DATE: May 19, 2016

AGENDA ITEM # 4

TO: Planning and Transportation Commission

FROM: David Kornfield, Planning Services Manager

SUBJECT: 16-D-01, 16-UP-02 and 16-SD-01—LOLA, LLC, 4880 El Camino Real
Proposed Five-Story, 21-Unit Condominium

RECOMMENDATION

Recommend that the City Council approve design review, use permit and subdivision applications 16-D-01, 16-UP-02 and 16-SD-01 subject to the recommended findings and conditions of approval

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PROJECT DESCRIPTION

This project is a multiple-family residential project at 4880 El Camino Real. The project consists of a 21-unit, five-story building with underground parking. The project replaces a vacant restaurant. The following table summarizes the project:

GENERAL PLAN DESIGNATION:	Commercial Thoroughfare
ZONING:	CT (Commercial Thoroughfare)
PARCEL SIZE:	0.45 acres (19,533 square feet)
MATERIALS:	Painted cementitious and plaster cement siding, natural stone veneer, metal overhangs, metal and glass balconies

	Existing	Proposed	Required/Allowed
SETBACKS:			
Front	30 feet	25 feet	25 feet
Rear	145 feet	40/100 feet	40/100 feet
Right side	22 feet	7 to 10 feet	0 feet
Left side	5 feet	7 feet	0 feet
HEIGHT:	n/a	62 feet[1]	45 feet
PARKING:	n/a	48 spaces	47 spaces
DENSITY:	n/a	21 units	21 units[2]

[1] The 62-foot overall building height is measured by the Municipal Code to the top of the roof deck. Exceptions allow for roof top structures eight feet above the roof, where the project has its elevator tower 11 feet above the roof, for an effective height of 74 feet.

[2] The City's zoning code allows 17 units. The State's density bonus regulations for affordable housing allow four additional units because the project provides three affordable housing units, two of which are designated low-income.

BACKGROUND

On February 4, 2016, the Planning and Transportation Commission held a study session on the project. The Commission indicated a general support for the project and provided comments related to clarifying the design. In response, the applicant:

- Organized a field trip to review the operation of the Klaus Mulitlift parking system;
- Widened the look of the mahogany front door by adding a wood surround and narrowed the awning windows above the entry;
- Enhanced the lobby windows by adding wider wood muntins and mullions and adding a lintel;
- Added natural stone to the parking garage entry wall wrapping around to the east side;
- Lowered the horizontal siding and lengthened a second-level balcony along the west side;
- Differentiated the lower two floors with a darker building color;
- Added an eight-foot tall, sound-attenuating wall along the side property line adjacent to the Jack in the Box restaurant;
- Provided more understory plantings and planting areas at the base of the building;
- Relocated the transformer vault from the entry path to the east side of the driveway;
- Moved the at-grade guest parking space to the garage and created a drop-off/turn-around instead;
- Created a staging area for the trash and recycling bins at the western border of the front yard;
- Expanded the area and relocated the rooftop deck to the south; and
- Provided a larger area for photovoltaics on the roof and indicated prewiring.

On March 23, 2016, the Bicycle and Pedestrian Advisory Commission (BPAC) met regarding the project and provided input to enhance the bicycle and pedestrian circulation. In response, the applicant:

- Increased the number of bike racks in the garage to at least one per unit;
- Omitted the landscape area within the public sidewalk; and

- Specified a bike-friendly trench drain grate at the bottom of the garage ramp.

DISCUSSION

General Plan

The General Plan goals and policies for El Camino Real emphasize fiscal stability, increasing commercial vitality, intensification of development, developing housing, including affordable housing, and ensuring compatibility with adjacent residential land uses (Land Use Element, Economic Development Element, and Housing Element).

The project replaces an approximately 3,600-square-foot restaurant with 21, multiple-family condominiums. Eighteen of the units will be market-rate; three of the units will be below-market rate. The site is a narrow and deep property, which lends itself to infill residential land use.

The Housing Element encourages maximum densities of residential development as well as facilitating affordable housing. The project provides the maximum density allowed for the El Camino Real corridor (38 dwellings per acre) and includes three below-market-rate dwellings. The site was overlooked as an opportunity site in the Housing Element.

The Land Use Element anticipates intensification along the El Camino Real corridor. This intensification is balanced with a policy that development along the corridor will be compatible with the residential land uses to the south. The multiple-family land uses to the south include medium density, two-story apartment buildings. Additionally, the medium density Los Altos Square condominiums are nearby to the south and southwest. The proposed building has stepped massing that lowers as it gets closer to the adjacent residential properties. A strong landscape buffer, including mature trees and an eight-foot tall masonry wall, provides a soft barrier along the rear.

Zoning

Except for the building height, the project meets or exceeds the minimum zoning codes. The front setback is 25 feet, where 25 feet is required. The side setbacks range from approximately seven to 10 feet, where no minimum setback is required from the side property line. The rear setback for the first and second stories is 40 feet, where a minimum setback of 40 feet is required for structures up to 30 feet in height. The rear setback for the third through fifth stories is 100 feet, which meets the minimum 100-foot setback for structures over 30 feet in height. The proposed uncovered decks and balconies may project up to six feet into the rear setback.

As a development incentive for providing affordable housing the applicant seeks an overall height exception to allow: a) a building height of 62 feet, where the Code allows a height of 45 feet; and b) rooftop structures 11 feet above the roof, where the Code allows such structures eight feet above the roof. The development incentives are discussed in more detail in the Affordable Housing section below.

The project meets the City's parking requirements by providing 42 reserved parking spaces, two per unit, and five guest parking spaces. Additionally, the project provides one extra parking space as an unassigned handicapped space. A Klaus Multiparking parking system provides the reserved parking in a mechanical system. The proposed system contains a rack that is two stories tall, which is accessed from the main garage level. The rack stores cars at the garage level and in a basement level below the garage on a series of platforms. The platforms shift up and down and side to side. The parking areas are approximately nine-foot, six inches wide, by 18 feet, six inches deep with the platforms at approximately eight feet, 11 inches wide by 17 feet deep. The system provides a vertical clearance of eight feet on the upper level and six feet, nine inches on the lower level. The parking system is explained in more detail in the attached letter and specifications (Attachment C).

Design Requirements and Findings

The applicable CT District design controls (Section 14.50.150 of the Municipal Code) address such concerns as scale, building proportions, bulk, and screening rooftop mechanical equipment as follows:

- In terms of scale, because of the district's relationship to the larger region, a mixture of scales is appropriate with some elements scaled for appreciation from the street and moving vehicles and others for appreciation by pedestrians;

- The building element proportions, especially those at the ground level, should be kept close to a human scale by using recesses, courtyards, entries, or outdoor spaces;

- At the residential interface, building proportions should be designed to limit bulk and protect residential privacy, daylight and environmental quality; and

- Rooftop mechanical equipment should be screened from public view.

In addition to complying with the General Plan and aforementioned district design criteria, the project must address the standard design review findings (Section 14.78.050 of the Municipal Code) summarized as follows:

- Architectural integrity and appropriate relationship with other structures in the immediate area in terms of height, bulk and design;

- Horizontal and vertical building mass articulation to relate to the human scale; variation and depth of building elevations to avoid large blank walls; and residential elements that signal habitation such as entrances, stairs, porches, bays and balconies;

- Exterior materials that convey quality, integrity, permanence and durability, and effectively define the building elements;

- Generous and inviting landscaping including onsite or offsite substantial street tree canopy, hardscape that complements the building;

- Appropriate signage to reflect the building architecture; and

- Screened rooftop mechanical equipment and architecturally appropriate utility areas.

Design Review

The project reflects the desired development intensity of the Commercial Thoroughfare district. It achieves the maximum housing density permitted, which benefits the City's housing goals. It maintains the required stepped massing from the rear property line to limit bulk and to protect daylight and environmental quality. It maintains and enhances an appropriate landscape buffer of redwood and pine trees in the rear yard to help protect the adjacent residential properties to the south.

The building design reflects an appropriate mixture of scales with some taller vertical elements such as the projecting bays with wood siding for appreciation from the street and moving vehicles and some smaller elements such as the mahogany wood entry door, stone veneer on the front lobby, and metal overhangs for appreciation by pedestrians. The design elements of the building avoid large blank walls.

The building design has appropriate elements that signal habitation such as the human-scaled, wooden front entry door, numerous balconies, overhangs and the vertical orientation of the windowpanes.

The exterior building materials appropriately define the building elements and convey the project's quality, integrity, durability and permanence. For example, the stone veneer on the front lobby is set on thick walls; some of the window bays project from two to four feet from the wall planes. Horizontal siding defines the large projecting window bays. On the sides and rear, a darker color cement siding defines the base of the building. C-channel metal awnings overhang the balconies and entry. Stained wood soffits enrich the detail of the bottom of the metal overhangs and balconies.

The landscape plan appears generous and inviting. The front yard contains two specimen palm trees, a bench, hedges, and ground cover. A staggered linear limestone pathway pavers lead to the front door. Smaller, rectangular pavers cover the driveway. The project replaces a street tree in front of the site and two poor condition street trees in front of the Jack in the Box property with City-standard London plane trees. The rear yard maintains the established redwood trees and a mature pine tree and eight-foot tall buffer wall, and proposed evergreen screening along the perimeter. The rear yard also includes benches and the pathways to allow a passive use. Giant timber bamboo screens the narrow side yards to help buffer the building. Low bollard light fixtures light the pathways around the building.

The four to five foot tall parapets architecturally screen the mechanical equipment that is located in the center of the upper roof. The garage contains the trash and recycling area, which is accessed from each floor by chutes. The western side of the front yard contains a staging area for the refuse on pick-up days.

The project does not propose any signage in the front yard. Large, laser cut metal numbers on the front elevation provide for an appropriate building identification in the larger context of the commercial thoroughfare.

Affordable Housing and Development Incentives

The project exceeds the City's affordable housing regulations by providing three affordable housing units, where two are required. Chapter 14.28 of the Municipal Code requires providing a minimum of 10 percent of the units as moderate income. By Code, if there is more than one moderate-income unit required, then the project must provide at least one of the units at the low-income level. In this case, the base project is 17 dwelling units, meeting the City's objective of maximizing the permitted density at 38 dwellings per acre. Rounding up, under the City's regulations the project must provide two affordable housing units: one moderate-income and one low-income. The project provides one moderate-income unit and two low-income units.

Housing Element program 4.3.2 requires that affordable housing units generally reflect the size and number of bedroom of the market rate units. In this case, the project provides nine, two-bedroom units and 12, three-bedroom units. Of the nine, two-bedroom units, two are designated at the low-income level. Of the 12, three-bedroom units, one is designated as a moderate-income unit. Staff believes that this mix of affordable housing meets the intent of the program since the project provides one of each bedroom size and volunteers an additional low-income housing unit.

Under the State's density bonus regulations (Section 65915 of the California Government Code), the project qualifies for a density bonus if it provides at least 10 percent low-income units. With the second low-income unit, the project provides 11.8 percent low-income units, which allows a density bonus of 21.5 percent. The density bonus adds four units to the base of 17 for 21 permitted dwelling units. Under State law, density bonus units are rounded up when there are fractional units and allowed beyond the City's maximum permitted density.

The two low-income units also qualify the project for at least one development incentive. In this case, the applicant requests a height incentive to allow the project to exceed the maximum height of 45 feet. The proposed building height of 62 feet and rooftop structures 11 feet above the roof allow the project to have a fifth story, taller interior wall heights and elevator service to the roof. The fifth floor allows the applicant to provide three additional market rate units.

Under State law (Section 65915 (d) (1), the City must give deference to the applicant on granting the requested development incentives unless it can make either of the findings:

a) That the development incentive is not required to provide for the costs of developing the affordable units; or

b) That the development incentive would have a specific adverse impact upon public health, safety or the physical environment, or historic resources, for which there is no feasible method to mitigate or avoid the impact without rendering the development unaffordable to low- and moderate-income households.

For reference, the moderate-income housing unit would be limited in cost to be affordable to a household that makes no more than 120 percent of the County's median income. The low-income housing units would be limited in cost to be affordable to a household that makes no more than 80 percent of the County's median income. The County's median income for 2015 was $106,300 for a family of four.

Use Permit

The project requires a use permit to allow the multiple-family residential use. The location of the use is desirable in that it improves an underdeveloped property along the City's major commercial thoroughfare with an appropriate amount of high-quality housing. The project meets other objectives of the zoning code as it relates well to the adjacent land uses, maintains a safe traffic circulation pattern, and provides a high-quality design that enhances the City's distinctive character.

The site has a limited commercial potential. Its relatively narrow frontage on the commercial thoroughfare does not lend itself to a retail development; however, office use may be feasible.

The project adequately buffers its units from the adjacent restaurant and drive-through use by providing an eight-foot tall masonry wall adjacent the restaurant and by providing a landscape plan that has tall bamboo elements.

The project mitigates the noise and air quality impacts from El Camino Real by using special construction and air handling equipment (see Environmental Review below). Appropriate conditions of approval are included to address the noise and air quality impacts.

Subdivision

The project includes a Vesting Tentative Map for Condominium purposes. The subdivision divides the building into 21 residential units and associated common areas. Under State law, a Vesting Tentative Map freezes the City's regulations that apply to the subdivision at the time of entitlement and provides certainty for the subdivider.

The subdivision conforms to the permitted General Plan and zoning densities as modified by State law. The subdivision is not injurious to public health and safety, and is suitable for the proposed type of development. The subdivision provides proper access easements for ingress, egress, public utilities and public services.

Environmental Review

As a small in-fill site substantially surrounded by urban uses, where the development is consistent with the General Plan and zoning, where there is no significant natural habitat for endangered species, where there are no significant effects related to traffic, noise, air or water quality, where the site is adequately served by all required utilities and public services, in accordance with Section 15332 of the California Environmental Quality Act Guidelines the project is exempt from further environmental review.

With regard to traffic, the Implementation Program C8 of the City's General Plan Circulation Element requires a transportation analysis for projects that result in 50 or more net new daily trips. Compared to the property's recently vacant restaurant use the proposed multiple-family residential project results in a net reduction of daily trips. The attached traffic report (Attachment D) calculates the project at 165 daily trips compared to the calculated 324 trips for the restaurant use. Thus, no transportation analysis is required.

With regard to air quality, since the project is located on a State Highway, the project potentially exposes people to air pollution. Additionally, the project's construction has a potential to create air pollution. The project's air quality report (Attachment E) provides appropriate mitigation measures including controlling dust and exhaust during construction, air filtration for the dwellings, and construction equipment guidelines. The report's recommended mitigations are included as conditions of approval. The project is below the significance threshold for creating a significant amount of greenhouse gas. Staff included appropriate conditions of approval to mitigate the air quality impacts.

With regard to noise, the project is located in an area that may expose its residents to higher noise levels. The noise study (Attachment F) recommends certain glazing, exterior wall construction, supplemental ventilation, and mechanical equipment noise controls to mitigate the noise levels to meet the City's standards. Staff included appropriate conditions of approval to mitigate the noise impacts.

With regard to the tree impacts, the applicant commissioned an arborist report. The report catalogs the condition of all of the on-site trees and provides for tree protection measures for the trees to remain. The significant trees to remain in the rear yard are in moderate to high health and suitable for preservation. The report contains tree protection measures for the on-site and off-site trees to remain. Staff included appropriate conditions of approval to mitigate the impacts to the trees.

PUBLIC CONTACT

The applicant held an informal neighborhood meeting on March 16, 2016 at the project site, which was attended by six interested parties.

Staff placed an advertisement in the Town Crier and mailed a post card the 155 surrounding property owners and business owners within a 500-foot radius.

The applicant constructed story poles marking the corners and heights of the building. The taller poles show the height to the top of the parapet (68 feet). Lower flags on the pole indicate the height of a conforming building parapet at 53 feet (45 feet plus eight-foot parapet). The shorter poles at the rear show parapet height at 29 feet.

The applicant provided a four-foot wide by six-foot tall on-site billboard notice located near the front property line.

Staff posted the agenda for a general public notice.

Cc: Lola, LLC, Property Owners
Brett Bailey, Architect, Dahlin Group

Attachments:

A. Application
B. Area Map, Vicinity Map and Notification Map
C. Klaus Parking System Information
D. Traffic Report
E. Air Quality Report
F. Noise Study
G. Arborist's Report

FINDINGS

16-D-01, 16-UP-02 and 16-SD-01—4880 El Camino Real

1. With regard to environmental review, the Planning and Transportation Commission finds in accordance with Section 15332 of the California Environmental Quality Act Guidelines, that the following Categorical Exemption findings can be made:

   a. The project is consistent with the applicable General Plan designation and all applicable General Plan policies as well as with applicable zoning designation and regulations, including incentives for the production of affordable housing;

   b. The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses; there is no record that the project site has value as habitat for endangered, rare or threatened species;

   c. Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and the completed studies and staff analysis reflected in this report support this conclusion; and

   d. The project has been reviewed and it is found that the site can be adequately served by all required utilities and public services.

2. With regard to commercial design review, the Planning and Transportation Commission makes the following findings in accordance with Section 14.78.040 of the Municipal Code:

   a. The proposal meets the goals, policies and objectives of the General Plan with its level of intensity and residential density within the El Camino Real corridor, and ordinance design criteria adopted for the specific district such as the stepped building massing and the landscape buffer at the rear;

   b. The proposal has architectural integrity and has an appropriate relationship with other structures in the immediate area in terms of height, bulk and design; the project has a mixture of scales relating to the larger street and vehicles and the smaller pedestrian orientation;

   c. Building mass is articulated to relate to the human scale, both horizontally and vertically as evidenced in the design of the projecting bay windows, overhangs and balconies. Building elevations have variation and depth and avoid large blank wall surfaces. Residential projects incorporate elements that signal habitation, such as identifiable entrances, overhangs, bays and balconies;

   d. Exterior materials and finishes such as the stained mahogany entry, natural limestone, cementitious horizontal siding, C-channel steel and architectural glass railings, convey quality, integrity, permanence and durability, and materials are used effectively to define building elements such as base, body, parapets, bays, and structural elements;

e. Landscaping such as the specimen palm trees, timber bamboo, hedges and groundcover is generous and inviting and landscape and hardscape features such as the limestone pavers, precast cement planters and benches are designed to complement the building and parking areas and to be integrated with the building architecture and the surrounding streetscape. Landscaping includes substantial street tree canopy including three street trees and two specimen palm trees, either in the public right-of-way or within the project frontage;

f. Signage such as the laser cut building numbers is designed to complement the building architecture in terms of style, materials, colors and proportions;

g. Mechanical equipment is screened from public view by the building parapet and is designed to be consistent with the building architecture in form, material and detailing; and

h. Service, trash and utility areas are screened from public view by their location in the building garage and careful placement to the side of the building consistent with the building architecture in materials and detailing.

3. With regard to use permit, the Planning and Transportation Commission finds in accordance with Section 14.80.060 of the Municipal Code:

a. That the proposed location of the multiple-family residential use is desirable or essential to the public health, safety, comfort, convenience, prosperity, or welfare in that the zoning conditionally permits it and the project provides housing at a variety of affordability levels;

b. That the proposed location of the multiple-family residential use is in accordance with the objectives of the zoning plan as stated in Chapter 14.02 of this title in that the project provides for community growth along sound line; that the design is harmonious and convenient in relation to surrounding land uses; that the project does not create a significant traffic impact; that the project helps meet the City's housing goals including affordable housing; that the project protects and enhances property values; and that the project enhances the City's distinctive character with a high-quality building design in a commercial thoroughfare context;

c. That the proposed location of the multiple-family residential use, under the circumstances of the particular case and as conditioned, will not be detrimental to the health, safety, comfort, convenience, prosperity, or welfare of persons residing or working in the vicinity or injurious to property or improvements in the vicinity;

d. That the proposed multiple-family residential use complies with the regulations prescribed for the district in which the site is located and the general provisions of Chapter 14.02;

4. With regard to the subdivision, the Planning and Transportation Commission finds in accordance with Section 66474 of the Subdivision Map Act of the State of California:

a. That the proposed subdivision is consistent with the General Plan;

b. That the site is physically suitable for this type and density of development in that the project meets all zoning requirements except where development incentives have been granted;

c. That the design of the subdivision and the proposed improvements are not likely to cause substantial environmental damage, or substantially injure fish or wildlife; and no evidence of such has been presented;

d. That the design of the condominium subdivision is not likely to cause serious public health problems because conditions have been added to address noise, air quality and life safety concerns; and

e. That the design of the condominium subdivision will not conflict with public access easements as none have been found or identified on this site.

CONDITIONS

16-D-01, 16-UP-02 and 16-SD-01—4880 El Camino Real

GENERAL

1. **Approved Plans**

   The project approval is based upon the plans received on May 12, 2016, except as modified by these conditions.

2. **Public Right-of-Way, General**

   All work within the public right-of-way shall be done in accordance with plans to be approved by the City Engineer.

3. **Encroachment Permit**

   The applicant shall obtain an encroachment permit, permit to open streets and/or excavation permit prior to any work done within the public right-of-way and it shall be in accordance with plans to be approved by the City Engineer. *Note: Any work within El Camino Real will require applicant to obtain an encroachment permit with Caltrans prior to commencement of work.*

4. **Public Utilities**

   The applicant shall contact electric, gas, communication and water utility companies regarding the installation of new utility services to the site.

5. **ADA**

   All improvements shall comply with Americans with Disabilities Act (ADA).

6. **Sewer Lateral**

   Any proposed sewer lateral connection shall be approved by the City Engineer.

7. **Upper Story Lighting**

   Any upper story lighting on the sides and rear of the building shall be shrouded or directed down to minimize glare.

8. **Indemnity and Hold Harmless**

   The property owner agrees to indemnify and hold City harmless from all costs and expenses, including attorney's fees, incurred by the City or held to be the liability of City in connection with

City's defense of its actions in any proceeding brought in any State or Federal Court, challenging the City's action with respect to the applicant's project.

9. **Plan Changes**

The Planning and Transportation Commission may approve minor changes to the development plans. Substantive project changes require a formal amendment of the application with review by the Planning and Transportation Commission and City Council.

PRIOR TO FINAL MAP RECORDATION

10. **CC&Rs**

The applicant shall include provisions in the Covenants, Conditions and Restrictions (CC&Rs) that: a) restrict storage on the private patio and decks and outline rules for other objects stored on the private patio and decks with the goal of minimizing visual impacts; and b) require the continued use and regular maintenance of the Klaus Multiparking vehicle parking system. Such restriction shall run in favor of the City of Los Altos.

11. **Public Utility Dedication**

The applicant shall dedicate public utility easements as required by the utility companies to serve the site.

12. **Fees**

The applicant shall pay all applicable fees, including but not limited to sanitary sewer impact fees, parkland dedication in lieu fees, traffic impact fees and map check fee plus deposit as required by the City of Los Altos Municipal Code.

PRIOR TO BUILDING PERMIT SUBMITTAL

13. **Subdivision Map Recordation**

The applicant shall record a final map. Plats and legal descriptions of the final map shall be submitted for review and approval by the City Land Surveyor, and the applicant shall provide a sufficient fee retainer to cover the cost of the final map application.

14. **Public Improvements**

The property owner or applicant shall install remove and replace with current City Standard sidewalk, vertical curb and gutter, and driveway approaches from property line to property along the frontage of El Camino Real. Such work shall restore the existing driveway approach to current City Standard vertical curb and gutter along the northerly corner of the property.

15. **Street Trees**

The street trees shall be installed along the project's El Camino Real frontage and include two trees in front of 4896 El Camino Real, as directed by the City Engineer.

16. **Sidewalk Lights**

The owner or applicant shall maintain and protect the existing light fixture in the El Camino Real sidewalk, as directed by the City Engineer.

17. **Performance Bond**

The applicant shall submit a cost estimate for all improvements in the public right-of-way and shall submit a 100 percent performance bond (to be held until acceptance of improvements) and a 50 percent labor and material bond (to be held until 6 months after acceptance of improvements) for the work in the public right-of-way.

18. **Right of Way Construction**

The applicant shall submit detailed plans for any construction activities affecting the public right-of-way, including but not limited to excavations, pedestrian protection, material storage, earth retention, and construction vehicle parking, to the City Engineer for review and approval. The applicant shall also submit on-site and off-site grading and drainage plans that include drain swales, drain inlets, rough pad elevations, building envelopes, and grading elevations for approval by the City.

19. **Sewer Capacity**

The applicant shall show sewer connection to the City sewer main and submit calculations showing that the City's existing 8-inch sewer main will not exceed two-thirds full due to the additional sewage capacity from proposed project. For any segment that is calculated to exceed two-thirds full for average daily flow or for any segment that the flow is surcharged in the main due to peak flow, the applicant shall upgrade the sewer line or pay a fair share contribution for the sewer upgrade to be approved by the Director of Public Works.

20. **Trash Enclosure**

The applicant shall contact Mission Trail Waste Systems and submit a solid waste, recyclables (and organics, if applicable) disposal plan indicating the type, size and number of containers proposed, and the frequency of pick-up service subject to the approval of the Engineering Division. The applicant shall also submit evidence that Mission Trail Waste Systems has reviewed and approved the size and location of the proposed trash enclosure. The approved trash staging location shall be maintained as required by the City Engineer.

21. **Stormwater Management Plan and NPDES Permit**

The applicant shall conform to the Stormwater Management Plan (SWMP) report showing that 100% of the site is being treated, and in compliance with the Municipal Regional Stormwater NPDES Permit (MRP), in accordance with the C.3 Provisions for Low Impact Development (LID) and in compliance with the November 19, 2015 requirements. The SWMP shall be reviewed and approved by a City approved third party consultant at the applicant's expense. The recommendation from the SWMP shall be shown on the building plans.

22. **Green Building Standards**

The applicant shall provide verification that the project will comply with the City's Green Building Standards (Section 12.26 of the Municipal Code) from a qualified green building professional.

23. **Property Address**

The applicant shall provide an address signage plan as required by the Building Official.

24. **Landscape**

The applicant shall provide a landscape and irrigation plan in conformance to the City's Water Efficient Landscape Regulations in accordance with Chapter 12.46 of the Municipal Code.

PRIOR TO ISSUANCE OF DEMOLITION AND/OR BUILDING PERMIT

25. **Construction Management Plan**

The applicant shall submit a construction management plan for review and approval by the Community Development Director. The construction management plan shall address any construction activities affecting the public right-of-way, including but not limited to: prohibiting dirt hauling during peak traffic hours, excavation, traffic control, truck routing, pedestrian protection, appropriately designed fencing to limit project impacts and maintain traffic visibility as much as practical, material storage, earth retention and construction and employee vehicle parking.

26. **Sewer Lateral**

The applicant shall abandon additional sewer laterals and cap at the main if they are not being used. A property line sewer cleanout shall be installed within 5 feet of the property line within private property.

27. **Solid Waste Ordinance**

The applicant shall comply with the City's adopted Solid Waste Collection, Remove, Disposal, Processing & Recycling Ordinance, which requires mandatory commercial and multi-family

dwellings to provide for recycling, and organics collection programs as per Chapter 6.12 of the Municipal Code.

28. **Air Quality Mitigation**

The applicant shall implement and incorporate the air quality mitigations into the plans as required by staff in accordance with the report prepared by Illingsworth & Rodin, Inc., dated March 18, 2016.

29. **Noise Mitigation**

The applicant shall implement and incorporate the noise mitigation measures into the plans as required by staff in accordance with the report by Wilson Ihrig, dated March 2, 2016 and revised on April 20, 2016.

30. **Tree Protection**

The applicant shall implement and incorporate the tree protection measures into the plans and on-site as required by staff in accordance with the report by The Tree Specialist, dated April 21, 2106.

31. **Affordable Housing Agreement**

The applicant shall offer for 30-year period, one, three-bedroom unit at the moderate-income level, and two, two bedroom units at the low-income level, in accordance with the City's Affordable Housing Agreement, in a recorded document in a form approved by the City Attorney.

PRIOR TO FINAL INSPECTION

32. **Maintenance Bond**

The applicant shall submit a one-year, 10-percent maintenance bond upon acceptance of improvements in the public right-of-way.

33. **Stormwater Facility Certification**

The applicant shall have a final inspection and certification done and submitted by the Engineer who designed the SWMP to ensure that the treatments were installed per design. The applicant shall submit a maintenance agreement to City for review and approval for the stormwater treatment methods installed in accordance with the SWMP. Once approved, the applicant shall record the agreement.

34. **Stormwater Catch Basin**

The applicant shall label all new or existing public and private catch basin inlets which are on or directly adjacent to the site with the "NO DUMPING - FLOWS TO THE BAY" logo as required by the City Engineer.

35. **Green Building Verification**

The applicant shall submit verification that the structure was built in compliance with the California Green Building Standards pursuant to Section 12.26 of the Municipal Code.

36. **Landscaping Installation**

The applicant shall install all on- and off-site landscaping and irrigation, as approved by the Community Development Director and the City Engineer.

37. **Signage and Lighting Installation**

The applicant shall install all required signage and on-site lighting per the approved plan. Such signage shall include the disposition of guest parking, the turn-around/loading space in the front yard and accessible parking spaces.

38. **Acoustical Report**

The applicant shall submit a report from an acoustical engineer ensuring that the rooftop mechanical equipment meets the City's noise regulations.

39. **Landscape Certification**

The applicant shall provide a Certificate of Completion conforming to the City's Water Efficient Landscape Regulations.

40. **Condominium Map**

The applicant shall record the condominium map as required by the City Engineer.

41. **Street Damage**

The applicant shall repair any damaged right-of-way infrastructures and otherwise displaced curb, gutter and/or sidewalks and City's storm drain inlet shall be removed and replaced as directed by the City Engineer or his designee. The applicant is responsible to resurface (grind and overlay) half of the street along the frontage of El Camino Real if determined to be damaged during construction, as directed by the City Engineer or his designee.

42. **Stormwater Management Plan Inspection**

The applicant shall have a final inspection and certification done and submitted by the Engineer who designed the SWMP to ensure that the treatments were installed per design. The applicant shall submit a maintenance agreement to City for review and approval for the stormwater treatment methods installed in accordance with the SWMP. Once approved, the applicant shall record the agreement.

43. **Driveway Visibility**

The applicant shall work with the Engineering Division to indicate a sufficient no parking area along El Camino Real to the north of the driveway to provide adequate sight visibility.

ATTACHMENT A

CITY OF LOS ALTOS

GENERAL APPLICATION

Type of Review Requested: *(Check all boxes that apply)* **Permit #** _____

	One-Story Design Review	X	Commercial/Multi-Family	X	Environmental Review
	Two-Story Design Review		Sign Permit		Rezoning
	Variance	X	Use Permit		R1-S Overlay
	Lot Line Adjustment		Tenant Improvement		General Plan/Code Amendment
X	Tentative Map/Division of Land		Sidewalk Display Permit		Appeal
	Historical Review		Preliminary Project Review		Other:

Project Address/Location: 4880 EL CAMINO REAL

Project Proposal/Use: 21 RESIDENTIAL UNITS **Current Use of Property:** VACANT (RESTAURANT)

Assessor Parcel Number(s): 170-02-022 **Site Area:** 19,533 SF

New Sq. Ft.: 32,084 NET **Altered/Rebuilt Sq. Ft.:** ALL **Existing Sq. Ft. to Remain:** —

Total Existing Sq. Ft.: 3,400 **Total Proposed Sq. Ft. (including basement):** 44,235

Is the site fully accessible for City Staff inspection? YES

Applicant's Name: JEFF TAYLOR

Telephone No.: 408-355-3699 **Email Address:** JEFF@NEWWORLDPROPERTIES.COM

Mailing Address: P.O. BOX B.H.

City/State/Zip Code: LOS GATOS, CA. 95031

Property Owner's Name: LOLA LLC

Telephone No.: 408-354-1980 **Email Address:** JEFF@NEWWORLDPROPERTIES.COM

Mailing Address: 12340 SARATOGA-SUNNYVALE RD (PEGGY@GALGB COMPANIES.COM)

City/State/Zip Code: SARATOGA, CA 95070

Architect/Designer's Name: THE DAHLIN GROUP BRETT BAILEY

Telephone No.: 925-251-7200 **Email Address:** BRETT.BAILEY@DAHLINGROUP.COM

Mailing Address: 5865 OWENS DR.

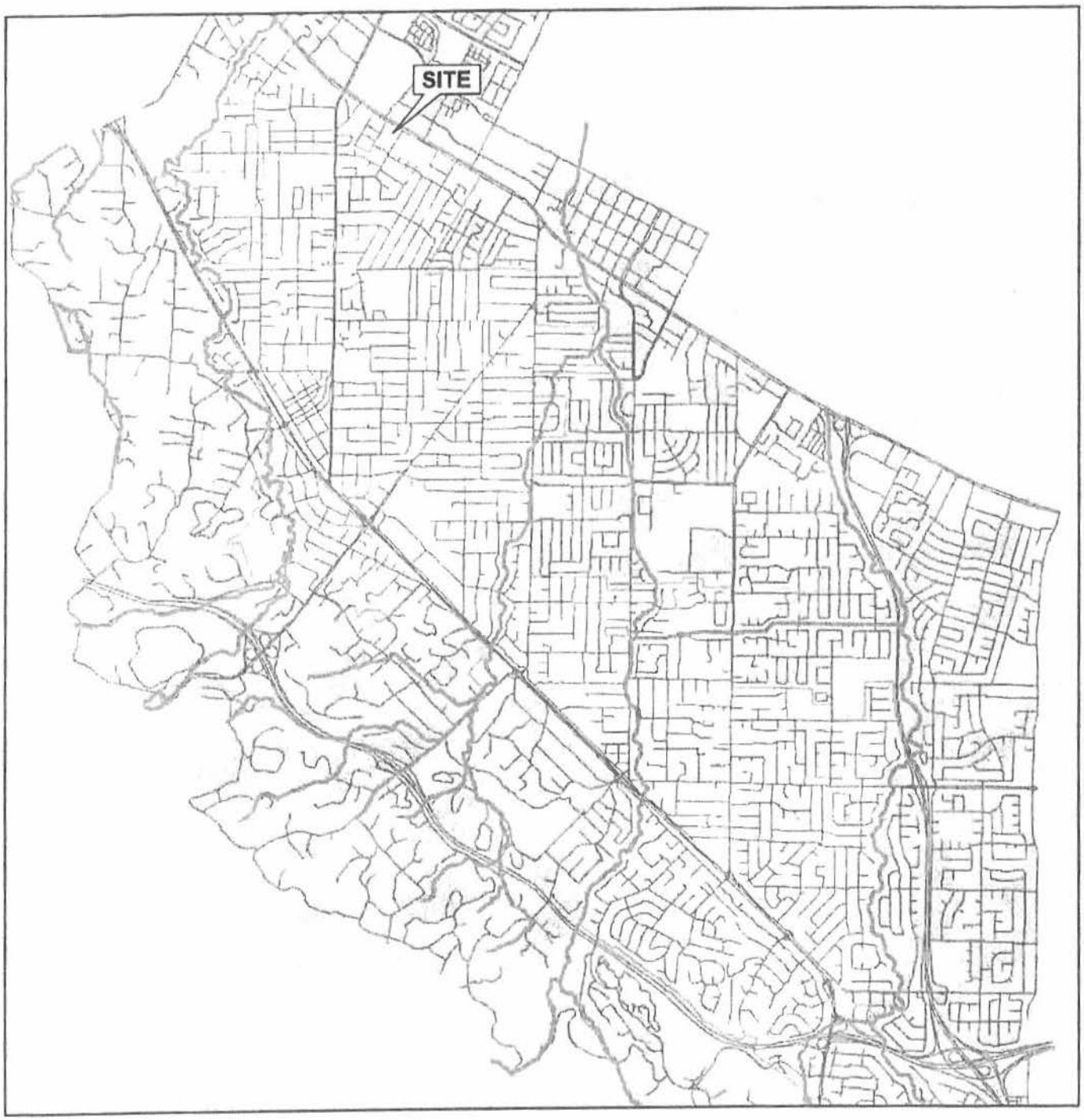
City/State/Zip Code: PLEASANTON, CA. 94588

** If your project includes complete or partial demolition of an existing residence or commercial building, a demolition permit must be issued and finaled prior to obtaining your building permit. Please contact the Building Division for a demolition package. **

(continued on back) 16-D-01, 16-UP-02 and 16-SD-01

ATTACHMENT B

AREA MAP



CITY OF LOS ALTOS

APPLICATION: 16-D-01, 16-UP-02 and 16-SD-01
APPLICANT: LOLA, LLC
SITE ADDRESS: 4880 El Camino Real

N

Not to Scale

VICINITY MAP

SCALE 1 : 6,000

500 0 500 1,000 1,500

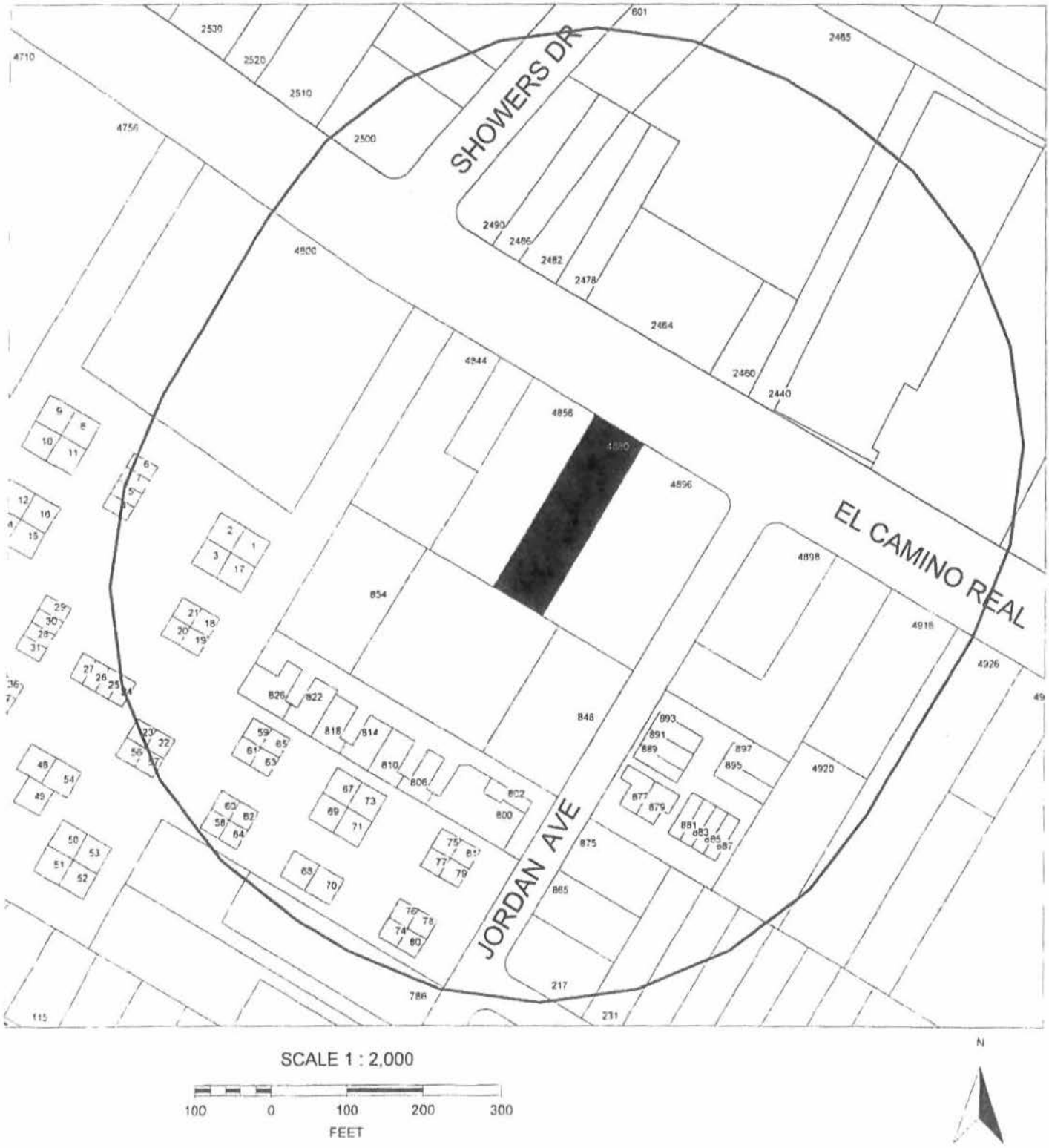
FEET

N

CITY OF LOS ALTOS

APPLICATION: 16-D-01, 16-UP-02 and 16-SD-01
APPLICANT: LOLA, LLC
SITE ADDRESS: 4880 El Camino Real

4880 El Cami..o Real 500-foot .Jotification Map



ATTACHMENT C

April 26, 2016

Mr. David Kornfield
Planning Services Manager
City of Los Altos
1 North San Antonio Road
Los Altos, CA 94022

RE: Klaus Multilift System – 4880 El Camino Real, Los Altos

Dear David.

This is the supplemental information that I promised you regarding the Klaus Multilift parking system.

We are proposing to use the Klaus Trendvario 4100 on each side of the garage. The development team has chosen Klaus over other manufacturers of multilift systems due to their 40-year proven track record of successfully building and installing these systems. Klaus is considered the best in its industry. Klaus has installed 190 systems in California, a large number of which are located in the Bay Area (a sample list is attached).

The Trendvario 4100 is a 2-story puzzle lift system of which one level is at the ground floor of the garage and the second level is within a pit below the ground floor of the garage. We currently plan for the Trendvario machine to accommodate 19 cars on the west side of the garage and for another Trendvario machine to accommodate 23 cars on the east side of the garage. Each condominium will be assigned two parking platforms. To be accessed, these platforms shift one space, up and down and left and right, as necessary. This shifting operation can be seen on the video that was shown at the informal Planning Commission study session (https://www.youtube.com/watch?v=I-TO89xBh7w). While the precise details of the system installation will be ironed out during the construction documentation phase, we currently anticipate:

- We will upgrade the Trendvario system on both sides of the garage to include an electric, secure, safety-oriented gate to protect the cars and prevent individuals without authorization from walking onto the car platforms. In addition to the manual control panels located within the garage, residents will have the convenience of remote controls to open and close the gates.
- On both sides of the garage, we intend to use the exclusive type Trendvario machine that has a typical stall dimensions of 9' – 6-3/16" wide and 18' – 8" deep. The usable platform width is 8' – 10-5/16" wide and 17' – 0" deep. The depth of the pit will be approximately 7' – 7". The exclusive type Trendvario 4100 allows a maximum vehicle length of 17' and height of 6'-9" on the lower level. No users of the system enter the lower level to enter their vehicle. The head clearance on the upper level will be 8'-0". For reference, the 2016 Escalade with a ski rack is 6'-6" tall and just under 17'-0" long.
- On the west side of the garage we intend to upgrade the Trendvario to have a weight capacity of up to 5,720 pounds which can provide parking for heavier vehicles, such as a 2016 Escalade which weighs 5,552 pounds. The Trendvario platforms on the east side of the garage will handle a weight capacity of up to 4,400 pounds, which is ample capacity for 75% of the vehicles on the road. For example, America's best selling SUV, the Honda CR-V, weighs 3,624 pounds.
- We intend to mount electric charging stations on selected parking platforms in a number sufficient to accommodate 25% of the vehicles.

Rick Rombach, manager of the Klaus Bay Area division, is available to meet Planning Department and Commission members for a show-and-tell at 930 Emerson Street, Palo Alto where a Klaus 11-car puzzle lift system is installed. While the system at 930 Emerson is a 3-level system with a pit (we will be using a 2-level), it does have the gates, which makes it the most relevant viewing example within the Los Altos vicinity. Rick is available Tuesday or Thursday over the next couple of weeks at approximately 10:30 a.m. to meet at 930 Emerson Street. Would you please confer with the Planning Department and Commission and circle back to me as soon as possible on what might work?

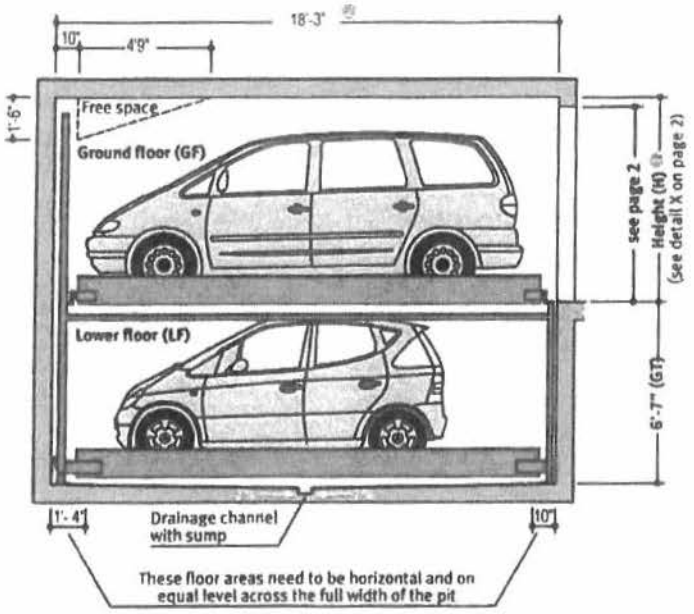
For your reference, I am attaching here, in addition to a redacted Klaus project list, the product data sheet for the Trendvario 4100. I am also attaching an image of what the electric charging station will look like, more or less (we have not decided on the vendor yet).

Please feel free to call me with any questions.

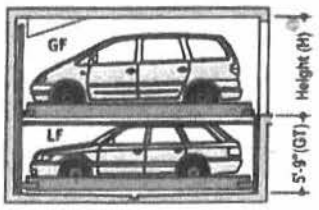
Sincerely on behalf of the Development Team for 4880 El Camino Real,

Peggy Galeb
Manager
LOLA, LLC
12340 Saratoga-Sunnyvale Road
Saratoga, CA 95070

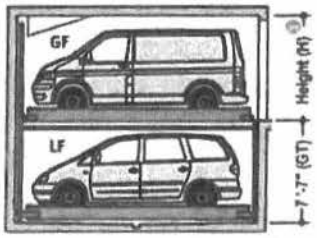
Standard Type 4100



Compact Type 4100



Exclusive Type 4100



Notes

(1) Changes in height H will change the car heights on the upper floor or the corresponding clearances on the ceiling, depending on the height of the door

(2) Standard is 18'-3" ; 18'-11" available

(3) Standard is 4400 lbs; 5720 lbs is available

Product Data TrendVario 4100

CE CONFORMITY

Loadable up to 5720 lbs

Single parking spaces can also be upgraded to handle heavier loads at a later date!

Number of parking spaces:
min. 3 to max. 29 vehicles

Dimensions:
All space requirements are minimum finished dimensions. Tolerances for space requirements are plus 1" minus 0.

TYP	GT	H
4100	5'-9"	7'-3"
4100	6'-7"	7'-3"
4100	7'-7"	7'-5"

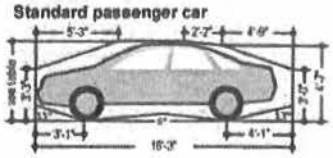
* = without car

Suitable for:
Standard passenger car, station wagon/ Van. Height and length according to contour.

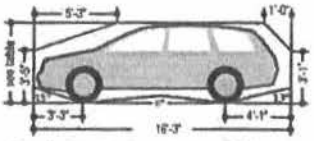
			CAR HEIGHT	
TYPE	GT	H	EG	UG
4100	5'-9"	7'-3"	6'-7"	4'-11"
4100	6'-7"	7'-3"	6'-7"	5'-9"
4100	7'-7"	7'-5"	6'-9"	6'-9"

WIDTH	6'-3"
WEIGHT	MAX. 4400/5720 LBS
WHEEL LOAD	MAX. 1100/1430 LBS

Standard passenger car



Standard station wagon/Van/SUV**



Standard passenger cars are vehicles without any sports options such as spoilers, low-profile tyres etc.

** = Make sure to observe the weights and dimensions!

KLAUS multiparking

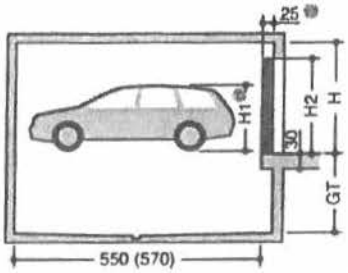
KLAUS MULTIPARKING INC.
3652A CHESTNUT STREET
LAFAYETTE CA. 94549

PHONE 925-284-2092
FAX 925-284-3365

WEB PARKLIFT.COM

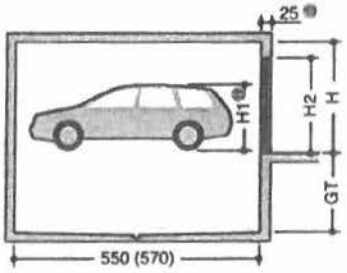
Garages with sliding doors (standard) I Widths dimensions

Sliding door behind columns



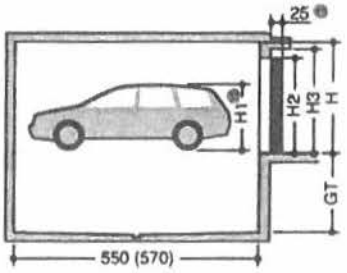
Type	GT	H	H1	H2
4100	175	220	200	210
4100	200	220	200	210
4100	230	235	205	220

Sliding door between columns



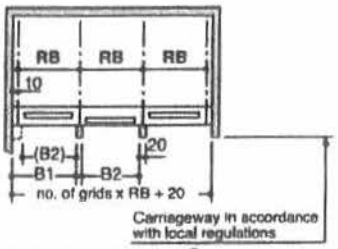
Type	GT	H	H1	H2
4100	175	220	200	220
4100	200	220	200	220
4100	230	235	205	230

Sliding door in front of columns



Type	GT	H	H1	H2	H3
4100	175	220	200	210	220
4100	200	220	200	210	220
4100	230	235	205	220	230

Columns per each grid unit

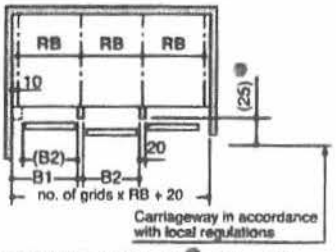


usable platform width	RB ❸	B1	B2
230	250	250	230
240	260	260	240
250	270	270	250
260	280	280	280
270	290	290	270

Columns per each grid unit

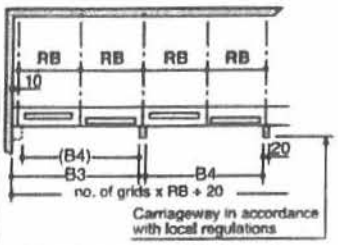
Not available!

Columns per each grid unit



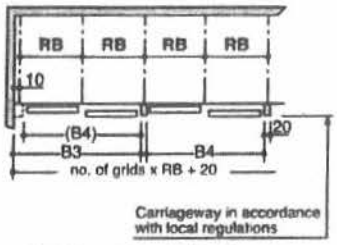
usable platform width	RB ❸	B1	B2
230	250	250	230
240	260	260	240
250	270	270	250
260	280	280	280
270	290	290	270

Columns every second grid unit



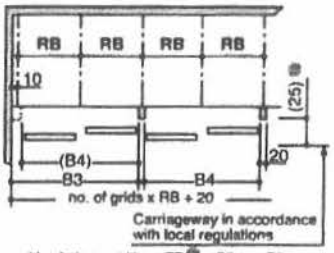
usable platform width	RB ❸	B3	B4
230	250	500	480
240	260	520	500
250	270	540	520
260	280	560	540
270	290	580	560

Columns every second grid unit



usable platform width	RB ❸	B3	B4
230	250	500	480
240	260	520	500
250	270	540	520
260	280	560	540
270	290	580	560

Columns every second grid unit



usable platform width	RB ❸	B3	B5
230	250	500	480
240	260	520	500
250	270	540	520
260	280	560	540
270	290	580	560

We intend to install the Model 270-- stall width (RB) of 290 cm

According to the BGR 232, an inspection book is required for the commercial use of a gate with electric drive. Prior to commissioning, and then once a year, the gate has to be inspected by an expert and the findings entered in the inspection book. The inspection has to be carried out independent of any maintenance work.

For parking boxes on the edges and boxes with intermediate walls we recommend our maximum platform width of 270 cm. Please consider adjoining grids. Problems may occur if smaller platform widths are used (depending on car type, access and individual driving behaviour and capability).

For larger limousines and SUV wider driveways are necessary (in particular on the boxes on the sides due to the missing manoeuvring radius).

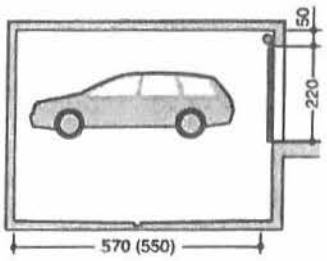
❶ H1 = Heigth of the vehicle on ground floor platform.

❷ RB = Grid unit width must strictly conform to dimensions quoted!

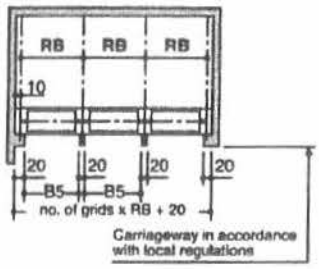
❸ Only applies to manually operated doors. The electrically driven doors must have 35 cm.

Garages with roll doors I Widths dimensions

Roll door behind columns



Columns per each grid unit



usable platform width	RB ●	B5
230	250	230
240	260	240
250	270	250
260	280	260
270	290	270

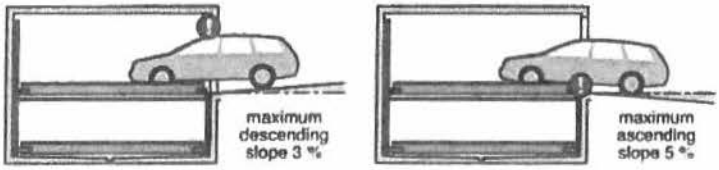
According to the BGR 232, an inspection book is required for the commercial use of a gate with electric drive. Prior to commissioning, and then once a year, the gate has to be inspected by an expert and the findings entered in the inspection book. The inspection has to be carried out independent of any maintenance work.

For parking boxes on the edges and boxes with intermediate walls we recommend our maximum platform width of 270 cm. Please consider adjoining grids. Problems may occur if smaller platform widths are used (depending on car type, access and individual driving behaviour and capability).

For larger limousines and SUV wider driveways are necessary (in particular on the boxes on the sides due to the missing manoeuvring radius).

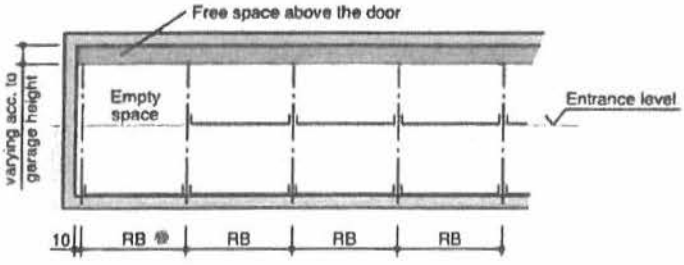
● RB = Grid unit width **must** strictly conform to dimensions quoted!

Approach



The illustrated maximum approach angles must not be exceeded. Incorrect approach angles will cause serious manoeuvring & positioning problems on the parking system for which the local agency of KLAUS Multiparking accepts no responsibility.

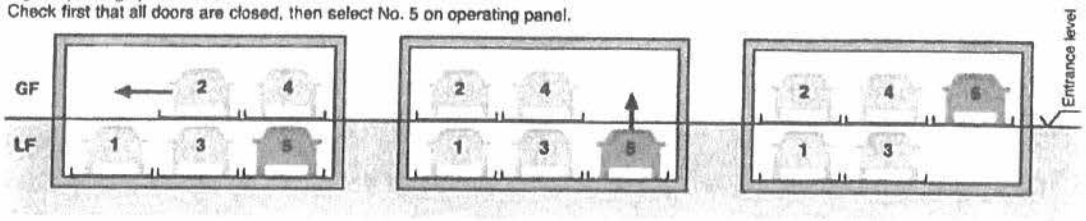
Longitudinal free space



● RB = Grid unit width **must** strictly conform to dimensions quoted!

Function with standard numbering and identification of parking levels

e.g. for parking space No. 5:
Check first that all doors are closed, then select No. 5 on operating panel.



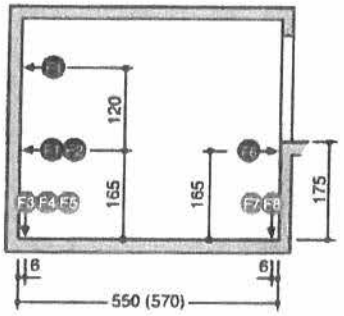
For driving the vehicle off platform No. 5 the upper parking platforms are shifted to the left.

The empty space is now below the vehicle which shall be driven off the platform. The platform No. 5 will be lifted.

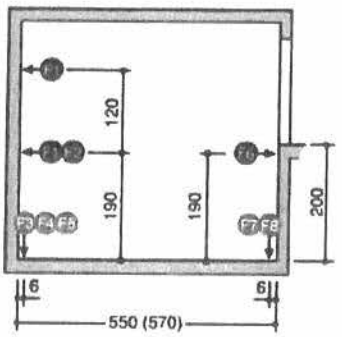
The vehicle on platform No. 5 can now be driven off the platform.

Load plan

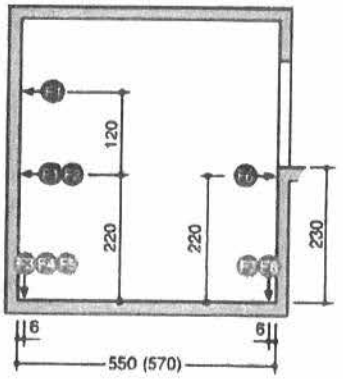
4100-175



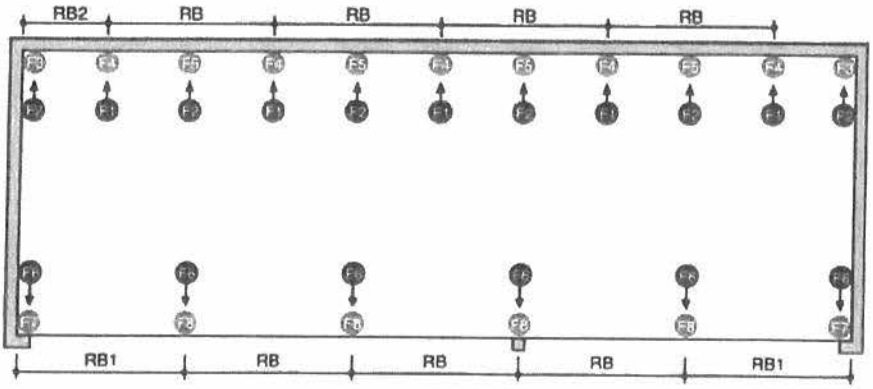
4100-200



4100-230



Load plan – top view



usable platform width	RB[1]	RB1	RB2
230	250	260	135
240	260	270	140
250	270	280	145
260	280	290	150
270	290	300	155

platform load	F1	F2	F3	F4	F5	F6	F7	F8 [2]
2000 kg	±5	±2,5	±9	+40	±18	±2,5	±15	+30
2600 kg	±5	±2,5	±9	+45	±18	±2,5	±23	+46

The system is dowelled to floor and walls. The drilling depth in the floor is approx. 15 cm.
The drilling depth in the walls is approx. 12 cm.

Floor and walls are to be made of concrete (grade of concrete min. C20/25)!

The dimensions for the points of support are rounded values. If the exact position is required, please contact KLAUS Multiparking.

[1] RB = Grid unit width must strictly conform to dimensions quoted!

[2] All forces in kN

KLAUS multiparking

Project Name	City, State	Model No.	No. of Parking Spaces	Type of Use	Install Date
10th and Market	San Francisco	Simple Stacker	300	Apartments	October-14
Rincon Towers	San Francisco	Simple Stacker	300	Condos	March-14
340 Fremont	San Francisco	Puzzle Lift Two High	260	Apartments	October-15
900 Folsom & 260 5th	San Francisco	Stacker w/plt	250	Apartments	June-14
Ironworks	Sunnyvale	Simple Stacker	232	Apartments	September-15
Equity Potrero	San Francisco	Puzzle Lift Two High	231	Apartments	October-15
10,000 Santa Monica	Los Angeles	Simple Stacker	202	Apartments	October-15
Pine and Franklin	San Francisco	Puzzle Lift Three High	192	Condos	February-15
45 Lansing	San Francisco	Simple Stacker	180	Apartments	September-15
One Henry Adans	San Francisco	Puzzle Lift Two High	141	Apartments	December-15
55 Laguna	San Francisco	Puzzle Lift Two High	150	Mixed Use	March-15
1201 Tennessee	San Francisco	Puzzle Lift Three High	141	Mixed Use	March-16
Manzanita Apts	Mountain View	Simple Stacker	130	Apts	October-15
4th and U	Berkeley, CA	Puzzle Lift Two High	125	Mixed Use	September-09
One Hawthorne	San Francisco	Simple Stacker	114	Condo	October-09
631 Folsom St.	San Francisco	Puzzle Lift Three High	112	Condos	December-08
Stanford Affordable Housi	Palo Alto	Puzzle Lift Two High	95	Apartments	January-16
Vara	San Francisco	Puzzle Lift Two High	89	Apts	January-13
Symphony Towers	San Francisco	Puzzle Lift Three High	86	Condos	November-07

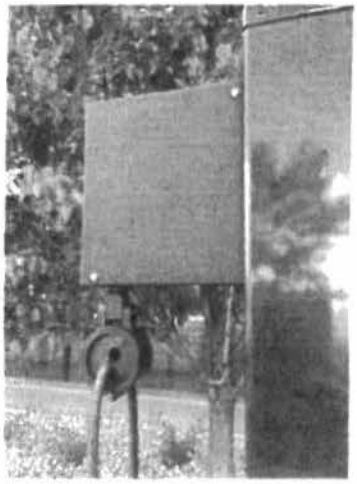
Project Name	City, State	Model No.	No. of Parking Spaces	Type of Use	Install Date
Century Towers	San Jose	Simple Stacker	80	Apts	December-15
1511 Jefferson St.	Oakland, CA	Puzzle Lift Three High	74	Condos	July-06
901 Jefferson St.	Oakland, CA	Stacker w/pit	72	Condos	July-07
2558 Mission	San Francisco	Puzzle Lift Two High	69	Condos	June-14
1844 Market	San Francisco	Puzzle Lift Two High	67	Apts	December-13
Acton Courtyards	Berkeley, CA	Puzzle Lift Three High-	61	Apts. over Commercial	April-03
Delaware Court	Berkeley, CA	Three High Stacker w/pit	60	Condo	June-09
Fine Arts Building	Berkeley, CA	Puzzle Lift Three	59	Apts. over Commercial	May-04
651 Addison	Berkeley	Puzzle Lift Two High	59	Apartments	November-13
77 Van Ness Ave.	San Francisco	Puzzle Lift Three High	56	Condos	February-09
Hillside Village	Berkeley, CA	Three High Stacker w/pit	55	Mixed Use	June-04
Adeline Place	Emeryville, CA	Puzzle Lift Three High	43	Condos	March-09
100 Grand Ave.	Oakland, CA	Simple Stacker	42	Apartments	January-09
Block 76	Salt Lake City	Simple Stacker	40	Mixed Use	November-09
MLK	Berkeley, CA	Puzzle Lift Two High	40	Mixed Use	May-10
3001 Telegraph	Berkeley	Puzzle Lift Two High	40	Apts	August-13
346 Potrero	San Francisco	Puzzle Lift Three High	40	Condos	August-16
2107 Dwight Way	Berkeley, CA	Puzzle Lift Three High	40	Apt	May-16
Gaia Building	Berkeley, CA	Three High Stacker w/pit	39	Apts. over Commercial	June-01
Arioso Oakland	Oakland, CA	Simple Stacker	38	Condos/Valet	August-03
Seacastle	Santa Monica, CA	Simple Stacker	37	Multiple Residential/Val	May-01
The Berkeleyan	Berkeley, CA	Three High Stacker w/pit	36	Apts. over Commercial	September-98

Project Name	City, State	Model No.	No. of Parking Spaces	Type of Use	Install Date
Lion Creek	Oakland	Stacker w/pit	36	Apts	July-11
Kensington	San Francisco	Stacker w/pit	34	Condos	September-08
Oxford Plaza	Berkeley, CA	Puzzle Lift Two High	34	Mixed Use	February-09
University Lofts	Berkeley, CA	Stacker w/pit	30	Apts. over Commercial	July-97
1310 Creekside Dr.	Walnut Creek, CA	Stacker w/pit	30	Apartments	April-07
Sand Hill Rd	San Francisco	Puzzle Lift Two High	30	Office	March-11
River Place Condos	Portland, OR	Simple Stacker	29	Condos	January-07
Bachenheimer Bldg.	Berkeley, CA	Puzzle Lift Three High	28	Apts. over Commercial	May-04
2700 San Pablo Ave.	Berkeley, CA	Puzzle Lift Two High	26	Condos	July-08
16th and P	Sacramento	Puzzle Lift Two High	25	Condos	October-14
1801 Shattuck Ave.	Berkeley, CA	Puzzle Lift Two High	25	Apartments	December-07
Telegraph Bays	Berkeley, CA	Three High Stacker w/pit	24	Mixed Use	March-04
The Loop	Santa Barbara	Puzzle Lift Two High	23	Apts	May-12
Northgate Apts.	Oakland, CA	Stacker w/pit	22	Apartments	July-03
1299 Bush St.	San Francisco	Stacker w/pit/2042	22	Condo	April-09
Crown Renovation	Emeryville, CA	Simple Stacker	21	Offices (exterior)	February-01
Kaiser Housing	San Francisco	Puzzle Lift Two High	20	Apts	June-10
Hyatt	Santa Cruz	Simple Stacker	20	Hotel	March-16
360 Residences	San Jose, CA	Simple Stacker	19	Condo	March-09
2628 Telegraph Ave.	Berkeley, CA	Stacker w/pit	18	Condos	December-06
ICON	Santa Barbara	Puzzle Lift Three High	17	Apts	June-12
ARTech Building	Berkeley, CA	Stacker w/pit	16	Apts. over Commercial	July-02
1825 15th St.	San Francisco	Stacker w/pit	16	Condos/For Sale	July-06

Project Name	City, State	Model No.	No. of Parking Spaces	Type of Use	Install Date
Bloomsbury	San Francisco	Stacker w/pit	16	Condos	October-07

Concept view

Cable Retractor



ATTACHMENT D

HEXAGON TRANSPORTATION CONSULTANTS, INC.

February 25, 2016

Mr. David Kornfield
City of Los Altos
1 North San Antonio Road
Los Altos, CA 94022

Subject: ***Traffic Report for the Proposed 4880 El Camino Real Residential Development Project in Los Altos, California***

Dear Mr. Kornfield:

Per your request, Hexagon Transportation Consultants, Inc. is submitting this traffic report for the proposed 4880 El Camino Real development in Los Altos, California. The project, as proposed, would include 21 condominium units. It would replace an existing 3,600-square foot restaurant onsite. Because the project is projected to generate fewer than 50 daily trips, City staff have stated that a full transportation impact analysis will not be required. Instead, the report will focus on documenting project trip generation and providing an assessment of onsite circulation and vehicular access.

Project Traffic Estimates

Through empirical research, data has been collected that correlate to common land uses their propensity for producing traffic. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. The trip generation estimates for the proposed project are based on rates obtained from the Institute of Transportation Engineers' (ITE) publication *Trip Generation*, 9th Edition.

Based on trip generation rates applicable to residential condos, it is estimated that the project would generate 165 daily trips, with 15 trips occurring during the AM peak commute hour and 17 trips occurring during the PM peak commute hour. The peak commute hour is the peak 60 minute period of traffic demand during the commute periods, which are 7:00 AM to 9:00 AM in the morning, and 4:00 PM and 6:00 PM in the evening.

As previously mentioned, the proposed project would replace an existing restaurant of approximately 3,600 square feet. Based on ITE rates, the existing restaurant use generates approximately 324 daily trips, with 3 trips occurring during the AM peak commute hour and 27 trips occurring during the PM peak commute hour. Thus, the replacement of the existing restaurant use with 21 condominiums would result in 158 fewer daily trips, 12 additional AM peak hour trips, and 10 fewer PM peak hour trips. The project trip generation estimates are presented in Table 1. Because the project would result in a traffic reduction on a daily basis, its impact on the greater transportation network in the context of the City's level of service policy would be negligible.

7901 Stoneridge Drive, Suite 202 · Pleasanton, California 94588 · phone 925.225.1439 · fx 925.225.0688 · www.hextrans.com

Table 1
Project Trip Generation Estimates

Land Use	Size unit	land use code	Daily rate	Daily Trips	AM Peak Hour				PM Peak Hour			
					Rate	In	Out	Total	Rate	In	Out	Total
Proposed Project [a]												
Condo	21 d.u.	230	7.88	165	0.71	3	12	15	0.80	11	6	17
Existing use [b]												
Restaurant	3.6 ksf	931	89.95	324	0.81	3	0	3	7.49	18	9	27
Total [a] - [b]				-158		0	12	12		-7	-3	-10

All Rates based on ITE *Trip Generation* , 9th Edition, for Condo and Quality Restaurant uses, regression rates where appropriate

Project Site Circulation and Access

The project's site circulation and access were evaluated in accordance with generally accepted traffic engineering standards based on project plans dated February 4th, 2016. The project would provide a single two-way driveway onto El Camino Real. Additional parking and/or potential loading space for trucks would be provided along the project frontage on El Camino Real. A description of the various design elements of the site circulation and access is provided below.

Street Level. The project driveway would be approximately 20 feet wide and serve a single guest parking stall at street-level directly adjacent to the front lobby. Because this parking stall is located approximately 20 feet from El Camino Real, it may sometimes be blocked by exiting vehicles. In addition, the sight distance between a driver backing out of the parking stall and a vehicle exiting the garage is restricted. For these reasons, this space should not be utilized for vehicular parking. It should be signed and striped as no parking and utilized solely as a turn-around area for vehicles that mistakenly enter the driveway and would otherwise be required to back onto El Camino Real. To improve the ability of a vehicle to back into the space, 3-foot curb radii are recommended between the drive aisle and the stall.

Ramp Design. The proposed garage ramp is approximately 60 feet long with an 18.4% grade and two transitions of 9.2% each at the top and bottom of the ramp. Transitions are generally required when ramp grades exceed 10% to prevent vehicles from bottoming out. Commonly cited parking publications recommend grades of up to 16% on ramps where no parking is permitted, but grades of up to 20% are cited as acceptable when garages are attended, ramps are covered (i.e. protected from weather) and not used for pedestrian walkways. Thus, the proposed 18.4% ramp grade could be adequately traversed by vehicles as designed, but will require a slightly greater level of caution than a less steep ramp. It should be noted that the vast majority of ramp users will be residents, and thus, will quickly become accustomed to the slightly steeper grade.

Gated Garage Entrance. The project driveway would connect directly to a parking garage ramp, which would lead to a below-grade parking structure. A remote controlled gate would be present at the bottom of the ramp. The distance between the gated entrance to the site's parking garage and the sidewalk on El Camino Real would be 75 feet, or enough space for three vehicles to queue. According to ITE, there would be approximately 11 PM peak hour trips inbound at the project driveway, or an average rate of approximately one vehicle every five and a half minutes. According to the publication *Parking* by Weant and Levinson, the typical capacity for a single lane coded-card reader is between 225 vehicles per hour and 550 vehicles per hour. Given this, it is anticipated that the inbound vehicle queues would rarely exceed one or two vehicles during the peak commute period. Thus, the garage gate as located, would most likely provide adequate capacity and vehicular storage to accommodate the proposed demand, and vehicle queues would not spill back to El Camino Real. Prior to final design, the design and operation of the proposed gate system should be reviewed by City staff to confirm the service flow rate and access to guest parking are adequate.

Garage Design. Within the parking structure, all parking would be provided at 90 degrees to the main drive aisle. There is no designated turn around space within the garage if parking cannot be located; the garage is effectively a single dead end aisle that serves mostly reserved parking. In the event that all guest spaces are occupied, vehicles would be required to make multiple point turns to exit the garage. This situation, while not ideal, is generally considered acceptable in urban areas where land is scarce and the traffic volumes are very low. To reduce the likelihood of a vehicle turning around in the garage, a parking guidance sign could be provided outside the garage to alert drivers when guest parking in the garage is full.

Puzzle Parking System. There would be five guest stalls provided in the garage, two of which would be ADA accessible. The remaining 42 parking spaces would be served by a 26-foot wide drive aisle and a puzzle lift system. The lift system shown on the project plans would stack two vehicles in each parking stall – one level of parking at basement level and one below in the "pit." Upon arriving at the garage, future patrons would utilize a remote to open their designated, secured, parking bay. If their vehicle is located in the pit, the puzzle lift system will shift parked vehicles on the upper level laterally, as needed, to make space to raise the vehicle on the lower level. The project applicant has also suggested that a 3-level puzzle lift system could be considered for the project. The differences in operation between a 2-level system and 3-level system are very minor, as vehicles are still being shifted laterally on the base level and moved up or down one level. Hexagon conducted observations at an existing two level lift system at the Avalon Development at 651 Addison Street in Berkeley, California. Based on these observations, the time to access a vehicle in the puzzle lift system can vary from 30 seconds to one minute and 45 seconds, depending on the configuration of vehicles within the system. Hexagon estimates the average time to access a parked vehicle in the puzzle lift system to be approximately one minute, which equates to a service rate of approximately 60 vehicles per hour. To determine whether the proposed lift system would work adequately, it is useful to consider the frequency of vehicles entering and exiting the parking garage during the highest hours of the day. According to ITE, the peak period of traffic generation at the project would be during the PM commute period. During this peak 60-minute period, the project would generate 17 trips, or about one trip every three and a half minutes. Given that the lift system could accommodate up to 60 vehicles per hour, it is anticipated that the proposed lift system would have adequate capacity to accommodate the number of trips into and out of the proposed parking garage. Vehicle queues and person queues (waiting to retrieve their vehicle) would rarely exceed two within the garage.

Access to El Camino Real. Outbound at the project driveway on El Camino Real, the low volume of project traffic would result in brief delays for vehicles. Outbound vehicle queues would rarely exceed one or two vehicles. Sight distance at the project driveway would be adequate provided (1) the landscaping is low level within 10 feet of the curb face on El Camino Real (the height of the planned landscaping is not shown) and (2) it is not blocked by parked vehicles. Parking should be prohibited on El Camino Real within 10 feet west of the driveway (i.e. looking left for an outbound driver from the project driveway).

Truck Access. Provisions for garbage collection and truck loading are not shown on the current plan. Prior to final design, the applicant should work with City staff to ensure truck access is adequately accommodated. Given the current design, truck access would likely occur via the existing curb parking on El Camino Real along the project frontage. A marked loading area may be considered for this location.

Bike Parking. The Valley Transportation Authority (VTA) provides guidelines for bike parking in its publication *Bike Technical Guidelines*. Class I spaces are defined as spaces that protect the entire bike and its components from theft, such as in a secure designated room or a bike locker. Class II spaces provide an opportunity to secure at least one wheel and the frame using a lock, such as bike racks. For multi-family dwelling units, VTA recommends one Class I space per three dwelling units and one Class II space per 15 dwelling units. For the proposed project, this would equate to seven Class I spaces and two Class II spaces. The project site plan shows two Class II bike parking spaces near the building entrance, between El Camino Real and the lobby. The project also provides for ten Class I bike parking spaces in a secured area (keyed gate) under the garage ramp. Thus, the project would exceed the bike parking standards recommended by VTA.

Pedestrian Access. The project would provide a paved walkway between the existing sidewalk on El Camino Real and the building entrance.

Generally, the design of the project site circulation and access is consistent with urban design practices. The presence of the garage ramp, short onsite drive aisle, and "confined" feel of the parking garage will serve to keep vehicles operating at very low speeds. In addition, the low traffic volume onsite, one trip every three and a half minutes, means that the frequency of vehicle conflicts will be relatively low. Under such circumstances, small parking structures usually operate adequately without any operational problems.

Conclusions

This analysis produced the following conclusions:

- Relative to the existing restaurant use, the project would result in a traffic reduction on a daily basis. Therefore, its impact on the greater transportation network in the context of the City's level of service policy would be negligible.
- The project's parking lift and front entrance gate systems would have adequate capacity to accommodate the anticipated traffic demand. Prior to final design, the design and operation of the proposed gate system should be reviewed by City staff to confirm the service flow rate and access to guest parking are adequate.

- Because of its proximity to El Camino Real and restricted sight distance, the street level parking space should be signed and striped as no parking and utilized solely as a turn-around area for vehicles that mistakenly enter the driveway. To improve the ability of a vehicle to back into the space, 3-foot curb radii are recommended between the drive aisle and the stall.
- Commonly cited parking publications recommend grades of up to 16% on ramps where no parking is permitted, but grades of up to 20% are cited as acceptable under certain conditions. The proposed 18.4% ramp grade could be adequately traversed by vehicles as designed, but will require a slightly greater level of caution.
- There is no designated turn around space within the garage if guest parking cannot be located. In the event that all guest spaces are occupied, vehicles would be required to make multiple point turns to exit the garage. While not ideal, this situation is generally considered acceptable in urban areas where land is scarce and the traffic volumes are very low. To reduce the likelihood of a vehicle turning around in the garage, a parking guidance sign could be provided outside the garage to alert drivers when guest parking in the garage is full.
- Outbound at the project driveway on El Camino Real, the low volume of traffic would result in brief delays and short vehicle queues. Sight distance at the project driveway would be adequate provided (1) the landscaping is low level within 10 feet of the curb face on El Camino Real and (2) it is not blocked by parked vehicles. Parking should be prohibited on El Camino Real within 10 feet west of the driveway.
- Prior to final design, the applicant should work with City staff to ensure truck access is adequately accommodated. Given the current design, truck access would likely occur via the existing curb parking on El Camino Real along the project frontage. A marked loading area may be considered for this location.
- The project would exceed the bike parking standards recommended by VTA.

If you have any questions, please do not hesitate to call.

Sincerely,

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Brett Walinski T.E.
Vice President and Principal Associate

ATTACHMENT E

4880 EL CAMINO REAL PROJECT DRAFT AIR QUALITY & GREENHOUSE GAS EMISSIONS ASSESSMENT

Los Altos, California

March 18, 2016

Prepared for:

Jeff Taylor
On behalf of LOLA LLC
12340 Saratoga-Sunnyvale Rd.
Saratoga, CA 95070

Prepared by:

Joshua D. Carman and
William Popenuck

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality
1 Willowbrook Court, Suite 120
Petaluma, CA 94954
(707) 794-0400

Project: 16-038

Introduction

The purpose of this report is to address air quality, toxic air contaminant (TAC), and greenhouse gas (GHG) emission impacts associated with the proposed residential project located at 4880 El Camino Real in Los Altos, California. We understand that the project would demolish the on-site buildings and pavement and construct and operate up to 21 residential units. Air quality and GHG impacts could occur due to temporary construction emissions and as a result of direct and indirect emissions from new residences. The primary issue addressed in this air quality study is localized community risk impacts from emissions of project construction equipment and El Camino Real traffic. This analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).

Setting

The project is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NOx). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles.[1] The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

The BAAQMD is the regional agency tasked with managing air quality in the region. At the State level, the CARB (a part of the California Environmental Protection Agency [EPA]) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has recently published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.[2]

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. The closest sensitive receptors are residences adjacent to the project site to the east and south. Additional residences are located to the south, west, and east.

Greenhouse Gases

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs),

[1] Available online: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed: June 9, 2015.
[2] Bay Area Air Quality Management District, 2011. *BAAQMD CEQA Air Quality Guidelines*. May.

perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2 and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger with a GWP of 23,900. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

An expanding body of scientific research supports the theory that global warming is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California could be adversely affected by the global warming trend. Increased precipitation and sea level rise could increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. These Thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA and were posted on BAAQMD's website and included in the Air District's updated CEQA Guidelines (updated May 2011). The significance thresholds identified by BAAQMD and used in this analysis are summarized in Table 1.

Table 1. Air Quality Significance Thresholds

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
Criteria Air Pollutants			
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82	82	15
$PM_{2.5}$	54	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards for New Sources			
Excess Cancer Risk	>10 per one million		
Chronic or Acute Hazard Index	>1.0		
Incremental annual average $PM_{2.5}$	>0.3 $\mu g/m^3$		
Health Risks and Hazards for Sensitive Receptors (Cumulative from all sources within 1,000 foot zone of influence) and Cumulative Thresholds for New Sources			
Excess Cancer Risk	>100 per one million		
Chronic Hazard Index	>10.0		
Annual Average $PM_{2.5}$	>0.8 $\mu g/m^3$		
Greenhouse Gas Emissions			
GHG Annual Emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons or 4.6 metric tons per capita		

Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less; and GHG = greenhouse gas.

BAAQMD's adoption of significance thresholds contained in the 2011 CEQA Air Quality Guidelines was called into question by an order issued March 5, 2012, in California Building Industry Association (CBIA) v. BAAQMD (Alameda Superior Court Case No. RGI0548693). The order requires the BAAQMD to set aside its approval of the thresholds until it has conducted environmental review under CEQA. The ruling made in the case concerned the environmental impacts of adopting the thresholds and how the thresholds would indirectly affect land use development patterns. In August 2013, the Appellate Court struck down the lower court's order to set aside the thresholds (Cal. Court of Appeal, First Appellate District, Case Nos. A135335 & A136212). CBIA sought review by the California Supreme Court on three issues, including the

appellate court's decision to uphold the BAAQMD's adoption of the thresholds, and the Court granted review on just one: Under what circumstances, if any, does CEQA require an analysis of how existing environmental conditions will impact future residents or users of a proposed project? In December 2015, the Supreme Court determined that an analysis of the impacts of the environment on a project – known as "CEQA-in-reverse" – is only required under two limited circumstances: (1) when a statute provides an express legislative directive to consider such impacts; and (2) when a proposed project risks exacerbating environmental hazards or conditions that already exist (Cal. Supreme Court Case No. S213478). The Supreme Court reversed the Court of Appeal's decision and remanded the matter back to the appellate court to reconsider the case in light of the Supreme Court's ruling. Accordingly, the case is currently pending back in the Court of Appeal. Because the Supreme Court's holding concerns the effects of the environment on a project (as contrasted to the effects of a proposed project on the environment), and not the science behind the thresholds, the significance thresholds contained in the 2011 CEQA Air Quality Guidelines are applied to this project.

Impacts and Project Measures

Impact 1: Conflict with or obstruct implementation of the applicable air quality plan? ***Less than significant.***

The most recent clean air plan is the *Bay Area 2010 Clean Air Plan* that was adopted by BAAQMD in September 2010. The proposed project would not conflict with the latest Clean Air planning efforts since 1) the project would have emissions well below the BAAQMD thresholds (see Impact 2), 2) the project would be considered urban infill, 3) the project would be located near employment centers, and 4) the project would be located near transit with regional connections. The project is too small to exceed any of the significance thresholds and, thus, it is not required to incorporate project-specific transportation control measures listed in the latest Clean Air Plan.

Impact 2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable State or federal ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? ***Less than significant with construction period control measures.***

The Bay Area is considered a non-attainment area for ground-level ozone and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NOx), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Due to the project size, construction- and operational-period emissions would be less than significant. In the 2011 update to the CEQA Air Quality Guidelines, BAAQMD identifies

screening criteria for the sizes of land use projects that could result in significant air pollutant emissions. For operational impacts, the screening project size is identified at 451 dwelling units. For construction impacts, the screening size is identified as 240 dwelling units. Condo/townhouse projects of smaller size would be expected to have less-than-significant impacts. Since the project proposes to develop up to 21 dwelling units, it is concluded that emissions would be below the BAAQMD significance thresholds. Stationary sources of air pollution (e.g., back-up generators) have not been identified with this project.

Construction activities, particularly during site preparation and grading would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. Fugitive dust emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. Fugitive dust emissions would also depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are employed to reduce these emissions. *Mitigation Measure 1 would implement BAAQMD-required best management practices.*

> ***Mitigation Measure 1:*** **Include basic measures to control dust and exhaust during construction.**
>
> During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less than significant level. The contractor shall implement the following best management practices that are required of all projects:
>
> 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
>
> 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
>
> 3. 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.
>
> 4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
>
> 5. 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.

6. 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.

7. 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.

8. 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.

Impact 3: Violate any air quality standard or contribute substantially to an existing or projected air quality violation? ***Less than significant.***

As discussed under Impact 2, the project would have emissions less than the BAAQMD screening size for evaluating impacts related to ozone and particulate matter. Therefore, the project would not contribute substantially to existing or projected violations of those standards. Carbon monoxide emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that carbon monoxide levels have been at healthy levels (i.e., below State and federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the standard. The highest measured level over any 8-hour averaging period during the last 3 years in the Bay Area is less than 3.0 parts per million (ppm), compared to the ambient air quality standard of 9.0 ppm. Intersections affected by the project would have traffic volumes less than the BAAQMD screening criteria and, thus, would not cause a violation of an ambient air quality standard or have a considerable contribution to cumulative violations of these standards.[3]

Impact 4: Expose sensitive receptors to substantial pollutant concentrations? ***Less than significant with operational and construction period control measures.***

Project impacts related to increased community risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. The BAAQMD recommends using a 1,000-foot screening radius around a project site for purposes of identifying community health risk from siting a new sensitive receptor or a new source of TACs. Operation of the project is not expected to cause any localized emissions that could expose

[3] For a land-use project type, the BAAQMD CEQA Air Quality Guidelines state that a proposed project would result in a less than significant impact to localized carbon monoxide concentrations if the project would not increase traffic at affected intersections with more than 44,000 vehicles per hour.

sensitive receptors to unhealthy air pollutant levels. No stationary sources of TACs, such as generators, are proposed as part of the project. The project would introduce new sensitive receptors to the area in the form of future residences. There are thresholds that address both the impact of single and cumulative TAC sources upon projects that include new sensitive receptors (see Table 1). Construction activity would generate dust and equipment exhaust on a temporary basis that could affect nearby sensitive receptors that include future planned residences.

Operational Community Risk Impacts

The project would include new sensitive receptors. Substantial sources of air pollution can adversely affect sensitive receptors proposed as part of new projects. A review of the area indicates that El Camino Real (SR-82) is within 1,000 feet of the site and can adversely affect new residences. All other nearby roadways are assumed to have average daily traffic (ADT) of less than 10,000 and, according to BAAQMD guidance, would have a less than significant impact and are not discussed further. A review of BAAQMD's *Stationary Source Screening Analysis Tool* did not identify any stationary sources of TAC emissions within 1,000 feet that could adversely affect the project site.[4]

Refined Highway Community Risk Impacts – El Camino Real

The refined analysis involved predicting traffic emissions for the traffic volume and mix of vehicle types on El Camino Real. These emissions were input to a dispersion model to predict exposure to TACs. The associated cancer risk was computed based on the modeled exposures. *Attachment 1* includes a description of how community risk impacts, including cancer risk are computed.

A review of the traffic information reported by Caltrans indicates that in the vicinity of the project area, El Camino Real has 41,500 ADT, as reported by Caltrans.[5] This includes about 2.6 percent trucks, of which 0.6 percent are considered heavy duty trucks and 2.0 percent are medium duty trucks.[6] The analysis involved the development of DPM and organic TAC emissions for traffic on El Camino Real using the California Air Resources Board (CARB) EMFAC2014 emission factor model and the traffic mix on El Camino Real, based on the Caltrans traffic data. EMFAC2014 is the most recent version of the CARB motor vehicle emission factor model. DPM emissions are projected to decrease in the future and are reflected in the EMFAC2014 emissions data. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road, or retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

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[4] See http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools , accessed March 17, 2016.

[5] California Department of Transportation. 2015a. *2014 Traffic Volumes on the California State Highway System.*

[6] California Department of Transportation. 2015b. *2014 Annual Average Daily Truck Traffic on California State Highways*

Emission factors for DPM ($PM_{2.5}$ exhaust from diesel vehicles) were developed for the year 2020 using the calculated mix of cars and trucks on El Camino Real. Default EMFAC2014 vehicle model year distributions for Santa Clara County were used in calculating emissions for 2020. Emissions were based on an average speed of 30 mph, 5 miles below the posted speed limit, for all hours of the day. Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,[7] which were then applied to the site-specific ADT volumes to obtain estimated hourly traffic volumes and emissions for El Camino Real. Year 2020 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated (30 years), since, as discussed above, overall vehicle emissions, and in particular diesel truck emissions will decrease in the future. Emissions of total organic gases (TOG) were also calculated for 2020 using the EMFAC2014 model. These TOG emissions were then used in the modeling the organic TACs. TOG emissions from exhaust and for running evaporative loses from gasoline vehicles were calculated using EMFAC2014 default model values for Santa Clara County along with the traffic volumes and vehicle mixes for El Camino Real.

$PM_{2.5}$ emissions for vehicles traveling on El Camino Real were modeled using the same basic modeling approach that was used for assessing TAC impacts. All $PM_{2.5}$ emissions from all vehicles were used, rather than just the $PM_{2.5}$ fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear and from re-entrained roadway dust were included in these emissions. The assessment involved, first, calculating $PM_{2.5}$ emission rates from traffic traveling on the roadway. These emissions were calculated using the EMFAC2014 model and traffic volumes and were calculated in the same manner as discussed for the TAC modeling. $PM_{2.5}$ re-entrained dust emissions from vehicles traffic were calculated using CARB emission calculation procedures.[8] The emission rates used in the analysis are shown in *Attachment 2*.

Dispersion modeling of DPM and organic TAC emissions was conducted using the CAL3QHCR model, which is recommended by the BAAQMD for this type of analysis.[9] East and west bound traffic on El Camino Real within about 1,000 feet of the project site were evaluated with the model. A five-year data set of hourly meteorological data (1968-1972) from Moffett Field obtained from BAAQMD was used in the modeling. The airport is about 3.5 miles northeast of the project site. Other inputs to the model included road geometry, hourly traffic volumes, and emission factors. The modeling included on-site receptors placed in the project residential areas on the first, second, and third floor levels with 7-meter spacing (23 feet) between receptors. Receptor heights of 1.5 meters (4.9 feet), 5.3 meters (17.4 feet), and 9.1 meters (30 feet) were used for the first, second, and third floor receptors, respectively. The receptors closest to and most affected by El Camino Real traffic are those at the second floor. Figure 1 shows the roadway segments modeled and residential receptor locations used in the modeling.

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[7] The Burden output from EMFAC2007, CARB's previous version of the EMFAC model, was used for this since the current web-based version of EMFAC2011 does not include Burden type output with hour by hour traffic volume information.

[8] CARB, 2014. *Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust*. Revised and updated, April 2014.

[9] BAAQMD, 2012. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012.

Attachment 1 includes a description of how community risk impacts, including cancer risk are computed. The maximum increased cancer risk for first floor residents was computed as 2.7 in one million and the maximum increased cancer risk for second floor residents was computed as 3.2 in one million for the second floor. This was modeled at a receptor in the residential area closest to El Camino Real, and is shown on Figure 1. Increased cancer risks for residents of the third through fifth floors would be lower than the maximum cancer risk.

The maximum annual $PM_{2.5}$ concentrations for the first, second, and third floor levels would be 0.3 $\mu g/m^3$, 0.4 $\mu g/m^3$, and 0.3 $\mu g/m^3$, respectively. $PM_{2.5}$ concentrations at the higher floors would be less than 0.3 $\mu g/m^3$. The concentration of 0.4 $\mu g/m^3$ would exceed the BAAQMD $PM_{2.5}$ threshold and require mitigation in the form of ventilation systems with high-efficiency filtration (see Mitigation Measure 2). Figure 2 shows the maximum annual $PM_{2.5}$ concentrations across the project for the first and second floors. The third floor would have lower concentrations than the second floor. Shaded areas indicate where annual $PM_{2.5}$ concentrations exceed thresholds. Non-cancer Hazard Index (HI) for El Camino Real traffic at the project site was computed as less than 0.01. The modeling results and health risk calculations for the receptor with the maximum cancer risk from El Camino Real traffic are also provided in *Attachment 2*.

Mitigation Measure 2: **The project shall include the following measures to minimize long-term toxic air contaminant (TAC) and annual $PM_{2.5}$ exposure for new project occupants:**

The project should install air filtration at residential units on the second floor depicted in Figure 2 where annual $PM_{2.5}$ concentrations are 0.4 $\mu g/m^3$. To ensure adequate health protection to sensitive receptors, a ventilation system is proposed to meet the following minimal design standards:

- Air filtration devices shall be rated MERV13 or higher rating;
- At least one air exchange(s) per hour of fresh outside filtered air; and
- At least four air exchange(s) per hour recirculation.

As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system will be developed. Recognizing that emissions from air pollution sources are decreasing, the maintenance period will last as long as significant annual $PM_{2.5}$ exposures are predicted. Subsequent studies could be conducted by an air quality expert approved by the City to identify the ongoing need for the filtered ventilation systems as future information becomes available.

In addition, it is important to ensure that the lease agreement and other property documents (1) require cleaning, maintenance, and monitoring of the affected units for air flow leaks; (2) include assurance that new tenants or owners are provided information on the ventilation system; and (3) include provisions that fees associated with owning or

leasing a unit(s) in the building include funds for cleaning, maintenance, monitoring, and replacements of the filters, as needed.

Effectiveness of Reduction Measure

The U.S. Environmental Protection Agency (EPA) reports particle size removal efficiency for filters rated MERV 13 of 90 percent for particles in the size range of 1 to 3 µm and less than 75 percent for particles 0.3 to 1 µm.[10] Studies by the South Coast AQMD indicate that MERV 13 filters could achieve reductions of about 60 percent for ultra-fine particles and about 35 percent for black carbon.[11]

A properly installed and operated ventilation system with MERV 13 air filters may reduce $PM_{2.5}$ concentrations from DPM mobile and stationary sources by approximately 60 to 70 percent indoors when compared to outdoors. The U.S. EPA reports that people, on average, spend 90 percent of their time indoors.[12] The overall effectiveness calculations take into effect time spent outdoors and away from home. Assuming 60-percent effectiveness for this filtration, with 21 hours per day of exposure to filtered air and three hours per day to unfiltered air (uncontrolled or 0-percent effectiveness), the overall effectiveness of filtration systems would be about 53 percent. Figure 2 also shows the annual concentrations for second floor exposures (where maximum impacts occur) with the filtration system properly installed and operated. Note that maximum annual $PM_{2.5}$ concentrations are reduced to 0.2 $\mu g/m^3$. Therefore, with implementation of Mitigation Measure 2, this impact would be reduce to a level of less than significant.

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[10] U.S. EPA 2009. *Residential Air Cleaners Second Edition. A Summary of Available Information. Indoor Air Quality (IAQ).* EPA 402-F-09-002 | Revised August 2009 | www.epa.gov/iaq

[11] South Coast AQMD. 2009. *Pilot Study of High Performance Air Filtration for Classrooms Applications.* Draft – October.

[12] Klepeis, N.E., Nelsen, WC., Ott, WR., Robinson, JP., Tsang, AM., Switzer, P., Behar, JV., Hern, SC., and Engelmann, WH. 2001. *The National Human Activity Pattern Survey (NHAPS): a resource for assessing exposure to environmental pollutants.* J. Expo Anal Environ Epidemial. 2001 May-Jun;11(3):231-52.

Figure 1. Project Site, On-Site Sensitive Receptors, Roadway Segments Modeled, and Receptor with Maximum Cancer Risk and Annual $PM_{2.5}$ Concentration Depicted

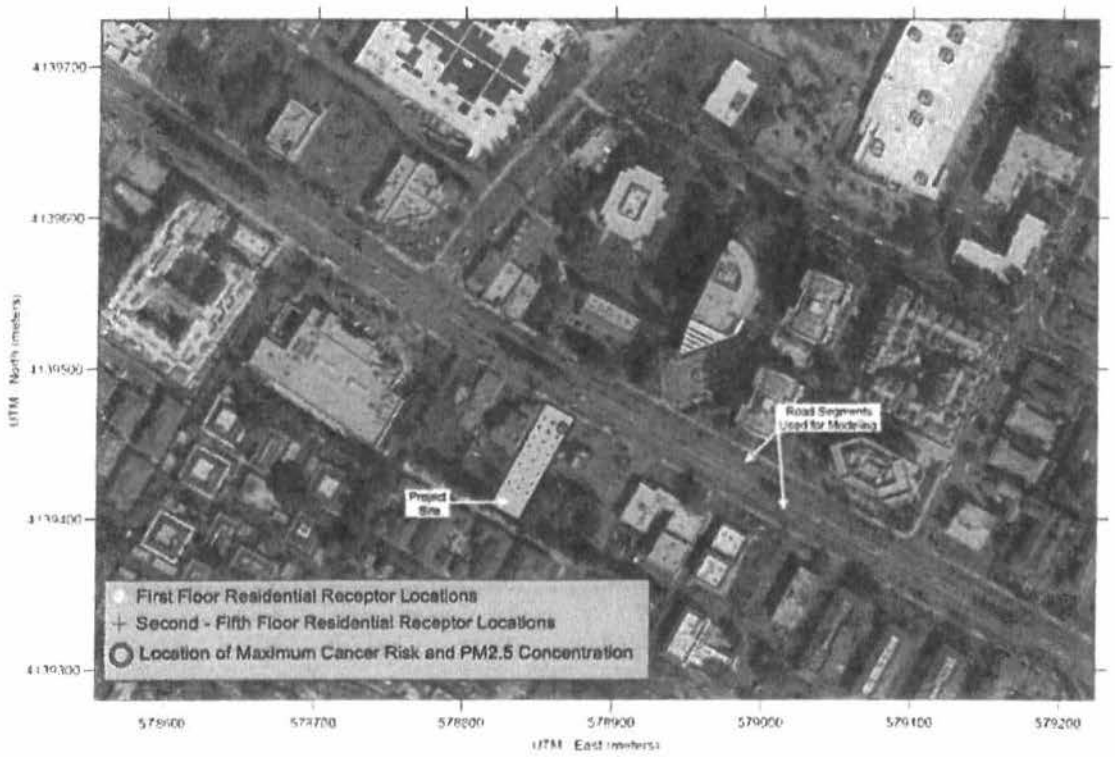
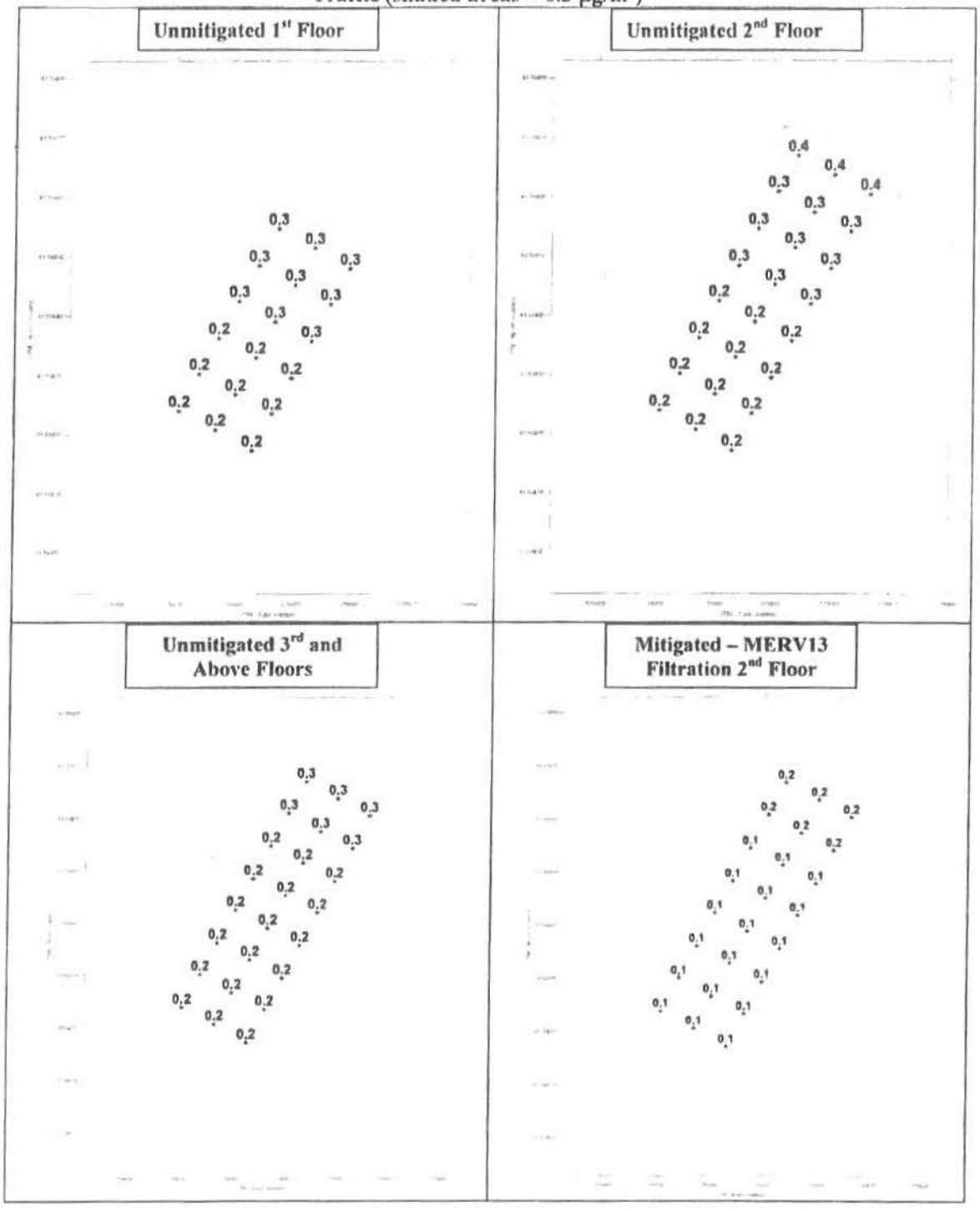


Figure 2. Maximum Annual Total $PM_{2.5}$ Concentrations in $\mu g/m^3$ from El Camino Real Traffic (shaded areas > 0.3 $\mu g/m^3$)



Summary of Combined Community Risk

As discussed above, the project site is affected by El Camino Real. There are no other substantial sources of TACs within 1,000 feet of the project site. This would be a less than significant impact.

Project Construction Activity

Construction activities, particularly during site preparation and grading would temporarily generate fugitive dust in the form of respirable particulate matter (PM_{10}) and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are employed to reduce these emissions. *Mitigation Measure 1 would implement BAAQMD-required best management practices.*

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose community risks for sensitive receptors such as nearby residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A community risk assessment of the project construction activities was conducted that evaluated potential health effects of sensitive receptors at these nearby residences from construction emissions of DPM and $PM_{2.5}$.[13] The closest sensitive receptors to the project site are residences adjacent to the southern and western boundary of the project site (see Figure 3). Emissions and dispersion modeling was conducted to predict the off-site DPM concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2013.2.2 was used to predict annual emissions for construction. CalEEMod provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The proposed project land uses were input into CalEEMod, which included 21 dwelling units entered as "Condo/Townhouse," and 47 spaces entered as "Enclosed Parking with Elevator" on a 0.45-acre site. A construction build-out scenario, including equipment list and phasing schedule was based on model defaults for a project of this type and size. It is expected that 6,300 cubic yard of soil export will be necessary, which was entered into the model. In addition, 380 tons of demolition is anticipated. It is estimated that there would be 8 one-way asphalt truck trips during

[13] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

the paving phase. *Attachment 3* includes the CalEEMod input and output values for construction emissions.

The CalEEMod model provided total annual $PM_{2.5}$ exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages of 0.0633 tons (127 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 15 pounds for the overall construction period. For the purpose of predicting risk levels at or near the site, the CalEEMod modeling included emissions from truck and worker travel, assumed to occur over a distance of one mile at or near the site.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ concentrations at existing sensitive receptors (residences) in the vicinity of the project site. The AERMOD modeling utilized two area sources to represent the on-site construction emissions, one for DPM exhaust emissions and the other for fugitive $PM_{2.5}$ dust emissions. To represent the construction equipment exhaust emissions, an emission release height of six meters was used for the area source. The elevated source height reflects the height of the equipment exhaust pipes and buoyancy of the exhaust plume. For modeling fugitive $PM_{2.5}$ emissions, a near ground level release height of two meters was used for the area source. Emissions from vehicle travel around the project site were included in the modeled area sources. Construction emissions were modeled as occurring daily between 8 a.m. - 5 p.m.

The modeling used a five-year data set (2009 - 2013) of hourly meteorological data from Moffett Field prepared for use with the AERMOD model by the CARB. Annual DPM and $PM_{2.5}$ concentrations from construction activities in 2017 were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby residential locations. Receptor heights of 1.5 meters (4.9 feet) were used in the modeling to represent the breathing heights of nearby residences. Figure 3 shows the construction area modeled, and locations of nearby residential receptors.

Predicted Cancer Risk and Hazards

The maximum-modeled DPM and $PM_{2.5}$ concentrations occurred at a residence just east of the project site. Using the maximum annual modeled DPM concentrations, the maximum increased cancer risks were calculated using the methods previously described. Due to the short anticipated duration of project construction activities (about 1 year), infant exposures were assumed in calculating cancer risks for residential exposures. Because an infant (0 to 2 years of age) has a breathing rate that is greater than the breathing rate for the 3rd trimester the contribution to total cancer risk from an infant exposure is greater than if the initial exposure assumed for the 3rd trimester is assumed. It was conservatively assumed that an infant exposure to construction emissions would occur over the entire construction period.

Results of this assessment indicate that the maximum increased residential cancer risks would be 98.6 in one million for an infant exposure and 1.7 in one million for an adult exposure. The location of the receptor with the maximum increased cancer risk is shown in Figure 3. The maximum residential excess cancer risk would be greater than the BAAQMD significance threshold of 10 in one million and would be considered a *significant impact*

The maximum-modeled annual $PM_{2.5}$ concentration, which is based on combined exhaust and fugitive dust emissions, was 0.7 $\mu g/m^3$, occurring at the same location where maximum cancer risk would occur. This annual $PM_{2.5}$ concentration would be greater than the BAAQMD significance threshold of 0.3 $\mu g/m^3$ and would be considered a *significant impact.*

The maximum modeled annual residential DPM concentration (i.e., from construction exhaust) was 0.6005 $\mu g/m^3$. The maximum computed HI based on this DPM concentration is 0.12, which is lower than the BAAQMD significance criterion of a HI greater than 1.0.

The project would have a *significant impact* with respect to community risk caused by construction activities. *Implementation of Mitigation Measures 1 and 3 would reduce this impact to a level of less than significant.*

Attachment 3 includes the emission calculations used for the area source modeling and the cancer risk calculations.

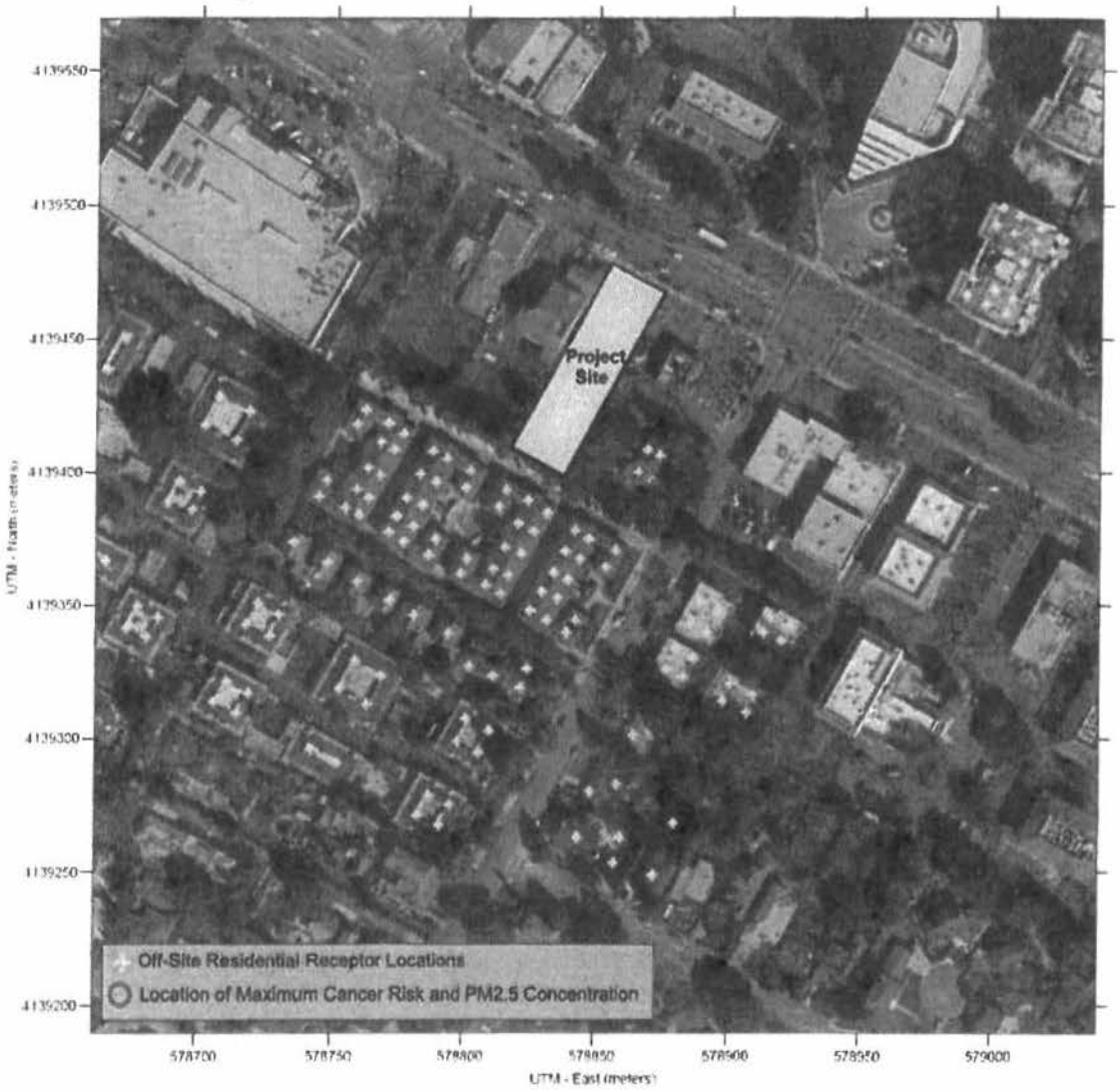
> ***Mitigation Measure 3:*** **Selection of equipment during construction to minimize emissions. Such equipment selection would include the following:**
>
> All diesel-powered off-road equipment operating on the site for more than two days continuously shall, at a minimum, meet U.S. EPA particulate matter emissions standards for Tier 4 engines or equivalent.

Note that the construction contractor could use other measures to minimize construction period DPM emissions to reduce the predicted cancer risk below the thresholds. Such measures may be the use of alternative powered equipment (e.g., LPG-powered lifts), alternative fuels (e.g., biofuels), added exhaust devices, or a combination of measures, provided that these measures are approved by the City and demonstrated to reduce community risk impacts to less than significant.

Implementation of *Mitigation Measure 1* is considered to reduce exhaust emissions by 5 percent and fugitive dust emissions by over 50 percent. Implementation of *Mitigation Measure 3* would further reduce on-site diesel exhaust emissions. With mitigation, the computed maximum increased cancer risk for construction would be 2.6 in one million. The cancer risk would be below the BAAQMD thresholds of greater than 10 per one million for cancer risk. With mitigation, the annual $PM_{2.5}$ concentration would be reduced to 0.03 $\mu g/m^3$, which is below the BAAQMD threshold of 0.3 $\mu g/m^3$. Therefore, *after implementation of these recommended*

measures, the project would have a less-than-significant impact with respect to community risk caused by construction activities.

Figure 3. Project Construction Site, Locations of Off-Site Sensitive Receptors and Maximum TAC Impact



Impact 5: Create objectionable odors affecting a substantial number of people? ***Less than significant.***

The project would generate localized emissions of diesel exhaust during construction equipment operation and truck activity. These emissions may be noticeable from time to time by adjacent receptors. However, they would be localized and are not likely to adversely affect people off site by resulting in confirmed odor complaints. The project would not include any sources of significant odors that would cause complaints from surrounding uses. This would be a *less-than-significant impact*

Impact 6: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ***Less than significant.***

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.[14]

Construction Phase

Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable. Best management practices assumed to be incorporated into construction of the proposed project include, but are not limited to: using local building materials of at least 10 percent and recycling or reusing at least 50 percent of construction waste or demolition materials.

Operational Impacts

Due to the project size, operational period GHG emissions would be less than significant. In their May 2011 update to the CEQA Air Quality Guidelines, BAAQMD identified screening criteria for the sizes of land use projects that could result in significant GHG emissions. For operational impacts, the screening project size is identified at 78 dwelling units. Condo/townhouse projects of smaller size would be expected to have less-than-significant impacts with respect to operational period GHG emissions. Since the project proposes to operate 21 dwelling units, it is concluded that emissions would be below the BAAQMD significance threshold of 1,100 MT of CO_2e annually and, therefore, this impact is considered *less than significant.*

[14] BAAQMD, 2011. *Op cit*

Impact 7: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ***Less than significant.***

The project would be subject to new requirements under rule making developed at the State and local level regarding greenhouse gas emissions and would be subject to local policies that may affect emissions of greenhouse gases.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[15] These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.[16] This HRA used the recent 2015 OEHHA risk assessment guidelines and CARB guidance. While the OEHHA guidelines use substantially more conservative assumptions than the current Bay Area Air Quality Management District (BAAQMD) guidelines, BAAQMD has not formally adopted recommended procedures for applying the newest OEHHA guidelines. BAAQMD is in the process of developing new guidance and has developed proposed HRA Guidelines as part of the proposed amendments to Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[17] Exposure parameters from the OEHHA guidelines and newly proposed BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs are calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency of exposure, and the exposure duration. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day). As recommended by the BAAQMD, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th

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[15] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.* Office of Environmental Health Hazard Assessment. February.

[16] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics.* July 23.

[17] BAAQMD, 2016. *Workshop Report. Proposed Amendments to Air District Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. Appendix C. Proposed Air District HRA Guidelines.* January 2016.

percentile breathing rates for child and adult exposures. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways).

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. BAAQMD recommends using these FAH factors for residential exposures.

Functionally, cancer risk is calculated using the following parameters and formulas:

Cancer Risk (per million) = $CPF \times Inhalation\ Dose \times ASF \times ED/AT \times FAH \times 10^6$

Where:

CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where:

C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

The health risk parameters used in this evaluation are summarized as follows:

Parameter	*Exposure Type →* / *Age Range →*	Infant		Child	Adult
		3rd Trimester	0<2	2 < 16	16 - 30
DPM Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day)*		361	1,090	572	261
Inhalation Absorption Factor		1	1	1	1
Averaging Time (years)		70	70	70	70
Exposure Duration (years)		0.25	2	14	14
Exposure Frequency (days/year)		350	350	350	350
Age Sensitivity Factor		10	10	3	1
Fraction of Time at Home		0.85	0.72	0.72	0.73

* 95th percentile breathing rates for 3rd trimester and infants and 80th percentile for children and adults

Non-Cancer Hazards

Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu g/m^3$).

Annual $PM_{2.5}$ Concentrations

While not a TAC, fine particulate matter ($PM_{2.5}$) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for $PM_{2.5}$ (project level and cumulative) are in terms of an increase in the annual average concentration. When considering $PM_{2.5}$ impacts, the contribution from all sources of $PM_{2.5}$ emissions should be included. For projects with potential impacts from nearby local roadways, the $PM_{2.5}$ impacts should include those from vehicle exhaust emissions, $PM_{2.5}$ generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 2: El Camino Real Emissions and Risk Calculations

4880 El Camino Real, Los Altos, CA
El Camino Real (SR 82)
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2020

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Width (ft)	Link Width (m)	Release Height (m)	Diesel ADT	Average Speed (mph)
EB-El Camino	Eastbound EL Camino	E	3	667	56	17.0	3.4	305	30
WB-El Camino	Westbound El Camino	W	3	664	56	17.0	3.4	305	30

2020 Hourly Diesel Traffic Volumes Per Direction and DPM Emissions - EB-El Camino

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	2.12%	6	0.0261	9	7.73%	24	0.0197	17	7.35%	22	0.0207
2	1.98%	6	0.0221	10	5.92%	18	0.0244	18	6.59%	20	0.0169
3	1.94%	6	0.0147	11	5.13%	16	0.0226	19	3.55%	11	0.0168
4	0.59%	2	0.0241	12	5.63%	17	0.0238	20	2.82%	9	0.0155
5	0.66%	2	0.0204	13	5.34%	16	0.0238	21	3.76%	11	0.0188
6	0.93%	3	0.0357	14	5.35%	16	0.0232	22	4.47%	14	0.0222
7	4.17%	13	0.0237	15	7.14%	22	0.0202	23	3.98%	12	0.0197
8	5.98%	18	0.0178	16	6.42%	20	0.0185	24	0.44%	1	0.0204
								Total		305	

2020 Hourly Diesel Traffic Volumes Per Direction and DPM Emissions - WB-El Camino

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	2.12%	6	0.0261	9	7.73%	24	0.0197	17	7.35%	22	0.0207
2	1.98%	6	0.0221	10	5.92%	18	0.0244	18	6.59%	20	0.0169
3	1.94%	6	0.0147	11	5.13%	16	0.0226	19	3.55%	11	0.0168
4	0.59%	2	0.0241	12	5.63%	17	0.0238	20	2.82%	9	0.0155
5	0.66%	2	0.0204	13	5.34%	16	0.0238	21	3.76%	11	0.0188
6	0.93%	3	0.0357	14	5.35%	16	0.0232	22	4.47%	14	0.0222
7	4.17%	13	0.0237	15	7.14%	22	0.0202	23	3.98%	12	0.0197
8	5.98%	18	0.0178	16	6.42%	20	0.0185	24	0.44%	1	0.0204
								Total		305	

4880 El Camino Real, Los Altos, CA
El Camino Real (SR 82)
PM2.5 & TOG Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2020

Group Link	Description	Direction	No. Lanes	Link Length (m)	Link Width (ft)	Link Width (m)	Release Height (m)	ADT	Average Speed (mph)
EB-El Camino	Eastbound EL Camino	E	3	667	56	17.0	1.3	21,995	30
WB-El Camino	Westbound El Camino	W	3	664	56	17.0	1.3	21,995	30

2020 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - EB-El Camino

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.07%	236	0.0212	9	7.07%	1556	0.0204	17	7.41%	1629	0.0202
2	0.36%	79	0.0225	10	4.25%	934	0.0209	18	8.33%	1831	0.0201
3	0.29%	63	0.0210	11	4.59%	1009	0.0205	19	5.82%	1280	0.0200
4	0.15%	34	0.0221	12	5.84%	1284	0.0205	20	4.39%	965	0.0200
5	0.44%	96	0.0204	13	6.18%	1359	0.0203	21	3.29%	724	0.0201
6	0.79%	174	0.0217	14	6.04%	1327	0.0204	22	3.31%	727	0.0204
7	3.75%	824	0.0204	15	7.09%	1560	0.0202	23	2.48%	546	0.0203
8	7.93%	1744	0.0200	16	7.25%	1595	0.0201	24	1.90%	418	0.0199
								Total		21,995	

2020 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - WB-El Camino

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.07%	236	0.0212	9	7.07%	1556	0.0204	17	7.41%	1629	0.0202
2	0.36%	79	0.0225	10	4.25%	934	0.0209	18	8.33%	1831	0.0201
3	0.29%	63	0.0210	11	4.59%	1009	0.0205	19	5.82%	1280	0.0200
4	0.15%	34	0.0221	12	5.84%	1284	0.0205	20	4.39%	965	0.0200
5	0.44%	96	0.0204	13	6.18%	1359	0.0203	21	3.29%	724	0.0201
6	0.79%	174	0.0217	14	6.04%	1327	0.0204	22	3.31%	727	0.0204
7	3.75%	824	0.0204	15	7.09%	1560	0.0202	23	2.48%	546	0.0203
8	7.93%	1744	0.0200	16	7.25%	1595	0.0201	24	1.90%	418	0.0199
								Total		21,995	

4880 El Camino Real, Los Altos, CA
El Camino Real (SR 82)
Entrained PM2.5 Road Dust Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2020

Group Link	Description	Direction	No. Lanes	Link Length (m)	Link Width (ft)	Link Width (m)	Release Height (m)	ADT	Average Speed (mph)
EB-El Camino	Eastbound El. Camino	E	3	667	56	17.0	1.3	21,995	30
WB-El Camino	Westbound El Camino	W	3	664	56	17.0	1.3	21,995	30

2020 Hourly Traffic Volumes Per Direction and Road Dust PM2.5 Emissions - EB-El Camino

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.07%	236	0.0153	9	7.07%	1556	0.0153	17	7.41%	1629	0.0153
2	0.36%	79	0.0153	10	4.25%	934	0.0153	18	8.33%	1831	0.0153
3	0.29%	63	0.0153	11	4.59%	1009	0.0153	19	5.82%	1280	0.0153
4	0.15%	34	0.0153	12	5.84%	1284	0.0153	20	4.39%	965	0.0153
5	0.44%	96	0.0153	13	6.18%	1359	0.0153	21	3.29%	724	0.0153
6	0.79%	174	0.0153	14	6.04%	1327	0.0153	22	3.31%	727	0.0153
7	3.75%	824	0.0153	15	7.09%	1560	0.0153	23	2.48%	546	0.0153
8	7.93%	1744	0.0153	16	7.25%	1595	0.0153	24	1.90%	418	0.0153
								Total		21,995	

2020 Hourly Traffic Volumes Per Direction and Road Dust PM2.5 Emissions - WB-El Camino

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.07%	236	0.0153	9	7.07%	1556	0.0153	17	7.41%	1629	0.0153
2	0.36%	79	0.0153	10	4.25%	934	0.0153	18	8.33%	1831	0.0153
3	0.29%	63	0.0153	11	4.59%	1009	0.0153	19	5.82%	1280	0.0153
4	0.15%	34	0.0153	12	5.84%	1284	0.0153	20	4.39%	965	0.0153
5	0.44%	96	0.0153	13	6.18%	1359	0.0153	21	3.29%	724	0.0153
6	0.79%	174	0.0153	14	6.04%	1327	0.0153	22	3.31%	727	0.0153
7	3.75%	824	0.0153	15	7.09%	1560	0.0153	23	2.48%	546	0.0153
8	7.93%	1744	0.0153	16	7.25%	1595	0.0153	24	1.90%	418	0.0153
								Total		21,995	

4880 El Camino Real, Los Altos, CA

El Camino Real (SR 82) Traffic Data and PM2.5 & TOG Emission Factors - 30 mph

Analysis Year = *2020*

Vehicle Type	2014 Caltrans Number Vehicles (veh/day)	2020 Number Vehicles (veh/day)	2020 Percent Diesel	Number Diesel Vehicles (veh/day)	Vehicle Speed (mph)	Emission Factors				
						Diesel Vehicles DPM (g/VMT)	All Vehicles		Gas Vehicles	
							Total PM2.5 (g/VMT)	Exhaust PM2.5 (g/VMT)	Exhaust TOG (g/VMT)	Running TOG (g/VMT)
LDA	24,645	26,123	1.09%	284	30	0.0136	0.0198	0.0020	0.0192	0.051
LDT	15,789	16,736	0.17%	29	30	0.0093	0.0197	0.0019	0.0224	0.071
MDT	831	880	10.35%	91	30	0.0130	0.0233	0.0026	0.0390	0.152
HDT	236	250	82.31%	206	30	0.0357	0.1074	0.0294	0.1330	0.108
Total	41,500	43,990	-	610	30	-	-	-	-	-
Mix Avg Emission Factor						**0.02078**	**0.02029**	**0.00214**	**0.02090**	**0.06090**
Increase From 2014		1.06								
Vehicles/Direction		21,995		305						
Avg Vehicles/Hour/Direction		916		13						

Traffic Data Year = *2014*

Caltrans 2014 Traffic AADTs & 2014 Truck AADTs	Total	Total Truck	Truck by Axle			
			2	3	4	5
Rte 82, B Los Altos, San Antonio Ave	41,500	1,067	831	185	9	42
			77.88%	17.34%	0.80%	3.98%
Percent of Total Vehicles		2.57%	2.00%	0.45%	0.02%	0.10%

Traffic Increase per Year (%) = *1.00%*

1701 El Camino Real, Mountain View, CA
El Camino Real Traffic Data and Entrained PM2.5 Road Dust Emission Factors

$E_{2.5} = [k(sL)^{0.91} \times (W)^{1.02} \times (1-P/4N) \times 453.59$

where:

$E_{2.5}$ = $PM_{2.5}$ emission factor (g/VMT)

k = particle size multiplier (g/VMT) [$k_{PM2.5} = k_{PM10} \times (0.0686/0.4572) = 1.0 \times 0.15 = 0.15$ g/VMT][a]

sL = roadway specific silt loading (g/m^2)

W = average weight of vehicles on road (Bay Area default = 2.4 tons)[a]

P = number of days with at least 0.01 inch of precipitation in the annual averaging period

N = number of days in the annual averaging period (default = 365)

Notes: [a] CARB 2014, Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust (Revised and updated, April 2014)

Road Type	Silt Loading (g/m^2)	Average Weight (tons)	County	No. Days ppt > 0.01"	$PM_{2.5}$ Emission Factor (g/VMT)
Major	0.032	2.4	Santa Clara	64	0.01528

SFBAAB[a]

Road Type	Silt Loading (g/m^2)
Collector	0.032
Freeway	0.02
Local	0.32
Major	0.032

SFBAAB[a]

County	>0.01 inch precipitation
Alameda	61
Contra Costa	60
Marin	66
Napa	68
San Francisco	67
San Mateo	60
Santa Clara	64
Solano	54
Sonoma	69

4880 El Camino Real, Los Altos, CA - El Camino Real DPM, PM2.5 & TOG TACs
CAL3QHCR Risk Modeling Parameters and Maximum Concentrations

Receptor Information

Number of Receptors	18
Receptor Heights =	1.5 meter (1st Floor)
Receptor distances =	7 meter (23 feet) grid spacing

Meteorological Conditions

BAAQMD Moffett Field Arpt Hourly Met 1968-1972

Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations - Receptor Height = 1.5 m

Meteorological Data Year	DPM Concentration ($\mu g/m^3$) 2020	Gas Veh Exhaust TOG Concentration ($\mu g/m^3$) 2020	Gas Veh Evaporative TOG Concentration ($\mu g/m^3$) 2020
1968	0.0026	0.1991	0.5798
1969	0.0024	0.1874	0.5459
1970	0.0023	0.1800	0.5244
1971	0.0023	0.1789	0.5211
1972	0.0023	0.1784	0.5196
Average	**0.0024**	**0.1848**	**0.5382**
Maximum	**0.0026**	**0.1991**	**0.5798**

PM2.5 Concentrations

Meteorological Data Year	Maximum Total PM2.5 Concentration ($\mu g/m3$) 2020	Maximum Road Dust PM2.5 Concentration ($\mu g/m3$) 2020	Maximum Vehicle PM2.5 Concentration ($\mu g/m3$) 2020
1968	0.3389	0.1456	0.1933
1969	0.3190	0.1371	0.1820
1970	0.3125	0.1377	0.1748
1971	0.3046	0.1309	0.1737
1972	0.3037	0.1305	0.1732
Average	**0.32**	**0.14**	**0.18**
Maximum	**0.34**	**0.15**	**0.19**

4880 El Camino Real, Los Altos, CA - El Camino Real Cancer Risks
First Floor On-Site Receptors - 1.5 meter Receptor Heights

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - <16	16 - 30
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

				Maximum - Exposure Information				Cancer Risk (per million)			
					Annual Conc (ug/m3)						
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM	TOG Exhaust	TOG Evaporative	DPM	TOG Exhaust	TOG Evaporative	Total
0	2018	0.25	-0.25 - 0*	10	0.0024	0.0000	0.0000	0.03	0.000	0.000	0.03
1	2018	1	1	10	0.0024	0.1848	0.5382	0.39	0.173	0.030	0.59
2	2019	1	2	10	0.0024	0.1848	0.5382	0.39	0.173	0.030	0.59
3	2020	1	3	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.09
4	2021	1	4	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.09
5	2022	1	5	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.09
6	2023	1	6	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.09
7	2024	1	7	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.094
8	2025	1	8	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.094
9	2026	1	9	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.094
10	2027	1	10	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.094
11	2028	1	11	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.094
12	2029	1	12	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.094
13	2030	1	13	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.094
14	2031	1	14	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.094
15	2032	1	15	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.094
16	2033	1	16	3	0.0024	0.1848	0.5382	0.06	0.027	0.005	0.094
17	2034	1	17	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
18	2035	1	18	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
19	2036	1	19	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
20	2037	1	20	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
21	2038	1	21	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
22	2039	1	22	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
23	2040	1	23	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
24	2041	1	24	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
25	2042	1	25	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
26	2043	1	26	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
27	2044	1	27	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
28	2045	1	28	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
29	2046	1	29	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
30	2047	1	30	1	0.0024	0.1848	0.5382	0.01	0.003	0.001	0.010
Total Increased Cancer Risk								1.8	0.8	0.1	2.7

* Third trimester of pregnancy

4880 El Camino Real, Los Altos, CA - El Camino Real DPM, PM2.5 & TOG TACs
CAL3QHCR Risk Modeling Parameters and Maximum Concentrations

Receptor Information

Number of Receptors	24
Receptor Heights =	5.3 meter (2nd Floor)
Receptor distances =	7 meter grid spacing

Meteorological Conditions

BAAQMD Moffett Field Arpt Hourly Met 1968-1972

Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations - Receptor Height = 5.3 m

Meteorological Data Year	DPM Concentration ($\mu g/m^3$)	Gas Veh Exhaust TOG Concentration ($\mu g/m^3$)	Gas Veh Evaporative TOG Concentration ($\mu g/m^3$)
	2020	2020	2020
1968	0.0031	0.2349	0.6842
1969	0.0029	0.2164	0.6304
1970	0.0027	0.2067	0.6020
1971	0.0028	0.2128	0.6199
1972	0.0029	0.2135	0.6217
Average	**0.0029**	**0.2169**	**0.6316**
Maximum	**0.0031**	**0.2349**	**0.6842**

PM2.5 Concentrations

Meteorological Data Year	Maximum Total PM2.5 Concentration (µg/m3)	Maximum Road Dust PM2.5 Concentration (µg/m3)	Maximum Vehicle PM2.5 Concentration (µg/m3)
	2020	2020	2020
1968	0.3999	0.1718	0.2281
1969	0.3684	0.1583	0.2101
1970	0.3519	0.1512	0.2007
1971	0.3624	0.1557	0.2066
1972	0.3633	0.1561	0.2072
Average	**0.37**	**0.16**	**0.21**
Maximum	**0.40**	**0.17**	**0.23**

4880 El Camino Real, Los Altos, CA - El Camino Real Cancer Risks
Second Floor On-Site Receptors - 5.3 meter Receptor Heights

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where CPF = Cancer potency factor (mg/kg-day)$^{-1}$

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where C_{air} = concentration in air (µg/m^3)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)$^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - <16	16 - 30
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information: Age Sensitivity Factor	Annual Conc (ug/m3): DPM	TOG Exhaust	TOG Evaporative	Cancer Risk (per million): DPM	TOG Exhaust	TOG Evaporative	Total
0	2019	0.25	0.25 - 0*	10	0.0029	0.0000	0.0000	0.04	0.000	0.000	0.04
1	2019	1	1	10	0.0029	0.2169	0.6316	0.47	0.203	0.035	0.71
2	2020	1	2	10	0.0029	0.2169	0.6316	0.47	0.203	0.035	0.71
3	2021	1	3	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.11
4	2022	1	4	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.11
5	2023	1	5	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.11
6	2024	1	6	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.11
7	2025	1	7	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.111
8	2026	1	8	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.111
9	2027	1	9	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.111
10	2028	1	10	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.111
11	2029	1	11	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.111
12	2030	1	12	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.111
13	2031	1	13	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.111
14	2032	1	14	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.111
15	2033	1	15	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.111
16	2034	1	16	3	0.0029	0.2169	0.6316	0.07	0.032	0.006	0.111
17	2035	1	17	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
18	2036	1	18	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
19	2037	1	19	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
20	2038	1	20	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
21	2039	1	21	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
22	2040	1	22	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
23	2041	1	23	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
24	2042	1	24	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
25	2043	1	25	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
26	2044	1	26	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
27	2045	1	27	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
28	2046	1	28	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
29	2047	1	29	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
30	2048	1	30	1	0.0029	0.2169	0.6316	0.01	0.004	0.001	0.012
Total Increased Cancer Risk								**2.1**	**0.9**	**0.2**	**3.2**

* Third trimester of pregnancy

Attachment 3: Construction Schedule, CalEEMod Input and Output Worksheets, and Risk Calculations

4880 El Camino Real Construction

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	47.00	Space	0.00	12,151.00	0
Condo/Townhouse	21.00	Dwelling Unit	0.45	32,084.00	60

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage and sf from construction spreadsheet and plan drawings

Construction Phase - Default

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Paving: 8 asphalt trips. One mile trip lengths to calculate risk from on- and near-site travel.

Demolition - 380 tons demo

Grading - 6,300cy soil export

Architectural Coating -

Construction Off-road Equipment Mitigation - Tier 4 engines for equip > 50hp. BAAQMD BMPs.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	PhaseEndDate	8/16/2017	8/23/2017
tblConstructionPhase	PhaseEndDate	1/13/2017	1/4/2017
tblConstructionPhase	PhaseEndDate	2/17/2017	3/29/2017
tblConstructionPhase	PhaseEndDate	1/5/2017	2/15/2017
tblConstructionPhase	PhaseStartDate	3/30/2017	4/6/2017
tblLandUse	LandUseSquareFeet	18,800.00	12,151.00
tblLandUse	LandUseSquareFeet	21,000.00	32,084.00

tblLandUse	LotAcreage	0.42	0.00
tblLandUse	LotAcreage	1.31	0.45
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	12.40	1.00
tblTripsAndVMT	WorkerTripLength	12.40	1.00
tblTripsAndVMT	WorkerTripLength	12.40	1.00
tblTripsAndVMT	WorkerTripLength	12.40	1.00
tblTripsAndVMT	WorkerTripLength	12.40	1.00
tblTripsAndVMT	WorkerTripLength	12.40	1.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					

2017	0.4001	1.0341	0.7110	9.6000e-004	0.0216	0.0683	0.0899	7.5600e-003	0.0633	0.0709	0.0000	88.3227	88.3227	0.0244	0.0000	88.8355
Total	0.4001	1.0341	0.7110	9.6000e-004	0.0216	0.0683	0.0899	7.5600e-003	0.0633	0.0709	0.0000	88.3227	88.3227	0.0244	0.0000	88.8355

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.3056	0.0585	0.6796	9.6000e-004	0.0104	1.6700e-003	0.0120	1.9500e-003	1.6600e-003	3.6100e-003	0.0000	88.3226	88.3226	0.0244	0.0000	88.8354
Total	0.3056	0.0585	0.6796	9.6000e-004	0.0104	1.6700e-003	0.0120	1.9500e-003	1.6600e-003	3.6100e-003	0.0000	88.3226	88.3226	0.0244	0.0000	88.8354

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	23.60	94.35	4.41	0.00	52.06	97.56	86.61	74.21	97.38	94.91	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/4/2017	5	10	
2	Site Preparation	Site Preparation	1/5/2017	2/15/2017	5	1	
3	Grading	Grading	2/16/2017	3/29/2017	5	2	
4	Building Construction	Building Construction	4/6/2017	8/23/2017	5	100	
5	Architectural Coating	Architectural Coating	8/24/2017	8/30/2017	5	5	

6	Paving	Paving	8/31/2017	9/6/2017	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 64,970; Residential Outdoor: 21,657; Non-Residential Indoor: 18,227; Non-Residential Outdoor: 6,076 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	38.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

Site Preparation	2	5.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	20.00	4.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	8.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2200e-003	0.0000	1.2200e-003	1.8000e-004	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0157	0.0129	2.0000e-005		1.0900e-003	1.0900e-003		1.0400e-003	1.0400e-003	0.0000	1.6109	1.6109	3.2000e-004	0.0000	1.6176
Total	1.8100e-003	0.0157	0.0129	2.0000e-005	1.2200e-003	1.0900e-003	2.3100e-003	1.8000e-004	1.0400e-003	1.2200e-003	0.0000	1.6109	1.6109	3.2000e-004	0.0000	1.6176

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9000e-004	8.9000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0277	0.0277	0.0000	0.0000	0.0277
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	1.0000e-005	1.5000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0121	0.0121	0.0000	0.0000	0.0121
Total	9.0000e-005	2.0000e-004	1.0400e-003	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0397	0.0397	0.0000	0.0000	0.0398

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.5000e-004	0.0000	5.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0000e-004	8.6000e-004	0.0118	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.6109	1.6109	3.2000e-004	0.0000	1.6176
Total	2.0000e-004	8.6000e-004	0.0118	2.0000e-005	5.5000e-004	3.0000e-005	5.8000e-004	4.0000e-005	3.0000e-005	7.0000e-005	0.0000	1.6109	1.6109	3.2000e-004	0.0000	1.6176

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9000e-004	8.9000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0277	0.0277	0.0000	0.0000	0.0277

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	1.0000e-005	1.5000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0121	0.0121	0.0000	0.0000	0.0121
Total	6.0000e-005	2.0000e-004	1.0400e-003	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0397	0.0397	0.0000	0.0000	0.0398

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.9500e-003	0.0000	7.9500e-003	8.6000e-004	0.0000	8.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0190	0.1903	0.1085	1.4000e-004		0.0116	0.0116		0.0106	0.0106	0.0000	13.0072	13.0072	3.9900e-003	0.0000	13.0909
Total	0.0190	0.1903	0.1085	1.4000e-004	7.9500e-003	0.0116	0.0195	8.6000e-004	0.0106	0.0115	0.0000	13.0072	13.0072	3.9900e-003	0.0000	13.0909

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	6.0000e-005	7.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0603	0.0603	0.0000	0.0000	0.0604
Total	1.9000e-004	6.0000e-005	7.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0603	0.0603	0.0000	0.0000	0.0604

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.5800e-003	0.0000	3.5800e-003	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7000e-003	7.3800e-003	0.1050	1.4000e-004		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	13.0072	13.0072	3.9900e-003	0.0000	13.0909
Total	1.7000e-003	7.3800e-003	0.1050	1.4000e-004	3.5800e-003	2.3000e-004	3.8100e-003	1.9000e-004	2.3000e-004	4.2000e-004	0.0000	13.0072	13.0072	3.9900e-003	0.0000	13.0909

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	6.0000e-005	7.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0603	0.0603	0.0000	0.0000	0.0604
Total	1.9000e-004	6.0000e-005	7.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0603	0.0603	0.0000	0.0000	0.0604

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					0.0113	0.0000	0.0113	6.2100e-003	0.0000	6.2100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0181	0.1571	0.1287	1.8000e-004		0.0109	0.0109		0.0104	0.0104	0.0000	16.1091	16.1091	3.1700e-003	0.0000	16.1757
Total	0.0181	0.1571	0.1287	1.8000e-004	0.0113	0.0109	0.0222	6.2100e-003	0.0104	0.0166	0.0000	16.1091	16.1091	3.1700e-003	0.0000	16.1757

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	1.2000e-004	1.5400e-003	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1207	0.1207	1.0000e-005	0.0000	0.1208
Total	3.7000e-004	1.2000e-004	1.5400e-003	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1207	0.1207	1.0000e-005	0.0000	0.1208

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.0800e-003	0.0000	5.0800e-003	1.4000e-003	0.0000	1.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0000e-003	6.6500e-003	0.1180	1.8000e-004		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	16.1090	16.1090	3.1700e-003	0.0000	16.1757

Total	2.0000e-003	8.6500e-003	0.1180	1.8000e-004	5.0800e-003	2.7500e-004	5.3500e-003	1.4000e-003	2.7000e-004	1.6700e-003	0.0000	16.1090	16.1090	3.1700e-003	0.0000	16.1757

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	1.2000e-004	1.5400e-003	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1207	0.1207	1.0000e-005	0.0000	0.1208
Total	3.7000e-004	1.2000e-004	1.5400e-003	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1207	0.1207	1.0000e-005	0.0000	0.1208

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0637	0.6337	0.4020	5.7000e-004		0.0428	0.0428		0.0394	0.0394	0.0000	52.5954	52.5954	0.0161	0.0000	52.9339
Total	0.0637	0.6337	0.4020	5.7000e-004		0.0428	0.0428		0.0394	0.0394	0.0000	52.5954	52.5954	0.0161	0.0000	52.9339

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4800e-003	5.8100e-003	0.0213	1.0000e-005	1.8000e-004	5.0000e-005	2.3000e-004	5.0000e-005	4.0000e-005	9.0000e-005	0.0000	0.8487	0.8487	1.0000e-005	0.0000	0.8489
Worker	2.4800e-003	8.2000e-004	0.0102	1.0000e-005	7.4000e-004	1.0000e-005	7.6000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.8044	0.8044	6.0000e-005	0.0000	0.8056
Total	3.9600e-003	6.6300e-003	0.0316	2.0000e-005	9.2000e-004	6.0000e-005	9.9000e-004	2.5000e-004	5.0000e-005	3.0000e-004	0.0000	1.6531	1.6531	7.0000e-005	0.0000	1.6545

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.9400e-003	0.0301	0.3849	5.7000e-004		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	52.5954	52.5954	0.0161	0.0000	52.9338
Total	6.9400e-003	0.0301	0.3849	5.7000e-004		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	52.5954	52.5954	0.0161	0.0000	52.9338

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4800e-003	5.8100e-003	0.0213	1.0000e-005	1.8000e-004	5.0000e-005	2.3000e-004	5.0000e-005	4.0000e-005	9.0000e-005	0.0000	0.8487	0.8487	1.0000e-005	0.0000	0.8489
Worker	2.4800e-003	8.2000e-004	0.0102	1.0000e-005	7.4000e-004	1.0000e-005	7.6000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.8044	0.8044	6.0000e-005	0.0000	0.8056
Total	3.9600e-003	6.6300e-003	0.0316	2.0000e-005	9.2800e-004	6.0000e-005	9.9000e-004	2.5000e-004	5.0000e-005	3.0000e-004	0.0000	1.6531	1.6531	7.0000e-005	0.0000	1.6545

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2892					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-004	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6397
Total	0.2901	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6397

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	8.0400e-003	8.0400e-003	0.0000	0.0000	8.0600e-003
Total	2.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	8.0400e-003	8.0400e-003	0.0000	0.0000	8.0600e-003

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2692					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0000e-005	3.2000e-004	4.5800e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6397
Total	0.2693	3.2000e-004	4.5800e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6397

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.9000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	8.6400e-003	8.6400e-003	0.0000	0.0000	8.6600e-003
Total	2.0000e-005	1.0000e-005	1.9000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	8.6400e-003	8.6400e-003	0.0000	0.0000	8.6600e-003

3.7 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6000e-003	0.0248	0.0181	3.0000e-005		1.5000e-003	1.5000e-003		1.3900e-003	1.3900e-003	0.0000	2.4243	2.4243	8.7000e-004	0.0000	2.4384
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.6000e-003	0.0248	0.0181	3.0000e-005		1.5000e-003	1.5000e-003		1.3900e-003	1.3900e-003	0.0000	2.4243	2.4243	8.7000e-004	0.0000	2.4384

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.3000e-004	6.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0194	0.0194	0.0000	0.0000	0.0194
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	4.0000e-005	4.6000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0362	0.0362	0.0000	0.0000	0.0363
Total	1.5000e-004	1.7000e-004	1.0800e-003	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0556	0.0556	0.0000	0.0000	0.0557

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.2000e-004	3.9500e-003	0.0193	3.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.4243	2.4243	8.7000e-004	0.0000	2.4384

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.2000e-004	3.9500e-003	0.0193	3.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.4243	2.4243	6.7000e-004	0.0000	2.4384

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.3000e-004	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0194	0.0194	0.0000	0.0000	0.0194
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	4.0000e-005	4.6000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0362	0.0362	0.0000	0.0000	0.0363
Total	1.5000e-004	1.7000e-004	1.0800e-003	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0556	0.0556	0.0000	0.0000	0.0557

4880 ECR, Los Altos, CA

DPM Construction Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (lbs/year)	Area Source	DPM Emissions (lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2017	Construction	0.0033	1_DPM	12*	0.0036	0.0005	1,718	2.90E-06
Total		*0.0033*		*12**	*0.0185*	*0.0049*		

Construction Hours
hr/day = 9 (Start - 5pm)
days/yr = 365
hours/yr = 3285

4880 ECR, Los Altos, CA

PM2.5 Fugitive Dust Construction Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (lbs/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate ($g/s/m^2$)
2017	Construction	1_PM25	0.0076	15.2	0.0043	5.93E-04	1,718	3.45E-07
Total			*0.0076*	*15.2*	*0.0043*	*0.0006*		

Construction Hours
hr/day = 9 (8am - 5pm)
days/yr = 365
hours/yr = 3285

4880 ECR, Los Altos, CA - Project Construction Health Impact Summary

Maximum Impacts at Off-Site Residences

Construction Year	Unmitigated					
	Maximum Concentrations		Cancer Risk (per million)		Hazard Index	Maximum Annual PM2.5 Concentration
	Exhaust PM2.5/DPM ($\mu g/m^3$)	Fugitive PM2.5 ($\mu g/m^3$)	Child	Adult	(-)	($\mu g/m^3$)
2017	0.6005	0.1122	98.63	1.72	0.120	0.713
Total	-	-	**98.6**	**1.7**	-	-
Maximum Annual	0.6005	0.1122	-	-	**0.120**	**0.713**

4880 ECR, Los Altos, CA - Construction Impacts - Unmitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Off-Site Residential Receptor Locations - 1.5 meters

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor (mg/kg-day)$^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air (µg/m^3)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information Modeled DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	-	0.0000	10	-	-	-	-	-		
1	1	0 - 1	2017	0.6005	10	98.63	2017	0.6005	1	1.72	0.1122	0.713
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00		
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						98.6				1.72		

* Third trimester of pregnancy

ATTACHMENT F

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

CALIFORNIA
WASHINGTON
NEW YORK

CCR TITLE 24 NOISE STUDY

4880 EL CAMINO REAL

LOS ALTOS, CALIFORNIA

March 2, 2016

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Prepared for:

Lola, LLC
Jeff Taylor, Peggy Galen
12340 Saratoga-Sunnyvale Road
Saratoga, California 95070

Prepared by:

Derek L. Watry

Ani S. Toncheva

WI Project 16-018

1 Introduction

This report presents an acoustical evaluation of the exterior noise and exterior to interior sound isolation for the proposed 4880 El Camino Real multi-family residential project to be constructed along El Camino Real between Los Altos Square and Jordan Avenue in the City of Los Altos, CA. The proposed project is a five story residential development of 21 units over one level of parking garage.

Inter-unit noise mitigation provisions, also required by CCR Title 24, include acoustical design and installation details for party walls, corridor walls, floor-ceiling assemblies, and other components. This design work is not included in this report.

The purpose of this noise study is to assess the exterior noise environment of the subject property and to provide recommendations on the control of exterior-to-interior noise with respect to the requirements of the California Code of Regulations (CCR), Title 24 (included in the California Building Code Section 1207 - Sound Transmission Control) and the City of Los Altos General Plan Environmental Management Element. This report provides a description of the environmental noise survey methodology, a discussion of applicable noise standards, noise survey results, future noise level projections, and exterior-to-interior noise mitigation recommendations. The current Study is based on the Permit Submittal drawing set dated 4 February 2016 by Dahlin Group.

The project site's existing noise environment is primarily dominated by vehicle traffic along El Camino Real (State Route 82) on the north side, and by far away sources such as Showers Drive to the northwest. The City of Los Altos General Plan indicates that traffic volumes along El Camino Real are not expected to increase over the next 10 years and the traffic study for this project by Hexagon Transportation Consultants (dated 25 February 2016) indicates that there will be a net decrease in traffic brought about by the conversion of this parcel from restaurant use to residential use. As such, the measured noise levels at the site today are expected to persist for the next 10 years.

Noise mitigation recommendations for project glazing, exterior assemblies, and exterior doors are presented, along with important installation details.

2 Noise Level Descriptors

The noise exposure at a site, measured using the Day-Night Level (L_{dn}) metric, represents the A-weighted equivalent continuous noise exposure level for a 24-hour period and includes a 10 decibel (dB) penalty added to sound levels during nighttime hours (10:00 pm to 7:00 am). The term "Equivalent Continuous Sound Exposure Level" (L_{eq}) refers to a decibel level that equals the level of a steady noise containing the same total sound energy as the fluctuating community noise level for a given period of time. The 10 dB penalty added to sound levels during the nighttime hours is meant to account for higher sensitivity of people to noise during nighttime and evening hours, relative to the daytime. The A-weighted scale, used for community noise measurements, causes the measuring instrumentation to respond to noise in a manner closely correlated with the auditory

response of the average person. A-weighting is implicit in noise levels reported in terms of L_{dn}.

More complete definitions for these and other acoustical terms can be found in the "Description of Acoustical Terms Relevant to Title 24 Projects" at the end of this report.

3 Applicable Noise Standards – Noise Study Criteria

Noise Insulation Requirements. California Code of Regulations (CCR) Title 24 – included in the amended California Building Code (CBC), Section 1207, "Sound Transmission" – specifies the maximum level of interior noise due to exterior sources allowable for new residential developments. Division II of the CBC, Appendix 12 presents acoustical requirements in general terms, with more specific language provided in Division IIA of Appendix 12. CCR Title 24 also defers to local requirements where applicable.

CCR Title 24 requires that the building be designed to have sound insulation so that, with all exterior doors and windows in the closed position, the interior noise level attributable to exterior sources shall not exceed an annual L_{dn} of 45 in any habitable room.

The Natural Environment and Hazards Element of the Los Altos General Plan reference the State of California noise insulation standards, explicitly citing the 45 L_{dn} interior noise standard for residential space. The Element requires acoustical studies such as this one for developments where the noise level exceeds 60 L_{dn} from industrial or transportation sources. The study must demonstrate compliance with the interior noise standard.

The Natural Environment & Hazards Element of the City of Los Altos General Plan also states that new development can be made compatible with the noise environment by utilizing the Land Use Compatibility Guidelines. Land uses and their compatibility with various noise criteria, as adopted by the City of Los Altos, is shown graphically in Figure 1, below, reproduced from the Natural Environment & Hazards Element.

As seen in Figure 1, residential development is considered Normally Acceptable in areas where the exterior noise exposure is less than 60 Ldn. Areas between 60 and 70 Ldn are considered Conditionally Acceptable, and detailed noise analysis is required to substantiate that proper noise reduction measures are included in the project design. Areas between 70 and 75 Ldn are considered Normally Unacceptable for new residential development, but is allowed provided that a detailed noise analysis is done and adequate noise reduction measurements are included in the project design.

The City of Los Altos Municipal Code at Chapter 6, Section 16.050, Exterior Noise Limits, contains absolute noise limits for various categories of land use under differing conditions. For the purpose of this study, these limits will be applied to HVAC and other mechanical noises associated with the project, and we are assuming that this equipment will, at times, have duty cycles that exceeded 30 minutes of use per hour. As such, the most restrictive noise limits will apply. At the neighboring commercial properties (C Zoning), the applicable limits are 60 dBA between 10 PM and 7 AM and 65 dBA between 7 AM and 10 PM [Code Section 6.16.050, Table 1]. For the neighboring residential units, the limits in Section 16.050 Table 1 are modified because they border another type of zoning. Per 6.16.050.A.4, when two zones abut, "the noise level limit applicable to the lower noise zone, plus five

dB, shall apply." As such, the applicable limits at the residential properties are 55 dBA between 10 PM and 7 AM and 60 dBA between 7 AM and 10 PM.

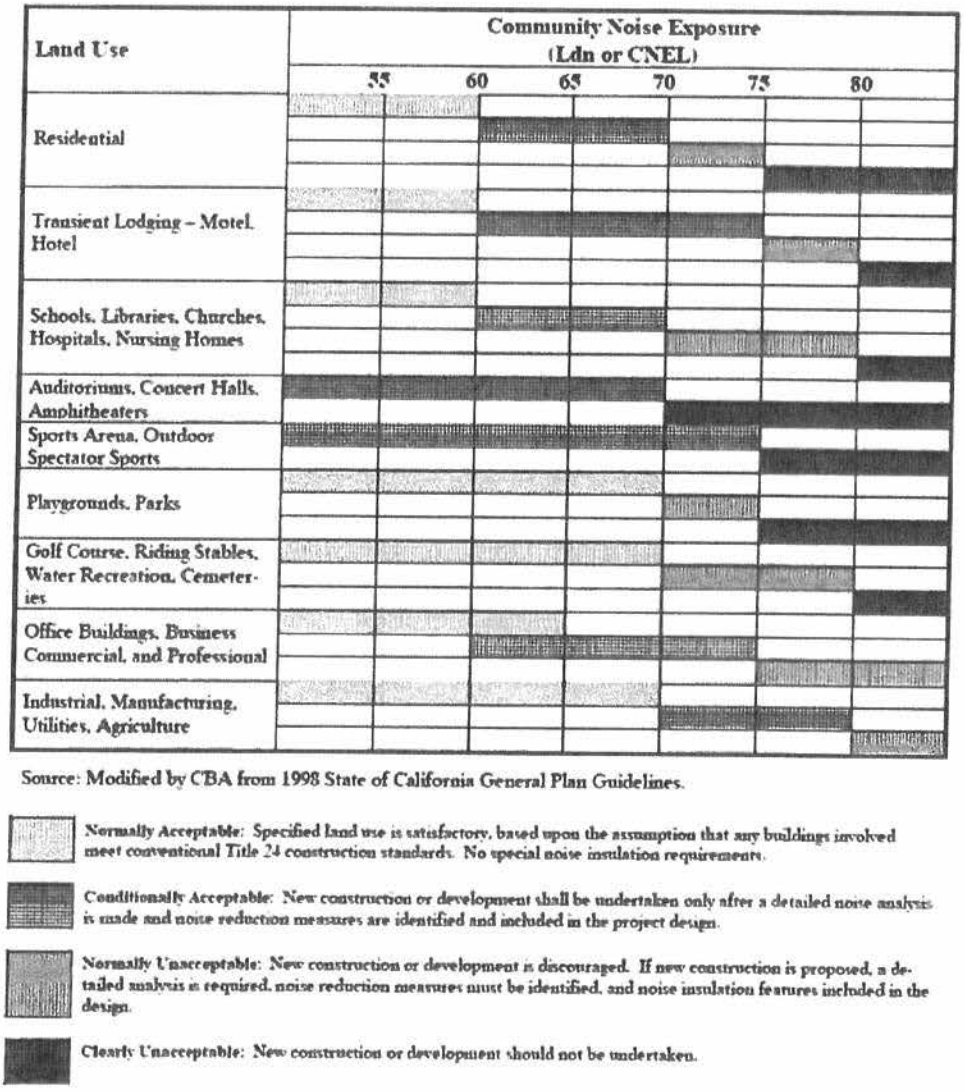

Figure 1: Land Use/Noise Compatibility Chart (from Los Altos' Natural Environment & Hazards Element of the 2002 General Plan, page 10)

Ventilation Requirements. Provision of adequate ventilation falls under the purview of the project mechanical engineer. However, it is related to acoustics because the requirement for acoustically-rated windows also triggers a requirement for mechanical ventilation. Specifically, for areas of the Project where the exterior noise exposure exceeds 60 Ldn, an alternative means of ventilation is usually required. We recommend you bring this to the attention of the project mechanical engineer.

4 Environmental Noise Survey Methodology

The Environmental Noise Survey consisted of both short-term noise recordings and long-term noise measurement efforts at several locations in the project vicinity. Table I summarizes the noise measurement locations, with distances to adjacent sources and the types of measurements performed at each. Figure 2 presents this information in graphical form.

Long-Term Measurements

Long-term, statistical noise levels were measured at the site by means of four precision, calibrated, Type I logging sound level meters left unattended at the site to monitor complete days between Thursday, 18 February and Tuesday, 23 February, inclusive. Long-term meters were placed at the locations indicated in Table I and Figure 2 (indicated as LT-1 to LT-4), where they could be secured to light poles and a tree. Microphone heights are approximately 12 ft to 15 ft above grade in this mounting arrangement. The sound meters monitored noise levels continuously during the survey period, providing hourly-averaged and statistical noise levels over six complete days. The hourly equivalent noise data (L_{eq}) were then used to calculate the daily and typical Day-Night Levels (L_{dn}), as required by the CCR Title 24 and the City of Los Altos General Plan Natural Environment & Hazards Element.

Short-Term Measurement

At short-term location ST, calibrated, digital recordings were made on Tuesday, 17 February for approximately 10 minutes to determine the spectral content of the noise.

Table 1: Environmental Noise Survey Measurement Locations

Label	Measurement Type	Location Description
LT-1	Long-Term	Light Pole at North Property Line ~ 75' from El Camino Real CL
LT-2 & ST	Long & Short-Term	Light Pole at North Property Line ~ 72' from El Camino Real CL
LT-3	Long-Term	Tree at East Property Line ~ 175' from El Camino Real CL
LT-4	Long-Term	Light Pole at South Property Line ~ 283' from El Camino Real CL

5 Environmental Noise Survey Results

Exterior-to-interior noise isolation requirements were determined by evaluating the existing and projected future noise levels at the project site.

5.1 Measured Existing Noise Levels

The results of the environmental noise survey reveal that existing noise levels across site range from 71 Ldn near El Camino Real to 58 Ldn near the rear property line. This puts the majority of the site in the Conditionally Acceptable category for residential land use. The day-night noise levels over the course of the long-term noise survey are summarized by location in Table 2. Figure 3A to 3D present the hourly averaged L_{eq} and calculated L_{dn} levels. The data show marginally higher noise levels on weekdays, when car and truck traffic in the vicinity are presumably greater. Lower levels are particularly evident on weekend mornings, due to the absence of a defined commute period.

The noise frequency spectrum provided by the short-term (ST) measurement is consistent with noise environments dominated by vehicle traffic. The spectrum is shown Figure 4.

Table 2: Summary of Measured Existing Day Night Noise Levels By Measurement Location (See also Figure 3A to Figure 3D)

	Location LT-1	Location LT-2	Location LT-3	Location LT-4
Ldn – Tue, 18 Feb	71	72	62	59
Ldn – Wed, 19 Feb	70	72	62	58
Ldn – Thu, 20 Feb	69	70	60	57
Ldn – Fri, 21 Feb	69	70	61	57
Ldn – Sat, 22 Feb	70	72	62	58
Ldn – Sun, 23 Feb	70	71	62	59
Existing Average Ldn	**70**	**71**	**61**	**58**

5.2 Projected Future Noise Levels

According to the City of Los Altos General Plan, average daily traffic along El Camino Real in front of the project site is expected to increase from 44,500 vehicles in 2001 (Table NEH-2) to 50,000 in 2025 (Table NEH-3). The mix of automobiles, medium trucks, and heavy truck is not expected to change. Given this information, the expected increase in noise due to traffic increase over the 24 year period is 0.5 dB. However, because the current date is 15 years into the 24 year period, it is expected that 0.3 dB of this increase has already occurred, implying that the increase between noise and 2025 or 2026 is on the order of 0.2 dB, a negligible amount. Therefore, for the purposes of this study, future noise levels are taken to be the same as today.

The noise contours developed for this study take into account the shielding provided by existing buildings on other properties for each level of the subject project. The lower floors of the project

building benefit more from shielding than the upper levels. Figures 5A to 5C shows the noise contours after development of the project site.

6 Noise Mitigation Recommendations

6.1 Exterior Glazing

Windows are inherently the weak link of a residential project's exterior acoustical envelope. Therefore, proper selection and installation of exterior glazing elements are paramount to achieving CCR Title 24 interior noise limits. Frames of windows and doors must be caulked with resilient, acoustical sealant to provide an airtight seal. Also, a bead of resilient, acoustical caulking must be applied to window casings before installation. Manufacturer's instructions for installation of acoustically rated window assemblies must be followed carefully, so that installed windows retain their rated acoustical performance.

Recommendations are presented in terms of the Outdoor-Indoor Transmission Class (OITC) and Sound Transmission Class (STC) acoustical performance ratings, either of which may be used to specify windows for the project, though the OITC rating is preferable. The window manufacturer shall provide laboratory test data for the specific window assembly types submitted for this project. Laboratory test reports should include third octave band sound isolation performance data for the specific glazing system proposed. Window manufacturers may provide alternative glazing configurations which might be more appropriate for this project, provided that these possess the minimum recommended OITC ratings.

Traditionally, manufacturers of exterior doors and windows have used the single-number Sound Transmission Class (STC) metric to rate the acoustical performance of their products. However, STC is a metric optimized for the spectral shape (or tonal quality) of human speech, as it was originally developed as a means to rate the degree of sound isolation between dwelling units in the late 1950's. The Outdoor-Indoor Transmission Class (OITC), as defined in the ASTM Standard E1332, is the *preferred metric* for rating the sound performance of building shell materials. OITC ratings are tied to a typical noise spectrum shape from transportation sources, which are rich in low frequency, bass-type sounds, as opposed to the frequencies of human speech or television audio. Both OITC and STC rating values are calculated from 1/3-octave band transmission loss data for specific building shell components.

Our acoustical glazing recommendations for the project are shown in Figure 6A for Floor 1, Figure 6B for Floor 2, and Figure 6C for Floors 3, 4, and 5. Two classes of exterior glazing are indicated for windows and balcony doors in Figures 6A to 6C:

- Glazing Class I with a minimum OITC 24 / STC 32 rating
- Glazing Class II with a minimum OITC 22 / STC 30 rating

The recommendations assume that the condominium units will have hard surface finishes, leading to a high level of reverberation in comparison to rooms that are carpeted. If the units in the project are going to be carpeted, the recommend OITC/STC ratings may be relaxed by 2 points. If this is done,

the projects Conditions, Covenants, and Restrictions should prevent future owners from replacing the carpet with hardwood flooring.

These recommendations are only for habitable rooms within residential units ("R" occupancy) and do not apply to common rooms and areas, corridors, public stair wells, storage areas, commercial spaces, garages, etc. All other façade sections where no specific OITC/STC recommendations are given do not require acoustically-rated glazing.

Many glazing configurations are produced that meet the above minimum requirements. In addition, glazing systems with dissimilar thickness panes are strongly recommended, unless one of the layers is made out of *laminated glass*.

6.2 Exterior Walls

The proposed main exterior wall construction per Dahlin Group Architecture is an exterior finish of a four-coat stucco system, , 2x6 wood studs, R19 fiberglass batt insulation in the stud cavity, and one layer of 5/8" gypsum board on the interior face of the wall. Assemblies similar to the assemblies listed above have been tested to have a sound insulation rating of at least OITC 37 (comparable to STC 46), which will not compromise the sound isolation of the building envelope, making it suitable for all noise exposures expected with this project.

The ultimate degree of sound isolation provided by the building shell is highly dependent on the quality of workmanship and attention to detail that is followed during construction. The following recommendations are aimed at delivering the full sound isolating potential of the building shell:

- If possible, avoid electrical outlets in exterior walls. If this is not possible, apply outlet box pads such as those manufactured by Lowry's or Dottie (#68 pads) to all electrical boxes in exterior walls, as one would in all corridor, party and other sound rated interior walls. Thoroughly caulk around all edges of electrical outlet boxes and other penetrations with non-hardening acoustical sealant.
- Carefully caulk the intersection between the interior layer of gypsum wall board at the floor and ceiling with resilient, non-hardening acoustical sealant.
- Fully fill the stud cavities with batt insulation, as the improvement in sound isolation provided by the partition is directly proportional to the percentage of the cavity filled with insulation. For exterior walls constructed with 8" studs, the use of two layers of slightly compressed R-13 batt insulation is highly recommended.

6.3 Supplemental Ventilation

As mentioned above, any habitable room that is required to have an acoustically-rated window (see Figures 6A through 6C are also required to provide for alternative ventilation so that the windows may remain closed for noise reduction purposes. This requirement should be addressed by the project mechanical engineer.

Supplemental ventilation can be provided in several forms. A ducted fresh air system could be incorporated into the HVAC system. Other projects have used passive, ducted air inlets that extend from the building's rooftop to soffits within each unit. Ducted air inlets should be acoustically lined through the first 10 feet in length away from the exterior opening and incorporate one or more 90-degree bends between openings, so as to not compromise the noise insulating performance of the residential unit's exterior envelope. Instead of serving unit stacks with a vertical duct drawing air from the room, air could also be drawn through the floor-ceiling assembly to a register in the ceiling. In either system, ducts should be located within gypsum shafts so as to not create a direct noise path from exterior penetration to the unit interior. We will gladly review and comment on designs provided by the project's architect or mechanical engineer.

Another means of providing fresh air ventilation without compromising the degree of acoustical isolation is to incorporate a "Z-duct" fresh air intake device in the building façade. If a Z-duct method is chosen to provide outside air intake at individual units, the vertical duct should be at least 5 ft in length, and lined with 1/2" or 1" thick acoustical liner. These requirements are essential to make the Z-duct provide adequate noise insulation and not compromise the noise insulating performance of the window and wall assemblies. Commercially available units include the Vibro-Acoustics model CT silencer (http://www.vibro-acoustics.com/).

6.4 Mechanical Equipment Noise Control

The project design is not far enough along at this point to select mechanical equipment that will service the building. Such equipment will include HVAC equipment and may include an emergency backup generator. The current plans indicate that the mechanical equipment will be located in a room at the Garage Level, which will contain most of the noise, but the equipment will also require inlet and exhaust ducts that will themselves be noise emitters. During detailed design of the project, noise mitigation measures will be employed as necessary to ensure compliance with the Municipal Code Section 6.16.050 noise limits. No equipment is anticipated for a project of this scale that would make meeting the applicable noise limits with standard noise control measures difficult.

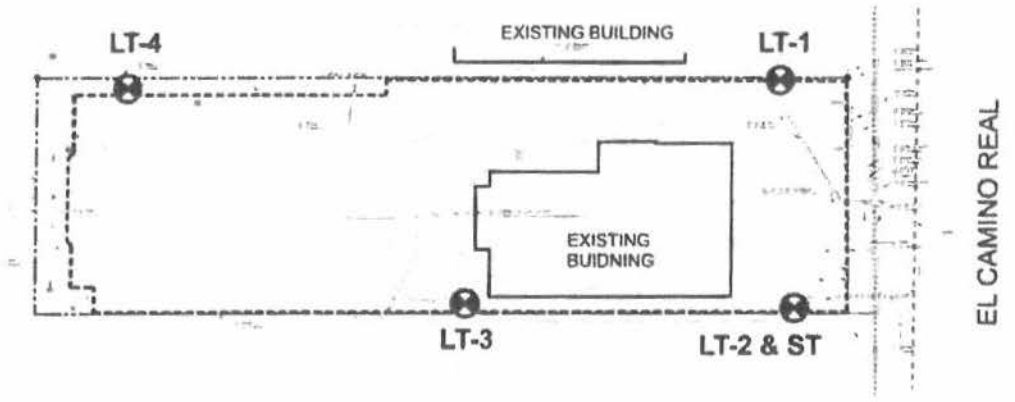

Figure 2: ***Present day, open lot day-night noise levels (Ldn) and noise survey locations***

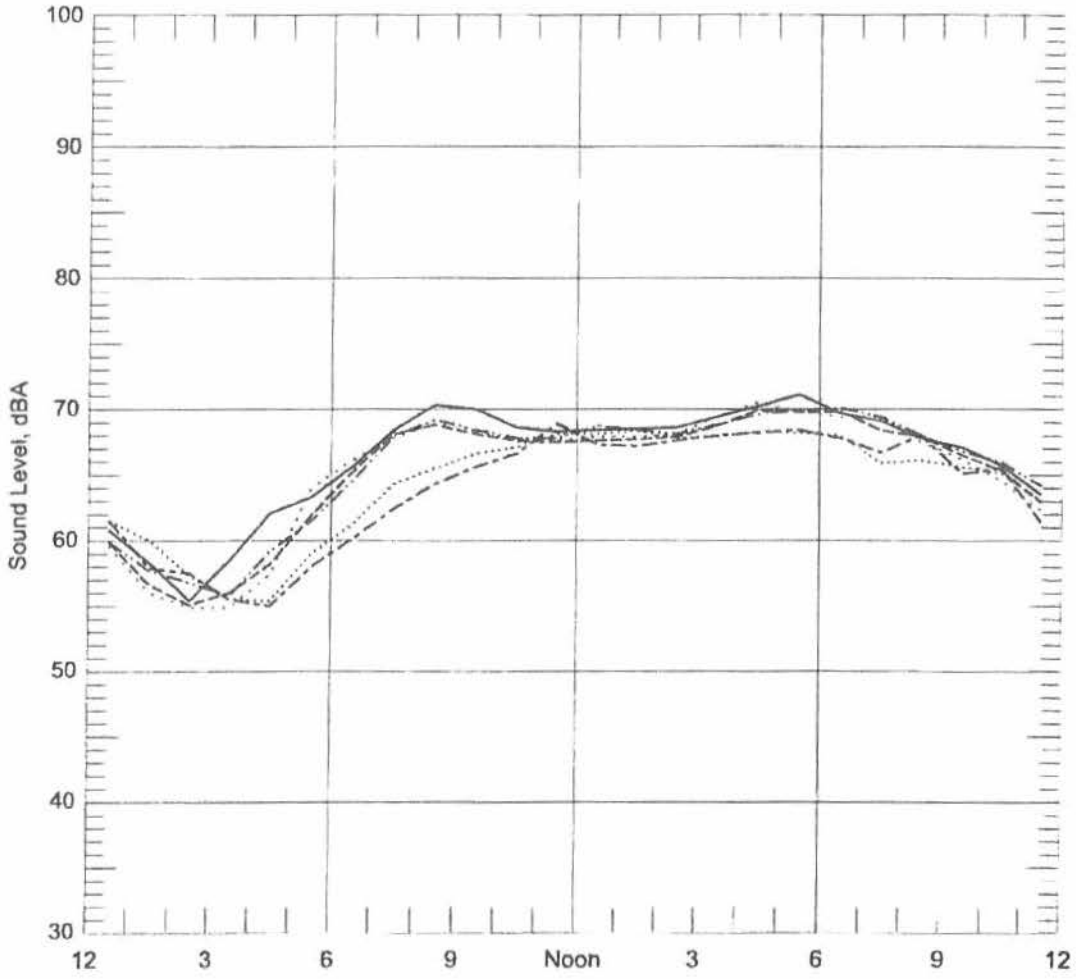

Figure 3A: Hourly Equivalent (Leq) and Day-Night (Ldn) Levels measured at Location LT-1

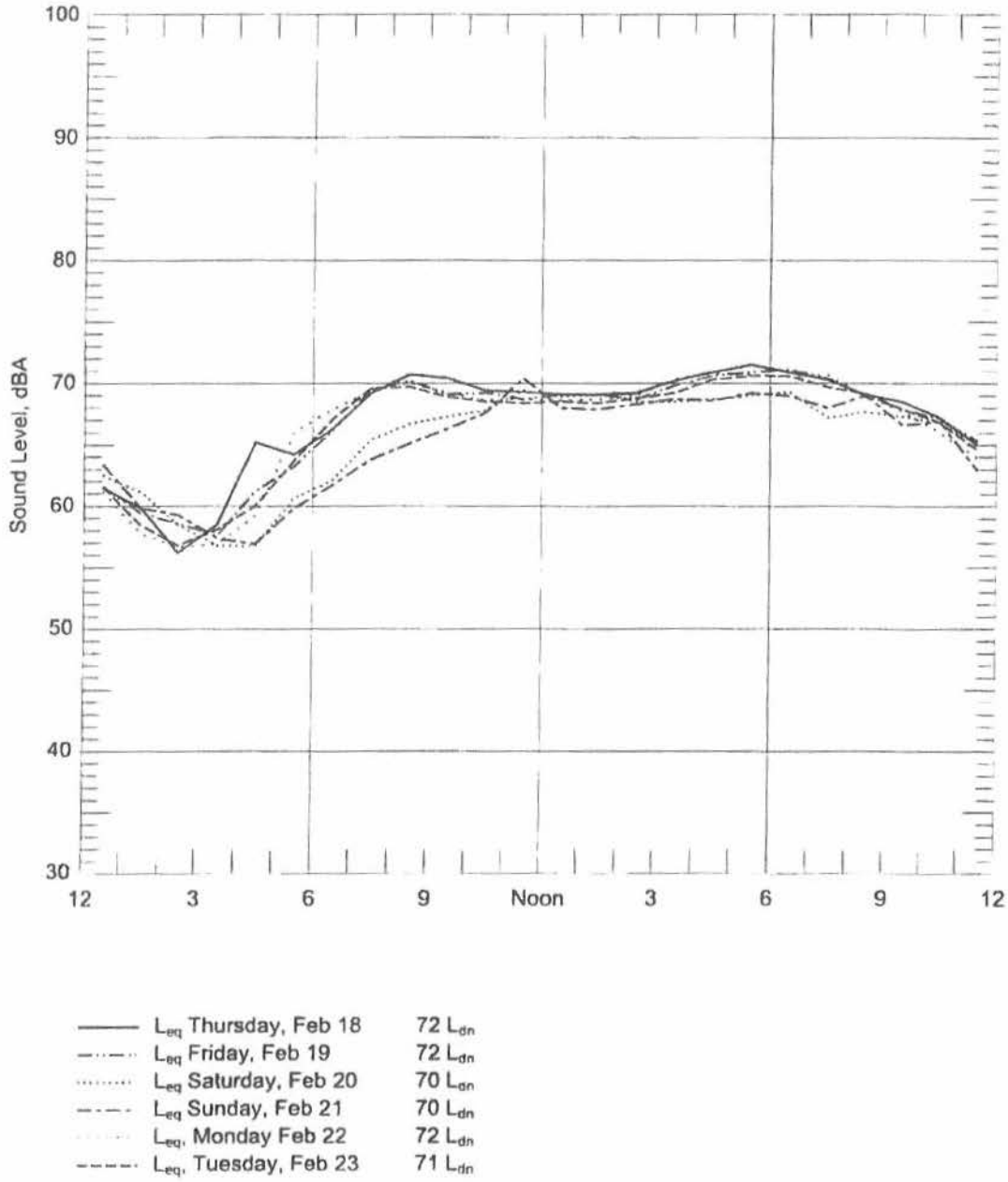

Figure 3B: Hourly Equivalent (Leq) and Day-Night (Ldn) Levels measured at Location LT-2

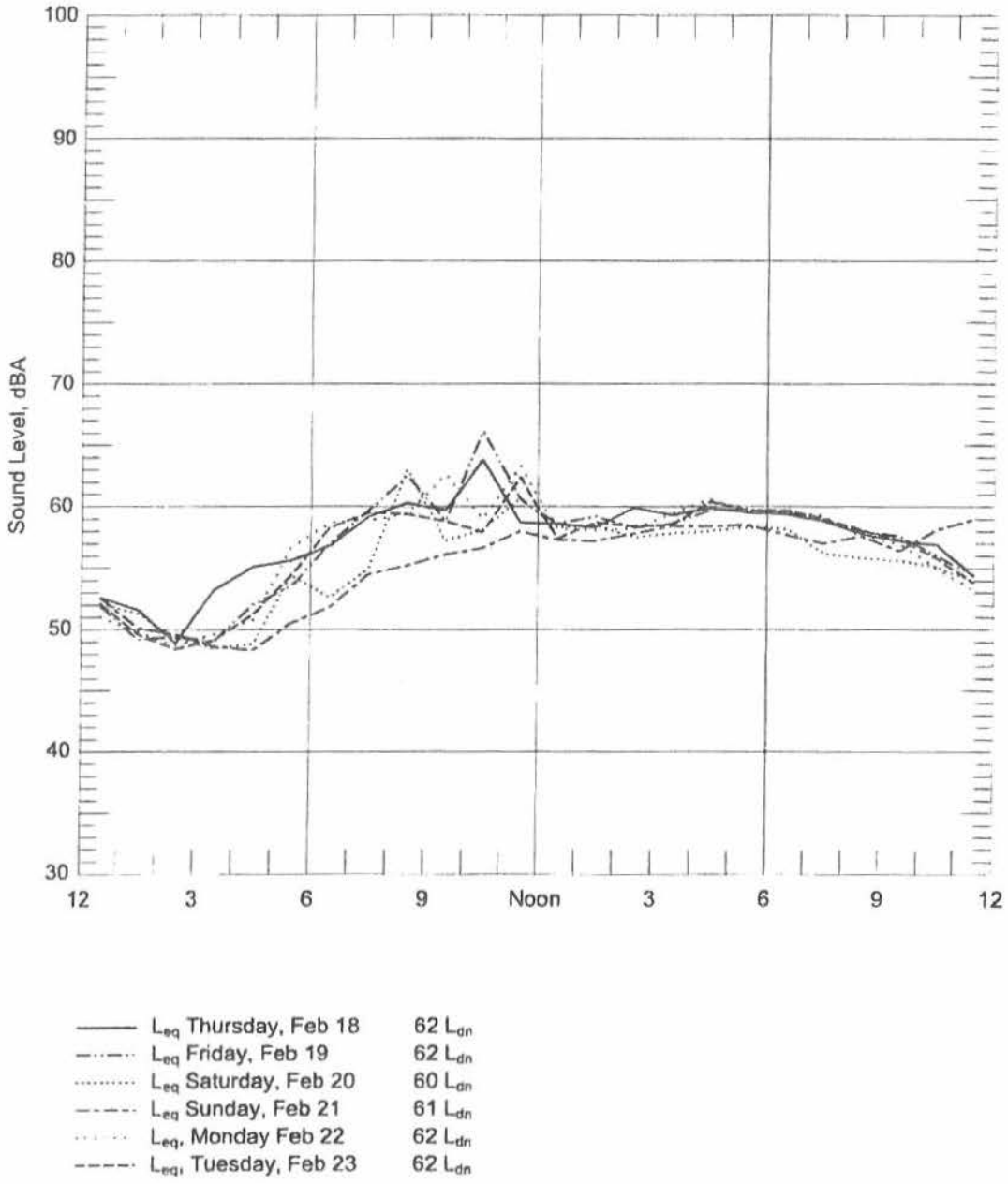

Figure 3C: Hourly Equivalent (Leq) and Day-Night (Ldn) Levels measured at Location LT-3

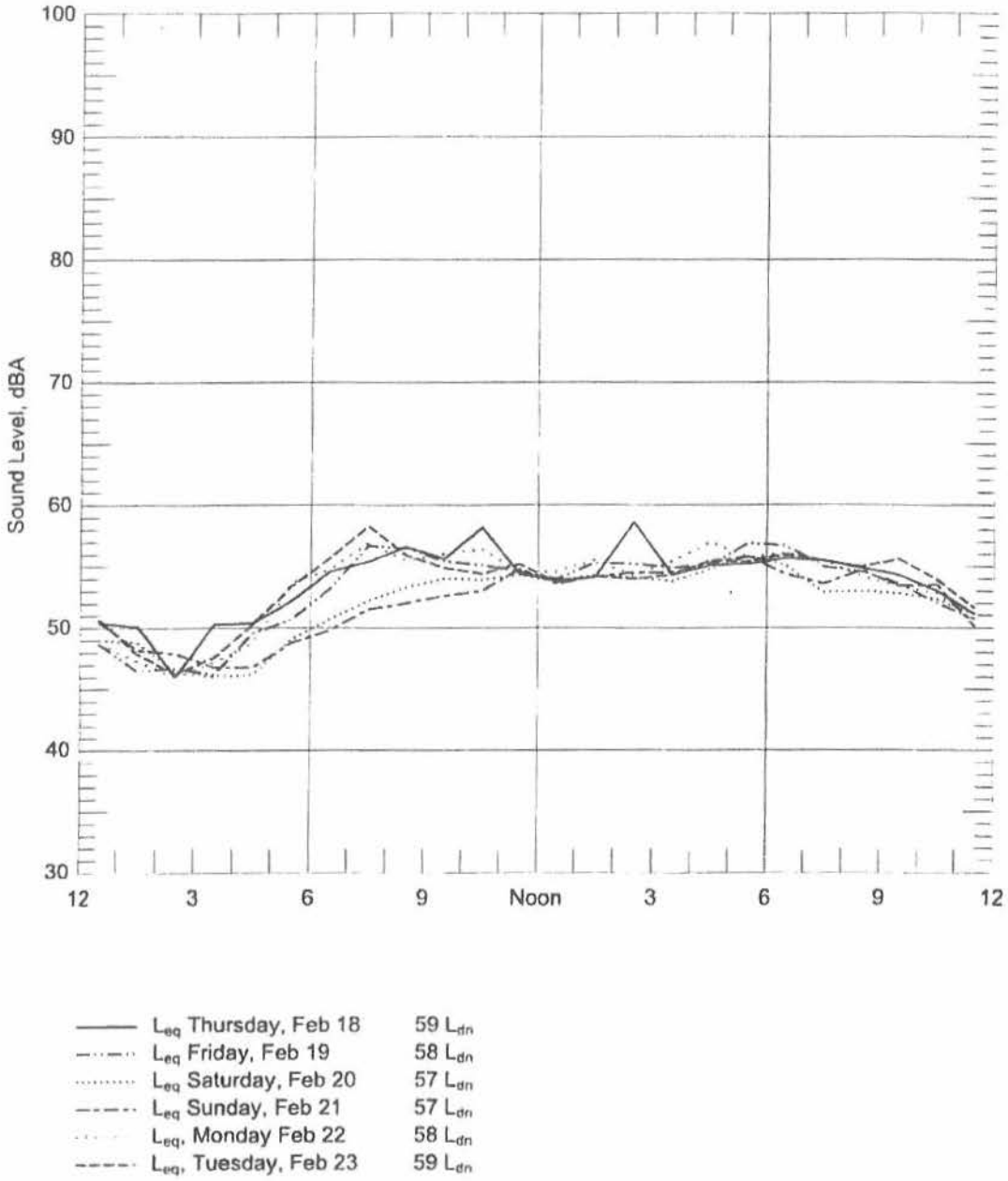

Figure 3D: Hourly Equivalent (Leq) and Day-Night (Ldn) Levels measured at Location LT-4

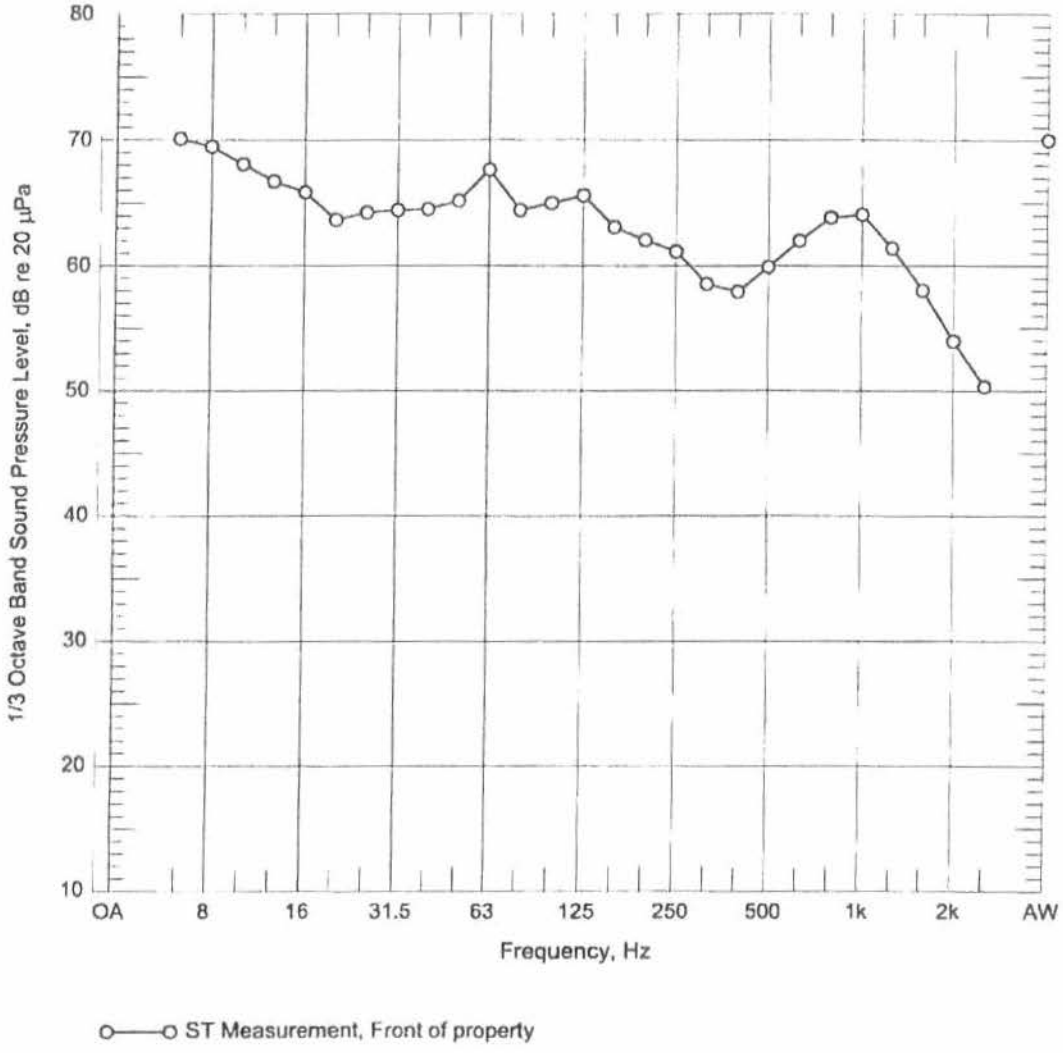

Figure 4: ***Noise Frequency Spectrum measured at ST (10-minute sample)***

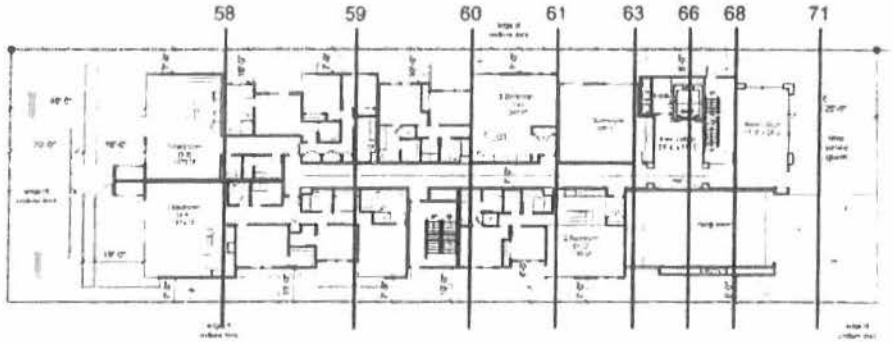

Figure 5A: Expected Future (2025) Day-Night Levels (Ldn) for Floor 1

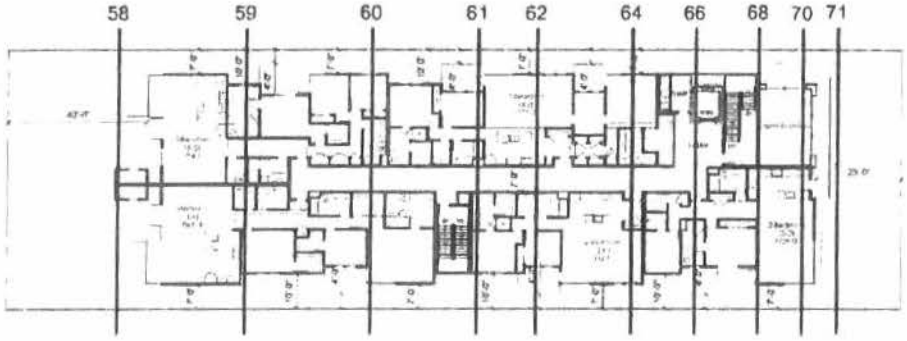

Figure5B: Expected Future (2025) Day-Night Levels (Ldn) for Floor 2

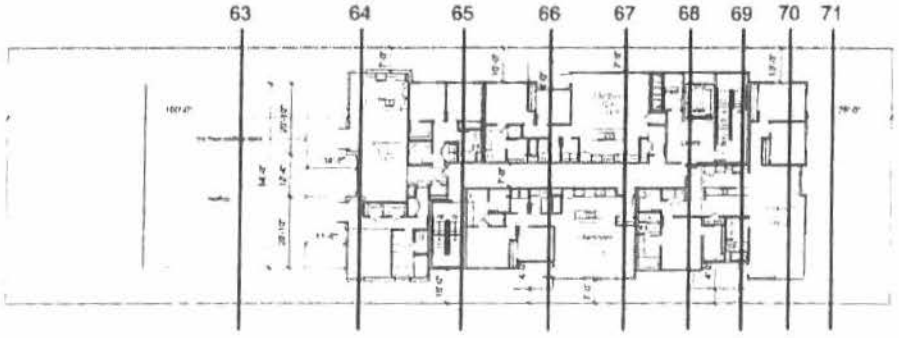

Figure 5C: Expected Future (2025) Day-Night Levels (Ldn) for Floor 3, Floor 4, and Floor 5

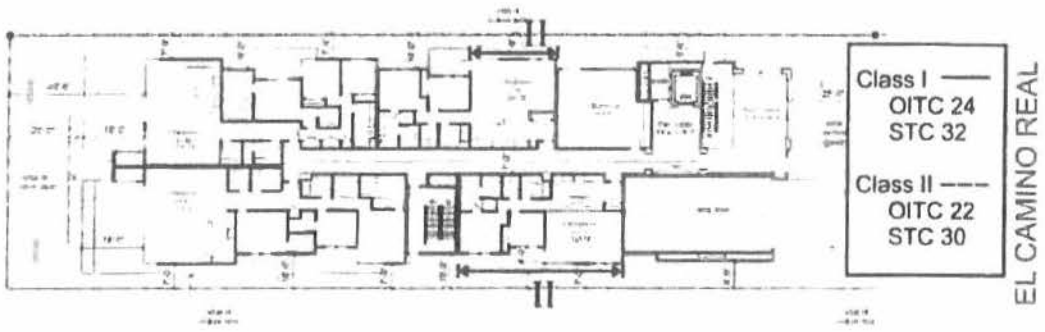

Figure 6A: Minimum recommended glazing ratings for Floor 1
Windows and exterior doors not flagged require no acoustical rating

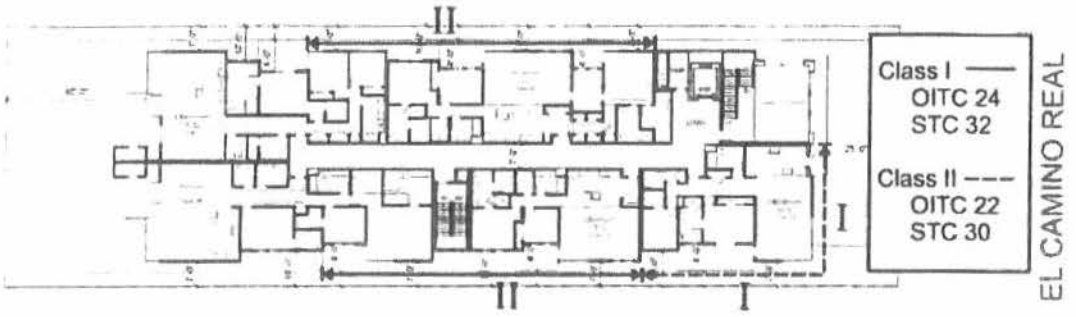

Figure 6B: Minimum recommended glazing ratings for Floor 2
Windows and exterior doors not flagged require no acoustical rating

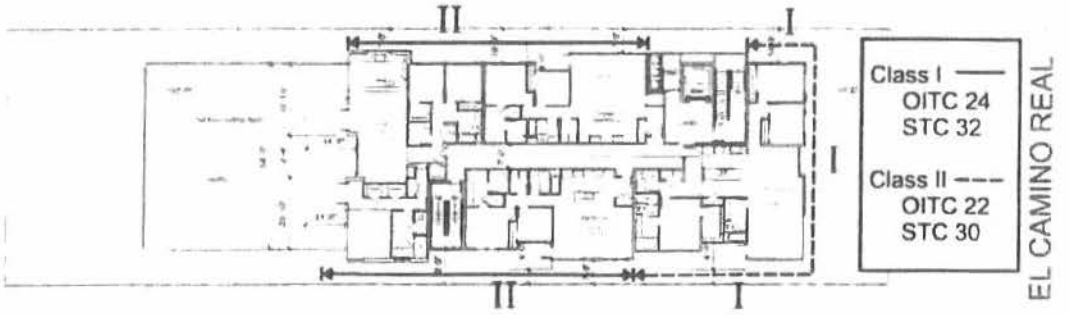

Figure 6C: Minimum recommended glazing ratings for Floor 3, Floor 4, and Floor 5
Windows and exterior doors not flagged require no acoustical rating

Appendix A: Description of Acoustical Terms

A-Weighted Sound Level (dBA):

The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectral data to which A-weighting adjustments have been made. A-weighting de-emphasizes the low and very high frequency components of the sound in a manner similar to the response of the average human ear. A-weighted sound levels correlate well with subjective reactions of people to noise and are universally used for community noise evaluations.

Airborne Sound:

Sound that travels through the air, as opposed to structure-borne sound.

Ambient Noise:

The prevailing general noise existing at a location or in a space, which usually consists of a composite of sounds from many sources near and far.

Community Noise Equivalent Level (CNEL):

The L_{eq} of the A-weighted noise level over a 24-hour period with a 5 dB penalty applied to noise levels between 7 p.m. and 10 p.m. and a 10 dB penalty applied to noise levels between 10 p.m. and 7 a.m.

Day-Night Sound Level (L_{dn}):

The L_{eq} of the A-weighted noise level over a 24-hour period with a 10 dB penalty applied to noise levels between 10 p.m. and 7 a.m.

Decibel (dB):

The decibel is a measure on a logarithmic scale of the magnitude of a particular quantity (such as sound pressure, sound power, sound intensity) with respect to a reference quantity.

Energy Equivalent Level (L_{eq}):

The level of a steady noise which would have the same energy as the fluctuating noise level integrated over the time period of interest. L_{eq} is widely used as a single-number descriptor of environmental noise. L_{eq} is based on the logarithmic or energy summation and it places more emphasis on high noise level periods than does L_{50} or a straight arithmetic average of noise level over time. This energy average is not the same as the average sound pressure levels over the period of interest, but must be computed by a procedure involving summation or mathematical integration.

Field Impact Insulation Class (FIIC):

A single number rating similar to the IIC except that the impact sound pressure levels are measured in the field.

Field Sound Transmission Class (FSTC):

A single number rating similar to STC, except that the transmission loss values used to derive the FSTC are measured in the field. All sound transmitted from the source room to the receiving room is assumed to be through the separating wall or floor-ceiling assembly.

Frequency (Hz):

The number of oscillations per second of a periodic noise (or vibration) expressed in Hertz (abbreviated Hz). Frequency in Hertz is the same as cycles per second.

Impact Isolation Class (IIC):

A single number rating used to compare the effectiveness of floor-ceiling assemblies in providing reduction of impact generated sounds such as footsteps. It is derived from the measurement of impact sound pressure levels across a series of 16 test bands using a standardized tapping machine.

Noise Isolation Class (NIC):

A single number rating derived from measured values of noise reduction between two enclosed spaces that are connected by one or more paths. The NIC is not adjusted or normalized to a standard reverberation time.

Normalized Noise Isolation Class (NNIC):

A single number rating similar to the NIC, except that the measured noise reduction values are normalized to a reverberation time of 1/2 second.

Outdoor-Indoor Transmission Class (OITC):

A single number classification, specified by the American Society for Testing and Materials (ASTM E 1332 issued 1994), that establishes the A-weighted sound level reduction provided by building facade components (walls, doors, windows, and combinations thereof), based upon a reference sound spectra that is typical of air, road, and rail transportation sources. The OITC is the preferred rating when exterior facade components are exposed to noise environments dominated by transportation sources.

Octave Band - 1/3 Octave Band:

One octave is an interval between two sound frequencies that have a ratio of two. For example, the frequency range of 200 Hz to 400 Hz is one octave, as is the frequency range of 2000 Hz to 4000 Hz. An octave band is a frequency range that is one octave wide. A standard series of octaves is used in acoustics, and they are specified by their center frequencies. In acoustics, to increase resolution, the frequency content of a sound or vibration is often analyzed in terms of 1/3 octave bands, where each octave is divided into three 1/3 octave bands.

Sound Absorption Coefficient (∀):

The absorption coefficient of a material is the ratio of the sound absorbed by the material to that absorbed by an equivalent area of open window. The absorption coefficient of a perfectly absorbing surface would be 1.0 while that for concrete or marble slate is approximately 0.01 (a perfect reflector would have an absorption of 0.00).

Sound Pressure Level (SPL):

The sound pressure level of sound in decibels is 20 times the logarithm to the base of 10 of the ratio of the RMS value of the sound pressure to the RMS value of a reference sound pressure. The standard reference sound pressure is 20 micro-pascals as indicated in ANSI S1.8-1969, "Preferred Reference Quantities for Acoustical Levels".

Sound Transmission Class (STC):

STC is a single number rating, specified by the American Society for Testing and Materials, which can be used to measure the sound insulation properties for comparing the sound transmission capability, in decibels, of interior building partitions for noise sources such as speech, radio, and television. It is used extensively for rating sound insulation characteristics of building materials and products.

Structure-Borne Sound:

Sound propagating through building structure. Rapidly fluctuating elastic waves in gypsum board, joists, studs, etc.

Statistical Distribution Terms:

L_{99} and L_{90} are descriptors of the typical minimum or "residual" background noise (or vibration) levels observed during a measurement period, normally made up of the summation of a large number of sound sources distant from the measurement position and not usually recognizable as individual noise sources. Generally, the prevalent source of this residual noise is distant street traffic. L_{90} and L_{99} are not strongly influenced by occasional local motor vehicle passbys. However, they can be influenced by stationary sources such as air conditioning equipment.

L_{50} represents a long-term statistical median noise level over the measurement period and does reveal the long-term influence of local traffic.

L_{10} describes typical or average levels for the maximum noise levels occurring, for example, during nearby passbys of trains, trucks, buses and automobiles, when there is relatively steady traffic. Thus, while L_{10} does not necessarily describe the typical maximum noise levels observed at a point, it is strongly influenced by the momentary maximum noise level occurring during vehicle passbys at most locations.

L_1, the noise level exceeded for 1% of the time is representative of the occasional, isolated maximum or peak level which occurs in an area. L1 is usually strongly influenced by the maximum short-duration noise level events which occur during the measurement time period and are often determined by aircraft or large vehicle passbys.

ATTACHMENT G

The Tree Specialist

Don Araki
ISA Certified Arborist WE-6547A
(408) 209-1007

Pre-Construction Tree Inventory and Certified Arborist's Report

Prepared for:
Jeff Taylor
Lola LLC
408-355-3699

Regarding Property Location:

4880 El Camino Real
Los Altos, CA

April 21, 2016, 2016

CONTENTS

1.0
AFFADAVIT

Don Araki of **The Tree Specialist** is an ISA Certified Arborist: WE- 6547A having authority to offer advice and suggestions accumulated from industry standards and working knowledge based on 20 years of experience in residential and commercial tree service. This report is respectfully submitted to Lola LLC, for work to be done at the location: 4880 El Camino Real, Los Altos, CA

_____
Don Araki

_____
Date

2.0
EXECUTIVE SUMMARY

Please be advised that the City of Los Altos, CA has established a strict code of compliance regarding tree work in your area titled "Heritage Tree Ordinance". For more information you may access this three page text at.

http://www.losaltosca.gov/communitydevelopment/page/tree-removal

The Community Development Department's "Permit Submittal Requirements" advise the submittal of two (2) copies of the Arborist Report pertaining to heritage trees in the vicinity. You may also have access to these requirements at

https://www.google.com/?gws_rd=ssl#q=los+altos+heritage+tree+ordinance

Since the design team has planned around this project's significant trees, the Heritage Trees can generally be preserved with the usual tree protection measures.

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TREE PRESERVATION PRECEPTS

{Books have been written on this topic – but if I had to choose three basic concepts to highlight:

Start early to preserve trees that are assets, but preserve whole trees (including roots, not merely trunks.

The owner(s) must have the entire team committed to preserving each tree everyday (from the designer to the project manager to the guys with the nail bags).

Minimize impacts, or the tree will require you to mitigate, lest you destroy its rootlets or its structure or its environment.}

4.0
SITE-SPECIFIC INFORMATION

Location: 4880 El Camino Real, Los Altos, CA 94022

4.1 Existing Conditions (Tree Inventory)

{tree list spreadsheet)

Observation Definition Guidelines

Tree Numbering System: We have tree identifiers attached to the tree with assigned numbers from 1 -10.

Names: We utilize the common Sunset names whenever possible or scientific/botanical to minimize confusion. We may describe a tree using Sunset or McMinn's key when necessary.

DSH: Diameter at Standard Height: This measurement is the trunk diameter measured at the standard height defined by the jurisdiction in which the tree trunk grows. The industry standard is 54 inches above ground level, taken with a standard surveyor's diameter tape, recorded in inches (DBH: diameter at breast height). Exceptions to the 54" level are called out in several jurisdictions (to wit: San Mateo at 48"; Redwood City between 6" – 36"; San Jose at 24"). For multi-trunked trees, measurements were taken below the lowest branch swelling and/or individual stems at 54" inches, or an average depending on which height measurement is deemed to produce the best representative figure.

Crown Radius: The average radius measurement is shown in feet.

Ht (Height): Estimated distance foliage crown extends above grade, recorded in feet.

Vigor: Rigor for tree's growth and vitality as a blend of elements like leaf or bud size and color, twig growth (elongation), accumulation of deadwood, cavities, wound wood development, trunk expansion (growth "cracks"), etc.

Structure: Structure rating for tree's architecture as a composite of factors like branch attachment, lean and balance, effects of prior breakage, crossing-tangled-twisted limbs, co-dominant trunks and/or branches, decay and cavities, anchorage (roots), etc.

Overall Condition: Percentage rating assessing the tree's overall vigor, recent growth, insects/diseases, and structural defects. Relative text rating included in the same cell as: Excellent, Good, Fair, Poor, Very Poor. This corresponds to the "Condition Percentage" factor in tree valuations per the Council or Tree and Landscape Appraisers (CTLA) system used by the International Society of Arboriculture. (CTLA, 1992) It combines foliage, branches, limbs, and trunk and root ratings into a composite condition score. This rating is used in the calculation of these trees' appraised value required by the City of Palo Alto.

Suitability for Preservation: Considers tree's condition (vigor and structure), longevity/age, adaptability, and aesthetics. This rating takes into account any announced intentions of changes in area/lot use. Degrees: High, Moderate, Low, And Very Low.

High: Tree in great condition and any existing defects or stresses are minor or can be easily mitigated.

Moderate: Notable vigor and/or stability problems but which can be moderated with treatment and /or increased tree protection zone.

Low: Significant problems, including shorter life expectancy. Difficult to retain but has potential with a much larger tree protection zone.

Very Low: Substantial, existing problems, defects, stresses; unlikely to survive the impact of any project.

Age / Longevity: Rates tree's relative age: Young (long) / Semi- Mature / Mature / Over-Mature.

Comment: Notes; most obvious defects, insects, diseases or unique characteristics.

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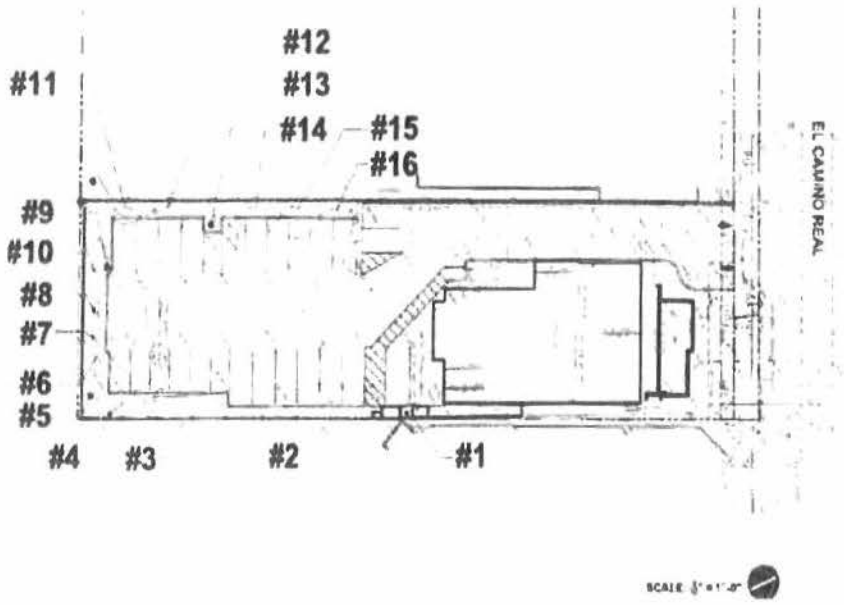
4.2 Site Plan of Existing Trees based on submitted property plan created by:

Van Dorn Abed, Landscape Architects, Inc.
81 14th Street. SF. CA. 94103
415-864-1921
hoanglan@valainc.com



Tree Description Table

Created by Scott Araki, Tree Specialist

Table includes Tree Number (corresponding to Previous Page site plan), Species name, Diameter at Standard Height, Canopy height, Canopy Width, Suitability of Preservation Rating, and General Description of tree condition

Tree #	Species	D.B.H. 48" above grade	Canopy Height	Canopy Width	Preservation Suitability	Health/Description
1	Walnut	18"	15'	15'	Fair	low

2	Coastal Live Oak	33"	20'	25'	High	High
3	Coastal Live Oak	12"	20'	5'	High	Moderate
4	Monterey Pine	18"	35'	15'	low	low
5	Monterey Pine	24"	35'	20'	Moderate	Moderate
6	Coastal Redwood	14"	35'	8'	high	high
7	Coastal Redwood	16"	36'	6'	high	high
8	Coastal Redwood	25"	38'	10'	high	high
9	Date Palm	44"	8'	10'	high	high
10	Ginkgo	8"	25'	5'	low	Moderate
11	Liquid Amber	8"	25'	10'	high	high
12	Liquid Amber	8"	25'	6'	high	high
13	Date Palm	44"	50'	15'	high	high
14	Liquid Amber	8"	25'	8'	high	high
15	Liquid Amber	8"	25'	6'	high	high
16	Liquid Amber	12"	28'	12'	high	high

D.B.H. - Diameter at Breast Height

4.3 Basic Tree Preservation Measures (TPMs)

The basic tree protection fencing is just the first step in tree preservation. Many additional tools and procedures come into play. Usually restriction of space and time curtail the use of the more esoteric ones, but those below are significant. Ideally, the owner or designer makes decisions well ahead of the project's start so that only trees which can realistically be preserved are retained.

Tree Protection Fence (TPF)

· We have inspected the property; Type I fence is to be installed to protect 5, 6, 7, and 8, as shown in attached site plan.

· Keep ***fence in tact*** until ready for final landscaping.

· Use ***a continuous 6' foot high chain link fence with an allowed 2' foot opening to provide access for inspections***. The Posts = 8 ft. tall X 2" inch diameter galvanized

posts driven 2 feet into the soil. Post Signs on the fence (8.5" X 11") warning of "penalty for working inside of fence or removal without written permission of Project or City Arborist (specific sign wording can be provided in memo form).

· Fence ***as much of the root zones as possible***, ideally 5' feet beyond the drip lines (branch tips) or including the entire TPZ. For this project's design constraints, the fence locations are pulled back to hardscape perimeters (with supplemental root zone protection described below).

· Prohibit ***all construction impact*** from disturbing the root zone area which can effect tree preservation.

·The "clinical" area of the trees are the trunk and the branch structures that we see above the ground, however to ensure the health of the tree and facilitate preservation we must also acknowledge and take into consideration the complex structures of the root system under the ground responsible for structural and nutritional health; therefore, ***should work be required within the TPZ the advice and guidance of a Project Arborist should be employed.***

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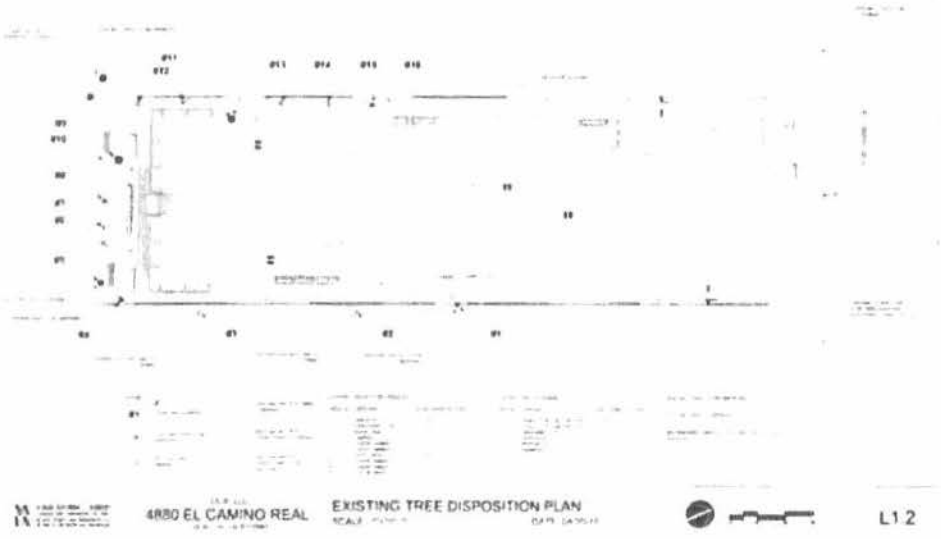

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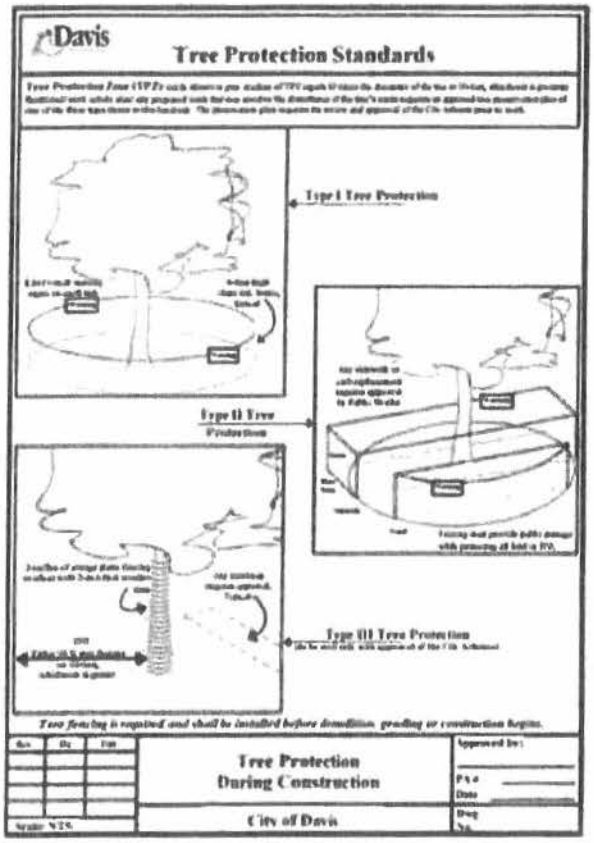

SUPPLEMENTAL PROTECTION – MULCH – ROOT ZONE BUFFER

Wood chip mulch shall be applied over open room zones (beneath trees' drip lines) to a depth of 4-6 inches, tapering to soil level within the 9 inches nearest the tree trunk.

Wood chips from tree pruning operations are ideal – they make a mulch that provides exceptional benefits to all trees – modifying the soil environment to conserve moisture, promote beneficial soil microbes, buffer against weather (desiccating sun, drying winds, pounding raindrops, temperature extremes), cushion the soil structure from foot (or vehicle) traffic.

Provide this for all trees – even inside of TPFs.

Where this buffer is used when TPFs cannot be placed at a drip line, additional supplemental material(s) may be required. When pre-existing driveway asphalt, or

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similar durable surface can be maintained intact, that may suffice. Otherwise for those cases, arborist sign-off is required, but generally depends on the traffic load:

-foot traffic and wheelbarrows: sheets of 5/8-inch plywood tacked together.

-Small bobcat-type vehicles and "Fergie" – size tractors: increase chip depth to 9 inches with 1-inch plywood sheets.

-Occasional full-size vehicles (cars, pickups, service vans): 9-inches of chips.

-Cement trucks, haulers, loaded dump trucks, heavy duty delivery trucks ["construction site temporary access road"]: a layer of biaxial geogrid (e.g. Tensar BX1200, or equal) on top of existing grade, topped with 12 inches of chips with 1-inch trench plate, tack welded together to avoid slipping apart.

Removal of any existing driveway or parking lot asphalt from over root zone areas must be performed with care. The excavator/tractor/trucks must keep all tires/tracks on the existing asphalt, picking it up as it goes. Re-laying the paving surfacing is done in reverse path, again keeping all tires/tracks on the hard surface above any root zone.

ROOT-SENSITIVE DESIGN

Additional preservation suggestions and techniques to consider can include:

-Pier and grade beam (on top of existing grade) to suspend construction above the roots.

-Trenchless technology to place utilities beneath roots without severing by trenching.

-Porous concrete, porous asphalt, open pavers can be used for some surfaces to let both air and water into root zones.

-Re-route the layout in a different location to avoid tree roots.

-Ramp over tree roots to avoid compacting their soil or severing them.

SUPPLEMENTAL WATERING AND FERTILIZING

Objective: To provide moisture to promote vigorous, healthy root growth.

Procedures:

For Heritage Trees Number 5,6,7, and 8, 2-4 inches of mulch is to cover as much of the root system as possible.

Water application hints can be found in the ISA BMPs (Fertilization).

Generally, a basic rule is to provide a deep soaking once a month during the hottest months of the year. Start before construction commences. Continue for a year after project completion. Modify by on-site arborist observations, especially during the "dry season" or in "drought conditions".

One application of water can be made to be included with a fertilizer application by surface application or soil injected to a depth of 6-8 inches.

Rules of thumb:

-10-20 gallons of water per trunk diameter incher per month, applied evenly over the root zone.

-Applying one inch of water will wet a moderate clay soil to about a depth of 1 ft.

-Soil samples should be lab tested to determine nutrients lacking-lab fertilizer recommendations should be followed.

PRUNING

General: The care of trees is the obvious domain of tree care contractors. Any clearance pruning, removals, aesthetic trimming, removal of limbs, root pruning, stump grinding, and/or remedial repair must be performed by a tree care contractor with a current California Contractor's License – the appropriate classification is C61/D49, with workers being WC-ISA Certified Tree Workers supervised by an ISA Certified Arborist. This includes removal of trees and/or stumps with intertwining/overlapping branches or roots.

Routine: Typically trees would benefit from pruning near the end of a project, sometimes to improve the health and structure of some, but also to remove any deadwood, establishing a benchmark against which one can measure changes n the trees' status (e/g/, accumulation of new deadwood, hence decline).

Project-Critical: Of particular importance here may be a project clearance issues. Depending on the owner's decision about which trees to retain, crown cleaning, thinning and raising may be needed, especially structural pruning for the near at hand perimeter trees.

Standards: All tree work must comply with applicable tree-specific ANSI Standards and be performed within the guidelines of the ISA Best Management Practices – qualified tree care contractors will be thoroughly familiar with those published industry standards.

Typical pruning types to be used are described in the cited standards. Most of the trees would benefit from "cleaning" to remove deadwood and diseased or superfluous branches; plus, they can be improved structurally by "thinning" to reduce foliage branch end weights; many will require "raising" for project clearance.

Over-Pruning: Care must be taken to avoid over-pruning trees that one seriously wants to preserve. Not only does that ruin trees' structure, but it also removes so many food producing leaves that it stresses the trees (puts them on a diet), sometime irrecoverably.

Generally, one can prune 25% from a young, vigorously growing oak or redwood without resulting in a stress reaction. Mature trees usually show stress when 15% is pruned out. Over-mature specimens can readily show decline when even 5% of the live foliage is removed from an area of the foliage canopy.

Pruning Specifications: Objectives and procedures must be project-specific. As project details take shape, the Project Arborist can draft tree-specific pruning specs in line with

those general guidelines, depending on the extent to which the project is designed to accommodate tree preservation.
Root Pruning: Any roots that must be severed must be cut cleanly (no shatter, rip, tear). A tree care contractor must root prune along any line, cut, or trench will disrupt roots larger that 1-inch in diameter. This root pruning is best scheduled prior to the installation contractor's work – this actually both speeds up the work for the contractor and cause less damage to the trees.

CUTS / FILLS

Cuts into the root zones must be minimized, per roots and root zones discussions above. Preview by Project or City Arborist required before commencing.

ROOT CROWN CHANGES / DISTURBANCES

Root crown: the base of a tree – where the trunk ends and scaffold roots flare off into the surrounding soil. No change or disturbance may occur in any root crown area and all materials inadvertently or intentionally accumulating there must be removed.

ATTACHMENTS

No construction apparatus shall be attached to any tree (braces, signs, slings, etc.).

TRENCHES

Proactively avoid routing any trench under any tree's drip line (including utility, sewer, phone, cable, electric, drainage, irrigation, decorative lighting, pool supply, etc.).

In the unlikely event that a trench must cross a root system, the plan must be reviewed by the Project Arborist before that work can be done.

Consider alternatives – Tunnel with trenchless technology equipment? Hand dig? Trench straight toward a tree's trunk from both sides and then follow tunneling procedures for the short distance between (tree-specific distances recommendations can be made, based on an individual subject tree's size)?

When trenching across a root zone is necessary on-site monitoring by Project Arborist is required.

EQUIPMENT CLEANING

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Establish a "Clean Out" site for such equipment as concrete trucks, cement forums, plastering apparatus, paint tools, etc. This must be located well away from any tree's root zone – or even any future planting areas.

All (sub) contractors must be on-notice that equipment must never be cleaned out over any tree's root zone – only within the designated "Clean Out" site.

STORAGE

No storage of gasoline, oil, or other chemicals over any tree's root zone.
No storage of any construction materials inside of any tree protection fence.

CHEMICAL SPILLS

Promptly confine and clean up any chemical spill over any root zone.

PARKING

No parking under tree canopies unless the root zones are protected. This will be precluded if they can be fenced at the drip lines. Even ore important is the root zone wood chip mulch.

Traffic causes irreparable harm to the soil structure and to the tree's roots due to the compaction.

Root zone compaction under a traffic load can be reduced by thickening the root zone buffer – say, beefing up to 6-8 inches of wood chips. Alternative buffer surfaces might include (alone or in combination): crushed rock, plywood sheets, steel plate, etc.

And one still must be careful of clearances to avoid bark bruising, trunk scrapes and limb breakage.

PUBLICATION & NOTICE

A copy of these tree protection measures must be on site, available to all workers, so they will be on notice regarding the tree's requirements.

One effective method is to paste up these pages on a sheet (usually titled "Tree Preservation Plan, Sheet T-1", or equivalent) and be certain that it is included in every set of construction drawings issued.

LANDSCAPE PLAN

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A well-though-out landscaping plan can be essential. It must take into account the status and longevity of this site's existing trees. Plan for the irrigation lines to be laid on top of existing grade, placed beneath the wood-chip-mulch layer. Expect no irrigation or water-loving plants within 10 feet of any mature tree's trunk.

MONITORING

Project Arborist inspections begin with a sign-off to confirm that initial tree protection measures are in place before commencement of any other part of the project.

The City of Los Altos requires periodic monitoring inspections by the Project Arborist verifying that the tree preservation measures continue to be effective, with monthly reports faxed to the owner and the City Arborist.

PENALTIES

All (sub) contractors and their personnel must understand that they are responsible for their actions around these trees.

Circumventing tree protection measures will most certainly cause the tree(s) additional stress. This can be calculated as a change in the tree's status and there are formulae for assessing damage dollar amounts (see CTLA, Council of Tree and Landscape Appraisers).

Besides penalties derived from action on the City Ordinance, court have required contractors to pay penalties directly to the property owner suffering the damage/loss (diminution in tree value), sometimes assessed as double or triple if intentional action.

5.0
CERTIFICATION

I certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge, ability, and belief and are made in good faith.

Thank you for the opportunity to be of service to you. Should you have any questions or concerns please feel free to contact me at any time of the day.

Respectfully submitted,

Don Araki
ISA Certified Arborist #WE-6547A
The Tree Specialist
(408) 209-1007

DISCUSSION ITEMS

Agenda Item # 9

AGENDA REPORT SUMMARY

Meeting Date: August 23, 2016

Subject: 4880 El Camino Real Development Application

Prepared by: David Kornfield, Advance Planning Services Manager
Reviewed by: Jon Biggs, Community Development Director
Approved by: Chris Jordan, Interim City Manager

Attachments:
1. Resolution No. 2016-27 of Findings and Conditions
2. Density Bonus and Concession Analysis, dated August 12, 2016
3. Revised Traffic Report, dated August 12, 2016
4. Memorandum to the Planning and Transportation Commission, dated May 19, 2016

Initiated by:
Applicant

Fiscal Impact:
The project provides three fiscal benefits: traffic impact fees, in-lieu of parkland fees and increased property tax. The traffic impact fees total $79,317 ($3,777 per unit). The park fees total $745,500 ($35,500 per unit). The estimated property tax revenue to the City from the project is approximately $20,000 per year.

Environmental Review:
Categorically exempt per Section 15332 of the California Environmental Quality Act Guidelines

Policy Questions for Council Consideration:

- Do the requested incentives and waivers meet the standards contained in the State's Density Bonus law? Is the requested incentive required to provide for affordable housing costs and are the waivers needed to permit the physical development of the proposed development with a density bonus?

Summary:

- The concession analysis shows that the proposed height concession is needed to offset the cost of the three affordable housing units. The height incentive is economically justified under both the five-story and four-story alternatives.
- The five-story alternative is the preferred alternative by the applicant. From a staff perspective the five-story alternative minimizes the project's impacts on the surrounding residential neighborhood.
- The Planning and Transportation Commission (PTC) held a hearing on the proposed project on DATE and recommended approval by a vote of 6-1.

Staff Recommendation:
In accordance with the recommendation of the PCT, move to approve design review, use permit and subdivision applications 16-D-01, 16-UP-02 and 16-SD-01 subject to the recommended findings and conditions of approval in Resolution No. 2016-27.

Background

This is the continued review for a 21-unit, multiple-family residential condominium building. On June 28, 2016 the City Council reviewed the project and continued its review subject to addressing the following questions:

1. Do requested incentives and waivers meet the standards contained in the State's Density Bonus law? Is the requested incentive required to provide for affordable housing costs, and are the waivers needed to permit the physical development of the proposed project with a density bonus?

2. Can the City require additional affordable housing units?

3. Can the City require a different mix of unit types (e.g., include one bedroom units)?

The Council also raised the following issues/concerns:

4. Consider a four-story alternative that uses exceptions to the rear yard setback area to minimize building height;

5. Clarify the trash service and staging;

6. Provide more landscape planting area in the front yard and reconsider the choice of using palm trees;

7. Clarify the storage unit sizes;

8. Provide more information on the parking system including the maintenance schedule, service response, access timing, etc.;

9. Clarify the location of the loading space;

10. Clarify other Municipal Codes related to the project such as required site area and open space.

In response to the Council's direction, staff commissioned an economic analysis of the requested concession (discussed below) and the applicant prepared a four-story alternative set of plans for consideration. The four story alternative project has: a roof height of 54 feet compared to the roof height of 62 feet in the original proposal; an elevator tower that reaches 69.5 feet versus the 73 feet of the original project; and interior ceiling heights in the units of 12 feet versus the originally proposed 10 feet, nine inches. The four story alternative has its third and fourth floors set back 50

feet from the rear property line, where a minimum of 100 feet is required. The applicant favors the original five-story proposal.

Discussion/Analysis

Density Bonus, Concession, and Waiver Analysis

The applicant's original proposal includes an incentive, or concession, to exceed the overall building height limit by 17 feet (45 feet to 62 feet). The additional height incentive or concession allows the project to have taller internal ceilings than the City's height code would normally permit and allow the four density bonus units on a fifth story. By definition, a development incentive or concession is a reduction in site development standards or change to zoning resulting in "identifiable, financially sufficient, and actual cost reductions." To deny a request for an incentive, the City must find that it "is not required in order to provide for affordable housing costs."

The original proposal also includes a waiver to allow the rooftop structures to exceed eight feet above the rooftop and to exceed the four percent area limit for such structures. By definition, waivers are different from incentives or concessions. Waivers are necessary when a development standard has the effect of physically precluding the construction of the proposed development. In this case, a fifth floor is needed to accommodate the additional four units. The waiver for the height and area of the rooftop structures is necessary since the project relies on taller ceiling heights and rooftop amenities to make up for the development cost of the affordable housing units, where a taller elevator cab and further enclosure of the rooftop structures is necessary to provide for the rooftop amenities.

At the request of the City Council, staff commissioned a Density Bonus and Concession Analysis prepared by Keyser Marston Associates, dated August 12, 2016. The analysis concludes that the proposed height concession is necessary to offset the cost of the three affordable housing units. The report analyzed the original five-story project, the developer's four-story alternative, a conforming project and an alternative without a density bonus. The concession analysis is included as Attachment 2.

According to the analysis, under both of the applicant's project alternatives, a height concession to allow 11 or 12 foot floors is needed to offset the cost to provide the three affordable housing units. According to the analysis, the cost of providing the three affordable housing units is approximately $2 million. Considering the height concession for both alternatives, the report calculates the value increment between $1.35 and $1.7 million. This supports the conclusion that the height concession for taller floors is reasonably necessary to address the cost of the three affordable housing units.

Additional Affordable Units

The application provides enough affordable units to entitle the project to the density bonus requested, and it meets the requirements of the City's affordable housing ordinance. Given this, the City does not have a basis to require additional affordable housing units.

Housing Unit Mix

The City Council inquired about diversifying the housing unit size, or mix of bedrooms, specifically, whether one bedroom units could or should be added to the mix. Although there are no zoning regulations requiring a specific size of housing units, Housing Element Program 2.1.1 supports encouraging a diversity of housing:

> Require diversity in the size of units for project in mixed-use or multifamily zones to accommodate the varied housing needs of families, couples, and individuals. Affordable housing units proposed within projects shall reflect the mix of community housing needs.

The general mix of housing units in each project is dependent on the permitted density and the allowed building area. In Los Altos, typically the lower density districts have smaller units (mostly one and two bedroom units) largely due to the limited building envelope area of the lot, with the exception of single-family districts. Downtown and along El Camino Real, where more building area is allowed, the City has typically seen larger units mostly ranging from two, three and sometimes four bedrooms.

The original five-story plan has nine, two-bedroom units and 12 three-bedroom units. The original plan offers three affordable housing units: one, three-bedroom, moderate income; and two, two-bedroom low income. The applicant revised the original plan to relocate one of the two-bedroom affordable units from the east side to the west side of the third level, which increases the size of the affordable unit by 44 square feet.

The alternative four-story plan has two, one-bedroom units, 10, two-bedroom units, and 9, three-bedroom units. The alternative plan offers the same mix and orientation of affordable housing units as the original: one, moderate-income, three-three bedroom unit; and two, low-income, two bedroom units.

A 17-unit project entirely conforming to the existing zoning could have units averaging 1,545 sf in size. The units in the proposed project average approximately 1,527 sf in size. This supports the need for a fifth story to accommodate the additional four units, in that the increased height is not due to an increase in unit size over what could be included in a conforming project.

Setback Incentive or Concession for Alternative Project

The applicant prepared a four-story alternative for the project at the request of the City Council. The four-story alternative reduces the building size by approximately 1,300 square feet, incorporates

two, one-bedroom units and distributes two full units and four partial units into the required rear yard setback area. The four-story alternative proposes a 50-foot rear yard setback for the third and fourth floors, where a setback of 100 feet is required.

In 2010 the City increased the height limit in the subject Commercial Thoroughfare district to 45 feet to facilitate mixed-use commercial and housing potential. In doing so, the City also increased the setback requirement for buildings over 30 feet tall to a minimum 100-foot rear yard setback. The increased rear yard setback was to help mitigate the more intensive development impacts from the adjacent residences.

Based on the intent of the setback requirement, staff recommends the applicant's original approach that maintains the 100-foot rear yard setback. Although the proposed four-story alternative is eight feet lower than the original proposal, its 54-foot roof height is roughly a one-to-one setback (horizontal to vertical) from the rear property line, which will appear massive and difficult to buffer from the two-story residential apartments behind. From the sides, the approximately 150-foot long four story building is less articulated (more uniform in height appearance) and appears out of context for the scale of the smaller, narrow property.

Trash Service

The applicant clarified that the trash area will use three-yard dumpsters instead of 96-gallon bins. This is to maintain an adequate service for the building and to facilitate and minimize the frequency of pick-up. The trash room is designed to accommodate a service cart to deliver the dumpsters to the street. The dumpster staging area was changed to the street to the east of the driveway where there will be no parking allowed. A condition of approval requires that the dumpsters would only be allowed in the street on their scheduled service days and must be removed before 5 PM on the same day as service. According to Mission Trail Waste Systems, the trash service along El Camino Real occurs from 6 AM to 10:30 AM and mostly on the early side. The on-street staging location to the east of the driveway minimizes disruption to the street and allows the applicant to increase the planting area in the front yard.

Landscape

The applicant added approximately 100 square feet of planting area to the front yard. In addition to replacing the decomposed granite onsite trash staging area with plantings, the applicant minimized the walkway paving. The softscape was increased from 52 to 57 percent in the front yard not including the driveway and turnaround. The Commercial Thoroughfare (CT) District requires landscaping at least 50 percent of the front yard and does not define the term landscape. Other commercial districts such as the OA-1 and CD/R3 define required front yard landscape to allow hard and soft surfaces.

The proposed landscape concept maintains the specimen palm trees. The project landscape architect indicated that the palm trees will not conflict with the London plane street trees noting that

the palm trees are offset enough, their canopy is significantly different, and the palm trees will be taller than the street trees. At the time of planting the palm trees will be 14 to 16 feet tall; the London plane trees will be nine to 10 feet tall.

Storage Units

The project provides 21 storage units, one for each residential unit. Sixteen storage units range from 140 cubic feet to 200 cubic feet. Four are 250 cubic feet; one is 375 cubic feet. They generally reflect the progression in sizes of the residential units. The storage unit access doors are three feet wide. The ceilings are nine feet tall.

The smallest storage unit is 45 percent larger than the 96 cubic feet required in the R3-1.8 District. The zoning code requires the 96 cubic feet of storage in the R3-1.8 District due to the generally smaller dwelling units where it was determined that the storage was a necessary element to help preserve the garage parking for vehicles.

Parking System

The parking lift system is organized into two bays, one on each side of the garage. Each bay allows a minim of one car to access the lift at a time, which makes the minimum parking potential two cars at a time with both bays. According to the manufacturer, more than one car may be accessed at a time if they are located at the parking level. According to the revised traffic report, the parking lift takes approximately two minutes per car, which equates to a maximum service rate of 60 vehicles per hour or one car per minute. The traffic report (Attachment 3) acknowledges that the parking system may have user imposed delays such as for unloading groceries but that they would be infrequent and generally occur during non-commute periods when traffic accessing the garage is lower. The traffic report concludes that the parking system would maintain a sufficient hourly capacity. The applicant has included a battery back-up power supply for the parking system.

Loading Space

Off-street loading spaces are not required for multiple-family residential uses. The City's off-street parking requirements, Municipal Code Section 14.74.160, requires on-site loading spaces for permitted commercial uses when determined necessary. This is to support the typically more frequent and expansive loading associated with such commercial uses. In staff's view, it is appropriate, however, to include an on-street loading space due to the limited potential of on-site parking opportunities. By condition of approval, the project would be required to establish a loading space adjacent the project, which would double as guest parking after normal business hours on weekdays and unrestricted parking on weekends.

Site Area

The site area of the subject property is slightly nonconforming. Section 14.50.070 of the Municipal Code requires a minimum site area of 20,000 square feet and 75 feet of frontage. The subject parcel has 19,533 square feet and 75 feet of frontage. The minimum site area is to ensure an appropriate

parcel size to facilitate development. Municipal Code Section 14.66.030 provides that nonconforming lots may be used but subject to the district regulations.

Open Space
The zoning code has no requirements for open space for projects. Subdivisions, however, require developers to set aside parkland, provide in-lieu park fees, or both, at the discretion of the City (Chapter 13.24 of the Municipal Code). To require a land dedication, however, the City must have an identified need for a park in the General Plan. In-lieu fees are required when there is not an identified need for a park or recreational facility; when dedication is impossible, impractical or undesirable; or when the subdivision contains 50 or fewer parcels. Staff's evaluation is that in-lieu fees are required to satisfy the park land dedication requirement.

Options

1) Approve the project as recommended by the Planning and Transportation Commission and staff.

Advantages: The project replaces an underdeveloped commercial property with a high-quality residential development that helps the City meet its goals for intensive development in the commercial thoroughfare. Also the project helps the City meet its housing and affordable housing goals.

Disadvantages: The project displaces a commercial development opportunity.

2) Remand the project to the Planning and Transportation Commission and require desired changes to meet the required findings including design, use permit and/or subdivision requirements, and/or direct the applicant to consider a mixed-use project that includes commercial development.

Advantages: The changes might provide more commercial area.

Disadvantages: The project might include a difficult to lease or sub-par commercial use and less housing.

3) Approve alternate 'B'. This goes into 100' rear yard setback but eight feet lower than the original proposal

Advantages: Results in a lower building.

Disadvantages: Encroaches 50' into the 100' rear yard setback. Results in a 54' tall building closer to an adjoining residential use than permitted by the site development standards.

4) Request a peer review of the economic analysis.

Advantages: Provides a review of the economic analysis and conclusions reached in that report.

Disadvantages: May result in differing opinions on the need for the requested incentive.

Recommendation

The staff recommends approving the project as originally recommended by the Planning and Transportation Commission.

RESOLUTION NO. 2016-27

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LOS ALTOS FOR DESIGN REVIEW, USE PERMIT AND SUBDIVISION APPLICATIONS FOR A 21-UNIT, MULTIPLE-FAMILY PROJECT AT 4880 EL CAMINO REAL

WHEREAS, the City of Los Altos received a development application from LOLA, LLC for a multiple-family residential condominium building, which includes Design, Use Permit and Subdivision applications 16-D-01, 16-UP-01 and 16-SD-01, referred herein as the "Project"; and

WHEREAS, the applicant LOLA, LLC, offers one Moderate-Income and two Low-Income affordable housing units; and

WHEREAS, the applicant LOLA, LLC seeks a development incentive to allow the building to have a height of 62 feet, where the Code allows a height of 45; and

WHEREAS, the applicant LOLA, LLC seeks waivers to allow a) rooftop structures 11 feet above the roof, where the Code allows such structures to be eight feet above the roof; and c) enclosed roof top structures at six percent of the roof area, where the Code limits such structures to four percent of the roof area; and

WHEREAS, under Government Code 65915 said Project is entitled to a development incentive and 21.5 percent density bonus; and

WHEREAS, said Project is exempt from environmental review as in-fill development in accordance with Section 15332 of the California Environmental Quality Act of 1970 as amended ("CEQA"); and

WHEREAS, the Planning and Transportation Commission held a duly noticed public hearing on Project on May 19, 2016, and recommended approval of the Project; and

WHEREAS, the Design, Use Permit and Subdivision applications were processed in accordance with the applicable provisions of the California Government Code and the Los Altos Municipal Code; and

WHEREAS, the location and custodian of the documents or other materials which constitute the record of proceedings upon the City Council's decision was made are located in the Office of the City Clerk.

NOW THEREFORE, BE IT RESOLVED, that the City Council of the City of Los Altos hereby approves the Project subject to the findings and conditions of approval attached hereto as Exhibit "A" and incorporated by this reference.

I HEREBY CERTIFY that the foregoing is a true and correct copy of a Resolution passed and adopted by the City Council of the City of Los Altos at a meeting thereof on the 23rd day of August, 2016 by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____

Jeannie Bruins, MAYOR

Attest:

_____

Jon Maginot, CMC, CITY CLERK

EXHIBIT A

FINDINGS

16-D-01, 16-UP-02 and 16-SD-01—4880 El Camino Real

1. With regard to environmental review, the City Council finds in accordance with Section 15332 of the California Environmental Quality Act Guidelines, that the following Categorical Exemption findings can be made:

   a. The project is consistent with the applicable General Plan designation and all applicable General Plan policies as well as with applicable zoning designation and regulations, including incentives for the production of affordable housing;

   b. The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses; there is no record that the project site has value as habitat for endangered, rare or threatened species;

   c. Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and the completed studies and staff analysis reflected in this report support this conclusion; and

   d. The project has been reviewed and it is found that the site can be adequately served by all required utilities and public services.

2. With regard to commercial design review, the City Council makes the following findings in accordance with Section 14.78.040 of the Municipal Code:

   A. The proposal meets the goals, policies and objectives of the General Plan with its level of intensity and residential density within the El Camino Real corridor, and ordinance design criteria adopted for the specific district such as the stepped building massing and the landscape buffer at the rear;

   B. The proposal has architectural integrity and has an appropriate relationship with other structures in the immediate area in terms of height, bulk and design; the project has a mixture of scales relating to the larger street and vehicles and the smaller pedestrian orientation;

   C. Building mass is articulated to relate to the human scale, both horizontally and vertically as evidenced in the design of the projecting bay windows, overhangs and balconies. Building elevations have variation and depth and avoid large blank wall surfaces. Residential projects incorporate elements that signal habitation, such as identifiable entrances, overhangs, bays and balconies;

   D. Exterior materials and finishes such as the stained mahogany entry, natural limestone, cementitious horizontal siding, C-channel steel and architectural glass railings, convey

quality, integrity, permanence and durability, and materials are used effectively to define building elements such as base, body, parapets, bays, and structural elements;

E. Landscaping such as the specimen palm trees, timber bamboo, hedges and groundcover is generous and inviting and landscape and hardscape features such as the limestone pavers, precast cement planters and benches are designed to complement the building and parking areas and to be integrated with the building architecture and the surrounding streetscape. Landscaping includes substantial street tree canopy including three street trees and two specimen palm trees, either in the public right-of-way or within the project frontage;

F. Signage such as the laser cut building numbers is designed to complement the building architecture in terms of style, materials, colors and proportions;

G. Mechanical equipment is screened from public view by the building parapet and is designed to be consistent with the building architecture in form, material and detailing; and

H. Service, trash and utility areas are screened from public view by their location in the building garage and careful placement to the side of the building consistent with the building architecture in materials and detailing.

3. With regard to use permit, the City Council finds in accordance with Section 14.80.060 of the Municipal Code:

a. That the proposed location of the multiple-family residential use is desirable or essential to the public health, safety, comfort, convenience, prosperity, or welfare in that the zoning conditionally permits it and the project provides housing at a variety of affordability levels;

b. That the proposed location of the multiple-family residential use is in accordance with the objectives of the zoning plan as stated in Chapter 14.02 of this title in that the project provides for community growth along sound line; that the design is harmonious and convenient in relation to surrounding land uses; that the project does not create a significant traffic impact; that the project helps meet the City's housing goals including affordable housing; that the project protects and enhances property values; and that the project enhances the City's distinctive character with a high-quality building design in a commercial thoroughfare context;

c. That the proposed location of the multiple-family residential use, under the circumstances of the particular case and as conditioned, will not be detrimental to the health, safety, comfort, convenience, prosperity, or welfare of persons residing or working in the vicinity or injurious to property or improvements in the vicinity;

d. That the proposed multiple-family residential use complies with the regulations prescribed for the district in which the site is located and the general provisions of Chapter 14.02;

4. With regard to the subdivision, the City Council finds in accordance with Section 66474 of the Subdivision Map Act of the State of California:

   a. That the proposed subdivision is consistent with the General Plan;

   b. That the site is physically suitable for this type and density of development in that the project meets all zoning requirements except where development incentives have been granted;

   c. That the design of the subdivision and the proposed improvements are not likely to cause substantial environmental damage, or substantially injure fish or wildlife; and no evidence of such has been presented;

   d. That the design of the condominium subdivision is not likely to cause serious public health problems because conditions have been added to address noise, air quality and life safety concerns; and

   e. That the design of the condominium subdivision will not conflict with public access easements as none have been found or identified on this site.

5. With regard to requested incentive and waivers, the City Council makes the following findings:

   a. The economic analysis by Keyser Marston and Associates commissioned by the City to evaluate the requested height concession demonstrates that the proposed height concession provides identifiable, financially sufficient, and actual cost reductions and is needed to offset the cost of the three affordable housing units. According to the analysis, a height concession to allow 11 foot floors is needed to offset the cost to provide the three affordable housing units, in that the cost of providing the three affordable housing units is approximately $2 million, and the height concession provides a value increment of $1.7 million. This supports the conclusion that the height concession for taller floors is reasonably necessary to provide for the cost of the three affordable housing units.

   b. The requested waivers to allow the rooftop structures to exceed eight feet above the rooftop and to exceed the four percent area limit for rooftop structures are necessary since the project relies on taller ceiling heights in the dwelling units and rooftop amenities. A taller elevator cab is required to accommodate the taller ceiling heights in the dwelling units and further enclosure of the rooftop structures is necessary to provide for and accommodate the rooftop amenities. Without the requested waivers, the City's development standards would "physically preclude" the development of the project with the density bonus units and the requested height concession.

CONDITIONS

16-D-01, 16-UP-02 and 16-SD-01—4880 El Camino Real

GENERAL

1. **Approved Plans**

   The project approval is based upon the plans received on August 12, 2016, except as modified by these conditions.

2. **Public Right-of-Way, General**

   All work within the public right-of-way shall be done in accordance with plans to be approved by the City Engineer.

3. **Encroachment Permit**

   The applicant shall obtain an encroachment permit, permit to open streets and/or excavation permit prior to any work done within the public right-of-way and it shall be in accordance with plans to be approved by the City Engineer. *Note: Any work within El Camino Real will require applicant to obtain an encroachment permit with Caltrans prior to commencement of work.*

4. **Public Utilities**

   The applicant shall contact electric, gas, communication and water utility companies regarding the installation of new utility services to the site.

5. **ADA**

   All improvements shall comply with Americans with Disabilities Act (ADA).

6. **Sewer Lateral**

   Any proposed sewer lateral connection shall be approved by the City Engineer.

7. **Upper Story Lighting**

   Any upper story lighting on the sides and rear of the building shall be shrouded or directed down to minimize glare.

8. **Indemnity and Hold Harmless**

   The property owner agrees to indemnify and hold City harmless from all costs and expenses, including attorney's fees, incurred by the City or held to be the liability of City in connection with City's defense of its actions in any proceeding brought in any State or Federal Court, challenging the City's action with respect to the applicant's project.

9. **Plan Changes**

The Planning and Transportation Commission may approve minor changes to the development plans. Substantive project changes require a formal amendment of the application with review by the Planning and Transportation Commission and City Council.

PRIOR TO FINAL MAP RECORDATION

10. **CC&Rs**

The applicant shall include provisions in the Covenants, Conditions and Restrictions (CC&Rs) that: a) restrict storage on the private patio and decks and outline rules for other objects stored on the private patio and decks with the goal of minimizing visual impacts; and b) require the continued use and regular maintenance of the Klaus Multiparking vehicle parking system and a power back up system for the parking system. Such restrictions shall be approved by and run in favor of the City of Los Altos.

11. **Public Utility Dedication**

The applicant shall dedicate public utility easements as required by the utility companies to serve the site.

12. **Fees**

The applicant shall pay all applicable fees, including but not limited to sanitary sewer impact fees, parkland dedication in lieu fees, traffic impact fees and map check fee plus deposit as required by the City of Los Altos Municipal Code.

PRIOR TO BUILDING PERMIT SUBMITTAL

13. **Subdivision Map Recordation**

The applicant shall record a final map. Plats and legal descriptions of the final map shall be submitted for review and approval by the City Land Surveyor, and the applicant shall provide a sufficient fee retainer to cover the cost of the final map application.

14. **Public Improvements**

The property owner or applicant shall design the project to install remove and replace with current City Standard sidewalk, vertical curb and gutter, and driveway approaches from property line to property along the frontage of El Camino Real. Such work shall restore the existing driveway approach to be ADA compliant and to the current City Standard vertical curb and gutter along the northerly corner of the property.

The applicant shall design the project to include no parking red curbs on either side of the driveway, and a loading zone to the west of the driveway as approved by the Transportation Services Manager. Such design shall include appropriate signage including but not limited to

permitting vehicle parking in the loading zone during non-business hours (e.g., 6 PM to 8 AM) on weekdays and anytime on weekends.

15. **Street Trees**

The street trees shall be installed along the project's El Camino Real frontage and include two trees in front of 4896 El Camino Real, as directed by the City Engineer.

16. **Sidewalk Lights**

The owner or applicant shall maintain and protect the existing light fixture in the El Camino Real sidewalk, as directed by the City Engineer.

17. **Performance Bond**

The applicant shall submit a cost estimate for all improvements in the public right-of-way and shall submit a 100 percent performance bond (to be held until acceptance of improvements) and a 50 percent labor and material bond (to be held until 6 months after acceptance of improvements) for the work in the public right-of-way.

18. **Right of Way Construction**

The applicant shall submit detailed plans for any construction activities affecting the public right-of-way, including but not limited to excavations, pedestrian protection, material storage, earth retention, and construction vehicle parking, to the City Engineer for review and approval. The applicant shall also submit on-site and off-site grading and drainage plans that include drain swales, drain inlets, rough pad elevations, building envelopes, and grading elevations for approval by the City.

19. **Sewer Capacity**

The applicant shall show sewer connection to the City sewer main and submit calculations showing that the City's existing 8-inch sewer main will not exceed two-thirds full due to the additional sewage capacity from proposed project. For any segment that is calculated to exceed two-thirds full for average daily flow or for any segment that the flow is surcharged in the main due to peak flow, the applicant shall upgrade the sewer line or pay a fair share contribution for the sewer upgrade to be approved by the Director of Public Works.

20. **Trash Enclosure**

The applicant shall contact Mission Trail Waste Systems and submit a solid waste, recyclables (and organics, if applicable) disposal plan indicating the type, size and number of containers proposed, and the frequency of pick-up service subject to the approval of the Engineering Division. The applicant shall also submit evidence that Mission Trail Waste Systems has reviewed and approved the size and location of the proposed trash enclosure. The approved trash staging location shall be maintained as required by the City Engineer.

The trash staging area shall only be allowed in the street adjacent to the curb to the east of the driveway on scheduled trash and recycling service days only. Any trash and recycling containers staged in the street shall be returned to the on-site storage area in the parking garage by 5 PM of the same day as serviced or be subject to towing.

21. **Stormwater Management Plan and NPDES Permit**

The applicant shall submit a complete Stormwater Management Plan (SWMP), a hydrology and hydraulic report for review and approval showing that 100% of the site is being treated; is in compliance with the Municipal Regional Stormwater NPDES Permit (MRP). The proposed storm water media filter is not considered to be an LID treatment measure per the C.3 Technical Guidance Handbook of the Santa Clara Valley Urban Runoff Prevention Program. The implementation of Low Impact Development ("LID") per the current MRP such as using evapotranspiration, infiltration, and/or rainwater harvesting and reuse shall be used. Applicant shall provide a hydrology and hydraulic study, and an infeasible/feasible comparison analysis to the City for review and approval for the purpose to verify that MRP requirements are met. Please complete in detail the attached Provision C.3 Data Form.

22. **Green Building Standards**

The applicant shall provide verification that the project will comply with the City's Green Building Standards (Section 12.26 of the Municipal Code) from a qualified green building professional.

23. **Property Address**

The applicant shall provide an address signage plan as required by the Building Official.

24. **Landscape**

The applicant shall provide a landscape and irrigation plan in conformance to the City's Water Efficient Landscape Regulations in accordance with Chapter 12.46 of the Municipal Code.

PRIOR TO ISSUANCE OF DEMOLITION AND/OR BUILDING PERMIT

25. **Construction Management Plan**

The applicant shall submit a construction management plan for review and approval by the Community Development Director. The construction management plan shall address any construction activities affecting the public right-of-way, including but not limited to: prohibiting dirt hauling during peak traffic hours, excavation, traffic control, truck routing, pedestrian protection, appropriately designed fencing to limit project impacts and maintain traffic visibility as much as practical, material storage, earth retention and construction and employee vehicle parking.

26. **Sewer Lateral**

The applicant shall abandon additional sewer laterals and cap at the main if they are not being used. A property line sewer cleanout shall be installed within 5 feet of the property line within private property.

27. **Solid Waste Ordinance**

The applicant shall comply with the City's adopted Solid Waste Collection, Remove, Disposal, Processing & Recycling Ordinance, which requires mandatory commercial and multi-family dwellings to provide for recycling, and organics collection programs as per Chapter 6.12 of the Municipal Code.

28. **Air Quality Mitigation**

The applicant shall implement and incorporate the air quality mitigations into the plans as required by staff in accordance with the report prepared by Illingsworth & Rodin, Inc., dated March 18, 2016.

29. **Noise Mitigation**

The applicant shall implement and incorporate the noise mitigation measures into the plans as required by staff in accordance with the report by Wilson Ihrig, dated March 2, 2016 and revised on April 20, 2016.

30. **Tree Protection**

The applicant shall implement and incorporate the tree protection measures into the plans and on-site as required by staff in accordance with the report by The Tree Specialist, dated April 21, 2106.

31. **Affordable Housing Agreement**

The applicant shall offer for a minimum 30-year period, one, three-bedroom unit at the moderate-income level, and two, two-bedroom units at the low-income level, in accordance with the City's Affordable Housing Agreement, in a recorded document in a form approved by the City Attorney.

PRIOR TO FINAL INSPECTION

32. **Maintenance Bond**

The applicant shall submit a one-year, 10-percent maintenance bond upon acceptance of improvements in the public right-of-way.

33. **Stormwater Facility Certification**

The applicant shall have a final inspection and certification done and submitted by the Engineer who designed the SWMP to ensure that the treatments were installed per design. The applicant shall submit a maintenance agreement to City for review and approval for the stormwater treatment methods installed in accordance with the SWMP. Once approved, the applicant shall record the agreement.

34. **Stormwater Catch Basin**

The applicant shall label all new or existing public and private catch basin inlets which are on or directly adjacent to the site with the "NO DUMPING - FLOWS TO THE BAY" logo as required by the City Engineer.

35. **Green Building Verification**

The applicant shall submit verification that the structure was built in compliance with the California Green Building Standards pursuant to Section 12.26 of the Municipal Code.

36. **Landscaping Installation**

The applicant shall install all on- and off-site landscaping and irrigation, as approved by the Community Development Director and the City Engineer.

37. **Signage and Lighting Installation**

The applicant shall install all required signage and on-site lighting per the approved plan. Such signage shall include the disposition of guest parking, the turn-around/loading space in the front yard and accessible parking spaces.

38. **Acoustical Report**

The applicant shall submit a report from an acoustical engineer ensuring that the rooftop mechanical equipment meets the City's noise regulations.

39. **Landscape Certification**

The applicant shall provide a Certificate of Completion conforming to the City's Water Efficient Landscape Regulations.

40. **Condominium Map**

The applicant shall record the condominium map as required by the City Engineer.

41. **Public Improvements and Street Damage**

The applicant shall install all public improvements required herein, and shall repair any damaged right-of-way infrastructures and otherwise displaced curb, gutter and/or sidewalks and City's

storm drain inlet shall be removed and replaced as directed by the City Engineer or his designee. The applicant is responsible to resurface (grind and overlay) half of the street along the frontage of El Camino Real if determined to be damaged during construction, as directed by the City Engineer or his designee.

42. **Stormwater Management Plan Inspection**

The applicant shall have a final inspection and certification done and submitted by the Engineer who designed the SWMP to ensure that the treatments were installed per design. The applicant shall submit a maintenance agreement to City for review and approval for the stormwater treatment methods installed in accordance with the SWMP. Once approved, the applicant shall record the agreement.

43. **Driveway Visibility and Loading Zone**

The applicant shall provide no parking areas on either side of the driveway and a loading zone to the west of the driveway as approved by the City Engineer.

KEYSER MARSTON ASSOCIATES
ADVISORS IN PUBLIC/PRIVATE REAL ESTATE DEVELOPMENT

MEMORANDUM

To: Jon Biggs
Community Development Director
City of Los Altos

From: Keyser Marston Associates, Inc.

Date: August 15, 2016

Subject: Density Bonus & Concession Analysis - 4880 El Camino Real

In accordance with your request, Keyser Marston Associates, Inc. (KMA) has prepared a real estate economic analysis related to the proposed residential project at 4880 El Camino Real in the City of Los Altos. The economic analysis addresses the proposal by the Developer of the project, LOLA, LLC, to obtain a density bonus and height concession as provided for by the State Density Bonus law (California Government Code Section 65915).

In summary, the finding of the analysis is that the proposed height concession is needed in order to offset the cost of the three proposed affordable units in the project (two at Low Income and one at Moderate Income). In other words, including three affordable units in the project would satisfy the provision of the State Density Bonus law that the height concession is economically justified.

I. Background

The proposed project is located on an approximately 0.45-acre site at 4880 El Camino Real between Los Altos Square and Jordan Avenue. Existing zoning for the site allows for 17 units, a density of 38 units/acre. The building height limit for the site is 45 feet. In terms of affordable housing requirements, the City's inclusionary housing ordinance requires that one of the project's units be sold to a Moderate Income household and one sold to a Low Income household (households earning up to 120% and 80% of area median income respectively).

The Developer has prepared two project alternatives. In the first alternative, the building would be 5-stories and 62 feet in height, not including rooftop mechanical equipment. Parking would be in a subterranean parking garage with a mechanical parking lift system. The project is proposed to include 21 units, resulting in a density of 47 units/acre. Three affordable units are proposed - two Low Income units required to qualify for the density bonus and one additional affordable unit at Moderate Income.

The Developer's second project alternative is similar to the first alternative except the project would have four stories rather than five. The 21 units are still achieved in this alternative despite the loss of the fifth story by reducing the building setbacks on the rear of the property. It is noted that the 4-story alternative has about 4% less sellable building area than the 5-story alternative (30,768 vs. 32,074 square feet).

The Developer is seeking a density bonus pursuant to the State Density Bonus law to increase the unit count from 17 to 21 units. In addition to the density bonus, the Developer is also seeking a height concession in order to exceed the site's current height limit. The height concession is needed in order for the Developer to achieve approximately 11 foot floor-to-ceiling heights in the proposed 5-story project alternative and 12 foot floor-to-ceiling heights in the proposed 4-story alternative. As described later in this memorandum, the analysis also considers a project alternative under current zoning and an alternative with the density bonus only (without the height concession)[1].

Development Alternatives	Acres	Units	DU/Acre	Bldg Height*	Floors	Fl to Ceiling
Project Under Current Zoning (Base Case)	0.448	17	37.9	45 feet	4 floors	~10 feet
Project w/ Density Bonus Only (no Height Concession)	0.448	21	46.8	~57 feet	5 floors	~10 feet
Proposed 5-Story Project w/ Height Concession	0.448	21	46.8	62 feet	5 floors	11 feet
4-Story Project Option w/ Reduced Setback	0.448	21	46.8	54 feet	4 floors	12 feet

*excludes rooftop mechanical equipment

II. Approach

Government Code Section 65915 requires cities to approve density bonuses when developers provide certain amounts of affordable units. A project qualifying for a density bonus is also eligible for one to three "concessions and incentives". These are defined as modifications of development standards that result in "identifiable, financially sufficient, and actual cost reductions". The proposed project is eligible for one concession and has requested an increase in building height from 45 to 62 feet. The City

[1] The height concession relates to the proposed floor-to-ceiling heights in excess of 10 feet. It is assumed that the fifth floor is needed in order to physically accommodate the 21 proposed units in the project (without the reduction in rear yard setbacks in the Developer's 4-story alternative).

must approve the height increase unless it can make a written finding, based on substantial evidence, of any of the following:

a) The concession or incentive is not required in order to provide for affordable housing costs, as defined in Section 50052.5 of the Health and Safety Code, or for rents for the targeted units to be set as specified in subdivision (c) of Section 65915.

b) The concession or incentive would have a specific adverse impact, as defined in paragraph (2) of subdivision (d) of Section 65589.5, upon public health and safety or the physical environment or on any real property that is listed in the California Register of Historical Resources and for which there is no feasible method to satisfactorily mitigate or avoid the specific adverse impact without rendering the development unaffordable to low- and moderate-income households.

c) The concession or incentive would be contrary to state or federal law.

The purpose of KMA's analysis is to analyze the economics of the proposed project in order to determine whether the height concession requested, in addition to the density bonus, is required to fulfill the subsection A criteria noted above. To that end, KMA prepared an analysis which (1) quantifies the affordable housing cost, also known as the below market rate housing (BMR) cost, and (2) quantifies the value increment generated by the density bonus and height concession. This two-step approach is a means of assessing, in as objective a manner as reasonably possible[2], whether the requested height concession is "required in order to provide for affordable housing costs" as specified in the State Density Bonus law.

III. Economic Analysis

The following describes the analysis of the two elements of the pro forma analysis: the BMR cost analysis, and the value increment generated by the density bonus and height concession.

a) BMR Cost

The first task of the analysis is to quantify the cost of the BMR units. The gross BMR cost is the development costs of building the BMR units including direct labor and

[2] The approach taken minimizes the analysis impacts that could result from disagreements with the Developer regarding pro forma inputs (sale prices, costs, returns, etc.).

materials costs of project construction, and indirect (soft) costs of development such as architecture and engineering, fees and permits costs, taxes, insurance, marketing, and financing costs. On this basis, the gross cost of the three BMR units in the 5-story alternative is estimated at $715/square foot of net livable area ($520/square foot of gross floor area[3]), or approximately $2.6 million for the three BMR units (average unit size of 1,225 square feet). A portion of the $2.6 million gross BMR cost is then offset by the sale proceeds from the three BMR units, averaging $215,000/unit (see the attached Table 3 and Table 4 for detail on the sale price estimates). After the sale proceeds have been accounted for, the net cost of the three BMR units in the 5-story alternative is estimated at $1.98 million.

Total BMR Cost*

	Units	Net Sq. Ft.	$/Unit	$/NSF	Total
Gross Cost of BMR Units			$875,667	$715 **	$2,627,000
(Less) Low Income Unit Sales (2BR)	2	2,338	($138,000)	($118)	($276,000)
(Less) Moderate Income Unit Sales (3BR)	1	1,337	($369,000)	($276)	($369,000)
Net Cost of BMR Units	3	3,675	$660,667	$539	$1,982,000

**To be conservative, the BMR cost is based on the 5-story alternative. The costs of the alternative without the height concession and the 4-story alternative are slighly lower.*

***$520/square foot of gross floor area.*

The construction costs of the project are high relative to some lower density projects due primarily to the subterranean parking garage. First class design, construction, and materials are also assumed in the analysis to correspond with the projected market rate sale prices.

b) Value Increment from Density Bonus & Height Concession

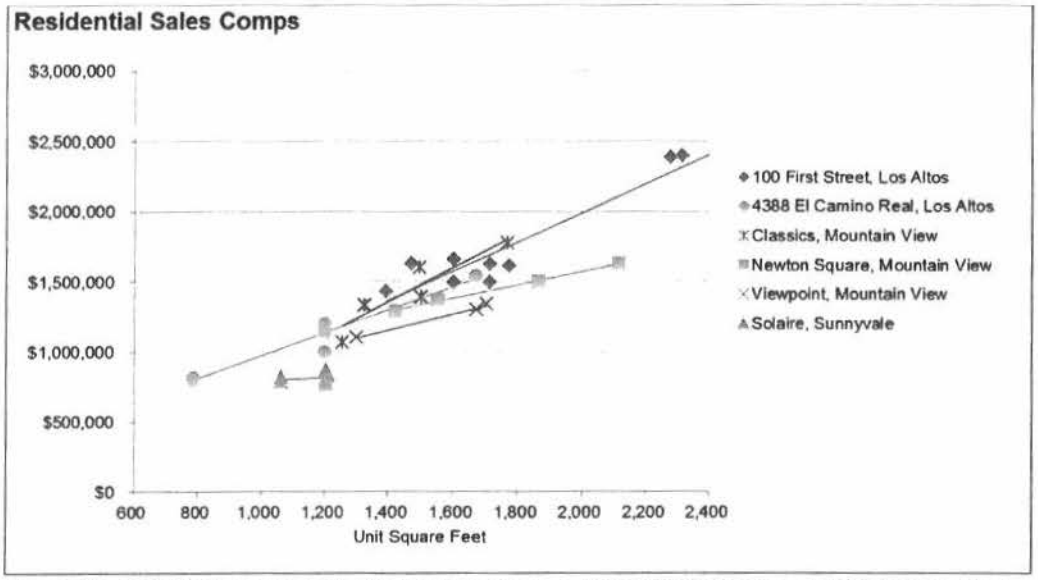
The next step in the analysis is to quantify the value increment (potential additional profit) generated for the Developer as a result of the density bonus and height concession. In order to justify the height concession, the value increment from the density bonus plus height concession should be proportionate to the cost of the BMR units. If the value increment is substantially higher than the BMR cost, the height concession could be determined to be unnecessary.

In order to estimate the value increment, a development pro forma has been run for a project alternative under current zoning (17 units, 4-stories, 45 feet), a project alternative with the density bonus only, i.e. without the height concession (21 units, 5-stories, approximately 57 feet), and the proposed project (21 units, 5-stories, 62 feet). By subtracting the estimated development costs from the estimated condo unit sale

[3] Gross building floor area includes hallways and other common areas but excludes the parking garage.

proceeds, an estimated project return can be calculated for each alternative. The value increment is the amount by which the project return exceeds the project return with the current zoning alternative. In other words, the value increment is the additional profit the Developer could potentially realize by building the project with the density bonus and height concession compared to the project under current zoning.

The development costs have been based on third party construction cost data such as RS Means, by general contractor cost estimates for similar projects in the market, and by project pro formas from other Bay Area projects KMA is involved with (estimates are shown in the attached Table 1A and Table 1B). Condo sale prices have been estimated at approximately $1.17 million for the average 1,200 square foot 2-bedroom unit and $1.7 million for the average 1,800 square foot 3-bedroom unit based on sales of residential units in the market adjusted for time, location, and level of amenities (see chart below). In general, pricing for the project will benefit from its desirable Los Altos address and close proximity to neighborhood services such as Whole Foods and the Village at San Antonio Center, however the project will not have the advantage of a downtown Los Altos location, and pricing will be discounted somewhat to reflect the proposed parking lift system instead of conventional side by side parking.



Source: The Mark Company, Corelogic, Real Estate Economics. Note: 100 First Street and 4388 El Camino Real sales are from 2015.

The following table summarizes the value increment analysis for the Developer's 5-story alternative with three BMR units. As shown, the value increment of the density bonus project only (i.e. the density bonus but not the height concession) over the current

zoning project is estimated at $1.3 million. The value increment of the Developer's 5-story project alternative, including the height concession, over the current zoning project is estimated at $1.7 million. The same figures for the Developer's 4-story alternative are also summarized on the following page (the conclusions from the analysis immediately follow the tables on p. 8).

5-Story Alternative

Value Increment from Density Bonus Only - 5-Story Alternative	Project Under Current Zoning	Density Bonus Only (No Height Concession)	Value Increment
Market Rate Units	15 units	18 units	3 units
Low Income Units	1 units	2 units	1 units
Moderate Income Units	1 units	1 units	0 units
Total Units	17 units	21 units	4 units
Sale Revenues	$22,263,000	$26,881,000	$4,618,000
(Less) Development Costs	($19,250,000)	($22,560,000)	($3,310,000)
Development Return	$3,013,000	$4,321,000	$1,308,000

Value Increment from Density Bonus and Height Concession - 5-Story Alternative	Project Under Current Zoning	Proposed 5-Story Alternative	Value Increment
Market Rate Units	15 units	18 units	3 units
Low Income Units	1 units	2 units	1 units
Moderate Income Units	1 units	1 units	0 units
Total Units	17 units	21 units	4 units
Sale Revenues	$22,263,000	$27,658,000	$5,395,000
(Less) Development Costs	($19,250,000)	($22,930,000)	($3,680,000)
Development Return	$3,013,000	$4,728,000	$1,715,000

4-Story Alternative

Value Increment from Density Bonus Only - 4-Story Alternative	Project Under Current Zoning	Proposed 4-Story Alternative	Value Increment
Market Rate Units	15 units	18 units	3 units
Low Income Units	1 units	2 units	1 units
Moderate Income Units	1 units	1 units	0 units
Total Units	17 units	21 units	4 units
Sale Revenues	$22,263,000	$25,613,000	$3,350,000
(Less) Development Costs	($19,250,000)	($21,820,000)	($2,570,000)
Development Return	$3,013,000	$3,793,000	$780,000

Value Increment from Density Bonus and Height Concession - 4-Story Alternative	Project Under Current Zoning	Proposed 4-Story Alternative	Value Increment
Market Rate Units	15 units	18 units	3 units
Low Income Units	1 units	2 units	1 units
Moderate Income Units	1 units	1 units	0 units
Total Units	17 units	21 units	4 units
Sale Revenues	$22,263,000	$26,355,000	$4,092,000
(Less) Development Costs	($19,250,000)	($21,990,000)	($2,740,000)
Development Return	$3,013,000	$4,365,000	$1,352,000

c) Conclusions

As described in Section III.a. of this memorandum, the cost of three BMR units is estimated at approximately $1.98 million. The value increment that could potentially be realized for the Developer's two alternatives with the density bonus only (no height concession) range from $780,000 to $1.3 million. Including the height concession, the value increment is estimated at $1.35 million and $1.7 million. Since the value increment in all cases is less than the cost of the three BMR units, the conclusion of the analysis is that the height concession is reasonably necessary to address the cost of the three BMR units in the both the 5-story and 4-story project alternatives.

Table 1A.
Development Cost Estimate - 5-Story Alternative vs. Current Zoning

Project Under Current Zoning (Base Case)				
		$/NSF	$/Unit	Total Costs
		26,273	17	
Land Acquisition [1]	$205 /land sf	$152	$235,294	$4,000,000
Direct Construction		$400	$618,235	$10,510,000
Indirects		$140	$216,471	$3,680,000
Financing		$40	$62,353	$1,060,000
Total Costs		$733	$1,132,353	$19,250,000

Project with Density Bonus Only (No Height Concession)				
		$/NSF	$/Unit	Total Costs
		32,074	21	
Land Acquisition [1]	$205 /land sf	$125	$190,476	$4,000,000
Direct Construction		$400	$610,952	$12,830,000
Indirects		$140	$213,810	$4,490,000
Financing		$39	$59,048	$1,240,000
Total Costs		$703	$1,074,286	$22,560,000

Proposed 5-Story Project w/ Height Concession				
		$/NSF	$/Unit	Total Costs
		32,074	21	
Land Acquisition [1]	$205 /land sf	$125	$190,476	$4,000,000
Direct Construction		$408	$623,333	$13,090,000
Indirects		$143	$218,095	$4,580,000
Financing		$39	$60,000	$1,260,000
Total Costs		$715	$1,091,905	$22,930,000

[1] Public records indicate the land was purchased in September 2015 for $4,000,000.

Prepared by: Keyser Marston Associates
Filename: 4880 ECR Pro forma 8.3.16.xlsx; Costs1

Table 1B.
Development Cost Estimate - 4-Story Alternative

Project with Density Bonus Only (No Height Concession)		$/NSF	$/Unit	Total Costs
		30,768	21	
Land Acquisition [1]	$205 /land sf	$130	$190,476	$4,000,000
Direct Construction		$400	$586,190	$12,310,000
Indirects		$140	$205,238	$4,310,000
Financing		$39	$57,143	$1,200,000
Total Costs		$709	$1,039,048	$21,820,000

Proposed 4-Story Project w/ Height Concession		$/NSF	$/Unit	Total Costs
		30,768	21	
Land Acquisition [1]	$205 /land sf	$130	$190,476	$4,000,000
Direct Construction		$404	$591,905	$12,430,000
Indirects		$141	$207,143	$4,350,000
Financing		$39	$57,619	$1,210,000
Total Costs		$715	$1,047,143	$21,990,000

[1] Public records indicate the land was purchased in September 2015 for $4,000,000.

Prepared by: Keyser Marston Associates
Filename: 4880 ECR Pro forma 8.3.16.xlsx; Costs2

Table 2A.
Sale Proceeds Estimate - 5-Story Alternative vs. Current Zoning

Project Under Current Zoning (Base Case)

	Program				Sales Proceeds		
	Units	% Total	Avg. SF	Total SF	Avg. Price	$/SF	Total
Market Rate Units							
2-Bedroom	6	29%	1,199	7,193	$1,127,000	$940	$6,762,000
3-Bedroom	9	43%	1,842	16,574	$1,666,000	$905	$14,994,000
Total	15	71%	1,584	23,767	$1,450,400	$915	$21,756,000
BMR Units							
2-Bedroom - Low	1	5%	1,169	1,169	$138,000	$118	$138,000
3-Bedroom - Moderate	1	5%	1,337	1,337	$369,000	$276	$369,000
Total	2	10%	1,253	2,506	$253,500	$202	$507,000
Total	17	81%	1,545	26,273	$1,309,588	$847	$22,263,000
(Less) Development Costs					($1,132,353)	($733)	($19,250,000)
Development Return					$177,235	$115	$3,013,000
% of Gross Sales							13.5%
% of Development Costs							15.7%

Project with Density Bonus Only (No Height Concession)

	Program				Sales Proceeds		
	Units	% Total	Avg. SF	Total SF	Avg. Price	$/SF	Total
Market Rate Units							
2-Bedroom	7	33%	1,201	8,406	$1,141,000	$950	$7,987,000
3-Bedroom	11	52%	1,818	19,993	$1,659,000	$913	$18,249,000
Total	18	86%	1,578	28,399	$1,457,556	$924	$26,236,000
BMR Units							
2-Bedroom - Low	2	10%	1,169	2,338	$138,000	$118	$276,000
3-Bedroom - Moderate	1	5%	1,337	1,337	$369,000	$276	$369,000
Total	3	14%	1,225	3,675	$215,000	$176	$645,000
Total	21	100%	1,527	32,074	$1,280,048	$838	$26,881,000
(Less) Development Costs					($1,074,286)	($703)	($22,560,000)
Development Return					$205,762	$135	$4,321,000
% of Gross Sales							16.1%
% of Development Costs							19.2%

Proposed 5-Story Project

	Program				Sales Proceeds		
	Units	% Total	Avg. SF	Total SF	Avg. Price	$/SF	Total
Market Rate Units							
2-Bedroom	7	33%	1,201	8,406	$1,175,000	$978	$8,225,000
3-Bedroom	11	52%	1,818	19,993	$1,708,000	$940	$18,788,000
Total	18	86%	1,578	28,399	$1,500,722	$951	$27,013,000
BMR Units							
2-Bedroom - Low	2	10%	1,169	2,338	$138,000	$118	$276,000
3-Bedroom - Moderate	1	5%	1,337	1,337	$369,000	$276	$369,000
Total	3	14%	1,225	3,675	$215,000	$176	$645,000
Total	21	100%	1,527	32,074	$1,317,048	$862	$27,658,000
(Less) Development Costs					($1,091,905)	($715)	($22,930,000)
Development Return					$225,143	$147	$4,728,000
% of Gross Sales							17.1%
% of Development Costs							20.6%

Table 2B.
Sale Proceeds Estimate - 4-Story Alternative

Project with Density Bonus Only (No Height Concession)	Program				Sales Proceeds		
	Units	% Total	Avg. SF	Total SF	Avg. Price	$/SF	Total
Market Rate Units							
1-Bedroom	2	10%	918	1,836	$896,000	$976	$1,792,000
2-Bedroom	8	38%	1,291	10,325	$1,217,000	$943	$9,736,000
3-Bedroom	8	38%	1,864	14,911	$1,680,000	$901	$13,440,000
Total	18	86%	1,504	27,072	$1,387,111	$922	$24,968,000
BMR Units							
2-Bedroom - Low	2	10%	1,169	2,338	$138,000	$118	$276,000
3-Bedroom - Moderate	1	5%	1,337	1,337	$369,000	$276	$369,000
Total	3	14%	1,225	3,675	$215,000	$176	$645,000
Total	21	100%	1,464	30,747	$1,219,667	$833	$25,613,000
(Less) Development Costs					($1,039,048)	($710)	($21,820,000)
Development Return					$180,619	$123	$3,793,000
% of Gross Sales							14.8%
% of Development Costs							17.4%

Proposed 4-Story Project	Program				Sales Proceeds		
	Units	% Total	Avg. SF	Total SF	Avg. Price	$/SF	Total
Market Rate Units							
1-Bedroom	2	10%	918	1,836	$923,000	$1,005	$1,846,000
2-Bedroom	8	38%	1,291	10,325	$1,253,000	$971	$10,024,000
3-Bedroom	8	38%	1,864	14,911	$1,730,000	$928	$13,840,000
Total	18	86%	1,504	27,072	$1,428,333	$950	$25,710,000
BMR Units							
2-Bedroom - Low	2	10%	1,167	2,334	$138,000	$118	$276,000
3-Bedroom - Moderate	1	5%	1,362	1,362	$369,000	$271	$369,000
Total	3	14%	1,232	3,696	$215,000	$175	$645,000
Total	21	100%	1,465	30,768	$1,255,000	$857	$26,355,000
(Less) Development Costs					($1,047,143)	($715)	($21,990,000)
Development Return					$207,857	$142	$4,365,000
% of Gross Sales							16.6%
% of Development Costs							19.8%

Table 3.
Estimated Affordable Home Prices - Moderate Income
4880 El Camino Real Project

Unit Size Household Size	2-Bedroom Unit 3-person HH	3-Bedroom Unit 4-person HH
100% AMI Santa Clara County 2016	$96,400	$107,100
Annual Income @ 110%	$106,040	$117,810
% for Housing Costs	35%	35%
Available for Housing Costs	$37,114	$41,234
(Less) Property Taxes	($3,390)	($3,690)
(Less) HOA	($6,300)	($6,900)
(Less) Utilities	($1,524)	($2,400)
(Less) Insurance	($800)	($900)
(Less) Mortgage Insurance	($4,347)	($4,739)
Income Available for Mortgage	$20,753	$22,605
Mortgage Amount	$322,200	$350,900
Down Payment (homebuyer cash)	$16,950	$18,450
Supported Home Price	$339,150	$369,350
Rounded	$339,000	$369,000
Key Assumptions		
- Mortgage Interest Rate [1]	5.00%	5.00%
- Down Payment [1]	5.00%	5.00%
- Property Taxes (% of sales price)	1.00%	1.00%
- HOA (per month) [2]	$525	$575
- Utilities (per month) [1]	$127	$200
- Mortgage Insurance (% of loan amount)	1.35%	1.35%

(1) Based on City BMR pricing sheet for 86 Third Street.
(2) Based on 86 Third Street and 100 First Street.

Prepared by: Keyser Marston Associates
Filename: 4880 ECR Pro forma 8.3.16.xlsx; Mod Prices

Table 4.
Estimated Affordable Home Prices - Low Income
4880 El Camino Real Project

Unit Size Household Size	2-Bedroom Unit 3-person HH	3-Bedroom Unit 4-person HH
100% AMI Santa Clara County 2016	$96,400	$107,100
Annual Income @ 70%	$67,480	$74,970
% for Housing Costs	30%	30%
Available for Housing Costs	$20,244	$22,491
(Less) Property Taxes	($1,380)	($1,460)
(Less) HOA	($6,300)	($6,900)
(Less) Utilities	($1,524)	($2,400)
(Less) Insurance	($800)	($900)
(Less) Mortgage Insurance	($1,769)	($1,877)
Income Available for Mortgage	$8,472	$8,955
Mortgage Amount	$131,500	$139,000
Down Payment (homebuyer cash)	$6,900	$7,300
Supported Home Price	$138,400	$146,300
Rounded	$138,000	$146,000
Key Assumptions		
- Mortgage Interest Rate [1]	5.00%	5.00%
- Down Payment [1]	5.00%	5.00%
- Property Taxes (% of sales price)	1.00%	1.00%
- HOA (per month) [2]	$525	$575
- Utilities (per month) [1]	$127	$200
- Mortgage Insurance (% of loan amount)	1.35%	1.35%

(1) Based on City BMR pricing sheet for 86 Third Street.

(2) Based on 86 Third Street and 100 First Street.

Prepared by: Keyser Marston Associates
Filename: 4880 ECR Pro forma 8.3.16.xlsx; Low Prices

HEXAGON TRANSPORTATION CONSULTANTS, INC.

August 12, 2016 (revised)

Mr. David Kornfield
City of Los Altos
1 North San Antonio Road
Los Altos, CA 94022

Subject: ***Traffic Report for the Proposed 4880 El Camino Real Residential Development Project in Los Altos, California***

Dear Mr. Kornfield:

Per your request, Hexagon Transportation Consultants, Inc. is submitting this traffic report for the proposed 4880 El Camino Real development in Los Altos, California. The project, as proposed, would include 21 condominium units. It would replace an existing 3,600-square foot restaurant onsite. Because the project is projected to generate fewer than 50 daily trips, City staff have stated that a full transportation impact analysis will not be required. Instead, the report will focus on documenting project trip generation and providing an assessment of onsite circulation and vehicular access.

Project Traffic Estimates

Through empirical research, data has been collected that correlate to common land uses their propensity for producing traffic. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. The trip generation estimates for the proposed project are based on rates obtained from the Institute of Transportation Engineers' (ITE) publication *Trip Generation*, 9th Edition.

Based on trip generation rates applicable to residential condos, it is estimated that the project would generate 165 daily trips, with 15 trips occurring during the AM peak commute hour and 17 trips occurring during the PM peak commute hour. The peak commute hour is the peak 60 minute period of traffic demand during the commute periods, which are 7:00 AM to 9:00 AM in the morning, and 4:00 PM and 6:00 PM in the evening.

As previously mentioned, the proposed project would replace an existing restaurant of approximately 3,600 square feet. Based on ITE rates, the existing restaurant use generates approximately 324 daily trips, with 3 trips occurring during the AM peak commute hour and 27 trips occurring during the PM peak commute hour. Thus, the replacement of the existing restaurant use with 21 condominiums would result in 158 fewer daily trips, 12 additional AM peak hour trips, and 10 fewer PM peak hour trips. The project trip generation estimates are presented in Table 1. Because the project would result in a traffic reduction on a daily basis, its impact on the greater transportation network in the context of the City's level of service policy would be negligible.

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Table 1
Project Trip Generation Estimates

Land Use	Size unit	land use code	Daily rate	Daily Trips	AM Peak Hour				PM Peak Hour			
					Rate	In	Out	Total	Rate	In	Out	Total
Proposed Project [a]												
Condo	21 d.u.	230	7.88	165	0.71	3	12	15	0.80	11	6	17
Existing use [b]												
Restaurant	3.6 ksf	931	89.95	324	0.81	3	0	3	7.49	18	9	27
Total [a] - [b]				-158		0	12	12		-7	-3	-10

All Rates based on ITE *Trip Generation* , 9th Edition, for Condo and Quality Restaurant uses, regression rates where appropriate

Project Site Circulation and Access

The project's site circulation and access were evaluated in accordance with generally accepted traffic engineering standards based on project plans dated February 4th, 2016. The project would provide a single two-way driveway onto El Camino Real. Additional parking and/or potential loading space for trucks would be provided along the project frontage on El Camino Real. A description of the various design elements of the site circulation and access is provided below.

Street Level. The project driveway would be approximately 20 feet wide and serve a single guest parking stall at street-level directly adjacent to the front lobby. Because this parking stall is located approximately 20 feet from El Camino Real, it may sometimes be blocked by exiting vehicles. In addition, the sight distance between a driver backing out of the parking stall and a vehicle exiting the garage is restricted. For these reasons, this space should not be utilized for vehicular parking. It should be signed and striped as no parking and utilized solely as a turn-around area for vehicles that mistakenly enter the driveway and would otherwise be required to back onto El Camino Real. To improve the ability of a vehicle to back into the space, 3-foot curb radii are recommended between the drive aisle and the stall.

Ramp Design. The proposed garage ramp is approximately 60 feet long with an 18.4% grade and two transitions of 9.2% each at the top and bottom of the ramp. Transitions are generally required when ramp grades exceed 10% to prevent vehicles from bottoming out. Commonly cited parking publications recommend grades of up to 16% on ramps where no parking is permitted, but grades of up to 20% are cited as acceptable when garages are attended, ramps are covered (i.e. protected from weather) and not used for pedestrian walkways. Thus, the proposed 18.4% ramp grade could be adequately traversed by vehicles as designed, but will require a slightly greater level of caution than a less steep ramp. It should be noted that the vast majority of ramp users will be residents, and thus, will quickly become accustomed to the slightly steeper grade.

Gated Garage Entrance. The project driveway would connect directly to a parking garage ramp, which would lead to a below-grade parking structure. A remote controlled gate would be present at the bottom of the ramp. The distance between the gated entrance to the site's parking garage and the sidewalk on El Camino Real would be 75 feet, or enough space for three vehicles to queue. According to ITE, there would be approximately 11 PM peak hour trips inbound at the project driveway, or an average rate of approximately one vehicle every five and a half minutes. According to the publication *Parking* by Weant and Levinson, the typical capacity for a single lane coded-card reader is between 225 vehicles per hour and 550 vehicles per hour. Given this, it is anticipated that the inbound vehicle queues would rarely exceed one or two vehicles during the peak commute period. Thus, the garage gate as located, would most likely provide adequate capacity and vehicular storage to accommodate the proposed demand, and vehicle queues would not spill back to El Camino Real. Prior to final design, the design and operation of the proposed gate system should be reviewed by City staff to confirm the service flow rate and access to guest parking are adequate.

Garage Design. Within the parking structure, all parking would be provided at 90 degrees to the main drive aisle. There is no designated turn around space within the garage if parking cannot be located; the garage is effectively a single dead end aisle that serves mostly reserved parking. In the event that all guest spaces are occupied, vehicles would be required to make multiple point turns to exit the garage. This situation, while not ideal, is generally considered acceptable in urban areas where land is scarce and the traffic volumes are very low. To reduce the likelihood of a vehicle turning around in the garage, a parking guidance sign could be provided outside the garage to alert drivers when guest parking in the garage is full.

Puzzle Parking System. There would be five guest stalls provided in the garage, two of which would be ADA accessible. The remaining 42 parking spaces would be served by a 26-foot wide drive aisle and two puzzle lift systems. The lift systems shown on the project plans would stack two vehicles in each parking stall – one level of parking at basement level and one below in the "pit." Upon arriving at the garage, future patrons would utilize a remote to open their designated, secured, parking bay. If their vehicle is located in the pit, the puzzle lift system will shift parked vehicles on the upper level laterally, as needed, to make space to raise the vehicle on the lower level. The project applicant has also suggested that a 3-level puzzle lift system could be considered for the project. The differences in operation between a 2-level system and 3-level system are very minor, as vehicles are still being shifted laterally on the base level and moved up or down one level. Hexagon conducted observations at an existing two level lift system at the Avalon Development at 651 Addison Street in Berkeley, California. Based on these observations, the time to access a vehicle in the puzzle lift system can vary from 30 seconds to one minute and 45 seconds, depending on the configuration of vehicles within the system. Hexagon estimates the average time to access a parked vehicle in proposed parking garage to be approximately one minute, which equates to a maximum service rate of approximately 60 vehicles per hour (2 lift systems at 2 minutes per lift equates to one vehicle per minute). To determine whether the proposed lift system would work adequately, it is useful to consider the frequency of vehicles entering and exiting the parking garage during the highest hours of the day. According to ITE, the peak period of traffic generation at the project would be during the PM commute period. During this peak 60-minute period, the project would generate 17 trips, or about one trip every three and a half minutes. Given that the garage could accommodate up to 60 vehicles per hour, it is anticipated that the proposed garage would have adequate capacity to accommodate the number of trips into and out of the

proposed parking garage. Vehicle queues and person queues (waiting to retrieve their vehicle) would rarely exceed two within the garage.

User Imposed Garage Delays. City staff have questioned whether user delays, including time required to load/unload goods, children (including infants/toddlers), elderly and mobility-impaired persons would significantly disrupt garage operations. Mobility impaired individuals could be expected to use one of the two ADA compliant parking spaces provided in the garage. During Hexagon's observations at an existing two level lift system at the Avalon Development at 651 Addison Street in Berkeley, there were no instances where people caused unusual delays when parking. Thus, it is expected that such delays would be somewhat infrequent. Many activities that require longer loading times, such as unloading groceries, occur during non-commute periods when traffic accessing the garage is lower. It is also noteworthy that the project would have two puzzle lift systems, one side of the garage would have a 12 parking bay system, and the other would have 10 parking bay system. Each of the two systems may load vehicles simultaneously. In addition, each parking bay will have its own lift. About half of the users would open the gate in front of the parking stall and enter the stall in the same manner as a typical parking space. These users would have very brief delays. It is only when lift activities are engaged that the time spent in a parking stall significantly affects traffic queues in the garage. During the highest hour of the day, ITE trip rates project that the garage would accommodate 17 vehicle trips. This translates to an average vehicular headway of one trip every 3.5 minutes. While some users may take extra time for the reasons staff have noted, for the garage to provide insufficient hourly capacity, every user would have to take an average of 3.5 minutes, instead of one minute, to access the garage. It is our opinion that, based on Hexagon's observations, this would be unlikely.

Access to El Camino Real. Outbound at the project driveway on El Camino Real, the low volume of project traffic would result in brief delays for vehicles. Outbound vehicle queues would rarely exceed one or two vehicles. Sight distance at the project driveway would be adequate provided (1) the landscaping is low level within 10 feet of the curb face on El Camino Real (the height of the planned landscaping is not shown) and (2) it is not blocked by parked vehicles. Parking should be prohibited on El Camino Real within 10 feet west of the driveway (i.e. looking left for an outbound driver from the project driveway).

Truck Access. Provisions for garbage collection and truck loading are not shown on the current plan. Prior to final design, the applicant should work with City staff to ensure truck access is adequately accommodated. Given the current design, truck access would likely occur via the existing curb parking on El Camino Real along the project frontage. A marked loading area may be considered for this location.

Bike Parking. The Valley Transportation Authority (VTA) provides guidelines for bike parking in its publication *Bike Technical Guidelines*. Class I spaces are defined as spaces that protect the entire bike and its components from theft, such as in a secure designated room or a bike locker. Class II spaces provide an opportunity to secure at least one wheel and the frame using a lock, such as bike racks. For multi-family dwelling units, VTA recommends one Class I space per three dwelling units and one Class II space per 15 dwelling units. For the proposed project, this would equate to seven Class I spaces and two Class II spaces. The project site plan shows two Class II bike parking spaces near the building entrance, between El Camino Real and the lobby. The project also provides for ten Class I bike parking spaces in a secured area (keyed gate) under the garage ramp. Thus, the project would exceed the bike parking standards recommended by VTA.

Pedestrian Access. The project would provide a paved walkway between the existing sidewalk on El Camino Real and the building entrance.

Generally, the design of the project site circulation and access is consistent with urban design practices. The presence of the garage ramp, short onsite drive aisle, and "confined" feel of the parking garage will serve to keep vehicles operating at very low speeds. In addition, the low traffic volume onsite, one trip every three and a half minutes, means that the frequency of vehicle conflicts will be relatively low. Under such circumstances, small parking structures usually operate adequately without any operational problems.

Conclusions

This analysis produced the following conclusions:

- Relative to the existing restaurant use, the project would result in a traffic reduction on a daily basis. Therefore, its impact on the greater transportation network in the context of the City's level of service policy would be negligible.
- The project's parking lift and front entrance gate systems would have adequate capacity to accommodate the anticipated traffic demand. Prior to final design, the design and operation of the proposed gate system should be reviewed by City staff to confirm the service flow rate and access to guest parking are adequate.
- Because of its proximity to El Camino Real and restricted sight distance, the street level parking space should be signed and striped as no parking and utilized solely as a turn-around area for vehicles that mistakenly enter the driveway. To improve the ability of a vehicle to back into the space, 3-foot curb radii are recommended between the drive aisle and the stall.
- Commonly cited parking publications recommend grades of up to 16% on ramps where no parking is permitted, but grades of up to 20% are cited as acceptable under certain conditions. The proposed 18.4% ramp grade could be adequately traversed by vehicles as designed, but will require a slightly greater level of caution.
- There is no designated turn around space within the garage if guest parking cannot be located. In the event that all guest spaces are occupied, vehicles would be required to make multiple point turns to exit the garage. While not ideal, this situation is generally considered acceptable in urban areas where land is scarce and the traffic volumes are very low. To reduce the likelihood of a vehicle turning around in the garage, a parking guidance sign could be provided outside the garage to alert drivers when guest parking in the garage is full.
- Outbound at the project driveway on El Camino Real, the low volume of traffic would result in brief delays and short vehicle queues. Sight distance at the project driveway would be adequate provided (1) the landscaping is low level within 10 feet of the curb face on El Camino Real and (2) it is not blocked by parked vehicles. Parking should be prohibited on El Camino Real within 10 feet west of the driveway.
- Prior to final design, the applicant should work with City staff to ensure truck access is adequately accommodated. Given the current design, truck access would likely occur via the existing curb parking on El Camino Real along the project frontage. A marked loading area may be considered for this location.
- The project would exceed the bike parking standards recommended by VTA.

If you have any questions, please do not hesitate to call.

Sincerely,

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Brett Walinski T.E.
Vice President and Principal Associate

DATE: May 19, 2016

AGENDA ITEM # 4

TO: Planning and Transportation Commission

FROM: David Kornfield, Planning Services Manager

SUBJECT: 16-D-01, 16-UP-02 and 16-SD-01—LOLA, LLC, 4880 El Camino Real
Proposed Five-Story, 21-Unit Condominium

RECOMMENDATION

Recommend that the City Council approve design review, use permit and subdivision applications 16-D-01, 16-UP-02 and 16-SD-01 subject to the recommended findings and conditions of approval

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PROJECT DESCRIPTION

This project is a multiple-family residential project at 4880 El Camino Real. The project consists of a 21-unit, five-story building with underground parking. The project replaces a vacant restaurant. The following table summarizes the project:

GENERAL PLAN DESIGNATION:	Commercial Thoroughfare
ZONING:	CT (Commercial Thoroughfare)
PARCEL SIZE:	0.45 acres (19,533 square feet)
MATERIALS:	Painted cementitious and plaster cement siding, natural stone veneer, metal overhangs, metal and glass balconies

	Existing	Proposed	Required/Allowed
SETBACKS:			
Front	30 feet	25 feet	25 feet
Rear	145 feet	40/100 feet	40/100 feet
Right side	22 feet	7 to 10 feet	0 feet
Left side	5 feet	7 feet	0 feet
HEIGHT:	n/a	62 feet[1]	45 feet
PARKING:	n/a	48 spaces	47 spaces
DENSITY:	n/a	21 units	21 units[2]

[1] The 62-foot overall building height is measured by the Municipal Code to the top of the roof deck. Exceptions allow for roof top structures eight feet above the roof, where the project has its elevator tower 11 feet above the roof, for an effective height of 74 feet.

[2] The City's zoning code allows 17 units. The State's density bonus regulations for affordable housing allow four additional units because the project provides three affordable housing units, two of which are designated low-income.

BACKGROUND

On February 4, 2016, the Planning and Transportation Commission held a study session on the project. The Commission indicated a general support for the project and provided comments related to clarifying the design. In response, the applicant:

- Organized a field trip to review the operation of the Klaus Mulitlift parking system;
- Widened the look of the mahogany front door by adding a wood surround and narrowed the awning windows above the entry;
- Enhanced the lobby windows by adding wider wood muntins and mullions and adding a lintel;
- Added natural stone to the parking garage entry wall wrapping around to the east side;
- Lowered the horizontal siding and lengthened a second-level balcony along the west side;
- Differentiated the lower two floors with a darker building color;
- Added an eight-foot tall, sound-attenuating wall along the side property line adjacent to the Jack in the Box restaurant;
- Provided more understory plantings and planting areas at the base of the building;
- Relocated the transformer vault from the entry path to the east side of the driveway;
- Moved the at-grade guest parking space to the garage and created a drop-off/turn-around instead;
- Created a staging area for the trash and recycling bins at the western border of the front yard;
- Expanded the area and relocated the rooftop deck to the south; and
- Provided a larger area for photovoltaics on the roof and indicated prewiring.

On March 23, 2016, the Bicycle and Pedestrian Advisory Commission (BPAC) met regarding the project and provided input to enhance the bicycle and pedestrian circulation. In response, the applicant:

- Increased the number of bike racks in the garage to at least one per unit;
- Omitted the landscape area within the public sidewalk; and

- Specified a bike-friendly trench drain grate at the bottom of the garage ramp.

DISCUSSION

General Plan

The General Plan goals and policies for El Camino Real emphasize fiscal stability, increasing commercial vitality, intensification of development, developing housing, including affordable housing, and ensuring compatibility with adjacent residential land uses (Land Use Element, Economic Development Element, and Housing Element).

The project replaces an approximately 3,600-square-foot restaurant with 21, multiple-family condominiums. Eighteen of the units will be market-rate; three of the units will be below-market rate. The site is a narrow and deep property, which lends itself to infill residential land use.

The Housing Element encourages maximum densities of residential development as well as facilitating affordable housing. The project provides the maximum density allowed for the El Camino Real corridor (38 dwellings per acre) and includes three below-market-rate dwellings. The site was overlooked as an opportunity site in the Housing Element.

The Land Use Element anticipates intensification along the El Camino Real corridor. This intensification is balanced with a policy that development along the corridor will be compatible with the residential land uses to the south. The multiple-family land uses to the south include medium density, two-story apartment buildings. Additionally, the medium density Los Altos Square condominiums are nearby to the south and southwest. The proposed building has stepped massing that lowers as it gets closer to the adjacent residential properties. A strong landscape buffer, including mature trees and an eight-foot tall masonry wall, provides a soft barrier along the rear.

Zoning

Except for the building height, the project meets or exceeds the minimum zoning codes. The front setback is 25 feet, where 25 feet is required. The side setbacks range from approximately seven to 10 feet, where no minimum setback is required from the side property line. The rear setback for the first and second stories is 40 feet, where a minimum setback of 40 feet is required for structures up to 30 feet in height. The rear setback for the third through fifth stories is 100 feet, which meets the minimum 100-foot setback for structures over 30 feet in height. The proposed uncovered decks and balconies may project up to six feet into the rear setback.

As a development incentive for providing affordable housing the applicant seeks an overall height exception to allow: a) a building height of 62 feet, where the Code allows a height of 45 feet; and b) rooftop structures 11 feet above the roof, where the Code allows such structures eight feet above the roof. The development incentives are discussed in more detail in the Affordable Housing section below.

The project meets the City's parking requirements by providing 42 reserved parking spaces, two per unit, and five guest parking spaces. Additionally, the project provides one extra parking space as an unassigned handicapped space. A Klaus Multiparking parking system provides the reserved parking in a mechanical system. The proposed system contains a rack that is two stories tall, which is accessed from the main garage level. The rack stores cars at the garage level and in a basement level below the garage on a series of platforms. The platforms shift up and down and side to side. The parking areas are approximately nine-foot, six inches wide, by 18 feet, six inches deep with the platforms at approximately eight feet, 11 inches wide by 17 feet deep. The system provides a vertical clearance of eight feet on the upper level and six feet, nine inches on the lower level. The parking system is explained in more detail in the attached letter and specifications (Attachment C).

Design Requirements and Findings

The applicable CT District design controls (Section 14.50.150 of the Municipal Code) address such concerns as scale, building proportions, bulk, and screening rooftop mechanical equipment as follows:

- In terms of scale, because of the district's relationship to the larger region, a mixture of scales is appropriate with some elements scaled for appreciation from the street and moving vehicles and others for appreciation by pedestrians;

- The building element proportions, especially those at the ground level, should be kept close to a human scale by using recesses, courtyards, entries, or outdoor spaces;

- At the residential interface, building proportions should be designed to limit bulk and protect residential privacy, daylight and environmental quality; and

- Rooftop mechanical equipment should be screened from public view.

In addition to complying with the General Plan and aforementioned district design criteria, the project must address the standard design review findings (Section 14.78.050 of the Municipal Code) summarized as follows:

- Architectural integrity and appropriate relationship with other structures in the immediate area in terms of height, bulk and design;

- Horizontal and vertical building mass articulation to relate to the human scale; variation and depth of building elevations to avoid large blank walls; and residential elements that signal habitation such as entrances, stairs, porches, bays and balconies;

- Exterior materials that convey quality, integrity, permanence and durability, and effectively define the building elements;

- Generous and inviting landscaping including onsite or offsite substantial street tree canopy, hardscape that complements the building;

- Appropriate signage to reflect the building architecture; and

- Screened rooftop mechanical equipment and architecturally appropriate utility areas.

Design Review

The project reflects the desired development intensity of the Commercial Thoroughfare district. It achieves the maximum housing density permitted, which benefits the City's housing goals. It maintains the required stepped massing from the rear property line to limit bulk and to protect daylight and environmental quality. It maintains and enhances an appropriate landscape buffer of redwood and pine trees in the rear yard to help protect the adjacent residential properties to the south.

The building design reflects an appropriate mixture of scales with some taller vertical elements such as the projecting bays with wood siding for appreciation from the street and moving vehicles and some smaller elements such as the mahogany wood entry door, stone veneer on the front lobby, and metal overhangs for appreciation by pedestrians. The design elements of the building avoid large blank walls.

The building design has appropriate elements that signal habitation such as the human-scaled, wooden front entry door, numerous balconies, overhangs and the vertical orientation of the windowpanes.

The exterior building materials appropriately define the building elements and convey the project's quality, integrity, durability and permanence. For example, the stone veneer on the front lobby is set on thick walls; some of the window bays project from two to four feet from the wall planes. Horizontal siding defines the large projecting window bays. On the sides and rear, a darker color cement siding defines the base of the building. C-channel metal awnings overhang the balconies and entry. Stained wood soffits enrich the detail of the bottom of the metal overhangs and balconies.

The landscape plan appears generous and inviting. The front yard contains two specimen palm trees, a bench, hedges, and ground cover. A staggered linear limestone pathway pavers lead to the front door. Smaller, rectangular pavers cover the driveway. The project replaces a street tree in front of the site and two poor condition street trees in front of the Jack in the Box property with City-standard London plane trees. The rear yard maintains the established redwood trees and a mature pine tree and eight-foot tall buffer wall, and proposed evergreen screening along the perimeter. The rear yard also includes benches and the pathways to allow a passive use. Giant timber bamboo screens the narrow side yards to help buffer the building. Low bollard light fixtures light the pathways around the building.

The four to five foot tall parapets architecturally screen the mechanical equipment that is located in the center of the upper roof. The garage contains the trash and recycling area, which is accessed from each floor by chutes. The western side of the front yard contains a staging area for the refuse on pick-up days.

The project does not propose any signage in the front yard. Large, laser cut metal numbers on the front elevation provide for an appropriate building identification in the larger context of the commercial thoroughfare.

Affordable Housing and Development Incentives

The project exceeds the City's affordable housing regulations by providing three affordable housing units, where two are required. Chapter 14.28 of the Municipal Code requires providing a minimum of 10 percent of the units as moderate income. By Code, if there is more than one moderate-income unit required, then the project must provide at least one of the units at the low-income level. In this case, the base project is 17 dwelling units, meeting the City's objective of maximizing the permitted density at 38 dwellings per acre. Rounding up, under the City's regulations the project must provide two affordable housing units: one moderate-income and one low-income. The project provides one moderate-income unit and two low-income units.

Housing Element program 4.3.2 requires that affordable housing units generally reflect the size and number of bedroom of the market rate units. In this case, the project provides nine, two-bedroom units and 12, three-bedroom units. Of the nine, two-bedroom units, two are designated at the low-income level. Of the 12, three-bedroom units, one is designated as a moderate-income unit. Staff believes that this mix of affordable housing meets the intent of the program since the project provides one of each bedroom size and volunteers an additional low-income housing unit.

Under the State's density bonus regulations (Section 65915 of the California Government Code), the project qualifies for a density bonus if it provides at least 10 percent low-income units. With the second low-income unit, the project provides 11.8 percent low-income units, which allows a density bonus of 21.5 percent. The density bonus adds four units to the base of 17 for 21 permitted dwelling units. Under State law, density bonus units are rounded up when there are fractional units and allowed beyond the City's maximum permitted density.

The two low-income units also qualify the project for at least one development incentive. In this case, the applicant requests a height incentive to allow the project to exceed the maximum height of 45 feet. The proposed building height of 62 feet and rooftop structures 11 feet above the roof allow the project to have a fifth story, taller interior wall heights and elevator service to the roof. The fifth floor allows the applicant to provide three additional market rate units.

Under State law (Section 65915 (d) (1), the City must give deference to the applicant on granting the requested development incentives unless it can make either of the findings:

a) That the development incentive is not required to provide for the costs of developing the affordable units; or

b) That the development incentive would have a specific adverse impact upon public health, safety or the physical environment, or historic resources, for which there is no feasible method to mitigate or avoid the impact without rendering the development unaffordable to low- and moderate-income households.

For reference, the moderate-income housing unit would be limited in cost to be affordable to a household that makes no more than 120 percent of the County's median income. The low-income housing units would be limited in cost to be affordable to a household that makes no more than 80 percent of the County's median income. The County's median income for 2015 was $106,300 for a family of four.

Use Permit

The project requires a use permit to allow the multiple-family residential use. The location of the use is desirable in that it improves an underdeveloped property along the City's major commercial thoroughfare with an appropriate amount of high-quality housing. The project meets other objectives of the zoning code as it relates well to the adjacent land uses, maintains a safe traffic circulation pattern, and provides a high-quality design that enhances the City's distinctive character.

The site has a limited commercial potential. Its relatively narrow frontage on the commercial thoroughfare does not lend itself to a retail development; however, office use may be feasible.

The project adequately buffers its units from the adjacent restaurant and drive-through use by providing an eight-foot tall masonry wall adjacent the restaurant and by providing a landscape plan that has tall bamboo elements.

The project mitigates the noise and air quality impacts from El Camino Real by using special construction and air handling equipment (see Environmental Review below). Appropriate conditions of approval are included to address the noise and air quality impacts.

Subdivision

The project includes a Vesting Tentative Map for Condominium purposes. The subdivision divides the building into 21 residential units and associated common areas. Under State law, a Vesting Tentative Map freezes the City's regulations that apply to the subdivision at the time of entitlement and provides certainty for the subdivider.

The subdivision conforms to the permitted General Plan and zoning densities as modified by State law. The subdivision is not injurious to public health and safety, and is suitable for the proposed type of development. The subdivision provides proper access easements for ingress, egress, public utilities and public services.

Environmental Review

As a small in-fill site substantially surrounded by urban uses, where the development is consistent with the General Plan and zoning, where there is no significant natural habitat for endangered species, where there are no significant effects related to traffic, noise, air or water quality, where the site is adequately served by all required utilities and public services, in accordance with Section 15332 of the California Environmental Quality Act Guidelines the project is exempt from further environmental review.

With regard to traffic, the Implementation Program C8 of the City's General Plan Circulation Element requires a transportation analysis for projects that result in 50 or more net new daily trips. Compared to the property's recently vacant restaurant use the proposed multiple-family residential project results in a net reduction of daily trips. The attached traffic report (Attachment D) calculates the project at 165 daily trips compared to the calculated 324 trips for the restaurant use. Thus, no transportation analysis is required.

With regard to air quality, since the project is located on a State Highway, the project potentially exposes people to air pollution. Additionally, the project's construction has a potential to create air pollution. The project's air quality report (Attachment E) provides appropriate mitigation measures including controlling dust and exhaust during construction, air filtration for the dwellings, and construction equipment guidelines. The report's recommended mitigations are included as conditions of approval. The project is below the significance threshold for creating a significant amount of greenhouse gas. Staff included appropriate conditions of approval to mitigate the air quality impacts.

With regard to noise, the project is located in an area that may expose its residents to higher noise levels. The noise study (Attachment F) recommends certain glazing, exterior wall construction, supplemental ventilation, and mechanical equipment noise controls to mitigate the noise levels to meet the City's standards. Staff included appropriate conditions of approval to mitigate the noise impacts.

With regard to the tree impacts, the applicant commissioned an arborist report. The report catalogs the condition of all of the on-site trees and provides for tree protection measures for the trees to remain. The significant trees to remain in the rear yard are in moderate to high health and suitable for preservation. The report contains tree protection measures for the on-site and off-site trees to remain. Staff included appropriate conditions of approval to mitigate the impacts to the trees.

PUBLIC CONTACT

The applicant held an informal neighborhood meeting on March 16, 2016 at the project site, which was attended by six interested parties.

Staff placed an advertisement in the Town Crier and mailed a post card the 155 surrounding property owners and business owners within a 500-foot radius.

The applicant constructed story poles marking the corners and heights of the building. The taller poles show the height to the top of the parapet (68 feet). Lower flags on the pole indicate the height of a conforming building parapet at 53 feet (45 feet plus eight-foot parapet). The shorter poles at the rear show parapet height at 29 feet.

The applicant provided a four-foot wide by six-foot tall on-site billboard notice located near the front property line.

Staff posted the agenda for a general public notice.

Cc: Lola, LLC, Property Owners
Brett Bailey, Architect, Dahlin Group

Attachments:

A. Application
B. Area Map, Vicinity Map and Notification Map
C. Klaus Parking System Information
D. Traffic Report
E. Air Quality Report
F. Noise Study
G. Arborist's Report

FINDINGS

16-D-01, 16-UP-02 and 16-SD-01—4880 El Camino Real

1. With regard to environmental review, the Planning and Transportation Commission finds in accordance with Section 15332 of the California Environmental Quality Act Guidelines, that the following Categorical Exemption findings can be made:

   a. The project is consistent with the applicable General Plan designation and all applicable General Plan policies as well as with applicable zoning designation and regulations, including incentives for the production of affordable housing;

   b. The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses; there is no record that the project site has value as habitat for endangered, rare or threatened species;

   c. Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and the completed studies and staff analysis reflected in this report support this conclusion; and

   d. The project has been reviewed and it is found that the site can be adequately served by all required utilities and public services.

2. With regard to commercial design review, the Planning and Transportation Commission makes the following findings in accordance with Section 14.78.040 of the Municipal Code:

   a. The proposal meets the goals, policies and objectives of the General Plan with its level of intensity and residential density within the El Camino Real corridor, and ordinance design criteria adopted for the specific district such as the stepped building massing and the landscape buffer at the rear;

   b. The proposal has architectural integrity and has an appropriate relationship with other structures in the immediate area in terms of height, bulk and design; the project has a mixture of scales relating to the larger street and vehicles and the smaller pedestrian orientation;

   c. Building mass is articulated to relate to the human scale, both horizontally and vertically as evidenced in the design of the projecting bay windows, overhangs and balconies. Building elevations have variation and depth and avoid large blank wall surfaces. Residential projects incorporate elements that signal habitation, such as identifiable entrances, overhangs, bays and balconies;

   d. Exterior materials and finishes such as the stained mahogany entry, natural limestone, cementitious horizontal siding, C-channel steel and architectural glass railings, convey quality, integrity, permanence and durability, and materials are used effectively to define building elements such as base, body, parapets, bays, and structural elements;

e. Landscaping such as the specimen palm trees, timber bamboo, hedges and groundcover is generous and inviting and landscape and hardscape features such as the limestone pavers, precast cement planters and benches are designed to complement the building and parking areas and to be integrated with the building architecture and the surrounding streetscape. Landscaping includes substantial street tree canopy including three street trees and two specimen palm trees, either in the public right-of-way or within the project frontage;

f. Signage such as the laser cut building numbers is designed to complement the building architecture in terms of style, materials, colors and proportions;

g. Mechanical equipment is screened from public view by the building parapet and is designed to be consistent with the building architecture in form, material and detailing; and

h. Service, trash and utility areas are screened from public view by their location in the building garage and careful placement to the side of the building consistent with the building architecture in materials and detailing.

3. With regard to use permit, the Planning and Transportation Commission finds in accordance with Section 14.80.060 of the Municipal Code:

a. That the proposed location of the multiple-family residential use is desirable or essential to the public health, safety, comfort, convenience, prosperity, or welfare in that the zoning conditionally permits it and the project provides housing at a variety of affordability levels;

b. That the proposed location of the multiple-family residential use is in accordance with the objectives of the zoning plan as stated in Chapter 14.02 of this title in that the project provides for community growth along sound line; that the design is harmonious and convenient in relation to surrounding land uses; that the project does not create a significant traffic impact; that the project helps meet the City's housing goals including affordable housing; that the project protects and enhances property values; and that the project enhances the City's distinctive character with a high-quality building design in a commercial thoroughfare context;

c. That the proposed location of the multiple-family residential use, under the circumstances of the particular case and as conditioned, will not be detrimental to the health, safety, comfort, convenience, prosperity, or welfare of persons residing or working in the vicinity or injurious to property or improvements in the vicinity;

d. That the proposed multiple-family residential use complies with the regulations prescribed for the district in which the site is located and the general provisions of Chapter 14.02;

4. With regard to the subdivision, the Planning and Transportation Commission finds in accordance with Section 66474 of the Subdivision Map Act of the State of California:

a. That the proposed subdivision is consistent with the General Plan;

b. That the site is physically suitable for this type and density of development in that the project meets all zoning requirements except where development incentives have been granted;

c. That the design of the subdivision and the proposed improvements are not likely to cause substantial environmental damage, or substantially injure fish or wildlife; and no evidence of such has been presented;

d. That the design of the condominium subdivision is not likely to cause serious public health problems because conditions have been added to address noise, air quality and life safety concerns; and

e. That the design of the condominium subdivision will not conflict with public access easements as none have been found or identified on this site.

CONDITIONS

16-D-01, 16-UP-02 and 16-SD-01—4880 El Camino Real

GENERAL

1. **Approved Plans**

   The project approval is based upon the plans received on May 12, 2016, except as modified by these conditions.

2. **Public Right-of-Way, General**

   All work within the public right-of-way shall be done in accordance with plans to be approved by the City Engineer.

3. **Encroachment Permit**

   The applicant shall obtain an encroachment permit, permit to open streets and/or excavation permit prior to any work done within the public right-of-way and it shall be in accordance with plans to be approved by the City Engineer. *Note: Any work within El Camino Real will require applicant to obtain an encroachment permit with Caltrans prior to commencement of work.*

4. **Public Utilities**

   The applicant shall contact electric, gas, communication and water utility companies regarding the installation of new utility services to the site.

5. **ADA**

   All improvements shall comply with Americans with Disabilities Act (ADA).

6. **Sewer Lateral**

   Any proposed sewer lateral connection shall be approved by the City Engineer.

7. **Upper Story Lighting**

   Any upper story lighting on the sides and rear of the building shall be shrouded or directed down to minimize glare.

8. **Indemnity and Hold Harmless**

   The property owner agrees to indemnify and hold City harmless from all costs and expenses, including attorney's fees, incurred by the City or held to be the liability of City in connection with

City's defense of its actions in any proceeding brought in any State or Federal Court, challenging the City's action with respect to the applicant's project.

9. **Plan Changes**

The Planning and Transportation Commission may approve minor changes to the development plans. Substantive project changes require a formal amendment of the application with review by the Planning and Transportation Commission and City Council.

PRIOR TO FINAL MAP RECORDATION

10. **CC&Rs**

The applicant shall include provisions in the Covenants, Conditions and Restrictions (CC&Rs) that: a) restrict storage on the private patio and decks and outline rules for other objects stored on the private patio and decks with the goal of minimizing visual impacts; and b) require the continued use and regular maintenance of the Klaus Multiparking vehicle parking system. Such restriction shall run in favor of the City of Los Altos.

11. **Public Utility Dedication**

The applicant shall dedicate public utility easements as required by the utility companies to serve the site.

12. **Fees**

The applicant shall pay all applicable fees, including but not limited to sanitary sewer impact fees, parkland dedication in lieu fees, traffic impact fees and map check fee plus deposit as required by the City of Los Altos Municipal Code.

PRIOR TO BUILDING PERMIT SUBMITTAL

13. **Subdivision Map Recordation**

The applicant shall record a final map. Plats and legal descriptions of the final map shall be submitted for review and approval by the City Land Surveyor, and the applicant shall provide a sufficient fee retainer to cover the cost of the final map application.

14. **Public Improvements**

The property owner or applicant shall install remove and replace with current City Standard sidewalk, vertical curb and gutter, and driveway approaches from property line to property along the frontage of El Camino Real. Such work shall restore the existing driveway approach to current City Standard vertical curb and gutter along the northerly corner of the property.

15. **Street Trees**

The street trees shall be installed along the project's El Camino Real frontage and include two trees in front of 4896 El Camino Real, as directed by the City Engineer.

16. **Sidewalk Lights**

The owner or applicant shall maintain and protect the existing light fixture in the El Camino Real sidewalk, as directed by the City Engineer.

17. **Performance Bond**

The applicant shall submit a cost estimate for all improvements in the public right-of-way and shall submit a 100 percent performance bond (to be held until acceptance of improvements) and a 50 percent labor and material bond (to be held until 6 months after acceptance of improvements) for the work in the public right-of-way.

18. **Right of Way Construction**

The applicant shall submit detailed plans for any construction activities affecting the public right-of-way, including but not limited to excavations, pedestrian protection, material storage, earth retention, and construction vehicle parking, to the City Engineer for review and approval. The applicant shall also submit on-site and off-site grading and drainage plans that include drain swales, drain inlets, rough pad elevations, building envelopes, and grading elevations for approval by the City.

19. **Sewer Capacity**

The applicant shall show sewer connection to the City sewer main and submit calculations showing that the City's existing 8-inch sewer main will not exceed two-thirds full due to the additional sewage capacity from proposed project. For any segment that is calculated to exceed two-thirds full for average daily flow or for any segment that the flow is surcharged in the main due to peak flow, the applicant shall upgrade the sewer line or pay a fair share contribution for the sewer upgrade to be approved by the Director of Public Works.

20. **Trash Enclosure**

The applicant shall contact Mission Trail Waste Systems and submit a solid waste, recyclables (and organics, if applicable) disposal plan indicating the type, size and number of containers proposed, and the frequency of pick-up service subject to the approval of the Engineering Division. The applicant shall also submit evidence that Mission Trail Waste Systems has reviewed and approved the size and location of the proposed trash enclosure. The approved trash staging location shall be maintained as required by the City Engineer.

21. **Stormwater Management Plan and NPDES Permit**

The applicant shall conform to the Stormwater Management Plan (SWMP) report showing that 100% of the site is being treated, and in compliance with the Municipal Regional Stormwater NPDES Permit (MRP), in accordance with the C.3 Provisions for Low Impact Development (LID) and in compliance with the November 19, 2015 requirements. The SWMP shall be reviewed and approved by a City approved third party consultant at the applicant's expense. The recommendation from the SWMP shall be shown on the building plans.

22. **Green Building Standards**

The applicant shall provide verification that the project will comply with the City's Green Building Standards (Section 12.26 of the Municipal Code) from a qualified green building professional.

23. **Property Address**

The applicant shall provide an address signage plan as required by the Building Official.

24. **Landscape**

The applicant shall provide a landscape and irrigation plan in conformance to the City's Water Efficient Landscape Regulations in accordance with Chapter 12.46 of the Municipal Code.

PRIOR TO ISSUANCE OF DEMOLITION AND/OR BUILDING PERMIT

25. **Construction Management Plan**

The applicant shall submit a construction management plan for review and approval by the Community Development Director. The construction management plan shall address any construction activities affecting the public right-of-way, including but not limited to: prohibiting dirt hauling during peak traffic hours, excavation, traffic control, truck routing, pedestrian protection, appropriately designed fencing to limit project impacts and maintain traffic visibility as much as practical, material storage, earth retention and construction and employee vehicle parking.

26. **Sewer Lateral**

The applicant shall abandon additional sewer laterals and cap at the main if they are not being used. A property line sewer cleanout shall be installed within 5 feet of the property line within private property.

27. **Solid Waste Ordinance**

The applicant shall comply with the City's adopted Solid Waste Collection, Remove, Disposal, Processing & Recycling Ordinance, which requires mandatory commercial and multi-family

dwellings to provide for recycling, and organics collection programs as per Chapter 6.12 of the Municipal Code.

28. **Air Quality Mitigation**

The applicant shall implement and incorporate the air quality mitigations into the plans as required by staff in accordance with the report prepared by Illingsworth & Rodin, Inc., dated March 18, 2016.

29. **Noise Mitigation**

The applicant shall implement and incorporate the noise mitigation measures into the plans as required by staff in accordance with the report by Wilson Ihrig, dated March 2, 2016 and revised on April 20, 2016.

30. **Tree Protection**

The applicant shall implement and incorporate the tree protection measures into the plans and on-site as required by staff in accordance with the report by The Tree Specialist, dated April 21, 2106.

31. **Affordable Housing Agreement**

The applicant shall offer for 30-year period, one, three-bedroom unit at the moderate-income level, and two, two bedroom units at the low-income level, in accordance with the City's Affordable Housing Agreement, in a recorded document in a form approved by the City Attorney.

PRIOR TO FINAL INSPECTION

32. **Maintenance Bond**

The applicant shall submit a one-year, 10-percent maintenance bond upon acceptance of improvements in the public right-of-way.

33. **Stormwater Facility Certification**

The applicant shall have a final inspection and certification done and submitted by the Engineer who designed the SWMP to ensure that the treatments were installed per design. The applicant shall submit a maintenance agreement to City for review and approval for the stormwater treatment methods installed in accordance with the SWMP. Once approved, the applicant shall record the agreement.

34. **Stormwater Catch Basin**

The applicant shall label all new or existing public and private catch basin inlets which are on or directly adjacent to the site with the "NO DUMPING - FLOWS TO THE BAY" logo as required by the City Engineer.

35. **Green Building Verification**

The applicant shall submit verification that the structure was built in compliance with the California Green Building Standards pursuant to Section 12.26 of the Municipal Code.

36. **Landscaping Installation**

The applicant shall install all on- and off-site landscaping and irrigation, as approved by the Community Development Director and the City Engineer.

37. **Signage and Lighting Installation**

The applicant shall install all required signage and on-site lighting per the approved plan. Such signage shall include the disposition of guest parking, the turn-around/loading space in the front yard and accessible parking spaces.

38. **Acoustical Report**

The applicant shall submit a report from an acoustical engineer ensuring that the rooftop mechanical equipment meets the City's noise regulations.

39. **Landscape Certification**

The applicant shall provide a Certificate of Completion conforming to the City's Water Efficient Landscape Regulations.

40. **Condominium Map**

The applicant shall record the condominium map as required by the City Engineer.

41. **Street Damage**

The applicant shall repair any damaged right-of-way infrastructures and otherwise displaced curb, gutter and/or sidewalks and City's storm drain inlet shall be removed and replaced as directed by the City Engineer or his designee. The applicant is responsible to resurface (grind and overlay) half of the street along the frontage of El Camino Real if determined to be damaged during construction, as directed by the City Engineer or his designee.

42. **Stormwater Management Plan Inspection**

The applicant shall have a final inspection and certification done and submitted by the Engineer who designed the SWMP to ensure that the treatments were installed per design. The applicant shall submit a maintenance agreement to City for review and approval for the stormwater treatment methods installed in accordance with the SWMP. Once approved, the applicant shall record the agreement.

43. **Driveway Visibility**

The applicant shall work with the Engineering Division to indicate a sufficient no parking area along El Camino Real to the north of the driveway to provide adequate sight visibility.