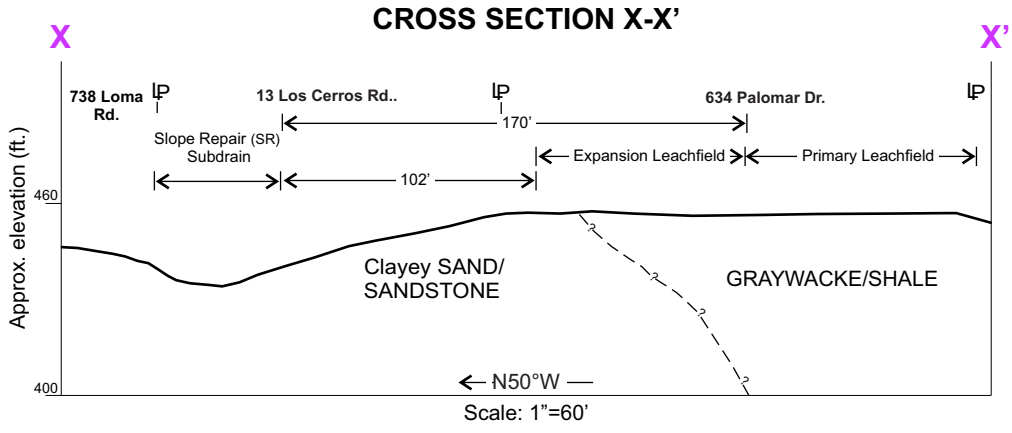
- Approximate limits of slope inflection/feature
- Direction of landslide movement
- Direction of debris slide movement
- **SR** Slope repair
- **S** Scoured surface from uncontrolled historic/recent runoff
- Flow direction of uncontrolled runoff
- 170'/102' Approximate distance from proposed Primary/Expansion Leachfields from site and off-site subdrains
- X——X' Line of Cross Section X-X'

N

60 ft.
Scale

Base Map from 2017 San Mateo County LiDAR and parcel database

CROSS SECTION X-X'



Scale: 1"=60'

ATLAS	**Job No.:** 91-55905-C **Approved:** JEB **Date:** 10.01.2021	**GEOMORPHIC MAP, CROSS SECTION X-X'** 634 Palomar Drive Redwood City, California	**Plate** 3

Photo 1a. Southeast view along top of cut slope along southwest margin of Site. Inferred 18% northeast facing native slope extends across property line fence.

Photo 1b. Exposure of closely jointed shale and graywacke at arrow in Photo 1a.

Photo 2a.Norhterely view along Palmar Drive cut slope bordering northeast side of 636 Palomar Drive.

Photo 2b. Exposure of recumbent fold in closely jointed shale and graywacke at arrow in Photo 2a.

Photo 3a. Easterly view along Los Cerros Rd cut across nose of spur separating site from vacant lot at 13 Los Cerros Rd. where 1982 landslide damaged house.

Photo 3b. Exposure at arrow in Photo 3a of closely jointed shale and graywacke mantled by Gravely Clayey Sand colluvium .

Photo 4a. Northwest view seasonal channel intersection with Los Cerros Road. Arrow points to location of Balance Hydrologics (2014) creek Water Sample.

Photo 4b. Exposure of closely jointed graywacke in bank of the dry channel about 100 feet downstream from the sample location in Photo 4a.

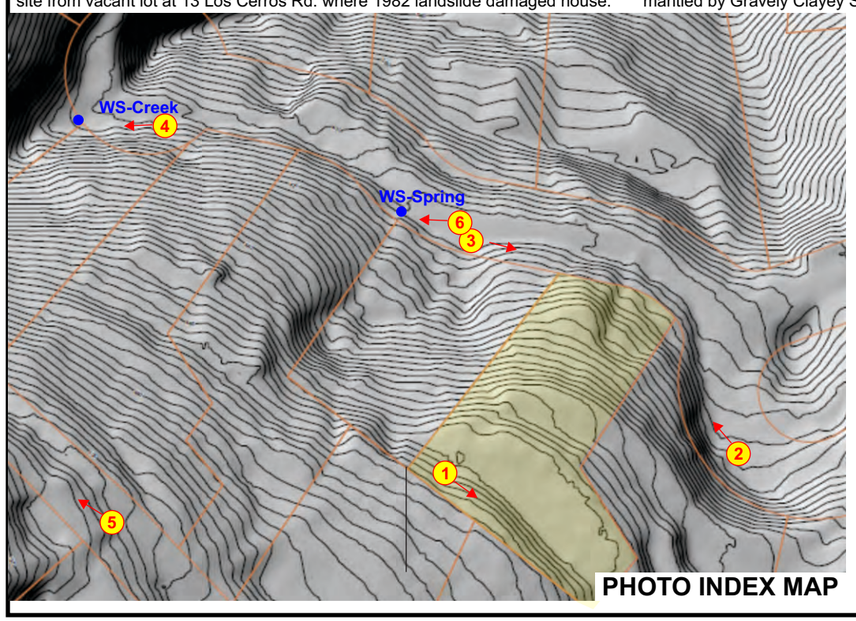


PHOTO INDEX MAP

EXPLANATION

2 Approx. line of sight, Photo 2

WS Balance Hydrologics (2014) water sample location

N

~100 ft.
Scale

Base map from 2017 San Mateo Co. LiDAR and parcel database

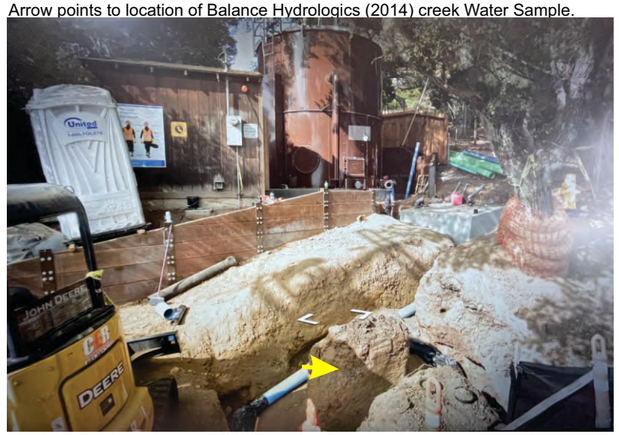


Photo 5. Northwest view of 2020 construction of water tank and booster pump at Cal Water Service Station 112 across from 742 Loma Ct. About 50 feet of new 6" diameter pressure line pipe was connected to the pre-existing line installed some time before 1985. Arrow points to trench exposure of soil similar to that reportedly underlying the landslide on 13 Los Cerros Rd. and 738 Loma Ct.

Photo 6. West view of Balance Hydrologics 738 Loma Ct. spring water sample onto Los Cerros Rd.Gutter that drains to catch basin/culvert system at head of stream across road from Photo 4a.

ATLAS

Job No.:	91-55905-C
Approved:	JEB
Date:	10.01.2021

PHOTO GALLERY

634 Palomar Drive
Redwood City, California

Plate 4

APPENDIX A

Logs of Soil Exploration and Laboratory Test Results

Plate A1 – Log of Boring 1
Plate A2 – Log of Boring 2
Plate A3 – Log of Boring 3
Plate A4 – Log of Boring 4
Plate A5 – Key to Borings
Plate A6 – Rock Hardness & Weathering Chart

BORING 1

Equipment Truck-Mounted Solid Fight Auger

Elevation ~35 ft. **Date** 08/21/2021

Dry Density (pcf)	Moisture Content %	Blows/Foot (SPT)	Depth (ft.)	blows/ft 0–50	Sample	USCS	
93.1	9.4	50/5"	0–5			SM	Yellow brown Silty SAND with Gravel, moist, very dense (**af**)
	6.5	61	5–10			ROCK	Very dark brown GRAYWACKE, slight to moderately weathered, closely fractured, hard (Franciscan Bedrock)
		41	10–15			ROCK	Brown yellow brown SILTY, Clayey SANDSTONE w/ hard, angular SHALE fragments to ½", very weathered, closely fractured, soft (Franciscan Bedrock)
	5.3	50/5"	15–19			ROCK	Very dark brown GRAYWACKE, very weathered, closely fractured, moderately hard to hard (Franciscan Bedrock)
		50	19–20				Terminated @ 19'

*Approximate elevation from Plate 2

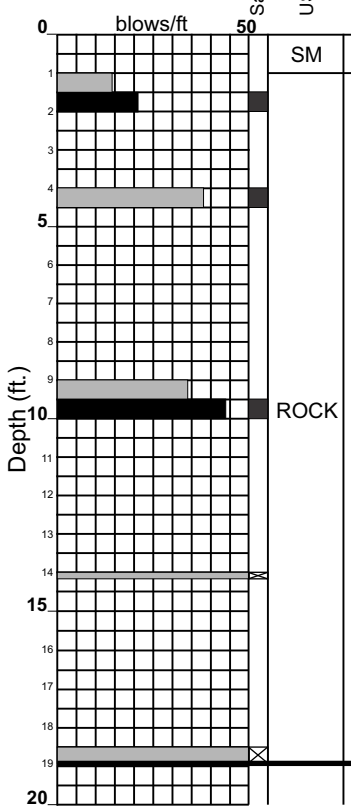
ATLAS	**Job No.:** 91-55905-C **Approved:** JEB **Date:** 09.17.2021	**LOG OF BORING 1** 634 Palomar Drive Redwood City, California	**Plate** A1

BORING 2

Equipment Truck-Mounted Solid Fight Auger

Elevation ~35 ft. **Date** 08/21/2021

Dry Density (pcf)	Moisture Content %	Blows/Foot (SPT)
104.5	12.7	34
122.3	7.3	38
132.1	6.4	77
		50/2"
		50



Yellow brown Silty SAND with Gravel, moist, dense (**af**)

Very dark brown GRAYWACKE, slight to moderately weathered, closely fractured, moderately hard to hard (Franciscan Bedrock)

Terminated @ 19'

*Approximate elevation from Plate 2

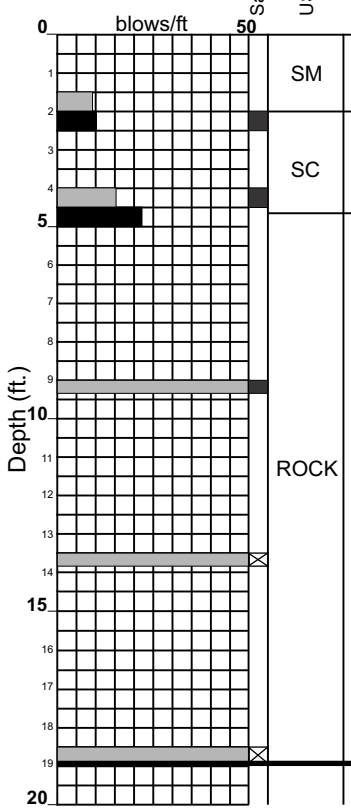
ATLAS	**Job No.:** 91-55905-C **Approved:** JEB **Date:** 09.17.2021	**LOG OF BORING 2** 634 Palomar Drive Redwood City, California	**Plate** A2

BORING 3

Equipment Truck-Mounted Solid Fight Auger

Elevation ~35 ft. **Date** 08/21/2021

Dry Density (pcf)	Moisture Content %	Blows/Foot (SPT)
90.4	9.2	19
101.5	8.1	37
122.4	6.3	50/4"
		50/4"
		50



Yellow brown Silty SAND with Gravel, moist, medium dense (**af**)

Dark brown Clayey SAND with Gravel, medium dense to dense moist (**Qc**)

Very dark brown GRAYWACKE, slight to moderately weathered, closely fractured, hard (Franciscan Bedrock)

Terminated @ 19'

*Approximate elevation from Plate 2

ATLAS	**Job No.:** 91-55905-C **Approved:** JEB **Date:** 09.17.2021	**LOG OF BORING 3** 634 Palomar Drive Redwood City, California	**Plate** A3

BORING 4

Equipment Truck-Mounted Solid Fight Auger

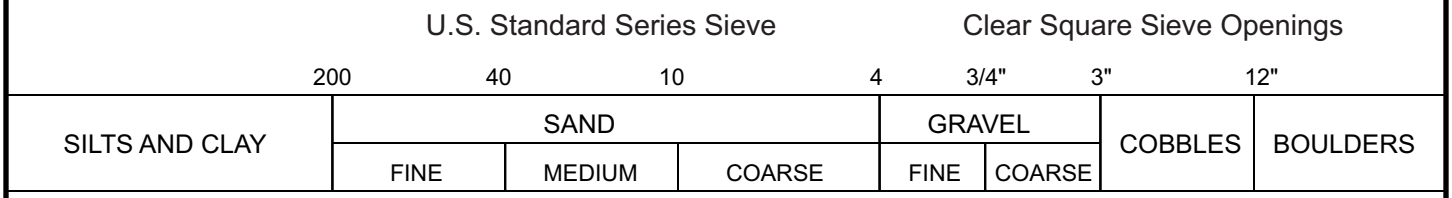
Elevation ~35 ft. **Date** 08/21/2021

Dry Density (pcf)	Moisture Content %	Blows/Foot (SPT)	Depth (ft.)	Sample	USCS	
			0 blows/ft 50			
107.5	5.3	60	1–4		SM	Yellow brown Gravelly SAND, moist, very dense (**af**) concrete fragments
100.5	6.7	28	5–8		SC	Dark brown Clayey SAND with Gravel, moist, medium dense (**Qc**)
		38/3"	9–13		ROCK	Very dark brown GRAYWACKE, slight to moderately weathered, closely fractured, hard (Franciscan Bedrock)
		50/3"	14–19			
112.6	8.8	50	20			Terminated @ 19’

*Approximate elevation from Plate 2

ATLAS	**Job No.:** 91-55905-C **Approved:** JEB **Date:** 09.17.2021	**LOG OF BORING 4** 634 Palomar Drive Redwood City, California	**Plate** A4

			GROUP SYMBOL	Secondary Divisions
COARSE GRAINED SOILS — MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS — MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVEL WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS — MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS — MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS — LIQUID LIMIT IS LESS THAN 50%		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Orangic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS — LIQUID LIMIT IS GREATER THAN 50%		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils.



Grain Sizes

SAND AND GRAVELS	BLOWS/FOOT*
VERY LOOSE	0 -4
LOOSE	4 -10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

Relative Density

SILTS AND CLAYS	STRENGTH **	BLOWS/FOOT*
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	OVER 4	OVER 32

Consistency

* Number of blows of 140 pound hammer falling 30 inches to drive a split spoon, SPT sampler (ASTM D-1586)

** Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation.

Sample location; blow counts listed are from the bottom 12 inches of 18- inch drive sample.

Grab sample

59 Total number of SPT blow counts for sampling interval. Bar graph represents individual 6-inch intervals.

Unified Soil Classification System (ASTM D-2487)

ATLAS

Job No.: 91-55905-C

Approved: JEB

Date: 08.27.2021

KEY TO BORINGS

634 Palomar Drive
Redwood City, California

Plate
A5

ROCK HARDNESS & WEATHERING CHART

ROCK HARDNESS

Very Hard Cannot be scratched with knife or pick. Hand specimens require several hard blows of geologist's hammer.

Hard Can be scratched with knife or pick only with difficulty. Hard blow of hammer required to detach hand specimen.

Moderately Hard Can be scratched with knife or pick. Gouges or grooves up to ¼ inch deep can be excavated by hard blow of point of a geologist's pick. Hard specimen can be detached by moderate blow.

Medium Can be grooved or gouged 1/16 inch deep by firm pressure on knife or pick point. Can be excavated in small chips to pieces about 1 inch maximum size by hand blows of the point of geologist's pick.

Soft Can be gouged or grooved readily with knife or pick point. Can be excavated in chips to pieces several inches in size by moderate blows of pick point. Small thin pieces can be broken by finger pressure.

Very Soft Can be carved with knife. Can be excavated readily with point of pick. Pieces 1 inch or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.

WEATHERING

Fresh Rock fresh, crystals bright, few joints may show slight staining. Rock rings under hammer if crystalline.

Very Slight Rock fresh, crystals bright, few joints may show slight staining. Rock rings under hammer if crystalline.

Slight Rock generally fresh, joints stained, and discoloration extends into rock up to 1 inch. Joints may contain clay. In granitoid rocks some occasional feldspar crystalsare dull and discolored. Rock rings under hammer if crystalline.

Moderate Significant portions of rock show discoloration and weathering effects. in granitoid rocks, most feldspars are dull and discolored; some are clayey. Rock has dull sound under hammer and shows significant loss of strength as compared with fresh rock.

Moderately Severe All rock except quartz discolored or stained. In granitoid rocks, all feldspars dull and discolored and majority show kaolinization. Rock shows severe loss of strength and can be excavated with geologist's pick. Rock goes "clank" when struck.

Severe All rock except quartz discolored or stained. Rock "fabric" clear and evident, but reduced in strength to strong soil. In granitoid rocks, all feldspars kaolinitized to some extent. Some fragments of strong rock usually left.

Very Severe All rock except quartz discolored or stained. Rock "fabric" discernible, but mass effectively reduced to "soil" with only fragments of strong rock remaining.

Complete Rock reduced to "soil". Rock fabric not discernible or discernibleonly in small scattered locations. Quartz may be present as dikes or stringers.

FRACTURE SPACING

	Joint or Fracture Spacing Descriptor	True Spacing
1	Extremely Widely Spaced	Greater than 10 feet (<3m)
2	Very Widely Spaced	3 to 10 feet (1 to 3m)
3	Widely Spaced	1 to 3 feet (300 mm to 1m)
4	Moderately Spaced	0.3 feet to 1 foot (100 to 300 mm)
5	Closely Spaced	0.1 feet to .3 feet (30 to 100 mm)
6	Very Closely Spaced	Less than 0.1 feet (<30 mm)

ATLAS

Job No.: 91-55905-C
Approved: JEB
Date: 08.27.2021

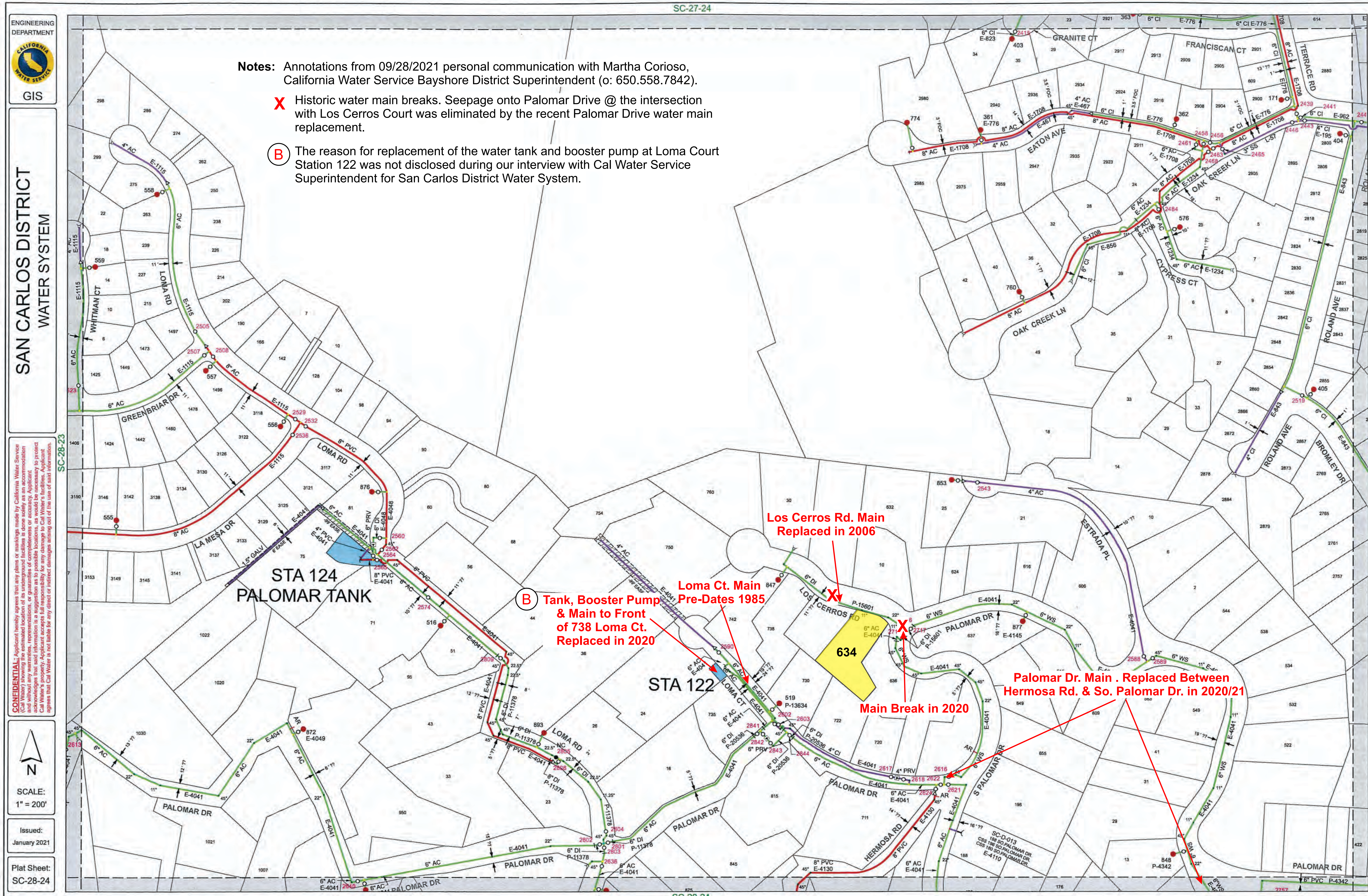
ROCK HARDNESS & WEATHERING CHART
634 Palomar Drive
Redwood City, California

Plate
A6

APPENDIX B

California Water Service Bayshore District

1. San Carlos District Water System (Sheet SC-28-24, dated 01.2021)
2. Legend


ENGINEERING DEPARTMENT
CALIFORNIA WATER SERVICE
GIS
SAN CARLOS DISTRICT
WATER SYSTEM
CONFIDENTIAL: Applicant hereby agrees that any plans or markings made by California Water Service (Cal Water) showing the estimated location of its underground facilities is done solely as an accommodation and without any warranties, representations, or guaranties of completeness or accuracy. Applicant acknowledges that said information is a suggestion as to possible locations, as would be necessary to protect Cal Water's property. Applicant accepts full responsibility for any damage to Cal Water's facilities. Applicant agrees that Cal Water is not liable for any direct or indirect damages arising out of the use of said information.
N
SCALE:
1" = 200'
Issued:
January 2021
Plat Sheet:
SC-28-24
SC-27-24
SC-28-23
SC-28-25
SC-29-24
Notes: Annotations from 09/28/2021 personal communication with Martha Corioso, California Water Service Bayshore District Superintendent (o: 650.558.7842).
X Historic water main breaks. Seepage onto Palomar Drive @ the intersection with Los Cerros Court was eliminated by the recent Palomar Drive water main replacement.
B The reason for replacement of the water tank and booster pump at Loma Court Station 122 was not disclosed during our interview with Cal Water Service Superintendent for San Carlos District Water System.
STA 124
PALOMAR TANK
STA 122
B Tank, Booster Pump & Main to Front of 738 Loma Ct. Replaced in 2020
Loma Ct. Main Pre-Dates 1985
Los Cerros Rd. Main Replaced in 2006
Main Break in 2020
634
Palomar Dr. Main . Replaced Between Hermosa Rd. & So. Palomar Dr. in 2020/21
GRANITE CT
FRANCISCAN CT
TERRACE RD
EATON AVE
OAK CREEK LN
CYPRESS CT
ROLAND AVE
BROMLEY DR
ESTRADA PL
LOMA RD
WHITMAN CT
GREENBRIAR DR
LA MESA DR
LOMA CT
LOS CERROS RD
PALOMAR DR
S PALOMAR DR
HERMOSA RD

Legend

- Access Manhole
- Blowoff
- Catch Basin
- Chemical Injector
- Critical Customer
- Hydrant
- Hydrant (Private)
- Interconnect
- Lateral Point
- Pull Box
- Pump
- Sampling Station
- Tank
- Termination
- Water Network Structure
- Well

Control Valves:

- Air Release Valve
- Altitude Valve
- Backflow Control Valve
- Combination Valve
- Double Check Valve

Control Valves (cont.):

- Pressure Reducing Valve
- Pressure Relief Valve
- Pressure Sustaining Valve
- Simple Check Valve

Fittings:

- Cap
- Cross
- Elbow
- Expansion Joint
- Pipe Change
- Plug
- Other
- Reducer
- Saddle
- Tapping Sleeve
- Tee
- Vertical Offset

Meters:

- Flow Meter
- Interconnect Meter
- Service Connection Meter

System Valves:

- Ball Valve
- Butterfly Valve
- Gate Valve
- Normally Closed Valve

Water Mains (by diameter):

- Unknown
- Smaller than 6"
- 6"
- 8"
- 10" to 12"
- Larger than 12"
- Main with Cathodic Protection

Other Lines (Drain, Flushing, etc.):

- Unknown
- Smaller than 6"
- 6"
- 8"
- 10" to 12"
- Larger than 12"

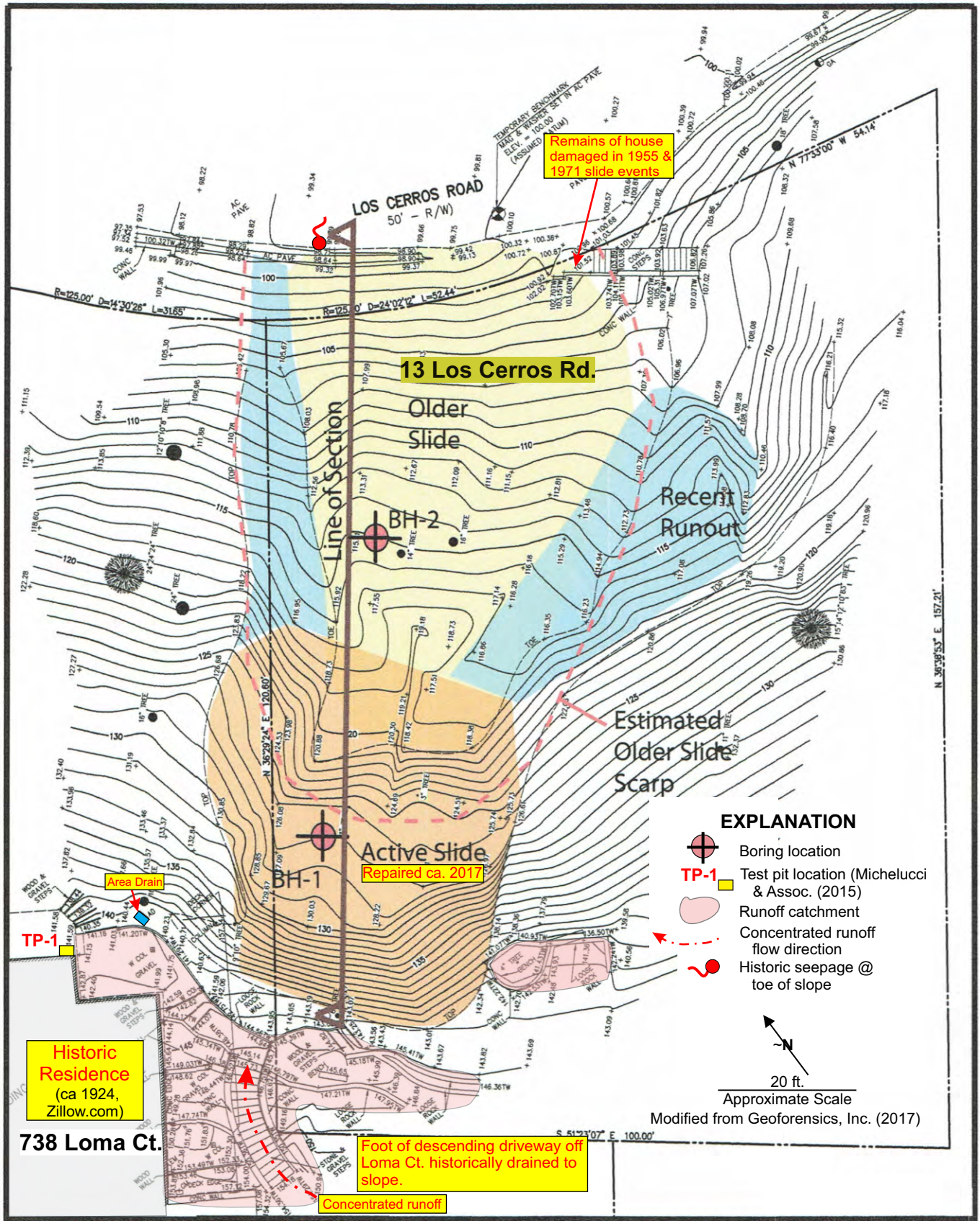
- Casing
- Conduit
- Other Agency Pipe

- Cal Water-Owned Property
- Easement
- Grid Boundary
- Parcel*
- Station
- Underground Enclosure

APPENDIX C

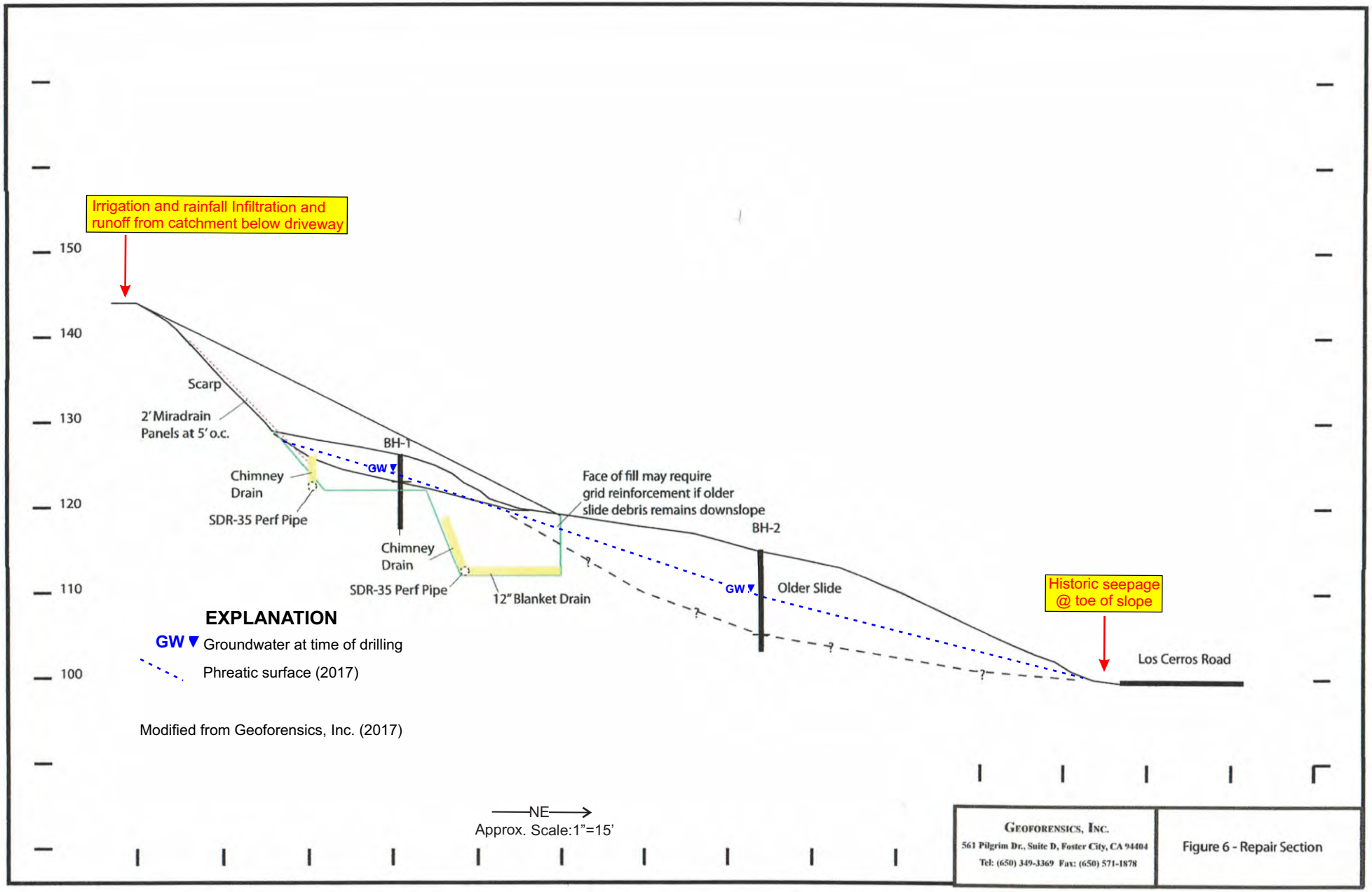
Seepage and Landslide @ 738 Loma Court, Redwood City, California

This appendix presents illustrations of adverse drainage conditions at the head of a retrogressive landslide that has persisted for decades without pursuit of characterizing the source and mitigation for causative perched ground water. Seepage was inferred from Geoforensics, Inc. (2017) boring data and cross section, and an earlier reconnaissance study by Michelucci & Associates (2015) to evaluate seepage and deflection of the nearly century-old residence. Neither report presented a characterization of the drainage conditions at the head of the landslide scarp.



GEOFORENSICS, INC.
561 Pilgrim Dr., Suite D, Foster City, CA 94404
Tel: (650) 349-3369 Fax: (650) 571-1878

Figure 4 - Site PLan


Irrigation and rainfall Infiltration and runoff from catchment below driveway
150
140
130
120
110
100
Scarp
2' Miradrain Panels at 5' o.c.
BH-1
GW
Chimney Drain
SDR-35 Perf Pipe
Face of fill may require grid reinforcement if older slide debris remains downslope
BH-2
Chimney Drain
SDR-35 Perf Pipe
12" Blanket Drain
GW
Older Slide
Historic seepage @ toe of slope
Los Cerros Road
EXPLANATION
GW Groundwater at time of drilling
Phreatic surface (2017)
Modified from Geoforensics, Inc. (2017)
NE
Approx. Scale:1"=15'
GEOFORENSICS, INC.
561 Pilgrim Dr., Suite D, Foster City, CA 94404
Tel: (650) 349-3369 Fax: (650) 571-1878
Figure 6 - Repair Section

LOG OF BORING

DEPTH (ft)	SAMPLE NUMBER	SAMPLE LOC.	BLOW COUNTS (12 inches)	MATERIAL DESCRIPTION	DRY DENSITY (pcf)	MOISTURE CONTENT (70)
				Sandy CLAY - red brown, wet, soft to firm (CL)		
5	1-1		61/9"	Clayey Gravelly SAND - red brown, sl. moist, dense (RX)	79.3	42.1
	1-2		88/10"	Clayey SAND with rock fragments - green brown with red brown, sl. moist, dense (RX)		23.7
10				Bottom of Boring @ 9.5 ft Groundwater at 2 feet, rose to 1 foot		
15						
20						
25						
30						

Logged by: BA
Job No: 217101
Drilled on 5/3/17

Minute Man Portable Drilling Rig
70 Pound Hammer
Groundwater at 1 foot

Mod. Cal Sampler
SPT Sampler

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561 Pilgrim Dr., Suite D, Foster City, CA 94404
Tel: (650) 349-3369 Fax: (650) 571-1878

Figure A1 - Log of Boring 1

LOG OF BORING

DEPTH (ft)	SAMPLE NUMBER	SAMPLE LOC.	BLOW COUNTS (12 inches)	MATERIAL DESCRIPTION	DRY DENSITY (pcf)	MOISTURE CONTENT (70)
	2-1		19	Sandy CLAY - red brown,moist to wet, firm (CL/Als)	92	32
5						
	2-2		25	Clayey Gravelly SAND - blue green and red brown, sl. moist, firm (CL/Als)	97.5	27.6
10						
	2-3		49	Clayey SAND with rock fragments - red brown and blue green, sl. moist, medium dense (RX)		12.4
15				Bottom of Boring @ 13.5 ft Ground Water at 12 feet		
20						
25						
30						

Logged by: BA
Job No: 217101
Drilled on 5/3/17

Minute Man Portable Drilling Rig
70 Pound Hammer
Groundwater at 12 feet

Mod. Cal Sampler
SPT Sampler

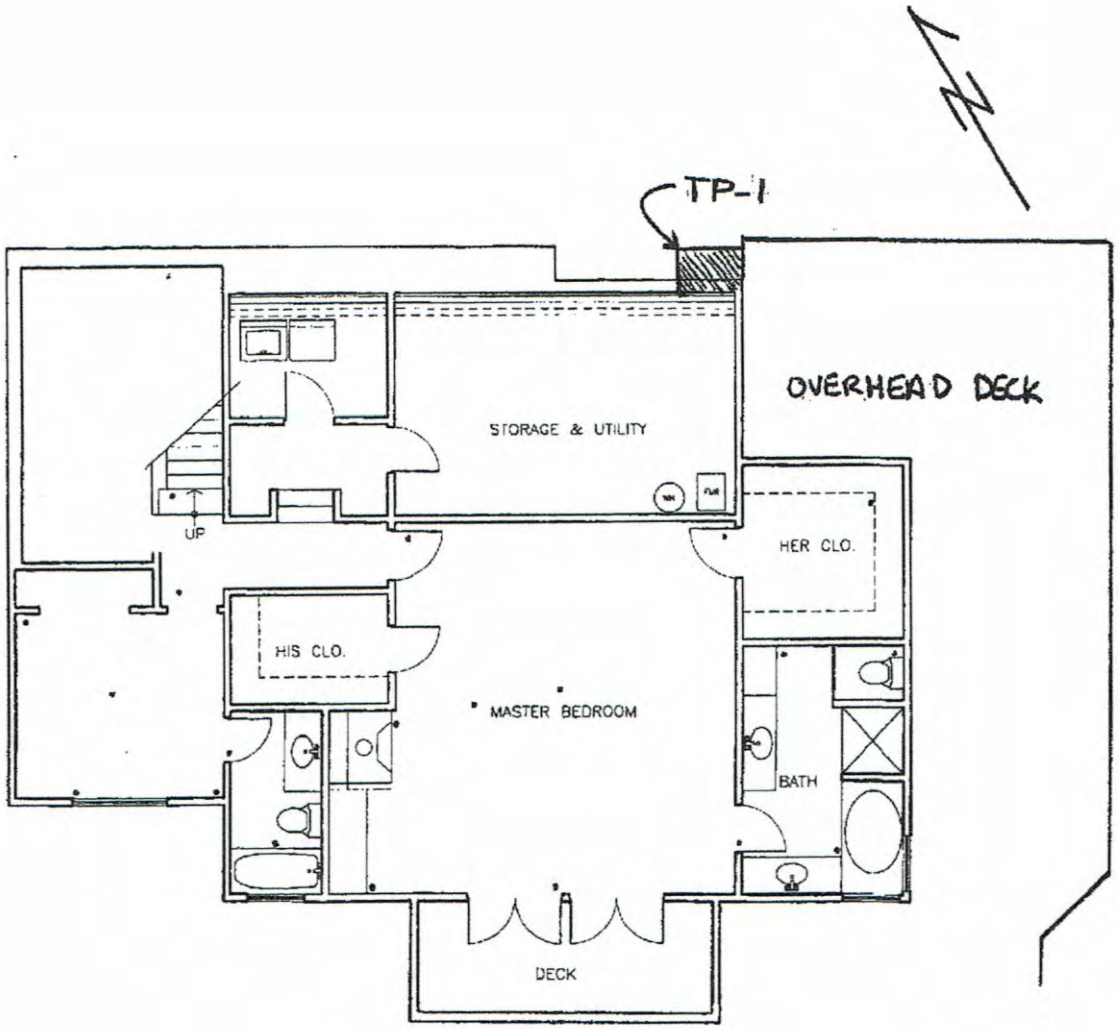
GEOFORENSICS, INC.
561 Pilgrim Dr., Suite D, Foster City, CA 94404
Tel: (650) 349-3369 Fax: (650) 571-1878

Figure A2 - Log of Boring 2

Site Plan*

738 Loma Court

Redwood City, California



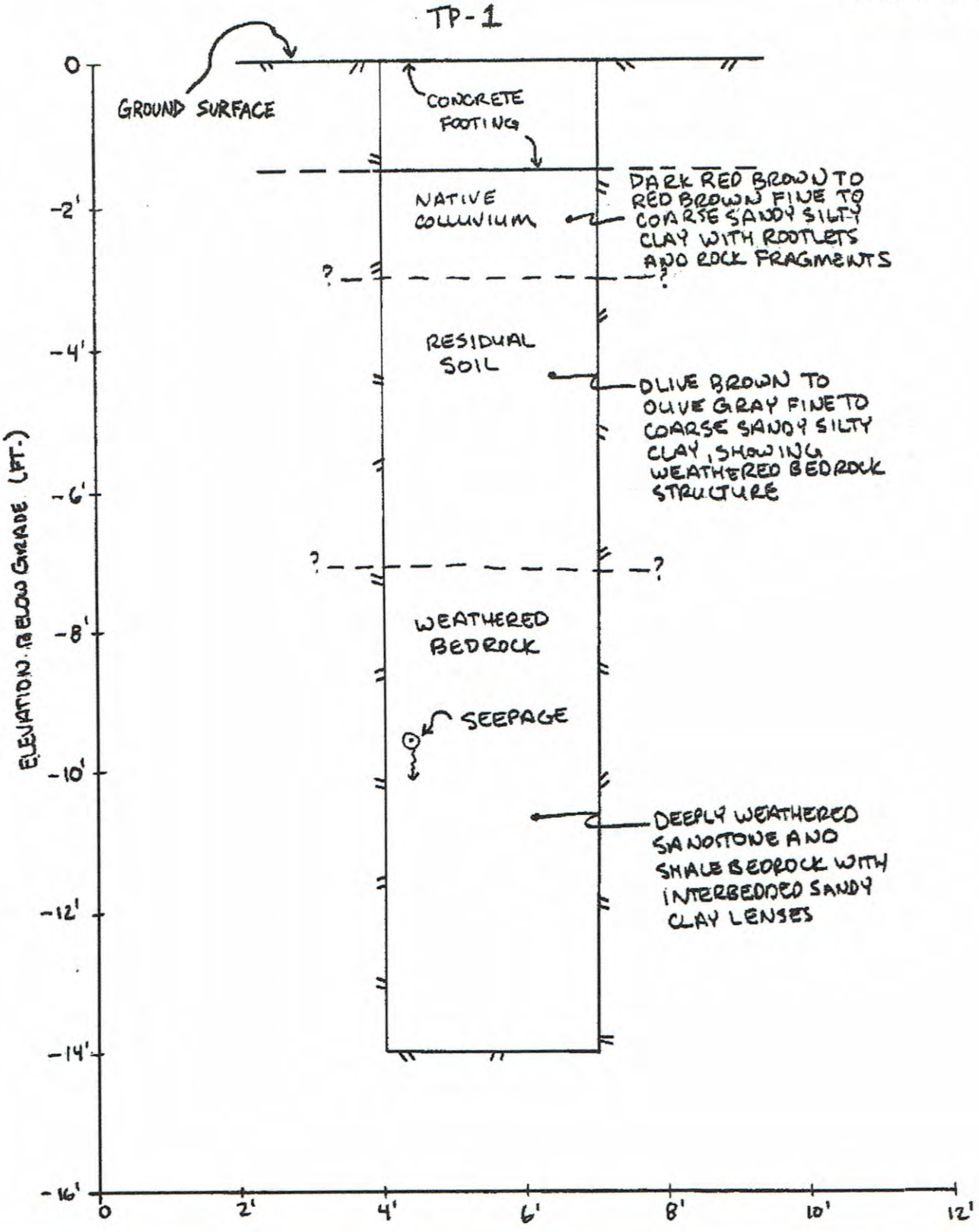
Scale: 1"=10' ±

*Base map taken from an undated existing ground floor plan (Sheet A-1) prepared by Luis Barbosa.

Job No. 14-4422	Michelucci & Associates	Figure 2

Test Pit Log*

Scale: 1"=2' ±



Job No. 14-4422	Michelucci & Associates	Figure 3

November 5, 2021
CSA Proj No: SMC6427A

TO: Gregory Smith PG REHS
Supervisor, Water Protection and Land Use Programs
San Mateo County Environment Health Services
2000 Alameda de las Pulgas, Suite 100
San Mateo, California 94403

SUBJECT: **Supplemental Geotechnical Peer Review**
RE: Onsite Wastewater Treatment System (OWTS)
PLN2020-00251
634 Palomar Drive

At your request, we have completed a supplemental geotechnical peer review of the OWTS application using:

- Supplemental Engineering Geologic Study (letter-report) prepared by Atlas Consultants, Inc., dated October 4, 2021;
- Engineering Geologic Consultations (report) prepared by Steven F. Connelly, CEG., dated August 10, 2021; and
- Onsite Systems Manual (OSM) prepared by the County Department of Environmental Health dated May, 2016.

In addition, we have reviewed pertinent technical documents, maps, and reports from our office files, as well as photographs and letters provided to us by the County.

DISCUSSION

We understand the applicant proposes to construct a new residence serviced by an Onsite Wastewater Treatment System (OWTS). This geotechnical peer review is limited to aspects of the proposed septic system, and is not intended to address all

geotechnical aspects of the proposed project. In our previous geotechnical peer review letter dated June 14, 2021, we recommended completion of supplemental engineering geologic evaluations and clarifications in conformance with the Onsite System Manual prepared by the County Department of Environmental Health. We refer to our previous geotechnical peer review letter dated June 14, 2021 for a more detailed description of our understanding of the proposed project as well as a description of the site conditions.

CONCLUSIONS AND RECOMMENDED ACTION

The Project Engineering Geologist (Atlas) has completed a supplemental study at the subject property to address the items presented in our prior peer review letter. The applicant's Consultant has completed additional evaluation of local topographic and geologic conditions including a review of available LiDAR resources and supplemental subsurface investigative borings to a maximum depth of 19 feet below the ground surface in the vicinity of the proposed primary and expansion leachfields. We understand groundwater was not encountered in the recent borings. Based on mapping completed by the Project Engineering Geologist, we understand that proposed leachfields are to be located at least 70 feet from slope mitigation improvements on the site, and over 100 feet from slope mitigation projects on neighboring properties. The applicant's Engineering Geologist also finds that the OWTS is not within 100 feet of unmitigated landslides, and presents a low risk of surfacing effluent, contaminating water quality, or influencing drainage or slope issues on 738 Loma Court which is located one property to the northwest of the subject property.

The County Onsite Systems Manual (OSM) includes general guidelines for geotechnical or geologic reports. The OSM notes that these reports should collect and use topographic, geologic and groundwater data to evaluate slopes, proximity of cuts or embankments, areas of fill, adequate spacing of trenches, as well as impacts to water quality, stability and set-backs from existing unstable geologic features (i.e., unmitigated landslides). Based on our review of the referenced letter-report dated October 4, 2021, we find that the Project Engineering Geologist has completed a supplemental study and provides recommendations and findings that adequately address the items raised in our previous geotechnical peer review letter, and complies with the requirements of the County OSM.

Consequently, we do not have engineering geologic or geotechnical engineering objections to approval of the subject OWTS application.

LIMITATIONS

This supplemental geotechnical peer review has been performed to provide technical advice to assist the County with its discretionary permit decisions. Our services have been limited to review of the documents previously identified, and a visual review of the property. Our opinions and conclusions are made in accordance with generally accepted principles and practices of the geotechnical profession. This warranty is in lieu of all other warranties, either expressed or implied.

Respectfully submitted,

COTTON, SHIRES AND ASSOCIATES, INC.
COUNTY GEOTECHNICAL CONSULTANT

Craig Stewart
Senior Geologist
PG 9786

David T. Schrier
Principal Geotechnical Engineer
GE 2334

DTS:CS:TS

LEA & BRAZE ENGINEERING, INC.
CIVIL ENGINEERS | LAND SURVEYORS

April 4, 2023

To:
County of San Mateo Planning and Building Department
County of San Mateo Planning Commission

Subject:
634 Palomar – Response to Report by Balance Hydrologics
PLN2020-00251

Please accept this letter as our formal assessment of the report update provided by Balance Hydrologics (BH) during the March 8th, 2023 planning commission hearing and our summary and review of the provided information.

Overall, the Balance Hydrologics report update provides no new findings or information relevant to proposed development. Balance Hydrologics overestimates the size of the development citing inaccurate square footages and refers to a list of items that "should have been identified in the Initial Study". Upon a complete re-review of the full Mitigated Negative Declaration and Initial Study document these items are listed in the reviewed documents including the original 2014 report by Balance Hydrologics.

Balance Hydrologics provided a review of the history of the area and notes that all slides in this area had "occurred during periods of above-average seasonal rainfall". Given the amount of rainfall this current storm season no evidence of new slides has occurred on the subject property or on the repaired slope on the neighboring vacant lot, as the report suggests. The project geologist and project geotechnical engineer have also reviewed the history of the area with actual subsurface reviews, borings, soil testing and proven adequate structure and support for the development. Analysis of these findings was reviewed by the County staff, County third party reviewers and the Initial Study which also found the information provided accurate and in favor of the development. Section 7 of the Initial Study provides a through review of the geology concerns and with County review provides the required mitigation measures necessary to address the concerns.

In the section titled Hydrogeology the Balance Hydrologics report notes that they are "hypnotizing" the findings of a spring and the source of the areas ground water. Boring locations or subsurface testing of this finding was not presented. As reviewed in the supplied project geotechnical study, supplemental reports and percolation testing pits no groundwater was found on the project site.

Bay Area Corporate Office:
2495 Industrial Parkway West
Hayward, CA 94545
Ph: (510) 887-4086 • Fax: (510) 887-3019

Lea Braze Engineering. Inc
www.leabraze.com

Regional Offices:
Roseville (Sacramento) (916) 966-1338
Dublin (Greater East Bay) (925) 452-2362
San Jose (Coming Soon)

As County staff confirmed this area is not located in a serviceable area for municipal sewer treatment and therefor required to provide an onsite wastewater treatment system (OWTS). Lea & Braze has designed this system based on the field testing results and site borings to meet all applicable setbacks and County and State standards. Our design uses a three 1,500 gallon tank method of storage and timed dispersal of the effluent from the house. These timed dosage system controls the amount of effluent released from the tank for filtration into the ground. The project site, as thoroughly described in the reports by Atlas and site testing, has been found to have a percolation rating of A, or the top percolation potential for a septic system. All information on effluent amounts is provided on the design plans and approved by the County Environmental Health Department. The section also notes that the neighborhood imports water from CalWater and that neighborhood septic systems add "tens of additional acre feet off effluent and irrigation" to the entire area (that is before this development) and yet even with this input there has been no significant groundwater found at 634 Palomar. While large amounts of subsurface water flows may be an issue for neighboring sites that doesn't mean it is a global problem. Soil conditions and makeup vary across properties and areas which is why the County requires specific site testing for every individual project and does not generalize requirements of an entire neighborhood.

In conclusion we believe that the past decade of site reviews, studies and through site specific investigations of 634 Palomar have proven it suitable and beneficial for development. There have been numerous letters, reports and documents submitted with concern for this development. It is evident that with the resubmission of some of these items that thorough review of the Initial Study, County report and the development consultant findings was not completed. County staff has noted review of all reports and provide a very detailed response to these in their mitigations and Executive summary. Lea & Braze takes great responsibility in public safety and with that we urge the County and Commissioners to review and trust actual findings and evidence over hypotheses and conjuncture and trust in the review of the governing agencies and professional recommendations that deem this development suitable and safe.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT D

GCD Inc.

Focused Site Drainage Assessment

738 Loma Court, Redwood City, CA

04/13/2023

GEOTECHNICAL CONSTRUCTION & DESIGN, INC.
7236 Via Mimosa, San Jose, CA. 95135
Email: gcdinc94@aol.com Cell: 408.812.4355

April 13, 2023

Ms. Denise Charlebois
738 Loma Court
Redwood City, CA

REGARDING: FOCUSED SITE DRAINAGE ANALYSIS
738 LOMA COURT, REDWOOD CITY, CA.

Dear Ms. Charlebois,

In response to your request, we have prepared the following focused site drainage analysis report your use. Our inspection was made, and this focused site drainage analysis report was prepared by a trained and experienced, licensed Professional Engineer and General Engineering Contractor.

Our reconnaissance, performed on April 11, 2023, was focused on and limited to a visual inspection and analysis of site drainage conditions as well as the preparation of this report. The professional opinions offered are based on our observations of apparent conditions existing at the time of the inspection (latent and concealed defects and deficiencies are excluded). Document search and review, destructive testing, subsurface investigation, structural calculation, geologic study and seismic analysis, as well as the preparation of engineering specifications and construction drawings for any recommended repairs or improvements are beyond the scope of services provided. However, we did review the drainage studies prepared Atlas, ltr. dtd. 10/04/23 and Balance Hydrologics, ltr. dtd. 05/07/23 & rpt. dtd. 04/16/14. The information derived from these reports (See Appendix 3) in combination with the observations made in the course of our reconnaissance of the site form the basis for the recommendations and conclusions presented here-in-after.

PLEASE READ THIS REPORT CAREFULLY, A FULL UNDERSTANDING OF THE INFORMATION IT CONTAINS MAY BE CRITICAL TO THE CONTINUED EXCELLENT PERFORMENCE OF THE SITE'S DRAINAGE CONTROL SYSTEMS AND THE SUCCESSFUL OUTCOME OF ANY RECOMMENDED OR PLANNED IMPROVEMENTS!

CURRENT OBSERVATIONS: We found the site's drainage system to be clean and in good serviceable condition. Its performance was documented with a video recording made under storm conditions. Our review of the video found the drainage systems to be functioning well in directing and capturing surface flow.

GEOTECHNICAL CONSTRUCTION & DESIGN, INC.
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Our reconnaissance of the site (both the upper and lower parcels) found that it has been provided with a comprehensive and robust drainage control system that includes area drains, subdrains, catch basins and gutter drains (see appendix 1). The site's extensive drainage control system has been augmented with well thought out hardscaping and landscaping i.e., terraced and drained retaining walls, storm water diversion swales, ground cover, shrubs, and trees.

The extensive drainage control systems appear to have been properly installed and are well maintained. Further, they have proven to be successful in keeping your property stable, particularly on the lower parcel with its recent (2017) land slide repair area. Moreover, it is critical that any modifications which can introduce moisture to the soil or significantly change the present waterflow must be engineered to ensure the current stability of your property is not degraded. Specifically, the steep grades on your property and the springs under it as well as surface drainage patterns on the adjacent parcels must be maintained in their current configuration or, if modified, surface and subsurface flow across or under your property must not be increased.

MAINTENANCE: The site drainage system will require continuing care which should be incorporated into your property maintenance program. Specifically:

1. Gutters, down spouts, catch basins and gutter drains should be cleaned and the free flow of all buried drain lines should be verified at the beginning and middle of each winter season (I did not flow test the system).

2. Area drainage should be observed during rainy periods and steps taken to direct all surface flow away from the structure and into the drainage control system.

3. I recommend that, if the drains become clogged, a video survey of the condition of your buried drainage control system be considered. The work should document and resolve any blockages or pipe failures.

4. I recommend monitoring surface flow during storm conditions with local regrading as necessary to eliminate any puddle areas at the home's perimeter and to direct surface flow away from the structure and into the yard area drain inlets. In addition, you may want to consider adding area drains in the low planter beds along the homes front foundation line and replacing your small plastic yard area drain inlets larger inlets.

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Unanticipated subsurface conditions may develop during the life of the structure that cannot be predicted from the limited visual inspection performed. Our inspection, oral comments and this report are not intended to be used as a guarantee or warranty, expressed or implied, regarding the adequacy, performance or condition of any inspected structure. During the life of the structure, there may develop unanticipated subsurface conditions that cannot be predicted from the limited visual inspection performed. This report is not a compliance inspection or certification for past or present governmental codes or regulations of any kind.

This report is not a complete distress survey nor is it intended for use as a complete description of the property. It is intended to provide information regarding current site drainage conditions and to outline appropriate improvements for your consideration. Our observations have been made using the degree of care and skill originally exercised, under similar conditions, by reputable Professional Engineers practicing in this area. No other warranty, expressed or implied, is made.

ARBITRATION OF DISPUTES: ANY CONTROVERSY OR CLAIM FOR DAMAGES ARISING OUT OF OR RELATING TO THIS CONDITION ASSESSMENT OR ANY WORK PERFORMED IN CONNECTION THEREWITH INCLUDING BUT NOT LIMITED TO NEGLIGENCE, ERRORS OR OMISSION SHALL BE SETTLED IN ACCORDANCE WITH THE CONSTRUCTION INDUSTRY ARBITRATION RULES OF THE AMERICAN ARBITRATION ASSOCIATION OR ALTERNATE DISPUTE RESOLUTION FORM ACCEPTABLE TO ALL PARTIES.

CONTRACTOR LICENSING INFORMATION: STATE LAW REQUIRES ANYONE WHO CONTRACTS TO DO CONSTRUCTION WORK TO BE LICENSED BY THE CONTRACTORS STATE LICENSE BOARD IN THE LICENSE CATEGORY IN WHICH THE CONTRACTOR IS GOING TO BE WORKING IF THE TOTAL PRICE ON THE JOB IS $300 OR MORE (INCLUDING LABOR AND MATERIALS).

IF YOU CONTRACT WITH SOMEONE WHO DOES NOT HAVE A LICENSE, THE CONTRACTORS STATE LICENSE BOARD MAY BE UNABLE TO ASSIST YOU WITH A COMPLAINT. YOUR ONLY REMEDY AGAINST AN UNLICENSED CONTRACTOR MAY BE IN CIVIL COURT AND YOU MAY BE LIABLE FOR DAMAGES ARISING OUT OF ANY INJURIES TO THE CONTRACTOR OR HIS OR HER EMPLOYEES.

THE BOARD HAS COMPLETE INFORMATION ON THE HISTORY OF LICENSED CONTRACTORS, INCLUDING ANY POSSIBLE SUSPENSIONS, REVOCATIONS, JUDGMENTS, AND CITATIONS. THE BOARD HAS OFFICES THROUGHOUT CALIFORNIA. PLEASE CHECK THE GOVERNMENT PAGES ON THE WHITE PAGES FOR THE OFFICE NEAREST OR CALL 1-800-321-CSLB FOR MORE INFORMATION.

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Acceptance and use of this report bind the parties to the limitation and conditions included in it. Should GCD and/or its agents or employees be found liable for any loss or damages resulting from a failure to perform any of its obligations, including and not limited to negligence, breach of contract, or otherwise, then the liability of GCD and/or its agents or employees, shall be limited to a sue equal to 5 times the amount of the fee paid by the Customer for the inspection and this condition assessment report. It has been a pleasure providing you with a focused inspection and site drainage evaluation and this report. Please do not hesitate to call if we may be of further assistance or if you have any questions or concerns.

Very truly yours,

George E. Drew, P.E., GCD, INC.

California Professional Engineer, license #C 20681
General Engineering Contractor license #A 64788
Member, American Society of Civil Engineers I.D
Member, National Society of Professional Engineers
Member, Structural Engineers Assoc. of Central California
Certified Inspection Engineer (BIECI)

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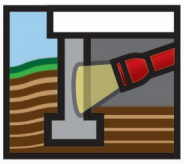

GCD Inc.

APPENDIX

1. **Plot Plan**
2. **Photos**
3. **Expert Comments**
4. **Inspection Agreement and Contract for Services (3 pages)**

Invoice

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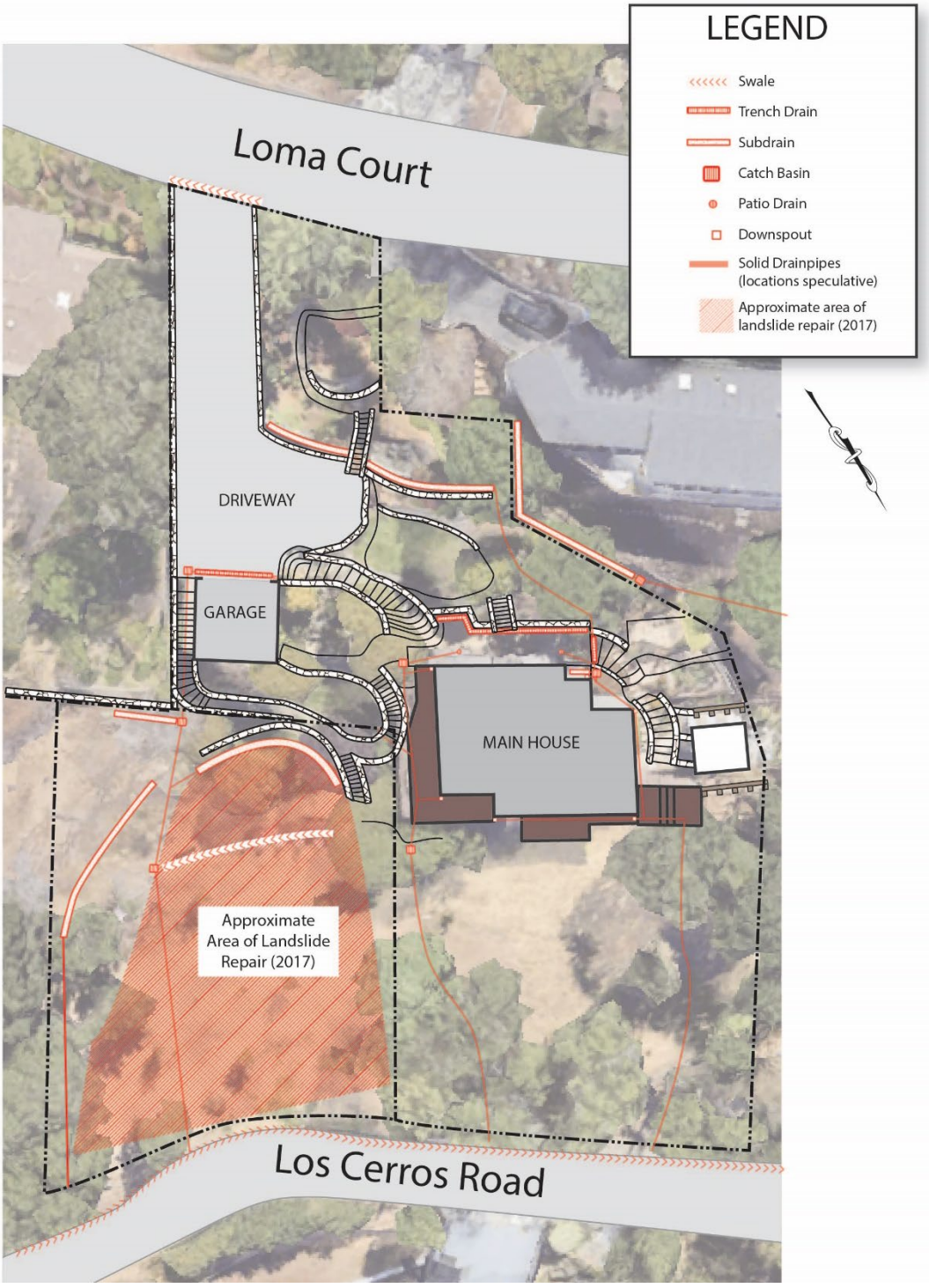
GCD Inc.

SITE DRAINAGE SYSTEMS

SHOWN AS OVERLAY ON 2D GOOGLE EARTH RENDERING
SHOWING THE EXTENSIVE DRAINAGE CONTROL SYSTEMS:



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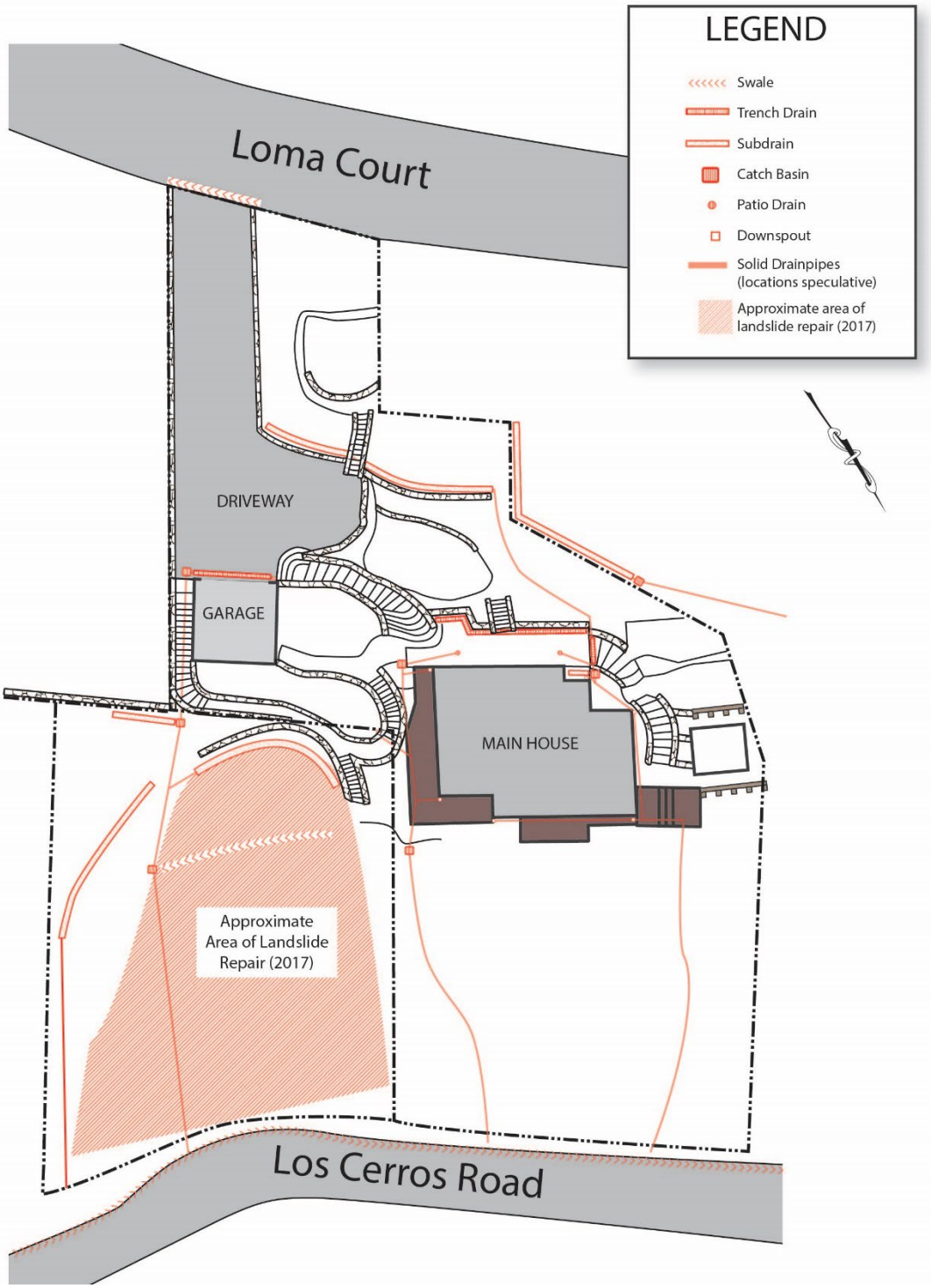
SITE DRAINAGE SYSTEMS

SHOWING THE EXTENSIVE DRAINAGE CONTROL SYSTEMS:



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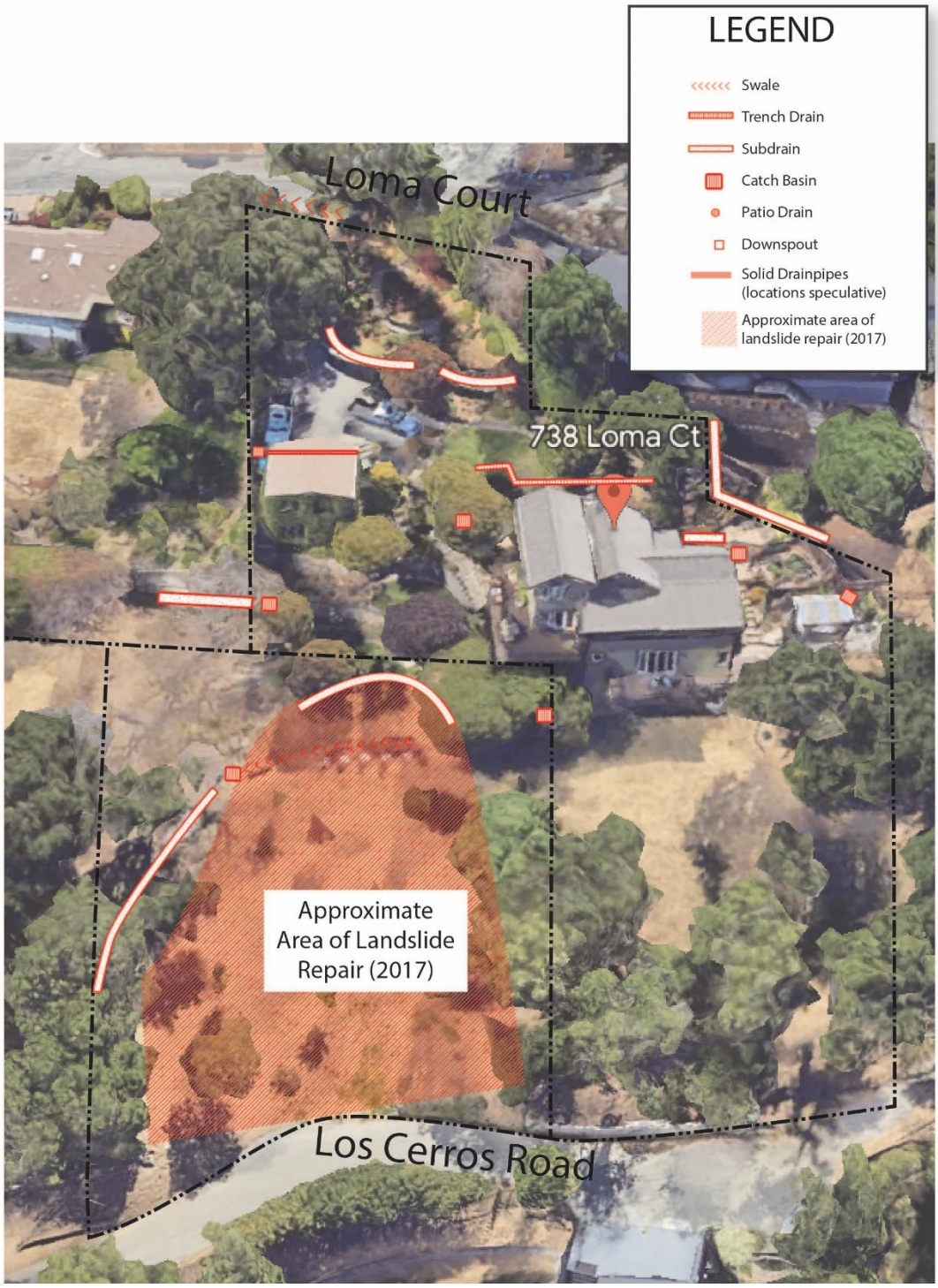
SITE DRAINAGE SYSTEMS

SHOWN AS OVERLAY ON 3D IMAGE TO SHOW SLOPE AND LOCATIONS OF DRAINAGE CONTROL SYSTEMS:



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PHOTOS

PHOTO 1:
Trench drain at end of driveway

PHOTO 2:
Drainage swale at the top of the driveway

PHOTO 3:
Area drain at end of flagstone and gravel walkway

PHOTO 4:
Trench drain and patio drains at front entry patio

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PHOTOS

PHOTO 4:
Spring pipe at bottom of landslide area: constant spring water flow

PHOTO 5:
Terraced and drained retaining walls

PHOTO 7:
Repaired landslide area

ESIGN, INC.
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EXPERT COMMENTS

Expert	Partial quote	Source	Profession	State/Professional Registrat'n No.
Jeff Lea	"…given the need for root systems to help maintain a fragile ground surface and for transpiration to help remove subsurface water from the hillside"	Lea, 2014	Civil Engineer	CE31678
Richard Smith	"My concern is that the removal of these trees would further decrease the stability of the slope and hillside. . . Also, the amount of water that these trees uptake daily is significant in dewatering the hillside. Any moisture that can naturally be removed from these has a significant value. Trees are an integral part of slope stabilization alone, and with an already saturate soil environment year-round. It is my recommendation that these trees remain."	Smith, 2022	Arborist	ISA WE-87645A
Alan Kilik	". . .I advise extreme caution and believe that changing any of the surrounding uphill surface or underground conditions will have an effect on the water that exists in this slope and will negatively impact the longevity of the hillside repair."	Kilik, 2017	Engineering Contractor	CCL #A-928944
Joseph Michelucci	" . . .the existing ground cover, small trees, bushes . . .have enhanced the stability of the area."	Petroff and Michelucci, 2015	Geotechnical Engineer	GE593

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EXPERT COMMENTS FROM
BALANCE HYD. LTR. DTD. 3/7/23
BY BERRY HECHT, CEG 1245

Inadequate Response to Third Party Review

The process of impact review and planning for suitable mitigation is also stymied by inadequate responses to the third-party review. As appropriate for a project of this complexity and a three-story residential structure three times the size typical of the Palomar Park area (and presumably much heavier and generating more effluent), the County commissioned a third-party review by the Cotton Shires firm, a suitable source, which requested identified gaps in the analysis. The Cotton Shires review plainly asked:

a. how much more water from site drainage and the leachfield will be put into the hillside?

b. in which direction(s) will it flow?

c. how deeply will it flow, given the hillside containing much water,

d. will the additional water and the grading for the structures affect the stability of the house or adjoining lots and structures.

The applicant was asked to drill as deeply as necessary and conduct tests to get the needed data.

Atlas responded with a 12-page letter which basically did not answer these questions.

The Planning Department and the community still have no calculations of how much effluent and drainage will enter the slope, whether the drainage and the effluent will surface and enter the surficial drainageways or the repaired landslide(s) or potential impacts to downslope drainageways and residents. The response hypothesizes that septic effluent will all flow into sandstone beds with 'adverse drainage' which seems inconsistent with their cross-section A-A', and contains no information about the depth or fluctuations of groundwater levels – information logically essential to answering the question of how much addition groundwater flow will result and which direction it will move, specifically toward known instabilities. There is no more information on depth of groundwater despite specific requests to drill deep enough to answer the questions of the third-party reviewers. The response also contends that runoff from the driveway and appurtenances at 738 Loma Court is responsible for much of the water in the slope, a contention which conflicts with the reality of our salinity measurements, as noted above. In our opinion, the impact review is not complete until these basic and reasonable questions have received a response.

Proposed Mitigation

Some of the measures proposed for mitigation by County staff seem to simply miss the point, not addressing the impact or potential threat.

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GCD Inc.

EXPERT COMMENTS FROM BALANCE HYD. LTR. DTD. 3/7/23 BY BERRY HECHT, CEG 1245

CONCLUSIONS:

1. The various parcels lie within a large, complex landslide area including about 20-30 homesites in Palomar Road and Los Cerros Road area of unincorporated San Mateo. The landslide, previously unmapped but consistent with evidence in the Seismic Safety element of the San Mateo County General Plan, showed evidence of stability over periods of decades prior to disturbance of construction of roads and homes during the early- to mid-1950s. Once the slide's profile was broken with excavations, landsliding has been chronic, occurring nearly every decade. Percolation for septic and drainage systems have added to local groundwater pool, and removal of larger trees seems to have further expanded it.

2. Landsliding is associated with wet years or periods of wet years. Nearly every year or years of above-average precipitation has resulted in at least one documented instability large enough to warrant a geotechnical report or road construction project. Most such wet periods were less profound than the pre-development wet periods of 1937-8 and 1940 - 1943, when no instabilities appear evident in aerial photographs. In its current configuration, slopes appear to go unstable when a relatively nominal amount of rainfall is added to the ground.

3. The proposed project requires substantial grading, cumulatively adding to post-development instability of the compound slide area. Additionally, it will be served by a septic system and leachfield, discharging a substantial amount of water to the landslide complex every year; it will also place a swimming pool at the head of one known near-surface slide, which if ruptures and drained suddenly will discharge many thousands of gallons of water aggravating even a minor instability associated with ongoing slope movement and/or ground shaking.

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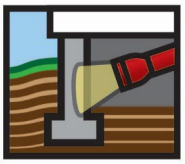

GCD Inc.

Inspection Agreement and Contract for Services

SCOPE OF SERVICES

GCD, INC. ("GCD") has been engaged by the undersigned client(s) to inspect the home's portico and thereafter issue a report as to the observations made by the inspector. GCD's inspection report is based on a visual reconnaissance of the structure. GCD does not perform, nor is it engaged in the performance of, a home inspection as defined by Business and Professions Code Section 7195 et. seq.

LIMITATIONS OF WARRANTY/DISCLAIMER AND STATUTE OF LIMITATIONS

It is hereby acknowledged that there may be hidden or obscured conditions that are not observed by the inspector and seasonal environmental and soil conditions that may change after the inspection. GCD warrants that the services provided are within the reasonable standard of care provided by other engineers practicing in this area and offering similar services. No other warranty expressed or implied is made. This report does not include an analysis of the presence of any environmental hazards including, but not limited to toxins, mold, carcinogens, hazardous materials, and contaminants in the soil, water, and air. GCD's site reconnaissance visually identifies actual conditions only at those points where and when observed. This report is based on conditions that exist at the time of GCD's inspection, no warranty or guarantee can be made as to future conditions. It is hereby agreed that the time to begin legal action for a claim under this contract shall not exceed two years from the date of the inspection.

LIQUIDATED DAMAGES

It is understood and agreed to by the client(s) that GCD is not an insurer and the amounts payable to GCD for its services by the client are not sufficient for GCD to assume the risk of consequential or other damages to the client(s) for any act of negligence, omission or commission. From the nature of the services to be performed it is hereby agreed that it is impractical and extremely difficult to fix actual damages in the event of an act of negligence, omission or commission, if any, which may result these services. If GCD should be found liable for loss or damage due to an act of omission of commission or for breach of this contract, its liability shall be limited to no more than five (5) times the amount paid by client for the services performed under this contract as liquidated damages. It is hereby agreed and understood that said amount agreed to as liquidated damages are not a penalty, irrespective of cause or origin of the loss or damage. Alternatively, the client may request in writing that the aforementioned limitation of liability clause be excluded or modified for an appropriate increase in the inspection fee. If the client selects this alternative, he or she must contact GCD for a quote as to the increased inspection fee and/or any other desired modification to the services provided or the terms under which they are offered. A separate written agreement must be executed to facilitate the selection of this alternative and until said writing is executed by both parties, the liquidated damages provisions set forth in the previous paragraph shall remain in full force and effect.

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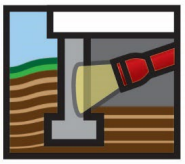


GCD Inc.

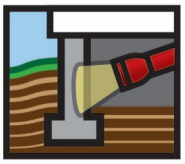
DISPUTE RESOLUTION

ANY DISPUTE OR CLAIM BETWEEN THE CLIENT(S) AND GCD AND/OR ITS AGENTS, OR AFFILIATES ARISING OUT OF THIS CONTRACT, THE OBSERVATIONS SET FORTH THEREIN OR THE RESULTING REPORT SHALL BE SUBMITTED FIRST TO MEDIATION BEFORE A MUTUALLY ACCEPTABLE MEDIATOR. IF THE DISPUTE OR CLAIM IS NOT RESOLVED BY MEDIATION, THE DISPUTE OR CLAIM WILL THEN BE SUBMITTED TO AND DECIDED BY NEUTRAL BINDING ARBITRATION IN ACCORDANCE WITH CHAPTER 3, TITLE 9 OF THE CALIFORNIA CODE OF CIVIL PROCEDURES (C.C.P. 1282, ET SEQ.). UPON SELECTION OF AN ARBITRATOR, THE PARTIES SHALL AGREE UPON THE LIMIT AND EXTENT OF NECESSARY DISCOVERY PRIOR TO THE HEARING. THE PARTIES SHALL AGREE UPON THE SELECTION OF AN ARBITRATOR WHO SHALL BE EITHER A RETIRED SUPERIOR COURT JUDGE, A LICENSED CALIFORNIA ATTORNEY WITH AT LEAST TEN (10) YEARS OF REAL ESTATE LITIGATION EXPERIENCE, A LICENSED GENERAL ENGINEERING CONTRACTOR OR LICENSED PROFESSIONAL ENGINEER WITH AT LEAST FIVE YEARS OF EXPERIENCE AS DEFINED IN BUSINESS AND PROFESSIONAL CODE 7195 ET SEQ. THE ARBITRATION SHALL TAKE PLACE IN THE COUNTY WHERE THE PROPERTY IS LOCATED. TO THE EXTENT THE PARTIES CANNOT AGREE UPON AN ARBITRATOR, ONE OR BOTH OF THE PARTIES MAY PETITION THE SUPERIOR COURT IN THE COUNTY WHERE THE PROPERTY IS LOCATED TO COMPEL ARBITRATION AND MAY IN SAID PETITION REQUEST THE COURT TO APPOINT A NEUTRAL ARBITRATOR. THE PREVAILING PARTY IN ANY ARBITRATION UNDER THIS ARBITRATION AGREEMENT SHALL BE ENTITLED TO RECOVERY OF ATTORNEY'S FEES AND COSTS INCURRED IN THE ARBITRATION AND THOSE RELATED TO ANY PETITION TO COMPEL ARBITRATION OR APPOINT AN ARBITRATOR, IF ONE IS NECESSARY. JUDGMENT ON THE AWARD RENDERED BY THE ARBITRATOR MAY BE ENTERED IN ANY COURT HAVING JURISDICTION.

IMPORTANT NOTICE

YOU ARE AGREEING TO HAVE ANY DISPUTE ARISING OUT OF THE MATTERS IN THIS AGREEMENT DECIDED BY NEUTRAL BINDING ARBITRATION AS PROVIDED BY CALIFORNIA LAW AND YOU ARE GIVING UP ANY RIGHTS YOU MIGHT POSSESS TO HAVE THE DISPUTE LITIGATED IN A COURT OF LAW OR BY JURY TRIAL. BY SIGNING IN THE SPACE BELOW YOU ARE GIVING UP YOUR RIGHTS TO CIVIL DISCOVERY AND YOUR RIGHTS TO AN APPEAL SINCE THE GROUNDS FOR AN APPEAL OF THE DECISION RENDERED MAY BE LIMITED. BY SIGNING BELOW, YOU ARE SPECIFICALLY AGREEING TO THE SCOPE OF SERVICES, LIMITATION OF LIABILITY AND DISPUTE RESOLUTION PROVISIONS, AND ALL CONDITIONS AS DESCRIBED ON THIS CONTRACT.

GEOTECHNICAL CONSTRUCTION & DESIGN, INC.
7236 Via Mimosa, San Jose, CA. 95135
Email: gcdinc94@aol.com Cell: 408.812.4355



GCD Inc.

IF THIS AGREEMENT IS NOT SIGNED WITHIN THREE (3) CALENDAR DAYS OF THE INSPECTION BY THE CLIENT OR THEIR AUTHORIZED AGENT, THE INSPECTION AND/OR REPORT WILL CARRY NO WARRANTY OR GUARANTEE AS TO ITS CONTENTS, AND NO ONE SHALL BE ENTITLED TO RELY ON ITS CONTENTS FOR ANY PURPOSE. THIS AGREEMENT SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA.

CLIENT REVIEW AND INTERPRETATION OF TERM

The client acknowledges that he/she had the opportunity to review the entirety of this contract. Client further agrees that he/she will not later contend that any ambiguity should be construed against GCD as the purported drafter of the Agreement.

WE HAVE READ AND UNDERSTAND THE FOREGOING:

CLIENT(S): _____ DATE: _____/_____/_____

INSPECTOR: _____ DATE: _____/_____/_____

GEOTECHNICAL CONSTRUCTION & DESIGN, INC.
7236 Via Mimosa, San Jose, CA. 95135
Email: gcdinc94@aol.com Cell: 408.812.4355

GCD Inc.

INVOICE

April 13, 2023

Ms. Denise Charlebois
738 Loma Court
Redwood City, CA

Phone: 650 740 9883
Email: DeCharlebiois1@Gmail.com

DESCRIPTION OF SERVICES:
FOCUSED SITE DRAINAGE ASSESSMENT
738 LOMA COURT, REDWOOD CITY, CA.

TOTAL AMOUNT DUE: $1,000.00

TERMS: Please include report no. (J23-139) on check payable to **GCD** & send to: **GCD, 7236 Via Mimosa, San Jose, CA 95135**, Total due within 7 days.

It's been a pleasure doing business with you. Thanks for the work! And, don't hesitate to call me if you have any questions or concerns.

George

408 812 4355

GEOTECHNICAL CONSTRUCTION & DESIGN, INC.
7236 Via Mimosa, San Jose, CA. 95135
Email: gcdinc94@aol.com Cell: 408.812.4355

BLACK CAT CONSTRUCTION

General Engineering Contractor License # 912797
P. O. Box 386, Aromas, CA 95004
(831) 750-7425 (831) 726-7001 FAX

March 5, 2020

Denise Enea
738 Loma Ct.
Redwood City, CA 94062

Re: Slope Failure Dewatering

Denise,

As you may remember, initial attempts at dewatering the above referenced site following the slope failure were attempted by hand labor as conventional equipment could not negotiate the site effectively due to the extremely saturated soil conditions. On or about March 30, 2017 Black Cat Construction mobilized a climbing excavator and constructed a sediment basin to contain the mud and debris flow. Upon reaching the base of the slide and removing the last bit of debris a small tree with its root mass and surrounding soil flowed freely downhill, as if on a raft. And, it required several months of drying time before the site could be accessed and reconstructed.

The amount of water emanating from the slide area was similar to that of an artesian spring or well, more than typical winter subsurface moisture. It would be difficult to determine the hydrological conditions that resulted in the formation this "spring." However, adding additional subsurface moisture from sewer or storm drain leaching could only exacerbate the problem. Bear in mind that the drainage design implemented on your slide is a topical solution to the current hydrological conditions. Unfortunately, it would appear, at this point in time, that your property is the weak point of the "aquifer."

It is interesting to note that many of the homes in Palomar Park were built at a time when little, if any, consideration was given to hydrology or geotechnology. But, we can no longer claim ignorance in urban design. Given today's knowledge we must think globally in regards to design, planning, population density, engineering and how new construction impacts our neighborhoods.

In order to understand what effect an additional residence may have on your property consider the following:

- The average person uses +/-80 gallons of water per day.
- Redwood City having an average rainfall of 20 inches equates to 12 gallons per square foot annually. An average 3000 square foot house would contribute 36,000 gallons per year, not including hardscape and landscape.
- Deep foundations drilled into bedrock may adversely alter subsurface conditions.

Should you have further questions or require additional clarification please feel free to call me any time at (831) 750-7425.

Best regards,

John Romandia
President
Black Cat Construction

Tree Recommendations

Arborist Report for Denise Enea

Report Prepared By:

Richard Smith
I.S.A. Certified Arborist #WE-8745A
Tree Risk Assessor Qualified

Contents

BACKGROUND

On November 3, 2022, I, Richard Smith, Certified Arborist No. WE-8745A, was called out to inspect multiple trees at different locations.

ASSIGNMENT

- Inspect these trees regarding the impact they are having on these properties.
- Provide report outlining findings and recommendations

LIMTITS OF THE ASSIGNMENT

No aerial inspection, trenching or resistance drilling was performed.

No Biological tests were performed.

Only a visual inspection from the ground was performed.

PURPOSE AND USE OF THIS REPORT

The purpose of this report is to provide comments/recommendations regarding to these trees in question.

OBSERVATIONS

I was called out to observe the trees bordering the property line of Mrs. Enea's property at 738 Loma Court and 0 Los Cerros, Redwood City. The bordering property is 634 Palomar Drive Redwood City, CA October 21st 2022.

I observed the trees in question located on the lower South East portion of the neighboring property 634 Palomar Dr. bordering Mrs. Enea's Property. The trees are primarily Quercus agrifolia with one Aesculus califiornica, and one Umbularia californica.

I pulled up a previous arborist report from the County website that was created for the 634 Palomar Drive, Redwood city. This report was submitted from the Tree management experts and was included in the architechtural report from M-design Architecture.This report identified the trees on the property, showed the proposed new home construction, and recommended trees for removal due to construction.

Background on the 634 Palomar Drive property and the neighbors property 738 Loma Court and 0 Los Cerros. These are neighboring properties above Palomar road and have a history of significant landslides, and loss of homes. The landslides have been occurring as far back as the 1940's , and as recently as 2018. The landslides are primarily caused by the steep terrain with a significant water source from a spring located approximately 100' above 738 Loma Court. There are documented findings of seepage year round onto Palomar road, below both 634 Palomar road and the property that borders Palomar road from 738 Loma Court. The seepage from the spring fans out considerably in a North South direction as it drains downhill towards Palomar road.

The trees that are identified for removal in the report from the Tree management experts along the property line. The report referred to is dated 12/1/2020
My concern is the specific trees referred to in the report identifying trees #14, 15, 16, 17. These trees are called out for removal being within the footprint of construction of the proposed new home construction and septic line installation.

The five trees in this area are mature trees, except for the 5" diameter Bay laurel. These trees consist of (3) Quercus agrifolia "Oak", (2) Aesculus californica "Buckeye", and one Umbellularia californica "Bay laurel". I assessed these trees from the property line and all are in good to fair condition. They are situated primarily within 3 to 7 feet of the property boundary lines bordering the properties.

Site overview for lots and slide area. (Appendix A: Site Overview)

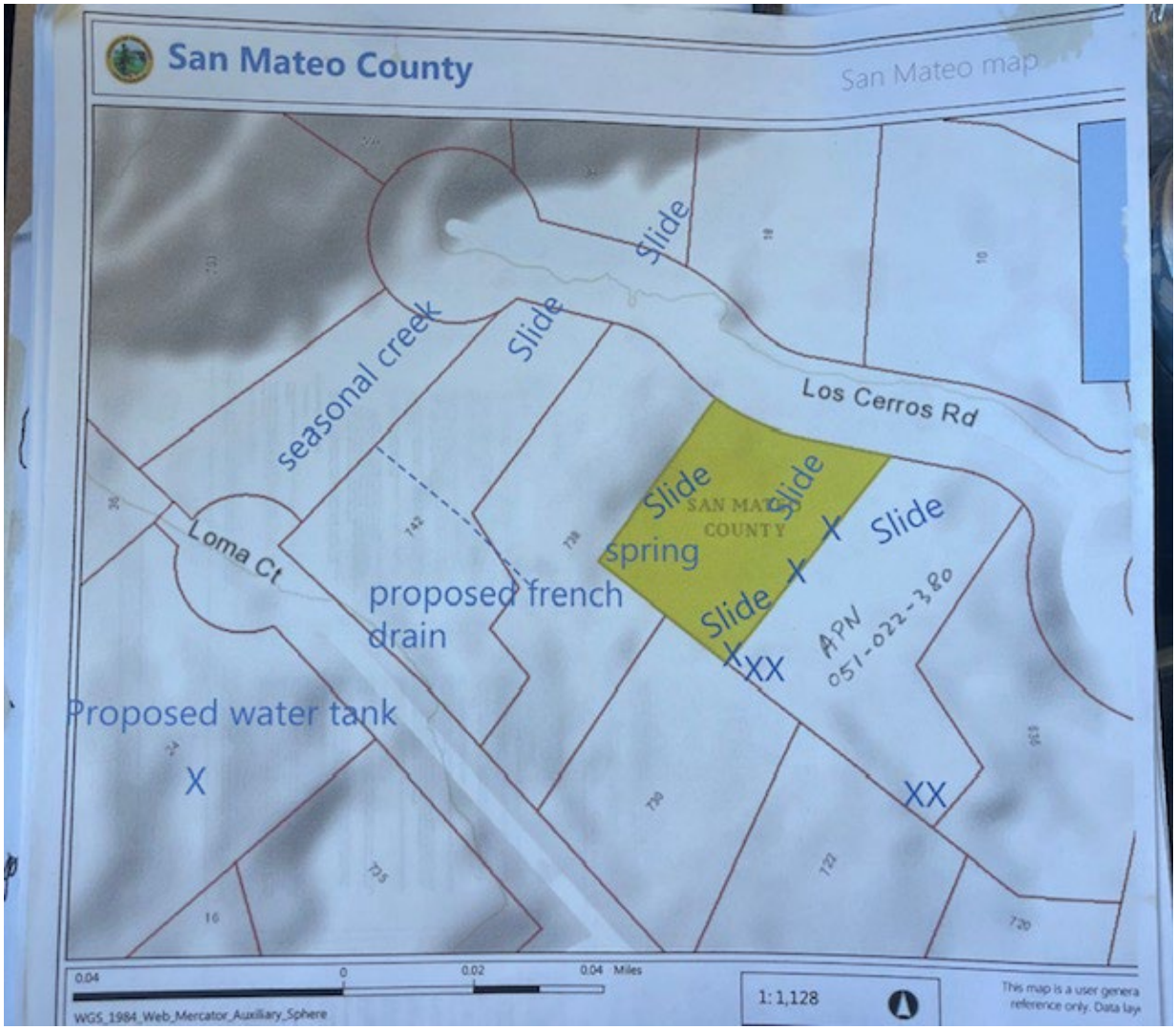
RECOMMENDATIONS

My concern is that the removal of these trees would further decrease the stability of the slope and hillside. As evidenced in pictures of the most current landslide on the 0 Los Cerros and 738 Loma court property. The slide directly below the trees and their root zones that were established, leaving the trees intact and the slope in that area partially unmoved. Also the amount of water that these trees uptake daily is significant in dewatering the hillside. Any moisture that can naturally be removed from these slopes has a significant value.

Trees are an integral part of slope stabilization alone, and with an already saturated soil environment year round. It is my recommendation that these trees remain.

It is my opinion that the footprint of the septic lines and the house plans should be moved to substantiate the preservation of these trees, and their very important role in preserving the hillside and protection of both properties.

APPPENDIX A: SITE OVERVIEW



Site overview for lots and slide area.

APPPENDIX B: TREE PHOTOGRAPHS


CAUTION

Photos of the trees involved.

QUALIFICATIONS, ASSUMPTIONS, AND LIMITING CONDITIONS

Any legal description provided to the arborist 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 arborist cannot be responsible for the accuracy of information provided by others.

The arborist shall not be required to give testimony or attend meetings, hearings, conferences, mediations, arbitrations, or trials by reason of this report unless subsequent contractual arraignments are made, including payment of an additional fee for such service.

This report and any appraisal value expressed herein represent the opinion of the arborist, and the arborist fee is not contingent upon the reporting of a specified appraised 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 Smith, Certify:

That I have personally inspected the tree(s) and/or the property referred to in this report, and have states 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 arborist, except as indicated in 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 an I.S.A. Certified Arborist in good standing with The International Society of Arboriculture. I hold a valid Qualified Applicators License with California Department of Pesticide Regulation. I have been involved with the practice of Arboriculture and the care and study of trees since 1997.

Richard Smith

I.S.A. Certified Arborist WE-8745A

Tree Risk Assessor Qualified

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT E

Denise Enea Charlebois
738 Loma Ct.
Redwood City, CA 94062

April 5, 2023

TO: David Jackson and Anusha Thalapaneni
3988 Sutherland Dr.
Palo Alto, CA 94303

RE: 634 Palomar Dr. Proposed Development & 0 Los Cerros Emergency Mitigations

Dear David and Anusha,

The multiple rainstorms of 2023 have played havoc within Palomar Park and my previous repaired vacant parcel, APN 051-022-310, which has sustained yet more damage and required emergency mitigations. This is not surprising to me based on the history and volatility of the hillside. There are two new landslides that have formed above and to the south of my 2017 slide. These new landslides are near the north perimeter property line of your vacant parcel. During the heaviest rainstorms water was flowing off the highest portion of your property, APN 051-022-380, and flowing onto my property which is substantially lower in elevation. This elevation change is partially due to the illegal grading that was conducted on your property in years past. There is also sluffing and erosion of soils that is apparent on the north side of your parcel and which continues onto my vacant parcel. The flow of water from your property potentially caused or exacerbated the formation of the new landslides. This flow of water also jeopardizes the 2017 landslide repair which is in a fragile state. There is also perched water that can be seen on your property in the proposed location of your northmost expansion leach field.

To preserve my property, I instituted emergency measures and with an emergency SMC issued Building Permit, installed hundreds of feet of subdrain on my property at the upper south corner of my property as well as new catch basins to collect the unsolicited water runoff and groundwater. The engineers and drainage installation was extremely costly. The neighbor at 740 Loma Ct. assisted with a portion of the installation of new subdrains. The new landslides have not been repaired and the sub drains are an emergency measure.

Considering the March Balanced Hydrologics report, (*March 7, 2023 Balanced Hydrologics report*), these new site developments and the many other professionals opinions, I again urge you to redesign your leach field locations and substantially distance them 100 ft. or more from my previously repaired slide and the newly formed slides and no higher than 20 ft above Los Cerros Rd. I also urge you to redesign the north side of your structure so that the large 15 inch, 100-year-old oak tree, may remain to stabilize the vulnerable hillside and assist with dewatering the spring fed hillside, (*Oct 21, 2022 Richard Smith arborist report).*

I have further hydrologic, engineering geologists and site drainage reports underway and will let you know the results when they are complete. Please feel free to contact me regarding this matter.

Sincerely,

Denise Enea Charlebois

cc. Greg Smith, Environmental Health
Camile Leung, SMC Planning
Jim Toby, Lea & Braze Engineering
Joel Baldwin, Atlas
Alpheus Jessup, M Designs Architects
Guru Thalapaneni

EMERGENCY LANDSLIDE REPAIR
738 LOMA COURT
REDWOOD CITY, CALIFORNIA

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BOUNDARY
		PROPERTY LINE
		RETAINING WALL
		LANDSCAPE RETAINING WALL
	RW RW	RAINWATER TIGHTLINE
	SUB	SUBDRAIN LINE
	TL	TIGHTLINE
SD	SD	STORM DRAIN LINE
SS	SS	SANITARY SEWER LINE
W	W	WATER LINE
G	G	GAS LINE
P	P	PRESSURE LINE
JT	JT	JOINT TRENCH
		SET BACK LINE
		CONCRETE VALLEY GUTTER
		EARTHEN SWALE
CB	CB	CATCH BASIN
JB	JB	JUNCTION BOX
AD	AD	AREA DRAIN
SDMH	SDMH	CURB INLET
		STORM DRAIN MANHOLE
		FIRE HYDRANT
SSMH	SSMH	SANITARY SEWER MANHOLE
		STREET SIGN
222.57 INV	222.57 INV	SPOT ELEVATION
		FLOW DIRECTION
	D	DEMOLISH/REMOVE
		BENCHMARK
200	200	CONTOURS
XX" TREE	XX" TREE	TREE TO BE REMOVED

ABBREVIATIONS

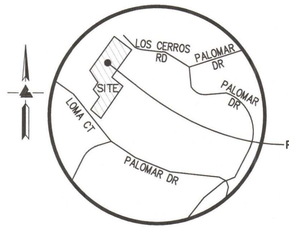
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
ACC	ACCESSIBLE
AD	AREA DRAIN
BC	BEGINNING OF CURVE
B & D	BEARING & DISTANCE
BM	BENCHMARK
BW/FG	BOTTOM OF WALL/FINISH GRADE
CB	CATCH BASIN
C & G	CURB AND GUTTER
℄	CENTER LINE
CPP	CORRUGATED PLASTIC PIPE (SMOOTH INTERIOR)
CO	CLEANOUT
COTG	CLEANOUT TO GRADE
CONC	CONCRETE
CONST	CONSTRUCT or –TION
CONC COR	CONCRETE CORNER
CY	CUBIC YARD
D	DIAMETER
DI	DROP INLET
DIP	DUCTILE IRON PIPE
EA	EACH
EC	END OF CURVE
EG	EXISTING GRADE
EL	ELEVATIONS
EP	EDGE OF PAVEMENT
EQ	EQUIPMENT
EW	EACH WAY
(E)	EXISTING
FC	FACE OF CURB
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FS	FINISHED SURFACE
G	GAS
GA	GAGE OR GAUGE
GB	GRADE BREAK
HDPE	HIGH DENSITY CORRUGATED POLYETHYLENE PIPE
HORIZ	HORIZONTAL
HI PT	HIGH POINT
H&T	HUB & TACK
ID	INSIDE DIAMETER
INV	INVERT ELEVATION
JB	JUNCTION BOX
JT	JOINT TRENCH
JP	JOINT UTILITY POLE
L	LENGTH
LNDG	LANDING
LF	LINEAR FEET
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MON.	MONUMENT
(N)	NEW
NO.	NUMBER
NTS	NOT TO SCALE
O.C.	ON CENTER
O/	OVER
(PA)	PLANTING AREA
PED	PEDESTRIAN
PIV	POST INDICATOR VALVE
PSS	PUBLIC SERVICES EASEMENT
ℙ	PROPERTY LINE
PP	POWER POLE
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RIM	RIM ELEVATION
RW	RAINWATER
R/W	RIGHT OF WAY
S	SLOPE
S.A.D.	SEE ARCHITECTURAL DRAWINGS
SAN	SANITARY
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SHT	SHEET
S.L.D.	SEE LANDSCAPE DRAWINGS
SPEC	SPECIFICATION
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
ST.	STREET
STA	STATION
STD	STANDARD
STRUCT	STRUCTURAL
T	TELEPHONE
TC	TOP OF CURB
TEMP	TEMPORARY
TP	TOP OF PAVEMENT
TW/FG	TOP OF WALL/FINISH GRADE
TYP	TYPICAL
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W/	WITH
W, WL	WATER LINE
WM	WATER METER
WWF	WELDED WIRE FABRIC

KEY MAP
1" = 10'

ESTIMATED EARTHWORK QUANTITIES

CUBIC YARDS	WITHIN BUILDING FOOTPRINT	OUTSIDE BUILDING FOOTPRINT	TOTAL CUBIC YARDS
CUT	0	0	0
FILL	0	660	660
IMPORT			660

NOTE:
GRADING QUANTITIES REPRESENT BANK YARDAGE. IT DOES NOT INCLUDE ANY SWELLING OR SHRINKAGE FACTORS AND IS INTENDED TO REPRESENT IN-SITU CONDITIONS. QUANTITIES DO NOT INCLUDE OVER-EXCAVATION, TRENCHING, STRUCTURAL FOUNDATIONS OR PIERS, OR POOL EXCAVATION (IF ANY). NOTE ADDITIONAL EARTHWORKS, SUCH AS KEYWAYS OR BENCHING MAY BE REQUIRED BY THE GEOTECHNICAL ENGINEER IN THE FIELD AT TIME OF CONSTRUCTION. CONTRACTOR TO VERIFY QUANTITIES.



VICINITY MAP
NO SCALE

OWNER'S INFORMATION

OWNER:
DENISE ENEA
738 LOMA COURT
REDWOOD CITY, CA

APN: 051-022-180 & 310

REFERENCES

THIS GRADING AND DRAINAGE PLAN IS SUPPLEMENTAL TO:
1. TOPOGRAPHIC SURVEY BY MACLEOD AND ASSOCIATES
   ENTITLED: "TOPOGRAPHIC SURVEY PLAN"
   738 LOMA COURT
   REDWOOD CITY, CA
   DATED: 05-19-17
   JOB# 4456-TOPO

2. SOIL REPORT BY GEOFORESCNICS, INC.
   ENTITLED: "GEOTECHNICAL INVESTIGATION FOR SLOPE REPAIR"
   738 LOMA COURT
   REDWOOD CITY, CA
   JOB# 217101
   DATE: 06-10-17

THE CONTRACTOR SHALL REFER TO THE ABOVE NOTED SURVEY AND PLAN, AND SHALL VERIFY BOTH EXISTING AND PROPOSED ITEMS ACCORDING TO THEM.

APPROVED PLANNING
AUG 1 2017
By
San Mateo County

APPROVED PLAN
This approval does not authorize violation of State or County building laws.
AUG 03 2017
SAN MATEO CO. BLDG. INSP. DIV.

GEOTECHNICAL CONSULTANT TO OBSERVE AND APPROVE ALL APPLICABLE WORK

FILE COPY

RECEIVED
JUL 19 2017
SAN MATEO COUNTY
BUILDING INSPECTOR

NOTE:
FOR CONSTRUCTION STAKING SCHEDULING OR QUOTATIONS PLEASE CONTACT ALEX ABAYA AT LEA & BRAZE ENGINEERING (510)887-4086 EXT 116. aabaya@leabraze.com

1-800-227-2600 CALL BEFORE YOU DIG UNDERGROUND SERVICE ALERT USA

SHEET INDEX

REGISTERED PROFESSIONAL ENGINEER
JAMES TODY
No. 63127
CIVIL
STATE OF CALIFORNIA
ORIGINAL SIGNATURES IN BLUE INK
6-30-2017

LEA & BRAZE ENGINEERING, INC.
CIVIL ENGINEERS • LAND SURVEYORS
BAY AREA REGION
2495 INDUSTRIAL PKWY. WEST
HAYWARD, CALIFORNIA 94545
(P) (510) 887-4086
(F) (510) 887-3019
SACRAMENTO REGION
3017 DOUGLAS BLVD. # 300
ROSEVILLE, CA 95661
(P) (916)966-1338
(F) (916)797-7363
WWW.LEABRAZE.COM

ENEA RESIDENCE
738 LOMA COURT
(UNINCORPORATED SAN MATEO COUNTY)
REDWOOD CITY, CALIFORNIA
APN: 051-022-180 & 310
SAN MATEO COUNTY

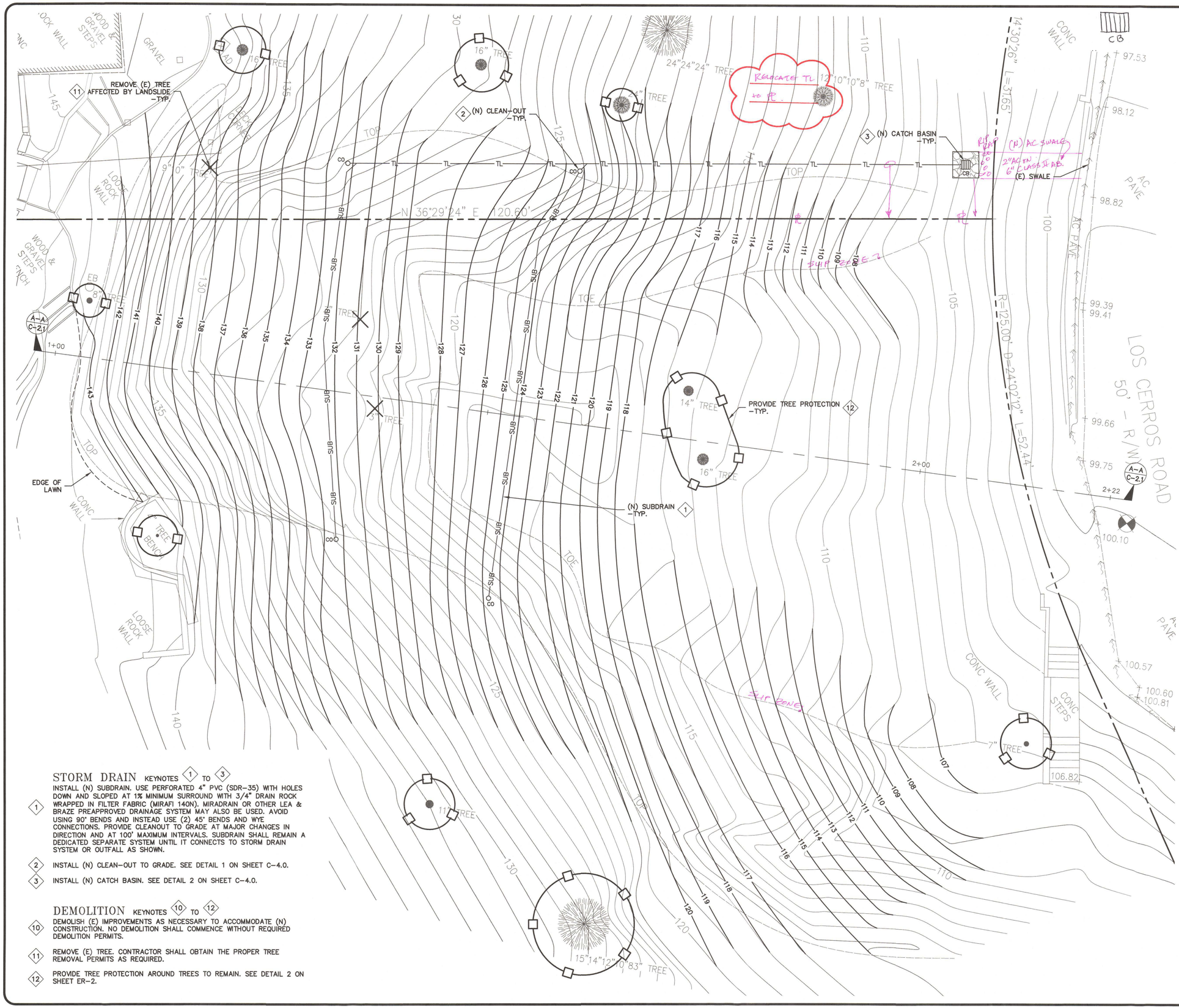
TITLE SHEET

2 Los Cerros Vacant Parcel

REVISIONS	BY
–	–
–	–
–	–
–	–
–	–

JOB NO:	2170695
DATE:	07-06-17
SCALE:	AS NOTED
DESIGN BY:	DM
DRAWN BY:	DM
SHEET NO:	C-1.0

1 OF 8 SHEETS



STORM DRAIN KEYNOTES 1 TO 3

1. INSTALL (N) SUBDRAIN. USE PERFORATED 4" PVC (SDR-35) WITH HOLES DOWN AND SLOPED AT 1% MINIMUM SURROUND WITH 3/4" DRAIN ROCK WRAPPED IN FILTER FABRIC (MIRAFI 140N). MIRADRAIN OR OTHER LEA & BRAZE PREAPPROVED DRAINAGE SYSTEM MAY ALSO BE USED. AVOID USING 90° BENDS AND INSTEAD USE (2) 45° BENDS AND WYE CONNECTIONS. PROVIDE CLEANOUT TO GRADE AT MAJOR CHANGES IN DIRECTION AND AT 100' MAXIMUM INTERVALS. SUBDRAIN SHALL REMAIN A DEDICATED SEPARATE SYSTEM UNTIL IT CONNECTS TO STORM DRAIN SYSTEM OR OUTFALL AS SHOWN.
2. INSTALL (N) CLEAN-OUT TO GRADE. SEE DETAIL 1 ON SHEET C-4.0.
3. INSTALL (N) CATCH BASIN. SEE DETAIL 2 ON SHEET C-4.0.

DEMOLITION KEYNOTES 10 TO 12

10. DEMOLISH (E) IMPROVEMENTS AS NECESSARY TO ACCOMMODATE (N) CONSTRUCTION. NO DEMOLITION SHALL COMMENCE WITHOUT REQUIRED DEMOLITION PERMITS.
11. REMOVE (E) TREE. CONTRACTOR SHALL OBTAIN THE PROPER TREE REMOVAL PERMITS AS REQUIRED.
12. PROVIDE TREE PROTECTION AROUND TREES TO REMAIN. SEE DETAIL 2 ON SHEET ER-2.

FILE COPY

APPROVED PLAN
This approval does not authorize violation of State or County building laws.
AUG 03 2017
SAN MATEO CO. BLDG. INSP. DIV.

APPROVED PLANNING
AUG 1 2017
BY: San Mateo County

APPROVED DRAINAGE PLAN
SITE DRAINAGE INSPECTION REQUIRED BEFORE BACK-FILL.
DPW Ph. 363-1852

RECEIVED
JL 10 2017
SAN MATEO COUNTY BUILDING INSPECTION

ALL (E) UTILITY AND (E) DRAINAGE PIPES TO REMAIN AND BE PROTECTED. NOTIFY ENGINEER IF CONFLICT WITH (E) UTILITIES OCCURS.

NOTE:
FOR CONSTRUCTION STAKING SCHEDULING OR QUOTATIONS PLEASE CONTACT ALEX ABAYA AT LEA & BRAZE ENGINEERING (510)887-4086 EXT 116. aabaya@leabraze.com

REGISTERED PROFESSIONAL ENGINEER JAMES TOY No. 60127 CIVIL STATE OF CALIFORNIA
ORIGINAL SIGNATURES IN BLUE INK
JUL 6 '17

LEA & BRAZE ENGINEERING, INC.
CIVIL ENGINEERS • LAND SURVEYORS
BAY AREA REGION
2495 INDUSTRIAL PKWY WEST
HAYWARD, CALIFORNIA 94545
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ENEA RESIDENCE
738 LOMA COURT
(UNINCORPORATED SAN MATEO COUNTY)
REDWOOD CITY, CALIFORNIA
APN: 051-022-180 & 310
SAN MATEO COUNTY

GRADING & DRAINAGE PLAN

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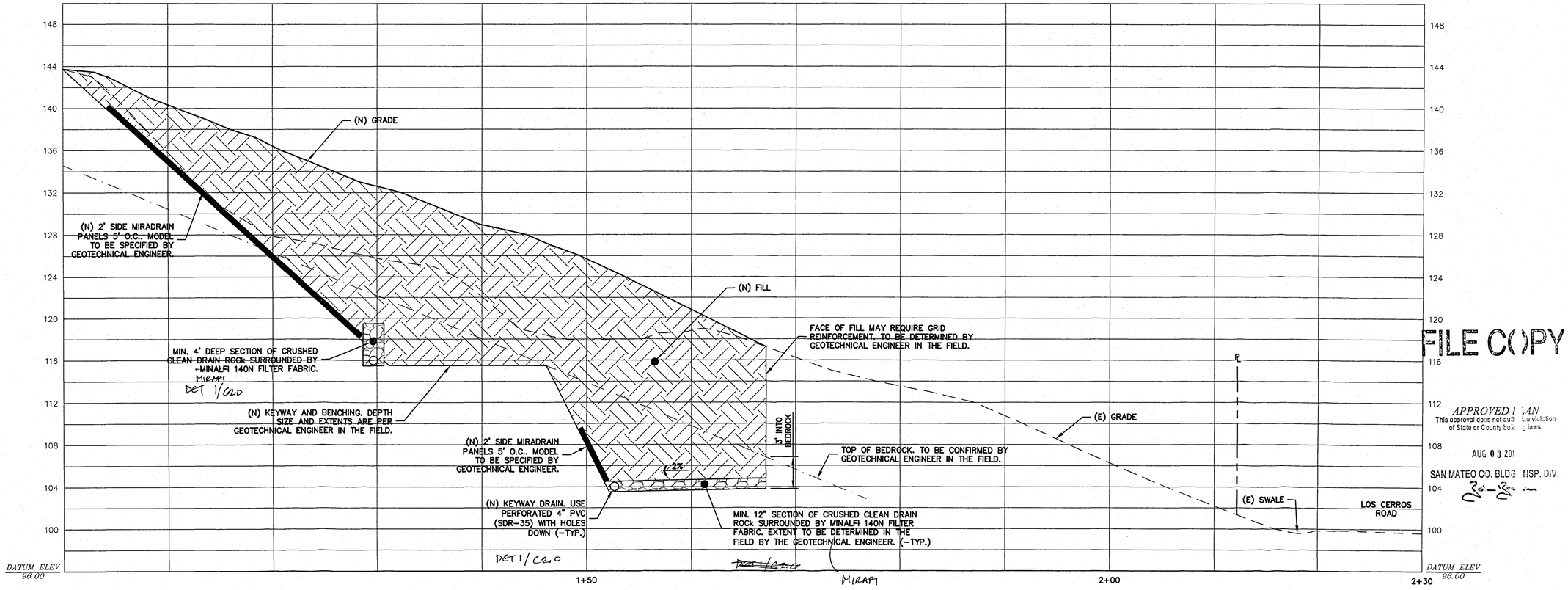
-			-
-			-
NO.	REVISIONS		BY
JOB NO:	2170695		
DATE:	07-06-17		
SCALE:	AS NOTED		
DESIGN BY:	DM		
DRAWN BY:	DM		
SHEET NO:	C-2.0		
2 OF 8 SHEETS			



A-A / C-2.1 **LANDSLIDE PROFILE**

1" = 5'

APPROVED DRAINAGE PLAN
SITE DRAINAGE INSPECTION
REQUIRED BEFORE BACK-FILL
DPW Ph. 363-1652 7/13/17

RECEIVED
JUL 10 2017
SAN MATEO COUNTY
BUILDING INSPECTOR

FILE COPY

APPROVED PLAN
This approval does not authorize violation of State or County building laws.
AUG 03 201
SAN MATEO CO. BLDG INSP. DIV.

REGISTERED PROFESSIONAL ENGINEER
JAMES TODY
No. 63127
CIVIL
STATE OF CALIFORNIA
ORIGINAL SIGNATURES IN BLUE INK
7-31-17

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SECTION

REVISIONS	BY
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3 OF 8 SHEETS

GENERAL NOTES

ALL GENERAL NOTES, SHEET NOTES, AND LEGEND NOTES FOUND IN THESE DOCUMENTS SHALL APPLY TYPICALLY THROUGHOUT. IF INCONSISTENCIES ARE FOUND IN THE VARIOUS NOTATIONS, NOTIFY THE ENGINEER IMMEDIATELY IN WRITING REQUESTING CLARIFICATION.

THESE DRAWINGS AND THEIR CONTENT ARE AND SHALL REMAIN THE PROPERTY OF LEA AND BRAZE ENGINEERING, INC. WHETHER THE PROJECT FOR WHICH THEY ARE PREPARED IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY ANY PERSONS ON OTHER PROJECTS OR EXTENSIONS OF THE PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO THE ENGINEER.

ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND TRADE STANDARDS WHICH GOVERN EACH PHASE OF WORK INCLUDING, BUT NOT LIMITED TO, CALIFORNIA MECHANICAL CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, CALTRANS STANDARDS AND SPECIFICATIONS, AND ALL APPLICABLE STATE AND/OR LOCAL CODES AND/OR LEGISLATION.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND ALL SUBCONTRACTORS TO CHECK AND VERIFY ALL CONDITIONS, DIMENSIONS, LINES AND LEVELS INDICATED. PROPER FIT AND ATTACHMENT OF ALL PARTS IS REQUIRED. SHOULD THERE BE ANY DISCREPANCIES, IMMEDIATELY NOTIFY THE ENGINEER FOR CORRECTION OR ADJUSTMENT THE EVENT OF FAILURE TO DO SO, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTION OF ANY ERROR.

ALL DIMENSIONS AND CONDITIONS SHALL BE CHECKED AND VERIFIED ON THE JOB BY EACH SUBCONTRACTOR BEFORE HE/SHE BEGINS HIS/HER WORK. ANY ERRORS, OMISSION, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER/CONTRACTOR BEFORE CONSTRUCTION BEGINS.

COMMENCEMENT OF WORK BY THE CONTRACTOR AND/OR ANY SUBCONTRACTOR SHALL INDICATE KNOWLEDGE AND ACCEPTANCE OF ALL CONDITIONS DESCRIBED IN THESE CONSTRUCTION DOCUMENTS, OR EXISTING ON SITE, WHICH COULD AFFECT THEIR WORK.

WORK SEQUENCE

IN THE EVENT ANY SPECIAL SEQUENCING OF THE WORK IS REQUIRED BY THE OWNER OR THE CONTRACTOR, THE CONTRACTOR SHALL ARRANGE A CONFERENCE BEFORE ANY SUCH WORK IS BEGUN.

SITE EXAMINATION: THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL THOROUGHLY EXAMINE THE SITE AND FAMILIARIZE HIM/HERSELF WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL VERIFY AT THE SITE ALL MEASUREMENTS AFFECTING HIS/HER WORK AND SHALL BE RESPONSIBLE FOR THE CORRECTIONS OF THE SAME. NO EXTRA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR EXPENSES DUE TO HIS/HER NEGLECT TO EXAMINE, OR FAILURE TO DISCOVER, CONDITIONS WHICH AFFECT HIS/HER WORK.

LEA AND BRAZE ENGINEERING, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF LEA AND BRAZE ENGINEERING, INC. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD HARMLESS LEA AND BRAZE ENGINEERING, INC.

CONSTRUCTION IS ALWAYS LESS THAN PERFECT SINCE PROJECTS REQUIRE THE COORDINATION AND INSTALLATION OF MANY INDIVIDUAL COMPONENTS BY VARIOUS CONSTRUCTION INDUSTRY TRADES. THESE DOCUMENTS CANNOT PORTRAY ALL COMPONENTS OR ASSEMBLIES EXACTLY. IT IS THE INTENTION OF THESE ENGINEERING DOCUMENTS THAT THEY REPRESENT A REASONABLE STANDARD OF CARE IN THEIR CONTENT. IT IS ALSO PRESUMED BY THESE DOCUMENTS THAT CONSTRUCTION REVIEW SERVICES WILL BE PROVIDED BY THE ENGINEER. SHOULD THE OWNER NOT RETAIN THE ENGINEER TO PROVIDE SUCH SERVICES, OR SHOULD HE/SHE RETAIN THE ENGINEER TO PROVIDE ONLY PARTIAL OR LIMITED SERVICES, THEN IT SHALL BE THE OWNER'S AND CONTRACTOR'S RESPONSIBILITY TO FULLY RECOGNIZE AND PROVIDE THAT STANDARD OF CARE.

IF THE OWNER OR CONTRACTOR OBSERVES OR OTHERWISE BECOMES AWARE OF ANY FAULT OR DEFECT IN THE PROJECT OR NONCONFORMANCE WITH THE CONTRACT DOCUMENTS, PROMPT WRITTEN NOTICE THEREOF SHALL BE GIVEN BY THE OWNER AND/OR CONTRACTOR TO THE ENGINEER.

THE ENGINEER SHALL NOT HAVE CONTROL OF OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

SITE PROTECTION

PROTECT ALL LANDSCAPING THAT IS TO REMAIN. ANY DAMAGE OR LOSS RESULTING FROM EXCAVATION, GRADING, OR CONSTRUCTION WORK SHALL BE CORRECTED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING SITE UTILITIES AND SHALL COORDINATE THEIR REMOVAL OR MODIFICATIONS (IF ANY) TO AVOID ANY INTERRUPTION OF SERVICE TO ADJACENT AREAS. THE GENERAL CONTRACTOR SHALL INFORM HIM/HERSELF OF MUNICIPAL REGULATIONS AND CARRY OUT HIS/HER WORK IN COMPLIANCE WITH ALL FEDERAL AND STATE REQUIREMENTS TO REDUCE FIRE HAZARDS AND INJURIES TO THE PUBLIC.

STORMWATER POLLUTION PREVENTION NOTES

1) STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES PROPERLY, SO AS TO PREVENT THEIR CONTACT WITH STORMWATER.

2) CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING SOLID WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASH WATER OR SEDIMENT, AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATER COURSES.

3) USE SEDIMENT CONTROL OR FILTRATION TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.

4) AVOID CLEANING, FUELING, OR MAINTAINING VEHICLES ON SITE, EXCEPT IN A DESIGNATED AREA IN WHICH RUNOFF IS CONTAINED AND TREATED.

5) DELINEATE CLEARING LIMITS, EASEMENTS, SETBACKS, SENSITIVE OR CRITICAL AREAS, BUFFER ZONES, TREES AND DISCHARGE COURSE WITH FIELD MARKERS.

6) PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OF FILTERS, DIKES, MULCHING, OR OTHER MEASURES AS APPROPRIATE.

7) PERFORM CLEARING AND EARTH MOVING ACTIVITIES DURING DRY WEATHER TO THE MAXIMUM EXTENT PRACTICAL.

8) LIMIT AND TIME APPLICATIONS OF PESTICIDES AND FERTILIZERS TO PREVENT POLLUTED RUNOFF.

9) LIMIT CONSTRUCTION ACCESS ROUTES AND STABILIZE DESIGNATED ACCESS POINTS.

10) AVOID TRACKING DIRT OR MATERIALS OFF-SITE; CLEAN OFF-SITE PAVED AREAS AND SIDEWALKS USING DRY SWEEPING METHODS TO THE MAXIMUM EXTENT PRACTICAL.

SUPPLEMENTAL MEASURES

A. THE PHRASE "NO DUMPING - DRAINS TO BAY" OR EQUALLY EFFECTIVE PHRASE MUST BE LABELED ON STORM DRAIN INLETS (BY STENCILING, BRANDING, OR PLAQUES) TO ALERT THE PUBLIC TO THE DESTINATION OF STORM WATER AND TO PREVENT DIRECT DISCHARGE OF POLLUTANTS INTO THE STORM DRAIN.

B. USING FILTRATION MATERIALS ON STORM DRAIN COVERS TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.

C. STABILIZING ALL DENUDED AREAS AND MAINTAINING EROSION CONTROL MEASURES CONTINUOUSLY FROM OCTOBER 15 AND APRIL 15.

D. REMOVING SPOILS PROMPTLY, AND AVOID STOCKPILING OF FILL MATERIALS, WHEN RAIN IS FORECAST. IF RAIN THREATENS, STOCKPILED SOILS AND OTHER MATERIALS SHALL BE COVERED WITH A TARP OR OTHER WATERPROOF MATERIAL.

E. STORING, HANDLING, AND DISPOSING OF CONSTRUCTION MATERIALS AND WASTES SO AS TO AVOID THEIR ENTRY TO THE STORM DRAIN SYSTEMS OR WATER BODY.

F. AVOIDING CLEANING, FUELING, OR MAINTAINING VEHICLES ON-SITE, EXCEPT IN AN AREA DESIGNATED TO CONTAIN AND TREAT RUNOFF.

GRADING & DRAINAGE NOTES:

1. SCOPE OF WORK

THESE SPECIFICATIONS AND APPLICABLE PLANS PERTAIN TO AND INCLUDE ALL SITE GRADING AND EARTHWORK ASSOCIATED WITH THE PROJECT INCLUDING, BUT NOT LIMITED TO THE FURNISHING OF ALL LABOR, TOOLS AND EQUIPMENT NECESSARY FOR SITE CLEARING AND GRUBBING, SITE PREPARATION, DISPOSAL OF EXCESS OR UNSUITABLE MATERIAL, STRIPPING, KEYING, EXCAVATION, OVER EXCAVATION, RECOMPACTION PREPARATION FOR SOIL RECEIVING FILL, PAVEMENT, FOUNDATION OF SLABS, EXCAVATION, IMPORTATION OF ANY REQUIRED FILL MATERIAL, PROCESSING, PLACEMENT AND COMPACTION OF FILL AND SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING TO CONFORM TO THE LINES, GRADING AND SLOPE SHOWN ON THE PROJECT GRADING PLANS.

2. GENERAL

A. ALL SITE GRADING AND EARTHWORK SHALL CONFORM TO THE RECOMMENDATIONS OF THESE SPECIFICATIONS, THE SOILS REPORT BY GEOFORENSICS INC. AND THE COUNTY OF SAN MATEO.

B. ALL FILL MATERIALS SHALL BE DENSIFIED SO AS TO PRODUCE A DENSITY NOT LESS THAN 90% RELATIVE COMPACTION BASED UPON ASTM TEST DESIGNATION D1557. FIELD DENSITY TEST WILL BE PERFORMED IN ACCORDANCE WITH ASTM TEST DESIGNATION 2922 AND 3017. THE LOCATION AND FREQUENCY OF THE FIELD DENSITY TEST WILL BE AS DETERMINED BY THE SOIL ENGINEER. THE RESULTS OF THESE TEST AND COMPLIANCE WITH THE SPECIFICATIONS WILL BE THE BASIS UPON WHICH SATISFACTORY COMPLETION OF THE WORK WILL BE JUDGED BY THE SOIL ENGINEER. ALL CUT AND FILL SLOPES SHALL BE CONSTRUCTED AS SHOWN ON PLANS, BUT NO STEEPER THAN TWO (2) HORIZONTAL TO ONE (1) VERTICAL.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF ALL THE EARTHWORK IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. NO DEVIATION FROM THESE SPECIFICATIONS SHALL BE MADE EXCEPT UPON WRITTEN APPROVAL BY THE SOILS ENGINEER. BOTH CUT AND FILL AREAS SHALL BE SURFACE COMPLETED TO THE SATISFACTION OF THE SOILS ENGINEER AT THE CONCLUSION OF ALL GRADING OPERATIONS AND PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL NOTIFY THE SOILS ENGINEER AT LEAST TWO (2) WORKING DAYS PRIOR TO DOING ANY SITE GRADING AND EARTHWORK INCLUDING CLEARING.

3. CLEARING AND GRUBBING

A. THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS PRESENT CONDITION. ALL EXISTING PUBLIC IMPROVEMENTS SHALL BE PROTECTED. ANY IMPROVEMENTS DAMAGED SHALL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE LOCAL JURISDICTION WITH NO EXTRA COMPENSATION.

B. ALL ABANDONED BUILDINGS AND FOUNDATIONS, TREE (EXCEPT THOSE SPECIFIED TO REMAIN FOR LANDSCAPING PURPOSES), FENCES, VEGETATION AND ANY SURFACE DEBRIS SHALL BE REMOVED AND DISPOSED OF OFF THE SITE BY THE CONTRACTOR.

C. ALL ABANDONED SEPTIC TANKS AND ANY OTHER SUBSURFACE STRUCTURES EXISTING IN PROPOSED DEVELOPMENT AREAS SHALL BE REMOVED PRIOR TO ANY GRADING OR FILL OPERATION. ALL APPURTENANT DRAIN FIELDS AND OTHER CONNECTING LINES MUST ALSO BE TOTALLY REMOVED.

D. ALL ABANDONED UNDERGROUND IRRIGATION OR UTILITY LINES SHALL BE REMOVED OR DEMOLISHED. THE APPROPRIATE FINAL DISPOSITION OF SUCH LINES DEPEND UPON THEIR DEPTH AND LOCATION AND THE METHOD OF REMOVAL OR DEMOLITION SHALL BE DETERMINED BY THE SOILS ENGINEER. ONE OF THE FOLLOWING METHODS WILL BE USED:

(1) EXCAVATE AND TOTALLY REMOVE THE UTILITY LINE FROM THE TRENCH.

(2) EXCAVATE AND CRUSH THE UTILITY LINE IN THE TRENCH.

(3) CAP THE ENDS OF THE UTILITY LINE WITH CONCRETE TO PREVENT THE ENTRANCE OF WATER. THE LOCATIONS AT WHICH THE UTILITY LINE WILL BE CAPPED WILL BE DETERMINED BY THE UTILITY DISTRICT ENGINEER. THE LENGTH OF THE CAP SHALL NOT BE LESS THAN FIVE FEET, AND THE CONCRETED MIX EMPLOYED SHALL HAVE MINIMUM SHRINKAGE.

4. SITE PREPARATION AND STRIPPING

A. ALL SURFACE ORGANICS SHALL BE STRIPPED AND REMOVED FROM BUILDING PADS, AREAS TO RECEIVE COMPACTED FILL AND PAVEMENT AREAS.

B. UPON THE COMPLETION OF THE ORGANIC STRIPPING OPERATION, THE GROUND SURFACE (NATIVE SOIL SUBGRADE) OVER THE ENTIRE AREA OF ALL BUILDING PADS, STREET AND PAVEMENT AREAS AND ALL AREAS TO RECEIVE COMPACTED FILL SHALL BE PLOWED OR SCARIFIED UNTIL THE SURFACE IS FREE OF RUTS, HUMMOCKS OR OTHER UNEVEN FEATURES WHICH MAY INHIBIT UNIFORM SOIL COMPACTION. THE GROUND SURFACE SHALL THEN BE DISCED OR BLADED TO A DEPTH OF AT LEAST 6 INCHES. UPON ENGINEER'S SATISFACTION, THE NEW SURFACE SHALL BE WATER CONDITIONED AND RECOMPACTED PER REQUIREMENTS FOR COMPACTING FILL MATERIAL.

5. EXCAVATION

A. UPON COMPLETION OF THE CLEARING AND GRUBBING, SITE PREPARATION AND STRIPPING, THE CONTRACTOR SHALL MAKE EXCAVATIONS TO LINES AND GRADES NOTED ON THE PLAN. WHERE REQUIRED BY THE SOILS ENGINEER, UNACCEPTABLE NATIVE SOILS OR UNENGINEERED FILL SHALL BE OVER EXCAVATED BELOW THE DESIGN GRADE. SEE PROJECT SOILS REPORT FOR DISCUSSION OF OVER EXCAVATION OF THE UNACCEPTABLE MATERIAL. RESULTING GROUND LINE SHALL BE SCARIFIED, MOISTURE-CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE.

B. EXCAVATED MATERIALS SUITABLE FOR COMPACTED FILL MATERIAL SHALL BE UTILIZED IN MAKING THE REQUIRED COMPACTED FILLS. THOSE NATIVE MATERIALS CONSIDERED UNSUITABLE BY THE SOILS ENGINEER SHALL BE DISPOSED OF OFF THE SITE BY THE CONTRACTOR.

6. PLACING, SPREADING AND COMPACTING FILL MATERIAL

A. FILL MATERIALS

THE MATERIALS PROPOSED FOR USE AS COMPACTED FILL SHALL BE APPROVED BY THE SOILS ENGINEER BEFORE COMMENCEMENT OF GRADING OPERATIONS. THE NATIVE MATERIAL IS CONSIDERED SUITABLE FOR FILL; HOWEVER, ANY NATIVE MATERIAL DESIGNATED UNSUITABLE BY THE SOILS ENGINEER SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. ANY IMPORTED MATERIAL SHALL BE APPROVED FOR USE BY THE SOILS ENGINEER, IN WRITING, BEFORE BEING IMPORTED TO THE SITE AND SHALL POSSESS SUFFICIENT FINES TO PROVIDE A COMPETENT SOIL MATRIX AND SHALL BE FREE OF VEGETATIVE AND ORGANIC MATTER AND OTHER DELETERIOUS MATERIALS. ALL FILL VOIDS SHALL BE FILLED AND PROPERLY COMPACTED. NO ROCKS LARGER THAN THREE INCHES IN DIAMETER SHALL BE PERMITTED.

B. FILL CONSTRUCTION

THE SOILS ENGINEER SHALL APPROVE THE NATIVE SOIL SUBGRADE BEFORE PLACEMENT OF ANY COMPACTED FILL MATERIAL. UNACCEPTABLE NATIVE SOIL SHALL BE REMOVED AS DIRECTED BY THE SOILS ENGINEER. THE RESULTING GROUND LINE SHALL BE SCARIFIED MOISTURE CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE. GROUND PREPARATION SHALL BE FOLLOWED CLOSELY BY FILL PLACEMENT TO PREVENT DRYING OUT OF THE SUBSOIL BEFORE PLACEMENT OF THE FILL.

THE APPROVED FILL MATERIALS SHALL BE PLACED IN UNIFORM HORIZONTAL LAYERS NO THICKER THAN 8" IN LOOSE THICKNESS. LAYERS SHALL BE SPREAD EVENLY AND SHALL BE THOROUGHLY BLADE MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. THE SCARIFIED SUBGRADE AND FILL MATERIAL SHALL BE MOISTURE CONDITIONED TO AT LEAST OPTIMUM MOISTURE. WHEN THE MOISTURE CONTENT OF THE FILL IS BELOW THAT SPECIFIED, WATER SHALL BE ADDED UNTIL THE MOISTURE DURING THE COMPACTION PROCESS. WHEN THE MOISTURE CONTENT OF THE FILL IS ABOVE THAT SPECIFIED, THE FILL MATERIAL SHALL BE AERATED BY BLADING OR OTHER SATISFACTORY METHODS UNTIL THE MOISTURE CONTENT IS AS SPECIFIED.

AFTER EACH LAYER HAS BEEN PLACED, MIXED, SPREAD EVENLY AND MOISTURE CONDITIONED, IT SHALL BE COMPACTED TO AT LEAST THE SPECIFIED DENSITY.

THE FILL OPERATION SHALL BE CONTINUED IN COMPACTED LAYERS AS SPECIFIED ABOVE UNTIL THE FILL HAS BEEN BROUGHT TO THE FINISHED SLOPES AND GRADES AS SHOWN ON THE PLANS. NO LAYER SHALL BE ALLOWED TO DRY OUT BEFORE SUBSEQUENT LAYERS ARE PLACED.

COMPACTION EQUIPMENT SHALL BE OF SUCH DESIGN THAT IT WILL BE ABLE TO COMPACT THE FILL TO THE SPECIFIED MINIMUM COMPACTION WITHIN THE SPECIFIED MOISTURE CONTENT RANGE. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER ITS ENTIRE AREA UNTIL THE REQUIRED MINIMUM DENSITY HAS BEEN OBTAINED.

7. CUT OR FILL SLOPES

ALL CONSTRUCTED SLOPES, BOTH CUT AND FILL, SHALL BE NO STEEPER THAN 2 TO 1 (HORIZONTAL TO VERTICAL). DURING THE GRADING OPERATION, COMPACTED FILL SLOPES SHALL BE OVERFILLED BY AT LEAST ONE FOOT HORIZONTALLY AT THE COMPLETION OF THE GRADING OPERATIONS, THE EXCESS FILL EXISTING ON THE SLOPES SHALL BE BLADED OFF TO CREATE THE FINISHED SLOPE EMBANKMENT. ALL CUT AND FILL SLOPES SHALL BE TRACK WALKED AFTER BEING BROUGHT TO FINISH GRADE AND THEN BE PLANTED WITH EROSION CONTROL SLOPE PLANTING. THE SOILS ENGINEER SHALL REVIEW ALL CUT SLOPES TO DETERMINE IF ANY ADVERSE GEOLOGIC CONDITIONS ARE EXPOSED. IF SUCH CONDITIONS DO OCCUR, THE SOILS ENGINEER SHALL RECOMMEND THE APPROPRIATE MITIGATION MEASURES AT THE TIME OF THEIR DETECTION.

8. SEASONAL LIMITS AND DRAINAGE CONTROL

FILL MATERIALS SHALL NOT BE PLACED, SPREAD OR COMPACTED WHILE IT IS AT AN UNSUITABLY HIGH MOISTURE CONTENT OR DURING OTHERWISE UNFAVORABLE CONDITIONS. WHEN THE WORK IS INTERRUPTED FOR ANY REASON THE FILL OPERATIONS SHALL NOT BE RESUMED UNTIL FIELD TEST PERFORMED BY THE SOILS ENGINEER INDICATE THAT THE MOISTURE CONDITIONS IN AREAS TO BE FILLED ARE AS PREVIOUSLY SPECIFIED. ALL EARTH MOVING AND WORKING OPERATIONS SHALL BE CONTROLLED TO PREVENT WATER FROM RUNNING INTO EXCAVATED AREAS. ALL EXCESS WATER SHALL BE PROMPTLY REMOVED AND THE SITE KEPT DRY.

9. DUST CONTROL

THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY FOR THE ALLEVIATION OR PREVENTION OF ANY DUST NUISANCE ON OR ABOUT THE SITE CAUSED BY THE CONTRACTOR'S OPERATION EITHER DURING THE PERFORMANCE OF THE GRADING OR RESULTING FROM THE CONDITION IN WHICH THE CONTRACTOR LEAVES THE SITE. THE CONTRACTOR SHALL ASSUME ALL LIABILITY INCLUDING COURT COST OF CO-DEFENDANTS FOR ALL CLAIMS RELATED TO DUST OR WIND-BLOWN MATERIALS ATTRIBUTABLE TO HIS WORK. COST FOR THIS ITEM OF WORK IS TO BE INCLUDED IN THE EXCAVATION ITEM AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

10. INDEMNITY

THE CONTRACTOR WILL HOLD HARMLESS, INDEMNIFY AND DEFEND THE ENGINEER, THE OWNER AND HIS CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS, FROM ANY AND ALL LIABILITY CLAIMS, LOSSES OR DAMAGE ARISING OR ALLEGED TO HEREIN, BUT NOT INCLUDING THE SOLE NEGLIGENCE OF THE OWNER, THE ARCHITECT, THE ENGINEER AND HIS CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS.

11. SAFETY

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE. INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

THE DUTY OF THE ENGINEERS TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.

12. GUARANTEE

NEITHER THE FINAL PAYMENT, NOR THE PROVISIONS IN THE CONTRACT, NOR PARTIAL, NOR ENTIRE USE OR OCCUPANCY OF THE PREMISES BY THE OWNER SHALL CONSTITUTE AN ACCEPTANCE OF THE WORK NOT DONE IN ACCORDANCE WITH THE CONTRACT OR RELIEVES THE CONTRACTOR OF LIABILITY IN RESPECT TO ANY EXPRESS WARRANTIES OR RESPONSIBILITY FOR FAULTY MATERIAL OR WORKMANSHIP.

THE CONTRACTOR SHALL REMEDY ANY DEFECTS IN WORK AND PAY FOR ANY DAMAGE TO OTHER WORK RESULTING THERE FROM WHICH SHALL APPEAR WITHIN A PERIOD OF ONE (1) CALENDAR YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK.

13. TRENCH BACKFILL

EITHER THE ON-SITE INORGANIC SOIL OR APPROVED IMPORTED SOIL MAY BE USED AS TRENCH BACKFILL. THE BACKFILL MATERIAL SHALL BE MOISTURE CONDITIONED PER THESE SPECIFICATIONS AND SHALL BE PLACED IN LIFTS OF NOT MORE THAN SIX INCHES IN HORIZONTAL UNCOMPACTED LAYERS AND BE COMPACTED BY MECHANICAL MEANS TO A MINIMUM OF 90% RELATIVE COMPACTION. IMPORTED SAND MAY BE USED FOR TRENCH BACKFILL MATERIAL PROVIDED IT IS COMPACTED TO AT LEAST 90% RELATIVE COMPACTION. WATER JETTING ASSOCIATED WITH COMPACTION USING VIBRATORY EQUIPMENT WILL BE PERMITTED ONLY WITH IMPORTED SAND BACKFILL WITH THE APPROVAL OF THE SOILS ENGINEER. ALL PIPES SHALL BE BEDDED WITH SAND EXTENDING FROM THE TRENCH BOTTOM TO TWELVE INCHES ABOVE THE PIPE. SAND BEDDING IS TO BE COMPACTED AS SPECIFIED ABOVE FOR SAND BACKFILL.

14. EROSION CONTROL

A. ALL GRADING, EROSION AND SEDIMENT CONTROL AND RELATED WORK UNDERTAKEN ON THIS SITE IS SUBJECT TO ALL TERMS AND CONDITIONS OF THE COUNTY GRADING ORDINANCE AND MADE A PART HEREOF BY REFERENCE.

B. THE CONTRACTOR WILL BE LIABLE FOR ANY AND ALL DAMAGES TO ANY PUBLICLY OWNED AND MAINTAINED ROAD CAUSED BY THE AFORESAID CONTRACTOR'S GRADING ACTIVITIES, AND SHALL BE RESPONSIBLE FOR THE CLEANUP OF ANY MATERIAL SPILLED ON ANY PUBLIC ROAD ON THE HAUL ROUTE.

C. THE EROSION CONTROL MEASURES ARE TO BE OPERABLE DURING THE RAINY SEASON, GENERALLY FROM OCTOBER FIRST TO APRIL FIFTEENTH. EROSION CONTROL PLANTING IS TO BE COMPLETED BY OCTOBER FIRST. NO GRADING OR UTILITY TRENCHING SHALL OCCUR BETWEEN OCTOBER FIRST AND APRIL FIFTEENTH UNLESS AUTHORIZED BY THE LOCAL JURISDICTION.

D. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED AND CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE SOILS ENGINEER.

E. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM.

F. ALL EROSION CONTROL FACILITIES MUST BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY DURING THE RAINY SEASON.

G. WHEN NO LONGER NECESSARY AND PRIOR TO FINAL ACCEPTANCE OF DEVELOPMENT, SEDIMENT BASINS SHALL BE REMOVED OR OTHERWISE DEACTIVATED AS REQUIRED BY THE LOCAL JURISDICTION.

H. A CONSTRUCTION ENTRANCE SHALL BE PROVIDED AT ANY POINT OF EGRESS FROM THE SITE TO ROADWAY. A CONSTRUCTION ENTRANCE SHOULD BE COMPOSED OF COARSE DRAIN ROCK (2" TO 3") MINIMUM DIAMETER) AT LEAST EIGHT INCHES THICK BY FIFTY (50) FEET LONG BY TWENTY (20) FEET WIDE UNLESS SHOWN OTHERWISE ON PLAN AND SHALL BE MAINTAINED UNTIL THE SITE IS PAVED.

I. ALL AREAS SPECIFIED FOR HYDROSEEDING SHALL BE NOZZLE PLANTED WITH STABILIZATION MATERIAL CONSISTING OF FIBER, SEED, FERTILIZER AND WATER, MIXED AND APPLIED IN THE FOLLOWING PROPORTIONS:

FIBER, 2000 LBS/ACRE
SEED, 200 LBS/ACRE (SEE NOTE J, BELOW)
FERTILIZER (11-8-4), 500 LBS/ACRE
WATER, AS REQUIRED FOR APPLICATION

J. SEED MIX SHALL BE PER CALTRANS STANDARDS.

K. WATER UTILIZED IN THE STABILIZATION MATERIAL SHALL BE OF SUCH QUALITY THAT IT WILL PROMOTE GERMINATION AND STIMULATE GROWTH OF PLANTS. IT SHALL BE FREE OF POLLUTANT MATERIALS AND WEED SEED.

L. HYDROSEEDING SHALL CONFORM TO THE PROVISIONS OF SECTION 20, EROSION CONTROL AND HIGHWAY PLANTING", OF THE STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, AS LAST REVISED.

M. A DISPERSING AGENT MAY BE ADDED TO THE HYDROSEEDING MATERIAL, PROVIDED THAT THE CONTRACTOR FURNISHES SUITABLE EVIDENCE THAT THE ADDITIVE WILL NOT ADVERSELY AFFECT THE PERFORMANCE OF THE SEEDING MIXTURE.

N. STABILIZATION MATERIALS SHALL BE APPLIED AS SOON AS PRACTICABLE AFTER COMPLETION OF GRADING OPERATIONS AND PRIOR TO THE ONSET OF WINTER RAINS, OR AT SUCH OTHER TIME AS DIRECTED BY THE COUNTY ENGINEER. THE MATERIAL SHALL BE APPLIED BEFORE INSTALLATION OF OTHER LANDSCAPING MATERIALS SUCH AS TREES, SHRUBS AND GROUND COVERS.

O. THE STABILIZATION MATERIAL SHALL BE APPLIED WITHIN 4-HOURS AFTER MIXING. MIXED MATERIAL NOT USED WITHIN 4-HOURS SHALL BE REMOVED FROM THE SITE.

P. THE CONTRACTOR SHALL MAINTAIN THE SOIL STABILIZATION MATERIAL AFTER PLACEMENT. THE COUNTY ENGINEER MAY REQUIRE SPRAY APPLICATION OF WATER OR OTHER MAINTENANCE ACTIVITIES TO ASSURE THE EFFECTIVENESS OF THE STABILIZATION PROCESS. APPLICATION OF WATER SHALL BE ACCOMPLISHED USING NOZZLES THAT PRODUCE A SPRAY THAT DOES NOT CONCENTRATE OR WASH AWAY THE STABILIZATION MATERIALS.

15. CLEANUP

THE CONTRACTOR MUST MAINTAIN THE SITE CLEAN, SAFE AND IN USABLE CONDITION. ANY SPILLS OF SOIL, ROCK OR CONSTRUCTION MATERIAL MUST BE REMOVED FROM THE SITE BY THE CONTRACTOR DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. COST FOR THIS ITEM OF WORK SHALL BE INCLUDED IN THE EXCAVATION AND COMPACTION ITEM AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

NOTE:
THESE NOTES ARE INTENDED TO BE USED AS A GENERAL GUIDELINE. THE REFERENCED SOILS REPORT FOR THE PROJECT AND GOVERNING AGENCY GRADING ORDINANCE SHALL SUPERSEDE THESE NOTES. THE SOILS ENGINEER MAY MAKE ON-SITE RECOMMENDATIONS DURING GRADING OPERATIONS.

REGISTERED PROFESSIONAL ENGINEER
JAMES TOBY
No. 63127
CIVIL
STATE OF CALIFORNIA
ORIGINAL SIGNATURES IN BLUE INK
JUL 0 6 2017

LEA & BRAZE ENGINEERING, INC.
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ENEA RESIDENCE
738 LOMA COURT
(UNINCORPORATED SAN MATEO COUNTY)
REDWOOD CITY, CALIFORNIA
SAN MATEO COUNTY
APN: 051-022-180 & 310

GRADING SPECIFICATIONS

REVISIONS	BY
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JOB NO:	2170695
DATE:	07-06-17
SCALE:	NO SCALE
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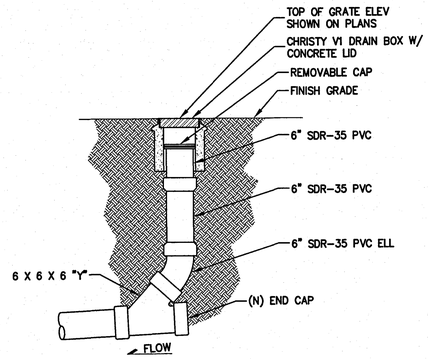

1 C-4.0 **ON-SITE CLEANOUT**
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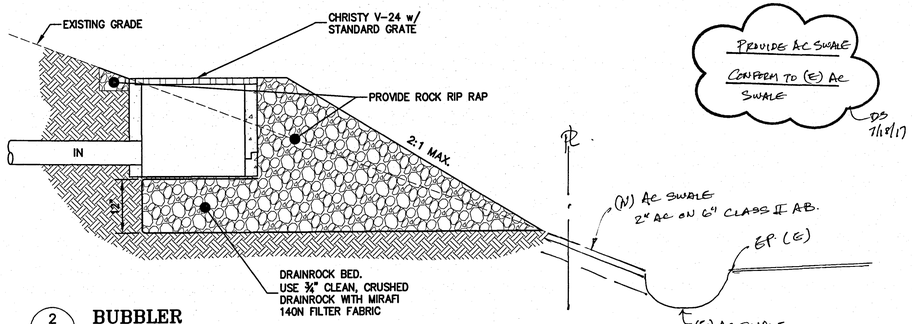

2 C-4.0 **BUBBLER**
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This approval does not authorize v lation
of State or County building la

AUG 0 3 2017

SAN MATEO CO. BLDG. INS . DIV.

APPROVED DRAINAGE PL N
SITE DRAINAGE INSPECTIO
REQUIRED BEFORE DACK-FI
DPW Ph. 363-1352
DS
7/18/17

RECEI ED
JUL 1 2017
SAN MATE COUNTY
BUILDING SPECTOR

REGISTERED PROFESSIONAL ENGINEER
JAMES TOBY
No. 63127
CIVIL
STATE OF CALIFORNIA
ORIGINAL SIGNATURES IN BLUE INK

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DETAILS

REVISIONS	BY
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JOB NO:	2170695
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SCALE:	NTS
DESIGN BY:	DM
DRAWN BY:	DM
SHEET NO:	C-4.0

5 OF 8 SHEETS

PURPOSE:

THE PURPOSE OF THIS PLAN IS TO STABILIZE THE SITE TO PREVENT EROSION OF GRADED AREAS AND TO PREVENT SEDIMENTATION FROM LEAVING THE CONSTRUCTION AREA AND AFFECTING NEIGHBORING SITES, NATURAL AREAS, PUBLIC FACILITIES OR ANY OTHER AREA THAT MIGHT BE AFFECTED BY SEDIMENTATION. ALL MEASURES SHOWN ON THIS PLAN SHOULD BE CONSIDERED THE MINIMUM REQUIREMENTS NECESSARY. SHOULD FIELD CONDITIONS DICTATE ADDITIONAL MEASURES, SUCH MEASURES SHALL BE PER CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD'S FIELD MANUAL FOR EROSION AND SEDIMENTATION CONTROL AND THE CALIFORNIA STORM WATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICES HANDBOOK FOR CONSTRUCTION. LEA & BRAZE ENGINEERING SHOULD BE NOTIFIED IMMEDIATELY SHOULD CONDITIONS CHANGE.

EROSION CONTROL NOTES:

1. IT SHALL BE THE OWNER'S/CONTRACTOR'S RESPONSIBILITY TO MAINTAIN CONTROL OF THE ENTIRE CONSTRUCTION OPERATION AND TO KEEP THE ENTIRE SITE IN COMPLIANCE WITH THIS EROSION CONTROL PLAN.
2. THE INTENTION OF THIS PLAN IS FOR INTERIM EROSION AND SEDIMENT CONTROL ONLY. ALL EROSION CONTROL MEASURES SHALL CONFORM TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD'S FIELD MANUAL FOR EROSION AND SEDIMENTATION CONTROL. THE CALIFORNIA STORM WATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICES HANDBOOK FOR CONSTRUCTION, AND THE LOCAL GOVERNING AGENCY FOR THIS PROJECT.
3. OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO, DURING, AND AFTER STORM EVENTS. PERSON IN CHARGE OF MAINTAINING EROSION CONTROL MEASURES SHOULD WATCH LOCAL WEATHER REPORTS AND ACT APPROPRIATELY TO MAKE SURE ALL NECESSARY MEASURES ARE IN PLACE.
4. SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM, INCLUDING EXISTING DRAINAGE SWALES AND WATERCOURSES.
6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION WILL BE MINIMIZED. COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS CONCERNING POLLUTION SHALL BE MAINTAINED AT ALL TIMES.
7. CONTRACTOR SHALL PROVIDE DUST CONTROL AS REQUIRED BY THE APPROPRIATE FEDERAL, STATE AND LOCAL AGENCY REQUIREMENTS.
8. ALL MATERIALS NECESSARY FOR THE APPROVED EROSION CONTROL MEASURES SHALL BE IN PLACE BY OCTOBER 15TH.
9. EROSION CONTROL SYSTEMS SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE RAINY SEASON, OR FROM OCTOBER 15TH THROUGH APRIL 15TH, WHICHEVER IS LONGER.
10. IN THE EVENT OF RAIN, ALL GRADING WORK IS TO CEASE IMMEDIATELY AND THE SITE IS TO BE SEALED IN ACCORDANCE WITH THE APPROVAL EROSION CONTROL MEASURES AND APPROVED EROSION CONTROL PLAN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING AND REPAIRING EROSION CONTROL SYSTEMS AFTER EACH STORM.
12. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY LOCAL JURISDICTION'S ENGINEERING DEPARTMENT OR BUILDING OFFICIALS.
13. MEASURES SHALL BE TAKEN TO COLLECT OR CLEAN ANY ACCUMULATION OR DEPOSIT OF DIRT, MUD, SAND, ROCKS, GRAVEL OR DEBRIS ON THE SURFACE OF ANY STREET, ALLEY OR PUBLIC PLACE OR IN ANY PUBLIC STORM DRAIN SYSTEMS. THE REMOVAL OF AFORESAID SHALL BE DONE BY STREET SWEEPING OR HAND SWEEPING. WATER SHALL NOT BE USED TO WASH SEDIMENTS INTO PUBLIC OR PRIVATE DRAINAGE FACILITIES.
14. EROSION CONTROL MEASURES SHALL BE ON-SITE FROM SEPTEMBER 15TH THRU APRIL 15TH.
15. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE RAINY SEASON OR FROM OCTOBER 15 THROUGH APRIL 15, WHICHEVER IS GREATER.
16. PLANS SHALL BE DESIGNED TO MEET C3 REQUIREMENTS OF THE MUNICIPAL STORMWATER REGIONAL PERMIT("MRP") NPDES PERMIT CAS 612008.
17. THE CONTRACTOR TO NPDES (NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM) BEST MANAGEMENT PRACTICES (BMP) FOR SEDIMENTATION PREVENTION AND EROSION CONTROL TO PREVENT DELETERIOUS MATERIALS OR POLLUTANTS FROM ENTERING THE TOWN OR COUNTY STORM DRAIN SYSTEMS.
18. THE CONTRACTOR MUST INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO THE INCEPTION OF ANY WORK ONSITE AND MAINTAIN THE MEASURES UNTIL THE COMPLETION OF ALL LANDSCAPING.
19. THE CONTRACTOR SHALL MAINTAIN ADJACENT STREETS IN A NEAT, CLEAN DUST FREE AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF THE TOWN INSPECTOR. THE ADJACENT STREET SHALL AT ALL TIMES BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCE BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR BE RESPONSIBLE FOR ANY CLEAN UP ON ADJACENT STREETS AFFECTED BY THE BY THEIR CONSTRUCTION, METHOD OF STREET CLEANING SHALL BE BY DRY SWEEPING OF ALL PAVED AREAS. NO STOCKPILING OF BUILDING MATERIALS WITHIN THE TOWN RIGHT-OF-WAY.
20. SEDIMENTS AND OTHER MATERIALS SHALL NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONTRACTOR SHALL INSTALL A STABILIZED CONSTRUCTION ENTRANCE PRIOR TO THE INSPECTION OF ANY WORK ONSITE AND MAINTAIN IT FOR THE DURATION OF THE CONSTRUCTION PROCESS SO AS TO NOT INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC RIGHT-OF-WAY UNTIL THE COMPLETION OF ALL LANDSCAPING.
21. THE CONTRACTOR SHALL PROTECT DOWN SLOPE DRAINAGE COURSES, STREAMS AND STORM DRAINS WITH ROCK FILLED SAND BAGS, TEMPORARY SWALES, SILT FENCES, AND EARTH PERMS IN CONJUNCTION OF ALL LANDSCAPING.
22. STOCKPILED MATERIALS SHALL BE COVERED WITH VISQUEEN OR A TARPAULIN UNTIL THE MATERIAL IS REMOVED FROM THE SITE. ANY REMAINING BARE SOIL THAT EXISTS AFTER THE STOCKPILE HAS BEEN REMOVED SHALL BE COVERED UNTIL A NATURAL GROUND COVER IS ESTABLISHED OR IT IS SEEDED OR PLANTED TO PROVIDE GROUND COVER PRIOR TO THE FALL RAINY SEASON.
23. EXCESS OR WASTE CONCRETE MUST NOT BE WASHED INTO THE PUBLIC RIGHT-OF-WAYOR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
24. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION AND DISPERSAL BY WIND

EROSION CONTROL NOTES CONTINUED:

24. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MUST NOT BE WASHED INTO THE DRAINAGE SYSTEM,
25. DUST CONTROL SHALL BE DONE BY WATERING AND AS OFTEN AS REQUIRED BY THE TOWN INSPECTOR.
26. SILT FENCE(S) AND/OR FIBER ROLL(S) SHALL BE INSTALLED PRIOR TO SEPTEMBER 15TH AND SHALL REMAIN IN PLACE UNTIL THE LANDSCAPING GROUND COVER IS INSTALLED. CONTRACTOR SHALL CONTINUOUSLY MONITOR THESE MEASURES, FOLLOWING AND DURING ALL RAIN EVENTS,TO PUBLIC OWNED FACILITIES.

EROSION CONTROL MEASURES:

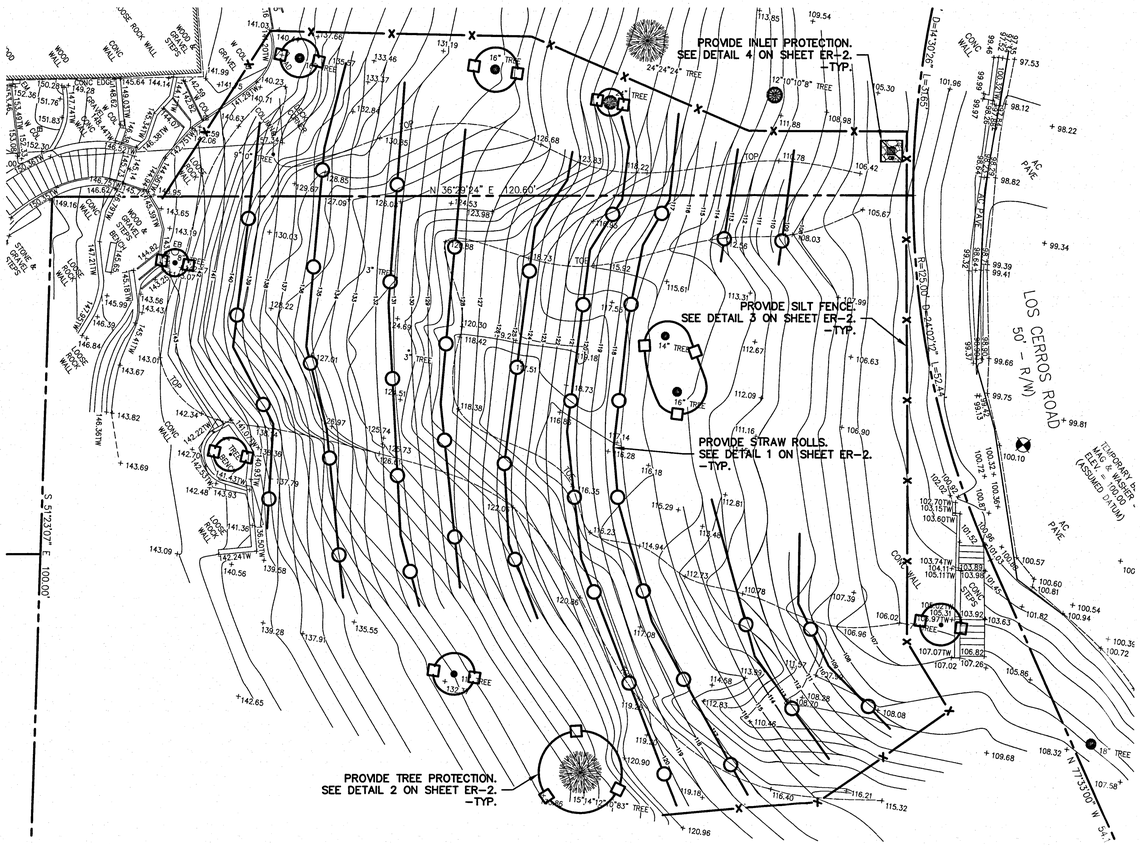
1. THE FACILITIES SHOWN ON THIS PLAN ARE DESIGNED TO CONTROL EROSION AND SEDIMENT DURING THE RAINY SEASON, OCTOBER 15TH TO APRIL 15. EROSION CONTROL FACILITIES SHALL BE IN PLACE PRIOR TO OCTOBER 15TH OF ANY YEAR. GRADING OPERATIONS DURING THE RAINY SEASON WHICH LEAVE DENUDED SLOPES SHALL BE PROTECTED WITH EROSION CONTROL MEASURES IMMEDIATELY FOLLOWING GRADING ON THE SLOPES.
2. SITE CONDITIONS AT TIME OF PLACEMENT OF EROSION CONTROL MEASURES WILL VARY. APPROPRIATE ACTION INCLUDING TEMPORARY SWALES, INLETS, HYDROSEEDING, STRAW BALES, ROCK SACKS, ETC. SHALL BE TAKEN TO PREVENT EROSION AND SEDIMENTATION FROM LEAVING SITE. EROSION CONTROL MEASURES SHALL BE ADJUSTED AS THE CONDITIONS CHANGE AND THE NEED OF CONSTRUCTION SHIFT.
3. CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. ALL CONSTRUCTION TRAFFIC ENTERING ONTO THE PAVED ROADS MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCES. CONTRACTOR SHALL MAINTAIN STABILIZED ENTRANCE AT EACH VEHICLE ACCESS POINT TO EXISTING PAVED STREETS. ANY MUD OR DEBRIS TRACKED ONTO PUBLIC STREETS SHALL BE REMOVED DAILY AND AS REQUIRED BY THE GOVERNING AGENCY.
4. ALL EXPOSED SLOPES THAT ARE NOT VEGETATED SHALL BE HYDROSEEDED. IF HYDROSEEDING IS NOT USED OR IS NOT EFFECTIVE BY OCTOBER 15, THEN OTHER IMMEDIATE METHODS SHALL BE IMPLEMENTED, SUCH AS EROSION CONTROL BLANKETS, OR A THREE-STEP APPLICATION OF 1) SEED, MULCH, FERTILIZER 2) BLOWN STRAW 3) TACKIFIER AND MULCH. HYDROSEEDING SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF SECTION 20" EROSION CONTROL AND HIGHWAY PLANTING" OF THE STANDARD SPECIFICATION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, AS LAST REVISED. REFER TO THE EROSION CONTROL SECTION OF THE GRADING SPECIFICATIONS THAT ARE A PART OF THIS PLAN SET FOR FURTHER INFORMATION.
5. INLET PROTECTION SHALL BE INSTALLED AT OPEN INLETS TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. INLETS NOT USED IN CONJUNCTION WITH EROSION CONTROL ARE TO BE BLOCKED TO PREVENT ENTRY OF SEDIMENT. MINIMUM INLET PROTECTION SHALL CONSIST OF A ROCK SACKS OR AS SHOWN ON THIS PLAN
6. THIS EROSION AND SEDIMENT CONTROL PLAN MAY NOT COVER ALL THE SITUATIONS THAT MAY ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS AND ADDITIONS MAY BE MADE TO THIS PLAN IN THE FIELD. A REPRESENTATIVE OF LEA & BRAZE ENGINEERING SHALL PERFORM A FIELD REVIEW AND MAKE RECOMMENDATIONS AS NEEDED. CONTRACTOR IS RESPONSIBLE TO NOTIFY LEA & BRAZE ENGINEERING AND THE GOVERNING AGENCY OF ANY CHANGES.
7. THE EROSION CONTROL MEASURES SHALL CONFORM TO THE LOCAL JURISDICTION'S STANDARDS AND THE APPROVAL OF THE LOCAL JURISDICTION'S ENGINEERING DEPARTMENT.
8. STRAW ROLLS SHALL BE PLACED AT THE TOE OF SLOPES AND ALONG THE DOWN SLOPE PERIMETER OF THE PROJECT. THEY SHALL BE PLACED AT 25 FOOT INTERVALS ON GRADED SLOPES. PLACEMENT SHALL RUN WITH THE CONTOURS AND ROLLS SHALL BE TIGHTLY END BUTTED. CONTRACTOR SHALL REFER TO MANUFACTURES SPECIFICATIONS FOR PLACEMENT AND INSTALLATION INSTRUCTIONS.

REFERENCES:

1. CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD'S FIELD MANUAL FOR EROSION AND SEDIMENTATION CONTROL
2. CALIFORNIA STORM WATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICES HANDBOOK FOR CONSTRUCTION

PERIODIC MAINTENANCE:

1. MAINTENANCE IS TO BE PERFORMED AS FOLLOWS:
   - A. DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION SHALL BE REPAIRED AT THE END OF EACH WORKING DAY.
   - B. SWALES SHALL BE INSPECTED PERIODICALLY AND MAINTAINED AS NEEDED.
   - C. SEDIMENT TRAPS, BERMS, AND SWALES ARE TO BE INSPECTED AFTER EACH STORM AND REPAIRS MADE AS NEEDED.
   - D. SEDIMENT SHALL BE REMOVED AND SEDIMENT TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO A DEPTH OF 1' FOOT.
   - E. SEDIMENT REMOVED FROM TRAP SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
   - F. RILLS AND GULLIES MUST BE REPAIRED.
2. GRAVEL BAG INLET PROTECTION SHALL BE CLEANED OUT WHENEVER SEDIMENT DEPTH IS ONE HALF THE HEIGHT OF ONE GRAVEL BAG.
3. STRAW ROLLS SHALL BE PERIODICALLY CHECKED TO ASSURE PROPER FUNCTION AND CLEANED OUT WHENEVER THE SEDIMENT DEPTH REACHED HALF THE HEIGHT OF THE ROLL.
4. SILT FENCE SHALL BE PERIODICALLY CHECKED TO ASSURE PROPER FUNCTION AND CLEANED OUT WHENEVER THE SEDIMENT DEPTH REACHES ONE FOOT IN HEIGHT.
5. CONSTRUCTION ENTRANCE SHALL BE REGRAVELED AS NECESSARY FOLLOWING SILT/SOIL BUILDUP.
6. ANY OTHER EROSION CONTROL MEASURES SHOULD BE CHECKED AT REGULAR INTERVALS TO ASSURE PROPER FUNCTION



EROSION CONTROL LEGEND

- GRAVEL BAG
- SEDIMENTATION BASIN
- INLET PROTECTION
- STRAW ROLL
- SILT FENCE
- CONCRETE WASHOUT
- CONSTRUCTION ENTRANCE
- TREE PROTECTION
- EROSION CONTROL BLANKET / MATTING

NOTE:
SEAL ALL OTHER INLETS NOT INTENDED TO ACCEPT STORM WATER AND DIRECT FLOWS TEMPORARILY TO FUNCTIONAL SEDIMENTATION BASIN INLETS. -TYP

0 5 10 20

SCALE: 1" = 10'

APPROVED PLAN
This approval does not authorize violation of State or County building laws.

AUG 03 2017

SAN MATEO CO. BLDG. INSP. DIV.

FILE COPY

RECEIVED
JUL 03 2017
SAN MATEO COUNTY
BUILDING INSPECTION

REGISTERED PROFESSIONAL ENGINEER
JAMES TODY
NO. C31127
CIVIL
STATE OF CALIFORNIA
ORIGINAL SIGNATURES IN BLUE INK

JUL 06 2017

LEA & BRAZE ENGINEERING, INC.
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SAN MATEO COUNTY
APN: 051-022-180 & 310

EROSION CONTROL PLAN

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JOB NO:	2170695
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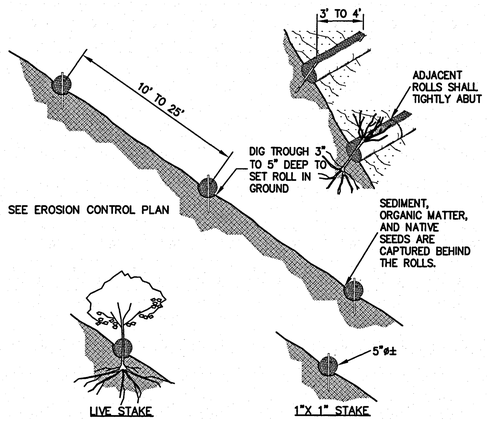
6 OF 8 SHEETS



NOTE:
1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" TO 5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.
2. CONTRACTOR IS RESPONSIBLE FOR REGULAR MAINTENANCE AND INSPECTION. THE SILT SHALL BE CLEANED OUT WHEN IT REACHES HALF THE HEIGHT OF THE ROLL.

1 ER-2 **STRAW ROLLS**
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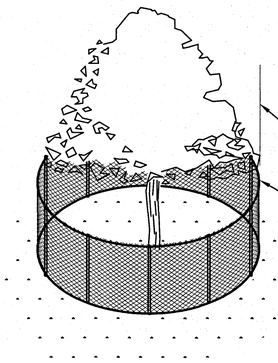


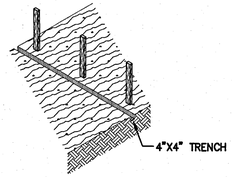
5' HIGH STEEL FENCE POSTS BURIED 2' INTO THE GROUND ON 5' CENTERS WITH 5' HIGH BRIGHT ORANGE FENCE FABRIC. POST TO BE AT DRIP LINE OF TREE WHERE EVER POSSIBLE.

NOTE:
REFER TO LANDSCAPE ARCHITECTURAL PLANS FOR ADDITIONAL TREE PROTECTION INFORMATION.

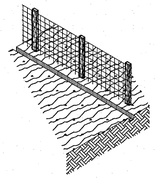
NOTE:
LOCAL JURISDICTION MIGHT HAVE MORE STRINGENT REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING W/ INSPECTOR TO ENSURE PROPER PROCEDURES ARE BEING FOLLOWED.

2 ER-2 **EXISTING TREE PROTECTION DETAIL**
NTS

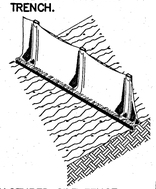
1. SET POSTS AND EXCAVATE A 4"X4" TRENCH UP SLOPE ALONG THE LINE OF POSTS.



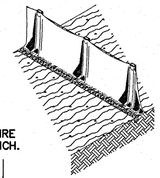
2. STAPLE WIRE FENCE TO THE POSTS.



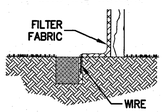
3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



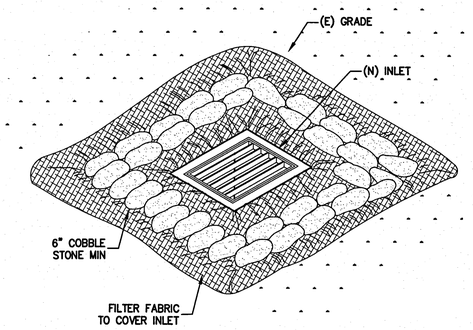
EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.



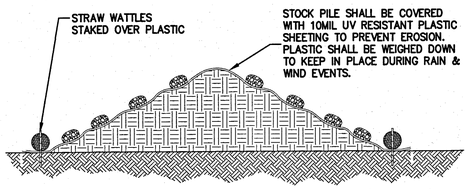
NOTE:
PREMANUFACTURED SILT FENCE PRODUCTS MAY BE USED IN LIEU OF WIRE FENCE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND MAINTAIN KEYING OF FABRIC PER THIS DETAIL.

NOTE:
IT IS ESSENTIAL THAT THE WIRE/FABRIC BE FULLY EMBEDDED INTO THE GROUND SO RUN-OFF CANNOT FLOW FREELY UNDER FENCE.

3 ER-2 **SILT FENCE**
NTS



4 ER-2 **INLET PROTECTION**
NTS



NOTE:
STOCKPILE TO BE WITHIN PROPERTY AND CLEAR OF TREE DRIPLINE AND ROOTS.

5 ER-2 **STOCK PILE COVERING**
NTS

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REGISTERED PROFESSIONAL ENGINEER
JAMES TOST
No. 63127
CIVIL
STATE OF CALIFORNIA
ORIGINAL SIGNATURES IN BLUE INK

JUL 6 2017

LEA & BRAZE ENGINEERING, INC.
CIVIL ENGINEERS • LAND SURVEYORS
BAY AREA REGION
2495 INDUSTRIAL PKWY WEST
HAYWARD, CALIFORNIA 94545
(P) (510) 887-4086
(F) (510) 887-3019

SACRAMENTO REGION
3017 DOUGLAS BLVD, # 300
ROSEVILLE, CA 95661
(P) (916)986-1338
(F) (916)797-7363
WWW.LEABRAZE.COM

ENEA RESIDENCE
738 LOMA COURT
(UNINCORPORATED SAN MATEO COUNTY)
REDWOOD CITY, CALIFORNIA
APN: 051-022-180 & 310
SAN MATEO COUNTY

EROSION CONTROL DETAILS

–		–
–		–
–		–
–		–
–		–
REVISIONS		BY

JOB NO:	2170695
DATE:	07-06-17
SCALE:	AS NOTED
DESIGN BY:	DM
DRAWN BY:	DM
SHEET NO:	ER-2

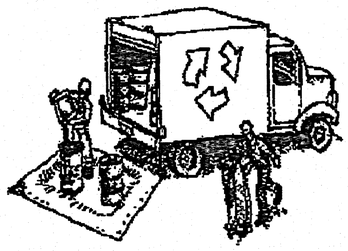
7 OF 8 SHEETS

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management



Non-Hazardous Materials

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- ❑ Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- ❑ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- ❑ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- ❑ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- ❑ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control

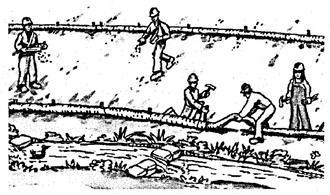
Maintenance and Parking

- ❑ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

Spill Prevention and Control

- ❑ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- ❑ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- ❑ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- ❑ Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving

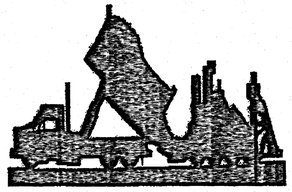


- ❑ Schedule grading and excavation work during dry weather.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- ❑ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - Unusual soil conditions, discoloration, or odor.
  - Abandoned underground tanks.
  - Abandoned wells
  - Buried barrels, debris, or trash.

Paving/Asphalt Work



- ❑ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- ❑ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- ❑ Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal

- ❑ Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- ❑ Shovel, abosorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ❑ If sawcut slurry enters a catch basin, clean it up immediately.

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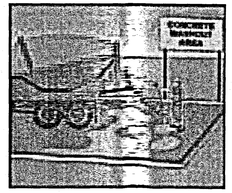
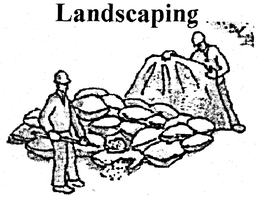
Concrete, Grout & Mortar Application



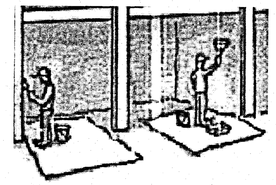
- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- ❑ When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

Landscaping



- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

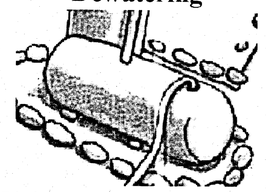
Painting & Paint Removal



Painting Cleanup and Removal

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- ❑ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.

Dewatering



- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- ❑ Divert run-on water from offsite away from all disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

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Storm drain polluters may be liable for fines of up to $10,000 per day!

LEGEND

——·——	PROPERTY LINE
AC PAVE	ASPHALT CONCRETE PAVEMENT
AD	AREA DRAIN
COL	COLUMN
CONC	CONCRETE
EM	ELECTRIC METER
FH	FIRE HYDRANT
GA	GUY ANCHOR
GM	GAS METER
JP	JOINT UTILITY POLE
TOE	TOE OF SLOPE
TOP	TOP OF SLOPE
W COL	WOOD COLUMN
●12" TREE	TREE W/ SIZE

EASEMENT NOTE:

EASEMENTS, IF ANY, ARE NOT INDICATED HEREON.

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This approval does not authorize violation of State or County building laws.

AUG 03 2017

SAN MATEO CO. BLDG. INSP. DIV.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

REV.	DESCRIPTION	BY:	DATE:

LICENSED LAND SURVEYOR DANIEL C. MACLEOD No. 5304 STATE OF CALIFORNIA

MacLEOD AND ASSOCIATES
CIVIL ENGINEERING · LAND SURVEYING
965 CENTER STREET · SAN CARLOS · CA 94070 · (650) 593-8580

PREPARED FOR:
DENISE ENEA

TOPOGRAPHIC SURVEY PLAN
LOS CERROS ROAD
A.P.N. 051-022-310 & 051-022-180
738 Loma Ct
UNINCORPORATED SAN MATEO COUNTY CALIFORNIA

DRAWN BY:	MDL
DESIGNED BY:	---
CHECKED BY:	DGM
SCALE:	1"=10'
DATE:	05-19-17
DRAWING NO.	4456-TOPO
SHEET	1 OF 1

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BLD2017-01443

738 Loma Ct

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JUL 10 2017

SAN MATEO COUNTY
BUILDING INSPECTION

April 18, 2023

Anusha Thalapaneni - athalapa@gmail.com
David Jackson - djackson52@gmail.com

RE: ENGINEERING GEOLOGIC DOCUMENT REVIEW & AREAL RECONNAISSANCE *OF 634 PALOMAR DRIVE (Thalapaneni-Jackson Property) & 13 LOS CERROS ROAD/738 LOMA COURT (Enea Property)*
Redwood City, San Mateo County, California
ATLAS #91-55905-B

Dear Thalapaneni-Jackson Family:

INTRODUCTION

In accordance with your authorization, we performed an engineering geologic reconnaissance of your property, and adjoining properties 13 Los Cerros Road and 738 Loma Court. Specifically, our reconnaissance was undertaken to verify claims of recent ground water seepage, slope erosion, soil sloughing, and landsliding affecting the vacant parcel at 13 Los Cerros Road as expressed in a 1-page, April 5, 2023, letter from your neighbor, Denise Enea Charlebois (Plate 1, *Parcel Index Map*).

The findings and conclusions presented below are based upon our extensive geotechnical studies conducted on your property (i.e., Atlas Technical Consultants, 2022), review of the 2017 landslide repair report on the vacant parcel 13 Los Cerros Road prepared by Geoforensics, Inc., and reconnaissance observations of salient slope and drainage features documented by ground photography and aerial drone imagery on April 18, 2023 (Plate 2a, *Photo Gallery*).

RECONNAISSANCE OBSERVATIONS

Following are descriptions of photo-documented observations pertaining to the current slope and drainage conditions on the north side of your property corresponding to letters A-G depicted on Plates 1 and 2a. Conditions interpreted from aerial imaging were confirmed by ground-truth:

A – Southwesterly aerial view of proposed leachfield development area. No detected evidence of recent accumulation of surface water or ground water seepage, slope erosion, or landslide activity.
B – West view to terraced landscape area of historic adverse runoff conditions on 13 Los Cerros Road.
C – Southerly view across intact 2018 fully drained, bedrock-supported engineered fill slope repair performing satisfactorily, as designed. Evidence of water seepage was absent.
D – West view across 2017 slope repair area. Evidence of surface runoff, surfacing of runoff, surface erosion, or landslide activity absent. Note undeflected animal trails indicative of intact slope conditions facilitated by the fully drained, engineered fill slope repair. Arrows point to the base of youthful trees.

E – Location of two subdrain pipe outfall locations where perched seepage is directed by gravity flow to the street. Notable was the significant reduction of water compared to conditions observed during recent period of prolonged rainfall.

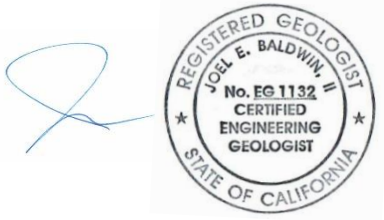
F – Discharge location of recent shallow subdrain constructed under emergency permit. Pipe was dry and no evidence of any discharge from the pipe since construction, as determined from the absence of erosion on the unprotected soil surface that exists between the pipe outlet and asphalt roadway. The subdrain alignment to the upslope southwest corner of 13 Los Cerros Road is delineated by the curvilinear dash-dot line approximately centered on the graded surface comprising approximately 1500 sq. ft. and lacking measures required to mitigate surface erosion.

G – Southwesterly view to an historic, dilapidated masonry retaining wall on neighboring upslope property (730 Loma Court) conveys water during rainfall through weep holes onto the northwest corner of your property and apparently more so onto the southwest corner of 13 Los Cerros Road where there is a gravel basin that has apparently been integrated with the new subdrain (Plate 2b, *Ground Truth Photos at Recon Area G)*. Further there is no evidence of soil sloughing, as reported in the April 5, 2023, letter Ms. Enea.

We trust this provides the information required at this time. If you have any questions, please contact Mr. Baldwin joel.baldwin@oneatlas.com.

Respectfully submitted,

ATLAS TECHNICAL CONSULTANTS LLC



(Renewal date 02/28/2025)

Joel E. Baldwin, II, P.G., C.E.G.
Principal Engineering Geologist

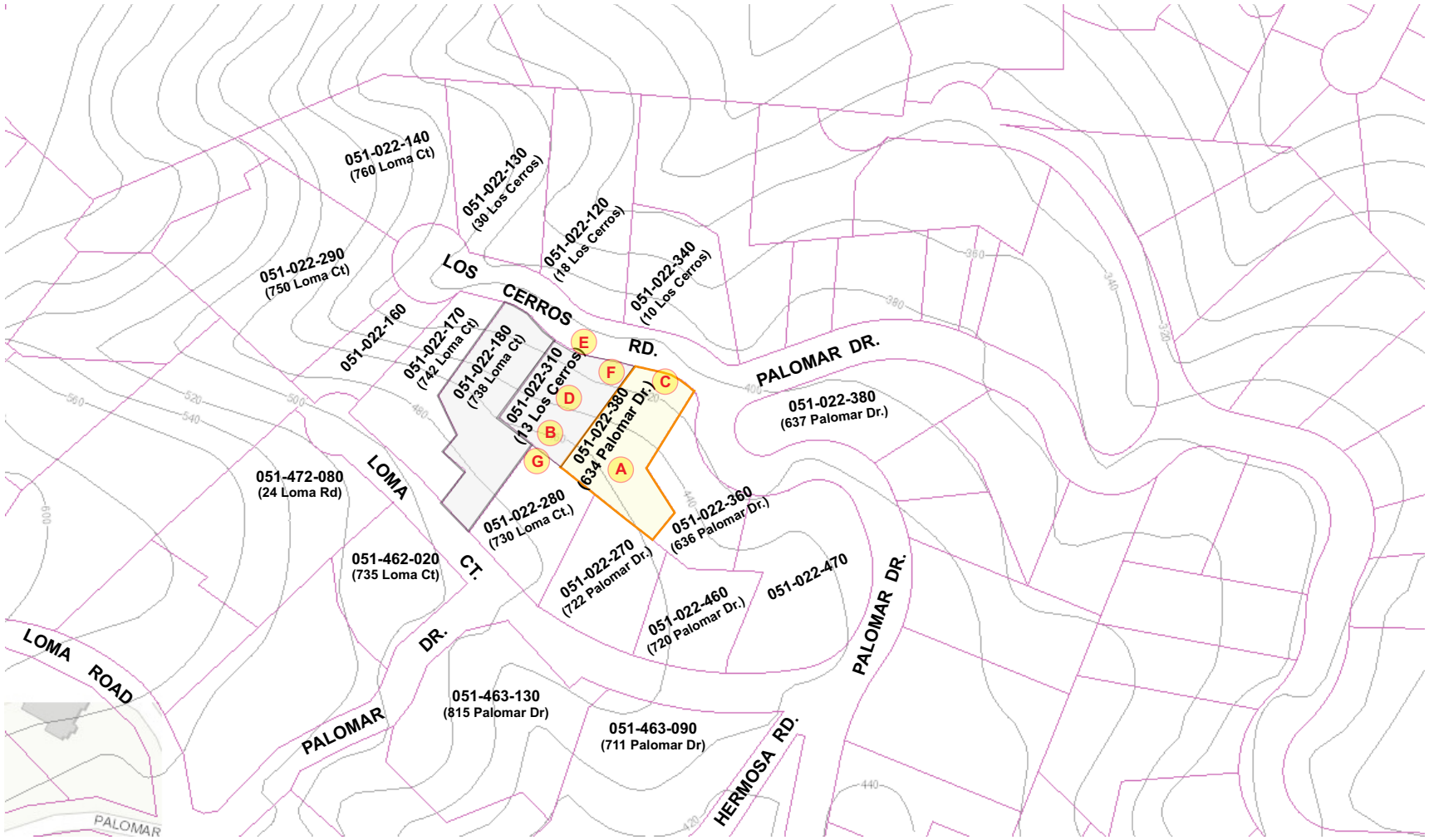
Distribution: efile to addressees; efile to Camille Leung, cleung@smcgov.org

REFERENCES

Atlas Technical Consultants LLC October 4, 2021, Supplemental Engineering Geologic Study Onsite Wastewater Treatment System (OWTS), Proposed Single-Family Residential Development, 634 Palomar Drive, Redwood City, Job 91-55905-C.

Geoforensics, Inc., 2017b, Observations of slide (slope) repair, Enea property, 738 Loma Court, Redwood City, California: Geotechnical consultant's October 9 construction observation final report, File: 217101, 2 pages with illustration.

Attachments: Plate 1 – Parcel Index Map
Plate 2a – Photo Galley
Plate 2b – Ground Truth Photos at Recon Area G (730 Loma Court Dilapidated Retaining Wall and Associated Drainage Conditions)



EXPLANATION

A Relative Location of Feature Depicted on Plate 2a, *Photo Gallery*

"Applicant" Parcel

"Neighbor" Parcels

N

200 feet
Scale

Source: County of San Mateo
https://gis.smcgov.org/Html5Viewer/
(03.17.2023)

ATLAS

Job No.:	91-55905-B
Approved:	JEB
Date:	04.18.2023

PARCEL INDEX MAP

634 Palomar Drive
Redwood City, California

Figure
1

EXPLANATION

A Proposed Leachfield

B Poorly Drained Area

C 2018 Slope Repair

D 2017 Slope Repair

E 2017 Subdrain Slope Discharge

F 2023 Subdrain Discharge

G 730 Loma Ct. Ret. Wall Drain Outlet

RW Retaining Wall

2023 Subdrain Alignment - arrowhead at discharge point

Small Tree (typ)

N

04.18.2023 Drone Image
NTS

ATLAS	**Job No.:** 91-55905-B **Approved:** JEB **Date:** 04.18.2023	**PHOTO GALLERY** 634 Palomar Drive Redwood City, California	**Figure** 2a

G-1. North view of dilapdated historic masonry retaining wall on 730 Loma Court facing the northwest corner of your property.

Note effervescence and mold deposits on wall face from pervasive moisture in this area. Wall backdrainage at the base of the wall is by flow, directly onto the ground from a series of terracotta pipes. Note incipient overturning at the north-west end where it abuts the timber fence at the southwest corner of 13 Los Cerros Road.

G-3. Southwest view of retaining wall (Photo G-1). Note nature and wetness of the wall face.

Note drainpipes discharge water directly onto the soil surface. Listing and pervasive cracking in the wall is indicative of excessive hydrostatic pressure from water accumulation behind the wall.

G-3. North view at northwest corner of your property where a make-shift gravel basin and sandbags have been placed in an effort to control runoff evidently derived from wall backdrain discharge during periods of rainfall.

G-4. Northeast view from head of new subdrain alignment likely connected to the gravel drainage basin just uphill. If so, introduction of surface water into the perforated subdrain pipe will result likely introduce water into the subsurface, contrary to the purpose of the subdrain, which is to intercept near-surface seepage during periods of rainfall.

Note the denuded soil surface on the subdrain alignment, providing an opportunity for potential erosion from surface runoff and sediment transport onto Los Cerros Road in the distance. Trenching likely encountered roots and possibly caused damage to the trees.

ATLAS	**Job No.:** 91-55905-B **Approved:** JEB **Date:** 04.18.2023	**GROUND TRUTH PHOTOS AT RECON AREA G** 634 Palomar Drive Redwood City, California	**Figure** 2b

Camille Leung

From: David Schrier <dschrier@cottonshires.com>
Sent: Thursday, April 20, 2023 3:16 PM
To: Camille Leung
Cc: Fred Lustenberger; Andrew Mead
Subject: 13 Los Cerros Road and 634 Palomar Drive
Attachments: IMG_6251.JPG; IMG_6262.JPG; IMG_6273.JPG

Follow Up Flag: Follow up
Flag Status: Completed

Hi Camille:
As I mentioned during our conference call today, I stopped by the 634 Palomar Dr/13 Los Cerros properties today to see if there was evidence of the newly formed landslide at 13 Cerros as indicated in the provided emergency permit description (below):

BLD2023-00624: Emergency permit
Install 180 ft of emergency subdrain to capture ground water and surface runoff coming from adjacent and uphill neighboring properties and exacerbating a newly formed landslide and endangering a previous 2017 landslide repair. No work will be conducted on adjacent properties. No work will be conducted in right of way. No grading will be conducted. No trees will be removed or are in the area of work. All trenching will be by hand. No soil taken off site. No fill will be utilized. Less than1 cubic yard of soil will be trenched and then backfilled. This subdrain system will connect to other subdrain and site drainage installed in a 2017 plumbing permit for a major landslide. Kilik Engineerng will observe the subdrain installation and submit a final letter upon completion of installation stating all work and material conducted per plans and specifications.

I observed a denuded swath extending to the west, up the slope adjacent to the 634 Palomar property line that I assume is the alignment of the new subdrain (see photo). I also observed a 4-inch diameter PVC pipe that daylights about 12 -18 inches above the roadway, which I judged to be the outfall of the new subdrain.
I did not observe any signs of recent landslide movement on either 634 Palomar or 13 Los Cerros.
Let me know if you have any other questions.
Thanks
David Schrier
Cotton, Shires and Associates, Inc.