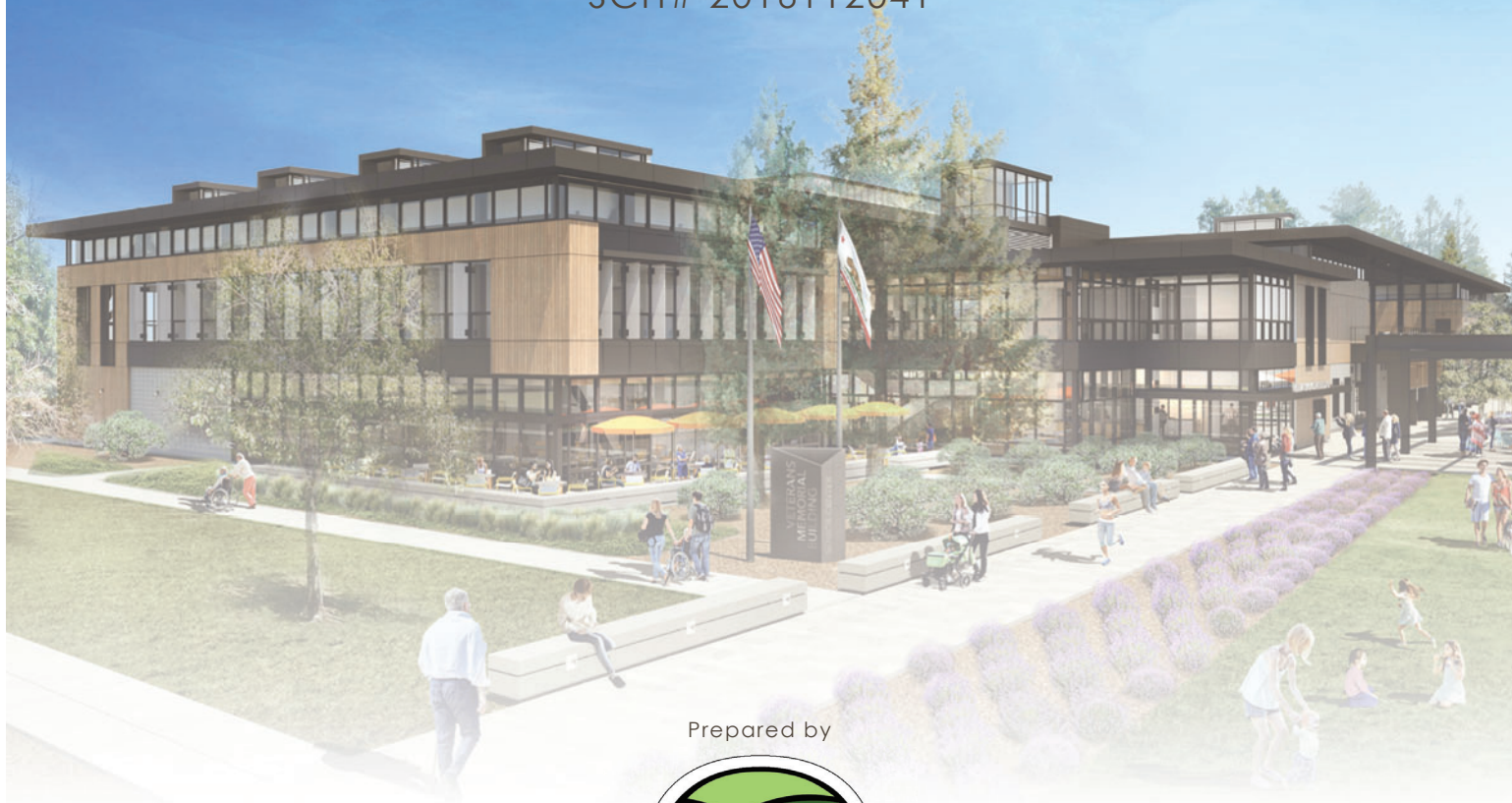


Draft Environmental Impact Report

Veterans Memorial Senior Center/YMCA Project

SCH# 2016112041



Prepared by



In Consultation with



June 2019

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SUMMARY

The Veterans Memorial Senior Center/YMCA project site is located at 1455 Madison Avenue within the larger 31.7-acre Red Morton Community Park in Redwood City. The project proposes to rezone the project site from R-2 (Residential – Duplex) to PF (Public Facilities) in order to demolish the existing buildings and surface parking lot on-site and construct a new Veterans Memorial Senior Center (VMSC) and YMCA. The YMCA would relocate its operations from its existing Sequoia YMCA facility at Palm Park to the proposed YMCA. In addition, as part of the project, portions of Nevada Street and St. Francis Street would be vacated; and new traffic calming measures would be installed in the neighborhood.

The proposed project would be implemented in two phases: Phase 1 consists of constructing the VMSC, pedestrian promenade, and traffic calming measures and Phase 2 consists of constructing the YMCA. Both phases would implement Transportation Demand Management (TDM) measures.

Significant Impacts and Mitigation Measures

The following table is a brief summary of the significant environmental impacts of the project identified and discussed within the text of the Environmental Impact Report (EIR), and the mitigation measures proposed to avoid or reduce those impacts. Refer to the main body text of the EIR for detailed discussions of the environmental setting, impacts, and mitigation measures. Alternatives to the proposed project are also summarized at the end of this section.

The project would result in significant unavoidable impacts due to the loss of a historic resource (see Impact CUL-1 in Section 3.5 Cultural Resources and Impact REC-2 in Section 3.16 Recreation). The project would not result in any significant unavoidable cumulative impacts.

Summary of Impacts and Mitigation Measures

Impact	Mitigation Measures
<p>Impact AIR-3: The project would not expose sensitive receptors to substantial pollutant concentrations.</p> <p>Less than Significant Impact with Mitigation Incorporated</p>	<p>Air Quality</p> <p>MM AIR-3.1: Prior to issuance of a grading permit, the project shall develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 55-percent reduction in DPM exhaust emissions or greater. The plan shall be submitted and approved by the City Planning Division. The following are feasible methods:</p> <ul style="list-style-type: none"> • All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall, at a minimum, meet EPA particulate matter emissions standards for Tier 3 engines with CARB-certified Level 3 Diesel Particulate Filters or equivalent. • All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for

Summary of Impacts and Mitigation Measures

Impact	Mitigation Measures
	<p>more than two days continuously shall meet EPA Tier 4 standards for particulate matter.</p> <ul style="list-style-type: none"> • The use of equipment that includes electric or alternatively-fueled equipment (i.e., non-diesel) would meet the reduction requirement above.

Impact AIR-C: The project would not result in a cumulatively considerable contribution to a significant air quality impact.

See **MM AIR-3.1** above

Less than Significant Cumulative Impact with Mitigation Incorporated

Biology

Impact BIO-1: The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

MM BIO-1.1: Construction shall be scheduled to avoid the nesting bird season to the extent feasible. The nesting season for most birds, including most raptors, in the San Francisco Bay Area extends from February 1 through August 31.

Less than Significant Impact with Mitigation Incorporated

If it is not possible to schedule construction activities between September 1 and January 31, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure no nest shall be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of grading, tree removal, or other demolition or construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).

During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist, in consultation with CDFW, shall determine the extent of a construction-free buffer zone to be established around the nest to ensure that nests of bird species protected by the MBTA or Fish and Game Code shall not be disturbed during project construction.

Summary of Impacts and Mitigation Measures

Impact	Mitigation Measures
	A final report of nesting birds, including any protection measures, shall be submitted to the Director of Community Development prior to the start of grading or tree removal.

Impact BIO-C: The project would not result in a cumulatively considerable contribution to a significant biological resources impact.

See **MM BIO-1.1** above

Less than Significant Cumulative Impact with Mitigation Incorporated

Cultural Resources

Impact CUL-1: The project would cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.

MM CUL-1.1: Prior to issuance of any demolition or grading permits, the City shall document the senior center. The documentation shall be in the form of a Historic American Buildings Survey (HABS) Level II and shall comply with the Secretary of the Interior’s Standards for Architectural and Engineering Documentation. The documentation shall include drawings, photographs and a narrative overview:

Significant and Unavoidable Impact with Mitigation Incorporated

- Drawings: Existing historic drawings of the senior center, if available, shall be photographed with large-format negatives or photographically reproduced on Mylar.
- Photographs: Photo-documentation of the exterior of the senior center shall be prepared to HABS standards for archival photography. Key views of the building’s interior should also be included in the photo-documentation.
- Historical Overview: A detailed narrative description of the building and its history shall be prepared. It is anticipated that much of this information will be drawn from the Historic Resource Report that Diana Painter completed for the VMSC in 2010.

The documentation shall be completed by a historian or architectural historian meeting the Secretary of the Interior’s Professional Qualification Standards for History and/or Architectural History. To ensure its public accessibility, the completed documentation shall be filed with the Redwood City Public Library for

Summary of Impacts and Mitigation Measures

Impact	Mitigation Measures
	<p>inclusion in their local history collection, as well as with the San Mateo County History Museum.</p> <p>MM CUL-1.2: The City shall be responsible for the production and placement of an interpretive display in the new VMSC/YMCA facility that describes the history and significance of the senior center, using photographs and drawings in addition to narrative text. The display shall be placed in a prominent space within the new building.</p> <p>Even with the implementation of MM CUL-1.1 and MM CUL-1.2, the project would result in a significant and unavoidable loss of a historic resource.</p>
<hr/> Noise <hr/>	
<p>Impact NOI-1: The project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.</p>	<p>MM NOI-1.1: The project shall develop a construction noise control plan, which shall include, but is not limited to the following measures:</p> <ul style="list-style-type: none">• If residents surrounding the project site complain about weekend and/or holiday construction noise or if work is disruptive to the adjacent Red Morton Community Park activities occurring on Saturdays, all weekend and holiday construction work shall cease at the City’s discretion, as specified in the allowable construction hours stated in the City’s Municipal Code.• Construct temporary noise barriers shall be installed, where feasible to screen stationary noise-generating equipment when located within 200 feet of adjoining sensitive land uses. Temporary noise barrier fences would provide a five dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receptor and if the barrier is constructed in a manner that eliminates any cracks or gaps.• If stationary noise-generating equipment is located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used. Any enclosure openings or venting shall face away from sensitive receptors.
<p>Less than Significant Impact with Mitigation Incorporated</p>	

Summary of Impacts and Mitigation Measures

Impact	Mitigation Measures
	<ul style="list-style-type: none">• Construction staging areas (including material stockpiles, maintenance/equipment staging, and parking areas) shall be established at locations that would create the greatest distance between the construction-related noise sources and noise-sensitive residential receptors nearest the project site during all project construction.• Generators, compressors, and pumps shall be housed in acoustical enclosures.• Where feasible, temporary power service from local utility companies should be used instead of portable generators.• Locate cranes as far from adjoining noise-sensitive residential receptors as possible.• During final grading, substitute graders for bulldozers. Wheeled heavy equipment are quieter than track equipment.• Substitute nail guns for manual hammering.• Avoid the use of circular saws, miter/chop saws, and radial arm saws near the adjoining noise-sensitive residential receptors. Shield saws with a solid screen with material having a minimum surface density of two pounds per square feet (e.g., such as ¾-inch plywood).• Substitute electrically-powered tools for noisier pneumatic tools.• Maintain smooth vehicle pathways for trucks and equipment accessing the site, and avoid local residential neighborhoods as much as possible.• During interior construction, the exterior windows facing noise-sensitive receptors shall be closed.• During interior construction, noise-generating equipment shall be located within the building to break the line-of-sight to the adjoining receptors.• The contractor shall be required to prepare a schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that

Summary of Impacts and Mitigation Measures

Impact	Mitigation Measures
	<p>construction activities can be scheduled to minimize noise disturbance.</p> <ul style="list-style-type: none"> • Designate a “disturbance coordinator” who would be responsible for responding to any complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., bad muffler, etc.) and would require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule. <p>MM NOI-1.2: Mechanical equipment shall be selected and designed to reduce impacts on surrounding uses to meet ambient noise conditions at the nearest residential land uses during both daytime and nighttime conditions. A qualified acoustical consultant shall be retained to review mechanical noise as these systems are selected to determine specific noise reduction measures necessary to comply with the City’s noise level requirements. Noise reduction measures could include, but are not limited to, selection of equipment that emits low noise levels and/installation of noise barriers, such as enclosures and parapet walls, to block the line-of-sight between the noise source and the nearest receptors. Alternate measures may include locating equipment in less noise-sensitive areas, such as indoors or the rooftop of the buildings away from the building’s edge nearest the noise-sensitive receptors.</p>
<p>Impact NOI-2: The project would not result in generation of, excessive groundborne vibration or groundborne noise levels.</p> <p>Less than Significant Impact with Mitigation Incorporated</p>	<p>MM NOI-2.1: In addition to the noise controls outlined in General Plan Program PS-63 and mitigation measure MM NOI-1.1, the project shall implement the following measures where vibration levels due to construction activities would exceed 0.3 in/sec PPV at nearby sensitive uses:</p> <ul style="list-style-type: none"> • Prohibit the use of heavy vibration-generating construction equipment within 20 feet of the structures located adjacent to the project site. • The contractor shall alert heavy equipment operators to the close proximity of the adjacent structures so they can exercise extra care.

Summary of Impacts and Mitigation Measures

Impact	Mitigation Measures
<p>Impact NOI-C: The project would not result in a cumulatively considerable contribution to a significant noise impact.</p> <p>Less than Significant Cumulative Impact with Mitigation Incorporated</p>	<p>See MM NOI-1.1 above</p>
Recreation	
<p>Impact REC-2: The project would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.</p> <p>Significant and Unavoidable Impact with Mitigation Incorporated</p>	<p>See MM CUL-1.1 and MM CUL-1.2 above</p> <p>Even with the implementation of MM CUL-1.1 and MM CUL-1.2, the project would result in a significant and unavoidable loss of a historic resource.</p>
Transportation	
<p>Impact TRN-1: The project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian facilities.</p> <p>Less than Significant Impact with Mitigation Incorporated</p>	<p>MM TRN-1.1: Within one year of full buildout and occupancy of the project, the City shall complete a traffic operations study to monitor Intersection 9, Valota Road and Roosevelt Avenue, and the project proponents shall signalize the intersection if the peak hour traffic signal warrant is met and the level of service deteriorates to an unacceptable level of service.</p>
<p>Impact TRN-C: The project would not result in a cumulatively considerable contribution to a significant transportation impact.</p> <p>Less than Significant Cumulative Impact with Mitigation Incorporated</p>	<p>See MM TRN-1.1 above</p> <p>MM TRN-C.1: The project shall add a refuge lane on Jefferson Avenue for drivers turning left onto Jefferson Avenue from Valota Road.</p>

Project Alternatives

The California Environmental Quality Act (CEQA) requires that an EIR identify alternatives to a project as it is proposed. The CEQA Guidelines specify that the EIR should identify alternatives which “would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.” The purpose of this section is to determine whether there are alternatives of design, scope, or location which would substantially lessen the significant impacts, even if those alternatives “impede to some degree the attainment of the project objectives” or are more expensive (Section 15126.6).

While CEQA does not require that alternatives must be capable of meeting all of the project objectives, their ability to meet most of the objectives is considered relevant to their consideration. As identified in Section 2.4, the City's objectives for the project are as follows:

1. Replace the aging VMSC and reduce escalating maintenance costs with a new approximately 45,000 square foot Veterans Memorial Building/Senior Center to enhance the existing seniors' programs and have spaces including a special veterans exhibits honoring Redwood City and San Mateo County veterans and office space for non-profit groups and the NFL Alumni Northern California Chapter.
2. Form a public/non-profit partnership with the YMCA to re-imagine the aging Veterans Memorial Senior Center and Sequoia YMCA to meet the changing health living, recreational and social needs of seniors, veterans, youth and families and ensure the Sequoia YMCA is able to remain in Redwood City.
3. Enhance and expand the existing membership at the Sequoia YMCA by providing a new approximately 35,000 square foot YMCA with a fitness center, multipurpose rooms, indoor and outdoor pools and a childcare facility open to the public.
4. Provide year round aquatics with new indoor and outdoor swimming pools as the City is currently only able to offer seasonal use of an aging center with growing maintenance costs.
5. Enhance the community quality of life by expanding health and wellness opportunities for all ages and enhancing the community's fitness, wellness, and recreation resources.
6. Provide state-of-the art community facility with multiple recreational opportunities for a growing community – both in population and age.
7. Provide a public promenade with flexible outdoor gathering spaces that would provide a gateway to Red Morton Park and link both buildings.
8. Design the new VMSC to meet a minimum of LEED Certification standards.
9. Provide a new public facility that could have the dual purpose of providing an emergency shelter or evacuation center in the event of an emergency.
10. Implement traffic calming measures near Red Morton Community Park to facilitate safer and slower vehicle circulation.

The City considered alternative locations for the proposed project to avoid or lessen the project's air quality, biological resources, cultural resources, noise, and recreation impacts. A feasible alternative location would be of similar size to the project site, within the jurisdictional boundaries of the City, and have the appropriate General Plan land use designation. There are not suitable locations meeting the criteria other than Red Morton Community Park. For these reasons, an alternative location to the project site was considered but rejected as infeasible.

An alternative location for the proposed YMCA elsewhere at Red Morton Community Park was considered in order to avoid the project's significant and unavoidable impact to a historic resource. The southwest portion of the park was considered as an alternative location for the proposed YMCA as this portion of the park is underutilized; however, the Westside Renovation/Magical Bridge Playground at Red Morton Park project is currently being constructed there. For this reason, an alternative location at Red Morton Community Park was considered but rejected as infeasible.

A summary of the feasible project alternatives evaluated in this EIR is provided below. Refer to Section 7.0 Alternatives for the full discussion of each alternative.

No Project Alternative

The CEQA Guidelines specifically require consideration of a “No Project” Alternative. The purpose of including a No Project Alternative is to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project. The Guidelines specifically advise that the No Project Alternative is “what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” The Guidelines emphasize that an EIR should take a practical approach, and not “...create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment (Section 15126.6[e][3][B]).”

Under the No Project Alternative, the project site could remain as it is today – developed with the existing VMSC, Sid Herkner Pool, and NFL Alumni Association building. The No Project Alternative would avoid all of the project’s environmental impacts and traffic calming benefits, and not meet any of the project objectives.

Preservation Alternative

Under the Preservation Alternative, the proposed VMSC would be constructed as proposed and the proposed YMCA would preserve the historic portions of the existing VMSC building and setting and construct a new addition to the preserved portion of the existing VMSC building. This alternative’s preservation of the historic portions of the existing VMSC would result in a less than significant impact to the historic resource and avoid the project’s significant and unavoidable impacts to a historic resource. This alternative would result in the same or similar impacts to all other environmental resources as the proposed project and could meet all of the project’s objectives.

Sequoia YMCA Site Redevelopment

Under the Sequoia YMCA Site Redevelopment Alternative, the proposed VMSC would be constructed as proposed, the proposed traffic calming measures would be constructed as proposed, and the proposed YMCA would be constructed where the existing Sequoia YMCA is currently at Palm Park.

The Sequoia YMCA Site Redevelopment Alternative would avoid the project’s significant and unavoidable impacts related to demolishing a historic resource and result in similar impacts as the project on all other environmental resources. This alternative could meet all of the project objectives except for objective 2 of forming a partnership between the City and YMCA.

Known Views of Local Groups and Areas of Controversy

Concerns from local residents, property owners, organizations, or agencies about the project were related to aesthetics, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, noise, and transportation.

Throughout the community outreach process, residents in the neighborhoods adjacent to the project voiced concerns around the proposed amount of parking for the project as well as the overall speed and flow of traffic causing safety concerns within the neighborhood.

SECTION 1.0 INTRODUCTION

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The City of Redwood City, as the Lead Agency, has prepared this Draft EIR for the Veterans Memorial Senior Center/YMCA project in compliance with CEQA and the CEQA Guidelines.

As described in CEQA Guidelines Section 15121(a), an EIR is an informational document that assesses potential environmental impacts of a proposed project, as well as identifies mitigation measures and alternatives to the proposed project that could reduce or avoid adverse environmental impacts (CEQA Guidelines 15121[a]). As the CEQA Lead Agency for this project, the City of Redwood City is required to consider the information in the EIR along with any other available information in deciding whether to approve the project. The basic requirements for an EIR include discussions of the environmental setting, significant environmental impacts including growth-inducing impacts, cumulative impacts, mitigation measures, and alternatives. It is not the intent of an EIR to recommend either approval or denial of a project.

1.2 EIR PROCESS

1.2.1 Notice of Preparation and Scoping

In accordance with Section 15082 of the CEQA Guidelines, the City prepared a Notice of Preparation (NOP) for this EIR. The NOP was circulated to local, state, and federal agencies on November 11, 2016. The standard 30-day comment period concluded on December 16, 2016. The NOP provided a general description of the proposed project and identified possible environmental impacts that could result from implementation of the project. The City also held a public scoping meeting on December 6, 2016 to discuss the project and solicit public input as to the scope and contents of this EIR. The meeting was held at Redwood City Council Chambers.

Subsequent to the publication of the NOP, the project scope was revised based on community feedback and direction from the City Council on conceptual designs. The City circulated an updated NOP from August 24, 2018 through September 24, 2018. Appendix A of this EIR includes both NOPs and comments received on the NOPs.

1.2.2 Draft EIR Public Review and Comment Period

Publication of this Draft EIR marks the beginning of a 45-day public review period. During this period, the Draft EIR will be available to the public and local, state, and federal agencies for review and comment. Notice of the availability and completion of this Draft EIR will be sent directly to every agency, person, and organization that commented on the NOP, as well as the Office of Planning and Research (OPR). Written comments concerning the environmental review contained in this Draft EIR during the 45-day public review period should be sent to:

Anna McGill, Senior Planner
Community Development Department
City of Redwood City
1017 Middlefield Road
Redwood City, CA 94063
amcgill@redwoodcity.org

1.3 FINAL EIR/RESPONSES TO COMMENTS

Following the conclusion of the 45-day public review period, the City will prepare a Final EIR in conformance with CEQA Guidelines Section 15132. The Final EIR will consist of:

- Revisions to the Draft EIR text, as necessary;
- List of individuals and agencies commenting on the Draft EIR;
- Responses to comments received on the Draft EIR, in accordance with CEQA Guidelines (Section 15088);
- Copies of letters received on the Draft EIR.

Section 15091(a) of the CEQA Guidelines stipulates that no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings. If the lead agency approves a project despite it resulting in significant adverse environmental impacts that cannot be mitigated to a less than significant level, the agency must state the reasons for its action in writing. This Statement of Overriding Considerations must be included in the record of project approval.

1.3.1 Notice of Determination

If the project is approved, the City will file a Notice of Determination (NOD), which will be available for public inspection and posted within 24 hours of receipt at the County Clerk's Office and available for public inspection for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15094[g]).

SECTION 2.0 PROJECT INFORMATION AND DESCRIPTION

2.1 PROJECT LOCATION

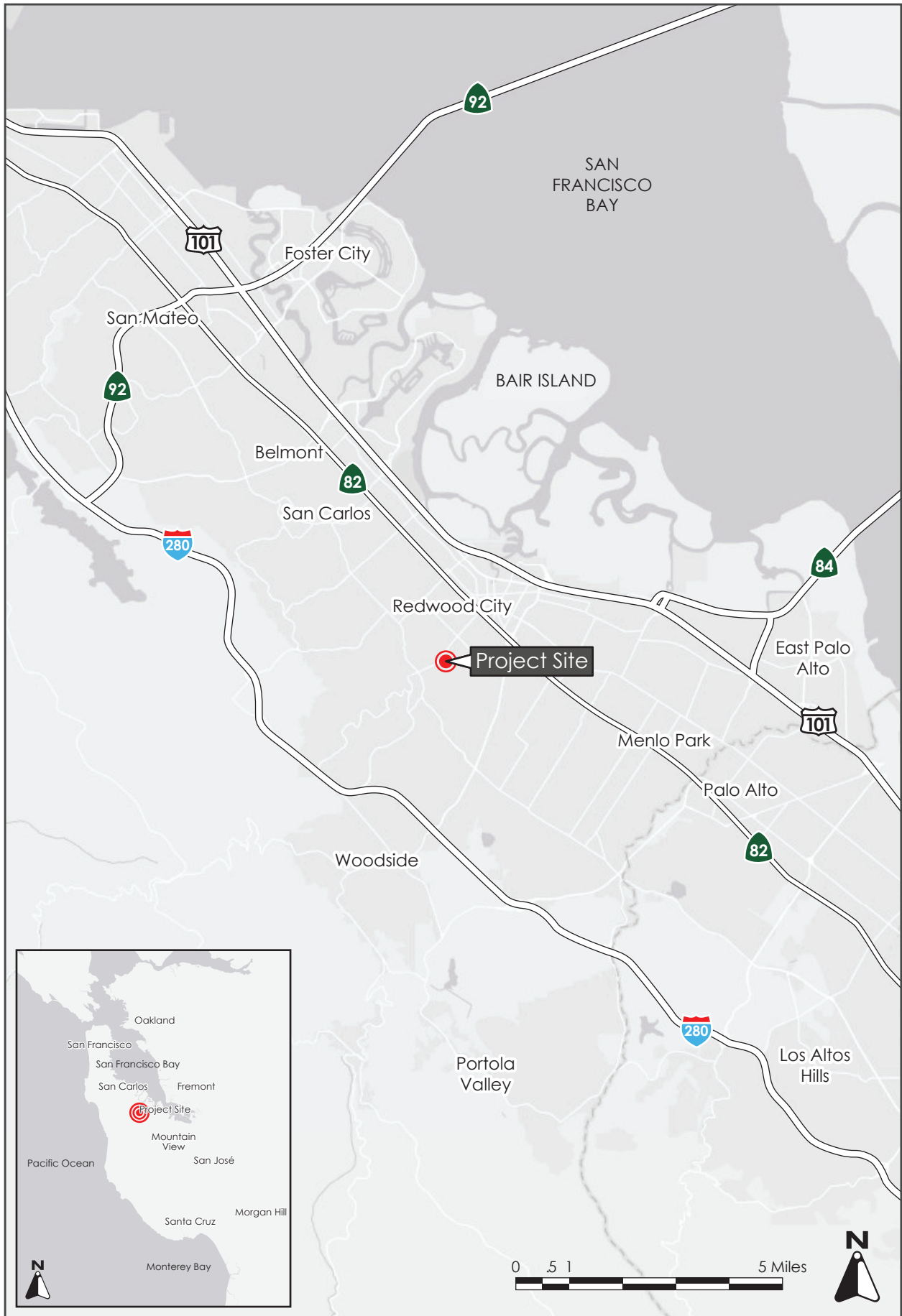
The approximately 5.4-acre project site (Accessors Parcel Numbers [APN] 058-186-040, 058-196-040 and 058-184-040) is located at 1455 Madison Avenue within the larger 31.7-acre Red Morton Community Park in Redwood City (refer to Figure 2.2-1, Figure 2.2-2, and Figure 2.2-3)

Red Morton Community Park is located at the southwest quadrant of Madison Avenue and Myrtle Street, within a residential neighborhood.¹ The project site is located at the northern portion of the park, with Nevada Street, St. Francis Street, and Vera Avenue bisecting the site. The project site consists of the existing approximately 34,560 square foot Veterans Memorial Building Senior Center (VMSC) (which includes three buildings: the senior center, resource building, annex), 17,175 square foot Sid Herkner Pool, 3,500 square foot NFL Alumni Association building, surface parking, and landscaping.

2.2 BACKGROUND INFORMATION

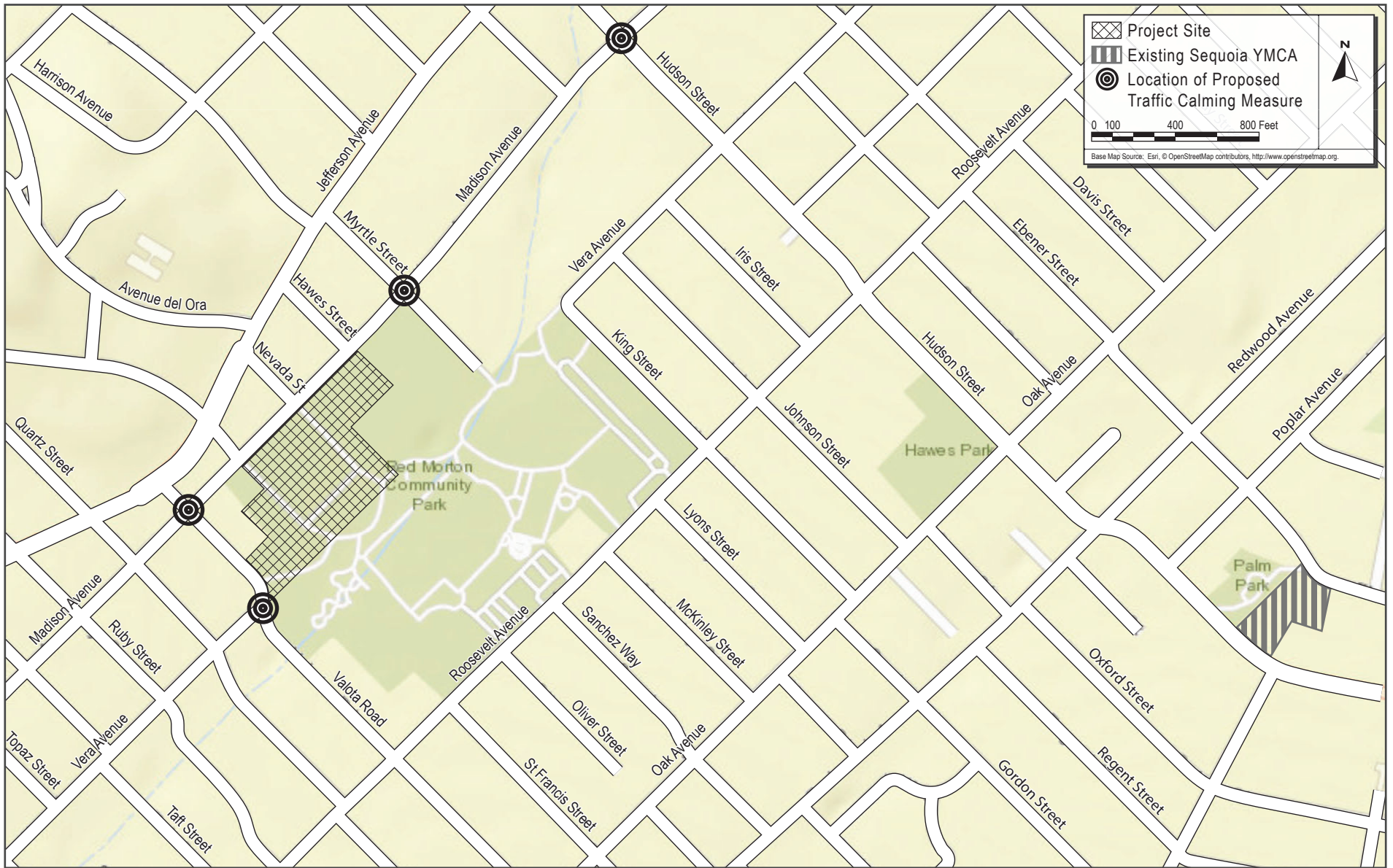
In 2017 and 2018 the City of Redwood City initiated a master planning effort, which included a series of community design workshops and traffic calming measure meetings, for the proposed project. The existing VMSC and Sequoia YMCA at Palm Park (located at 1445 Hudson Street, approximately 0.65 miles east of the project site) are aging and require improvements to meet Redwood City's changing needs. After community discussions about whether to rebuild or renovate, a decision was made to rebuild and reimagine these facilities. As a result, the City and the YMCA have formed a public/non-profit partnership to re-imagine the facilities and meet ongoing community needs. However, the project would be entitled and constructed in two phases, with the City as the applicant for the first phase (and thus initiating the project and CEQA review) and the YMCA as the applicant for the second phase and submitting an application for entitlements separately.

¹ For ease of reference, Madison Avenue is considered north of the site.



REGIONAL MAP

FIGURE 2.2-1



Legend

- Project Site
- Existing Sequoia YMCA
- Location of Proposed Traffic Calming Measure

0 100 400 800 Feet

Base Map Source: Esri, © OpenStreetMap contributors, <http://www.openstreetmap.org>

VICINITY MAP

FIGURE 2.2-2



AERIAL PHOTOGRAPH

FIGURE 2.2-3

2.3 PROJECT DESCRIPTION

The project proposes to rezone the project site from R-2 (Residential – Duplex) to PF (Public Facilities) in order to demolish the existing buildings and surface parking lot on-site and construct a new VMSC and YMCA. The YMCA would relocate its operations from its existing Sequoia YMCA facility at Palm Park to the proposed YMCA.² In addition, as part of the project, portions of Nevada Street and St. Francis Street would be vacated; and new traffic calming measures would be installed in the neighborhood.

The proposed project would be implemented in two phases: Phase 1 consists of constructing the VMSC, pedestrian promenade, and traffic calming measures and Phase 2 consists of constructing the YMCA. These two project phases are described in detail below. Both phases would implement TDM measures. These measures are described in Section 2.3.3.

2.3.1 Phase 1

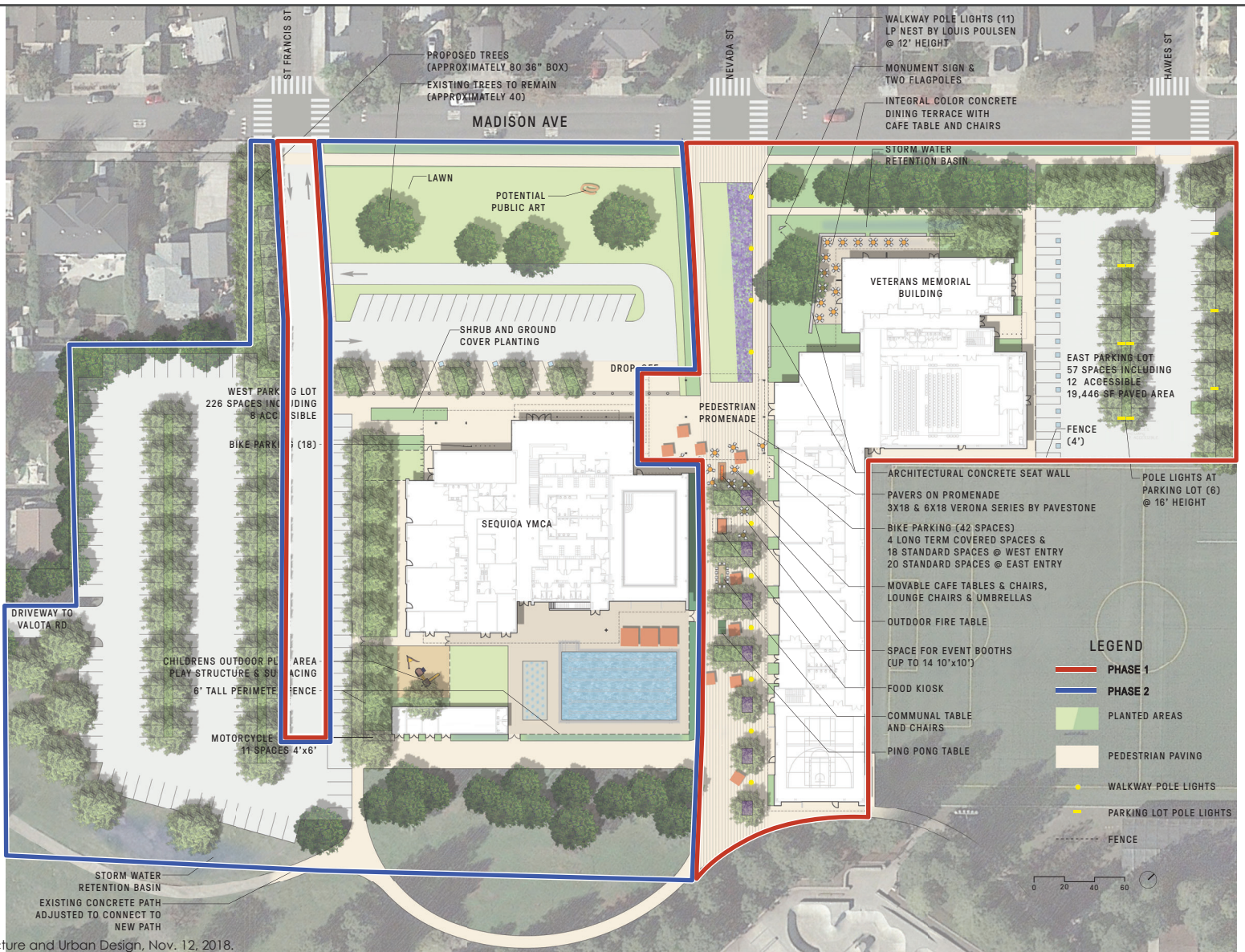
2.3.1.1 *Veterans Memorial Building/ Senior Center*

A new two-story (up to 41 foot tall), approximately 45,000 square foot VMSC is proposed on the eastern portion of the site (refer to Figure 2.3-1). The VMSC would be designed to promote greater, multi-generational community access with programmatic elements for all ages. The proposed VMSC would include the following components:

- Lobby at the entry with a seating area;
- Multi-purpose rooms for group meetings as well as social, arts and crafts, and other activities;
- Multi-purpose dining room with a kitchen;
- Physical therapy and wellness rooms;
- Mini gymnasium suitable for a variety of indoor activities such as half-court basketball, pickleball, and multi-purpose exercise and group activities;
- Lounge/game room for gathering and table games;
- Outdoor roof terrace (approximately 5,900 square feet) with a track for running and walking, as well as seating areas and a space for gardening. The outdoor roof terrace would also include a roof-trellis structure;
- Office spaces for non-profit groups and the NFL Alumni Northern California Chapter;
- Multi-purpose theater (approximately 7,200 square feet) with approximately 270 seats. This space could also be used for gatherings and exercise classes; and
- Exhibit space honoring local United States veterans and NFL alumni of Northern California.

The proposed VMSC would operate from 5:30 AM to 10:30 PM Monday through Friday and 7:00 AM to 11:00 PM on Saturday and Sunday, same as the operation of the current VMSC. A microgrid/battery system is proposed to provide emergency power to VMSC in the event of a power outage. The microgrid/battery system would be located at the southeast corner of the proposed parking lot for VMSC.

² The future of the Sequoia YMCA site and improvements are unknown at this time and independent of the proposed project.



Source: ELS Architecture and Urban Design, Nov. 12, 2018.

CONCEPTUAL SITE PLAN

FIGURE 2.3-1

Green Building Measures

The proposed VMSC would be designed to meet Leadership in Energy and Environmental Design (LEED) certification standards by incorporating natural ventilation systems, water conservation measures (including use of cisterns for on-site rainwater storage), and energy conservation measures (including use of efficient Light Emitting Diode [LED] light fixtures and renewable building materials and installation of solar panels).

Nevada Street Vacation and Pedestrian Promenade

As part of Phase 1, the approximately 300-foot segment of Nevada Street that extends from its intersection with Madison Avenue south through the project site would be vacated. This portion of Nevada Street would be converted to a pedestrian promenade. The proposed promenade would include landscaping and pedestrian amenities (such as refreshment kiosks, seating, and game tables). The promenade would provide a pedestrian link between the Phase 1 and Phase 2 development.

St. Francis Street Vacation

As part of Phase 1, the approximately 300-foot segment of St. Francis Street that extends from its intersection with Madison Avenue south through the project site would be vacated and converted to an access driveway for the proposed YMCA.

Landscaping, Stormwater Treatment, Utility Connections

As part of the Phase 1 construction, approximately 21 trees would be removed and 34 new trees would be planted. In addition, new landscaping would be placed around the proposed VMSC and associated parking lot. The landscaping area north of the VMSC building would function as a stormwater retention basin.

The project would also include other design features (such as vegetated swales, permeable pavement, and bio-treatment areas) to capture and treat stormwater runoff from the adjoining Madison Avenue right-of-way and within the site prior to its discharge from the site.

The project would require a new, approximately 300-foot long, eight-inch water main in segment of Nevada Street that is proposed to be vacated and new lateral connections from the project site to existing utility systems (sanitary sewer, water, and storm drain) located in the public right-of-way or public utility easements.

The project would also underground the existing overhead electricity lines along Nevada Street and construct new underground services (including the above mentioned utility connections for the building).

Lighting

Phase 1 would include nighttime security lighting along the pedestrian promenade, in the parking lot, and surrounding the proposed VMSC. The proposed lighting would be shielded and directed downwards or towards the building.

Access and Parking

While the proposed VMSC is being constructed, the existing VMSC would continue to operate and its associated parking lots would be available for patrons.

Upon completion, pedestrians would access Phase 1 via the sidewalk on Madison Avenue, the proposed pedestrian promenade, and the existing Vera corridor bike path within the park.

Vehicular access to Phase 1 would be provided via a driveway on Madison Avenue that would lead directly to the surface parking lot. A surface parking lot for Phase 1 of the project is proposed east of the VMSC and would have 57 vehicle parking spaces (including four electrical vehicle charging stations) and 42 bicycle parking spaces.

During weekend operations, employees of the VMSC would park at the Community Activities Building parking lot located within Red Morton Community Park on the south side of the park.

2.3.1.2 Off-Site Improvements

Traffic Calming Measures

To address existing traffic safety concerns regarding speeding and other unsafe driving behavior, the project proposes the following traffic calming measures:

- 1) Install a new roundabout at Vera Avenue and Valota Road;
- 2) Install a new median island and curb extensions at the Valota Road and Madison Avenue intersection;
- 3) Install a new mini traffic circle at Madison Avenue and Myrtle Street; and
- 4) Expand the existing traffic circle at Hudson Street and Madison Avenue and remove the two-way stop control on Madison Avenue.

The proposed traffic calming measures are shown in Figure 2.3-2 and Figure 2.3-3.

Signage at Nevada Street and Jefferson Avenue

Left turns are prohibited from Nevada Street onto westbound Jefferson Avenue and from westbound Jefferson Avenue onto Nevada Street. Despite the existing median, drivers were observed driving around the median to make the left turns. The project would install a sign notifying drivers that left turns are prohibited at the intersection.

2.3.1.3 Construction

Phase 1 construction is estimated to take approximately 24 months, starting as early as January 2020 and concluding as early as December 2022. Phase 1 construction would require grading and excavation; however, no soil is expected to be hauled off-site. As discussed previously, the existing VMSC would continue to operate during construction of Phase 1.

Vera Avenue and Valota Road



Existing Intersection

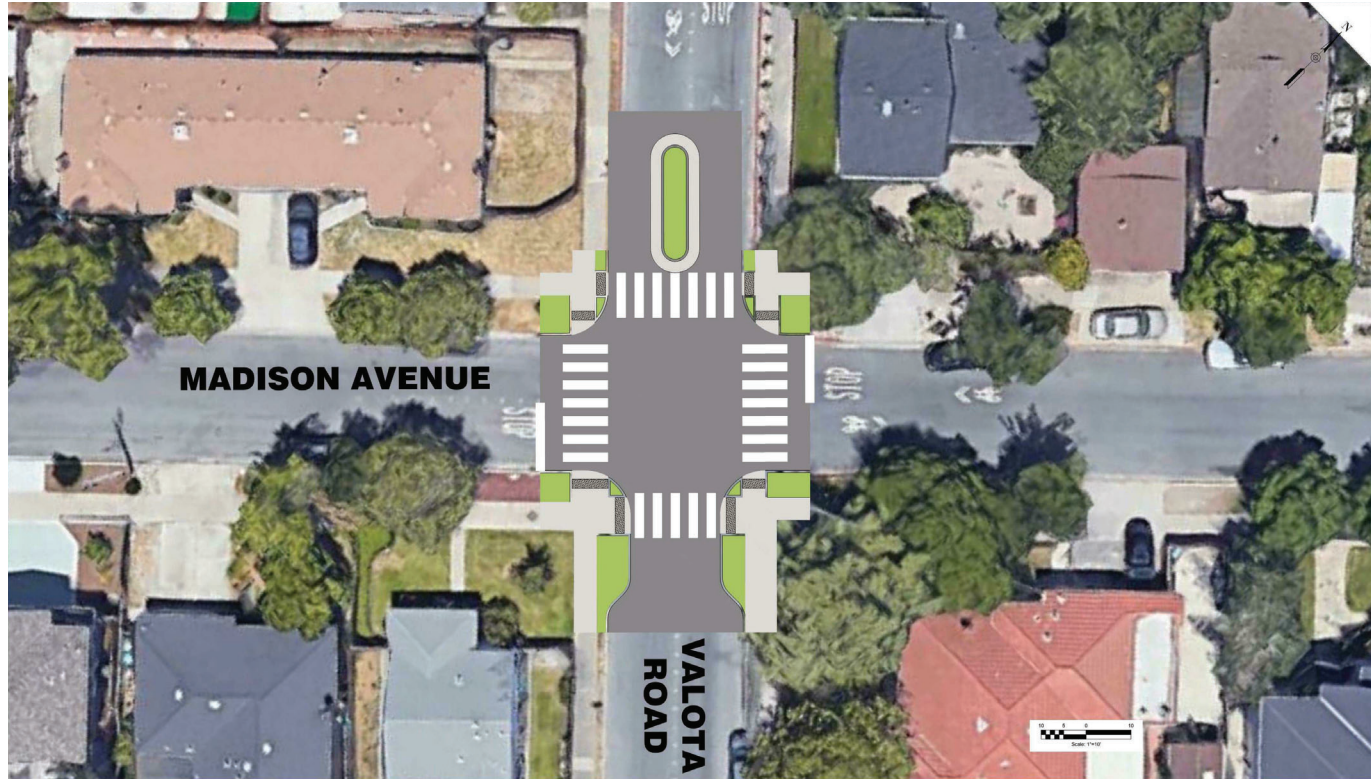


Proposed Roundabout

Valota Road and Madison Avenue



Existing Intersection

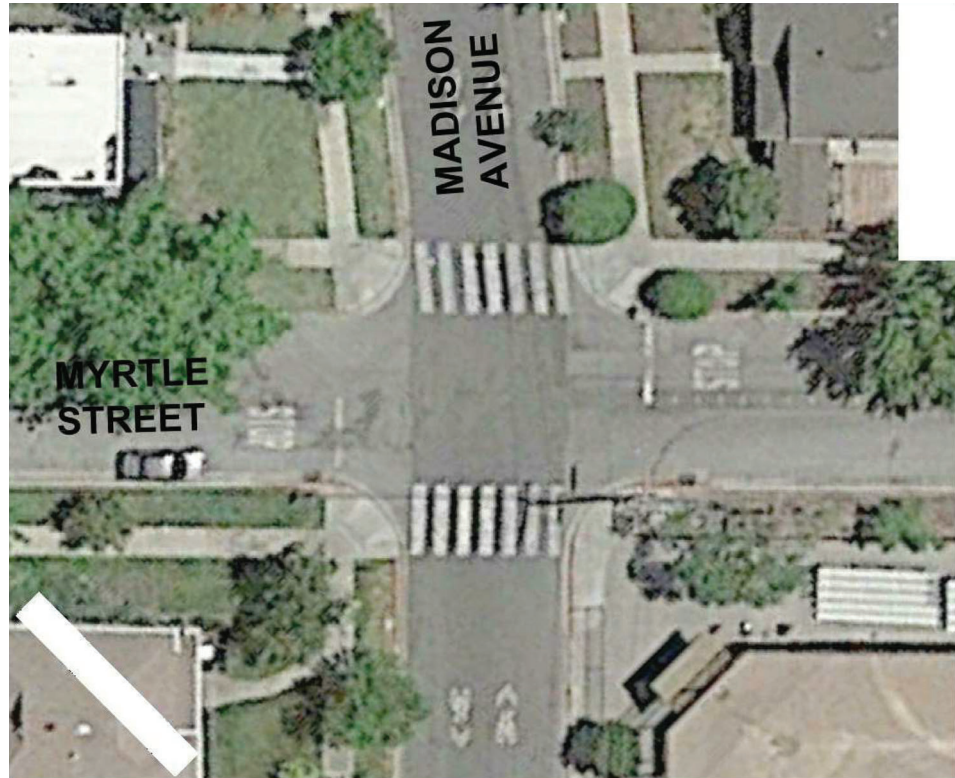


Proposed Intersection

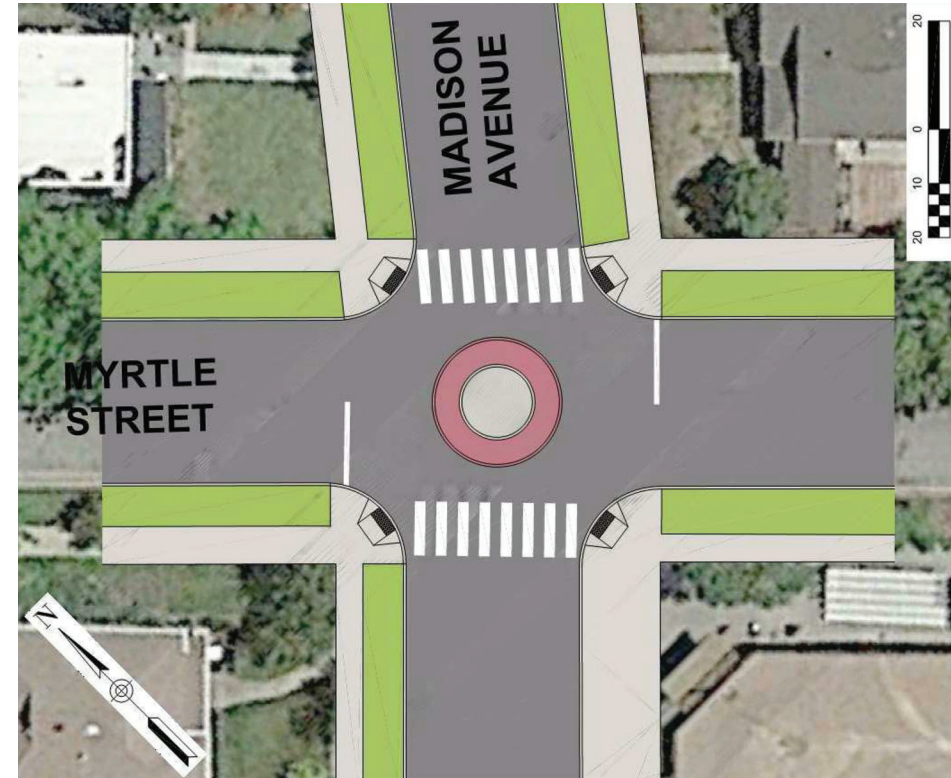
PROPOSED TRAFFIC CALMING MEASURES

FIGURE 2.3-2

Myrtle Street and Madison Avenue

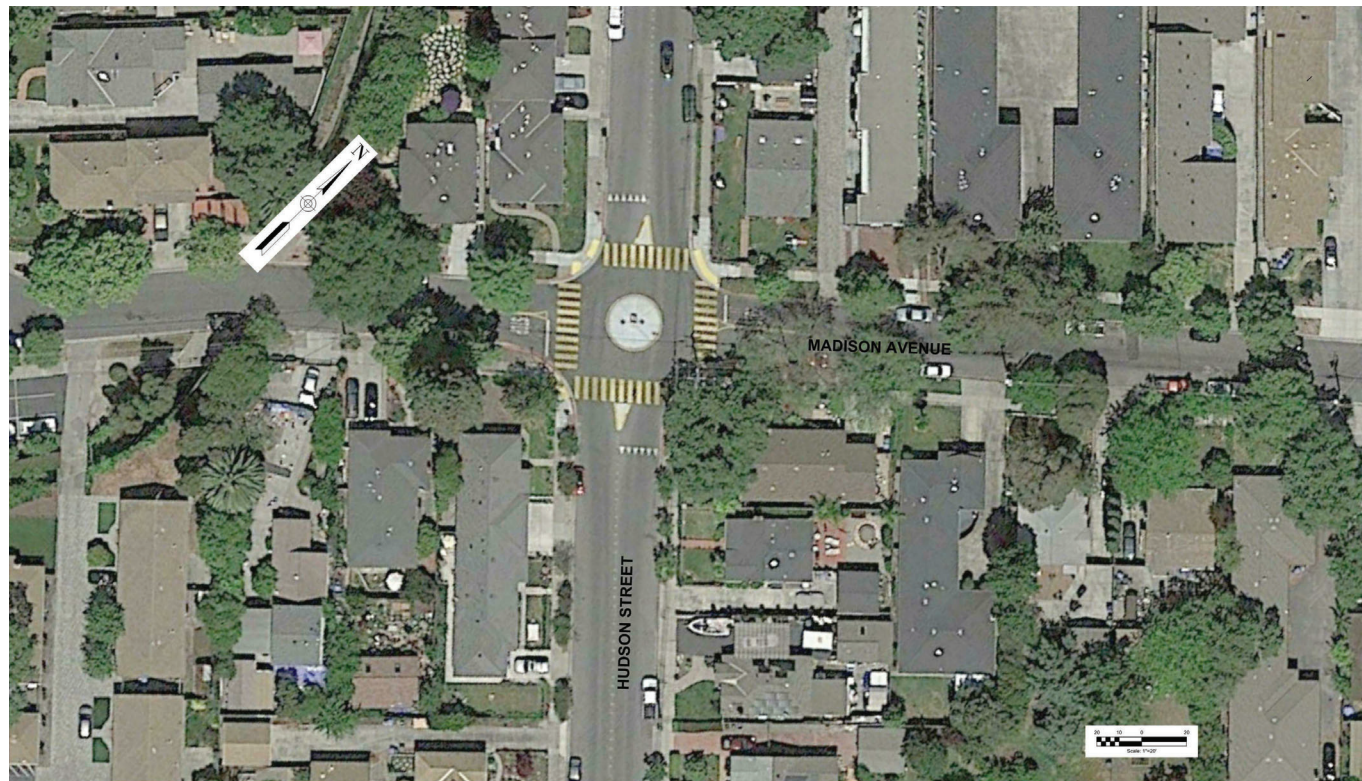


Existing Intersection



Proposed Roundabout

Hudson Street and Madison Avenue



Existing Intersection



Proposed Roundabout

PROPOSED TRAFFIC CALMING MEASURES

FIGURE 2.3-3

2.3.2 **Phase 2**³

2.3.2.1 **YMCA**

A new two-story (up to 35 foot tall), approximately 35,000 square foot YMCA is proposed on the western portion of the site. The YMCA would include the following components:

- Health and wellness center with exercise machines, weightlifting machines, and free weights, and space to host exercise and stretching classes
- Aquatic center with an indoor pool and outdoor pool;
- Daycare facility of approximately 2,700 square feet. The daycare would have three classrooms with the capacity for 24 children in each classroom, for a total of 72 children. The daycare would include a children’s play area composed of a lawn and concrete paved areas, as well as several play structures. The west parking lot would include 10 short-term parking spaces for the daycare; and
- Flexible multi-use rooms for classes and meetings.

The hours of operation for the proposed YMCA are 7:00 AM to 10:30 PM Monday through Friday and 7:00 AM to 11:00 PM on Saturday and Sunday. A microgrid/battery system may be installed to provide emergency power to the YMCA in the event of a power outage. The microgrid/battery system could be located south of YMCA building.

Green Building Measures

The proposed YMCA would incorporate green building measures such as natural ventilation systems, water conservation measures, and energy conservation measures, in accordance with state building code requirements.

Landscaping, Stormwater Treatment, Utility Connections

As part of Phase 2 construction, approximately 20 existing trees would be removed and 80 new trees would be planted. In addition, new landscaping would be placed around the proposed YMCA and within the associated parking lots.

A stormwater detention basin would be installed south of the Phase 2 parking lot. Phase 2 would also include other design features (such as vegetated swales, permeable pavement, and bio-treatment areas) to capture and treat stormwater runoff prior from the adjoining Madison Avenue right-of-way and within the site to its discharge from the site.

Phase 2 would require new lateral connections from the project site to the existing utility systems located in the public right-of-way or public utility easements.

³ Phase 2 of the project is the construction and operation of the YMCA on-site. The description of the proposed YMCA is based on the current understanding of the anticipated development. If in the future, an application is filed with the City for development that is not consistent with what is analyzed in this EIR, subsequent environmental review may be required.

Phase 2 would also underground the electrical distribution lines along St. Francis Street and construct new underground services (e.g., including the above mentioned utility connections for the building).

Lighting

Phase 2 would include nighttime security lighting in the parking lots and surrounding the proposed YMCA. The proposed lighting would be shielded and directed downwards or towards the building.

Access and Parking

Pedestrians would access Phase 2 via sidewalks on Madison Avenue and Valota Road, the proposed pedestrian promenade, and the existing Vera corridor bike path within the park. Vehicular access to Phase 2 would be provided via a two-way driveway on Madison Avenue at St. Francis Street. In addition, the project proposes to add a new two-way driveway on Valota Road south of the existing residences and north of Vera Avenue. The project would post signage at the proposed Valota Road driveway exit noting the presence of the bike path and cautioning drivers to watch for bikes and pedestrians. The project would also install signs on Valota Road for bicyclists and pedestrians in order to direct them to enter the site from the bike/pedestrian path. In addition, the project would construct a curb-cut for bicyclist to use instead of the driveway to access the bike path. An Americans with Disability Act (ADA) compliant sidewalk and ramps would be constructed along Valota Road and crossing the new driveway.

Both driveways would provide access to a new surface parking lot proposed north of the YMCA and a larger surface parking lot west of the proposed YMCA. The surface parking lots would provide a total of 226 vehicle parking spaces and 11 motorcycle parking spaces. A total of 18 bicycle parking spaces are proposed at the front (north side) of the YMCA building.

During weekend operations, employees of the YMCA would park at the Community Activities Building parking lot located within Red Morton Community Park on the south side of the park.

2.3.2.2 Construction

Phase 2 of the project would occur once construction of Phase 1 has been completed and once funding for the proposed YMCA has been secured. Phase 2 construction would require grading and excavation and the removal of approximately 1,365 cubic yards of soil. It is estimated that Phase 2 construction would take approximately 24 months, starting as early as January 2022 and concluding in December 2024.

2.3.3 Transportation Demand Management Measures

The project would implement TDM measures. The TDM measures include planning and design measures related to the attributes of the site design and on-site amenities, which encourage walking, biking, and use of transit. The TDM measures are listed below and described in detail in Appendix H:

- Provide secure bicycle storage
- Provide showers and changing rooms
- Subsidize transit tickets for employees

- Operate a commute assistance center
- Survey employees to examine use and best practices
- Coordinate TDM programs with existing developments/employers
- Make roads and streets more pedestrian and bicycle friendly
- Install and maintain alternative transportation online kiosk⁴

A final TDM plan for the YMCA shall be reviewed and approved by the City prior to the issuance of a certificate of building occupancy. The plan shall have a goal of a maximum of 52 percent drive alone trips by employees to the YMCA. The TDM plan shall include an annual reporting requirement for the life of the project that details the project’s mode splits, parking utilization rates, and employee use and awareness of the TDM program elements. Annual reports shall be submitted to the City on December 1 of each year.

2.4 PROJECT OBJECTIVES

The City’s objectives for the project are as follows:

1. Replace the aging VMSC and reduce escalating maintenance costs with a new approximately 45,000 square foot Veterans Memorial Building/Senior Center to enhance the existing seniors’ programs and have spaces including a special veterans exhibits honoring Redwood City and San Mateo County veterans and office space for non-profit groups and the NFL Alumni Northern California Chapter.
2. Form a public/non-profit partnership with the YMCA to re-imagine the aging Veterans Memorial Senior Center and Sequoia YMCA to meet the changing health living, recreational and social needs of seniors, veterans, youth and families and ensure the Sequoia YMCA is able to remain in Redwood City.
3. Enhance and expand the existing membership at the Sequoia YMCA by providing a new approximately 35,000 square foot YMCA with a fitness center, multipurpose rooms, indoor and outdoor pools and a childcare facility open to the public.
4. Provide year round aquatics with new indoor and outdoor swimming pools as the City is currently only able to offer seasonal use of an aging center with growing maintenance costs.
5. Enhance the community quality of life by expanding health and wellness opportunities for all ages and enhancing the community’s fitness, wellness, and recreation resources.
6. Provide state-of-the art community facility with multiple recreational opportunities for a growing community – both in population and age.
7. Provide a public promenade with flexible outdoor gathering spaces that would provide a gateway to Red Morton Park and link both buildings.
8. Design the new VMSC to meet a minimum of LEED Certification standards.
9. Provide a new public facility that could have the dual purpose of providing an emergency shelter or evacuation center in the event of an emergency.
10. Implement traffic calming measures near Red Morton Community Park to facilitate safer and slower vehicle circulation.

⁴ The online kiosk would include information regarding non-automobile transportation alternatives. Transportation news and commuter alerts would be posted via the kiosk. Future employees could access this online kiosk from their home and work. For additional details, refer to Appendix H.

2.5 USES OF THE EIR

The EIR provides decision makers in the City and the general public with environmental information to use in considering the proposed project. It is intended that this EIR be used for the discretionary approvals necessary to implement the project, as proposed. These discretionary actions include, but are not limited to, the following:

City of Redwood City

- Rezoning
- Tentative Map
- Architectural Permit
- Use Permit (for Phase 2 YMCA only)
- Tree Removal Permits
- Encroachment Permits
- Street Vacation

Pacific Gas & Electric Company

- Actions related to undergrounding electrical lines and approval process

SECTION 3.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections

3.1	Aesthetics	3.11	Land Use and Planning
3.2	Agriculture and Forestry Resources	3.12	Mineral Resources
3.3	Air Quality	3.13	Noise
3.4	Biological Resources	3.14	Population and Housing
3.5	Cultural Resources	3.15	Public Services
3.6	Energy	3.16	Recreation
3.7	Geology and Soils	3.17	Transportation
3.8	Greenhouse Gas Emissions	3.18	Tribal Cultural Resources
3.9	Hazards and Hazardous Materials	3.19	Utilities and Service Systems
3.10	Hydrology and Water Quality	3.20	Wildfire

The discussion for each environmental subject includes the following subsections:

Environmental Setting – This subsection 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the project and 2) describes the existing, physical environmental conditions at the project site and in the surrounding area, as relevant.

Impact Discussion – This subsection includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts.

- 1) **Project Impacts** – This subsection discusses the project’s impact on the environmental subject as related to the checklist questions. For significant impacts, feasible mitigation measures are identified. “Mitigation measures” are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Each impact is numbered to correspond to the checklist question being answered. For example, Impact BIO-1 answers the first checklist question in the biological resources section. Mitigation measures are also numbered to correspond to the impact they address. For example, MM BIO-1.3 refers to the third mitigation measure for the first impact in the biological resources section.
- 2) **Cumulative Impacts** – This subsection discusses the project’s cumulative impact on the environmental subject. Cumulative impacts, as defined by CEQA, refer to two or more individual effects, which when combined, compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant effects taking place over a period of time. CEQA Guideline Section 15130 states that an EIR should discuss cumulative impacts “when the project’s incremental effect is cumulatively considerable.” The discussion does not need to be in as great detail as is necessary for project impacts, but is to be “guided by the standards of practicality and reasonableness.” The purpose of the cumulative

analysis is to allow decision makers to better understand the impacts that might result from approval of past, present, and reasonably foreseeable future projects, in conjunction with the proposed project addressed in this EIR.

The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence. CEQA Guidelines Section 15130(b). To accomplish these two objectives, the analysis should include either a list of past, present, and probable future projects or a summary of projections from an adopted general plan or similar document. CEQA Guidelines Section 15130(b)(1). This EIR uses the list of projects approach.

The analysis must determine whether the project’s contribution to any cumulatively significant impact is cumulatively considerable, as defined by CEQA Guideline Section 15065(a)(3). The cumulative impacts discussion for each environmental issue accordingly addresses the following issues: 1) would the effects of all of past, present, and probable future (pending) development result in a significant cumulative impact on the resource in question; and, if that cumulative impact is likely to be significant, 2) would the contribution from the proposed project to that significant cumulative impact be cumulatively considerable?

Table 3.0-1 identifies the approved (but not yet constructed or occupied) and pending projects in the project vicinity at the time the updated NOP was circulated on August 24, 2018 and are considered in the cumulative analysis. There are no approved nor pending projects within a 1,000 foot radius of the project site, with the exception of the Westside Renovation/Magical Bridge Playground at Red Morton Park project.

Table 3.0-1: Cumulative Projects List	
Location	Description
Approved But Not Yet Constructed/Occupied	
1548 Maple Street	131 residential units
1690 Broadway	92 room hotel
353 Main Street	125 residential units
433 Harrison Avenue	17 residential units
612 Jefferson Avenue	20 residential units
707 Bradford Street	117 residential units; 8,000 square foot childcare
910 Woodside Road	10 residential units
929 Main Street	8,002 square feet retail
1305 El Camino Real	137 residential units
1548 Maple Street	131 residential units
103 Wilson Street	175 residential units
1175 Marshall Street	196,100 square feet medical

Table 3.0-1: Cumulative Projects List	
Location	Description
1409 El Camino Real	350 residential units
150 El Camino Real	12 residential units
1629 Main Street	24,700 square feet office; 2 residential units
2075 Broadway	80,000 square feet office; 13,515 square feet retail
550 Allerton Street	69,486 square feet office
601 El Camino Real	33 residential units
849 Veterans Boulevard	90 residential units
851 Main Street	80,000 square feet retail; 6,910 square feet retail
Stanford in Redwood City	570,000 square feet office; 31,159 square feet recreation; 14,000 square feet childcare; 5,053 square feet storage
Westside Renovation/Magical Bridge Playground at Red Morton Park	Circulation improvements, all-inclusive children's playground, and improvements to sports field spectator area
Pending	
County Center	200,000 square feet office
1401 Broadway	520 residential units; 420,000 square feet office; 18,800 square feet retail; 6,860 square feet commercial/flex
320-350 Blomquist Street	1,296,556 square feet high-tech office campus
557 E Bayshore Road	480 residential units, 100,000 square feet sports club
1601 El Camino Real	272 residential units, 589,700 square feet office, 10,000 square feet retail, 10,000 square feet childcare
31 Center Street	7 residential units
120 El Camino Real	12 residential units
525 E. Bayshore Road	201,000 square feet auto-dealership
610 Walnut Street	63,835 square feet office
150 Charter Street	72 residential units

For each environmental issue, cumulative impacts may occur within different geographic areas. For example, the project effects on air quality would combine with the effects of projects in the entire air basin, whereas noise impacts would primarily be localized to the surrounding area.

3.1 AESTHETICS

3.1.1 Environmental Setting

3.1.1.1 *Regulatory Framework*

State

Scenic Highways Program

The California Scenic Highway Program is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. State laws governing the Scenic Highway Program are found in the Streets and Highway Code, Sections 260 through 263.

California Title 24 Building Energy Efficiency Standards

The California Code of Regulations (Title 24, Part 6) includes the California Title 24 Building Energy Efficiency Standards. The standards improve the quality of outdoor lighting and help reduce the impacts of light pollution, light trespass, and glare. The standards regulate lighting characteristics, such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off.

Local

Redwood City General Plan

The Redwood City General Plan (General Plan) reflects the community’s shared values of what Redwood City is today and plans to be in the future years. Often referred to as the community’s “blueprint,” the General Plan establishes the basis for zoning regulations and provides guidance in the evaluation of development proposals. The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to aesthetics and are applicable to the proposed project.

Policy	Description
<u>The Built Environment</u>	
BE-1.1	Maintain and enhance the beneficial and unique character of the different neighborhoods, corridors, and centers, and open spaces that define Redwood City.
BE-1.5	Require that new and renovated buildings be designed to avoid styles, colors, and materials that negatively impact the environment or the design character of the neighborhood, corridor, and center in in which they are located.
BE-1.8	Require that new projects are integrated as seamlessly as possible into surrounding development, creating extensions of the urban fabric.
BE-1.9	Carefully consider new shade, shadow, light, and glare effects from proposed development projects and comprehensive plans.
BE-6.1	Ensure that new development is compatible with the established character of individual Post-War Neighborhoods.

Policy	Description
The Built Environment	
BE-44.1	Reduce the visual impact of aboveground and overhead utilities, including electric lines, by working with Pacific Gas and Electric Company (PG&E) to maximize opportunities to place utilities underground.

Redwood City Zoning Ordinance

The Redwood City Zoning Ordinance provides standards that direct the visual character and quality of development associated with related land uses (Article 45.8, Architectural Standards). Height and architectural standards are defined for the various zoning districts throughout the City to “protect and enhance the natural beauty of the environment, provide for the orderly and harmonious appearance of structures and grounds.”

Redwood City Architectural Advisory Committee

The City’s Architectural Advisory Committee (AAC), as established by Resolution No. 11497, is responsible for addressing the architectural design and form of structures in the City. The AAC advises the City Council, Planning Commission, and Zoning Administrator on matters concerning building and landscape architecture, site design, and signs. The AAC also provides other recommendations pertaining to architectural matters regarding private and public projects in the City as deemed appropriate.

3.1.1.2 Existing Conditions

Project Site

The 5.4-acre project site is located within an urbanized, post-war neighborhood. As described in the General Plan, post war neighborhood typology refers to neighborhoods of detached homes often interspersed with cul-de-sacs. Suburban in nature, these lower density neighborhoods were designed to be automobile oriented, with access taken from the street by a front driveway to an attached or detached garage. Post-war neighborhoods were developed during the mid-20th century, following World War II. The project neighborhood is relatively flat and, as a result, the site is visible from the immediate area.

The segment of St. Francis Street that bisects the site (and is located west of the senior center) functions as a one-way driveway to surface parking lots located on the western portion of the site. In addition to surface parking, the western portion of the project site (west of Nevada Street) is developed with the senior center and annex. The senior center is a one-story (approximately 25 foot tall), 16,500 square foot, brick building with shallow-pitched gable roofs with deep eaves. The one-story (approximately 20 foot tall), 2,360 square foot annex building clad in stucco is located adjacent to the northeast of the senior center. There are large landscaped setbacks ranging from approximately 40 to 70 feet between the buildings and sidewalk on Madison Avenue. The landscaping, which includes grass areas and trees, is located within the setback areas, perimeter of the two buildings, and surface parking lots. The segment of Nevada Street bisecting the site functions as a one-way driveway with vehicle parking on both sides of the street.

The eastern portion of the site east of Nevada Street is developed with the resource building, Sid Herkner Pool, and NFL Alumni Association building. The resource building is a long, rectangular, 15,700 square foot building fronting Nevada Street. This building has a central two-story portion flanked by one-story portions. The resource building is clad with vertical siding and stucco and has shallow-pitched roofs and deep eaves. East of the resource building is the Sid Herkner Pool. The Sid Herkner Pool consists of a pool house visible from Madison Avenue and Nevada Street. The pool house is a one-story (approximately 20 foot), flat roofed building clad in diagonal wood boards. The remainder of the pool facility south of the pool house is enclosed by a wood fence and is not visible from public vantage points. To the east of the Sid Herkner Pool is the NFL Alumni Association building. The NFL Alumni Association building is one-story (approximately 20 foot), approximately 3,500 square foot rectangular building that fronts Madison Avenue. The NFL Alumni Association building is primarily clad in stucco, with portions of the front façade facing Madison Avenue with brick detail. There is also a pergola with brick pillars along the front façade of the NFL Alumni Association building. A community garden is located south of the NFL Alumni Association building. Views of the project site are shown in Photos 1-4.

Surrounding Area

A two-lane roadway with parking on both sides (Madison Avenue) and one- and two-story single-family residences are located north of the project site. The remainder of Red Morton Community park is located west and south of the project site. A baseball field with bleacher seating is located west of the site. A parcourse with fitness equipment, a grass soccer field, grass areas, a concrete skateboard park, and Vera Avenue corridor bike path are located south of the site. One- and two-story single-family residences are located west of the site.

Scenic Vistas and Resources

There are no City-designated scenic vistas in the City.⁵ There are no state-designated scenic highways in Redwood City.⁶ The nearest designated scenic highway is Interstate 280 (I-280), approximately 2.6 miles west of the project site. Given the distance between I-280 and the project site, as well as the intervening topography and urban development, the project site is not visually distinguishable from I-280.

⁵ Redwood City. *Redwood City General Plan*. Adopted October 11, 2010 and amended October 20, 2014.

⁶ California Department of Transportation. "California Scenic Highway Mapping System."

http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed February 27, 2019.



Photo 1: View of existing Veteran's Memorial Senior Center from Madison Avenue, facing south.



Photo 2: View of existing Sid Herkner Pool from sidewalk on Madison Avenue, facing south.

PHOTOS 1 & 2



Photo 3: View of NFL Alumni Association Building from sidewalk on Madison Avenue, facing south.



Photo 4: View of the site from proposed road extension of Vera Ave. from Valota Road, facing east.

PHOTOS 3 & 4

Light and Glare

The project site includes pole mounted lights in the parking lot and lights at the building entrances for nighttime security. In the immediate area, lighting includes streetlights, nighttime park and building security lights, vehicular headlights, internal building lights, and lights from residences.

Glare can be caused by sunlight or artificial light reflecting from finished surfaces. The existing buildings are not constructed with highly reflective materials such as mirrored glass and therefore, do not generate substantial glare.

3.1.2 Impact Discussion

For the purpose of determining the significance of the project's impact on aesthetics, would the project:

- 1) Have a substantial adverse effect on a scenic vista?
- 2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- 3) Substantially degrade the existing visual character or quality of public views⁷ of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
- 4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

3.1.2.1 *Project Impacts*

Impact AES-1: The project would not have a substantial adverse effect on a scenic vista. **(No Impact)**

Scenic vistas in the City are located within the southern and western portions of the City within the hillside neighborhoods. The project site is located in the central portion of the City and, therefore, is not located within a scenic vista. As a result, the project would not effect a scenic vista. **(No Impact)**

Impact AES-2: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. **(No Impact)**

As discussed in Section 3.1.1.2, the project site is not within a state scenic highway and is not visually distinguishable from the nearest designated scenic highway (I-280). **(No Impact)**

⁷ Public views are those that are experienced from publicly accessible vantage points.

Impact AES-3: The project is in an urbanized area and would not substantially degrade the existing visual character or quality of public views of the site and its surrounding or conflict with applicable zoning and other regulations governing scenic quality. **(Less than Significant Impact)**

The project site is located in an urbanized area and would replace multiple one and two-story buildings totaling approximately 55,205 square feet with two, two-story buildings totaling approximately 80,000 square feet. The proposed VMSC would be set back approximately 60 feet from Madison Avenue and the proposed YMCA would be set back approximately 150 feet from Madison Avenue. New landscaping would also be planted throughout the site, including along the project site frontage on Madison Avenue. While the overall square footage of development on-site would increase compared to existing conditions, the proposed development would be set back a greater distance from Madison Avenue and include new landscaping on the project site's Madison Avenue frontage to soften the increased mass and density of the development on-site. In addition, as described in more detail in Section 2.3 Project Description, the segment of Nevada Street that bisects the site would be vacated and converted to a pedestrian promenade with new landscaping and pedestrian amenities. The proposed development and improvements would not substantially degrade the visual character of the site or its surroundings.

As discussed above under Impact AES-2, would not conflict with the Scenic Highways Program. The project would rezone the site from R-2 (Residential-Duplex) to PF (Public Facilities). The City's PF zoning district and Zoning Ordinance do not include regulations pertaining to scenic quality. The project would be subject to the review of the ACC to ensure the project would be visually compatible with the existing neighborhood pursuant to General Plan policies BE-1.1, BE-1.5, BE-1.8, BE-1.9, and BE-6.1 listed in Section 3.1.1.1 by requiring the project be designed to include complimentary styles, colors, and materials of the neighborhood. **(Less than Significant Impact)**

Impact AES-4: The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. **(Less than Significant Impact)**

The project site currently generates light from facility operations and nighttime security lighting throughout the parking lot and at building entrances. The project would redevelop the site with new buildings and include similar sources of light for facility operations and nighttime security, with lights illuminating the parking lots, buildings, and promenade. The project would adhere to Title 24 Building Energy Efficiency Standards to reduce light pollution, light trespass, and glare.

The project includes a new driveway on Valota Road. In the evening, the driveway could be a new source of light for the existing residences in the immediate vicinity of the driveway as vehicles enter/exit the site. There is an existing fence and a row of mature redwood trees that would remain between the proposed driveway and the adjacent residence to the north that would minimize light from cars using the driveway. In addition, there are existing sources of light on Valota Road from vehicles and streetlights. For these reasons, the addition of the driveway on Valota Road would not create a new source of substantial light in the area.

While the proposed buildings would include windows, the design of the buildings do not include large uninterrupted expansions of glass or highly reflective materials such as mirrored glass. The existing and new trees and landscaping around the proposed buildings and site perimeter would minimize any glare from the buildings.

Furthermore, as a condition of approval, consistent with the certified Redwood City New General Plan EIR (General Plan EIR) Mitigation Measure 4.1-5, the project would implement the following measure:

- General Plan EIR Mitigation Measure 4.1-5: All new development and redevelopment shall be in compliance with Title 24 Lighting Zone (LZ-3) requirements and submit lighting and photometric site plans for City review and approval prior to issuance of individual building permits prior to issuance of individual building permits.⁸

Based on the above discussion, the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. **(Less Than Significant Impact)**

3.1.2.2 *Cumulative Impacts*

Impact AES-C: The project would not result in a cumulatively considerable contribution to a significant cumulative aesthetics impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative aesthetic impacts is the immediate project vicinity. The Westside Renovation/Magical Bridge Playground at Red Morton Park, located south of the project site, would contribute to the same aesthetic impacts as the proposed project.

Scenic Vista, Scenic Highway, and Applicable Zoning and Other Regulations

As discussed under Impact AES-1 through AES-3, the project would have no impact on a scenic vista, state scenic highway, or applicable zoning and other regulations governing scenic quality. Therefore, the project would not contribute to cumulative impacts on those resources. **(No Cumulative Impact)**

Light and Glare

The proposed project and Westside Renovation/Magical Bridge Playground at Red Morton Park project would not result in a significant cumulative source of substantial light and glare which would adversely affect day or nighttime views in the area. Both projects are required to comply with Title 24 Building Energy Efficiency Standards to reduce light pollution, light trespass, and glare and, per General Plan EIR Mitigation Measure 4.1-5, submit lighting and photometric site plans for City review and approval to ensure light and glare impacts would be reduced to a less than significant level. **(Less than Significant Cumulative Impact)**

⁸ Redwood City. *A New General Plan for Redwood City Draft Environmental Impact Report*. May 2010. Certified in October 2010. Page 4.1-50.

3.2 AGRICULTURE AND FORESTRY RESOURCES

3.2.1 Environmental Setting

3.2.1.1 *Regulatory Framework*

State

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status. The best quality land is called Prime Farmland. In CEQA analyses, the FMMP classifications and published county maps are used, in part, to identify whether agricultural resources that could be affected are present on-site or in the project area.⁹

California Land Conservation Act

The California Land Conservation Act (Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space uses. In return, landowners receive lower property tax assessments. In CEQA analyses, identification of properties that are under a Williamson Act contract is used to also identify sites that may contain agricultural resources or are zoned for agricultural uses.¹⁰

Forest Land, Timberland, and Timberland Production

The California Department of Forestry and Fire Protection (Cal Fire) identifies forest land, timberland, and lands zoned for timberland production that can (or do) support forestry resources.¹¹ Programs such as Cal Fire's Fire and Resource Assessment Program (FRAP) and are used to identify whether forest land, timberland, or timberland production areas that could be effected are located on or adjacent to a project site.¹²

⁹ California Department of Conservation. "Farmland Mapping and Monitoring Program." <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>. Accessed February 19, 2019.

¹⁰ California Department of Conservation. "Williamson Act." <http://www.conservation.ca.gov/dlrp/lca>. Accessed February 20, 2019.

¹¹ *Forest land* is land that can support 10 percent native tree cover and allows for management of one or more forest resources, including timber, fish, wildlife, and biodiversity (California Public Resources Code Section 12220(g)); *Timberland* is land not owned by the federal government or designated as experimental forest land that is available for, and capable of, growing a crop of trees used to produce lumber and other forest products, including Christmas trees (California Public Resources Code Section 4526); and *Timberland Production* is land devoted to and used for growing and harvesting timber and other compatible uses (Government Code Section 51104(g)).

¹² Cal Fire. "FRAP". <http://frap.fire.ca.gov/>

3.2.1.2 *Existing Conditions*

The project site is not designated as farmland. According to the San Mateo County Important Farmlands 2016 Map, the project site is designated as Urban and Built-Up Land.¹³ Urban and Built-Up Land is defined as land with at least six structures per 10 acres and utilized for residential, industrial, commercial, institutional, golf course, landfill, and other urban-related purposes.

The project site is not zoned for agricultural use, forest land, or timberland. The project site is zoned R-2 (Residential-Duplex). The project site is not the subject of a Williamson Act Contract.¹⁴

The project site and surrounding properties are designated for and developed with urban uses. The project site is currently part of an existing community park and developed with buildings, a pool facility, landscaping, and surface parking lot.

3.2.2 Impact Discussion

For the purpose of determining the significance of the project's impact on agriculture and forestry resources, would the project:

- 1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- 2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- 3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
- 4) Result in a loss of forest land or conversion of forest land to non-forest use?
- 5) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

3.2.2.1 *Project Impacts*

Impact AG-1: The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. **(No Impact)**

As discussed previously, the project site is not designated as farmland. The project site and surrounding properties are designated and developed with urban uses. For these reasons, the project would not convert designated farmland to non-agricultural use. **(No Impact)**

¹³ California Department of Conservation. *San Mateo County Important Farmland 2016*. Map. February 2018.

¹⁴ California Department of Conservation. "San Mateo County Williamson Act 2006/2007." Map. 2012.

Impact AG-2: The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. **(No Impact)**

The project site is not zoned for agricultural use, nor is it subject of a Williamson Act contract. The project, therefore, would not conflict with zoning for agricultural use or a Williamson Act contract. **(No Impact)**

Impact AG-3: The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. **(No Impact)**

The project site and surrounding properties are not zoned for forest land or timberland. For this reason, the project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. **(No Impact)**

Impact AG-4: The project would not result in a loss of forest land or conversion of forest land to non-forest use. **(No Impact)**

The project site and surrounding properties are developed with urban uses, not forest land. For this reason, the development of the project would not result in the loss of forest land or conversion of forest land to non-forest use. **(No Impact)**

Impact AG-5: The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. **(No Impact)**

The project site is not designated agricultural or forest land, and is located within a developed urban area with no agricultural or forestry land nearby. As a result, implementation of the proposed project would not result in the conversion of farmland to non-agricultural use or forest land to non-forest uses. **(No Impact)**

3.2.2.2 *Cumulative Impacts*

Impact AG-C: The project would not result in a cumulatively considerable contribution to a significant agricultural and forestry resources impact. **(No Impact)**

As discussed under Impacts AG-1 through AG-5, the project would have no impact on agricultural or forestry resources. The project, therefore, would not contribute to a cumulative impact on agricultural or forestry resources. **(No Impact)**

3.3 AIR QUALITY

The following discussion is based in part on an Air Quality and Greenhouse Gas Assessment prepared by Illingworth & Rodkin, Inc. on May 8, 2019. A copy of this report is included in Appendix B of this EIR.

3.3.1 Environmental Setting

3.3.1.1 *Regulatory Framework*

Federal and State

Federal and state agencies regulate air quality in the San Francisco Bay Area Air Basin, within which the proposed project is located. At the federal level, the United States Environmental Protection Agency (EPA) is responsible for overseeing implementation of the Clean Air Act and its subsequent amendments. The California Air Resources Board (CARB) is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act.

Federal Clean Air Act and California Clean Air Act

The federal Clean Air Act requires the EPA to set national ambient air quality standards for six common air pollutants (referred to as criteria pollutants), including particulate matter (PM), ground-level ozone (O₃), carbon monoxide (CO), sulfur oxides, nitrogen oxides (NO_x), and lead. The EPA and CARB have adopted ambient air quality standards establishing permissible levels of these pollutants to protect public health and the climate. Units of concentration are generally expressed in parts per million (ppm) or micrograms per cubic meter (µg/m³).

The health effects associated with air pollutants are summarized in Table 3.3-1. Asthma and other respiratory conditions may be triggered or exacerbated by poor indoor or outdoor air quality, as well as other environmental conditions. As a result, poor air quality is linked to a higher incidence of public health costs associated with these respiratory illnesses. CARB suggests that the annual health impacts of exceeding state health-based standards for ozone and particulate matter include 6,500 premature deaths, 4,000 hospital admissions for respiratory disease, and 350,000 asthma attacks nationwide. The loss of productive workdays also affects the local economy. The American Lung Association reports that nationally, asthma accounts for an estimated 14.5 million lost workdays per year for people over 18 years of age.¹⁵

Violations of ambient air quality standards are based on air pollutant monitoring data and are determined for each air pollutant. Attainment status for a pollutant means that a given air district meets the standard set by the EPA and/or CARB.

¹⁵ Redwood City. *Redwood City General Plan*. Adopted October 11, 2010 and amended October 20, 2014. Page PS-3.

Table 3.3-1: Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust • Natural events, such as decomposition of organic matter 	<ul style="list-style-type: none"> • Reduced tolerance for exercise • Impairment of mental function • Impairment of fetal development • Death at high levels of exposure • Aggravation of some heart diseases (angina)
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust • High temperature stationary combustion • Atmospheric reactions 	<ul style="list-style-type: none"> • Aggravation of respiratory illness • Reduced visibility
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases • Irritation of eyes • Impairment of cardiopulmonary function
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil 	<ul style="list-style-type: none"> • Impairment of blood functions and nerve construction • Behavioral and hearing problems in children
Suspended Particulate Matter (PM _{2.5} and PM ₁₀)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels • Construction activities • Industrial processes • Atmospheric chemical reactions 	<ul style="list-style-type: none"> • Reduced lung function • Aggravation of the effects of gaseous pollutants • Aggravation of respiratory and cardiorespiratory diseases • Increased cough and chest discomfort • Reduced visibility
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels • Smelting of sulfur-bearing metal ores • Industrial processes 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema) • Reduced lung function • Irritation of eyes • Reduced visibility
Toxic Air Contaminants	<ul style="list-style-type: none"> • Cars and trucks, especially diesels • Industrial sources such as chrome platers • Neighborhood businesses such as dry cleaners and service stations • Building materials and product 	<ul style="list-style-type: none"> • Cancer • Chronic eye, lung, or skin irritation • Neurological and reproductive disorders

Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles

Toxic Air Contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality, usually because they cause cancer. TACs are found in ambient air, especially in urban areas, and are released by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). 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. Diesel exhaust is a complex mixture of gases, vapors, and fine particles. To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a substantial component of the plan involves application of emission control strategies to existing diesel vehicles and equipment.

Many of the measures of the plan to reduce emissions of diesel exhaust and diesel particulate matter (DPM) have been approved and adopted. Several of these regulatory programs affect medium and heavy-duty diesel trucks, which represent the bulk of DPM emissions from California highways. The majority of DPM is small enough to be inhaled into the lungs. Most inhaled particles are subsequently exhaled, but some deposit on the lung surface or are deposited in the deepest regions of the lungs (most susceptible to injury).¹⁶

Fine Particulate Matter (PM_{2.5}) is a TAC composed of a mix of substances, such as carbon and metals, compounds such as nitrates, organics, and sulfates, and mixtures such as diesel exhaust and wood smoke. Because of their small size (particles are less than 2.5 micrometers in diameter), PM_{2.5} can lodge deeply into the lungs. According to BAAQMD, PM_{2.5} is the air pollutant most harmful to the health of Bay Area residents. Sources of PM_{2.5} include gasoline stations, dry cleaners, diesel vehicles, and diesel backup generators.

Local risks associated with TACs and PM_{2.5} are evaluated on the basis of risk to human health rather than comparison to an ambient air quality standard or emission-based threshold.

Regional and Local

Bay Area 2017 Clean Air Plan

The Bay Area Air Quality Management District (BAAQMD) is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. Regional air quality management districts, such as BAAQMD, must prepare air quality plans specifying how state and federal air quality standards would be met. BAAQMD's most recently adopted plan is the Bay Area 2017 Clean Air Plan (2017 CAP). The 2017 CAP focuses on two related BAAQMD goals: protecting public health and protecting the climate. To protect public

¹⁶ CARB. "Overview: Diesel Exhaust and Health." Accessed April 1, 2019. <https://www.arb.ca.gov/research/diesel/diesel-health.htm>.

health, the 2017 CAP describes how BAAQMD will continue its progress toward attaining state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 CAP includes control measures designed to reduce emissions of methane and other super-greenhouse gases that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.¹⁷

Bay Area Air Quality Management District CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. The City of Redwood City and other jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing air quality Impacts developed by BAAQMD within their CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to air quality and are applicable to the proposed project.

Policy	Description
Public Safety	
PS-1.5	Require projects that generate potentially significant levels of air pollutants to incorporate the most effective air quality mitigation into project design, as feasible.

3.3.1.2 Existing Conditions

The project is located in San Mateo 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 (PM₁₀), and PM_{2.5}.

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, and elementary schools. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are in the residences to the north

¹⁷ BAAQMD. *Final 2017 Clean Air Plan*. April 19, 2017.

and west of the project site (see Figure 2.2-3). There is also an elementary school (John Gill Elementary School) north of the project site.

3.3.2 Air Quality Impacts

3.3.2.1 *Thresholds of Significance*

For the purpose of determining the significance of the project’s impact on air quality, would the project:

- 1) Conflict with or obstruct implementation of the applicable air quality plan?
- 2) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
- 3) Expose sensitive receptors to substantial pollutant concentrations?
- 4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for judgment on the part of the lead agency and must be based to the extent possible on scientific and factual data. The City has considered the air quality thresholds updated by BAAQMD in May 2017 and regards these thresholds to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and PM_{2.5}. The BAAQMD CEQA Air Quality thresholds used in this analysis are identified in Table 3.3-2.

Table 3.3-2: BAAQMD Air Quality Significance Thresholds			
Pollutant	Construction Thresholds	Operation Thresholds	
	Average Daily Emissions (pounds/day)	Annual Daily Emissions (pounds/year)	Annual Average Emissions (tons/year)
Criteria Air Pollutants			
ROG, NO _x	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10
CO	Not Applicable	9.0 ppm (eight-hour) or 20.0 ppm (one-hour)	
Fugitive Dust	Dust-Control Measures/Best Management Practices	Not Applicable	

Table 3.3-2: BAAQMD Air Quality Significance Thresholds			
Pollutant	Construction Thresholds	Operation Thresholds	
	Average Daily Emissions (pounds/day)	Annual Daily Emissions (pounds/year)	Annual Average Emissions (tons/year)
Health Risks and Hazards for New Sources (within a 1,000-foot Zone of Influence)			
Health Hazard	Single Source	Combined Cumulative Sources	
Excess Cancer Risk	10 per one million	0.3 µg/m ³	
Hazard Index	1.0	10.0	
Incremental Annual PM _{2.5}	0.3 µg/m ³	0.8 µg/m ³ (average)	
Notes: ROG = reactive organic gases, NO _x = nitrogen oxides, PM ₁₀ = coarse particulate matter with a diameter of 10 micrometers (µm) or less, and PM _{2.5} = fine particulate matter with a diameter of 2.5 µm or less.			

3.3.2.2 Project Impacts

Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan. **(Less than Significant Impact)**

The project would not conflict with the 2017 CAP because it would not result in construction or operational criteria air pollutant emissions above the BAAQMD CEQA Air Quality Guidelines Operational Criteria Pollutant impact thresholds shown in Table 3.3-2 (see discussion under Impact AIR-2), is considered urban infill, and would be located near bike paths and transit with regional connections. Thus, the project is not required to incorporate project-specific control measures listed in the 2017 CAP. Further, implementation of the project would not inhibit BAAQMD or partner agencies from continuing progress toward attaining state and federal air quality standards and eliminating health-risk disparities from exposure to air pollution among Bay Area communities, as described in the 2017 CAP. **(Less than Significant Impact)**

Impact AIR-2: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. **(Less than Significant Impact)**

As described in Section 3.3.1.2, the Bay Area meets all ambient air quality standards with the exception of ground-level ozone, PM₁₀, and PM_{2.5}. As part of an effort to attain and maintain ambient air quality standards for ozone and PM₁₀, BAAQMD has established thresholds of significance for these air pollutants and their precursors (see Table 3.3-2). These thresholds are for ozone precursor pollutants (Reactive Organic Gases [ROG] and NO_x), PM₁₀, and PM_{2.5} and apply to both construction period and operational period impacts.

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the site (assuming full build out of the project), based on project land use types and size and anticipated construction schedule.

Construction Emissions

CalEEMod provided annual emissions for both on-site and off-site construction activities. On-site activities are primarily construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. Additional details about the model inputs are included in Appendix B.

Average daily emissions were computed for each phase by dividing the total construction emissions by the number of construction days. Table 3.3-3 summarizes the project's average daily construction emissions of ROG, NO_x, PM₁₀ exhaust, and PM_{2.5} exhaust. As shown in Table 3.3-3, the project's estimated construction emissions would not exceed the BAAQMD significance thresholds.

Table 3.3-3: Construction Period Emissions				
	ROG	NO_x	PM₁₀ Exhaust	PM_{2.5} Exhaust
	pounds/day			
Phase 1				
Average Daily Emissions	4.0	15.8	0.8	0.8
<i>BAAQMD Thresholds</i>	54	54	82	54
Exceed Threshold?	No	No	No	No
Phase 2				
Average Daily Emissions	3.4	16.2	0.7	0.7
<i>BAAQMD Thresholds</i>	54	54	82	54
Exceed Threshold?	No	No	No	No
Phase 1 + Phase 2				
Total Average Daily Emissions	7.4	32.0	1.5	1.4
<i>BAAQMD Thresholds</i>	54	54	82	54
Exceed Threshold?	No	No	No	No

Construction activities, particularly during site preparation and grading, would generate fugitive dust in the form of PM₁₀ 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 (BMPs) are implemented to reduce these emissions.

Condition of Approval:

- During any construction period ground disturbance, the applicant shall ensure that the project contractor implement the following standard BAAQMD BMPs:
 - All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
 - All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
 - 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.
 - All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
 - 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.
 - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five 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.
 - 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.
 - Post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

The project, with the implementation of above condition of approval to control dust and limit exposed soil surfaces, would not result in significant construction emissions. **(Less than Significant Impact)**

Operational Emissions

Operational air emissions from the project would be generated primarily from automobiles driven by employees and future site users. Other operational emissions include evaporative emissions from architectural coatings and maintenance products (classified as consumer products) from the proposed buildings. CalEEMod was used to estimate emissions from operation of the proposed project at full build out. Additional details about the model inputs are included in Appendix B.

As shown in Table 3.3-4, the project's estimated operational emissions would not exceed BAAQMD significance thresholds.¹⁸ **(Less than Significant Impact)**

¹⁸ In a 2018 decision (*Sierra Club v. County of Fresno*), the state Supreme Court determined that CEQA requires that when a project's criteria air pollutant emissions would exceed applicable thresholds and contribute a cumulatively considerable contribution to a significant cumulative regional criteria pollutant impact, the potential for the project's emissions to affect human health in the air basin must be disclosed. State and federal ambient air quality standards are health-based standards and exceedances of those standards result in continued unhealthy levels

Table 3.3-4: Operational Emissions				
Scenario	ROG	NOx	PM₁₀	PM_{2.5}
Project (both phases) Operational Emissions (tons/year)	0.8	1.3	1.5	0.4
Existing Use Emissions (tons/year)	0.5	0.8	1.0	0.3
Net Project Emissions (tons/year)	0.3	0.5	0.5	0.1
<i>BAAQMD Thresholds (tons/year)</i>	<i>10</i>	<i>10</i>	<i>15</i>	<i>10</i>
Exceed Threshold?	No	No	No	No
Net Project Operational Emissions (pounds/day)	1.6	2.9	2.6	0.7
<i>BAAQMD Thresholds (pounds/day)</i>	<i>54</i>	<i>54</i>	<i>82</i>	<i>54</i>
Exceed Threshold?	No	No	No	No

Impact AIR-3: The project would not expose sensitive receptors to substantial pollutant concentrations. **(Less than Significant Impact with Mitigation Incorporated)**

Project impacts related to increased community risk can occur by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. In addition, project construction activities would generate dust and equipment exhaust that could affect nearby sensitive receptors. Community risk impacts are addressed by predicting increased lifetime cancer risk, the increase in annual PM_{2.5} concentrations, and computing the Hazard Index (HI) for non-cancer health risks. The methodology for computing community risks impacts is described in Appendix B.

Project Operation

The long-term operation of the project would not cause any localized emissions that could expose sensitive receptors to unhealthy air pollutant levels. When operating, the project would generate automobile traffic and infrequent truck traffic; however, these emissions are anticipated to result in fairly low impacts in terms of TAC or PM_{2.5} exposure and there would be no other operational sources of TAC or PM_{2.5}. In addition, the project proposes uses similar to the existing uses on-site. No stationary sources of TACs, such as generators, are proposed as part of the project. **(Less than Significant Impact)**

of air pollutants. As stated in the 2017 BAAQMD CEQA Air Quality Guidelines, air pollution by its nature is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project’s individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project’s individual emissions would be cumulatively considerable. If a project has a less than significant impact for criteria pollutants, it is assumed to have no adverse health effect.

Construction Community Risk

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 health risks for sensitive receptors such as surrounding 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 health risk assessment of the project construction activities was completed to evaluate potential health effects of sensitive receptors at these nearby residences from construction emissions of DPM and PM_{2.5}.¹⁹ The nearest sensitive receptors to the project site are the single-family residences to the west to the project site opposite St. Francis Street and to the north of the project site opposite Madison Avenue. There is also an elementary school to the north of the project (see Figure 2.2-3). Emissions and dispersion modeling were completed to predict the off-site concentrations resulting from project construction to evaluate lifetime cancer risks and non-cancer health effects. Additional details about the model inputs are included in Appendix B.

The results of the community health risk assessment is summarized in Table 3.3-5 (refer to Appendix B for additional details). The results of the assessment indicate the maximum incremental residential cancer risk at the maximally exposed individual (MEI) receptor (which is located immediately west of the project site) would be 20.5 in one million, which exceeds the BAAQMD significance threshold of 10 in one million (refer to Appendix B for a map showing the MEI).

The maximum-modeled annual PM_{2.5} concentration, which is based on combined exhaust and fugitive dust emissions, was 0.14 µg/m³ at the residential MEI. The maximum annual PM_{2.5} concentrations would not exceed the BAAQMD significance threshold of 0.3 µg/m³. The maximum modeled annual DPM concentration (i.e., from construction exhaust) was 0.1149 µg/m³ at the residential MEI. The maximum computed HI based on these DPM concentrations are 0.02 at the residential MEI, which is below the BAAQMD significance criterion of an HI greater than 1.0.

¹⁹ The project includes the installation of new or expand traffic calming measures (refer to Section 2.3). Construction of the proposed traffic calming measures would only occur for a few weeks with the use of minimal equipment. Due to the short construction duration and minimal construction emissions, the traffic calming measures were not evaluated in the construction analysis.

Table 3.3-5: Project Construction Community Risk at the Residential Maximally Exposed Individual			
Source	Maximum Cancer Risk (per million)	PM_{2.5} concentration (µg/m³)	Hazard Index
Project Construction			
Unmitigated	20.5	0.14	0.03
Mitigated	3.5	0.03	0.01
<i>BAAQMD Threshold – Single Source</i>	<i><10.0</i>	<i>>0.3</i>	<i>>1.0</i>
Exceed Threshold?			
Unmitigated	Yes	No	No
Mitigated	No	No	No

Mitigation Measure:

MM AIR-3.1: Prior to issuance of a grading permit, the project shall develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 55-percent reduction in DPM exhaust emissions or greater. The plan shall be submitted and approved by the City Planning Division. The following are feasible methods:

- All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall, at a minimum, meet EPA particulate matter emissions standards for Tier 3 engines with CARB-certified Level 3 Diesel Particulate Filters or equivalent.
- All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall meet EPA Tier 4 standards for particulate matter.
- The use of equipment that includes electric or alternatively-fueled equipment (i.e., non-diesel) would meet the reduction requirement above.

Implementation of MM AIR-3.1 would result in a less than significant impact with respect to community risk caused by construction activities. The computed maximum increased lifetime residential cancer risk from construction would be 3.5 in one million or less with implementation of the above mitigation measure (see Table 3.3-5), which would be below the BAAQMD significance threshold of 10 in one million. **(Less than Significant Impact with Mitigation Incorporated)**

Impact AIR-4: The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. **(Less than Significant Impact)**

Examples of land uses that generate considerable odors include wastewater treatment plants, landfills, and chemical plants. The project proposes public and community uses on-site. The proposed uses are similar to the existing uses on-site and would not create emissions leading to objectionable odors. **(Less than Significant Impact)**

3.3.2.3 *Cumulative Impacts*

Impact AIR-C: The project would not result in a cumulatively considerable contribution to a significant air quality impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

By its very nature, air pollution is largely a cumulative impact. The geographic area for cumulative air quality impacts is the San Francisco Bay Area Air Basin. Past, present, and future development projects (including the cumulative projects) contribute to the region's adverse air quality impacts. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts.

Air Pollutant Emissions

In developing thresholds of significance for air pollutants, BAAQMD considered the emissions levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emission would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. As discussed under Impact AQ-2, the project would result in less than significant operational criteria air pollutant emissions. As a result, the project would not have a considerable contribution to a significant cumulative operational criteria air pollutant impact. There are no cumulative projects in the vicinity of the project site that would contribute to a cumulative construction criteria air pollutant emissions impact. **(Less than Significant Cumulative Impact)**

Exposure of Sensitive Receptors

Cumulative community risk impacts were addressed through evaluation of TAC sources located within 1,000 feet of the project site. These sources include freeways or highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that traffic on Jefferson Avenue would exceed 10,000 vehicles per day. Other nearby streets are assumed to have less than 10,000 vehicles per day. A review of BAAQMD's stationary source Google Earth map tool identified one stationary source with the potential to affect the residential construction MEI. Details of the modeling and community risk calculations, as well as a map of the sources affecting the residential MEI, are included in Appendix B. Community risk impacts from these sources upon the residential construction MEI are summarized in Table 3.3-6.

Table 3.3-6: Cumulative Community Risk at the Residential Maximally Exposed Individual			
Sources	Maximum Cancer Risk (per million)	PM_{2.5} concentration (µg/m³)	Hazard Index
Project Construction (with mitigation measure MM AIR-2.1)	3.5	0.03	0.01
Jefferson Avenue at 380 feet	1.9	0.07	<0.03
Plant #17467 (Generator) at +1,000 feet	0.2	<0.01	<0.01
Combined Sources	5.6	0.11	<0.05
<i>BAAQMD Threshold – Combined Sources</i>	<i>>100</i>	<i>>0.8</i>	<i>>10.0</i>
Exceed Threshold?	No	No	No

As shown in Table 3.3-6, the project with the implementation of mitigation measure MM AIR-3.1, would not have a cumulatively considerable contribution to a significant cumulative community health risk. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

Other Emissions Leading to Odors

There are no existing significant sources of odors (e.g., wastewater treatment plants, landfills, and chemical plants) in the project vicinity. The cumulative projects (including the proposed project) do not propose uses that would generate significant sources of odors. For these reasons, there would be no significant cumulative emissions leading to odors and the project would not have a considerable contribution to a significant cumulative odor impact. **(Less than Significant Cumulative Impact)**

3.4 BIOLOGICAL RESOURCES

The following section is based in part on arborist reports prepared by Deborah Ellis and Advanced Tree Care in October 2015 and October 2018, respectively. Copies of these reports and a tree removal plan is included in Appendix C.

3.4.1 Environmental Setting

3.4.1.1 *Regulatory Framework*

Federal and State

Special-Status Species

Individual plant and animal species listed as rare, threatened or endangered under state and federal Endangered Species Acts are considered special-status species. Federal and state endangered species legislation has provided the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Permits may be required from both the USFWS and CDFW if activities associated with a proposed project would result in the take of a species listed as threatened or endangered. To “take” a listed species, as defined by the State of California, is “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill” said species. Take is more broadly defined by the federal Endangered Species Act to include harm of a listed species.

In addition to species listed under state and federal Endangered Species Acts, Section 15380(b) and (c) of the CEQA Guidelines provide that all potential rare or sensitive species, or habitats capable of supporting rare species, must be considered as part of the environmental review process. These may include plant species listed by the California Native Plant Society and CDFW listed Species of Special Concern.

Migratory Bird and Birds of Prey Protections

The federal Migratory Bird Treaty Act (MBTA) prohibits killing, capture, possession, or trade in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Hunting and poaching are also prohibited. The taking and killing of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take birds.²⁰ Nesting birds are considered special-status species and are protected by the USFWS. The CDFW also protects migratory and nesting birds under California Fish and Game Code Sections 3503, 3503.5, and 3800. The CDFW defines taking as causing abandonment and/or loss of reproductive efforts through disturbance.

²⁰ United States Department of the Interior. M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take. <https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf>.

Sensitive Habitats

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to regulation by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), CDFW, and/or the USFWS under provisions of the federal Clean Water Act (e.g., Sections 303, 304, 404) and State of California Porter-Cologne Water Quality Control Act.

CDFW Stream/Riparian Habitat

Streambeds and banks, as well as associated riparian habitat, are regulated by the CDFW per Section 1602 of the Fish and Game Code. Work within the bed or banks of a stream or the adjacent riparian habitat requires a Streambed Alteration Agreement from the CDFW.

Local

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to biological resources and are applicable to the proposed project.

Policy	Description
<hr/> Natural Resources <hr/>	
NR-8.3	Replace and control invasive, non-native vegetation and animals to the extent feasible in parks and open space areas. Encourage restoration of native vegetation.
NR-9.1	Preserve, maintain, and expand the number of trees in Redwood City's urban forest, on both public and private property.
NR-9.2	Require new trees to be planted and/or plant new trees in sufficient number, as identified on a site by site basis, on sites designated as sensitive receptors (i.e. schools or hospitals) that are in close proximity to industry, heavily traveled freeways and roads, and other similar pollution sources in order to mitigate air pollution.
NR-9.3	Select appropriate trees for Redwood City, focusing especially on native and landmark tree types.

Redwood City Tree Preservation Ordinance

The Redwood City Tree Preservation Ordinance (Redwood City Municipal Code, Chapter 35) defines a tree as:

- Any woody plant characterized by having a single trunk of a circumference of 38 inches or more, measured at any point between six and 36 inches above ground level; or

- Any woody plant characterized by having a single trunk which has been found by the Park and Recreation Commission to have special significance to the community, which plant shall be designated a “heritage tree.”²¹

The ordinance protects trees defined above from being cut, removed, or caused to be cut, moved, or removed without a permit from the City’s Parks and Recreation Director. If trees are damaged or removed without this approval, the tree must be restored to its former condition under the direction of the Parks and Recreation Director. If restoration is not possible, the tree must be replaced with a tree as approved by the Parks and Recreation Director.

3.4.1.2 Existing Conditions

The project site is currently developed and located within a community park in an urbanized area. Arroyo Ojo Agua flows underneath the northern portion of the site in an underground culvert in Madison Avenue, through the middle of the site in Nevada Street, and along the southern portion of the site southerly to Vera Avenue. Arroyo Ojo de Agua daylights approximately 300 feet to the west of the project site (near the Valota Road and Vera Avenue intersection) and 590 feet southeast of the project site (near the Vera Avenue and King Street intersection), where it flows in concrete-lined channels.

The improvements on-site are man-made and include ornamental landscaping. There are no sensitive habitats (including wetlands) on-site, therefore, no special-status animal or plant species are on-site.²² The main biological resources on-site are trees.

There are approximately 71 existing trees on the project site. Primary tree species on-site include coast redwood, tulip, and raywood ash trees. None of the trees on-site are designated by the City as Heritage Trees although there are two native trees, a California sycamore (tree #22) located in the southwestern section of the site, and a coast live oak (tree #48) located in the far eastern section of the site (refer to tree location map in the arborist report by Deborah Ellis in Appendix C).

The project site is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

²¹ The Commission may declare any tree, regardless of size, to be a heritage tree if said tree is healthy and has adapted well to the climatic conditions of the area, if said tree is visually accessible from a public right-of-way and if the Commission finds that at least one of the following conditions exist:

- A. That said tree has historical significance
- B. That said tree is indigenous to the area
- C. That said tree is one of a group of trees and that each is dependent on the other tree for survival

²² United States Department of the Interior, Fish and Wildlife Service. *List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project*. March 1, 2019.

3.4.2 Impact Discussion

For the purpose of determining the significance of the project's impact on biological resources, would the project:

- 1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?
- 2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?
- 3) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- 4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- 5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- 6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

3.4.2.1 *Project Impacts*

Impact BIO-1: The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. **(Less than Significant Impact with Mitigation Incorporated)**

Given the urbanized nature of the project site and surrounding area, there are no sensitive habitats or special-status animal or plant species on or adjacent to the project site. The project site, however, includes trees which could be used by nesting birds (including migratory birds and raptors). Nesting birds are protected under the MBTA and by the California Fish and Game Code 3503, 3503.5, and 2800. Construction disturbance during the breeding season could result in incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by CDFW. Any loss of fertile eggs, nesting raptors, or any activities resulting in nest abandonment would constitute a significant impact. Construction activities such as site grading that disturb a nesting bird or raptor on-site or immediately adjacent to the construction zone would constitute a significant impact.

Mitigation Measure:

MM BIO-1.1: Construction shall be scheduled to avoid the nesting bird season to the extent feasible. The nesting season for most birds, including most raptors, in the San Francisco Bay Area extends from February 1 through August 31.

If it is not possible to schedule construction activities between September 1 and January 31, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure no nest shall be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of grading, tree removal, or other demolition or construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).

During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist, in consultation with CDFW, shall determine the extent of a construction-free buffer zone to be established around the nest to ensure that nests of bird species protected by the MBTA or Fish and Game Code shall not be disturbed during project construction.

A final report of nesting birds, including any protection measures, shall be submitted to the Director of Community Development prior to the start of grading or tree removal.

The project, with implementation of the above mitigation measure, would reduce impacts to nesting birds (if present) by avoiding construction during nesting bird season or completing pre-construction nesting bird surveys to minimize and/or avoid impacts to nesting birds. **(Less than Significant Impact with Mitigation Incorporated)**

Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. **(No Impact)**

As discussed in Section 3.4.1 and under Impact BIO-1, the project site is developed and located in an urbanized area. There are no riparian habitats located within or adjacent to the project site, and the project site does not support other sensitive natural communities. The project site is located near the Arroyo Ojo de Agua Creek, which is channelized and concrete-lined. The project would not result in any changes to the creek. For these reasons, the project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulation or by the CDFW or USFWS. **(No Impact)**

Impact BIO-3: The project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. **(No Impact)**

The project site is developed and located in an urbanized area. The project site does not contain state or federally protected wetlands. **(No Impact)**

Impact BIO-4: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. **(No Impact)**

The project site is developed and surrounded by urban development. There are no sensitive habitats or waterways on or adjacent to the site. For these reasons, the project site does not facilitate substantial wildlife movement. There are no native wildlife nursery sites in the vicinity. For these reasons, the project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. **(No Impact)**

Impact BIO-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. **(Less than Significant Impact)**

As discussed in Section 3.4.1, there are a total of approximately 71 trees on-site. None of the trees are designated as heritage trees. Implementation of the project would result in the preservation of 28 trees (including the coast live oak tree) and the removal of 43 trees (including the California sycamore tree).

While the project would result in the removal of 43 existing trees, 114 new trees would be planted as part of the project. The project would result in a tree removal and replacement ratio of 1:2.5 (removed : replaced). As a condition of approval, the project would also implement the tree protection recommendations detailed in the arborist report by Deborah Ellis and Advanced Tree Care in Appendix C, which includes:

- Having a certified arborist prepare custom tree protection specifications for each tree to be preserved,
- Completing construction and landscaping work within the dripline of existing trees to be preserved by hand to the extent feasible,
- Identifying and delineating a Tree Protection Zone (TPZ) for each tree to be preserved and limiting work and new landscaping within the TPZ,
- Having a certified arborist conduct necessary pruning and maintenance of trees prior to construction,
- Irrigating preserved trees appropriately pre- and post-construction.

The project would obtain tree removal permits, pursuant to the City's Tree Preservation Ordinance. The project, therefore, would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. **(Less than Significant Impact)**

Impact BIO-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. **(No Impact)**

The project site is not located within an adopted Habitat Conservation Plan, Natural Community Plan, or other approved, local, regional, or state habitat conservation plan. The proposed project, therefore, would not conflict with provisions of any of these plans. **(No Impact)**

3.4.2.2 *Cumulative Impacts*

Impact BIO-C: The project would not result in a cumulatively considerable contribution to a significant biological resources impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

The geographic area for cumulative biological resources impacts includes the project site and its surrounding area.

Special-Status Species

Construction of the cumulative projects, including the proposed project, could result in a significant cumulative impact on nesting birds (if present during construction). Each project is subject to federal, state, and local regulations (including the MBTA, Fish and Game Code, and CEQA), which would avoid and/or minimize impacts to nesting birds.

The project, with the implementation of mitigation measure MM BIO-1.1 to comply with the MBTA and Fish and Game Code, would not have a cumulatively considerable contribution to a significant cumulative impact to nesting birds. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

Riparian Habitat, Other Sensitive Natural Community, Wetlands, Species Movement, Native Wildlife Nursery Use

As discussed under Impact BIO-2, BIO-3, and BIO-4, the project would have no impact on riparian habitat, other sensitive natural community, wetlands, species movement, or native wildlife nursery site use. For this reason, the project would not contribute to cumulative impacts to those biological resources. **(No Cumulative Impact)**

Tree Preservation Ordinance

All the cumulative projects (including the proposed project) would be required to comply with the City's Tree Preservation Ordinance. **(Less than Significant Cumulative Impact)**

3.5 CULTURAL RESOURCES

The following discussion is based in part on a historical resources technical report prepared by Architectural Resource Group, Inc. in January 2017. A copy of this report is included in Appendix D.

3.5.1 Environmental Setting

3.5.1.1 *Regulatory Framework*

Federal and State

National Historic Preservation Act

Federal protection is legislated by the National Historic Preservation Act (NHPA) of 1966 and the Archaeological Resource Protection Act of 1979. These laws maintain processes for determination of the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA and related regulations (36 Code of Federal Regulations Part 800) constitute the primary federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed or eligible for listing in the NRHP. Impacts to properties listed in the NRHP must be evaluated under CEQA.

The NRHP is the nation's master inventory of historic resources that are considered significant at the national, state, or local level. The minimum criteria for determining NRHP eligibility follow:

- The property is at least 50 years old (properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
- It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
- It possesses at least one of the following characteristics:
 - Association with events that have made a significant contribution to the broad patterns of history.
 - Association with the lives of persons significant in the past.
 - Distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction.
 - Has yielded, or may yield, information important to prehistory or history.

Refer to Appendix D for additional details about the NRHP eligibility criteria.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is administered by the State Office of Historic Preservation and encourages protection of resources of architectural, historical, archeological, and cultural significance. The CRHR identifies historic resources for state and local planning purposes and affords protections under CEQA. Under Public Resources Code Section 5024.1(c), a resource may be eligible for listing in the CRHR if it meets any of the NRHP criteria.²³

Historical resources eligible for listing in the CRHR must meet the significance criteria described previously and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if it maintains the potential to yield significant scientific or historical information or specific data.

The concept of integrity is essential to identifying the important physical characteristics of historical resources and hence; in evaluating adverse changes to them. Integrity is defined as “the authenticity of an historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.” The process of determining integrity is similar for both the CRHR and NRHP and use the same seven variables or aspects to define integrity that are used to evaluate a resource's eligibility for listing. These seven characteristics include 1) location, 2) design, 3) setting, 4) materials, 5) workmanship, 6) feeling, and 7) association.

Refer to Appendix D for additional details about the CRHR eligibility criteria.

California Public Resources Code, California Code of Regulations, and California Health and Safety Code

Archaeological, and historical sites are protected by a number of state policies and regulations under the California Public Resources Code, California Code of Regulations (Title 14 Section 1427), and California Health and Safety Code. California Public Resources Code Sections 5097.9-5097.991 require notification of discoveries of Native American remains and provides for the treatment and disposition of human remains and associated grave goods. Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains to protect them from disturbance, vandalism, and inadvertent destruction.

Pursuant to Public Resources Code Section 5097.98, in the event of human remains are discovered, no further disturbance is allowed until the County Coroner has made the necessary findings regarding origin and disposition of the remains. If the Coroner determines the remains are those of Native Americans, the Native American Heritage Commission (NAHC) and a “most likely descendant” must also be notified.

²³ CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6. March 14, 2006.

Local

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to cultural resources and are applicable to the proposed project.

Policy	Description
The Built Environment	
BE-4.2	Encourage carefully designed and sensitive infill development that creates harmony and compatibility with nearby structures of historic value and merit. Require new development to integrate with, if not enhance, the historic nature of the neighborhood through appropriate site patterns and building character.
BE-37.1	Enhance, restore, preserve, and protect, as appropriate, historic resources throughout the city.
BE-37.2	Preserve historic landmark structures, landscapes (including trees), trails, and sites that serve additional community needs, such as recreational open space and/or cultural needs.
BE-37.8	Permit removal of non-contributing elements of structures in or adjacent to designated historic resources to allow replacement by compatible, historically appropriate structures.

Redwood City Historic Preservation Ordinance

The Historic Preservation Ordinance (Chapter 40 of the City Municipal Code) is intended to safeguard the City's heritage by providing for the protection of historic landmarks, encourage public knowledge of the City's history, and foster a sense of identity in the community. The Historic Preservation Ordinance requires that applications or projects affecting historic resources comply with applicable local, state, and federal laws. Under the Historic Preservation Ordinance, the City also maintains a list of individual historic landmarks, resources, and districts.

Section 40.6 states that an improvement may be designated a historic landmark or historic site by the City Council, and any area within the City may be designated a historic district by the City Council pursuant to Section 40.7 of this Chapter if it meets the following criteria or other criteria established by the Planning Commission pursuant to Section 40.5 of this Chapter:

- A. It exemplifies or reflects special elements of the City's cultural, aesthetic, or architectural history; or
- B. It is identified with persons or events significant in local, state, or national history; or
- C. It embodies distinctive characteristics of a style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship; or
- D. It is representative of the notable work of a builder, designer, or architect.

Historic Resources Advisory Committee and Cultural Resources Management Plan

The Historic Resources Advisory Committee (HRAC) actively pursues historic preservation projects in the City, such as overseeing management of the City's Historic Resources Inventory. The HRAC also developed and oversees implementation of a Cultural Resources Management Plan that outlines the City's policies for the treatment of historic resources impacted by development projects in the City. The Cultural Resources Management Plan is applied to all historic sites which have a potential for the on-site discovery, reconnaissance, and identification of a cultural resource.

3.5.1.2 Existing Conditions

Archaeological Resources

There are eight reported, but not officially recorded, cultural resource sites within the City, three of which are understood to be associated with Native Americans.²⁴ Within the City boundaries, there are 12 known prehistoric archaeological sites ranging from tool processing sites to habitation sites with burials. An additional site is considered to have multiple components. None of the known archaeological sites are within the project site.²⁵ As discussed in the General Plan EIR, there is a high likelihood that unrecorded Native American cultural resources existing within the City boundaries.²⁶

Historic Structures

The project site is developed with five buildings: 1) VMSC senior center; 2) VMSC resource building; 3) VMSC annex; 4) Sid Herkner Pool; and 5) NFL Alumni Association Building (see to Figure 2.2-3). A summary description of the buildings is provided in Table 3.5-1.

Two historic evaluations were completed in 2010 and 2015 for the site and concluded that the senior center is eligible for the CRHR.²⁷ As a result, the senior center is considered a historic resource under CEQA (CEQA Guidelines Section 15064.5[a][1]). The 2010 and 2015 historic evaluations concluded that the other buildings on the project site were not historical resources. Additional details about the previous historic evaluations of the site are summarized in Appendix D.

A historic resources technical report was completed for the project in January 2017 by Architectural Resources Group, Inc. (see Appendix D). The analysis in this technical report confirmed the senior center is eligible for the CRHR and none of the other buildings or structures on-site appear eligible for consideration as historical resources under CEQA.²⁸ The senior center is considered a significant resource with respect to patterns of local history (as it was constructed as a World War II memorial and funded and developed by the people) and its association with Birge Clark, a prominent Palo Alto

²⁴ Redwood City. *A New General Plan for Redwood City Draft Environmental Impact Report*. May 2010. Certified October 2010. Page 4.5-12.

²⁵ CirclePoint. Personal communications. 2009.

²⁶ Redwood City. *A New General Plan for Redwood City Draft Environmental Impact Report*. May 2010. Certified October 2010. Page 4.5-12.

²⁷ Previous historic evaluations: 1) Painter, Diana J. *Historic Resource Report, Veterans Memorial Building, Redwood City, California*. September 2010., and 2) Brandi, Richard. *Peer Review of Historic Resource Evaluation, Veteran's Memorial Senior Center Building at 1455 Madison Avenue*. April 2015.

²⁸ Architectural Resources Group, Inc. *Historical Resources Technical Report Veterans Memorial Senior Center/YMCA Project*. January 2017. Page 7.

architect. The evaluation also concluded that the senior center appears to satisfy Redwood City landmark criteria A and D. Refer to Appendix D for additional details of the evaluation.

Table 3.5-1: Summary Description of On-Site Buildings		
Structure	Date of Construction and Modifications	Description
Veterans Memorial Senior Center		
<ul style="list-style-type: none"> • Senior Center 	1955-1956	The senior center is a one-story brick building with a cross-shaped plan. The building has shallow-pitched gable roofs with deep eaves. The building was designed by Palo Alto architect Birge M. Clark based on a Master Plan developed by Clark and Stromquist and constructed in 1955-1956 for the City. Its design and construction were funded by a tax levied on the citizens of Redwood City. The building took 12 years to accumulate the funds to building the memorial building.
<ul style="list-style-type: none"> • Resource Building 	1982	The resource building is a rectangular-in-plan, one-story building clad in stucco. The building has metal sliding windows and a shallow-pitched roof with deep eaves.
<ul style="list-style-type: none"> • Annex 	1956, 1965, 1968	The annex is a long, rectangular building with a central two-story portion flanked by one-story portions. The building is clad with vertical siding and stucco, and has metal sliding windows, along with shallow-pitched hipped roofs and deep eaves.
Sid Herkner Pool		
	1951, 1980	The pool house is a one-story building that is clad in diagonal wood boards and has a flat roof. The central portion features a pergola and clerestory ²⁹ windows. The pool house and surrounding wood fence enclose two concrete in-ground pools.
NFL Alumni Association Building		
	1962	The NFL Alumni Association Building is a one-story building rectangular in plan and has a flat roof. It is primarily clad in stucco, with portions of the front (northwest) façade clad in brick. A pergola with brick pillars extends along this façade. The main entrance consists of a glazed metal door with metal sidelights and transom.

²⁹ Clerestory is defined as a high section of wall that contains windows above eye level.

3.5.2 Impact Discussion

For the purpose of determining the significance of the project's impact on cultural resources, would the project:

- 1) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?
- 2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?
- 3) Disturb any human remains, including those interred outside of dedicated cemeteries?

3.5.2.1 *Project Impacts*

Impact CUL-1: The project would cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.
(Significant and Unavoidable Impact with Mitigation Incorporated)

The project would result in the demolition of all the buildings on-site, including the senior center, a historic resource. As described in Section 3.5.1.2, the senior center is eligible for the CRHR and appears to satisfy Redwood City landmark criteria A and D.

The significance of a historic resource is considered “materially impaired” when a project demolishes or substantially alters the physical characteristics that justify the determination of a historic resource’s significance (CEQA Guidelines Section 15064.5[b]). Given that the project would result in the demolition of the senior center, the project would materially impair the integrity and significance of the historic resource as all character-defining features of the building would be lost. Demolition of the senior center, therefore, is a significant impact.

Mitigation Measures:

- MM CUL-1.1:** Prior to issuance of any demolition or grading permits, the City shall document the senior center. The documentation shall be in the form of a Historic American Buildings Survey (HABS) Level II and shall comply with the Secretary of the Interior’s Standards for Architectural and Engineering Documentation. The documentation shall include drawings, photographs and a narrative overview:
- Drawings: Existing historic drawings of the senior center, if available, shall be photographed with large-format negatives or photographically reproduced on Mylar.
 - Photographs: Photo-documentation of the exterior of the senior center shall be prepared to HABS standards for archival photography. Key views of the building’s interior should also be included in the photo-documentation.
 - Historical Overview: A detailed narrative description of the building and its history shall be prepared. It is anticipated that much of this information will be drawn from the Historic Resource Report that Diana Painter completed for the VMSC in 2010.

The documentation shall be completed by a historian or architectural historian meeting the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History. To ensure its public accessibility, the completed documentation shall be filed with the Redwood City Public Library for inclusion in their local history collection, as well as with the San Mateo County History Museum.

MM CUL-1.2: The City shall be responsible for the production and placement of an interpretive display in the new VMSC/YMCA facility that describes the history and significance of the senior center, using photographs and drawings in addition to narrative text. The display shall be placed in a prominent space within the new building.

With implementation of the mitigation measures MM CUL-1.1 and CUL-1.2, the impact to the historic resource would be reduced by documenting and commemorating the building. Since the historic resource would be demolished, the impact is be significant and unavoidable. **(Significant and Unavoidable Impact with Mitigation Incorporated)**

Impact CUL-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. **(Less than Significant Impact)**

As discussed in the General Plan EIR, there is a high likelihood that unrecorded Native American cultural resources exist in portions of the City. Implementation of the project would require site preparation, including excavation and grading activities, which could adversely impact previously undiscovered archaeological resources. Consistent with the General Plan EIR, as conditions of approval, the project would implement the following measures to reduce impacts to archaeological resources (if encountered) to a less than significant level:

- General Plan EIR Mitigation Measure 4.5-1b: Prior to the issuance of grading permits, the project applicant is responsible for ensuring all construction crews undergo adequate training for the identification of federal or state-eligible cultural resources, and that the construction crews are aware of the potential for previously undiscovered archaeological resources, of the laws protecting these resources and associated penalties, and of the procedures to follow should they discover cultural resources during project-related work.
- General Plan EIR Mitigation Measure 4.5-1a: If deposits of prehistoric or historic archeological materials are encountered during project construction activities, all work within an appropriate buffer area (no less than 50 feet) around the discovery shall be stopped and a qualified archeologist meeting federal criteria under 36 CFR 61 shall be contacted to assess the deposit(s) and make recommendations.

If the deposits are recommended to be non-significant by a qualified archeologist, avoidance is not necessary. If the deposits are determined to be potentially significant by the qualified archeologist, the resources shall be avoided. If avoidance is not feasible, project impacts shall be mitigated in accordance with the recommendations of the qualified archaeologist, in

coordination with the City Planning, Housing, and Economic Development Department and CEQA Guidelines Section 15126.4 (b)(3)(C), which requires implementation of a data recovery plan.

The data recovery plan shall be prepared and implemented by a qualified archaeologist. The data recovery plan shall include provisions for adequately recovering all scientifically consequential information from and about any discovered archeological materials and include recommendations for the treatment of these resources. In-place preservation of the archeological resource is the preferred manner of mitigating potential impacts, as it maintains the relationship between the resource and the archeological context. In-place preservation also reduces the potential for conflicts with the religious or cultural values of groups associated with the resource. Other mitigation options include, but are not limited to, the full or partial removal and curation of the resource. The data recovery plan shall be conducted prior to any additional earth-moving activities in the area of the resource. The recovery plan shall be submitted to the project applicant, the City Planning, Housing, and Economic Development Department, and the Northwest Information Center (NWIC). Once the recovery plan is reviewed and approved by the City Planning, Housing, and Economic Development Department and any appropriate resource recovery completed, project construction activity within the area of the find may resume. A data recovery plan shall not be required for resources that have been deemed by the NWIC as adequately recorded and recovered by studies already completed.³⁰

With implementation of the above measures, the project would not result in significant impacts to archaeological resources because the project would require training of construction personnel regarding identifying and protecting archaeological resources and halting work if a resource is encountered in order to assess the find and mitigate/avoid impacts if determined to be significant. **(Less than Significant Impact)**

Impact CUL-3: The project would not disturb any human remains, including those interred outside of dedicated cemeteries. **(Less than Significant Impact)**

As discussed in the General Plan EIR, the potential to uncover Native American human remains exists in locations throughout the state. Although not anticipated, human remains may be encountered during site preparation and grading activities, resulting in a significant impact. Consistent with the General Plan EIR, as conditions of approval, the project would implement the following measure to reduce impacts to human remains (if encountered) to a less than significant level:

- General Plan EIR Mitigation Measure 4.5-3b: Prior to the issuance of grading permits, the project applicant is required to ensure all construction crews undergo a training session to inform them of the presence and nature of federal or state-eligible cultural resources and the potential for previously undiscovered human remains within the project area, of the laws

³⁰ Redwood City. *A New General Plan for Redwood City Draft Environmental Impact Report*. May 2010. Certified October 2010. Pages 4.5-23 and 4.5-24.

protecting these resources and associated penalties, and of the procedures to follow should they discover cultural resources during project-related work.

- General Plan EIR Mitigation Measure 4.5-3a: If human remains are encountered during ground disturbing activities, the project contractor and/or on-site supervisor shall stop work within 50 feet of the discovery. The project contractor shall immediately notify the Coroner upon the discovery of any human remains. At the same time, a qualified archaeologist, in coordination with the City Planning, Housing, and Economic Development Department, shall assess the situation and consult with the appropriate agencies. If the human remains are of Native American origin, the Coroner shall notify the NAHC within 24 hours of this identification. The NAHC will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment or disposition, with proper dignity, of the remains and any associated grave goods. Upon completion of the assessment, the qualified archaeologist shall prepare a report documenting the background to the finds, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the project applicant, the City Planning Department, and the NWIC. Once the report is reviewed and approved by the City Planning Department, and any appropriate treatment completed, project construction activity within the area of the find may resume. If the MLD does not make recommendations within 48 hours, the project applicant(s) shall reinter the remains in an area of the property secure from further disturbance. If the project applicant(s) does not accept the MLD's recommendations, the applicant(s) or the MLD may request mediation by the NAHC.³¹

With implementation of the above conditions of approval, the project would not result in significant impacts to human remains because the project would require training of construction personnel regarding identifying and protecting the remains and halting work and notifying appropriate parties if human remains are encountered, and implementing recommendations to ensure proper treatment or disposition of the find. **(Less than Significant Impact)**

³¹ Redwood City. *A New General Plan for Redwood City Draft Environmental Impact Report*. May 2010. Certified October 2010. Page 4.5-26.

3.5.2.2 *Cumulative Impacts*

Impact CUL-C: The project would result in a cumulatively considerable contribution to a significant cultural resources impact. **(Less than Significant Cumulative Impact)**

The geographic area for cultural resources is the city boundaries as cultural resource impacts are typically localized and generally limited to the immediate area in which a given cultural resources is located.

Historic Resources

As discussed under Impact CUL-1, the senior center is considered a significant resource with respect to patterns of local history and its association with Birge Clark. No other cumulative project would impact a structure of similar significance. For this reason, the project would not contribute to a significant cumulative impact on historic resources. **(Less than Significant Cumulative Impact)**

Archaeological Resources

The cumulative projects (including the proposed project), would be required to implement General Plan EIR Mitigation Measures 4.5-1b and 4.5-1a to reduce impacts to archaeological resources (if encountered) to a less than significant level. As concluded in the General Plan EIR, future development under the General Plan, in conformance with existing policies and regulations and with the implementation of General Plan EIR Mitigation Measures 4.5-1b and 4.5-1a would not result in significant cumulative impacts to archaeological resources.³² **(Less than Significant Cumulative Impact)**

Human Remains

Build out of the General Plan, including the proposed project and cumulative projects, would be required to implement General Plan EIR Mitigation Measures 4.5-3b and 4.5-3a to reduce impacts to human remains (if encountered) to a less than significant level. As concluded in the General Plan EIR, future development under the General Plan, in conformance with existing policies and regulations and with the implementation of General Plan EIR Mitigation Measures 4.5-3b and 4.5-3a would not result in significant cumulative impacts to human remains.³³ **(Less than Significant Cumulative Impact)**

³² Redwood City. *A New General Plan for Redwood City Draft Environmental Impact Report*. May 2010. Certified October 2010. Page 6-12.

³³ Ibid.

3.6 ENERGY

3.6.1 Environmental Setting

3.6.1.1 *Regulatory Framework*

Federal

At the federal level, energy standards set by the EPA apply to numerous consumer products and appliances (e.g., the EnergyStar™ program). The EPA also sets fuel efficiency standards for automobiles and other modes of transportation.

State

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard (RPS) Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. In 2008, Executive Order S-14-08 was signed into law requiring retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable sources by 2030. SB 100, passed in 2018, requires 100 percent of electricity in California to be provided by 100 percent renewable and carbon-free sources by 2045.

Building Codes

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years, and the 2016 Title 24 updates went into effect on January 1, 2017. Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.³⁴

The California Green Building Standards Code (CALGreen) establishes mandatory green building standards for buildings in California. CALGreen was developed to reduce GHG emissions from buildings, promote environmentally responsible and healthier places to live and work, reduce energy and water consumption, and respond to state environmental directives. The most recent update to CALGreen went into effect on January 1, 2017, and covers five categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.

³⁴ California Energy Commission (CEC). "2016 Building Energy Efficiency Standards." Accessed April 4, 2019. <http://www.energy.ca.gov/title24/2016standards/index.html>.

Local

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to energy and are applicable to the proposed project.

Policy	Description
Natural Resources	
NR-4.3	Incorporate the use of energy conservation strategies in City projects and operations.
NR-4.5	Conserve energy by promoting efficient and cost-effective lighting that reduces glare and light pollution.
The Built Environment	
BE-22.2	Development must incorporate sustainability features, including features that minimize energy and water use, limit carbon emissions, provide opportunities for local power generation and food production, and provide areas for recreation.
PS-1.2	Minimize vehicle emissions by reducing automobile use and encouraging alternative means of transportation.

3.6.1.2 Existing Conditions

Total energy usage in California was approximately 7,830 trillion British thermal unit (Btu) in the year 2016, the most recent year for which this data was available. Out of the 50 states, California is ranked 2nd in total energy consumption and 48th in energy consumption per capita. The breakdown by sector was approximately 18 percent (1,384 trillion Btu) for residential uses, 19 percent (1,477 trillion Btu) for commercial uses, 24 percent (1,853 trillion Btu) for industrial uses, and 40 percent (3,116 trillion Btu) for transportation.³⁵ This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

Electricity

Electricity in San Mateo County in 2017 was consumed primarily by the commercial sector (62 percent), with the residential sector consuming 38 percent. In 2017, a total of approximately 4,368 gigawatt hours (GWh) of electricity was consumed in San Mateo County.³⁶

Peninsula Clean Energy (PCE) is a public and locally controlled electricity provider for the County of San Mateo. Electricity provided by PCE is delivered through Pacific Gas and Electric (PG&E) transmission lines. Commercial and residential customers in San Mateo County are included in the PCE service area and can choose to have 50 to 100 percent of their electricity supplied from carbon free and renewable sources. Customers are automatically enrolled in the ECOplus plan, which

³⁵ United States Energy Information Administration. "State Profile and Energy Estimates." Accessed March 29, 2019. <https://www.eia.gov/state/?sid=CA#tabs-2>.

³⁶ CEC. Energy Consumption Data Management System. "Electricity Consumption by County". Accessed March 15, 2019. <http://ecdms.energy.ca.gov/electbycounty.aspx>.

generates its electricity from 85 percent carbon free sources, with at least 50 percent from renewable sources. Customers have the option to enroll in the ECO100 plan, which generates its electricity from 100 percent carbon free, renewable sources.³⁷

Natural Gas

PG&E provides natural gas services within San Mateo County. In 2017, approximately 1.4 percent of California's natural gas supply came from in-state production, while the remaining supply was imported from other western states and Canada.³⁸ Residential and commercial customers in California used approximately 29 percent, power plants used 32 percent, and the industrial sector used 37 percent. Transportation accounted for one percent of natural gas use in California. In 2017, San Mateo County used 21 trillion Btu (or approximately 1.7 percent of the state's total consumption of 2,110 trillion Btu of natural gas).^{39,40,41}

Fuel for Motor Vehicles

In 2017, 15 billion gallons of gasoline were sold in California.⁴² The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 13.1 miles-per-gallon (mpg) in the mid-1970's to 22 mpg in 2016.⁴³ Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. That standard, which originally mandated a national fuel economy standard of 35 miles per gallon by the year 2020, was subsequently revised to apply to cars and light trucks Model Years 2011 through 2020.^{44,45}

³⁷ Sources: 1) Peninsula Clean Energy. "FAQ Page" Accessed April 4, 2019.

<https://www.peninsulacleanenergy.com/faq/>. 2) Peninsula Clean Energy. "Energy Choices." Accessed April 4, 2019. <https://www.peninsulacleanenergy.com/energy-choices/>.

³⁸ California Gas and Electric Utilities. *2018 California Gas Report*. Accessed March 26, 2019.

https://www.socalgas.com/regulatory/documents/cgr/2018_California_Gas_Report.pdf

³⁹ EIA. "California Natural Gas Total Consumption, Annual." Accessed April 1, 2019.

https://www.eia.gov/opendata/qb.php?sdid=NG.NA1490_SCA_2.A

⁴⁰ CEC. "Natural Gas Consumption by County." Accessed March 29, 2019.

<http://ecdms.energy.ca.gov/gasbycounty.aspx>.

⁴¹ Ministry of Energy. Natural Gas Unit Conversion Calculator. Accessed April 1, 2019.

<http://www.energy-sea.gov.il/English-Site/Pages/Data%20and%20Maps/calc.aspx>

⁴² California Department of Tax and Fee Administration. Net Taxable Gasoline Gallons. Accessed March 29, 2019.

http://www.cdtfa.ca.gov/taxes-and-fees/MVF_10_Year_Report.pdf.

⁴³ United States Environmental Protection Agency. Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles. Accessed March 29, 2019.

https://www.bts.gov/archive/publications/national_transportation_statistics/table_04_23

⁴⁴ United States Department of Energy. Energy Independence & Security Act of 2007. Accessed April 1, 2019.

<http://www.afdc.energy.gov/laws/eisa>.

⁴⁵ Public Law 110-140—December 19, 2007. Energy Independence & Security Act of 2007. Accessed April 1, 2019. <http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf>.

3.6.2 Impact Discussion

For the purpose of determining the significance of the project's impact on energy, would the project:

- 1) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?
- 2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

3.6.2.1 *Project Impacts*

Impact EN-1: The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation.
(Less than Significant Impact)

Construction

Construction of the project would require energy for the manufacture and transportation of building materials, site preparation and grading, and the actual construction of the buildings and infrastructure. As discussed in Section 3.3 Air Quality, the project would implement mitigation measure MM AIR-1.1 to minimize the idling of construction equipment. In addition, as discussed in Section 3.19 Utilities and Service Systems, the project is required to participate in the City's Construction & Demolition Debris Program which requires 100 percent of demolition inert solids be diverted from the landfill and a minimum of 65 percent of all other construction and demolition debris from new construction, roofing, and alternations/additions be diverted from the landfill. Diversion saves energy by reusing and recycling materials for other uses (instead of landfilling materials and using additional non-renewable resources). For these reasons, the construction of the project would not use energy in a wasteful manner. **(Less than Significant Impact)**

Operation

Operation of the project would consume energy for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, electronics, and exercise machines. Energy would also be consumed during each vehicle trip generated by employees and visitors.

The project's estimated energy demand is summarized in Table 3.6-1. The project would be built in accordance with Title 24 and CalGreen and include green building measures to reduce energy consumption. Phase 1 of the project would not use energy in a wasteful manner by being designed to meet minimum LEED Certification standards by incorporating natural ventilation systems, water conservation measures (including use of cisterns for on-site rainwater storage), and energy conservation measures (including use of efficient LED light fixtures, renewable building materials, and installation of solar panels). In addition, Phase 1 would include four electrical vehicle charging stations. Phase 2 of the project would not use energy in a wasteful manner by incorporating green building measures such as natural ventilation systems, water conservation measures, and energy conservation measures.

Table 3.6-1: Annual Project Energy Demand			
	Electricity (GWh)	Natural Gas (kBTU)	Gasoline* (gallons)
Phase 1	0.35	1,113,750	56,000
Phase 2	0.30	843,894	41,150
<i>Total</i>	<i>0.65</i>	<i>1,957,644</i>	<i>97,150</i>

Note: * Gasoline demand was calculated by dividing the project's estimated VMT by 35 mpg.
Source: Illingworth & Rodkin, Inc. *Veterans Memorial Building Senior Center & YMCS Air Quality & Greenhouse Gas Assessment*. May 8, 2019. Attachment 2: CalEEMod Modeling Output.

In addition, the project would include on-site recycling facilities to minimize and divert materials from being landfilled. The project also encourages alternatives to single-vehicle occupancy trips by being on a site adequately served by pedestrian and bicycle facilities and implementing TDM measures (refer to Section 2.3.3 for more details about the TDM measures). For these reasons, operation of the project would not use energy in a wasteful manner. **(Less than Significant Impact)**

Impact EN-2: The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **(Less than Significant Impact)**

The project would be consistent with the regulations described in Section 3.6.1.1 (including General Plan policies) by:

- Designing Phase 1 to meet minimum LEED Certification standards by incorporating natural ventilation systems, water conservation measures (including use of cisterns for on-site rainwater storage), and energy conservation measures (including LED light fixtures, solar panels, and renewable building materials),
- Designing Phase 2 to incorporating measures such as natural ventilation systems, water conservation measures, and energy conservation measures,
- Implementing TDM measures to promote walking, bicycling, and transit use,
- Complying with Title 24 and CALGreen,
- Participating in the City's Construction & Demolition Debris Program, and
- Providing on-site recycling facilities.

The project, therefore, would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **(Less than Significant Impact)**

3.6.2.2 *Cumulative Impacts*

Impact EN-C: The project would not result in a cumulatively considerable contribution to a significant energy impact. **(Less than Significant Cumulative Impact)**

Energy is a cumulative resource. The geographic area for cumulative energy impacts is the State of California. Past, present, and future development projects contribute to the state's energy impacts. If the project is determined to have a significant energy impact, it is concluded that the impact is a cumulative impact. As discussed under Impact EN-1 and EN-2, the project would not result in significant energy impacts. Therefore, the project would not have a cumulatively considerable contribution to a significant cumulative energy impact. **(Less than Significant Cumulative Impact)**

3.7 GEOLOGY AND SOILS

The following discussion is based on a geotechnical investigation completed for the project by Cleary Consultants, Inc. in August 2018. A copy of this report is included in Appendix E.

3.7.1 Environmental Setting

3.7.1.1 *Regulatory Framework*

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and identify measures to reduce earthquake-related hazards.

California Building Standards Code

The California Building Standards Code (CBC) prescribes standards for constructing safer buildings. The CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions, such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years; the current version is the 2016 CBC.

California Division of Occupational Safety and Health Regulations

Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

California Public Resources Code

The California Public Resources Code (Section 5097.5) specifies that unauthorized removal of a paleontological resource is a misdemeanor. Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These are valued for the information they yield about the history of the earth and its past ecological settings. Under the CEQA Guidelines, a project would have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature.

Local

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to geology and soils and are applicable to the proposed project.

Policy	Description
Public Safety	
PS-6.1:	Identify structural types, land uses, and sites that are highly sensitive to earthquake activity and other geological hazards, and seek to abate or modify them to achieve acceptable levels of risk.
PS-6.3:	Work to ensure that structures and the public in Redwood City are exposed to reduced risks from seismic and geological events.

3.7.1.2 Existing Conditions

Seismicity and Fault Rupture

Redwood City is located in the seismically active San Francisco Bay Area. The three major fault zones pass through the Bay Area in a northwest direction. The faults causing these earthquakes are part of the San Andreas fault system, a major rift in the earth's crust that extends for at least 450 miles along the California coast that includes the San Andreas, San Gregorio, Hayward, and Calaveras faults. The distance between the site and these nearby faults is summarized in Table 3.7-1.

Fault	Distance from Site
San Andreas	3.4 miles northeast
San Gregorio	12.4 miles northeast
Hayward	15.6 miles southwest
Calaveras	21.5 miles southwest

Additional information about nearby faults, including a location map and summary of past seismic activity, is included in Appendix E. Like most of the San Francisco Bay Area, the project site is subject to moderate to large earthquakes. During such an earthquake, strong ground shaking is likely to occur on-site.

There are no known active or potentially active faults crossing the project site.⁴⁶ The project site is not located within an Earthquake Fault Zone as defined by the State of California Alquist-Priolo Earthquake Fault Zoning Act. The potential hazard from surface fault rupture on-site, therefore, is considered low.

Seismic-Related Ground Failure

Liquefaction

Liquefaction is the result of seismic activity and is characterized as the transformation of loose, water-saturated soils from a solid state to a liquid state after ground shaking. There are many variables that contribute to liquefaction, including the age of the soil, soil type, soil cohesion, soil density, and ground water level. Flow failure, lateral spreading, differential settlement, loss of bearing strength, ground fissures, lurch cracking, and sand boils are caused by liquefaction. The project site is located within a liquefaction hazard zone.^{47,48} Investigation of on-site soils (including soil sampling and analysis), however, determined that on-site soils are not susceptible to liquefaction and that the potential for earthquake induced soil liquefaction on-site is low.⁴⁹

Landslide and Lateral Spreading

Given the relatively level topography of the site, the likelihood of landslides is remote.⁵⁰ Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water. Given the generally level topography and absence of a free face on or adjacent to the site, the potential for lateral spreading on-site is low.

On-Site Soils

Soil borings on-site generally encountered stiff to hard sandy clay and silty clay to depths of 12 to 27 feet. Bedrock was encountered underlying the soils from depths of 17 to 32 feet. The soil-bedrock contact generally deepened to the northeast, with the shallowest bedrock encountered at a depth of 17 feet. On-site soils have a high to critically high expansive potential. A detailed description of on-site soils is included in Appendix E.

⁴⁶ Cleary Consultants, Inc. *Geotechnical Investigation Veterans Memorial Senior Center and YMCA Complex Project 1455 Madison Avenue Redwood City, California*. August 2018. Page 14.

⁴⁷ Association of Bay Area Government. [Interactive Seismic Hazards Zone Map](http://resilience.abag.ca.gov/earthquakes/). Accessed March 4, 2019.

⁴⁸ Cleary Consultants, Inc. *Geotechnical Investigation Veterans Memorial Senior Center and YMCA Complex Project 1455 Madison Avenue Redwood City, California*. August 2018. Page 15.

⁴⁹ Ibid. Page 16.

⁵⁰ Ibid. Page 18.

Paleontological Resources

There are no known fossil localities within the City.⁵¹ The closest recorded paleontological sites are located approximately two miles south of the City in the City of Atherton.⁵² Fossils are found in sedimentary rock layers.⁵³

3.7.2 Impact Discussion

For the purpose of determining the significance of the project's impact on geology and soils, would the project:

- 1) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)?
 - Strong seismic ground shaking?
 - Seismic-related ground failure, including liquefaction?
 - Landslides?
- 2) Result in substantial soil erosion or the loss of topsoil?
- 3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
- 4) Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?
- 5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?
- 6) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

⁵¹ Redwood City. *A New General Plan for Redwood City Draft Environmental Impact Report*. May 2010. Certified October 2010. Page 4.5-10.

⁵² Ibid.

⁵³ Ibid. Page 4.5-25.

3.7.2.1 *Project Impacts*

Impact GEO-1: The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. **(Less than Significant Impact)**

As discussed in Section 3.7.1.2, there are no known active or potentially active faults crossing the project site. The site is not located within an Earthquake Fault Zone as defined by the State of California Alquist-Priolo Earthquake Fault Zoning Act. For these reasons, there is a low potential for surface fault rupture on-site.⁵⁴

While the project site is located within a potential liquefaction hazard zone, analysis of on-site soils determined that the soils on-site are not susceptible to liquefaction.⁵⁵ In addition, given that the topography of the project site and area is relatively level, the potential for landslides is low.⁵⁶ For these reasons, the potential for seismic-related ground failure (i.e., liquefaction and landslides) is low.

Strong ground shaking is likely to occur during the lifetime of the project as a result of movement along one or more of the regional active faults. As required by the SHMA and CBC, a design-level geotechnical report for the project would be completed and the recommendations for proper design and construction to avoid and minimize seismic and seismic-related hazards (including strong ground shaking) would be implemented.

The project, in conformance with the SHMA and CBC, would not directly or indirectly cause potential substantial seismic or seismic-related impacts. **(Less than Significant Impact)**

Impact GEO-2: The project would not result in substantial erosion or the loss of topsoil. **(Less than Significant Impact)**

Construction of the project (including demolition and soil excavation activities) would expose soils and could result in wind or water-related erosion and loss of topsoil. Compliance with erosion control measures, as required by the National Pollutant Discharge Elimination System (NPDES) program described in Section 3.10 Hydrology and Water Quality, would reduce the potential for substantial erosion or loss of topsoil to a less than significant level. **(Less than Significant Impact)**

⁵⁴ Cleary Consultants, Inc. *Geotechnical Investigation Veterans Memorial Senior Center and YMCA Complex Project 1455 Madison Avenue Redwood City, California*. August 2018. Page 14.

⁵⁵ Ibid. Page 16.

⁵⁶ Ibid. Page 18.

Impact GEO-3: The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. **(Less than Significant Impact)**

As discussed in Section 3.7.1.2, the potential for landslide, lateral spreading, and liquefaction or collapse is low.

The proposed project would develop urban uses connected to the City's water system, and would not require groundwater extraction wells on-site. Consistent with CALGreen, the project would implement water efficiency measures including low flow fixtures and recycled water, to reduce regional groundwater demand. The construction of the proposed YMCA swimming pools could be below the groundwater table and would require dewatering during construction (see Section 3.10 Hydrology and Water Quality for a detailed discussion). The project developed in accordance with the current building codes would reduce the risk from hydrostatic pressure to acceptable levels and the project would not result in subsidence.

Based on the above discussion, the project would not result in landslide, lateral spreading, subsidence, liquefaction or collapse. **(Less than Significant Impact)**

Impact GEO-4: The project would not be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property. **(Less than Significant Impact)**

There are expansive soils on-site. The project would be required to adhere to the SHMA and CBC, and implement the recommendations in the design-level geotechnical investigation for the project, which would reduce impacts related to expansive soils to a less than significant level. **(Less than Significant Impact)**

Impact GEO-5: The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. **(No Impact)**

The project would not require the installation of a septic tank or alternative wastewater disposal system. **(No Impact)**

Impact GEO-6: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. **(Less than Significant Impact)**

There are no known unique paleontological resources or unique geological features within the City. Based on soil sampling completed at the site, shallow bedrock (i.e., the sedimentary rock layer) is located at approximately 17 feet below ground. The project would require excavation of up to 11 feet for the proposed swimming pools. Given the fact that the project would not require substantial earthwork or deep foundations that would penetrate sedimentary rock layers, the project would not destroy a unique paleontological resource or site. **(Less than Significant Impact)**

3.7.2.2 *Cumulative Impacts*

Impact GEO-C: The project would not result in a cumulatively considerable contribution to a significant geology and soils impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative geology and soils impacts is generally the project site and immediate area. The existing geology and soils conditions would not be exacerbated by the project such that it would impact (or worsen) on- or off-site geology and soils conditions. For this reason, the project would not have a cumulatively considerable contribution to a cumulatively significant geology and soils impact. **(Less than Significant Cumulative Impact)**

3.8 GREENHOUSE GAS EMISSIONS

The following discussion is based in part on a greenhouse gas assessment prepared by Illingworth & Rodkin, Inc. in May 8, 2019. A copy of this report is included in Appendix B.

3.8.1 Environmental Setting

3.8.1.1 *Background Information*

Gases that trap heat in the atmosphere, referred to as greenhouse gases (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 (CO₂) and water vapor but there are several others, most importantly methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO₂ and N₂O are byproducts of fossil fuel combustion.
- N₂O is associated with agricultural operations such as fertilization of crops.
- CH₄ 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 SF₆ 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 CO₂ being assigned a value of one and SF₆ being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO₂ equivalents (CO₂e).

An expanding body of scientific research supports the theory that global climate change 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 are adversely affected by the global warming trend. Increased precipitation and sea level rise will 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.

3.8.1.2 *Regulatory Framework*

State

Assembly Bill 32 and Senate Bill 32

Under the California Global Warming Solutions Act, also known as Assembly Bill (AB) 32, CARB established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHG, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, identifying how emission reductions would be achieved from significant GHG sources.

In 2016, Senate Bill (SB) 32 was signed into law, amending the California Global Warming Solution Act. SB 32, and accompanying Executive Order B-30-15, require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 to express the 2030 statewide target in terms of million metric tons of carbon dioxide equivalent (MMTCO_{2e}). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 MMTCO_{2e}.

Senate Bill 375

SB 375, known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. SB 375 builds upon AB 32 by requiring CARB to develop regional GHG reduction targets for automobile and light truck sectors for 2020 and 2035, as compared to 2005 emissions levels. The per-capita GHG emissions reduction targets for passenger vehicles in the San Francisco Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.

Consistent with the requirements of SB 375, the Metropolitan Transportation Commission (MTC) partnered with the Association of Bay Area Governments (ABAG), BAAQMD, and Bay Conservation and Development Commission to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan process. The SCS is referred to as Plan Bay Area. Plan Bay Area establishes a course for reducing per-capita GHG emissions through the promotion of compact, high-density, mixed-use neighborhoods near transit, particularly within identified Priority Development Areas (PDAs). The project site is not located within a PDA.

Senate Bill 350

In September 2015, the California Legislature passed SB 350, which increases the states Renewable Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Advanced Clean Cars Program

CARB adopted the Advanced Clean Cars program in 2012 in coordination with the EPA and National Highway Traffic Safety Administration. The program combines the control of smog-causing (criteria) pollutants and GHG emissions into a single coordinated set of requirements for

model years 2015 through 2025. The program promotes development of environmentally superior passenger cars and other vehicles, as well as saving the consumer money through fuel savings.⁵⁷

Regional and Local

Bay Area 2017 Clean Air Plan

Regional air quality management districts, such as BAAQMD, must prepare air quality plans specifying how state and federal air quality standards would be met. BAAQMD’s most recently adopted plan is the 2017 CAP. The 2017 CAP focuses on two related BAAQMD goals: protecting public health and protecting the climate. To protect the climate, the 2017 CAP includes control measures designed to reduce emissions of methane and other super-GHGs that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

Bay Area Air Quality Management District CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. The jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing GHG impacts developed by BAAQMD within the CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to GHGs and are applicable to the proposed project.

Policy	Description
<hr/>	
Public Safety	
<hr/>	
PS-5.3	Reduce greenhouse gas emissions and adapt to climate change with efforts in the following areas. Major mitigation and adaptation strategies will include: <ul style="list-style-type: none">– <i>Energy</i>: Incentivize renewable energy installation, facilitate green technology and business, and reduce community-wide energy consumption.– <i>Land Use</i>: Encourage investment and development in Downtown, transit-oriented development, compact development, infill development, and a mix of uses. Discourage development on land vulnerable to flooding from sea level rise where potential impacts cannot be adequately addressed.– <i>Transportation</i>: Enhance bicycling and walking infrastructure, and support public transit, including Caltrain, rapid rail, streetcars, and public bus service.
<hr/>	

⁵⁷ CARB. “The Advanced Clean Cars Program.” Accessed March 26, 2019. <https://www.arb.ca.gov/msprog/acc/acc.htm>.

Policy	Description
	<ul style="list-style-type: none"> - <i>Buildings</i>: Educate developers regarding the City’s Green Building Ordinance, and develop an assessment of green building techniques as a formal stage of City design review. Consider strategies to encourage energy and water conservation retrofits in existing buildings. Adaptation strategies will also include increased water efficiency in buildings. - <i>Waste</i>: Increase composting, recycling, and efforts to reduce waste generation, focusing especially on large commercial and industrial waste producers. - <i>Ecology</i>: Plant trees and more vegetation, and endeavor to preserve open space. Major climate adaptation strategies will include native and drought-resistant planting and preservation of open space buffers near floodplains that may be affected by sea level rise. - <i>Government Operations</i>: Develop green procurement plans and seek energy savings in operations and maintenance of City facilities. - <i>Communication and Programs</i>: Develop or support energy- or climate change-themed publications and workshops, facilitate energy audits for residents, and establish partnerships to reduce greenhouse gas emissions.

Redwood City Climate Action Plan

The City Council adopted the current Climate Action Plan on Earth Day, April 22, 2013. The City’s Climate Action Plan is a roadmap to achieving the City’s General Plan target of a 15 percent reduction in GHG emissions below 2005 levels by 2020. The City is now undertaking an update of the plan in order to carry through the approaching horizon year of 2020 and to align with state GHG emissions goals for 2030 – a 40 percent reduction in emissions from 1990 levels. Applicable recommended measures for the project in the Climate Action Plan include the following:

- EM1 – Replace street, parks, and parking lot lighting with efficient lighting (LED, induction, etc.)
- EM4 – Complete installation of solar or other renewable energy projects at select City facilities (such as the wastewater treatment plant) and install where feasible.
- WC1 – Increase participation in recycling programs and ensure weekly collection of recyclables and organic waste to achieve an 85 percent waste diversion goal by 2020.
- TL2 – Remake urban landscape to make walking and biking more desirable. Add bike lanes, bike parking, and traffic calming measures.

3.8.1.3 Existing Conditions

Unlike emissions of criteria and toxic air pollutants, which have regional and local impacts, emissions of GHGs have a broader, global impact. Global warming is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth and changes in weather patterns. The principal GHGs contributing to global warming include CO₂, methane, nitrous oxide, and fluorinated compounds. Emissions of GHGs contributing to global

climate change are attributable in large part to human activities associated with the transportation, manufacturing, utility, and agricultural sectors.

The project site currently generates GHG emissions from building and facility operations and vehicles traveling to and from the project site.

3.8.2 Impact Discussion

For the purpose of determining the significance of the project's impact on GHG emissions, would the project:

- 1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- 2) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

As described previously, BAAQMD adopted GHG emissions thresholds of significance to assist in the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD has determined that GHG emissions would cause significant environmental impacts. The GHG emissions thresholds identified by BAAQMD are 1,100 metric tons (MT) of CO₂e per year or 4.6 MT CO₂e per service population per year. A project that is in compliance with the City's Climate Action Plan (a qualified GHG Reduction Strategy) is considered to have a less than significant GHG impact regardless of its emissions.

The numeric thresholds set by BAAQMD and included within the City's Climate Action Plan were calculated to achieve the state's 2020 target for GHG emissions levels (and not the SB 32 specified target of 40 percent below the 1990 GHG emissions level). The project would start construction as early as January 2020 and be completed as early as December 2024. The project, therefore, would not be fully constructed and occupied until after December 31, 2020. Because the project would be completed in the post-2020 timeframe, the project would not be covered under the City's current Climate Action Plan.

CARB has completed a Scoping Plan, which will be utilized by BAAQMD to establish the 2030 GHG efficiency threshold. Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO₂e/year/service population and a bright-line threshold of 660 MT CO₂e/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels. The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO₂e/year threshold.

3.8.2.1 *Project Impacts*

Impact GHG-1: The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. **(Less than Significant Impact)**

GHG emissions associated with development of the 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 project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

Construction Emissions

GHG emissions associated with construction were computed to be 647 MT of CO_{2e} for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. 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. **(Less than Significant Impact)**

Operational Emissions

The CalEEMod model, along with the project vehicle trip generation rates, were used to estimate daily emissions associated with operation of the fully-developed site under the proposed project. To be considered significant, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold.

The annual net emissions from operation of the proposed project are predicted to be 484 MT CO_{2e} in the year 2024 and 281 MT CO_{2e} in the year 2030.⁵⁸ The project, therefore, does not exceed the 2030 significant threshold of 660 MT CO_{2e} per year. The service population emissions would be 75.3 CO_{2e} per year per service population in 2024 and 66.5 CO_{2e} per year per service population in 2030.⁵⁹ The project would exceed the service population threshold of 2.8 CO_{2e} per year.

Because the project would not exceed both the metric tons per year and service population significance thresholds, the project would not generate significant GHG emissions. **(Less than Significant Impact)**

⁵⁸ Illingworth & Rodkin, Inc. *Veterans Memorial Building Senior Center and YMCA Facilities*. May 8, 2019. Page 22.

⁵⁹ The project service population efficiency rate is based on the number of future full-time employees. For this project, the number of future employees is estimated to be eight full-time employees at the VMSC, 10 full-time employees at the YMCA, and five full-time employees at the daycare. The total future service population would be 23 employees. Source: Beth, Chris. Director, Redwood City Parks, Recreation and Community Services. Personal communication. February 26, 2019.

Impact GHG-2: The project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. **(Less than Significant Impact)**

2017 Climate Action Plan

As discussed in Section 3.3.2, the project would not conflict with the 2017 CAP because it would not generate criteria pollutant emissions in excess of the BAAQMD CEQA Air Quality Guidelines operational criteria pollutant impact thresholds, is considered urban infill, and would be located near bike paths and transit with regional connections. Thus, the project is not required to incorporate project-specific control measures listed in the 2017 CAP. Further, implementation of the project would not inhibit BAAQMD or partner agencies from continuing progress toward attaining state and federal air quality standards and eliminating health-risk disparities from exposure to air pollution among Bay Area communities, as described within the 2017 CAP. **(Less than Significant Impact)**

Redwood City General Plan

The project would be consistent with applicable General Plan policies, including PS-5.3 of reducing GHG emissions. Phase 1 of the project would reduce GHG emissions by being designed to meet a minimum of LEED Certification standards by incorporating natural ventilation systems, water conservation measures (including use of cisterns for on-site rainwater storage), and energy conservation measures (including use of efficient LED light fixtures and renewable building materials and installation of solar panels). In addition, Phase 1 would include four electric vehicle charging stations. Phase 2 of the project would be reduce GHG emissions by incorporating measures such as natural ventilation systems, water conservation measures, and energy conservation measures.

The project would also reduce GHG emissions by participating in the City's Construction & Demolition Debris Program to reduce the amount of material being landfilled and include on-site recycling facilities to minimize and divert materials from being landfilled. In addition, as described in Section 2.3.3, the project would implement TDM measures to reduce single-occupancy vehicle trips (which would thereby reduce GHG emissions). **(Less than Significant Impact)**

Redwood City Climate Action Plan

As discussed in Section 3.8.1, the City is in the process of updating its Climate Action Plan. The project is consistent with the current Climate Action Plan (specifically recommendations EM1, EM4, WC1, and TL2 listed in Section 3.8.1) by installing LED lights, participating in the City's Construction & Demolition Debris Program, providing on-site recycling services, incorporating pedestrian and bicycle facilities on-site, installing traffic calming measures, and implementing TDM measures. For these reasons, the project is consistent with the City's Climate Action Plan. **(Less than Significant Impact)**

3.8.2.2 *Cumulative Impacts*

Impact GHG-C: The project would not result in a cumulatively considerable contribution to a GHG emissions impact. **(Less than Significant Cumulative Impact)**

Past, present, and future development projects (including the cumulative projects) worldwide contribute to global climate change. No single project is sufficient in size to, by itself, change the global average temperature. Therefore, due to the nature of GHG impacts, a significant project impact is a significant cumulative impact. As discussed under Impact GHG-1 and GHG-2, the project would not result in significant GHG impact. The project, therefore, would not result in a cumulatively considerable GHG impact. **(Less than Significant Cumulative Impact)**

3.9 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based in part on an EDR Report prepared in December 2016. A copy of the report is included as Appendix F.

3.9.1 Environmental Setting

3.9.1.1 *Regulatory Framework*

Federal and State

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. Federal regulations and policies related to development include the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, and the Resource Conservation and Recovery Act (RCRA). In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Worker health and safety and public safety are key issues when dealing with hazardous materials. Proper handling and disposal of hazardous material is vital if it is disturbed during project construction. Cal/OSHA enforces state worker health and safety regulations related to construction activities. Regulations include exposure limits, requirements for protective clothing, and training requirements to prevent exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety regulations specific to lead and asbestos investigations and abatement.

Cortese List

Section 65962.5 of the Government Code requires CalEPA to develop and update a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by state and local agencies and developers to comply with CEQA requirements. The Cortese List includes hazardous substance release sites identified by the Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB).

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program aims to prevent accidental releases of regulated hazardous materials that represent a potential hazard beyond the boundaries of property. Facilities that are required to participate in the CalARP program use or store specified quantities of toxic and flammable substances (hazardous materials) that can have off-site consequences if accidentally released. The San Mateo County Health Department, Environmental Health Division (SMCEHD) reviews CalARP risk management plans as the CUPA.

Asbestos-Containing Materials and Lead-Based Paint

Friable asbestos is any asbestos containing material (ACM) that, when dry, can easily be crumbled or pulverized to a powder by hand, allowing the asbestos particles to become airborne. Common examples of products that have been found to contain friable asbestos include acoustical ceilings,

plaster, wallboard, and thermal insulation for water heaters and pipes. Common examples of non-friable ACMs are asphalt roofing shingles, vinyl floor tiles, and transite siding made with cement. The EPA phased out use of friable asbestos products between 1973 and 1978. National Emission Standards for Hazardous Air Pollutants (NESHAP) guidelines require that potentially friable ACMs be removed prior to building demolition or remodeling that may disturb the ACMs.

The United States Consumer Product Safety Commission banned the use of lead-based paint in 1978. Removal of older structures with lead-based paint is subject to requirements outlined by Cal/OSHA Lead in Construction Standard, Title 8, California Code of Regulations 1532.1 during demolition activities. Requirements include employee training, employee air monitoring, and dust control. If lead-based paint is peeling, flaking, or blistered, it is required to be removed prior to demolition.

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are chlorinated organic compounds that were produced in the United States between 1955 to 1978. Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications, including building and structure materials such as plasticizers, paints, sealants, caulk, and wood floor finishes. In 1979, the EPA banned the production and any new uses of PCBs due to concerns about their potential harmful health effects and their persistence in the environment. The one remaining approved use is for existing, totally enclosed applications (i.e., the use in electrical transformers).

Although production has been banned since 1979, PCBs can still be released to the environment today through various pathways, including building materials that contain legacy caulks and sealants or other potential PCBs-containing material potentially released during demolition or renovation. With the adoption of the reissued San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (MRP) by the San Francisco Bay Regional Water Quality Control Board on November 19, 2015, the implementation of stormwater control programs for PCBs has become a high priority compliance issue for permittees throughout the Bay Area. Provision C.12.f. of the MRP requires that permittees develop an assessment protocol methodology for managing materials with PCBs in applicable structures that are planned for demolition, so that PCBs do not enter municipal storm drain systems. Municipalities throughout the Bay Area are currently modifying demolition permit processes and implementing PCB screening protocols to comply with Provision C.12.f. (see Section 3.10 Hydrology and Water Quality).

Federal Aviation Administration Regulations

Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace (FAR Part 77) sets forth standards and review requirements for protecting the airspace for safe aircraft operation, particularly by restricting the height of potential structures and minimizing other potential hazards (such as reflective surfaces, flashing lights, and electronic interference) to aircraft in flight. These regulations require that the Federal Aviation Administration (FAA) be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above ground.

Regional and Local

Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport

The Comprehensive Airport Land Use Compatibility Plan (ALUCP) was prepared by the City/County Association of Governments of San Mateo County (C/CAG) in its designated role as the Airport Land Use Commission (ALUC) for San Mateo County. The ALUCP encourages compatible land uses in the vicinity surrounding an airport by providing for the orderly growth of each public airport and the area surrounding the airport while safeguarding the welfare of the inhabitants within the vicinity of the airport and the public in general.⁶⁰

The ALUCP addresses four primary land use compatibility concerns: 1) airport noise, 2) safety of persons on the ground, 3) airspace protection/building heights, and 4) aircraft overflights. The Airport Influence Area (AIA) boundaries define areas where noise, safety, airspace/height, and overflight policies and criteria are applied to certain proposed land use policy actions. Within Area A of the AIA, the real estate disclosure requirements of state law apply.⁶¹ Within Area B of the AIA, the C/CAG Board shall exercise its statutory duties to review proposed land use policy actions. The real estate disclosure requirements of Area A also apply to Area B.

City of Redwood City General Plan

General Plan Goal PS-8 is to protect City residents, businesses, and employees from potential hazards associated with the use, storage, transport, and disposal of hazardous materials in and through Redwood City. The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to hazards and hazardous materials and are applicable to the proposed project.

Policy	Description
<hr/>	
Public Safety	
<hr/>	
PS-10.1	Work to achieve consistency between General Plan land use and related policies and the San Carlos Airport Comprehensive Land Use Plan, as is appropriate for Redwood City. Measures may include restrictions on permitted land uses and development criteria, including height restrictions.

Redwood City Emergency Operations Plan

The City has an Emergency Operations Plan (EOP) that provides a comprehensive emergency response document for natural disasters and man-made events. The EOP includes detailed emergency management procedures designed for prevention, preparedness, response, and recovery. The EOP is reviewed and revised annually.

⁶⁰ City/County Association of Governments of San Mateo County. *Final Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport*. Adopted October 2015. Page 1-1.

⁶¹ Section 11010(b)(13) of the Business and Professions Code requires people offering subdivided property for sale or lease to disclose the presence of all existing and planned airports within two miles of the property (Source: City/County Association of Governments of San Mateo County. *Final Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport*. Adopted October 2015. Page 4-45.)

3.9.1.2 Existing Conditions

The project site is part of an existing community park and is developed with several buildings and a pool facility. No hazardous materials are used on-site other than small quantities of herbicides and pesticides for landscaping maintenance, and cleaning and pool chemicals.

The project site is not located within the San Carlos Airport FAR Part 77 Airspace Protection Surfaces.⁶² The project site is located within the AIA Area A of the San Carlos Airport and within the aircraft overflight notification area.⁶³ The project site is not located within the ALUCP 2035 aircraft noise contours, safety zones, or airspace protection surfaces for the airport.⁶⁴

Database Search

A review of federal, state, and local regulatory agency databases was completed to evaluate the likelihood of contamination incidents at and near the project site. The database search report is included in Appendix F. The project site is listed in the HAZNET database, which includes all businesses that use and dispose of hazardous materials. The project site is not on the Cortese List.⁶⁵

There is an open Leaking Underground Storage Tank (LUST) case at USA Independent located at 3139 Jefferson Avenue, approximately 0.4 miles southwest of the project site. Groundwater and soils at the site have been impacted and the site is currently being remediated under the oversight of SMCEHD and San Francisco Bay RWQCB. The primary concerns with this open LUST site is soil vapor intrusion of an adjacent building and contamination of nearby residential wells.⁶⁶ Given the localized nature of the contamination, the distance from the project site, and the direction of groundwater flow (north/northeast), it is unlikely the contamination at USA Independent would impact soil, soil vapor, or groundwater beneath the project site.

No other nearby off-site spill incidents were reported that appear likely to significantly impact soil, soil vapor, or groundwater beneath the site based on case status, location of the reported incidents in relation to the site, and the assumed groundwater flow direction.

⁶² ESA Airports. *Final Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport*. Adopted October 2015. Page 4-31.

⁶³ Ibid. Page 4-9.

⁶⁴ Ibid. Pages 4-9, 4-17, 4-31, 4-41, and 4-47.

⁶⁵ CalEPA. "Cortese List Data Resources." Accessed October 22, 2018. <https://calepa.ca.gov/sitecleanup/corteselist>.

⁶⁶ Geotracker. "USA INDEPENDENT (T0608189635)." Accessed March 1, 2019.

https://geotracker.waterboards.ca.gov/profile_report?global_id=T0608189635&cmd=ptcreport<cp_id=118680.

3.9.2 Impact Discussion

For the purpose of determining the significance of the project's impact on hazards and hazardous materials, would the project:

- 1) Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?
- 2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- 3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- 4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- 5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?
- 6) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- 7) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

3.9.2.1 *Project Impacts*

Impact HAZ-1: The project would not create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials. **(Less than Significant Impact)**

The project does not propose any on-site use of hazardous materials other than small quantities of herbicides and pesticides for landscaping maintenance and cleaning and pool chemicals. The pool cleaning and maintenance chemicals would be managed in accordance with federal, state, and local laws and regulations that ensure on-site use, storage, transportation and disposal of chemicals will result in a less than significant impact. These laws and regulation include the Hazardous Materials Transportation Act which protects the public and environment from the risks associated with the transportation of hazardous materials, Department of Transportation 49 Code of Federal Regulations [CFR] 173.3 and EPA 40 CFR 264.175 which specify how hazardous materials are to be contained, and OSHA 29 CFR 1910.106 (e)(2)(iii) which specifies how hazardous materials are to be transferred safely. No other routine use, storage, transportation, or disposal of hazardous materials are proposed or would be required as part of the project. **(Less than Significant Impact)**

Impact HAZ-2: The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. **(Less than Significant Impact)**

The project site does not have any known contamination on-site and, as discussed under Impact HAZ-3, the project would comply with existing regulations and implement the conditions of approval outlined to reduce impacts from ACM, lead-based paint, and PCBs to a less than significant level. For these reasons, the project would not create a hazard to the public or the environment involving the release of hazardous materials. **(Less than Significant Impact)**

Impact HAZ-3: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. **(Less than Significant Impact)**

The nearest school to the project site is John Gill Elementary School located at 555 Avenue Del Ora, approximately 0.2 miles northwest of the project site. The project would require the demolition of existing buildings on-site that could contain ACM, lead-based paint, and PCBs.

As conditions of approval, pursuant to existing regulations (including those by NESHAP, Cal/OSHA, and Provision C.12.f of the MRP), the project would implement the following measures to reduce impacts due to the presence of ACMs, lead-based paint, and PCBs to a less than significant level:

- A visual inspection/pre-demolition survey, and possible sampling, shall be conducted prior to the demolition of on-site buildings to determine the presence of asbestos-containing materials and/or lead-based paint.
- Prior to demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, California Code of Regulations 1532.1, including employee training, employee air monitoring, and dust control. Any debris or soil containing lead-based paint or coatings would be disposed of at landfills that meet acceptance criteria for the waste being disposed.
- All potentially friable ACMs shall be removed in accordance with NESHAP guidelines prior to any building demolition or renovation that may disturb the materials. All demolition activities will be undertaken in accordance with Cal/OSHA standards contained in Title 8 of CCR, Section 1529, to protect workers from exposure to asbestos.
- A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in the asbestos survey performed for the site in accordance with the standards stated above.
- Materials containing more than one percent asbestos are also subject to BAAQMD regulations. Removal of materials containing more than one percent asbestos shall be completed in accordance with BAAQMD requirements.
- The project applicant shall screen for materials with PCBs in structures planned for demolition and dispose of the PCB material appropriately in compliance with C.12.f.

The proposed project, with the implementation of the above conditions of approval, would reduce impacts from ACMs, lead-based paint, and PCBs to a less than significant level by requiring a survey for asbestos and its removal in accordance with NESHAP guidelines to control asbestos emissions and removal, disposing lead-based paint in accordance with OSHA regulations to protect worker health and safety, and requiring materials containing PCBs be disposed of appropriately and prevent PCBs from entering the storm drain system. **(Less than Significant Impact)**

Impact HAZ-4: The project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment. **(No Impact)**

As discussed in Section 3.9.1.2, the project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., the Cortese List). **(No Impact)**

Impact HAZ-5: The project is located within an airport land use plan and would not result in a safety hazard or excessive noise for people residing or working in the project area. **(Less than Significant Impact)**

The project site is located within the AIA Area A of the San Carlos Airport and within the aircraft overflight notification area. In compliance with the ALUCP, the City would provide a real estate disclosure about the presence of the airport in its lease agreement with the YMCA.

The project site is not located within the ALUCP 2035 aircraft noise contours, safety zones, or airspace protection surfaces for the airport. The ALUCP land use compatibility policies specific to noise, safety, and airspace protection, therefore, are not applicable and the project would not result in a safety hazard or excessive noise for people residing or working in the project area. **(Less than Significant Impact)**

Impact HAZ-6: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. **(Less than Significant Impact)**

The project would be constructed in accordance with current building and fire codes to ensure structural stability and safety in the event of a seismic or seismic-related hazard. In addition, the Fire Department would review the site development plans to ensure fire protection design features are incorporated and adequate emergency access is provided. For these reasons, the proposed project would not impair implementation of or physically interfere with the City's EOP. **(Less than Significant Impact)**

Impact HAZ-7: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. **(No Impact)**

The proposed project is located in an urbanized area and is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones.⁶⁷ For these reasons, the project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. **(No Impact)**

3.9.2.2 *Cumulative Impacts*

Impact HAZ-C: The project would not result in a cumulatively considerable contribution to a significant hazards and hazardous materials impact. **(No Cumulative Impact)**

The geographic area for cumulative hazards and hazardous materials impacts is the project site and immediate vicinity. The only cumulative project in the project vicinity is the Westside Renovation/Magical Bridge Playground at Red Morton Park project located south of the project site. No hazards or hazardous materials impacts were identified for the Westside Renovation/Magical Bridge Playground at Red Morton Park project.⁶⁸ For this reason, the project and the Westside Renovation/Magical Bridge Playground at Red Morton Park project would not result in cumulative hazards and hazardous materials impacts. **(No Cumulative Impact)**

⁶⁷ Sources: 1) State of California Department of Forestry and Fire Protection. *San Mateo County Fire Hazard Severity Zones in SRA*. Adopted November 7, 2007. and 2) State of California Department of Forestry and Fire Protection. *Redwood City Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE*. Adopted November 24, 2008.

⁶⁸ City of Redwood City. *Park Renovation – CEQA Exemption*. March 2, 2016.

3.10 HYDROLOGY AND WATER QUALITY

3.10.1 Environmental Setting

3.10.1.1 *Regulatory Framework*

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the EPA and SWRCB have been developed to fulfill the requirements of this legislation. EPA regulations include the NPDES permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by the RWQCBs. The project site is within the jurisdiction of the San Francisco Bay RWQCB.

Federal and State

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) in order to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRM) that identify Special Flood Hazard Areas (SFHA). An SFHA is an area that would be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood. The SFHA includes Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE, and V.

Statewide Construction General Permit

The SWRCB has implemented a NPDES General Construction Permit for the State of California (Construction General Permit). For projects disturbing one acre or more of soil, a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) must be prepared by a qualified professional prior to commencement of construction. The Construction General Permit includes requirements for training, inspections, record keeping, and for projects of certain risk levels, monitoring. The general purpose of the requirements is to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges.

Regional and Local

San Francisco Bay Basin Plan

The San Francisco Bay RWQCB regulates water quality in accordance with the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan lists the beneficial uses that the San Francisco Bay RWQCB has identified for local aquifers, streams, marshes, rivers, and the San Francisco Bay, as well as the water quality objectives and criteria that must be met to protect these uses. The San Francisco Bay RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for nonpoint sources such as the urban runoff discharged by a City's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies.

Municipal Regional Stormwater Permit

The San Francisco Bay RWQCB has issued a Municipal Regional Stormwater NPDES Permit⁶⁹ (MRP) to regulate stormwater discharges from municipalities and local agencies (co-permittees) in Alameda, Contra Costa, San Mateo, and Santa Clara counties, and the cities of Fairfield, Suisun City, and Vallejo. Provisions C.3 and C.12 of the MRP are described below.

- *Provision C.3 – New Development and Redevelopment:* New and redevelopment projects that create or replace 10,000 square feet or more of impervious surface area are required to implement site design, source control, and Low Impact Development (LID)-based stormwater treatment controls to treat post-construction stormwater runoff. LID-based treatment controls are intended to maintain or restore the site’s natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and using stormwater as a resource (e.g. rainwater harvesting for non-potable uses). The MRP also requires that stormwater treatment measures are properly installed, operated, and maintained.

In addition to water quality controls, the MRP requires all new and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation or other impacts to beneficial uses of local rivers, streams, and creeks. The project site is located in an area exempt from HMP requirements.⁷⁰

Provision C.3 also includes subsection of C.3j (Green Infrastructure Planning and Implementation) which includes requirements for early implementation of green infrastructure projects or “no missed opportunities.”

- *Provision C.12 – PCBs Controls:* Co-permittee agencies are required to implement a control program for PCBs that reduces PCBs loads by a specified amount during the term of the permit, thereby making substantial progress toward achieving the urban runoff PCBs wasteload allocation in the Basin Plan by March 2030.⁷¹ The program must include focused implementation of PCBs control measures (source control, treatment control, and pollution prevention strategies) through a collaborative effort. One of the strategies that has been recently adopted by municipalities region-wide is the updating of their building demolition permitting processes to incorporate the management of PCBs in building materials. The goal is to ensure that PCBs are not discharged to storm drains during demolition of buildings that contain PCBs in building materials (such as certain older caulks, paints, and mastics).

The Bay Area Stormwater Management Agencies Association (BASMAA) is assisting Bay Area municipalities to comply with these new stormwater permit building demolition requirements. Redwood City is expected to have adopted the program for implementation prior to the end of fiscal year 2018-19.

⁶⁹ MRP Number CAS612008

⁷⁰ San Mateo Countywide Water Pollution Prevention Program. *C.3 Stormwater Technical Guidance*. June 2016. Appendix H, Redwood City and San Carlos.

⁷¹ California RWQCB. *Municipal Regional Stormwater Permit*. Provision C.12. November 19, 2015.

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to hydrology and water quality and are applicable to the proposed project.

Policy	Description
Public Safety	
PS-7.3	Strive to maintain the structural and operational integrity of essential public facilities during flooding. Locate, when feasible, new essential public facilities outside of flood hazard zones; identify construction methods or other methods to minimize damage if these facilities are located in flood hazard zones. Essential public facilities include City government operations facilities, police and fire facilities, and hospitals.

Redwood City Municipal Code

The Redwood City Municipal Code, Chapter 27A, sets forth the Redwood City Stormwater Management and Discharge Control Program (SMDCP). The SMDCP discusses exempted activities, illicit discharge prohibitions, broad watercourse protection objectives, and best management practices for new and redevelopment projects. It also refers to the NPDES regulations for stormwater protection and treatment.

Redwood City Zoning Ordinance

Section 32.12 of the City's Zoning Ordinance provides requirements related to stormwater treatment. The purpose of these requirements is to provide zoning standards that minimize the quantity of runoff and associated pollutants in stormwater runoff from developed sites to creeks, the storm drain system, and ultimately, to the San Francisco Bay. According to the City's Zoning Ordinance, enhanced stormwater quality can be achieved through reduction of impervious surfaces, the protection of watercourses and riparian vegetation, providing for infiltration of stormwater on-site through vegetation and soils, and with engineered treatment systems. This section also requires that all new development, additions, and reconstruction are subject to the provisions of Chapter 27A of the City's Municipal Code.

City of Redwood City Stormwater Pollution Prevention Program Drainage Guidelines for Commercial Development

As part of the City's Drainage Guidelines for Commercial Development, non-residential development is required to design their project so that post-development runoff discharge is equal or less than pre-development discharge.

3.10.1.2 Existing Conditions

Water Quality

The water quality of streams, creeks, ponds, and other surface water bodies can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from unidentified sources, known as non-point source pollutants, are washed from streets, construction sites, parking lots, and other exposed surfaces into storm drains. Urban stormwater runoff often contains contaminants such as oil and grease, plant and animal debris (e.g., leaves, dust, animal feces, etc.), pesticides, litter, and heavy metals. In sufficient concentration, these pollutants have been found to adversely affect the aquatic habitats to which they drain. Stormwater runoff from the project site currently drains into the Redwood City storm drain system, which eventually empties into the San Francisco Bay. Water collected by the storm drain system contains varying amounts of non-point source pollutants associated with urban uses (e.g., oil, litter, brake dust, pesticides, herbicides, etc.).

Groundwater

The project site is located within the Santa Clara Valley groundwater basin and the San Mateo groundwater sub-basin.⁷² Groundwater in the project area ranges from 9.5 to 12.5 feet below the ground surface.⁷³ The depth to groundwater can vary due to factors such as variations in rainfall, temperature, runoff, irrigation, and groundwater withdrawal and/or recharge. The regional topographic gradient is generally north northeast towards the bay. The site is not within an area used for in-stream or other groundwater recharge.⁷⁴

Stormwater Drainage

The site is in the Redwood Creek watershed.⁷⁵ The nearest waterway is Arroyo Ojo de Agua, a tributary to Redwood Creek. Arroyo Ojo Agua flows underneath the northern portion of the site in an underground culvert in Madison Avenue, through the middle of the site in Nevada Street, and along the southern portion of the site southerly to Vera Avenue. Arroyo Ojo de Agua daylights approximately 300 feet to the west of the project site (near the Valota Road and Vera Avenue intersection) and 590 feet southeast of the project site (near the Vera Avenue and King Street intersection), where it flows in concrete-lined channels.

Currently, approximately 2.8 acres (or 41 percent) of project site is pervious and the remaining 4.2 acres (or 59 percent) is impervious. Stormwater runoff from the site flows to a five by four foot underground culvert in Nevada Street and a five by 12 foot underground box culvert in Vera Avenue (Arroyo Ojo de Agua). The Redwood City Public Works Services Department maintains the storm drainage system which serves the project site. Stormwater in Redwood City is conveyed into creeks, lined channels, storm drainage pipes and retention basins, all of which drain directly into San Francisco Bay.

⁷² California Department of Water Resources. *A Comprehensive Groundwater Protection Evaluation for the South San Francisco Bay Basins*. May 2003. Figure 9.

⁷³ Cleary Consultants, Inc. *Geotechnical Investigation Veterans Memorial Senior Center and YMCA Complex Project*. August 2018.

⁷⁴ City of Redwood City. *2015 Urban Water Management Plan*. June 2016. Page 36.

⁷⁵ County of San Mateo Public Works. "Watersheds of San Mateo County." Accessed March 6, 2019. <https://publicworks.smcgov.org/watersheds-san-mateo-county>

Flooding, Tsunami, and Seiche

Flooding

The project site is not located within an SFHA. According to the FIRM prepared by FEMA for the project area, the site is located within Zone X, which is defined as an area of 0.2 percent annual chance of flood; areas of one percent annual chance flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from one percent annual chance flood.⁷⁶

Tsunami and Seiche

The project site is not within the County of San Mateo Tsunami Evacuation Planning Area or an area subject to seiche.⁷⁷

3.10.2 Impact Discussion

For the purpose of determining the significance of the project's impact on hydrology and water quality, would the project:

- 1) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- 2) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- 3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - result in substantial erosion or siltation on- or off-site;
 - substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
 - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - impede or redirect flood flows?
- 4) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- 5) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

⁷⁶ Federal Emergency Management Agency. Flood Insurance Rate Map, Community Panel No. 06081C0301E. Map. Effective Date: October 16, 2012.

⁷⁷ California Emergency Management Agency, California Geological Survey and University of Southern California. *Tsunami Inundation Map for Emergency Planning Redwood Point Quadrangle/Palo Alto Quadrangle*. Map. June 15, 2009.

3.10.2.1 *Project Impacts*

Impact HYD-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. **(Less than Significant Impact)**

Construction Impacts

Implementation of the project would result in ground disturbance of the site and would temporarily increase pollutant loads due to grading and construction (i.e., removal of pavement and construction of new structures). Demolition, soil excavation, and construction activities would temporarily increase the amount of debris on-site and grading activities would increase the potential for erosion and sedimentation that could be carried by runoff into Arroyo Ojo de Agua and eventually the San Francisco Bay.

The project would disturb more than one acre and, therefore, is required to comply with the General Construction Permit (which includes preparation of a SWPPP) and MRP (including Provision C.12) to reduce pollutants in surface runoff from the site during construction to a less than significant level. In addition, in accordance with the City's grading permit requirements, the project would be required to prepare an erosion control plan. The erosion control plan would include locations and specifications of recommended soil stabilization techniques such as the use of straw wattles, silt fences, construction berms, and storm drain inlet protection. For these reasons, the project would not result in substantial water quality impacts during construction. **(Less than Significant Impact)**

Post-Construction Impacts

The type of development and use on the project site would not substantially change with implementation of the project and, therefore, the project would contribute the same types of stormwater runoff pollutants as the existing use. With the implementation of the project, the amount of impervious surfaces would increase from 4.2 acres (or 59 percent) to 4.8 acres (or 69 percent).⁷⁸ Per City standards for stormwater control⁷⁹, the project shall detail any net increase in runoff produced from the increase in impervious surfaces and match the pre-project flows.

Because the project would create and/or replace more than 10,000 square feet of impervious surface area, the project is required to comply with the MRP (including Provision C.3)⁸⁰, City Municipal Code, and City Zoning Ordinance to implement site design, source control, and on-site treatment control measures to reduce post-construction water quality impacts to a less than significant level. Project stormwater treatment measures include bioretention areas and pervious pavers. Conformance with the applicable regulations protect water quality and reduce water quality impacts to a less than significant level. **(Less than Significant Impact)**

⁷⁸ Gordon, William. Personal communications, ELS Director of Interior Architecture. March 29, 2019.

⁷⁹ City of Redwood City. *Drainage Guidelines for Commercial Development*. February 1, 2005.

⁸⁰ With the proposed alterations to the project frontages on Madison Avenue, there is an opportunity to include green infrastructure pursuant to Provision C.3 subsection C.3j for the treatment of the right-of-way runoff tributary to the frontages of the VMSC and the YMCA. The frontages would be designed to direct the runoff to treatment facilities, which were sized based on the sizing criteria of Provision C.3.d of the NPDES permit.

Impact HYD-2: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. **(Less than Significant Impact)**

Groundwater is not used as a source of municipal water supply in Redwood City. As discussed in Section 3.19 Utilities and Service Systems, the City receives potable water from the Hetch Hetchy regional water system. The project does not propose to pump groundwater or install groundwater extraction wells. In addition, as discussed in Section 3.10.1.2, the project site is not within an area used for in-stream or other groundwater recharge. For these reasons, the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. **(Less than Significant Impact)**

Impact HYD-3: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. **(Less than Significant Impact)**

The project would not alter the course of a stream, river, or other waterway. As discussed under Impact HYD-1, the project would not result in an increase in surface runoff from the site compared to existing conditions. As a result, no off-site flooding would occur. In addition, as discussed under Impact HYD-1, the project would comply with existing regulations to reduce stormwater runoff water quality impacts to a less than significant level. **(Less than Significant Impact)**

Impact HYD-4: The project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. **(Less than Significant Impact)**

The project site is located within Zone X and is subject to minimal risk of flooding. Hazardous materials (including pool chemicals) on-site would be stored and contained in accordance with regulations to prevent accidental release (refer to Section 3.9 for additional details). For this reason, the project would not risk release of pollutants due to project flooding. Additionally, as discussed in Section 3.10.1.2, the project site is not within the County of San Mateo Tsunami Evacuation Planning Area or an area subject to seiche. **(Less than Significant Impact)**

Impact HYD-5: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. **(Less than Significant Impact)**

As discussed under Impacts HYD-1 and HYD-2, the project would comply with applicable water quality control regulations and would not substantially decrease groundwater supplies or interfere with groundwater recharge. **(Less than Significant Impact)**

3.10.2.2 *Cumulative Impacts*

Impact HYD-C: The project would not result in a cumulatively considerable contribution to a significant hydrology and water quality impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative hydrology and water quality impacts is the Redwood Creek watershed, which the project site is located within.

Water Quality

Build out of the cumulative projects would involve redevelopment of existing developed sites that contain substantial impervious surfaces, and these projects would be required to conform to applicable General Plan policies regarding stormwater runoff, infrastructure, and flooding. Cumulative projects would be required to comply with applicable regulations including the Construction General Permit, MRP, City Municipal Code, and City Zoning Ordinance to avoid hydrology and water quality impacts or reduce them to a less than significant level. Because all projects, including the proposed project, are required to comply with applicable water quality regulations, the project would not have a considerable contribution to a significant cumulative impact. **(Less than Significant Cumulative Impact)**

Groundwater

As discussed under Impact HYD-2, the project does not propose to pump groundwater or install groundwater extraction wells. In addition, the project site is not used for in-stream or other groundwater recharge. For these reasons, the project would not have a considerable contribution to a significant cumulative impact to groundwater supplies or recharge. **(Less than Significant Cumulative Impact)**

Storm Drain System

As discussed under Impact HYD-3, the project would result in net new discharge into the existing local and downstream storm drain system serving the project and other cumulative projects contributing to the same mains and lines. **(Less than Significant Cumulative Impact)**

Flooding, Tsunami, and Seiche

As discussed under Impact HYD-4, hazardous materials on-site would be stored properly to prevent accidental release in the event of a flood. In addition, the project site is not subject to tsunamis or seiches. For these reasons, the project would not contribute to a significant cumulative impact from a release of pollutants due to inundation. **(Less than Significant Cumulative Impact)**

3.11 LAND USE AND PLANNING

3.11.1 Environmental Setting

3.11.1.1 *Regulatory Framework*

Local

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to land use and are applicable to the proposed project.

Policy	Description
<hr/> The Built Environment <hr/>	
BE-2.1	Create complete neighborhoods by integrating schools, parks, childcare centers, community centers, infrastructure, green spaces and parks, and other public amenities into each neighborhood.
BE-2.8	Make efforts to maintain and increase walking access to a variety of neighborhood destinations by encouraging uses that provide access to services, goods, and community facilities within and near neighborhoods. Figure BE-8, Walking Shed Map, maps baseline accessibility to neighborhood destinations.
BE-6.2	Create new connections to commercial uses, schools, parks and recreational areas, and transit from Post-War Neighborhoods.
<hr/> Building Community <hr/>	
BC-4.4	Locate new community facilities in neighborhoods and centers where they will serve populations of the greatest needs. Look for opportunities to create joint-use community space at facilities owned by private organizations such as faith-based groups, service clubs, banks and hospitals.

Redwood City Zoning Ordinance

The purpose of the City’s Zoning Ordinance is to protect the public health, safety, and welfare of the people and property of Redwood City and to implement the General Plan.

3.11.1.2 *Existing Conditions*

The project site is designated as Parks on the City’s General Plan Land Use Map.⁸¹ The Parks land use designation applies to open space areas set aside for active and passive recreation, including public and private parks of all sizes, sports fields, recreational facilities, plazas, and trails.⁸² The project site is zoned R-2 (Residential – Duplex).⁸³

The project site part of the larger 31.7-acre Red Morton Community Park. The project site is the northern 5.4-acres of the park and is developed and occupied by a senior center, pool facility, and offices for the NFL Alumni Association. The project site is located within an existing post-war neighborhood⁸⁴ and surrounded by single-family residences and other park uses (including multi-use sports fields, tennis courts, and community facilities). The buildings on-site and surrounding land uses are shown in Figure 2.2-3.

3.11.2 Impact Discussion

For the purpose of determining the significance of the project’s impact on land use and planning, would the project:

- 1) Physically divide an established community?
- 2) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

3.11.2.1 *Project Impacts*

Impact LU-1: The project would not physically divide an established community. **(Less than Significant Impact)**

The proposed project would redevelop a site, which currently contains community facilities, and include physical improvements in the community. The development of the VMSC and YMCA would be contained within the existing boundaries of the project site and not extend into the neighborhood. The project, however, includes a new driveway on Valota Road to provide additional access to the site and traffic calming measures at four nearby intersections (Vera Avenue/Valota Road, Hudson Street/Madison Avenue, Madison Avenue/Myrtle Street, and Valota Road and Madison Avenue). The addition of a new driveway on Valota Road is consistent with General Plan Policy BE-6.2 of creating new connections to parks and recreational areas in post-war neighborhoods. The proposed traffic calming measures are intended to promote safer travel in the neighborhood. The project (including the new driveway and traffic calming measures) facilitate safer and better connectivity in the neighborhood and would not physically divide the neighborhood. **(Less than Significant Impact)**

⁸¹ Redwood City. *Redwood City General Plan*. Adopted October 11, 2010 and amended October 20, 2014. Page BE-39.

⁸² Ibid.

⁸³ Redwood City Community GIS. Zoning Map.

⁸⁴ Redwood City. *Redwood City General Plan*. Adopted October 11, 2010 and amended October 20, 2014. Page BE-15.

Impact LU-2: The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **(Less than Significant Impact)**

The project site is developed with public uses and office space for a community organization. The project would redevelop the site with the same public use (i.e., senior center) and a community facility (i.e., YMCA). The proposed uses are the same or similar to the current uses on the site, and would be consistent with the General Plan Parks land use designation on the site. The project is also consistent with the General Plan policies identified in Section 3.11.1.1 by proposing community uses within an existing neighborhood, and facilitating safer and better connectivity in the neighborhood.

The project would rezone the site from R-2 (Residential – Duplex) to PF (Public Facility) to make the zoning designation on the site consistent with the existing General Plan land use designation and the proposed uses. The PF zoning designation is for governmental, public utility and educational facilities. Under the PF zoning designation, the proposed VMSC is a permitted use and the YMCA is a conditional use. The project would require a conditional use permit for the operation of the YMCA.

Based on the discussion above, the project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect. **(Less than Significant Impact)**

3.11.2.2 *Cumulative Impacts*

Impact LU-C: The project would not result in a cumulatively considerable contribution to a significant land use and planning impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative land use impacts is the City's boundaries. All development, including the proposed project and cumulative projects, are subject to conformance with applicable land use plans, policies, and regulations for the purpose of avoiding or mitigating environmental impacts.

As discussed under Impact LU-1 and LU-2, the project would not divide an established community and is consistent with the General Plan land use designation for the site and applicable General Plan policies. For this reason, the project would not contribute to a significant cumulative land use and planning impact. **(Less than Significant Cumulative Impact)**

3.12 MINERAL RESOURCES

3.12.1 Environmental Setting

3.12.1.1 *Regulatory Framework*

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted by the California Legislature in 1975 to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property and the environment. As mandated under SMARA, the State Geologist has designated mineral land classifications in order to help identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board, after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance.

3.12.1.2 *Existing Conditions*

The project site is located in Mineral Resource Zone (MRZ) 1, which is defined as areas where adequate information indicates no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.⁸⁵ There are no known mineral resources located on or adjacent to the project site.

3.12.2 Impact Discussion

For the purpose of determining the significance of the project's impact on mineral resources, would the project:

- 1) Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?
- 2) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

3.12.2.1 *Project Impacts*

Impact MIN-1: The project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. **(No Impact)**

The project site does not contain any known or designated mineral resources. The project, therefore, would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. **(No Impact)**

⁸⁵ California Department of Conservation. *Generalized Mineral Land Classification Map of the South San Francisco Bay Production-Consumption Region*. 1996.

Impact MIN-2: The project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. **(No Impact)**

The project site is not delineated in the General Plan or other land use plan as a locally important mineral resource recovery site. For this reason, the project would not result in the loss of availability of locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. **(No Impact)**

3.12.2.2 *Cumulative Impacts*

Impact MIN-C: The project would not result in a cumulatively considerable contribution to a significant mineral resources impact. **(No Cumulative Impact)**

Since the project would not result in impacts to mineral resources, the project would not contribute to a cumulative impact to mineral resources. **(No Cumulative Impact)**

3.13 NOISE

The following discussion is based on a noise and vibration assessment completed for the project by Illingworth & Rodkin, Inc. on March 12, 2019. A copy of this report is included in Appendix G.

3.13.1 Environmental Setting

3.13.1.1 *Background Information*

Fundamentals of Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its pitch⁸⁶ or its loudness.⁸⁷ In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location.

A decibel (dB) is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a 10-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities.

There are several methods of characterizing sound. The most common in California is the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq} . The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

Since the sensitivity to noise increases during the evening and at night – because excessive noise interferes with the ability to sleep – 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The Community Noise Equivalent Level (CNEL) is a measure of the cumulative noise exposure in a community, with a five dB penalty added to evening (7:00 PM – 10:00 PM) and a 10 dB addition to nocturnal (10:00 PM – 7:00 AM) noise levels. The Day/Night Average Sound Level (DNL) is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

⁸⁶ Pitch is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch.

⁸⁷ Loudness is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

Fundamentals of Groundborne Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One method is the Peak Particle Velocity (PPV). The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. A PPV descriptor with units of millimeters per second (mm/sec) or inches per second (in/sec) is used in this EIR to evaluate construction generated vibration for building damage and human complaints.

To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage.

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction related groundborne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor has been routinely used to measure and assess groundborne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 in/sec PPV. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level. Structural damage can be classified as cosmetic only, such as paint flaking or minimal extension of cracks in building surfaces; minor, including limited surface cracking; or major, that may threaten the structural integrity of the building.

Refer to Appendix G for additional details about the fundamentals of noise and vibration.

3.13.1.2 *Regulatory Framework*

State

California Green Building Standards Code

The state established exterior sound transmission control standards for new non-residential buildings, as set forth in the 2010 California Green Building Standards Code (CALGreen Code) Sections 5.507.4.1 and 5.507.4.2. These standards were not altered in the 2016 revisions. Section 5.507 states that either the prescriptive (Section 5.507.4.1) or the performance method (Section 5.507.4.2) shall be used to determine environmental control at indoor areas. The prescriptive method is very conservative and not practical in most cases; however, the performance method can be quantitatively verified using exterior-to-interior calculations. For the purposes of this report, the performance method is utilized to determine consistency with the CALGreen Code. Both of the sections that pertain to this project are as follows:

- *5.507.4.1 Exterior noise transmission, prescriptive method* – Wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall meet a composite Sound Transmission Class (STC) rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or Outdoor/Indoor Transmission Class (OITC) of 30 when the building falls within the 65 dBA DNL noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway noise source, as determined by the local general plan noise element.
- *5.507.4.2 Performance method* – For buildings located as defined by Section 5.507.4.1, wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level ($L_{eq (1-hr)}$) of 50 dBA in occupied areas during any hour of operation.

The performance method, which establishes the acceptable interior noise level, is the method typically used when applying these standards.

Local

Redwood City General Plan

The General Plan identifies noise and land use compatibility standards for various land uses and establishes policies to control noise within the community. The City’s noise and land use compatibility guidelines are shown in Table 3.13-1.

The General Plan also includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to noise and are applicable to the proposed project.

Policy	Description
Public Safety	
PS-13.5	Limit the hours of operation at all noise generation sources that are adjacent to noise-sensitive areas, wherever practical.
PS 13.6	Require all exterior noise sources (construction operations, air compressors, pumps, fans, and leaf blowers) to use available noise suppression devices and techniques to bring exterior noise down to acceptable levels that are compatible with adjacent land uses.
PS-13.8	Implement appropriate standard construction noise controls for all construction projects.
PS-13.9	Require noise created by new non-transportation noise sources to be mitigated so as not to exceed acceptable interior and exterior noise level standards.

Table 3.13-1: General Plan Noise Guidelines for Land Use Planning

Land Use Category	Community Noise Equivalent Level (CNEL), dB						
	55	60	65	70	75	80	85
Residential - Low Density	[Light Gray]		[Medium Gray]			[Dark Gray]	
Residential - Medium/Medium-High Density	[Light Gray]		[Medium Gray]			[Dark Gray]	
Residential - High Density	[Light Gray]		[Medium Gray]			[Dark Gray]	
Mixed-Use Districts	[Light Gray]		[Medium Gray]			[Dark Gray]	
Commercial - Neighborhood	[Light Gray]		[Medium Gray]			[Dark Gray]	
Commercial - Regional	[Light Gray]		[Medium Gray]			[Dark Gray]	
Commercial - Office Professional/Technology	[Light Gray]		[Medium Gray]			[Dark Gray]	
Marina	[Light Gray]		[Medium Gray]			[Dark Gray]	
Hospital	[Light Gray]		[Medium Gray]			[Dark Gray]	
Industrial/Port	[Light Gray]		[Medium Gray]			[Dark Gray]	
Public Facilities/Schools	[Light Gray]		[Medium Gray]			[Dark Gray]	
Open Space/Recreation	[Light Gray]		[Medium Gray]			[Dark Gray]	

[Light Gray]	[Medium Gray]	[Dark Gray]	[Black]
Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Specified land use is satisfactory, assuming buildings are of conventional construction	New development should be undertaken only after detailed analysis of noise reduction requirements are made.	New development should be generally discouraged, if not, a detailed analysis of noise reduction requirements must be made.	New development should generally not be undertaken

Source: Redwood City. *Redwood City General Plan*. Adopted October 2010 and amended October 2014. Page PS-72.

In addition, General Plan Program PS-63 requires enforcement of standard construction noise controls such as:

- Limit construction to the hours of 8:00 a.m. to 5:00 p.m. on weekdays, and 9:00 a.m. to 5:00 p.m. on Saturdays, with no noise-generating construction on Sundays or holidays.
- Control noise from construction workers' radios to the point where they are not audible at existing residences that border the project site.
- Equip all internal combustion engine-driven equipment with mufflers that are in good condition and appropriate for the equipment.
- Utilize quiet models of air compressors and other stationary noise sources where technology exists.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Prohibit unnecessary idling of internal combustion engines.
- Notify residents adjacent to the project site of the construction schedule in writing.

Redwood City Municipal Code

The City's Municipal Code establishes noise level performance standards for fixed sources of noise. The following sections from the Municipal Code apply to this project:

- *Section 24.31. Prohibited Noise Levels.* It shall be unlawful for any person to suffer or allow noise levels to be generated by:
 - A. Construction activities, including demolition, alteration, repair or remodeling of or to existing structures and construction of new structures on property within the City, at more than 110 dB measured at any point within a residential district of the City and outside of the plane of said property; or
 - B. An individual item of machinery, equipment or device used during construction activities, including demolition, alteration, repair or remodeling of or to existing structures and construction of new structures on property within the City, at more than 110 dB measured within a residential district of the City at a distance of twenty-five feet (25') from said machinery, equipment or device. If said machinery, equipment or device is housed within a structure on the property, then the measurement shall be made at a distance as near to twenty-five feet (25') from said machinery, equipment or device as possible.
- *Section 24.32. Time Limitations.* Notwithstanding the provisions in this Division to the contrary, it shall be unlawful for any person to engage in construction activities, including demolition, alteration, repair or remodeling of or to existing structures and the construction of new structures on property in a residential district or within 500 feet of a residential district in the City, between the hours of 8:00 PM and 7:00 AM the following day, Monday through Friday of any week or at any time on Saturdays, Sundays, or holidays if the noise level generated by any such activity exceeds the local ambient measured at any point within the residential district and outside of the plane of said property.

3.13.1.3 *Existing Conditions*

The noise environment in the project vicinity results primarily from vehicular traffic along nearby Jefferson Avenue and the local roadways adjacent to the site, including Madison Avenue and Valota Road. The occasional overhead aircraft associated with the San Carlos Airport may also affect the noise environment sporadically.

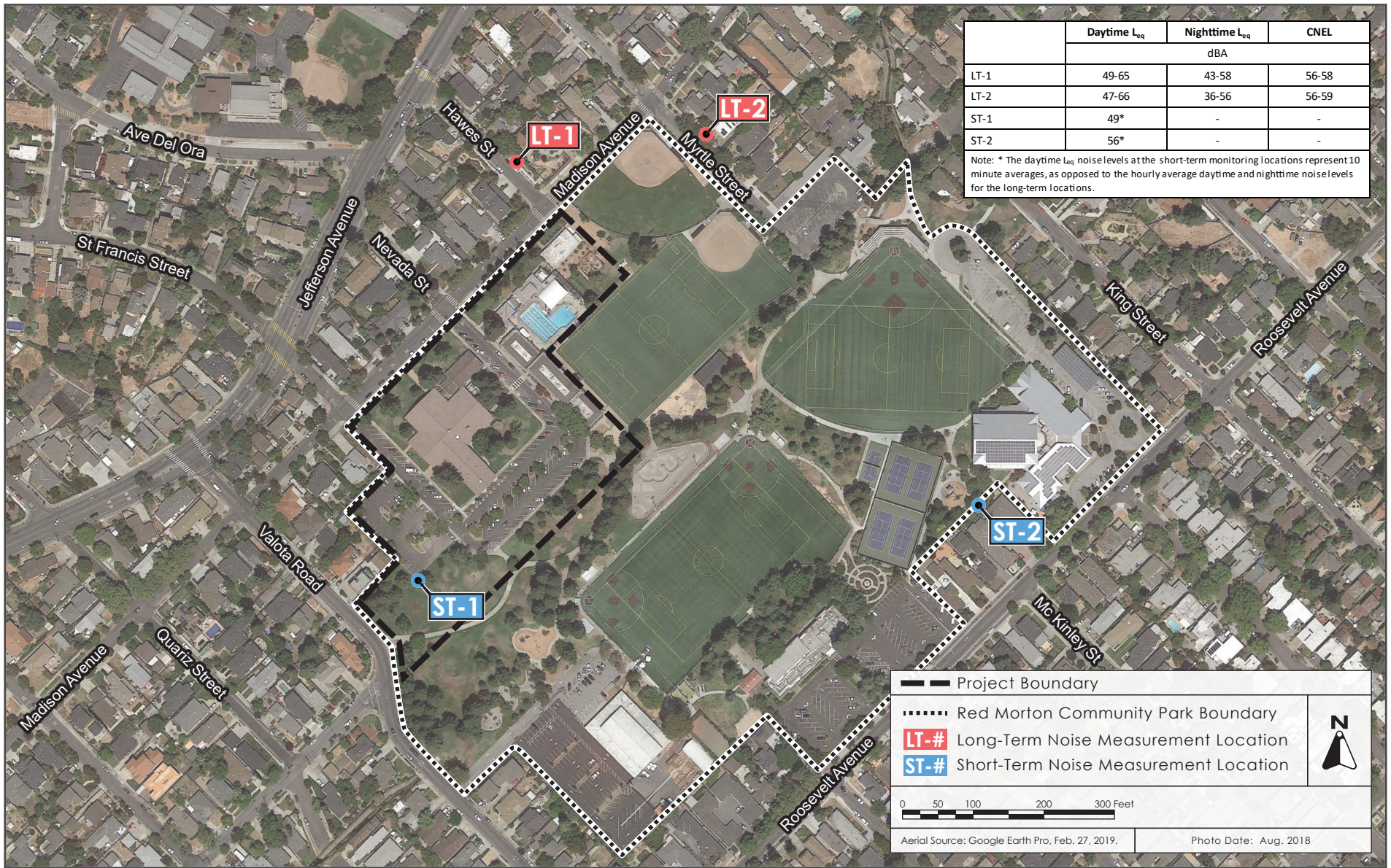
A noise monitoring survey was completed to measure the ambient noise level. The noise measurement locations and a summary of the noise measurements is shown in Figure 3.13-1. Two long-term noise measurements (LT-1 and LT-2) and two short-term noise measurements (ST-1 and ST-2), as shown in Figure 3.13-1, were made as part of the monitoring survey.

Long-term noise measurement LT-1 was positioned approximately 110 feet north of the centerline of Madison Avenue and 20 feet east of the centerline of Hawes Street. Hourly average noise levels at this location typically ranged from 49 to 65 dBA L_{eq} during the day, and from 43 to 58 dBA L_{eq} at night. The community noise equivalent level ranged from 56 to 58 dBA CNEL.

LT-2 was located northeast of Mitchell Field, approximately 20 feet east of the centerline of Myrtle Street and 130 feet south of the centerline of Madison Avenue. Hourly average noise levels at this location ranged from 47 to 66 dBA L_{eq} during the day and from 36 to 56 dBA L_{eq} at night. The community noise equivalent level ranged from 56 to 59 dBA CNEL for the duration of the testing period.

Short-term noise measurements, ST-1 and ST-2, were conducted in 10-minute intervals. The ST-1 measurement was near the existing senior center, approximately 150 feet east of the centerline of Valota Road. ST-1 was approximately 35 feet south of the parking lot for the existing senior center and approximately 95 feet southeast of single-family residences. The 10-minute $L_{eq(10-min)}$ measured at ST-1 was 49 dBA $L_{eq(10-min)}$. ST-2 was made near the playground located by the tennis courts in the southeastern corner of the park, approximately 80 feet southeast of the tennis courts and 200 feet north of the centerline of Roosevelt Avenue, with shielding from the roadway provided by single-family residences. The 10-minute $L_{eq(10-min)}$ measured at ST-2 was 56 dBA $L_{eq(10-min)}$.

Additional details about the noise monitoring survey are included in Appendix G.



NOISE MEASUREMENT LOCATIONS AND SUMMARY OF DATA

FIGURE 3.13-1

3.13.2 Impact Discussion

For the purpose of determining the significance of the project's impact on noise, would the project result in:

- 1) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- 2) Generation of excessive groundborne vibration or groundborne noise levels?
- 3) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

CEQA does not define what noise level increase would be considered substantial. Typically, an increase in the DNL noise level resulting from the project at noise sensitive land uses of three dBA or greater would be considered a significant impact when projected noise levels would exceed those considered acceptable for the affected land use. An increase of five dBA DNL or greater would be considered a significant impact when projected noise levels would remain within those considered acceptable for the affected land use.

3.13.2.1 *Project Impacts*

Impact NOI-1: The project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. **(Less than Significant Impact with Mitigation Incorporated)**

Temporary Construction Noise

Noise impacts resulting from construction depend upon the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

As described in Section 3.13.1.2, Section 24.31 of the Municipal Code restricts construction activities to 110 dBA at any time within residential districts and limits noise produced by any individual piece of construction equipment used within a residential district to no more than 110 dBA at a distance of 25 feet or 25 feet from the housing if the equipment is enclosed. Municipal Code Section 24.32 states that construction activities would be unlawful in a residential district or within 500 feet of a residential district between the hours of 8:00 PM and 7:00 AM Monday through Friday or at any time on weekends or holidays if the noise level generated by any construction activity exceeds local ambient noise levels within the residential district.

The noise level threshold for speech interference indoors is 45 dBA. Assuming a 15 dBA exterior-to-interior reduction for standard residential construction, this would correlate to an exterior threshold of 60 dBA L_{eq} at residential land uses. Additionally, temporary construction could be disruptive to surrounding land uses if the ambient noise environment increased by at least five dBA L_{eq} for an extended period of time. Therefore, the temporary construction noise impact would be considered significant if project construction activities exceeded 60 dBA L_{eq} at nearby residences or exceeded 70 dBA L_{eq} at nearby commercial land uses and exceeded the ambient noise environment by five dBA L_{eq} or more for a period longer than one year.

Based on the noise measurements made in the residential neighborhood surrounding the site at LT-1 and LT-2, existing hourly average noise levels ranged from 51 to 66 dBA L_{eq} during daytime hours on weekdays and from 47 to 64 dBA L_{eq} during daytime hours on weekends.

Construction noise would primarily result from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks. The highest maximum noise levels generated by project construction would typically range from about 80 to 90 dBA L_{max} at a distance of 50 feet from the noise source. A list of typical maximum instantaneous noise levels measured at 50 feet are provided in Table 3.13-2. Typical hourly average construction-generated noise levels for construction of the type of facilities proposed are about 75 to 89 dBA L_{eq} measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.), as shown in Table 3.13-3. As part of the proposed project, traffic calming improvements would also be made in the project site vicinity. Hourly average noise levels for this type of work would range from 78 to 84 dBA L_{eq} . Construction-generated noise levels drop off at a rate of about six dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional five to 10 dBA noise reduction at distant receptors.

Table 3.13-2: Construction Equipment 50-Foot Noise Emission Limits

Equipment Category	L_{max} Level (dBA)^{a,b}
Arc Welder	73
Auger Drill Rig	85
Backhoe	80
Bar Bender	80
Boring Jack Power Unit	80
Chain Saw	85
Compressor ^c	70
Compressor (other)	80
Concrete Mixer	85
Concrete Pump	82
Concrete Saw	90
Concrete Vibrator	80
Crane	85
Dozer	85
Excavator	85

Table 3.13-2: Construction Equipment 50-Foot Noise Emission Limits

Equipment Category	L_{max} Level (dBA)^{a,b}
Front End Loader	80
Generator	82
Generator (25 KVA or less)	70
Gradall	85
Grader	85
Grinder Saw	85
Horizontal Boring Hydro Jack	80
Hydra Break Ram	90
Impact Pile Driver	105
Insitu Soil Sampling Rig	84
Jackhammer	85
Mounted Impact Hammer (hoe ram)	90
Paver	85
Pneumatic Tools	85
Pumps	77
Rock Drill	85
Scraper	85
Slurry Trenching Machine	82
Soil Mix Drill Rig	80
Street Sweeper	80
Tractor	84
Truck (dump, delivery)	84
Vacuum Excavator Truck (vac-truck)	85
Vibratory Compactor	80
Vibratory Pile Driver	95
All other equipment with engines larger than 5 HP	85

Notes:

^a Measured at 50 feet from the construction equipment, with a “slow” (1 sec.) time constant.

^b Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.

^c Portable Air Compressor rated at 75 cubic feet per minute (cfm) or greater and that operates at greater than 50 pounds per square inch (psi).

^d The noise level identified for the equipment is only upon impact or continuous while in operation.

Table 3.13-3: Typical Ranges of Construction Noise Levels at 50 Feet, L_{eq} (dBA)								
	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious Amusement & Recreations, Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84
Notes: I - All pertinent equipment present at site. II - Minimum required equipment present at site.								

Pile driving is not proposed by the project. Therefore, the loudest, single piece of equipment expected for this project would generate noise levels up to 96 dBA L_{max} at a distance of 25 feet, which would meet the City’s requirements for a single piece of equipment. For 110 dBA to be exceeded at any residential property surrounding the project site, a piece of equipment rated at 90 dBA or more would have to operate within five feet of the residential property line. Similarly, equipment rated below 90 dBA (as shown in Table 3.13-2) would have to be used within one to three feet of the property line. The heavy construction work for the proposed project would not be within 25 feet of any residential property lines. As a result, the project would be consistent with the City’s thresholds under Section 24.31 of the Municipal Code.

As described in Section 2.3, the project would be completed in two phases. Phase 1 includes construction of the VMSC building and traffic calming measures and would start as early as January 2020 and be completed as early as December 2021 (a total of 24 months). Phase 2 is the construction of the YMCA building, which would also last 24 months, starting as early as January 2022 and concluding in December 2023.

The hourly average noise levels summarized in Table 3.13-3 were used to calculate the hourly average noise levels at the property lines of the surrounding residences, as measured from the center of the active construction site. For the construction of the VMSC building in Phase 1, the center of the active construction site would be the center of the proposed VMSC building. The existing VMSC, which is located where the proposed YMCA would be constructed, would remain open during Phase 1 construction. This existing building would provide partial shielding for the residences located to the west of the project site; however, for purposes of assuming worst-case conditions, no noise level reduction was assumed due to intervening buildings for this assessment. Table 3.13-4

shows the estimated hourly average noise levels at the nearby residences during the construction of the VMSC building.

Table 3.13-4: Estimated Construction Noise Levels at Nearby Land Uses During Phase 1 Construction of the Proposed VMSC				
Proposed Project Construction	Estimated Noise Levels at Nearby Residences			
	North Residence (210 feet)	East Residence (540 feet)	West Residence (380 feet)	South Residence (885 feet)
	dBA L_{eq}			
Ground Clearing	72	63	66	59
Excavation	67-77	58-68	61-71	54-64
Foundations	66	57	60	53
Erection	63-75	54-66	57-69	50-62
Finishing	63-77	54-68	57-71	50-64

Additionally, Table 3.13-5 shows the estimated hourly average noise levels for the residences located at each of the intersections where traffic calming measures are proposed. For estimating the noise levels in Table 3.13-5, the distances to the nearest residential property were measured from the center of each intersection.

Table 3.13-5: Estimated Construction Noise Levels at Nearby Land uses During Phase 1 Construction of the Traffic Calming Measures				
Proposed Project Construction	Estimated Noise Levels at Nearby Residences			
	Residence at Vera Avenue/ Valota Road (25 feet)	Residence at Hudson Street/ Madison Avenue (40 feet)	Residence at Madison Avenue/ Myrtle Street (35 feet)	Residence at Valota Road/ Madison Avenue (30 feet)
	dBA L_{eq}			
Ground Clearing	90	86	87	88
Excavation	84-94	80-90	81-91	82-92
Foundations	94	90	91	92
Erection	84-85	80-81	81-82	82-83
Finishing	90	86	87	88

Table 3.13-6 summarizes the noise levels generated by Phase 2 construction, as measured at the nearest surrounding residential property lines. As with the VMSC building construction, shielding due to intervening buildings was not assumed for the noise level calculations in Table 3.13-6.

Table 3.13-6: Estimated Construction Noise Levels at Nearby Residences During Phase 2 Construction of the YMCA				
Proposed Project Construction	Estimated Noise Levels at Nearby Residences			
	North Residence (2,850 feet)	East Residence (745 feet)	West Residence (210 feet)	South Residence (775 feet)
	dBA L_{eq}			
Ground Clearing	69	61	72	60
Excavation	64-74	56-66	67-77	55-65
Foundations	63	55	66	54
Erection	60-72	52-64	63-75	51-63
Finishing	60-74	52-66	63-77	51-65

Based on estimated construction noise levels identified in Table 3.13-4, Table 3.13-5, and Table 3.13-6, the nearest noise-sensitive receptors would at times be exposed to temporary construction noise in excess of existing ambient conditions. Further, noise levels would at times exceed 60 dBA L_{eq} at the nearest residences and at times exceed ambient noise levels by five dBA L_{eq} or more. Since total project construction is expected to last for approximately four years, this would be a significant impact.

Reasonable regulation of construction hours, as well as regulation of the arrival and operation of heavy equipment and the delivery of construction material, are necessary to protect the health and safety of persons, promote the general welfare of the community, and maintain the quality of life. Construction activities would be completed in accordance with the provisions of the City’s General Plan and Municipal Code. Program PS-63 of the City’s General Plan enforces construction and maintenance noise regulations using the following standard construction noise controls:

- Limit construction to the hours of 8:00 AM to 5:00 PM on weekdays, and 9:00 AM to 5:00 PM on Saturdays, with no noise-generating construction on Sundays or holidays.
- Control noise from construction workers’ radios to the point where they are not audible at existing residences that border the project site.
- Equip all internal combustion engine-driven equipment with mufflers that are in good condition and appropriate for equipment.
- Utilize quiet models of air compressors and other stationary noise sources where technology exists.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Prohibit unnecessary idling of internal combustion engines.
- Notify residents adjacent to the project site of the construction schedule in writing.

The project’s conformance with General Plan Program PS-63 by implementing the above measures would help minimize noise disturbance to the surrounding neighbors but not to a less than significant level. The City’s Municipal Code further defines allowable construction hours between 7:00 AM and

8:00 PM Monday through Friday. If the ambient noise environment is exceeded within a residential district, the Municipal Code prohibits construction on weekends and holidays.

Mitigation Measure:

MM NOI-1.1: The project shall develop a construction noise control plan, which shall include, but is not limited to, the following measures:

- If residents surrounding the project site complain about weekend and/or holiday construction noise or if work is disruptive to the adjacent Red Morton Community Park activities occurring on Saturdays, all weekend and holiday construction work shall cease at the City's discretion, as specified in the allowable construction hours stated in the City's Municipal Code.
- Construct temporary noise barriers shall be installed, where feasible to screen stationary noise-generating equipment when located within 200 feet of adjoining sensitive land uses. Temporary noise barrier fences would provide a five dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receptor and if the barrier is constructed in a manner that eliminates any cracks or gaps.
- If stationary noise-generating equipment is located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used. Any enclosure openings or venting shall face away from sensitive receptors.
- Construction staging areas (including material stockpiles, maintenance/equipment staging, and parking areas) shall be established at locations that would create the greatest distance between the construction-related noise sources and noise-sensitive residential receptors nearest the project site during all project construction.
- Generators, compressors, and pumps shall be housed in acoustical enclosures.
- Where feasible, temporary power service from local utility companies should be used instead of portable generators.
- Locate cranes as far from adjoining noise-sensitive residential receptors as possible.
- During final grading, substitute graders for bulldozers. Wheeled heavy equipment are quieter than track equipment.
- Substitute nail guns for manual hammering.
- Avoid the use of circular saws, miter/chop saws, and radial arm saws near the adjoining noise-sensitive residential receptors. Shield saws with a solid screen with material having a minimum surface density of two pounds per square feet (e.g., such as 3/4-inch plywood).
- Substitute electrically-powered tools for noisier pneumatic tools.
- Maintain smooth vehicle pathways for trucks and equipment accessing the site, and avoid local residential neighborhoods as much as possible.

- During interior construction, the exterior windows facing noise-sensitive receptors shall be closed.
- During interior construction, noise-generating equipment shall be located within the building to break the line-of-sight to the adjoining receptors.
- The contractor shall be required to prepare a schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.
- Designate a “disturbance coordinator” who would be responsible for responding to any complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., bad muffler, etc.) and would require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

The project, in conformance with General Plan Program PS-63 and with the implementation of mitigation measures MM NOI-1.1 above, would reduce construction noise levels and minimize disruption from the site to a less than significant level by restricting construction hours, controlling noise from construction activities and equipment, notifying and coordinating with nearby residences, and designating a disturbance coordinator to address noise complaints. In addition, the project does not propose the use of high-intensity construction equipment, such as pile drivers. **(Less than Significant Impact with Mitigation Incorporated)**

Permanent Noise

Project-Generated Traffic

A significant permanent noise increase would occur if the project would increase noise levels at noise-sensitive receptors by three dBA CNEL or greater where future ambient noise levels exceed the “normally acceptable” noise level standard. Where future ambient noise levels would remain below the “normally acceptable” noise level standard, noise level increases of five dBA CNEL or greater would be considered significant. As shown in Table 3.13-1, 55 dBA CNEL would be the “normally acceptable” noise level threshold for single-family residences. Since existing ambient noise levels in the vicinity of the project site exceed 55 dBA CNEL, it is expected that ambient noise levels would continue to exceed 55 dBA CNEL under future conditions. Therefore, a significant impact would occur if traffic due to the proposed project would permanently increase ambient levels by three dBA CNEL.

The transportation impact analysis completed for the project (see Appendix H) includes peak hour traffic turning movements for 14 intersections in the vicinity of the project site. The existing plus project scenario was compared to the existing volumes to estimate the noise level increase due to project-generated traffic. Based on the calculated noise level increase due to project-generated traffic along roadways and review of traffic volumes on roadways, the noise level increase at residences near the project were two dBA or less. The project, therefore, would not cause a substantial

permanent noise level increase at the surrounding noise-sensitive receptors. **(Less than Significant Impact)**

Mechanical Equipment

The City does not identify noise regulations for mechanical equipment. The project would include mechanical equipment, such as heating, ventilation, air conditioning systems, exhaust units, etc. It is assumed the mechanical equipment for the proposed buildings would be located within mechanical equipment rooms or on the rooftops. Since details about the specific type of mechanical equipment, number of mechanical equipment units per building, and noise levels provided by the manufacturer for each unit, it is possible noise generated by project mechanical equipment could exceed the ambient noise levels at the residential land uses during daytime or nighttime conditions.

Mitigation Measure:

MM NOI-1.2: Mechanical equipment shall be selected and designed to reduce impacts on surrounding uses to meet ambient noise conditions at the nearest residential land uses during both daytime and nighttime conditions. A qualified acoustical consultant shall be retained to review mechanical noise as these systems are selected to determine specific noise reduction measures necessary to comply with the City's noise level requirements. Noise reduction measures could include, but are not limited to, selection of equipment that emits low noise levels and/installation of noise barriers, such as enclosures and parapet walls, to block the line-of-sight between the noise source and the nearest receptors. Alternate measures may include locating equipment in less noise-sensitive areas, such as indoors or the rooftop of the buildings away from the building's edge nearest the noise-sensitive receptors.

The project, with the implementation of mitigation measure MM NOI-1.2 above, would reduce noise impacts from mechanical equipment at nearby sensitive receptors by requiring the equipment type, design, and/or location be as such to meet ambient noise conditions at nearby residences. For this reason, the project's mechanical equipment would not result in a significant impact. **(Less than Significant Impact with Mitigation Incorporated)**

Truck Loading and Unloading

The project is expected to have regular deliveries for the kitchens and dining areas. Two delivery drop-off locations are proposed along the eastern building facade of the VMSC building in the eastern parking lot. This analysis assumes the project would have one to two truck deliveries per week, each delivery would take approximately 15 minutes or less, and the deliveries would only occur during the daytime. Based on the size of the proposed buildings, small delivery trucks would be expected. Small delivery trucks typically generate maximum noise levels of 65 to 70 dBA at a distance of 50 feet.

The nearest residences with direct line-of-sight to the proposed delivery zones are 120 feet north, opposite Madison Avenue. Using a six dBA per doubling of the distance propagation rate, noise

levels due to deliveries at the nearest residences would range from 57 to 62 dBA, which would fall in the range of daytime ambient noise levels of 49 to 65 dBA L_{eq} (LT-1).

While the nearest residences to the east would also have direct line-of-sight to the delivery zones, the distance from these residences to the delivery zones would be 435 feet or more. At 435 feet, truck deliveries would produce noise levels ranging from 46 to 51 dBA, which would fall in the range of daytime ambient noise levels of 47 to 66 dBA L_{eq} (LT-2).

The nearest residences to the west would be shielded by the proposed VMSC building and would not be affected by the truck deliveries. Residences to the south would be 845 feet or more away from the nearest delivery zone and would be exposed to truck delivery noise levels below 50 dBA.

Based on the above discussion, daytime truck deliveries at the project site would result in a less than significant impact. **(Less than Significant Impact)**

Impact NOI-2: The project would not result in generation of, excessive groundborne vibration or groundborne noise levels. **(Less than Significant Impact with Mitigation Incorporated)**

The construction of the project may generate perceptible vibration when heavy equipment or impact tools (e.g., jackhammers and hoe rams) are used. Construction activities would include site demolition, preparation work, foundation work, and new building framing and finishing. The project does not propose pile driving. Critical factors pertaining to the impact of construction vibration on sensitive receptors include the proximity of the existing structures to the project site, the soundness of the structures, and the methods of construction used.

For structural damage, Caltrans recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.08 in/sec PPV for ancient buildings or buildings that are documented to be structurally weakened. No known ancient buildings or buildings that are documented to be structurally weakened adjoin the project area. Therefore, conservatively, groundborne vibration levels exceeding 0.3 in/sec PPV would have the potential to result in a significant vibration impact.

Table 3.13-7 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet. Project construction activities, such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (e.g., tracked vehicles and compactors) may generate substantial vibration in the immediate vicinity. Vibration levels would vary depending on soil conditions, construction methods, and equipment used.

Table 3.13-7: Vibration Source Levels for Construction Equipment		
Equipment		PPV at 25 feet (in/sec)
Clam shovel drop		0.202
Hydromill (slurry wall)	in soil	0.008
	in rock	0.017
Vibratory Roller		0.210
Hoe Ram		0.089
Large bulldozer		0.089
Caisson drilling		0.089
Loaded trucks		0.076
Jackhammer		0.035
Small bulldozer		0.003

For the construction work expected during phases 1 and 2 of the project, vibration levels from Table 3.13-7 were propagated from the project's nearest boundaries to the nearest off-site buildings. The estimated vibration levels at nearby buildings are summarized in Table 3.13-8. Vibration levels at the nearest residences to the north and west of the project site would be below the 0.3 in/sec PPV threshold. Additionally, the nearest building south, which is an existing building associated with Red Morton Community Park would also be exposed to vibration levels below the 0.3 in/sec PPV threshold. The nearest residence to the south would be farther from the project site, and thus, would be exposed to lower vibration levels. The nearest residences to the west of the site, which would adjoin the west parking lot and access driveway, would be 10 to 15 feet from the shared property line. At these distances, vibration levels would be as high as 0.37 to 0.58 in/sec PPV, as shown in Table 3.13-8. This would exceed the 0.3 in/sec PPV threshold.

Table 3.13-8: Estimated Vibration Levels at the Nearest Buildings from Construction Equipment Used at the Project Site				
Equipment	Residence to the North (55 feet)	Residence to the East (335 feet)	Residence to the West (10-15 feet)	Park Building to the South (325 feet)
	PPV (in/sec)			
Clam shovel drop	0.085	0.012	0.354-0.553	0.012
Hydromill (slurry wall)	in soil	0.003	0.0005	0.014-0.022
	in rock	0.007	0.01	0.030-0.047
Vibratory Roller	0.088	0.012	0.368-0.575	0.012
Hoe Ram	0.037	0.005	0.156-0.244	0.005
Large bulldozer	0.037	0.005	0.156-0.244	0.005
Caisson drilling	0.037	0.005	0.156-0.244	0.005
Loaded trucks	0.032	0.004	0.133-0.208	0.005
Jackhammer	0.015	0.002	0.061-0.096	0.002
Small bulldozer	0.001	0.0002	0.005-0.008	0.0002
Note: Bold text indicates vibration levels above the 0.3 in/sec threshold of significance.				

For each of the traffic calming measures, vibration levels in Table 3.13-7 were propagated from the edge of the intersection to the nearest residence. Table 3.13-9 summarizes the vibration levels calculated for construction activities related to each of the traffic calming measures. At each intersection, the nearest residence would be set back 25 feet or more from construction work areas, which would result in vibration levels below the 0.3 in/sec PPV threshold.

Table 3.13-9: Estimated Vibration Levels for Construction Equipment Used at the Intersections of the Proposed Traffic Calming Measures					
Equipment		Vibration Levels at Nearest Building			
		Residence to Vera Avenue/ Valota Road (35 feet)	Residence to Hudson Street/ Madison Avenue (25 feet)	Residence to Madison Avenue/Myrtle Street (40 feet)	Residence to Valota Road/ Madison Avenue (30 feet)
		PPV (in/sec)			
Clam shovel drop		0.140	0.202	0.120	0.165
Hydromill (slurry wall)	in soil	0.006	0.008	0.005	0.007
	in rock	0.012	0.017	0.010	0.014
Vibratory Roller		0.145	0.210	0.125	0.172
Hoe Ram		0.061	0.089	0.053	0.073
Large bulldozer		0.061	0.089	0.053	0.073
Caisson drilling		0.061	0.089	0.053	0.073
Loaded trucks		0.052	0.076	0.045	0.062
Jackhammer		0.024	0.035	0.021	0.029
Small bulldozer		0.002	0.003	0.002	0.002

The construction-generated vibration in excess of 0.3 PPV could potentially result in cosmetic damage (e.g., hairline cracks in plaster, opening of old cracks, etc.) at the existing structures adjoining the project site to the west. Additionally, construction vibration would be strongly perceptible to severe to occupants of the adjacent residences.

The project in compliance with General Plan Program PS-63 and with the implementation of mitigation measure MM NOI-1.1 would reduce construction-generated vibration levels but not to a less than significant level.

Mitigation Measure:

MM NOI-2.1: In addition to the noise controls outlined in General Plan Program PS-63 and mitigation measure MM NOI-1.1, the project shall implement the following measures where vibration levels due to construction activities would exceed 0.3 in/sec PPV at nearby sensitive uses:

- Prohibit the use of heavy vibration-generating construction equipment within 20 feet of the structures located adjacent to the project site.
- The contractor shall alert heavy equipment operators to the close proximity of the adjacent structures so they can exercise extra care.

The project in compliance with General Plan Program PS-63 and with the implementation of mitigation measures MM NOI-1.1 and NOI-2.1 would reduce construction-generated vibration levels at the residences to the west of the project site to a less than significant level by limiting construction hours, prohibiting use of heavy vibration-generating equipment near residences to the west, and informing heavy equipment operators to be cognizant of activities near residences to the west. **(Less than Significant Impact with Mitigation Incorporated)**

Impact NOI-3: The project is located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. The project would not expose people residing or working in the project area to excessive noise levels. **(Less than Significant Impact)**

The San Carlos Airport is approximately 2.5 mile northwest of the project site. As discussed under Impact HAZ-5, the project site is located outside the 2035 60 dBA CNEL noise contour for the Airport. While aircraft flyovers may at times be audible at the outdoor use area on the project site, noise levels due to aircraft would not exceed 60 dBA CNEL and, therefore, both the exterior and interior noise levels resulting from aircraft would be compatible with the project. **(Less than Significant Impact)**

3.13.2.2 *Cumulative Impacts*

Impact NOI-C: The project would not result in a cumulatively considerable contribution to a significant noise impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

Temporary Construction Noise

The geographic area for cumulative construction noise impacts is the immediate project vicinity, specifically within 1,000 feet of the project site. Cumulative projects within 1,000 feet of the project site could contribute to the same noise impacts as the proposed project.

The Westside Renovation/Magical Bridge Playground at Red Morton Park project, which is currently under construction, is scheduled to be completed in December 2019. The proposed project is expected to start construction in January 2020. While the construction from the two projects would not be concurrent, the surrounding residences would be exposed to continual construction due to the two projects, which would extend disruption due to construction noise. With incorporation of the construction best management practices provided in mitigation measure MM NOI-1.1, the cumulative noise exposure from the two projects constructed sequentially would be less than significant. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

Other cumulative projects may be under construction concurrently with the proposed project; however, the other construction sites are not located within 1,000 feet of the project site. Their construction, therefore, would not measurably contribute to the noise levels expected from project-generated construction. **(Less than Significant Cumulative Impact)**

Permanent Noise

The geographic area for cumulative permanent noise impacts includes the project site and surrounding roadways. A significant impact would occur if the cumulative traffic noise level increase was three dBA CNEL or greater for future levels exceeding normally acceptable levels or was five dBA CNEL or greater for future levels at or below normally acceptable levels and if the project would make a “cumulatively considerable” contribution to the overall traffic noise increase. As discussed in Section 3.13.3, the future ambient noise level at the project site is projected to be 63 to 66 dBA CNEL, which is above the City’s 55 dBA CNEL “normally acceptable” guideline for residential land uses (refer to Table 3.13-1). A “cumulatively considerable” contribution is defined as an increase of one dBA CNEL or more attributable solely to the proposed project.

Cumulative traffic noise level increases were calculated by comparing the cumulative traffic volumes and the cumulative plus project volumes to existing traffic volumes. Based on the traffic noise increases calculated under the cumulative plus project scenario and review of traffic volumes on roadways, the cumulative plus project noise level increase over existing conditions at the residences would be less than three dBA CNEL. Therefore, the cumulative projects (including the proposed project) would not result in a significant cumulative permanent noise increase. **(Less than Significant Cumulative Impact)**

3.13.3 Non-CEQA Effects

Per *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (BIA v. BAAQMD), effects of the environment on the project are not considered CEQA impacts. The following discussion is included for informational purposes only because the City and state have noise standards that apply to existing noise conditions affecting a proposed project.

Noise and Land Use Compatibility

Table 3.13-1 identifies the City’s General Plan exterior noise standards for common outdoor use areas at various types of land uses in Redwood City. The proposed VMSC and YMCA buildings would fall within the open space/recreation category, and for this type outdoor use, noise levels are required to be at or below 75 dBA CNEL. The performance method of the state’s CALGreen Code requires interior noise levels to be maintained at or below 50 dBA $L_{eq (1-hr)}$ during hours of operation. This interior noise level performance standard would apply to noise levels within the two proposed buildings.

The future noise environment at the project site would continue to result from vehicular traffic along Jefferson Avenue and Madison Avenue. The traffic analysis (see Appendix H) for the project included peak hour traffic volumes for roadways in the vicinity of the project site. By comparing the cumulative plus project traffic volumes to the existing traffic volumes, noise level increases at the project site were calculated to be two dBA.

While no long-term noise measurements were made along Madison Avenue, the community noise exposure level for both LT-1 and LT-2 were similar, with daily average noise levels ranging from 56 to 58 dBA CNEL and 56 to 59 dBA CNEL, respectively. With Madison Avenue located between the two side streets where LT-1 and LT-2 were located, it is assumed that Madison Avenue would be the dominant noise source for both of these measurement locations. It is estimated that the future noise

environment at a distance of 20 feet from the centerline of Madison Avenue would range from 67 to 70 dBA CNEL, based on the noise measurements from LT-1 and LT-2 and the calculated two dBA increase assumed under cumulative plus project conditions.

Future Exterior Noise Environment

Outdoor activity areas at the project site include a dining area on the north side of the VMSC building, a roof terrace located on the roof of the VMSC building, a lawn and potential public art area on the north side of the YMCA building, a child play area and pool on the south side of the YMCA building, and a promenade located between the two proposed buildings (see Figure 2.3-1).

The outdoor dining area along the northern facade of the VMSC building would be set back from the centerline of Madison Avenue by approximately 75 feet or more. At this distance, the future exterior noise levels would range from 61 to 64 dBA CNEL. The second-floor roof terrace would include outdoor seating and a track for walking or running. This outdoor space would be partially shielded from traffic noise by the northern building façade, when considering the relative elevation of the outdoor use area with respect to the roadway. With a setback of 225 feet or more, the roof terrace at the VMSC building would have future exterior noise level below 60 dBA CNEL.

The lawn area north of the YMCA building would be set back 35 feet or more from the centerline of Madison Avenue. At this distance, the future exterior noise levels at the lawn would range from 64 to 67 dBA CNEL. The child play area and outdoor pool would be located south of the YMCA building, and thus, would be partially shielded by the building. With a setback of 310 feet or more, the future exterior noise levels would be below 60 dBA CNEL.

The promenade would have outdoor seating and open lawn for extended outdoor use. The promenade would be 45 feet or more from the centerline of Madison Avenue. At this distance, the future exterior noise levels would be up to 63 to 66 dBA CNEL.

The future noise levels for each of the proposed outdoor use areas would meet the City's 75 dBA CNEL "normally acceptable" threshold for open space/recreation land uses.

Future Interior Noise Environment

Standard construction materials for these type of land uses proposed would typically range from 20 to 25 dBA of noise reduction in interior spaces. As described in Section 2.3 Project Description, operational hours during weekdays would be 5:30 AM to 10:30 PM for the VMSC and 7:00 AM to 10:30 PM for the YMCA. The northern facade of the VMSC building would be set back approximately 90 feet from the centerline of Madison Avenue and would be exposed to future exterior noise levels ranging from 45 to 70 dBA $L_{eq(1-hr)}$ during operation hours on weekdays. Assuming a conservative 20 dBA exterior-to-interior noise reduction, the interior noise levels at the VMSC would be at or below 50 dBA $L_{eq(1-hr)}$. The northern facade of the YMCA building would be set back approximately 195 feet from the centerline of Madison Avenue and would be exposed to future exterior noise levels ranging from 49 to 65 dBA $L_{eq(1-hr)}$ during operation hours on weekdays. Assuming a conservative 20 dBA exterior-to-interior noise reduction, the interior noise levels at the YMCA would be at or below 45 dBA $L_{eq(1-hr)}$.

On weekends, both buildings would operate from 7:00 AM to 11:00 PM. The northern facade of the VSMC building would be exposed to future exterior noise levels ranging from 51 to 68 $L_{eq(1-hr)}$ during operational hours. Assuming a minimum of 20 dBA of exterior-to-interior noise reduction, the future interior noise levels would be at or below 48 dBA $L_{eq(1-hr)}$ at the VSMC building. The northern facade of the YMCA building would be exposed to future exterior noise levels ranging from 46 to 64 $L_{eq(1-hr)}$ during operational hours. Assuming a minimum of 20 dBA of exterior-to-interior noise reduction, the future interior noise levels would be at or below 44 dBA $L_{eq(1-hr)}$ at the YMCA building.

With standard construction materials and methods, noise levels within building interiors would meet the daytime operational noise level threshold established in the CALGreen Code.

3.14 POPULATION AND HOUSING

3.14.1 Environmental Setting

3.14.1.1 *Regulatory Framework*

State

In order to attain the state housing goal, cities must make sufficient suitable land available for residential development, as documented in an inventory, to accommodate their share of regional housing needs. California's Housing Element Law requires all cities to: 1) zone adequate lands to accommodate its Regional Housing Needs Allocation (RHNA); 2) produce an inventory of sites that can accommodate its share of the RHNA; 3) identify governmental and non-governmental constraints to residential development; 4) develop strategies and work plan to mitigate or eliminate those constraints; and 5) adopt a housing element and update it on a regular basis.⁸⁸ The City of Redwood City Housing Element and related land use policies were last updated in November 2014.

Regional

ABAG allocates regional housing needs to each city and county within the nine-county Bay Area, based on statewide goals. ABAG also develops forecasts for population, households, and economic activity in the Bay Area. ABAG, MTC, and local jurisdiction planning staff created the Regional Forecast of Jobs, Population and Housing (upon which Plan Bay Area 2040 is based), which is an integrated land use and transportation plan looking out to the year 2040 for the nine-county San Francisco Bay Area.

Plan Bay Area 2040 is a state-mandated, integrated long-range transportation, land-use and housing plan intended support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution and GHG emissions in the Bay Area. Plan Bay Area promotes compact, mixed-use residential and commercial neighborhoods near transit, particularly within identified PDAs.

3.14.1.2 *Existing Conditions*

According to the California Department of Finance, the 2017 population of Redwood City was 86,360 residents.⁸⁹ There are no residents or housing units on-site.

⁸⁸ California Department of Housing and Community Development. "Regional Housing Needs Allocation and Housing Elements" Accessed April 27, 2018. <http://hcd.ca.gov/community-development/housing-element/index.shtml>.

⁸⁹ California Department of Finance. *E-1: City/County Population Estimates with Annual Percent Change. January 1, 2017 and 2018*. May 1, 2018.

3.14.2 Impact Discussion

For the purpose of determining the significance of the project's impact on population and housing, would the project:

- 1) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- 2) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

3.14.2.1 *Project Impacts*

Impact POP-1: The project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
(Less than Significant Impact)

The project would not add new land uses or population in the City. The project proposes new facilities for existing uses. The proposed project would replace the existing senior center, pool facility, and offices on-site with a new senior center and relocate the operations at the existing Sequoia YMCA to the proposed YMCA (which would include a new pool and daycare).⁹⁰ The proposed facilities could indirectly result in minimal population growth if employees relocate to reside in the City.

The traffic calming measures are proposed at existing intersections to facilitate safer (i.e., slower) vehicular circulation in the area, and would not induce substantial population growth in the area. The proposed facilities and traffic calming measures would serve the City's existing and planned population. Based on the above discussion, the project would not induce substantial unplanned population growth in an area, either directly or indirectly. **(Less than Significant Impact)**

Impact POP-2: The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. **(No Impact)**

The project site does not include residents or housing units and, therefore, the project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. **(No Impact)**

⁹⁰ As discussed in Section 2.3 Project Description, the future of the Sequoia YMCA site and improvements are unknown at this time and independent of the proposed project.

3.14.2.2 *Cumulative Impacts*

Impact POP-C: The project would not result in a cumulatively considerable contribution to a significant population and housing impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative population and housing impacts is the City's boundaries. The project would serve the existing and planned growth in the City. The project does not propose new uses or otherwise indirectly induce substantial unplanned population growth (refer to discussion under Impact POP-1). In addition, the project would not displace residents or housing. For these reasons, the project would not have a cumulatively considerable contribution to a significant cumulative unplanned population growth in the area. **(Less than Significant Cumulative Impact)**

3.15 PUBLIC SERVICES

3.15.1 Environmental Setting

3.15.1.1 *Regulatory Framework*

State

Quimby Act

The Quimby Act (California Government Code Sections 66477) was approved by the California legislature to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees due in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two at the discretion of the City.

Local

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to public service resources and are applicable to the proposed project.

Policy	Description
<hr/> Building Community <hr/>	
BC-4.1	Maintain multi-functional, flexible, and complementary space at Redwood City's community buildings and centers.
BC-4.2	Maximize public facility use by sharing with nonprofit organizations, school districts, and community organizations.
BC-8.3	Consult with private and public community service organizations to coordinate educational and community services, including childcare/early education, classes to learn English, after-school programs, and recreational activities.
<hr/> Public Services <hr/>	
PS-11.1	Work with the Police Department to determine and meet community needs for law enforcement services.
PS-11.2	Work with the Fire Department to determine and meet community needs for fire protection and related emergency services.

In regards to response time goals, the Fire Department has a goal of responding to emergency calls within five to seven minutes and the Police Department has a goal of responding to emergency calls and arriving on-scene within five minutes.^{91,92}

⁹¹ Redwood City. *Redwood City General Plan*. Adopted October 11, 2010 and amended October 20, 2014. Page PS-49.

⁹² Ibid.

3.15.1.2 Existing Conditions

Fire Protection Services

The Redwood City Fire Department (Fire Department) is responsible for fire prevention and suppression, medical response, and property protection within the City boundaries. While the Fire Department is the official fire service provider in the City, automatic mutual aid is provided by the California Department of Forestry and Fire Protection and fire departments from adjacent cities including Menlo Park, Woodside, Belmont, and San Carlos. These fire departments participate in the Greater Alarm Plan, which is a countywide response plan that allows continuous coverage from the closest dispatch unit within San Mateo County.

The Fire Department includes seven fire stations housing seven engines, one truck, one battalion chief and currently has over 90 staff members including firefighters, firefighter/paramedics, captains, battalion chiefs, fire prevention staff, training staff, and administrative staff.⁹³

The nearest fire station to the project site is Station 10 located at 2190 Jefferson Avenue, which is approximately 0.2 miles north of the site.

Police Protection Services

The Redwood City Police Department (Police Department) headquarters is located at 1301 Maple Street, approximately two miles northeast of the project site. The Police Department is comprised of 96 sworn officers, 36 civilian employees, four reserve officers, and 25 volunteers.⁹⁴

Schools

The project site is located within the Redwood City Elementary School District and Sequoia Union High School District. Local public schools in the project area include John Gill Elementary School located at 555 Avenue del Ora, Kennedy Middle School located at 2521 Goodwin Avenue, and Sequoia High School located at 1201 Brewster Avenue.

Park Facilities

Redwood City has approximately 228 acres of park facilities including mini-parks, neighborhood parks, community parks, special use parks, and sports fields on public school property. Parks in the sphere of influence contribute an additional 7.5 acres, for a total of about 236 acres of developed parkland citywide.⁹⁵ The City has a goal of providing active and passive park space at a ratio of 3.0 acres per 1,000 residents.⁹⁶ The City's current parkland ratio is 2.73 acres per 1,000 residents, which

⁹³ Redwood City. "About the Department." <https://www.redwoodcity.org/departments/fire-department/about-the-department>. Accessed February 25, 2019.

⁹⁴ Redwood City. "About Us." <https://www.redwoodcity.org/departments/police-department/about-us>. Accessed February 25, 2019.

⁹⁵ City of Redwood City. *Harbor View Project Draft Environmental Impact Report*. January 2019. Page 4.12-3.

⁹⁶ Redwood City. *Redwood City General Plan*. Adopted October 11, 2010 and amended October 20, 2014. Page BC-11.

is below the City's goal.⁹⁷ The project site is within the 31.7-acre Red Morton Community Park and includes the VMSC, Sid Herkner Pool, and NFL Alumni Association building.

Library Facilities

Redwood City operates and maintains its own library system, which includes four libraries. The Redwood City Public Library is a member of the Peninsula Library System, a group of 34 public and community college libraries in San Mateo County. The libraries have meeting rooms and adjacent outdoor areas that community groups use for activities and events. The nearest library to the project site is Schaberg Branch Library located at 2140 Euclid Avenue, approximately 0.6 miles southwest of the project site.

3.15.2 Impact Discussion

For the purpose of determining the significance of the project's impact on public services, would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- 1) Fire protection?
- 2) Police protection?
- 3) Schools?
- 4) Parks?
- 5) Other public facilities?

3.15.2.1 *Project Impacts*

Impact PS-1: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services. **(Less than Significant Impact)**

The project site is currently served by the Fire Department. The project's replacement of the senior center facility would not increase fire protection services to the site. The project would also relocate the operations of the Sequoia YMCA on-site. The relocation of the Sequoia YMCA to the project site would intensify the use of the project site compared to existing conditions and could incrementally increase the demand for fire protection services on the project site. The project, however, would be constructed in conformance with current building and fire codes, and the Fire Department would review project plans to ensure appropriate safety features are incorporated to reduce fire hazards. The

⁹⁷ The parkland ratio was calculated using the population estimate of 86,380 (California Department of Finance. *E-1: City/County Population Estimates with Annual Percent Change. January 1, 2017 and 2018. May 1, 2018.*).

Fire Department, with Station 10 located 0.2 miles north of the site, would meet their response time goal to the site. For these reasons, the project would not require new or expanded fire protection facilities (the construction of which could cause significant environmental impacts) in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services. **(Less than Significant Impact)**

Impact PS-2: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services. **(Less than Significant Impact)**

The project site is currently served by the Police Department. Like with fire protection services, the project's replacement of the senior center facility would not increase police protection services to the site. The relocation of the Sequoia YMCA to the project site would intensify the use of the project site compared to existing conditions and could incrementally increase the demand for police protection services on the project site.

The incremental increase in police protection services would not require new or expanded police protection facilities (the construction of which could cause significant environmental impacts) in order to maintain acceptable service ratios, response times or other performance objectives for police protection services. In addition, the Police Department would review final site design, including proposed landscaping, access, and lighting, to ensure that the project provides adequate safety and security measures. **(Less than Significant Impact)**

Impact PS-3: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools. **(No Impact)**

The project proposes public and community uses, which would serve the existing and planned population in the City. The project does not propose housing units or other uses that would generate new students and impact school facilities. The project, therefore, would not require new or expanded school facilities, the construction of which could cause significant environmental impacts. **(No Impact)**

Impact PS-4: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks. **(Less than Significant Impact)**

New residents increase demand for parks. The proposed project would not generate new residents and, therefore, would not directly generate demand for parks. The project would improve Red Morton Community Park with new facilities that are intended to serve the existing and planned population in the City. Relocating the YMCA to the park could increase the use of the park by YMCA patrons but the increase would be incremental and not result in substantial adverse physical impacts to the park. **(Less than Significant Impact)**

Impact PS-5: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities. **(No Impact)**

New residents increase demand on library facilities. The proposed project would not generate new residents and, therefore, would not generate demand for libraries. The project, therefore, is not anticipated to require new or expanded library facilities, the construction of which could cause significant environmental impacts. **(No Impact)**

3.15.2.2 *Cumulative Impacts*

Impact PS-C: The project would not result in a cumulatively considerable contribution to a significant public services impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative public service impacts is the City's boundaries.

Fire and Police Protection Services

The cumulative projects would increase demand for police and fire protection services. The cumulative projects, including the proposed project, would be reviewed by the Fire Department and Police Department to ensure adequate safety and security measures are included and would provide tax revenue and other development fees that would go toward paying for increased personnel and facilities (if determined to be required). The adequacy of fire and police personnel and facilities is monitored on a consistent basis by the Fire Chief, Police Chief, and management staff and service needs are budgeted for by the City every two years. For these reasons, the cumulative projects do not require new or expanded fire or police protection facilities. **(Less than Significant Cumulative Impact)**

Schools and Library Facilities

As discussed under Impact PS-3 and PS-5, the project would have no impact on school or library facilities. For this reason, the project would not contribute to cumulative impacts on those resources. **(No Cumulative Impact)**

Park Facilities

As discussed under Impact PS-4, the proposed project would not generate new residents and, therefore, would not generate demand for parks. The project would improve Red Morton Community Park and, therefore, would not have a cumulatively considerable contribution to a significant cumulative impact on park facilities. **(Less than Significant Cumulative Impact)**

3.16 RECREATION

3.16.1 Environmental Setting

3.16.1.1 *Regulatory Framework*

State

Quimby Act

The Quimby Act (California Government Code Sections 66477) was approved by the California legislature to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees due in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two at the discretion of the City of Redwood City.

Local

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to recreational resources and are applicable to the proposed project.

Policy	Description
<hr/>	
Building Community	
<hr/>	
BC-1.3	Enhance street corridors, parkways, and public property between buildings to serve as functional recreation and green space.
BC-3.1	Incorporate flexible design characteristics into the renovation of existing and development of new parks and community facilities. Consider incorporating education with recreation opportunities.
BC-3.2	Continue to build, renovate, and maintain parks and community facilities in a manner that is environmentally responsible.
BC-4.1	Maintain multi-functional, flexible, and complementary space at Redwood City's community buildings and centers.
BC-4.2	Maximize public facility use by sharing with nonprofit organizations, school districts, and community organizations.
BC-6.1	Implement human service programs that are flexible and responsive to the community's changing needs.
<hr/>	

3.16.1.2 *Existing Conditions*

As described in Section 3.15, Redwood City has approximately 228 acres of park facilities including mini-parks, neighborhood parks, community parks, special use parks, and sports fields on public school property. The City is currently below the standard at 2.68 acres per 1,000 residents. In addition to parks, the City has four community centers, one senior center, two pool facilities, and several recreational bicycle paths including access to the regional San Francisco Bay Trail (Bay Trail).

The project site is within the 31.7-acre Red Morton Community Park and includes a senior center (VMSC) and pool facility (Sid Herkner Pool).

3.16.2 Impact Discussion

For the purpose of determining the significance of the project's impact on recreation, would the project:

- 1) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- 2) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

3.16.2.1 *Project Impacts*

Impact REC-1: The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. **(Less than Significant Impact)**

As discussed in Section 3.15.2, the proposed project would not generate new residents and, therefore, would not increase demand for parks or other recreational facilities in that manner. The project would improve Red Morton Community Park by replacing existing public and community facilities with new facilities. The proposed facilities would serve the existing and planned population in the City.

The project's replacement of the senior center facility would not substantially increase the use of Red Morton Community Park. The relocation of the Sequoia YMCA operations on-site, however, could incrementally increase the use of the Red Morton Community Park. This incremental increase would not result in substantial adverse physical impacts to the park given the improvements proposed and under construction (i.e., the Westside Renovation/Magical Bridge Playground at Red Morton Park project) to serve park users. The project, therefore, would not increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. **(Less than Significant Impact)**

Impact REC-2: The project would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. **(Significant and Unavoidable Impact with Mitigation Incorporated)**

The project is the construction of two recreational facilities – the VMSC and YMCA. The environmental impacts of the project are analyzed throughout this EIR. All project impacts are concluded to be no impact, less than significant impact, or less than significant impact with mitigation incorporated except for Impact CUL-1 in Section 3.5 Cultural Resources. Even with the implementation of mitigation measures MM CUL-1.1 and MM CUL-1.2, the project would result in a significant and unavoidable loss of a historic resource. For this reason, the project would include recreational facilities which would have an adverse physical effect on the environment. **(Significant and Unavoidable Impact with Mitigation Incorporated)**

3.16.2.2 *Cumulative Impacts*

Impact REC-C: The project would not result in a cumulatively considerable contribution to a significant recreation impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative recreation impacts is the City's boundaries. Cumulative projects generating new residents are required to comply with the City's requirements for parkland dedication, provisions of public space, and/or payment of in-lieu fees to minimize impacts of new residents on existing park and recreation facilities. As discussed under Impact REC-1, the project does not generate new residents. The project, therefore, would not have a considerable contribution to a significant cumulative increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. No other cumulative project contributes to the project's significant and unavoidable impact to a historic resource. For these reasons, the project would not result in a cumulatively considerable contribution to a significant recreation impact. **(Less than Significant Cumulative Impact)**

3.17 TRANSPORTATION

The following discussion is based on a Transportation Impact Analysis (TIA) prepared by Hexagon Transportation Consultants, Inc. on May 8, 2019. The TIA was completed in accordance with the standards set forth by the City, C/CAG, and CEQA. A copy of the TIA is included in Appendix H.

3.17.1 Environmental Setting

3.17.1.1 *Regulatory Framework*

State

Regional Transportation Planning

MTC is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area, including San Mateo County. MTC is charged with regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities in the region. MTC and ABAG adopted Plan Bay Area 2040 in July 2017, which includes the region's Sustainable Communities Strategy (integrating transportation, land use, and housing to meet GHG reduction targets set by CARB) and Regional Transportation Plan (including a regional transportation investment strategy for revenues from federal, state, regional and local sources over the next 24 years).

Senate Bill 743

SB 743 establishes criteria for determining the significance of transportation impacts using a vehicle miles traveled (VMT) metric intended to promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Specifically, SB 743 requires the replacement of automobile delay – as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion – with VMT as the recommended metric for determining the significance of transportation impacts. OPR approved the CEQA Guidelines implementing SB 743 on December 28, 2018. Local jurisdictions are required to implement a VMT policy by July 1, 2020.

SB 743 did not authorize OPR to set specific VMT impact thresholds, but it did direct OPR to develop guidelines for jurisdictions to utilize. CEQA Guidelines Section 15064.3(b)(1) describes factors that might indicate whether a development project's VMT may be significant, or not. Notably, projects located within one half mile of transit should be considered to have a less than significant transportation impact based on OPR guidance.

Regional and Local

San Mateo County Congestion Management Program

C/CAG is the Congestion Management Agency (CMA) for San Mateo County authorized to set state and federal funding priorities for improvements affecting the San Mateo County Congestion Management Program (CMP) roadway system.

C/CAG-designated CMP roadway system components in Redwood City include El Camino Real, Woodside Road, US Highway 101, and Interstate 280. C/CAG-designated CMP intersections in or near Redwood City include El Camino Real/Whipple Avenue, Bayfront Expressway/Marsh Road (borders Redwood City), and Woodside Road/Middlefield Road.

C/CAG has adopted guidelines to reduce the number of net new vehicle trips generated by new developments. These guidelines apply to all developments that generate 100 or more net new peak-hour vehicular trips on the CMP network.

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to transportation and are applicable to the proposed project.

Policy	Description
<hr/>	
The Built Environment	
<hr/>	
BE-26.6	Require new development projects to provide pedestrian, bicycle, and electric bicycle/scooter facilities that connect to existing and planned pedestrian and bicycle facilities; and require large parking facilities to accommodate pedestrian, bicycle, and electric bicycle/scooter circulation.
BE-26.10	Prioritize bicycle, electric bicycle/scooter, and pedestrian safety improvements at street crossings.
BE-26.18	Maintain and encourage the use of existing pedestrian walkways that enhance pedestrian connectivity throughout the city.
BE-27.5	Require that new development and projects improve access to and accommodations for public transit.
BE-27.10	Maintain and improve access and mobility for the mobility impaired population groups such as youth, the disabled, and seniors.

The City of Redwood City General Plan contains the following transportation policy with respect to level of service:

- Program BE-55/Level of Service Policy Evaluation: Evaluate Redwood City’s current LOS policies for motor vehicle circulation. The evaluation shall consider the following to ensure efficient traffic flow and balance multi-modal mobility goals:
 - Maintaining LOS D or better for motor vehicles in all areas of the city, except the Downtown area as defined by the Downtown Precise Plan. In Downtown, no minimum vehicular LOS standard will be maintained but vehicular LOS will be calculated and alternate LOS standards for other travel modes will be established.”

For unsignalized intersections, a project would cause a traffic level of service deficiency at an unsignalized study intersection if the project would cause:

1. Operations at an unsignalized intersection to deteriorate from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F) or delay at an unsignalized intersection operating at an unacceptable level (LOS E or F) to increase by five seconds or more;
2. And traffic volumes at the intersection satisfy the Caltrans peak-hour volume signal warrant for traffic signal installation.

LOS is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The level of service definitions for signalized intersections are shown in Table 3.17-1.

Table 3.17-1: Unsignalized Intersection Level of Service Definitions Based on Delay		
Level of Service	Description	Average Control Delay per Vehicle
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.0 to 50.0
F	Extreme traffic delays	Greater than 50.0

3.17.1.2 Existing Conditions

Roadway Network

The existing roadway network is shown in Figure 3.17-1 and described below.

Regional Access

Regional access to the project site is provided via the roadways described below.

United States Highway 101 (US 101) is a north/south freeway that extends from San Francisco through San Mateo and Santa Clara Counties. US 101 has full interchanges at Woodside Road and at Whipple Avenue. Between those interchanges, US 101 has six mixed-flow lanes and two High Occupancy Vehicle (HOV) lanes.

Interstate 280 (I-280) is also a north/south freeway that extends from San Francisco through San Mateo County to its terminus in Santa Clara County where it connects with I-680. In Redwood City, I-280 has eight mixed flow lanes. Interchanges are provided at Farm Hill Boulevard and at Woodside Road (SR 84).

El Camino Real (State Route [SR] 82) is a six-lane north/south arterial that extends from South San Francisco, through all of San Mateo County, to its terminus in Santa Clara County. El Camino Real has a grade-separated connection with Woodside Road.

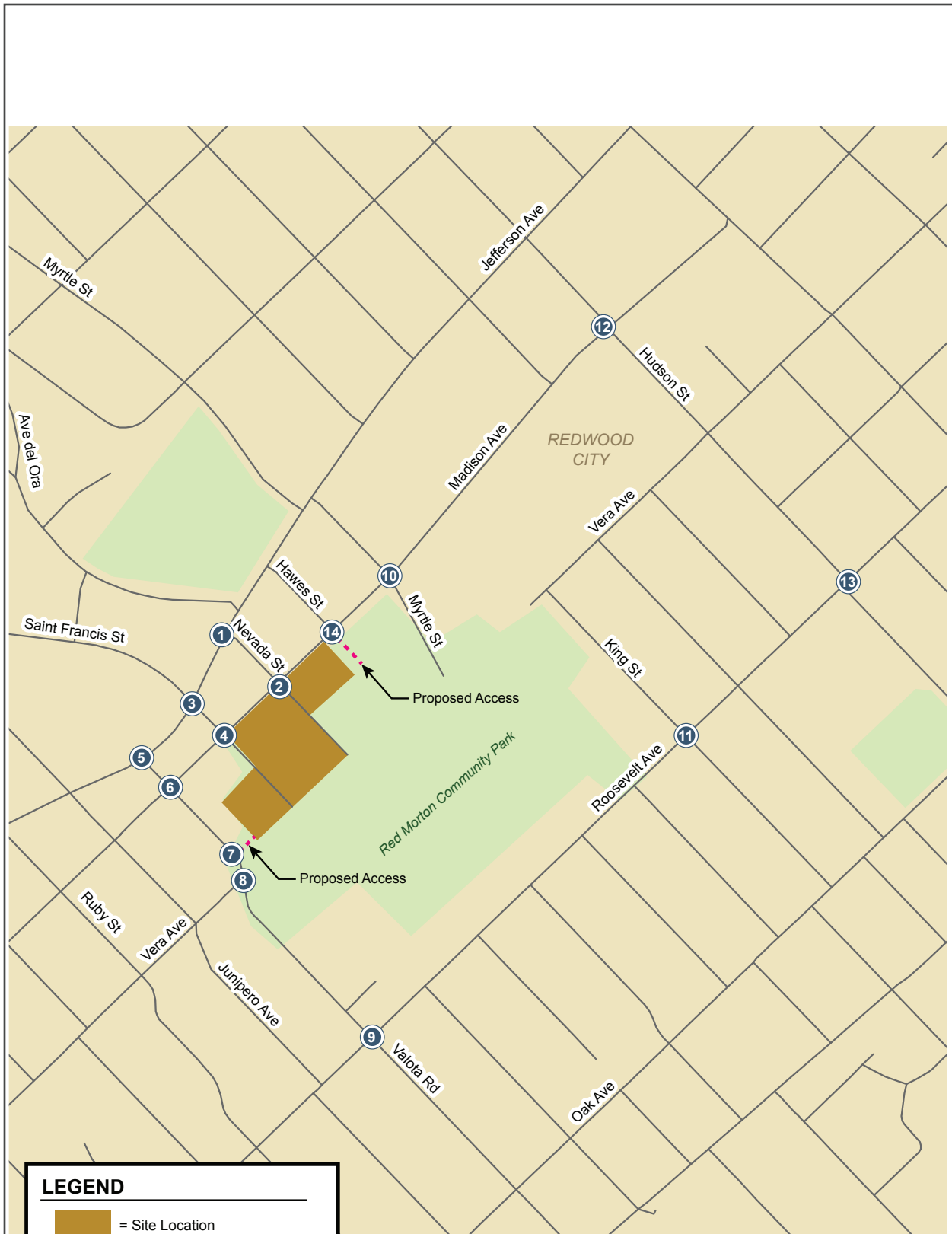
Woodside Road (SR 84) is a four-lane east/west arterial that extends from US 101, west to I-280, and through the Town of Woodside. Further west of I-280, Woodside Road becomes La Honda Road and extends all the way to Cabrillo Highway (SR 1).

Alameda de las Pulgas is a north/south arterial that begins at San Carlos Avenue in San Carlos and extends through Redwood City to Santa Cruz Avenue in Menlo Park.

Local Access

Local access to the project site is provided by numerous streets that form a grid pattern in the residential neighborhood where Red Morton Community Park is located. These roadways are described below.

Jefferson Avenue is a four-lane arterial that begins at Veterans Boulevard, passes under the Caltrain tracks, crosses El Camino Real, and then continues through the residential neighborhood that includes Red Morton Community Park and the project site. After crossing Alameda de las Pulgas and the intersection at Highland Avenue, Jefferson Avenue becomes a two-lane curvilinear roadway with bike lanes that extends all the way to Farm Hill Boulevard near I-280. In the immediate vicinity of the project site, Jefferson Avenue is uncontrolled, except for a traffic signal at Hawes Street, where there is a pedestrian-activated signal for a crosswalk adjacent to an elementary school on the north side of the roadway. Further from the project site, traffic signals are also present at Alameda de las Pulgas and at Hudson Street.



Source: Hexagon Transportation Consultants, Inc., March 2019.

EXISTING ROADWAY NETWORK AND STUDY INTERSECTIONS

FIGURE 3.17-1

Madison Avenue is a two-lane local street that runs roughly parallel to Jefferson Avenue. It begins at El Camino Real and terminates at Alameda de las Pulgas. The project site has frontage on Madison Avenue. On-street parking is permitted on both sides of the street on the block between Nevada Street and St. Francis Street (adjacent to the existing VMSC), but on-street parking is prohibited on the south side between St. Francis Street and Hawes Street (adjacent to the Sid Herkner Pool).

Roosevelt Avenue is a two-lane connector street that runs parallel to Jefferson and Madison Avenues on the opposite side of Red Morton Park. It begins at El Camino Real, crosses Alameda de las Pulgas, and terminates at Foothill Street. It provides direct access to the community facilities located within the southern portion of Red Morton Community Park.

Valota Road is a two-lane connector street that runs between Jefferson Avenue and Woodside Road. Valota Road is approximately 30 feet wide and includes on-street parking. Signs are posted to encourage drivers to slow down and to pull aside for oncoming traffic.

St. Francis Street is a two-lane local street that begins at Harding Avenue, crosses Jefferson Avenue, and then provides one-way inbound access to the parking lot for the existing VMSC. St. Francis Street resumes south of the park at Roosevelt Avenue and continues to Redwood Avenue.

The segment of *Nevada Street* near the project site is a very short two-lane local street that is parallel to St. Francis Street. On the block between Jefferson Avenue and Madison Avenue, Nevada Street is a two-way street, but south of Madison Avenue, Nevada Street is a one-way outbound driveway from the parking lot for the existing VMSC. Another discontinuous segment of Nevada Street serves the residential neighborhood on the other side of Jefferson Avenue. On northbound Nevada Street, only right turns are allowed at Jefferson Avenue.

The segment of *Hawes Street* near the project site is a two-lane local street that is only one block long and runs between Jefferson Avenue and Madison Avenue. There is a signal at Jefferson Avenue and Hawes Street that includes pedestrian countdown signals for the crosswalks across Jefferson Avenue and across Hawes Street. This signal facilitates traffic turning left onto westbound Jefferson Avenue, since there are no left turns allowed from Nevada Street or Myrtle Street onto westbound Jefferson Avenue. No left turns or U-turns are, however, allowed from westbound Jefferson Avenue onto Hawes Street.

Myrtle Street extends from Whipple Avenue to Red Morton Community Park, with an offset intersection at Jefferson Avenue. There are left-turn pockets in both directions on Jefferson Avenue, facilitating left turns from westbound Jefferson Avenue onto Myrtle Street, which then connects with Madison Avenue and leads to the project site. On northbound Myrtle, only right turns are allowed at Jefferson Avenue.

Pedestrian and Bicycle Facilities

Bicycle Facilities

Bicycle facilities are comprised of paths, lanes, and routes. Bicycle paths (or Class I facilities) are paved trails that are separate from roadways. Bicycle lanes (or Class II facilities) are lanes on roadways designed for bicycle use by striping, pavement legends, and signs. Bicycle routes (or Class III facilities) are roadways designated for bicycle use by signs only.

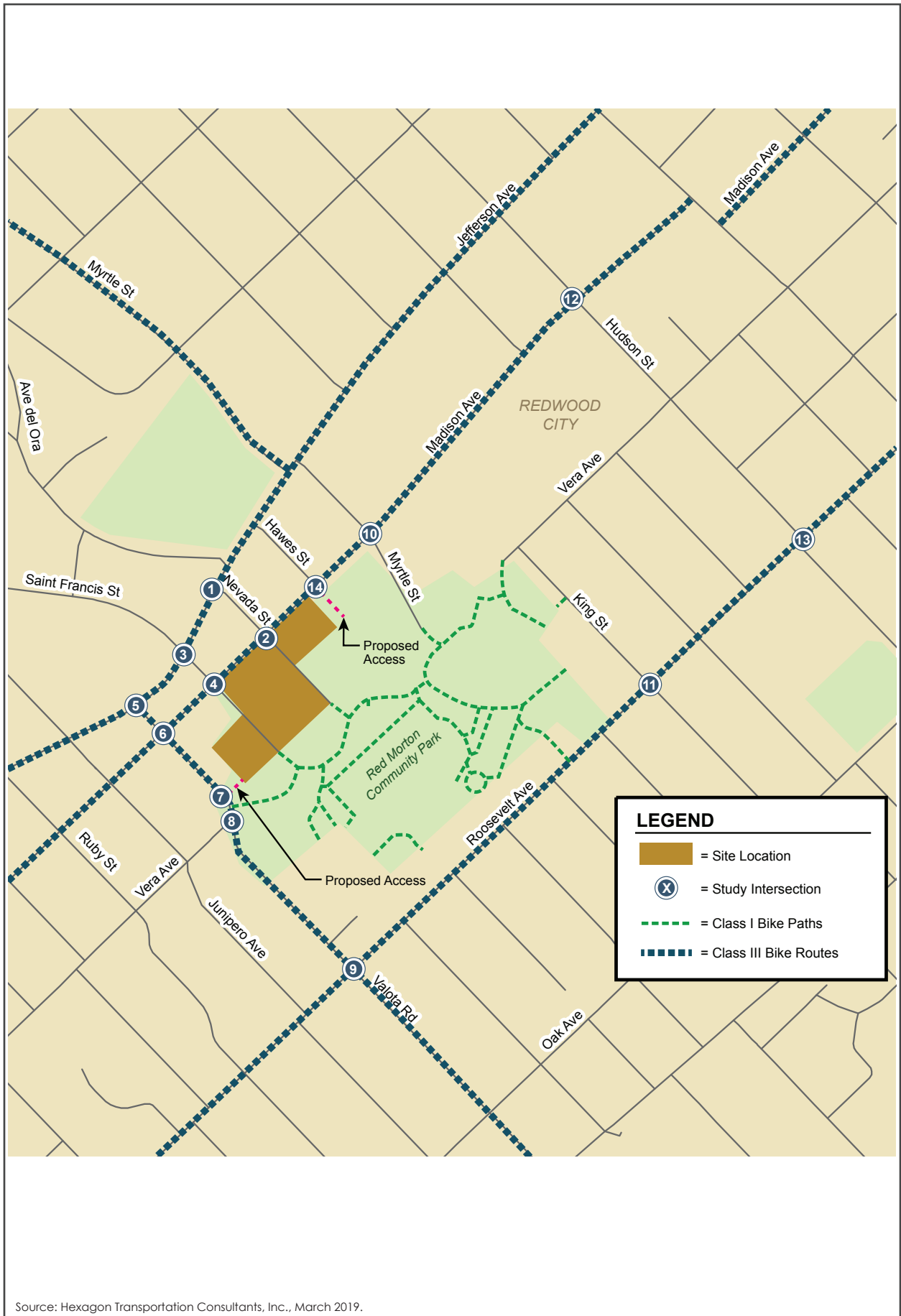
Red Morton Community Park includes Class I bicycle and pedestrian paths that connect its facilities and provide access to and from the surrounding neighborhood. The Vera Bike Corridor, a bicycle and pedestrian path, enters the park from Valota Road.

In addition to the bike paths that run through the park, the project area is served by numerous Class III bike routes. In the vicinity of the project site, “sharrows” are painted on Jefferson Avenue, Madison Avenue, Valota Road, and Roosevelt Avenue. Sharrows are road markings used to indicate a shared lane environment for bicycles and vehicles. Jefferson Avenue is much wider than many of the other streets in the area and is shown as a route preferred by cyclists on *C/CAG’s Bicycle Map of San Mateo County*. North of Jefferson Avenue, sharrows are painted on Myrtle Street, King Street, and Hudson Street.

Jefferson Avenue between Alameda de las Pulgas and Farm Hill Boulevard includes Class II bike lanes. Alameda de las Pulgas includes Class II bike lanes south of Jefferson Avenue. North of Jefferson Avenue, Alameda de las Pulgas is a designated bike route. The existing bicycle facilities in the project vicinity are shown on Figure 3.17-2.

Pedestrian Facilities

There are sidewalks on all streets and numerous crosswalks in the project site vicinity. Uncontrolled crosswalks with yield lines are provided across Jefferson Avenue at Valota Road and at St. Francis Street. At the intersection of Jefferson Avenue and Hawes Street, there are signalized crosswalks (one across Jefferson Avenue and one across Hawes Street) with pedestrian-activated push buttons and countdown heads. Crosswalks with yield lines are also provided across Madison Avenue at St. Francis Street, Nevada Street, Hawes Street, and Myrtle Street. The intersection of Valota Road and Roosevelt Avenue includes crosswalks across all four approaches.



EXISTING BICYCLE FACILITIES

FIGURE 3.17-2

Transit Service

Existing transit service in the project area is provided by the San Mateo County Transit District (SamTrans). Bus routes and bus stops in the project vicinity are shown in Figure 3.17-3.

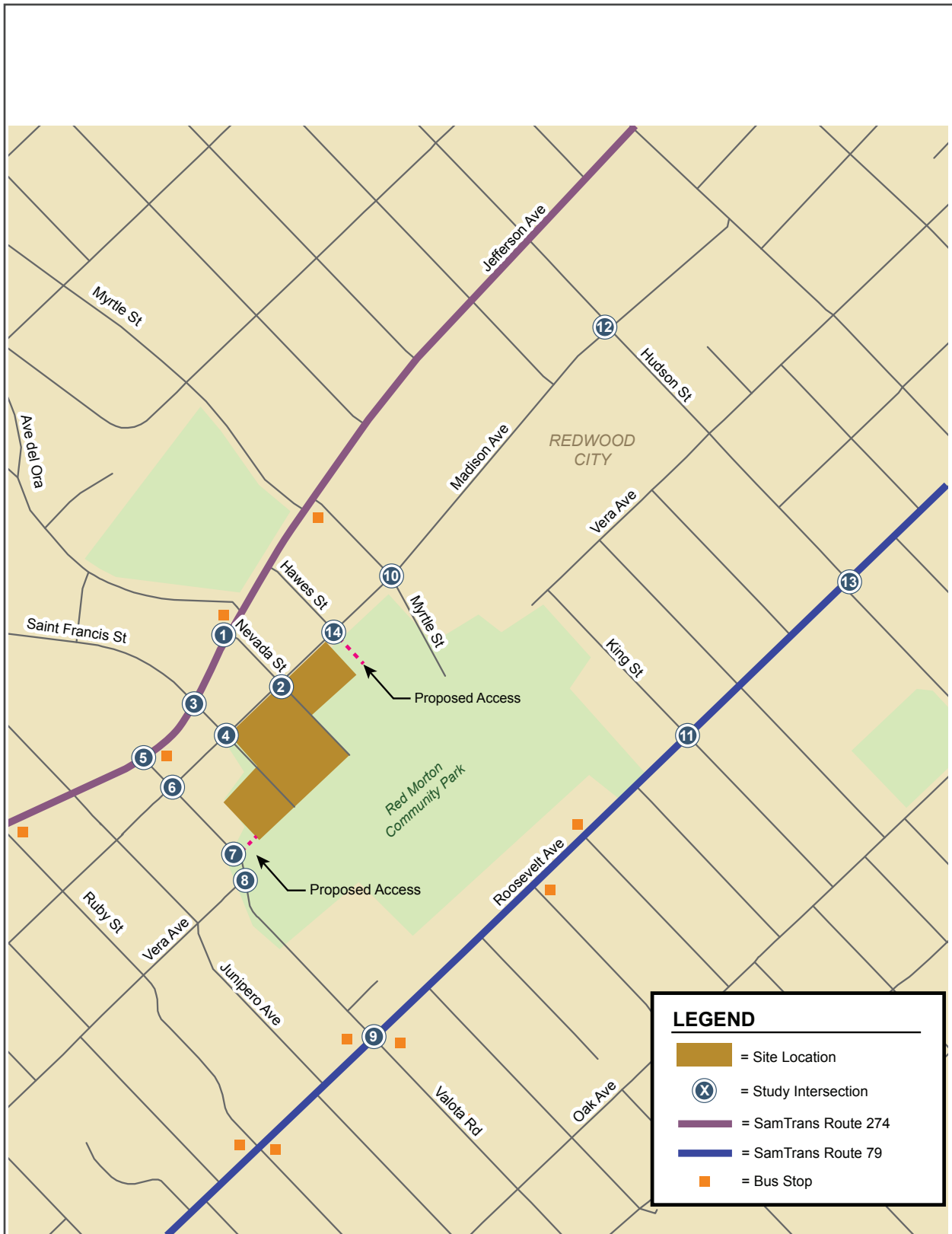
Route 274 provides service between the Redwood City Transit Center and Canada College, and runs along Jefferson Avenue just one block from the project site. Bus stops are provided on Jefferson Avenue in the eastbound direction at Valota Road and at Myrtle Street and in the westbound direction at Nevada Street/Avenue Del Ora. Hours of service on weekdays are from 6:20 AM to 10:20 PM with 30-minute headways throughout the day. Because this route serves the Redwood City Transit Center, it provides connections to Caltrain service and to SamTrans routes ECR, KX, 270, 275, 276, 296, and 398.

Route 79 runs from Florence and 17th Street to Kennedy Middle School, located on Connecticut Street, on school days only. A portion of the route operates on Roosevelt Avenue, adjacent to Red Morton Community Park. Bus stops are provided in both directions at Roosevelt Avenue and Valota Road. There are four westbound trips on school days in the morning between 7:00 and 8:00 AM. In the afternoon, there are five eastbound trips between 3:15 and 6:15 PM on Mondays, Tuesdays, Wednesdays, and Fridays. On Thursdays, to accommodate early dismissal from school, the route operates three eastbound trips, beginning at 2:00 PM.

3.17.2 Impact Discussion

For the purpose of determining the significance of the project's impact on transportation, would the project:

- 1) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian facilities?
- 2) For a land use project, conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
- 3) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?
- 4) Result in inadequate emergency access?



Source: Hexagon Transportation Consultants, Inc., March 2019.

EXISTING TRANSIT SERVICES

FIGURE 3.17-3

3.17.2.1 *Project Impacts*

Impact TRN-1: The project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian facilities. **(Less than Significant Impact with Mitigation Incorporated)**

The City of Redwood City does not currently have an adopted VMT policy. Per SB 743, the City is required to implement a VMT policy by July 1, 2020. In the interim, the City is evaluating transportation impacts based the City's adopted transportation policy.^{98,99} The City's General Plan Program BE-55/Level of Service Policy utilizes LOS as the metric to determine the functionality of the roadway system and the effect of new development on the roadway network.

General Plan Program BE-55/Level of Service Policy

Scope of Study

An analysis was completed to evaluate the effects of the project at intersections that provide primary access to the project site. The study intersections, all of which are unsignalized, are listed below and shown on Figure 3.17-1.¹⁰⁰

1. Nevada Street and Jefferson Avenue
2. Nevada Street and Madison Avenue
3. St. Francis Street and Jefferson Avenue
4. St. Francis Street and Madison Avenue
5. Valota Road and Jefferson Avenue
6. Valota Road and Madison Avenue
7. Valota Road and Project Driveway
8. Valota Road and Vera Avenue
9. Valota Road and Roosevelt Avenue
10. Myrtle Street and Madison Avenue
11. King Street and Roosevelt Avenue
12. Hudson Street and Madison Avenue
13. Hudson Street and Roosevelt Avenue
14. Hawes Street and Madison Avenue

⁹⁸ State of California Office of Planning and Research. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.

⁹⁹ California Natural Resources Agency. *Final Statement of Reasons for Regulatory Action Amendments to the State CEQA Guidelines OAL Notice File No. Z-2018-0116-12*. November 2018.

¹⁰⁰ According to C/CAG's guidelines, projects that generate more than 100 peak hour trips must include a CMP analysis. This project would generate more than 100 new peak hour trips, but due to the project site's location and the local residency of most of its patrons, very few trips would use a CMP facility, such as US 101, I-280, El Camino Real (SR 82), or Woodside Road (SR 84), to access the site. Therefore, the analysis of freeway segments or other CMP facilities is not applicable.

Traffic conditions at the study intersections were analyzed for four different time periods:

- Weekday AM peak hour,
- Weekday PM peak hour,
- Saturday mid-day peak hour, and
- Sunday mid-day peak hour.

The weekday AM and PM peak hour is between 7:00 AM and 9:00 AM and between 4:00 PM and 6:00 PM, respectively on weekdays. These are the times when the most traffic congestion occurs on the roadways near Red Morton Community Park. Based on intersection counts conducted for another traffic study near Red Morton Community Park, it was determined that that the busiest times on weekends occur at mid-day. Therefore, the Saturday and Sunday intersection mid-day peak hour is between 11:00 AM and 2:00 PM.

Traffic conditions were evaluated for the following scenarios:

- *Existing Conditions.* Existing traffic volumes at study intersections were based on traffic counts conducted in April 2017, May-June 2018, and February 2019. The study intersections were evaluated with a level of service analysis using Synchro software in accordance with the 2010 HCM methodology.
- *Existing Plus Project Conditions.* Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
- *Background Conditions.* Background traffic volumes were estimated by adding to existing traffic volumes the projected volumes from Redwood City's Downtown Precise Plan and other approved but not yet constructed projects that would generate trips at the study intersections.
- *Background Plus Project Conditions.* Background traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Background plus project conditions were evaluated relative to background conditions in order to determine project impacts.
- *Cumulative No Project Conditions.* Cumulative no project traffic volumes were obtained by applying a 1.5 percent annual growth factor to the existing volumes on Jefferson Avenue, which is an arterial roadway, and a 0.5 percent growth factor to the local streets in the vicinity of the project site. These growth factors were applied for a six-year period, seven-year period and eight-year period to the 2019, 2018, and 2017 volumes respectively to obtain year 2025 cumulative no project traffic volumes. In addition to the growth factor, traffic volumes from the Westside Renovation Project at Red Morton Park and the County Center project were considered.
- *Cumulative Plus Project Conditions.* Cumulative plus project traffic conditions were estimated by adding to the cumulative no project volumes the additional traffic generated by the project. Cumulative plus project conditions were evaluated relative to cumulative no project conditions in order to determine potential project impacts.

The cumulative and cumulative plus project conditions are discussed in Section 3.17.2.2.

Trip Generation Estimates

Phase 1 of the project would replace the existing buildings and maintain the existing VMSC programs. For this reason, the proposed VMSC in Phase 1 of the project would not generate any net new traffic. The traffic calming measures proposed as part of Phase 1 would accommodate existing traffic and would not generate net new traffic. Phase 2, which is moving the Sequoia YMCA to the site and increasing its size would increase traffic in the area. The traffic effects of the net new trips from the project site were evaluated. The estimated net project trips are shown in Table 3.17-2.

Table 3.17-2: Estimated Trip Generation			
		Proposed YMCA*	Proposed Daycare**
Weekday			
AM Peak Hour	In	107	30
	Out	82	26
	<i>Total</i>	<i>189</i>	<i>56</i>
PM Peak Hour	In	87	27
	Out	79	30
	<i>Total</i>	<i>166</i>	<i>57</i>
Weekend			
Saturday Peak Hour	In	35	-
	Out	67	-
	<i>Total</i>	<i>102</i>	<i>-</i>
Sunday Peak Hour	In	37	-
	Out	41	-
	<i>Total</i>	<i>78</i>	<i>-</i>
Notes:			
* Based on existing counts conducted at the Sequoia YMCA			
** Trip generation for day care center was estimated based on average trip rates (per student) presented in the <i>ITE Trip Generation Manual, 10 Edition</i> for Day Care Center (Land Use 565)			

Existing and Existing Plus Project Conditions

The transportation network under existing conditions is described in Section 3.17.1.2. The results of the intersection level of service analysis under existing conditions are summarized in Table 3.17-3. The results show that all study intersections operate at acceptable levels (LOS D or better) during all four time periods.

Under existing plus project conditions, the transportation network is assumed to be the same as the existing transportation network, except for the following changes that would occur as a result of the project:

- *St. Francis Street and Madison Avenue.* St. Francis Street currently becomes a one-way street south of Madison Avenue, and functions as an inbound driveway to the parking lots near the existing senior center. There are sidewalk bulb-outs to narrow the roadway and a pavement marking showing an inbound arrow. This one-way traffic flow is necessitated by the diagonal parking spaces adjacent to the roadway, where St. Francis Street functions as a parking lot drive aisle. Under “plus project” conditions, this access point is assumed to provide two-way access (inbound and outbound) to the proposed YMCA parking lot, and there would be two-way stop control at this intersection.
- *Nevada Street and Madison Avenue.* Nevada Street currently functions as the other half of a one-way horseshoe loop around the existing senior center and provides outbound access only from the parking areas. This one-way traffic flow is necessitated by the diagonal parking spaces adjacent to the roadway, where Nevada Street functions as a parking lot drive aisle. Under “plus project” conditions, the segment of Nevada Street that extends from its intersection with Madison Avenue south through the project site would be vacated and converted to a pedestrian promenade. The intersection of Nevada Street and Madison Avenue would operate as a T-intersection with a stop control on Nevada Street.
- *Hawes Street and Madison Avenue.* This intersection currently operates as a T-intersection. Although there is no stop control on any of the three approaches, vehicular traffic on Hawes Street generally stops for traffic on Madison Avenue. Under “plus project” conditions, this intersection would be converted to a four-legged intersection, with the southern leg providing two-way access to the proposed VMSC parking lot. The intersection of Hawes Street and Madison Avenue would operate with stop controls on the northbound and southbound approaches.
- *Vera Avenue and Valota Road.* This intersection currently operates with a stop sign on Vera Avenue. A roundabout would be constructed at this intersection.
- *Hudson Street and Madison Avenue.* The existing traffic circle would be expanded at this intersection;
- *Madison Avenue and Myrtle Street.* A new mini traffic circle would be installed at this intersection; and
- *Valota Road and Madison Avenue.* A new median island and curb extensions would be installed at this intersection.

For the existing plus project scenario, the additional trips that would be generated by the project were added to the existing traffic volumes. The results of the intersection level of service analysis under existing plus project conditions are summarized in Table 3.17-3 and show that, based on the City’s impact criteria, the project not result in significant intersection impacts. **(Less than Significant Impact)**

Table 3.17-3: Existing and Existing Plus Project Level of Service

Study Intersection ¹	Peak Hour	Existing		Existing Plus Project		
		Average Delay	LOS	Average Delay	LOS	Incr. in Critical Delay
1. Nevada Street and Jefferson Avenue OWSC (Nevada Street)	AM	14.5	B	14.8	B	0.3
	PM	11.3	B	11.5	B	0.2
	Sat	10.8	B	11.0	B	0.2
	Sun	10.7	B	10.8	B	0.1
2. Nevada Street and Madison Avenue TWSC (Nevada Street)	AM	9.7	A	10.1	B	0.4
	PM	9.7	A	9.4	A	-0.3
	Sat	9.9	A	9.0	A	-0.9
	Sun	9.2	A	7.3	A	-1.9
3. St. Francis Street and Jefferson Avenue TWSC (St. Francis Street)*	AM	20.1	C	45.5	E	25.4
	PM	28.8	D	35.5	E	6.7
	Sat	24.0	C	26.5	D	2.5
	Sun	15.2	C	15.8	C	0.6
4. St. Francis Street and Madison Avenue OWSC (St. Francis Street)	AM	10.4	B	11.5	B	1.1
	PM	9.3	A	9.7	A	0.4
	Sat	9.7	A	9.8	A	0.1
	Sun	9.0	A	9.2	A	0.2
5. Valota Road and Jefferson Avenue OWSC (Valota Road)	AM	20.8	C	25.4	D	4.6
	PM	15.7	C	17.8	C	2.1
	Sat	12.2	B	12.6	B	0.4
	Sun	11.4	B	11.6	B	0.2
6. Valota Road and Madison Avenue TWSC (Valota Road)	AM	15.0	B	15.5	C	0.5
	PM	16.0	C	16.4	C	0.4
	Sat	12.4	B	12.5	B	0.1
	Sun	10.9	B	10.9	B	0.0
7. Valota Road and Project Driveway ² OWSC (Project Driveway)	AM	0.0	A	12.3	B	12.3
	PM	0.0	A	12.5	B	12.5
	Sat	0.0	A	10.9	B	10.9
	Sun	0.0	A	10.1	B	10.1
8. Valota Road and Vera Avenue ³ OWSC (Vera Avenue)	AM	10.3	B	5.8	A	-4.5
	PM	10.7	B	5.9	A	-4.8
	Sat	9.7	A	5.1	A	-4.6
	Sun	9.3	A	4.6	A	-4.7
9. Valota Road and Roosevelt Avenue AWSC	AM	25.9	D	33.7	D	7.8
	PM	21.5	C	25.4	D	3.9
	Sat	11.4	B	11.7	B	0.3
	Sun	10.0	A	10.2	B	0.2
10. Myrtle Street and Madison Avenue TWSC (Myrtle Street)	AM	10.1	B	10.3	B	0.2
	PM	9.8	A	10.0	A	0.2
	Sat	9.8	A	9.9	A	0.1
	Sun	9.3	A	9.4	A	0.1

Table 3.17-3: Existing and Existing Plus Project Level of Service

Study Intersection ¹	Peak Hour	Existing		Existing Plus Project		
		Average Delay	LOS	Average Delay	LOS	Incr. in Critical Delay
11. King Street and Roosevelt Avenue TWSC (King Street)	AM	13.0	B	13.1	B	0.1
	PM	12.1	B	12.2	B	0.1
	Sat	11.3	B	11.3	B	0.0
	Sun	11.4	B	11.4	B	0.0
12. Hudson Street and Madison Avenue TWSC (Madison Avenue)	AM	16.5	C	7.5	A	-9.0
	PM	15.1	C	7.4	A	-7.7
	Sat	13.0	B	6.1	A	-6.9
	Sun	13.6	B	6.2	A	-7.4
13. Hudson Street and Roosevelt Avenue AWSC	AM	19.9	C	20.4	C	0.5
	PM	29.0	D	30.8	D	1.8
	Sat	14.6	B	14.7	B	0.1
	Sun	12.3	B	12.4	B	0.1
14. Hawes Street and Madison Avenue TWSC (Hawes Street)	AM	9.3	A	10.2	B	0.9
	PM	9.3	A	9.9	A	0.6
	Sat	9.0	A	10.0	A	1.0
	Sun	8.7	A	9.3	A	0.6

Notes: **Bold** values indicate substandard LOS

* While Intersection 3, St. Francis Street and Jefferson Avenue, would operate at an unacceptable LOS under project conditions, the intersection would not meet the AM and PM peak hour traffic signal warrants. Based on Redwood City’s significant impact criteria, an unsignalized intersection must also meet the peak hour traffic signal warrant for there to be a significant impact (see Section 3.17.1.1 Regulatory Framework).

¹ OWSC=One-Way Stop Control; TWSC= Two-Way Stop Control; AWSC=All Way Stop Control

For the intersections with stop control only on the minor street, the delay shown is the worst delay on the minor street approach. For the all-way stop controlled intersection, the delay shown is the average for the entire intersection.

² This intersections exist only under project conditions.

³ This intersection was analyzed as a roundabout under project conditions.

Background and Background Plus Project Conditions

Background conditions are the conditions anticipated to exist just prior to completion of the proposed development. Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by approved but not yet constructed or occupied developments in the vicinity of the site (refer to Appendix H for additional detail regarding background traffic volumes).

The background volumes also include an increase in traffic volumes on Jefferson Avenue due to higher enrollment at John Gill Elementary School and on Roosevelt Street due to closure of Hawes Elementary School and students going to Roosevelt Elementary School.

The roadway network under background conditions is assumed to be the same as under existing conditions. Traffic studies for the background projects did not include trip generation estimates for the weekend. As a result, an assumption of proportionality was used to develop Saturday and Sunday peak hour trip estimates for the background scenario.

The results of the intersection level of service analysis under background conditions are summarized in Table 3.17-4. The results show that all study intersections operate at acceptable levels (LOS D or better) during all four time periods.

Project trips were added to the background traffic volume estimates to create the background plus project volumes. The roadway network under background plus project conditions includes the proposed traffic calming measures. The results of the intersection level of service analysis under background plus conditions are summarized in Table 3.17-4. The results show, measured against the City's impact criteria, that the project would result in a significant LOS impact at the following intersections:

9. Valota Road and Roosevelt Avenue (AM peak hour)

Intersection 9, Valota Road and Roosevelt Avenue, would operate at LOS E in the AM peak hour and would meet the peak hour signal warrant under background plus project conditions. The intersection is an all-way stop control, so the level of service reflects the average of all four approaches, not just the worst approach. The peak hour signal warrant it is only slightly above the threshold defined for Part B of the warrant, which considers the sum of the vehicular volumes on the major street approaches (Roosevelt Avenue) and on the minor street approach with the highest delay (northbound Valota).

Mitigation Measure:

MM TRN-1.1: Within one year of full buildout and occupancy of the project, the City shall complete a traffic operations study to monitor Intersection 9, Valota Road and Roosevelt Avenue, and the project proponents shall signalize the intersection if the peak hour traffic signal warrant is met and the level of service deteriorates to an unacceptable level of service.

Signalization would reduce the average delay at this intersection from 37.5 seconds (LOS E) to 25.8 seconds (LOS C) in the AM peak hour and fully mitigate the project's impact. It is likely that the grid street network in the neighborhood would facilitate alternate routes to and from the project site, if this intersection become chronically over-congested during the AM peak hour. For example, if a driver is heading to the project site from Alameda de las Pulgas via Roosevelt Avenue, they would have the option to turn left before reaching Valota, proceeding to Madison Avenue, and then turning right on Madison to reach the site. Or, they could continue on Alameda de las Pulgas to Jefferson Avenue, turn right on Jefferson, and then turn right on Valota to reach the site. The advantage of the grid street network in the neighborhood is that it offers many alternate routes to drivers, and the projected delay at this intersection under background plus project conditions may not actually occur. **(Less than Significant Impact with Mitigation Incorporated)**

Table 3.17-4: Study Intersection LOS – Background Conditions and Background Plus Project Conditions

Study Intersection ¹	Peak Hour	Background		Background plus Project		
		Average Delay	LOS	Average Delay	LOS	Incr. in Critical Delay
1. Nevada Street and Jefferson Avenue OWSC (Nevada Street)	AM	14.9	B	15.3	C	0.4
	PM	11.8	B	12.1	B	0.3
	Sat	11.1	B	11.2	B	0.1
	Sun	11.0	B	11.1	B	0.1
2. Nevada Street and Madison Avenue TWSC (Nevada Street)	AM	9.7	A	10.1	B	0.4
	PM	9.7	A	9.4	A	-0.3
	Sat	9.9	A	7.5	A	-2.4
	Sun	9.2	A	7.3	A	-1.9
3. St. Francis Street and Jefferson Avenue TWSC (St Francis Street)*	AM	22.1	C	59.6	F	37.5
	PM	34.0	D	42.9	E	8.9
	Sat	27.5	D	29.7	D	2.2
	Sun	16.4	C	17.0	C	0.6
4. St Francis Street and Madison Avenue OWSC (St Francis Street)	AM	10.4	B	11.5	B	1.1
	PM	9.3	A	9.7	A	0.4
	Sat	9.7	A	9.8	A	0.1
	Sun	9.0	A	9.7	A	0.7
5. Valota Road and Jefferson Avenue OWSC (Valota Road)	AM	23.0	C	29.1	D	6.1
	PM	17.3	C	20.2	C	2.9
	Sat	12.6	B	13.1	B	0.5
	Sun	11.7	B	12.0	B	0.3
6. Valota Road and Madison Avenue TWSC (Valota Road)	AM	15.0	B	15.5	C	0.5
	PM	16.0	C	16.4	C	0.4
	Sat	12.4	B	12.5	B	0.1
	Sun	10.9	B	10.9	B	0.0
7. Valota Road and Project Driveway ² OWSC (Project Driveway)	AM	0.0	A	12.3	B	12.3
	PM	0.0	A	12.5	B	12.5
	Sat	0.0	A	10.9	B	10.9
	Sun	0.0	A	10.1	B	10.1
8. Valota Road and Vera Avenue ³ OWSC (Vera Avenue)	AM	10.3	B	5.8	A	-4.5
	PM	10.7	B	5.9	A	-4.8
	Sat	9.7	A	5.1	A	-4.6
	Sun	9.3	A	4.6	A	-4.7
9. Valota Road and Roosevelt Avenue AWSC	AM	28.1	D	37.5	E	9.4
	PM	22.5	C	27.9	D	5.4
	Sat	11.5	B	11.8	B	0.3
	Sun	10.2	B	10.3	B	0.1
10. Myrtle St and Madison Avenue TWSC (Myrtle Street)	AM	10.1	B	10.3	B	0.2
	PM	9.8	A	10.0	A	0.2
	Sat	9.8	A	9.9	A	0.1
	Sun	9.3	A	9.4	A	0.1

Table 3.17-4: Study Intersection LOS – Background Conditions and Background Plus Project Conditions						
Study Intersection¹	Peak Hour	Background		Background plus Project		
		Average Delay	LOS	Average Delay	LOS	Incr. in Critical Delay
11. King Street and Roosevelt Avenue TWSC (King Street)	AM	13.1	B	13.3	B	0.2
	PM	12.2	B	12.3	B	0.1
	Sat	11.3	B	11.4	B	0.1
	Sun	11.5	B	11.5	B	0.0
12. Hudson Street and Madison Avenue TWSC (Madison Avenue)	AM	16.5	C	7.5	A	-9.0
	PM	15.1	C	7.4	A	-7.7
	Sat	13.0	B	6.1	A	-6.9
	Sun	13.6	B	6.2	A	-7.4
13. Hudson Street and Roosevelt Avenue AWSC	AM	20.6	C	21.0	C	0.4
	PM	31.8	D	32.6	D	0.8
	Sat	14.9	B	15.0	B	0.1
	Sun	12.5	B	12.6	B	0.1
14. Hawes Street and Madison Avenue TWSC (Hawes Street)	AM	9.3	A	10.2	B	0.9
	PM	9.3	A	9.9	A	0.6
	Sat	9.0	A	10.0	A	1.0
	Sun	8.7	A	9.3	A	0.6

Notes: **Bold** values indicate substandard LOS
Bold and Shaded values indicates a significant project impact, per City criteria
* While Intersection 3, St. Francis Street and Jefferson Avenue, would operate at an unacceptable LOS under project conditions, the intersection would not meet the AM and PM peak hour traffic signal warrants. Based on Redwood City’s significant impact criteria, an unsignalized intersection must also meet the peak hour traffic signal warrant for there to be a significant impact (see Section 3.17.1.1 Regulatory Framework).¹ OWSC=One-Way Stop Control; TWSC= Two-Way Stop Control; AWSC=All Way Stop Control
For the intersections with stop control only on the minor street, the delay shown is the worst delay on the minor street approach. For the all-way stop controlled intersection, the delay shown is the average for the entire intersection.
² This intersections exist only under project conditions.
³ This intersection was analyzed as a roundabout under project conditions.

General Plan Transportation Policies

In addition to level of service, the City’s General Plan includes policies addressing other transportation modes within the circulation system. Table 3.17-5 summarizes the project’s consistency with the applicable General Plan policies.

As shown in Table 3.17-5, the project would not conflict with General Plan policies regarding the circulation system. In addition, in accordance with City practice, the project would implement TDM measures (refer to Section 2.3.3 Transportation Demand Management Measures). (**Less than Significant Impact**)

Table 3.17-5: Project Consistency with Applicable General Plan Transportation Policies

General Plan Policy		Consistency
BE-26.6	Require new development projects to provide pedestrian, bicycle, and electric bicycle/scooter facilities that connect to existing and planned pedestrian and bicycle facilities; and require large parking facilities to accommodate pedestrian, bicycle, and electric bicycle/scooter circulation.	As discussed in Section 3.17.1.2, the project area has adequate pedestrian and bicycle facilities. The project includes a pedestrian promenade and bicycle parking facilities on-site. The proposed promenade would connect the Vera bicycle corridor to El Camino Real and Alameda de las Pulgas. The project is consistent with this policy.
BE-26.10	Prioritize bicycle, electric bicycle/scooter, and pedestrian safety improvements at street crossings.	The project includes traffic calming measures to facilitate safer and slower vehicular circulation in the neighborhood and includes signage cautioning drivers at the proposed driveway on Valota Road. The project is consistent with this policy.
BE-26.18	Maintain and encourage the use of existing pedestrian walkways that enhance pedestrian connectivity throughout the city.	The project would maintain the sidewalks along the project frontage and include a pedestrian promenade on-site. The project is consistent with this policy.
BE-27.5	Require that new development and projects improve access to and accommodations for public transit.	The project would implement TDM measures including maintaining an online transportation kiosk with information about transit routes and schedules and providing employees with information about free trip planning resources. The project would also offer transit subsidies to employees. The project is consistent with this policy.
BE-27.10	Maintain and improve access and mobility for the mobility impaired population groups such as youth, the disabled, and seniors.	The project would be constructed in accordance with the Americans Disability Act (ADA). The project is consistent with this policy.

Impact TRN-2: The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). **(Less than Significant Impact)**

VMT is identified in CEQA Guidelines Section 15064.3 as the most appropriate measure of transportation impacts. With the exception of evaluating transportation capacity projects, a project’s effect on automobile delay shall not constitute a significant environmental impact (CEQA Guidelines Section 16064.3[a]). The City or County is not yet required, and has not yet adopted a standard approach or guidelines to evaluate a project’s VMT impact.

Due to the fact that the project entails a community and fitness center, most of the trips to and from the project would be made by patrons living in the local area (except employees, which is a small percentage compared to the number of visitors). The total project annual VMT is estimated to be

approximately 3.7 million.¹⁰¹ The project is proposing to implement TDM measures for employees and users of the proposed facilities. The TDM measures would encourage alternative and active commuting behavior that would reduce single-occupant vehicle trips. It is estimated the TDM measures would result in approximately five to 10 percent reduction in trips. These TDM measures would reduce the VMT generated by the project and so would not be in conflict with CEQA Guidelines section 15064.3. **(Less than Significant Impact)**

Impact TRN-3: The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). **(Less than Significant Impact)**

The project design does not substantially increase hazards. The proposed access point on Valota Road is just north of the existing Vera corridor bike path, utilized by both pedestrians and bicyclists. To avoid the potential for conflicting turning movements between motorists using this new access point and cyclists/pedestrians using the bike path, the project would post signage at the Valota Road driveway exit noting the presence of the bike path and cautioning drivers to watch for bikes and pedestrians. The project would also install signs on Valota Road for bicyclists and pedestrians in order to direct them to enter the site from the bike/pedestrian path. In addition, a curb-cut for bicyclists would be constructed as part of the project for bicyclist to use (instead of the proposed driveway). An ADA-compliant sidewalk and ramps are proposed as part of the project for pedestrians walking along Valota Road and crossing the new driveway. The project also includes off-site improvements to increase safety and minimize existing hazards.

The project includes traffic calming measures at four local intersections (refer to Section 2.3.1) to facilitate safer and slower vehicular circulation. In addition, the project would post a sign prohibiting left turns at the intersection of Nevada Street and Jefferson Avenue. Currently, there is a median on Jefferson Avenue that extends far enough into the intersection to block left turns from Nevada Street onto westbound Jefferson Avenue and left turns from westbound Jefferson Avenue onto Nevada Street. Traffic counts, however, determined that drivers drove around the median and still made those left turns because the lane configuration is ambiguous. The proposed sign would eliminate ambiguity and clearly identify the prohibited movement. **(Less than Significant Impact)**

Impact TRN-4: The project would not result in inadequate emergency access. **(Less than Significant Impact)**

The project be built in conformance with the current building and fire codes, and be reviewed by the Fire Department to ensure adequate emergency access, including adequate fire apparatus access to buildings and adequate widths for on-site driveways and parking aisles. **(Less than Significant Impact)**

¹⁰¹ Illingworth & Rodkin, Inc. *Veterans Memorial Building Senior Center & YMCA Air Quality & Greenhouse Gas Assessment*. May 8, 2019.

3.17.2.2 *Cumulative Impacts*

Impact TRN-C: The project would not result in a cumulatively considerable contribution to a significant transportation impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

The geographic area for cumulative transportation resource impacts includes the project site and its surrounding area as defined by the study intersections identified under Impact TRN-1 and shown in Figure 3.17-1.

General Plan Program BE-55/Level of Service Policy

Cumulative and Cumulative Plus Project Conditions

The roadway network under cumulative conditions is assumed to be the same as described under existing plus project conditions. The only pending projects in the immediate vicinity of the project site are the County Center and the Westside Renovation Project at Red Morton Park. For this reason, in addition to the growth factor, traffic volumes from the proposed County Center and Westside Renovation Project at Red Morton Park were considered. The cumulative volumes also reflect an increase in traffic volumes on Jefferson Avenue due to higher enrollment at John Gill Elementary School and on Roosevelt Street due to closure of Hawes Elementary School and students going to Roosevelt elementary school.

Project trips were added to the cumulative traffic volume estimates to create the cumulative plus project volumes. The results of the intersection level of service analysis under cumulative and cumulative plus project conditions are summarized in Table 3.17-6. The results show that, measured against the City's impact criteria, the project would result in a significant LOS impact at the following intersections:

- 5. Valota Road and Jefferson Avenue (AM peak hour)
- 9. Valota Road and Roosevelt Avenue (AM and PM peak hours)

Mitigation Measure:

MM TRN-C.1: The project shall add a refuge lane on Jefferson Avenue for drivers turning left onto Jefferson Avenue from Valota Road.

There is sufficient curb-to-curb width within the existing roadway to accommodate the refuge lane by narrowing the center median and restriping. With installation of the refuge lane, the calculated delay would improve from 46.4 seconds (LOS E) to 28.6 seconds (LOS D) in the AM peak hour under cumulative plus project conditions and mitigate the project's cumulative impact to a less than significant level. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

Intersection 9, Valota Road and Roosevelt Avenue, with the implementation mitigation measure MM TRN-1.1 above, would reduce the average delay at this intersection from 52.3 seconds (LOS F) to 28.5 seconds (LOS C) during the AM peak hour and from 41.8 seconds (LOS E) to 26.8 (LOS C) during the PM peak hour under cumulative plus project conditions and mitigate the project's

cumulative impact to a less than significant level. (**Less than Significant Cumulative Impact with Mitigation Incorporated**)

Table 3.17-6: Study Intersection LOS – Cumulative Conditions and Cumulative Plus Project Conditions							
Study Intersection¹	Peak Hour	Cumulative		Cumulative Plus Project			
		Average Delay	LOS	Average Delay	LOS	Incr. in Critical Delay	
1. Nevada Street and Jefferson Avenue OWSC (Nevada Street)	AM	16.0	C	16.4	C	0.4	
	PM	12.3	B	12.6	B	0.3	
	Sat	11.1	B	11.7	B	0.6	
	Sun	11.5	B	11.5	B	0.0	
2. Nevada Street and Madison Avenue TWSC (Nevada Street)	AM	9.7	A	10.1	B	0.4	
	PM	9.7	A	10.4	B	0.7	
	Sat	9.9	A	10.1	B	0.2	
	Sun	9.2	A	9.6	A	0.4	
3. St. Francis Street and Jefferson Avenue TWSC (St Francis Street)*	AM	26.8	D	>100.0	F	81.5	
	PM	34.5	D	44.1	E	9.6	
	Sat	29.7	D	32.1	D	2.4	
	Sun	17.8	C	18.5	C	0.7	
4. St Francis Street and Madison Avenue OWSC (St Francis Street)	AM	10.4	B	11.7	B	1.3	
	PM	9.3	A	9.8	A	0.5	
	Sat	9.7	A	9.9	A	0.2	
	Sun	9.1	A	9.2	A	0.1	
5. Valota Road and Jefferson Avenue OWSC (Valota Road)	AM	33.0	D	46.4	E	13.4	
	PM	22.7	C	28.2	D	5.5	
	Sat	14.1	B	14.9	B	0.8	
	Sun	13.0	B	13.3	B	0.3	
6. Valota Road and Madison Avenue TWSC (Valota Road)	AM	15.5	C	16.1	C	0.6	
	PM	17.1	C	17.7	C	0.6	
	Sat	12.4	B	13.1	B	0.7	
	Sun	11.2	B	11.3	B	0.1	
7. Valota Road and Project Driveway ² OWSC (Project Driveway)	AM	0.0	A	12.6	B	12.6	
	PM	0.0	A	13.0	B	13.0	
	Sat	0.0	A	11.2	B	11.2	
	Sun	0.0	A	10.4	B	10.4	
8. Valota Road and Vera Avenue ³ OWSC (Vera Avenue)	AM	10.3	B	6.0	A	-4.3	
	PM	10.9	B	6.1	A	-4.8	
	Sat	9.8	A	5.3	A	-4.5	
	Sun	9.4	A	4.8	A	-4.6	
9. Valota Road and Roosevelt Avenue AWSC	AM	34.6	D	52.3	F	17.7	
	PM	30.3	D	41.8	E	11.5	
	Sat	11.5	B	131	B	1.6	
	Sun	10.9	B	11.1	B	0.2	

Table 3.17-6: Study Intersection LOS – Cumulative Conditions and Cumulative Plus Project Conditions

Study Intersection ¹	Peak Hour	Cumulative		Cumulative Plus Project		
		Average Delay	LOS	Average Delay	LOS	Incr. in Critical Delay
10. Myrtle St and Madison Avenue TWSC (Myrtle Street)	AM	10.1	B	10.4	B	0.3
	PM	9.8	A	10.0	A	0.2
	Sat	9.8	A	10.0	A	0.2
	Sun	9.4	A	9.4	A	0.0
11. King Street and Roosevelt Avenue TWSC (King Street)	AM	13.4	B	13.6	B	0.2
	PM	12.4	B	12.5	B	0.1
	Sat	11.3	B	12.3	B	1.0
	Sun	12.0	B	12.1	B	0.1
12. Hudson Street and Madison Avenue TWSC (Madison Avenue)	AM	17.2	C	7.8	A	-9.4
	PM	15.4	C	7.6	A	-7.8
	Sat	13.0	B	6.3	A	-6.7
	Sun	12.8	B	6.4	A	-6.4
13. Hudson Street and Roosevelt Avenue AWSC*	AM	22.7	C	23.4	C	0.7
	PM	39.2	E	40.5	E	1.3
	Sat	14.9	B	16.0	C	1.1
	Sun	13.1	B	13.2	B	0.1
14. Hawes Street and Madison Avenue TWSC (Hawes Street)	AM	9.3	A	10.2	B	0.9
	PM	9.9	A	10.0	A	0.7
	Sat	9.0	A	10.1	B	1.1
	Sun	8.7	A	9.3	A	0.6

Notes: **Bold** Values indicate substandard LOS

Bold and Shaded values indicates a significant LOS impact by the project, per City criteria

* While Intersection 3, St. Francis Street and Jefferson Avenue, would operate at an unacceptable LOS under project conditions, the intersection would not meet the AM and PM peak hour traffic signal warrants. Based on Redwood City’s significant impact criteria, an unsignalized intersection must also meet the peak hour traffic signal warrant for there to be a significant impact (see Section 3.17.1.1 Regulatory Framework). While Intersection 13, Hudson Street and Roosevelt Avenue, would operate at an unacceptable LOS under project conditions in the PM peak hour and met the peak hour signal warrant in the PM peak hour; the project would add less than five seconds delay to this intersection. Based on the Redwood City’s significant impact criteria, an unsignalized intersection must also increase critical delay by five seconds or more (see Section 3.17.1.1 Regulatory Framework).

¹ OWSC=One-Way Stop Control; TWSC= Two-Way Stop Control; AWSC=All Way Stop Control

For the intersections with stop control only on the minor street, the delay shown is the worst delay on the minor street approach. For the all-way stop controlled intersection, the delay shown is the average for the entire intersection.

² This intersections exists only under project conditions.

³ This intersection was analyzed as a roundabout under project conditions.

General Plan Transportation Policies

The project would be consistent with applicable General Plan policies regarding circulation and, therefore, would not have a cumulatively considerable contribution to a significant cumulative conflict with those policies. **(Less than Significant Cumulative Impact)**

CEQA Guidelines Section 15064.3, Subdivision (b)

While the project would increase VMT compared to existing uses, the project is local serving and includes TDM measures to reduce single-occupant vehicle trips. For this reason, the project would not contribute to a significant cumulative VMT impact. **(Less than Significant Cumulative Impact)**

Emergency Access and Geometric Design

The Westside Renovation/Magical Bridge Playground at Red Morton Park project is the only cumulative project in the immediate vicinity of the project. The Westside Renovation/Magical Bridge Playground at Red Morton Park project is compatible with the project uses. Visitors of the Westside Renovation/Magical Bridge Playground at Red Morton Park would use the same access roadways and paths as the project and have the same benefits from the proposed traffic calming measures and signage as the proposed project.

All cumulative projects (including the project) would comply with current building and fire codes and be reviewed by the Fire Department to ensure adequate emergency access. For these reasons, the cumulative projects would not result in a significant cumulative impact to emergency access. **(Less than Significant Cumulative Impact)**

3.17.3 Non-CEQA Effects

3.17.3.1 *Parking Demand and Supply*

A parking analysis was completed for the project by Hexagon Transportation Consultants, Inc. on February 5, 2019. A copy of this report is included in Appendix H.

Current Parking Demand

An analysis of current parking demand was completed at the project site and Sequoia YMCA. Hourly counts at the VMSC of occupied parking spaces was completed. The count included all of the parking spaces on and adjacent to the loop formed by St. Francis Street, Vera Avenue, and Nevada Street. The count included all parked vehicles, regardless of whether the vehicle's occupants were going to the senior center or one of the other facilities at the park. The peak weekday parking demand at the project site occurred at 11:00 AM, with 118 parked vehicles. The peak Saturday parking demand occupied at 12:00 noon, with 174 parked vehicles. It is assumed that the parking demand for the proposed VMSC would be the same as existing parking demand surveyed at the project site.

The hourly counts of parked cars at the Sequoia YMCA were completed and included the parking areas in front of, next to, and in back of the YMCS building, as well as the three on-street parking spaces directly in front of the building. The peak weekday parking demand at the YMCA occupied at both 9:00 AM and 10:00 AM, with 64 parked vehicles at both times. This count represents 100

percent occupancy of all available spaces at the YMCA. The peak Saturday parking demand occurred at 10:00 AM, with 62 parked vehicles. There was only one unoccupied space at that time.

In general, it is not desirable to have 100 percent occupancy of a parking area because it means a new arrival has nowhere to park and would need to search for parking in the nearby residential neighborhood. The parking counts at the existing Sequoia YMCA suggests that there is more parking demand than the existing facility is able to accommodate during at least a couple of hours in the morning in both weekdays and Saturdays.

Proposed Parking Supply and Demand

Supply

A surface parking lot for Phase 1 of the project is proposed east of the proposed VMSC and would have 57 vehicle parking spaces and 42 bicycle parking spaces. Phase 2 would provide a new surface parking lot north of the proposed YMCA and a larger surface parking lot west of the YMCA. The surface parking lots would provide a total of 226 vehicle parking spaces and 11 motorcycle parking spaces. A total of 18 bicycle parking spaces are proposed at the front (north side) of the YMCA building.

After full build-out of the project, there would be a total of 283 vehicular parking spaces, 11 motorcycle parking spaces, and 60 bicycle parking spaces to accommodate the parking needs of both the VMSC and YMCA facilities.

Demand

In order to estimate parking demand for the project, the peak demand at each of the existing parking areas was added together. It is assumed that the parking demand for the proposed VMSC building would not exceed the collective parking demand generated by the existing uses on-site (the VMSC, Sid Herkner Pool, NFL Alumni Association building, and other facilities in Red Morton Community Park). Parking rates for the proposed YMCA facility were calculated by dividing the observed demand by the square footage of the existing facility (25,100 square feet). This rate was applied to the additional square footage (9,900 square) related to the expansion. This results in a future estimated parking demand of 208 spaces on weekdays and 261 spaces on a Saturday. This estimate is considered the low end of the likely demand, since there is likely unmet demand for parking at the YMCA.

To estimate a more realistic parking demand, an estimated parking demand rate of 3.0 spaces per 1,000 square feet is used for the YMCA. Since the observed demand was approximately 2.5 spaces per 1,000 square feet on both the Tuesday and Saturday surveyed, a rate of 3.0 is 20 percent higher than the full occupancy that was observed. Applying this rate to the proposed YMCA facility and assuming the parking demand for the VMSC is as described above results in a future parking demand of 223 spaces on weekdays and 279 spaces on a Saturday for the project. The project proposes to provide a total of 283 vehicular parking spaces, which would meet this parking demand. A summary of the observed parking demand and project parking demand is provided in Table 3.17-7.

Table 3.17-7: Estimated Parking Demand					
Facility	Size	Peak Parking Demand			
		Weekday (occ. spaces)	Rate (per ksf)	Weekend (occ. spaces)	Rate (per ksf)
Based on Observed Parking Demand Rates					
VMSC/Red Morton Community Park ¹		118	-	174	
Existing Sequoia YMCA ¹	25.1 ksf	64	2.55	62	2.47
Proposed YMCA Expansion ²	9.9 ksf	26	2.55	25	2.47
<i>Future Parking Demand</i>		208		261	
Based on Observed VMSC Parking Demand and Increased YMCA Parking Demand Rates					
VMSC/Red Morton Community Park ¹		118	-	174	-
Existing YMCA ³	25.1 ksf	75	3.00	75	3.00
Proposed YMCA Expansion ²	9.9 ksf	30	3.00	30	3.00
<i>Future Parking Demand</i>		223		279	
<i>Total Parking Needed for 90% Occupancy</i>		248		310	
Notes: occ. Spaces = occupied spaces; ksf = thousand square feet					
¹ Parking demand for the VMSC and existing YMCA based on parking counts conducted in April 2017.					
² Parking rate for expansion assumes the same parking rate as the existing YMCA					
³ parking rate of 3.0 is based on evidence of unmet parking demand at existing YMCA facility.					

Parking facilities function best when they are about 90 percent occupied or less. A 90 percent occupancy rate means that new arrivals can be assured of finding a vacant space without a long search up and down drive aisles. This improves circulation within the parking areas because drivers need not block drive aisles while waiting for another driver to back out of a space or circle the same area looking for a recently vacated space. A 90 percent occupancy rate for the proposed facility would result in a need for 248 parking spaces on a weekday and 310 spaces on a Saturday. The parking demand for 310 spaces on a Saturday exceeds the proposed number of on-site parking by 27 spaces. As described in Section 2.3 Project Description, and identified as a condition of approval (see below), project employees would park at the Community Activities Building parking lot on the south side of Red Morton Community Park during weekend operations. Also, the project proposes to implement TDM measures that would reduce the parking needs of the project. It is estimated that the parking demand could be reduced by at least five percent. In light of these factors, the proposed parking supply would be adequate.

Condition of Approval:

- During weekend operations, project employees shall park at the Community Activities Building parking lot.

In the event there is a delay in the construction of Phase 2, the parking demand for Phase 1 (118 vehicle parking spaces) would be met with the proposed 57 parking spaces to be constructed as part of Phase 1 and the existing 171 parking spaces on the Phase 2 portion of the site, and would therefore provide sufficient parking. Upon completion of Phase Two, a total of 283 parking spaces would be provided. The parking analysis determined that at peak demand, 279 parking.

3.18 TRIBAL CULTURAL RESOURCES

3.18.1 Environmental Setting

3.18.1.1 *Regulatory Framework*

State

Assembly Bill 52

AB 52, effective July of 2015, established a new category of resources for consideration by public agencies when approving discretionary projects under CEQA, called Tribal Cultural Resources (TCRs). AB 52 requires lead agencies to provide notice of projects to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified. Where requested by a tribe, consultation is required.

Under AB 52, a TCRs are defined as follows:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are also either:
 - Included or determined to be eligible for inclusion in the California Register of Historic Resources¹⁰²
 - Included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)
- A resource determined by the lead agency to be a TCR.

3.18.1.2 *Existing Conditions*

No Native American tribes have contacted the City pursuant to AB 52 to be notified about projects within the City for the purposes of requesting consultation. In addition, the City has contacted local tribes and no tribes have responded as having TRCs on-site.¹⁰³

¹⁰² See Public Resources Code section 5024.1. The State Historical Resources Commission oversees the administration of the CRHR and is a nine-member state review board that is appointed by the Governor, with responsibilities for the identification, registration, and preservation of California's cultural heritage. The CRHR "shall include historical resources determined by the commission, according adopted procedures, to be significant and to meet the criteria in subdivision (c) (Public Resources Code, Section 5024.1 (a)(b)).

¹⁰³ McGill, Anna. Senior Planner, City of Redwood City. Personal Communication. June 4, 2019.

3.18.2 Impact Discussion

For the purpose of determining the significance of the project's impact on TCRs, would the project cause a substantial adverse change in the significance of a TRC, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- 1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?
- 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.18.2.1 *Project Impacts*

Impact TCR-1: The project would not cause a substantial adverse change in the significance of a TRC that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). **(No Impact)**

As discussed in Section 3.18.1.2, no Native American tribes have contacted the City pursuant to AB 52. In addition, local Native American tribes were contacted by the City and no tribes have responded as having TRCs on-site.¹⁰⁴ Therefore, there are no known TRCs on-site. For these reasons, the project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). **(No Impact)**

Impact TCR-2: The project would not cause a substantial adverse change in the significance of a TRC that is determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. **(No Impact)**

As discussed under Impact TCR-1, there are no known TRCs on-site. For this reason, the project would not cause a substantial adverse change in the significance of a TRC that is determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. **(No Impact)**

¹⁰⁴ McGill, Anna. Senior Planner, City of Redwood City. Personal Communication. June 4, 2019.

3.18.2.2 *Cumulative Impacts*

Impact TCR-C: The project would not result in a cumulatively considerable contribution to a significant TRCs impact. **(No Cumulative Impact)**

As discussed under Impact TRC-1 and TRC-2, the project would not impact TRCs. For this reason, the project would not contribute to a cumulatively significant TRC impact. **(No Cumulative Impact)**

3.19 UTILITIES AND SERVICE SYSTEMS

3.19.1.1 *Regulatory Framework*

State

Urban Water Management Plan

Pursuant to the State Water Code, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water annually must prepare and adopt an urban water management plan (UWMP) and update it every five years. As part of a UWMP, water agencies are required to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events. The City adopted its most recent UWMP in June 2016.

Regional Water Quality Control Board Requirements

RWQCB includes regulatory requirements that each wastewater collection system agency shall, at a minimum, develop goals for the Sewer System Management Plan to provide adequate capacity to convey peak flows. Other RWQCB regulatory requirements include the General Waste Discharge Requirements, which regulates the discharge from wastewater treatment plants.

Assembly Bill 939 and Senate Bill 1016

The California Integrated Waste Management Act of 1989, or AB 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures. SB 1016 revised the reporting requirements of AB 939 by implementing a per capita disposal rate on a jurisdiction's population (or employment) and its disposal.

Assembly Bill 341

AB 341 sets forth the requirements of the statewide mandatory commercial recycling program in the Public Resources Code. All businesses that generate four or more cubic yards of garbage per week and multi-family dwellings with five or more units in California are required to recycle. AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020.

Senate Bill 1383

SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The bill grants the Department of Resources Recycling and Recovery (CalRecycle) the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

California Green Building Standards Code

CALGreen Section 4.408, Construction Waste Reduction Disposal and Recycling, mandates that, in the absence of a more stringent local ordinance, a minimum of 50 percent of non-hazardous construction and demolition debris must be recycled or salvaged. CALGreen requires that all applicants have a waste management plan for on-site sorting of construction debris. The waste management plan shall do the following:

- Identify the materials to be diverted from disposal by recycling, reused on the project, or salvaged for future use or sale;
- Specify if materials will be sorted on-site or mixed for transportation to a diversion facility;
- Identify the diversion facility where the material collected will be taken;
- Identify construction methods employed to reduce the amount of waste generated; and
- Specify that the amount of materials diverted shall be calculated by weight or volume, but not by both.

Regional and Local

2014 Five-Year Countywide Integrated Waste Management Plan Review Report

Public Resources Code Sections 41770 and 41822, and Title 24, California Code of Regulations Section 18788 require that each countywide or regional agency integrated waste management plan, and the elements thereof, be reviewed, revised if necessary, and submitted to CalRecycle every five years. The San Mateo County's most recent five year Countywide Integrated Waste Management Plan (CIWMP) was completed in 2014. The purposes of the CIWMP is, in part, to determine if the county has adequate landfill disposal capacity.

Redwood City General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts from planned development in the City. The policies below are specific to utilities and service systems and are applicable to the proposed project.

Policy	Description
<hr/>	
The Built Environment	
<hr/>	
BE-40.2	Maintain the city's water system to ensure adequate fire flow.
BE-41.1	Continue to ensure adequate treatment capacity and collection system for Redwood City's wastewater conveyed to at South Bayside System Authority (SBSA) treatment facilities while protecting water quality and public health, and minimizing adverse impacts to the environment.
BE-41.3	Minimize groundwater infiltration and inflow to the wastewater collection system to maintain sufficient peak wet weather capacity and continue to explore other possible options to reduce peak wet weather flow.
BE-44.2	Continue to require the placement of utilities underground with new development.
BE-45.1	Meet or exceed State mandates regarding the diversion of waste from landfills.

Redwood City Urban Water Management Plan

The City's most current Urban Water Management Plan (UWMP) was adopted in 2016. The purpose of the UWMP is to facilitate local and regional water planning activities and support the City's long-term water resource planning goals. The population projections outlined in the 2010 General Plan match the growth assumptions contained in the UWMP.

The City's total annual water demand in 2015 was 9,589 acre-feet, including both potable and recycled water, with an available capacity of 2,654 acre-feet remaining, per the UWMP.

The City has actively reviewed alternate water sources and methods to reduce its water demand and reliance on the RWS. The City does not include local groundwater as a source of supply in its 2016 UWMP; locally groundwater is not used as a source of municipal potable water supply due to water quality, quantity, reliability, and long-term production capacity concerns. Beyond groundwater, the City has incorporated extensive, active water conservation and recycling programs. The active measures include incentives and rebates for low-flow toilets and water efficient faucets, washing machines, shower heads, and irrigation methods. The recycling program includes a water treatment facility and series of distribution pipelines.

Redwood City Construction & Demolition Debris Program

The City requires 100 percent of demolition inert solids (asphalt, brick, concrete, dirt, rock, sand, soil, and stone) be diverted from the landfill and a minimum of 65 percent of all other construction and demolition debris from new construction, roofing, and alternations/additions be diverted from the landfill.

3.19.1.2 *Existing Conditions*

Water Supply and System

The City's water service area covers approximately 14 square miles and serves the City of Redwood City and portions of the sphere of influence including Emerald Lake Hills and a portion of North Fair Oaks, and Canada College. The Redwood City water system receives potable water from the Hetch Hetchy regional water system operated by the San Francisco Public Utilities Commission.

The City owns and operates the recycled water system. Silicon Valley Clean Water (SVCW, formerly known as South Bayside System Authority or SBSA) and Redwood City entered into agreements for the production and distribution of recycled water. The project site is located within the recycled water service area; however, recycled water service is not currently available to the project site.

The project site is served by a 12-inch water line in Madison Avenue, eight-inch line in St. Francis Street, two-inch water line in Nevada Street, and 10-inch water line in Vera Avenue. The existing development on-site has a water demand of approximately 2.0 million gallons per year.¹⁰⁵

¹⁰⁵ Redwood City. *Water Allocations 2015-2016*.

Sanitary Sewer System/Wastewater Treatment

The Redwood City Public Works Services Department operates and maintains the sanitary sewer system. The City has agreements with San Mateo County sewer districts in adjacent unincorporated areas to collect and convey wastewater for treatment. These districts include the Emerald Lake Heights, Fair Oaks, Kensington Square, Oak Knoll, and Edgewood Sewer Districts. The wastewater contributions of these districts are considered part of the City's total inflows to the SVCW wastewater treatment plant. The SVCW wastewater treatment plant permitted operating capacity is 29 million gallons per day (mgd) of average dry weather flow (ADWF) and 71 mgd of peak wet weather flow (PWWF). The City has an ADWF capacity allocation of approximately 13.8 mgd at the wastewater treatment plant.¹⁰⁶ The City currently generates approximately nine mgd of ADWF. In the past, the City has experienced PWWF capacity issues due to rain and groundwater infiltration into the collection system, however, the sewer system downstream of the project site has adequate capacity for the PWWF.¹⁰⁷

The project site is served by 15-inch sewer line in Madison Avenue, six-inch sewer line in St. Francis Street, six-inch sewer line in Nevada Street, and eight-inch sewer line in Vera Avenue.

Storm Drainage System

The Redwood City Public Works Services Department operates and maintains the City's storm drainage system. Stormwater in Redwood City is conveyed into creeks, lined channels, storm drainage pipes and retention basins, all of which drain directly into San Francisco Bay.

Currently, 4.2 acres (or 59 percent) of the project site is impervious. Runoff from the project site flows to a five by four foot underground box culvert in Nevada Street and a five by 12 foot underground box culvert in Vera Avenue (Arroyo Ojo de Agua).

Electricity, Natural Gas, and Telecommunication Services

PCE is the default electricity provider in the City and PG&E provides natural gas service to the City. There are overhead electricity lines on Nevada Street and St. Francis Street. Broadband service is provided by CableCom of California.

Solid Waste

Recology San Mateo provides solid waste collection, recycling, transportation, and disposal services to Redwood City. Residential and commercial solid waste from Redwood City is taken to the Shoreway Environmental Center, a recycling and transfer station located on Shoreway Road in San Carlos. Once sorted, solid waste is hauled to Ox Mountain Sanitary Landfill for disposal. Ox Mountain Sanitary Landfill has approximately 22 million cubic yards of disposal capacity remaining

¹⁰⁶ City of Redwood City. *Draft Environmental Impact Report for the Redwood City Downtown Precise Plan*. August 2010. Certified January 2011.

¹⁰⁷ West Yost Associates. *Technical memorandum, City of Redwood City Sewer Master Plan Update*. January 28, 2013.

and has an estimated closure date of 2034.¹⁰⁸ In 2017, the City disposed of approximately 73,360 tons (or 0.08 million cubic yards¹⁰⁹) of solid waste.¹¹⁰

The uses on-site currently generates solid waste and recyclables that are collected by Recology.

3.19.2 Impact Discussion

For the purpose of determining the significance of the project's impact on utilities and service systems, would the project:

- 1) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- 2) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
- 3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- 4) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
- 5) Be noncompliant with federal, state, and local management and reduction statutes and regulations related to solid waste?

3.19.2.1 *Project Impacts*

Impact UTL-1: The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. **(Less than Significant Impact)**

Water System

The project requires a new eight-inch water main in the portion of Nevada Street proposed to be vacated and service connections to the new and existing water mains. The City has determined that the new and existing water system infrastructure would be adequate to meet the demands of the project.¹¹¹ **(Less than Significant Impact)**

¹⁰⁸ CalRecycle. *Solid Waste Facility Permit 41-AA-0002*. June 5, 2017.

¹⁰⁹ Ox Mountain Sanitary Landfill operation is achieving a compaction of 1,850 pounds per cubic yard (Source: County of San Mateo. *County of San Mateo 2014 Five-Year Countywide Integrated Waste Management Plan Review Report*. October 2014. Page 10.).

¹¹⁰ CalRecycle. *Jurisdiction Disposal Tonnage Trend*.

<https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports>. Accessed: February 26, 2019.

¹¹¹ Chapel, Justin. Public Works Superintendent, Water Utilities, City of Redwood City. Personal Communication. April 29, 2019.

Sanitary Sewer System/Wastewater Treatment Facilities

It is estimated that the project would generate approximately 13,575 gpd (or 0.013 mgd) of sewage.¹¹² The City has determined that there is sufficient local and downstream capacity in the sanitary sewer system to accommodate project flows. In addition, given the SVCW wastewater treatment plant capacity (29 mgd ADWF), the City's allocated capacity at the treatment plant (13.8 mgd), the City's current generation (nine mgd), and the project's estimated net sewage generation (0.013 mgd), there is sufficient capacity at the treatment plant to accept project flows. **(Less than Significant Impact)**

Storm Drainage System

The proposed project would result in a net increase of 0.6 acres (or 10 percent) in impervious surfaces at the site, thereby resulting in a corresponding net increase in runoff. Per City standards for stormwater control, the project shall detail any net increase in runoff produced from the increase in impervious surfaces and match the pre-project flows. The project, therefore, would not result in a net increase in runoff from the site and the existing storm drainage system would be adequate to serve the project. **(Less than Significant Impact)**

Electric Power, Natural Gas, and Telecommunications

The project site is already served by existing electricity, natural gas, and telecommunications infrastructure. The project would underground the overhead electricity lines on Nevada Street and St. Francis Street and connect the new underground services to existing infrastructure. No new or expanded infrastructure (e.g., transmission lines or natural gas pipelines) is required. **(Less than Significant Impact)**

Impact UTL-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. **(Less than Significant Impact)**

Currently, development on-site uses approximately 2.0 million gallons of water annually. It is estimated the project would use approximately 7.7 million gallons of water per year.¹¹³ The project, therefore, would result in a net increase in water demand of 5.7 million gallons per year compared to existing conditions.

The total potable projected water demand in the City in the UWMP is based on the population and employment projections assumed in the City's General Plan and planned projects (i.e., 851 Main Street, 557 East Bayshore, and 1401 Broadway projects).¹¹⁴ The project is consistent with the existing General Plan. For these reasons, the project's water demand is included in the City's UWMP.

¹¹² City of Redwood City. *Attachment Q*. May 2019.

¹¹³ Ibid.

¹¹⁴ Erler & Kalinowski, Inc. *2015 Urban Water Management Plan for the City of Redwood City*. June 2016. Page 30.

The UWMP concluded that the City has sufficient water supply to meet its planned water demands during normal years through 2040.¹¹⁵ During dry years, the City expects to experience some supply shortfalls. The City will meet water supply shortfalls through implementation of its Water Shortage Contingency Plan, which the City had successfully implemented in the past.¹¹⁶ For these reasons, the project would have sufficient water supplies available to serve the project and reasonably foreseeable future development. **(Less than Significant Impact)**

Impact UTL-3: The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. **(Less than Significant Impact)**

As discussed under Impact UTL-1, the SVCW wastewater treatment plant has sufficient capacity to serve the proposed project. **(Less than Significant Impact)**

Impact UTL-4: The project would not generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. **(Less than Significant Impact)**

The project would generate approximately 454 tons (or 0.0005 million cubic yards) of municipal solid waste per year that would be hauled to Ox Mountain Sanitary Landfill for disposal. Ox Mountain Sanitary Landfill has 22 million cubic yards of disposal capacity remaining. There is, therefore, sufficient capacity at Ox Mountain Sanitary Landfill to serve the project.

The project would be required to comply with the state and local regulations described in Section 3.19.1.1 regarding construction and demolition recycling and on-site recycling collection to assist the attainment of solid waste reduction goals. **(Less than Significant Impact)**

Impact UTL-5: The project be compliant with federal, state, and local management and reduction statutes and regulations related to solid waste. **(Less than Significant Impact)**

The construction and operation of the project would comply with federal, state, and local regulations related to diversion of materials from disposal and appropriate disposal of solid waste. **(Less than Significant Impact)**

¹¹⁵ Erler & Kalinowski, Inc. *2015 Urban Water Management Plan for the City of Redwood City*. June 2016. Page 88.

¹¹⁶ *Ibid.*

3.19.2.2 *Cumulative Impacts*

Impact UTL-C: The project would not result in a cumulatively considerable contribution to a significant utilities and service systems impact. **(Less than Significant Cumulative Impact)**

Water Supply and System

The geographic area for cumulative water supply and system impacts is the service area of the Redwood City water system. The cumulative projects (including the proposed project) are accounted for in population and employment assumptions of the UWMP. For this reason, there is adequate water supply (with the implementation of the City's Water Shortage Contingency Plan if needed) for the cumulative projects. The project, therefore, would not result in a considerable contribution to a significant cumulative water supply impact. **(Less than Significant Cumulative Impact)**

As described in Section 2.3 Project Description, the project includes the construction of a new eight-inch water main in Nevada Street. Based on review of the existing water system infrastructure and cumulative projects (which includes the proposed project and the construction of a new eight-inch water main in Nevada Street), the demand of the project and other cumulative projects (including the Westside Renovation/Magical Bridge Playground at Red Morton Park project) would not require other new or expanded water system infrastructure. **(Less than Significant Cumulative Impact)**

Sanitary Sewer System/Wastewater Treatment

The geographic area for cumulative sanitary sewer system and wastewater treatment is the City's sanitary sewer system service area. Based on review of the existing sanitary sewer system infrastructure and cumulative projects, the ADWF from the project and other cumulative projects (including the Westside Renovation/Magical Bridge Playground at Red Morton Park project) would not require new or expanded sanitary sewer system infrastructure. To reduce PWWF, cumulative projects (including the project) may be required to replace older sewer lines to reduce rainfall infiltration. **(Less than Significant Cumulative Impact)**

The General Plan EIR concluded there was sufficient wastewater treatment capacity to serve full build out of the General Plan.¹¹⁷ The cumulative projects, including the project, are included in the population and employment growth assumptions in the General Plan. In addition, as discussed above, individual projects would replace older sewer lines as needed to reduce rainfall infiltration and inflow. For these reasons, the cumulative projects would not have a significant cumulative impact on wastewater treatment capacity. **(Less than Significant Cumulative Impact)**

Storm Drainage System

The geographic area for cumulative storm drain impacts includes the project site and surrounding area, specifically areas upstream and downstream of the project site. Build out of the cumulative projects would involve redevelopment of existing developed sites that contain impervious surfaces, and these projects would be required to comply with applicable regulations regarding stormwater

¹¹⁷ Redwood City. *A New General Plan for Redwood City Draft Environmental Impact Report*. May 2010. Certified in October 2010. Pages 4.15-26 and 4.15-27.

runoff and infrastructure. In cases such as the proposed project that would result in the net increase in impervious surfaces, the City would require improvements to the storm drain system as necessary to ensure the system locally and downstream operates adequately. For these reasons, the cumulative projects would not result in a significant cumulative impact to the storm drain system. The project, therefore, would not result in a considerable contribution to a significant cumulative storm drain system impact. **(Less than Significant Cumulative Impact)**

Electricity, Natural Gas, and Telecommunication Services

Energy is a cumulative resources. The geographic area for cumulative electricity, natural gas, and telecommunication services is the State of California. If a project is determined to have a significant energy impact, it is concluded that the impact is a cumulative impact. As discussed under Impact EN-3, the project would not result in a significant energy impact. In addition, the cumulative projects are within urban areas already served by existing electricity, natural gas, and telecommunication infrastructure. Redevelopment of the cumulative project sites (including the project site) would not require new or expanded electricity, natural gas, and telecommunication infrastructure. The project, therefore, would not result in a considerable contribution to a significant cumulative impact to electricity, natural gas, and telecommunication infrastructure. **(Less than Significant Cumulative Impact)**

Solid Waste

The geographic area for cumulative landfill impacts is the County because the CIWMP evaluates countywide landfill capacity. San Mateo County has one operating landfill, which is used by most county jurisdictions for municipal disposal, Ox Mountain Sanitary Landfill. According to the 2014 Five-Year CIWMP, the County has adequate disposal capacity (which is defined as equal to or greater than 15 years).¹¹⁸ As discussed in Section 3.19.1.2, Ox Mountain Sanitary Landfill has an estimated closure date of 2034. The General Plan EIR concluded that the build out of the City would not result in a significant landfill impact.¹¹⁹ For these reasons, the cumulative projects in the City (including the proposed project) would not result in significant cumulative landfill impacts. The project, therefore, would not result in a considerable contribution to a significant cumulative landfill impact. **(Less than Significant Cumulative Impact)**

¹¹⁸ County of San Mateo. *2014 Five-Year Countywide Integrated Waste Management Plan Review Report*. October 2014. Page 11.

¹¹⁹ Redwood City. *A New General Plan for Redwood City Draft Environmental Impact Report*. May 2010. Certified in October 2010. Pages 4.15-28.

3.20 WILDFIRE

3.20.1 Environmental Setting

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones.¹²⁰

3.20.2 Impact Discussion

For the purpose of determining the significance of the project's impact on wildfire, if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- 1) Substantially impair an adopted emergency response plan or emergency evacuation plan?
- 2) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- 3) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
- 4) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

3.20.2.1 *Project Impacts*

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not result in wildfire impacts. **(No Impact)**

3.20.2.2 *Cumulative Impacts*

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not result in cumulative wildfire impacts. **(No Cumulative Impact)**

¹²⁰ Sources: 1) State of California Department of Forestry and Fire Protection. *San Mateo County Fire Hazard Severity Zones in SRA*. Adopted November 7, 2007. and 2) State of California Department of Forestry and Fire Protection. *Redwood City Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE*. Adopted November 24, 2008.

SECTION 4.0 GROWTH-INDUCING IMPACTS

Impact GRO-1: The project would not foster or stimulate significant economic or population growth in the surrounding environment. **(Less than Significant Impact)**

The CEQA Guidelines require that an EIR identify the likelihood that a proposed project could “foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment” (Section 15126.2[d]). This section of the EIR is intended to evaluate the impacts of such growth in the surrounding environment. Examples of projects likely to have significant growth-inducing impacts include removing obstacle to population growth, for example by extending or expanding infrastructure beyond what is needed to serve the project. Other examples of growth inducement include increases in population that may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

The project would replace existing facilities and relocate existing uses (i.e., the Sequoia YMCA) on-site. The proposed traffic calming measures facilitate safer (i.e., slower) vehicular circulation, and do not foster growth. For these reasons, the project would not foster or stimulate substantial economic growth or population growth (refer to the discussion in Section 3.14 Population and Housing) in the surrounding environment. **(Less than Significant Impact)**

SECTION 5.0 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

This section was prepared pursuant to CEQA Guidelines Section 15126.2(c), which requires a discussion of the significant irreversible changes that would result from the implementation of a proposed project. Significant irreversible changes include the use of nonrenewable resources, the commitment of future generations to similar use, irreversible damage resulting from environmental accidents associated with the project, and irretrievable commitments of resources. Applicable environmental changes are described in more detail below.

5.1 USE OF NONRENEWABLE RESOURCES

During construction and operation, the project would require the use and consumption of nonrenewable resources. Unlike renewable resources, nonrenewable resources cannot be regenerated over time. Nonrenewable resources include fossil fuels and metals. Renewable resources, such as lumber and other wood byproducts, could also be used.

Energy, as discussed in more detail in Section 3.6, would be consumed during both the construction and operational phases of the project. The construction phase would require the use of nonrenewable construction material, such as concrete, metals, and plastics, and glass. Nonrenewable resources and energy would also be consumed during the manufacturing and transportation of building materials, preparation of the site, and construction of the buildings. The operational phase would consume energy for multiple purposes including building heating and cooling, lighting, appliances, and electronics. Energy, in the form of fossil fuels, would be used to fuel vehicles traveling to and from the project site.

The project would result in a substantial increase in demand for nonrenewable resources. The project, however, is subject to the standard California Code of Regulations Title 24 Part 6 and CALGreen energy efficiency requirements. In addition, as described in Section 2.0, the project would meet a minimum LEED Certification standards. For these reasons, the project would minimize the use of nonrenewable energy resources.

5.2 COMMITMENT OF FUTURE GENERATIONS TO SIMILAR USE

The project would be developed on a site that is already fully developed for urban uses. Development of the project would commit resources to prepare the site, construct the buildings, and operate them, but it would not result in development of a previously undeveloped area.

5.3 IRREVERSIBLE DAMAGE RESULTING FROM ENVIRONMENTAL ACCIDENTS ASSOCIATED WITH THE PROJECT

The project does not propose any new or uniquely hazardous uses and, consistent with current operation of the VMSC and YMCA, its operation would not cause environmental accidents that would impact other areas. As discussed in Section 3.9 Hazards and Hazardous Materials, there would be no significant hazards and hazardous materials conditions on-site or off-site that would substantially affect the public and surrounding environment. There would be no significant geology and soils impacts from implementation of the project. For these reasons, the project would not result in irreversible damage that may result from environmental accidents.

SECTION 6.0 SIGNIFICANT AND UNAVOIDABLE IMPACTS

The project would result in a significant and unavoidable impact to a historic resource, as discussed under Impact CUL-1 in Section 3.5 Cultural Resources and Impact REC-2 in Section 3.16 Recreation.

SECTION 7.0 ALTERNATIVES

CEQA requires that an EIR identify alternatives to a project as it is proposed. The CEQA Guidelines specify that the EIR should identify alternatives which “would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.” The purpose of this section is to determine whether there are alternatives of design, scope, or location which would substantially lessen the significant impacts, even if those alternatives “impede to some degree the attainment of the project objectives” or are more expensive (Section 15126.6).

In order to comply with the purpose of CEQA, it is important to identify alternatives that reduce the significant impacts which are anticipated to occur if the project is implemented, but to try to meet as many of the project’s objectives as possible. The Guidelines emphasize a commonsense approach – the alternatives should be reasonable, “foster informed decision making and public participation,” and focus on alternatives that avoid or substantially lessen the significant impacts. The range of alternatives selected for analysis is governed by the “rule of reason” which requires the EIR to discuss only those alternatives necessary to permit a reasoned choice.

The three critical factors to consider in selecting and evaluating alternatives are, therefore: 1) the significant impacts from the proposed project which could be reduced or avoided by an alternative, 2) the project’s objectives, and 3) the feasibility of the alternatives available. Each of these factors is discussed below.

7.1 SIGNIFICANT IMPACTS OF THE PROJECT

As mentioned above, the CEQA Guidelines advise that the alternatives analysis in an EIR should be limited to alternatives that would avoid or substantially lessen any of the significant effects of the project and would achieve most of the project objectives. The project would result in a significant and unavoidable impact from the demolition of a historic resource (see Impact CUL-1 and Impact REC-2).

Alternatives may also be considered if they would further reduce impacts that are already less than significant because the project is proposing mitigation. Impacts that would be significant, but for which the project includes mitigation to reduce them to less than significant levels include construction-related impacts to air quality, biological resources, and noise. The alternatives discussion does not focus on project impacts that are less than significant.

CEQA encourages consideration of an alternative site when impacts of the project might be avoided or substantially lessened. Only locations that would avoid or substantially lessen any of the impacts of the project and meet most of the project objectives need to be considered for inclusion in the EIR.

7.2 PROJECT OBJECTIVES

While CEQA does not require that alternatives must be capable of meeting all of the project objectives, their ability to meet most of the objectives is considered relevant to their consideration. As identified in Section 2.4, the City's objectives for the project are as follows:

The City's objectives for the project are as follows:

1. Replace the aging VMSC and reduce escalating maintenance costs with a new approximately 45,000 square foot Veterans Memorial Building/Senior Center to enhance the existing seniors' programs and have spaces including a special veterans exhibits honoring Redwood City and San Mateo County veterans and office space for non-profit groups and the NFL Alumni Northern California Chapter.
2. Form a public/non-profit partnership with the YMCA to re-imagine the aging Veterans Memorial Senior Center and Sequoia YMCA to meet the changing health living, recreational and social needs of seniors, veterans, youth and families and ensure the Sequoia YMCA is able to remain in Redwood City.
3. Enhance and expand the existing membership at the Sequoia YMCA by providing a new approximately 35,000 square foot YMCA with a fitness center, multipurpose rooms, indoor and outdoor pools and a childcare facility open to the public.
4. Provide year round aquatics with new indoor and outdoor swimming pools as the City is currently only able to offer seasonal use of an aging center with growing maintenance costs.
5. Enhance the community quality of life by expanding health and wellness opportunities for all ages and enhancing the community's fitness, wellness, and recreation resources.
6. Provide state-of-the art community facility with multiple recreational opportunities for a growing community – both in population and age.
7. Provide a public promenade with flexible outdoor gathering spaces that would provide a gateway to Red Morton Park and link both buildings.
8. Design the new VMSC to meet a minimum of LEED Certification standards.
9. Provide a new public facility that could have the dual purpose of providing an emergency shelter or evacuation center in the event of an emergency.
10. Implement traffic calming measures near Red Morton Community Park to facilitate safer and slower vehicle circulation.

7.3 FEASIBILITY OF ALTERNATIVES

CEQA, the CEQA Guidelines, and the case law on the subject have found that feasibility can be based on a wide range of factors and influences. The Guidelines advise that such factors can include (but are not necessarily limited to) the suitability of an alternate site, economic viability, availability of infrastructure, consistency with a general plan or with other plans or regulatory limitations, jurisdictional boundaries, and whether the project proponent can “reasonably acquire, control or otherwise have access to the alternative site (Section 15126.6[f][1]).”

7.4 SELECTION OF ALTERNATIVES

7.4.1 Alternative Considered But Rejected

7.4.1.1 *Alternative Location*

The City considered alternative locations for the proposed project to avoid or lessen the project's air quality, biological resources, cultural resources, noise, and recreation impacts. A feasible alternative location would be of similar size to the project site, within the jurisdictional boundaries of the City, and have the appropriate General Plan land use designation. There are not suitable locations meeting the criteria other than Red Morton Community Park. For these reasons, an alternative location to the project site was considered but rejected as infeasible.

7.4.1.2 *YMCA Alternative Location at Red Morton Community Park*

An alternative location for the proposed YMCA elsewhere at Red Morton Community Park was considered in order to avoid the project's significant and unavoidable impact to a historic resource. Given the construction of the Westside Renovation/Magical Bridge Playground at Red Morton Park project on the southwestern portion of the park, there are no underutilized areas of the park in which the YMCA could be developed. For this reason, this alternative was considered but rejected as infeasible.

7.4.2 Alternatives Selected

In addition to "No Project," the CEQA Guidelines advise that the range of alternatives discussed in the EIR should be limited to those that "would avoid or substantially lessen any of the significant effects of the project" (Section 15126.6[f]). The discussion below addresses alternatives which could reduce project impacts and are feasible from a physical land use, and infrastructure perspective. This EIR does not evaluate financial or economic feasibility.

Given the factors discussed above, the following evaluation of possible alternatives to the project as it is proposed includes: 1) No Project Alternatives as required by CEQA, 2) Preservation Alternative, and 3) Sequoia YMCA Site Redevelopment Alternative. The components of these alternatives are described below, followed by a discussion of their impacts and how they would differ from those of the proposed project. A summary of the environmental impacts of the proposed project and the project alternatives are provided in Table 7.5-1 at the end of this section.

7.5 PROJECT ALTERNATIVES

7.5.1 No Project Alternative

The CEQA Guidelines specifically require consideration of a “No Project” Alternative. The purpose of including a No Project Alternative is to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project. The Guidelines specifically advise that the No Project Alternative is “what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” The Guidelines emphasize that an EIR should take a practical approach, and not “...create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment (Section 15126.6[e][3][B]).”

Under the No Project Alternative, the project site could remain as it is today – developed with the existing VMSC, Sid Herkner Pool, and NFL Alumni Association building.

7.5.1.1 *Comparison of Environmental Impacts*

The No Project Alternative would avoid all of the project’s environmental impacts and traffic calming benefits that would result from the implementation of the proposed project.

7.5.1.2 *Relationship to Project Objectives*

The No Project Alternative would not meet any of the project objectives of replacing the aging VMSC (objective 1), forming a partnership with the YMCA (objective 2), providing a new YMCA facility (objective 3), providing year-round aquatics (objective 4), expanding health and wellness opportunities (objective 5), providing a community facility with multiple recreation opportunities for all (objective 6), providing a new public promenade (objective 7), providing a new public facility that could provide shelter in the event of an emergency (objective 9), and implementing traffic calming measures near the park (objective 10).

7.5.1.3 *Conclusion*

The No Project Alternative would avoid all of the project’s environmental impacts and traffic calming benefits, and not meet any of the project objectives.

7.5.2 Preservation Alternative

Under the Preservation Alternative, the proposed VMSC would be constructed as proposed and the proposed YMCA would involve the preservation of historic portions of the existing VMSC building and setting and construction of a new addition to the preserved portion of the existing VMSC building.

Instead of demolishing the entire VMSC building to construct the proposed YMCA, the VMSC building would be retained and preserved except for the southern (theater) wing which can be

demolished without substantially affecting the historic integrity of the building.¹²¹ In addition, no new construction would be located on the lawn and open space areas immediately north and west of the VMSC building. Figure 7.5-1 shows the historic portion of the existing VMSC and lawn and open space area that would be preserved under this alternative.

Rehabilitation and new construction would occur to meet the total proposed square footage of 35,000 square feet for the YMCA and would adhere to the following measures:

- Prior to issuance of site or construction permits related directly to the Veterans Memorial Building, proposed plans for the rehabilitation of those buildings would be submitted to the Redwood City Community Development Department for review and approval. Any exterior alterations would be conducted in accordance with the Secretary of the Interior's Standards for Rehabilitation and undertaken with the assistance of a historic preservation architect meeting the Secretary of the Interior's Standards Professional Qualifications Standards. The historic preservation architect shall regularly evaluate the ongoing renovation to ensure it continues to satisfy the Standards. The historic preservation architect would submit status reports to the Redwood City Community Development Department according to a schedule agreed upon prior to commencement of the work.
- Prior to issuance of site or construction permits, proposed plans for new construction on site shall be submitted to the Redwood City Community Development Department for review and approval. Said permits shall only be issued after it has been confirmed that the design of the new construction is in conformance with the Secretary of the Interior's Rehabilitation Standard 9 and, in particular, is compatible with the design of the Veterans Memorial Building.

This alternative would preserve the building's primary public facades, as well as the open space between those facades and Madison Avenue and St. Francis Street. Under this alternative, it is assumed that little to no modifications of the building's exterior features would be made. This project alternative would avoid the project's significant and unavoidable impact to a historic resource.

7.5.2.1 *Comparison of Environmental Impacts*

The Preservation Alternative would avoid the project's significant and unavoidable cultural resources and recreation impacts from demolishing a historic resource (the existing senior center). This alternative would modify the historic resource while preserving the historic portions of the resource. For this reason, this alternative would result in a less than significant impact to the historic resource. This alternative would result in the same or similar impacts to all other environmental resources as the proposed project.

7.5.2.2 *Relationship to Project Objectives*

The Preservation Alternative could meet all of the project objectives of replacing the aging VMSC (objective 1), forming a partnership with the YMCA (objective 2), providing a new YMCA facility (objective 3), providing year-round aquatics (objective 4), expanding health and wellness

¹²¹ Based on the historic resource analysis completed for the project, the southern wing is less architecturally distinctive than the other wings and could be removed without significant loss to the building's character-defining features and the building would retain its CRHR eligibility.

opportunities (objective 5), providing a community facility with multiple recreation opportunities for all (objective 6), providing a new public promenade (objective 7), providing a new public facility that could provide shelter in the event of an emergency (objective 9), and implementing traffic calming measures near the park (objective 10).

7.5.2.3 Conclusion

The Preservation Alternative would avoid the project's significant and unavoidable impacts related to demolishing a historic resource and result in the same or similar impacts to all other environmental resources as the proposed project. This alternative could meet all of the project's objectives.

7.5.3 Sequoia YMCA Site Redevelopment

Under the Sequoia YMCA Site Redevelopment Alternative, the proposed VMSC would be constructed as proposed on the project site, the proposed traffic calming measures would be constructed as proposed, and the proposed YMCA would be constructed where the existing Sequoia YMCA is currently at Palm Park.

7.5.3.1 Comparison of Environmental Impacts

The Sequoia YMCA Site Redevelopment Alternative would avoid the project's significant and unavoidable impacts related to demolishing a historic resource. This alternative would result in no impact to the historic resource. This alternative would result in a similar amount of total construction and demolition on two sites (the project site and the existing Sequoia YMCA site), therefore, this alternative would result in similar impacts to all other environmental resources as the proposed project.¹²²

While generally not considered an environmental impact under CEQA, parking supply is a concern with this alternative. Given the size of the existing Sequoia YMCA site (65,970 square feet or 1.5 acres) and size of the proposed YMCA (35,000 square feet), limited area would be available on the site for surface parking. Either underground or above ground structured parking would be required, which would result in a greater total air pollutant emissions and could result in a greater level of noise compared to the proposed project.

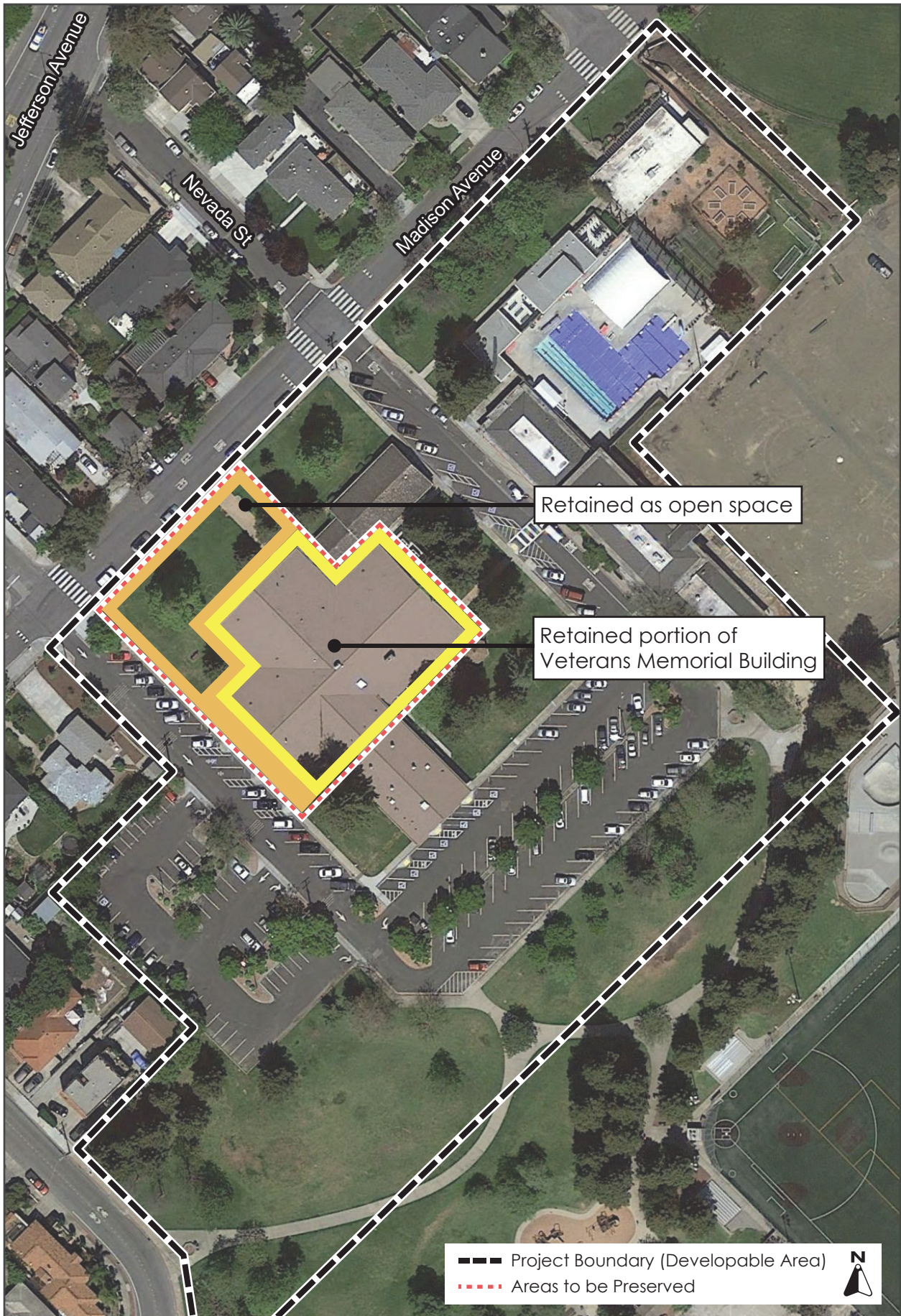
7.5.3.2 Relationship to Project Objectives

The Sequoia YMCA Site Redevelopment Alternative could meet all of the project objectives except for objective 2 of forming a partnership between the City and YMCA.

7.5.3.3 Conclusion

The Sequoia YMCA Site Redevelopment Alternative would avoid the project's significant and unavoidable impacts related to demolishing a historic resource and result in similar impacts as the project on all other environmental resources. This alternative could meet all of the project objectives except for objective 2 of forming a partnership between the City and YMCA.

¹²² The Sequoia YMCA site (1445 Hudson Street) is not listed on the Cortese List and, therefore, there is no known hazards or hazardous materials contamination on the site.



PRESERVATION ALTERNATIVE

FIGURE 7.5-1

7.5.4 Environmentally Superior Alternative

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. Based on the above discussion, the environmentally superior alternative to the project is the No Project Alternative because all of the project’s significant environmental impacts would be avoided. Section 15126.6(c)(2), however, states that “if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmental superior alternative among the other alternatives.” In addition to the No Project Alternative, Sequoia YMCA Site Redevelopment Alternative would be environmentally superior to the project as it would preserve the VMSC as is.¹²³

Impacts	Proposed Project	Project		
		No Project Alternative	Preservation Alternative	Sequoia YMCA Site Redevelopment
Air Quality (refer to Impacts AIR-1, AIR-2, AIR-3 and AIR-C in Section 3.3)	SM	NI	SM	SM
Biological Resources (refer to Impact BIO-1 in Section 3.4)	SM	NI	SM	SM
Cultural Resources (refer to Impact CUL-1 in Section 3.5)	SU	NI	LTS	NI
Noise (refer to Impacts NOI-1, NOI-2, and NOI-C in Section 3.13)	SM	NI	SM	SM
Recreation (refer to Impact REC-2 in Section 3.16)	SU	NI	LTS	LTS
Meets Project Objectives?	Yes	No	Yes	Partially
Notes: SU = Significant unavoidable impact; SM = Significant impact, but can be mitigated to a less than significant level; Bold text indicates being environmentally superior to the proposed project.				

¹²³ The Sequoia YMCA Site Redevelopment alternative would result in no impact to a historic resource; whereas the Preservation Alternative would result in a less than significant impact to a historic resource as it would make modifications to a historic resource.

SECTION 8.0 REFERENCES

The analysis in this EIR is based on the professional judgement and expertise of the environmental specialists preparing this document, based upon review of the site, surrounding conditions, site plans, and the following references:

Advanced Tree Care. *Veterans Memorial Building/Senior Center*. October 9, 2018.

Architectural Resources Group, Inc. *Historical Resources Technical Report Veterans Memorial Senior Center/YMCA Project*. January 2017.

Association of Bay Area Government. "Interactive Seismic Hazards Zone Map." Accessed March 4, 2019. <http://resilience.abag.ca.gov/earthquakes/>.

Richard Brandi. *Peer Review of Historic Resource Evaluation, Veteran's Memorial Senior Center Building at 1455 Madison Avenue*. April 2015.

CalEPA. "Cortese List Data Resources." Accessed October 22, 2018. <https://calepa.ca.gov/sitecleanup/corteselist>.

California Department of Conservation. *Generalized Mineral Land Classification Map of the South San Francisco Bay Production-Consumption Region*. 1996.

California Department of Finance. *E-1: City/County Population Estimates with Annual Percent Change, January 1, 2017 and 2018*. May 1, 2018.

California Department of Tax and Fee Administration. Net Taxable Gasoline Gallons. Accessed March 29, 2019. http://www.cdtfa.ca.gov/taxes-and-fees/MVF_10_Year_Report.pdf.

California Department of Water Resources. *A Comprehensive Groundwater Protection Evaluation for the South San Francisco Bay Basins*. May 2003. Figure 9.

California Emergency Management Agency, California Geological Survey and University of Southern California. *Tsunami Inundation Map for Emergency Planning Redwood Point Quadrangle/Palo Alto Quadrangle*. Map. June 15, 2009.

California Energy Commission (CEC). "2016 Building Energy Efficiency Standards." Accessed April 4, 2019. <http://www.energy.ca.gov/title24/2016standards/index.html>.

California Gas and Electric Utilities. *2018 California Gas Report*. Accessed March 26, 2019. https://www.socalgas.com/regulatory/documents/cgr/2018_California_Gas_Report.pdf

California Natural Resources Agency. *Final Statement of Reasons for Regulatory Action Amendments to the State CEQA Guidelines OAL Notice File No. Z-2018-0116-12*. November 2018.

California Regional Water Quality Control Board. *Municipal Regional Stormwater Permit*. Provision C.12. November 19, 2015.

- CalRecycle. "Jurisdiction Disposal Tonnage Trend." Accessed: February 26, 2019.
<https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports>.
- . *Solid Waste Facility Permit 41-AA-0002*. June 5, 2017.
- CARB. "The Advanced Clean Cars Program." Accessed March 26, 2019.
<https://www.arb.ca.gov/msprog/acc/acc.htm>.
- CEC. "Natural Gas Consumption by County." Accessed March 29, 2019.
<http://ecdms.energy.ca.gov/gasbycounty.aspx>.
- . Energy Consumption Data Management System. "Electricity Consumption by County". Accessed March 15, 2019. <http://ecdms.energy.ca.gov/elecbycounty.aspx>.
- City/County Association of Governments of San Mateo County. *Final Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport*. Adopted October 2015. Page 4-45.
Integral Group. *Sewage Demand Per Occupancy*. March 20, 2019.
- City of Redwood City. *2015 Urban Water Management Plan*. June 2016. Page 36.
- . *Attachment Q*. May 2019.
- . *Draft Environmental Impact Report for the Redwood City Downtown Precise Plan*. August 2010.
Certified January 2011.
- . *Drainage Guidelines for Commercial Development*. February 1, 2005.
- . *Harbor View Project Draft Environmental Impact Report*. January 2019.
- . *Park Renovation – CEQA Exemption*. March 2, 2016.
- . "About the Department." https://www.redwoodcity.org/departments/fire_department/about-the-department. Accessed February 25, 2019.
- . "About Us." Accessed February 25, 2019. <https://www.redwoodcity.org/departments/police-department/about-us>.
- . *A New General Plan for Redwood City Draft Environmental Impact Report*. May 2010. Certified October 2010.
- . *Redwood City General Plan*. Adopted October 11, 2010 and amended October 20, 2014.
- . *Water Allocations 2015-2016*.
- City/County Association of Governments of San Mateo County. *Final Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport*. Adopted October 2015.

Cleary Consultants, Inc. *Geotechnical Investigation Veterans Memorial Senior Center and YMCA Complex Project 1455 Madison Avenue Redwood City, California*. August 2018.

County of San Mateo. *County of San Mateo 2014 Five-Year Countywide Integrated Waste Management Plan Review Report*. October 2014.

---. "Watersheds of San Mateo County." Accessed March 6, 2019.
<https://publicworks.smcgov.org/watersheds-san-mateo-county>

---. *2014 Five-Year Countywide Integrated Waste Management Plan Review Report*. October 2014.

Deborah Ellis, MS. *Preliminary Arborist Report*. October 15, 2015.

EDR. *The EDR Radius Map Report with GeoCheck*. December 14, 2016.

EIA. "California Natural Gas Total Consumption, Annual." Accessed April 1, 2019.
https://www.eia.gov/opendata/qb.php?sdid=NG.NA1490_SCA_2.A

ELS. *Tree Removal Diagram – Full Build-Out*. July 20, 2018.

Erler & Kalinowski, Inc. *2015 Urban Water Management Plan for the City of Redwood City*. June 2016.

ESA Airports. *Final Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport*. Adopted October 2015.

Federal Emergency Management Agency. Flood Insurance Rate Map, Community Panel No. 06081C0301E. Map. Effective Date: October 16, 2012.

Geotracker. "USA INDEPENDENT (T0608189635)." Accessed March 1, 2019.
https://geotracker.waterboards.ca.gov/profile_report?global_id=T0608189635&cmd=ptcprepor<pc_id=118680.

Hexagon Transportation Consultants, Inc. *Redwood City Joint Senior Center and YMCA Facilities*. May 8, 2019.

Illingworth & Rodkin, Inc. *Veterans Memorial Building Senior Center & YMCA Air Quality & Greenhouse Gas Assessment*. May 8, 2019.

---. *Veterans Memorial Building/ Senior Center Noise and Vibration Assessment*. March 12, 2019.

Ministry of Energy. Natural Gas Unit Conversion Calculator. Accessed April 1, 2019.
<http://www.energy-sea.gov.il/English-Site/Pages/Data%20and%20Maps/calc.aspx>

Diana J. Painter. *Historic Resource Report, Veterans Memorial Building, Redwood City, California*. September 2010.

Public Law 110–140—December 19, 2007. Energy Independence & Security Act of 2007. Accessed April 1, 2019. <http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf>.

California Department of Housing and Community Development. “Regional Housing Needs Allocation and Housing Elements.” Accessed April 27, 2018. <http://hcd.ca.gov/community-development/housing-element/index.shtml>.

SA Airports. *Final Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport*. Adopted October 2015.

San Mateo Countywide Water Pollution Prevention Program. *C.3 Stormwater Technical Guidance*. June 2016.

State of California Department of Forestry and Fire Protection. *San Mateo County Fire Hazard Severity Zones in SRA*. Adopted November 7, 2007.

---. *Redwood City Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE*. Adopted November 24, 2008.

State of California Department of Forestry and Fire Protection. *San Mateo County Fire Hazard Severity Zones in SRA*. Adopted November 7, 2007.

---. *Redwood City Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE*. Adopted November 24, 2008.

State of California Office of Planning and Research. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.

Peninsula Clean Energy. “FAQ Page” Accessed April 4, 2019. <https://www.peninsulacleanenergy.com/faq/>.

---. “Energy Choices.” Accessed April 4, 2019. <https://www.peninsulacleanenergy.com/energy-choices/>.

United States Department of the Interior, Fish and Wildlife Service. *List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project*. March 1, 2019.

United States Energy Information Administration. “State Profile and Energy Estimates.” Accessed March 29, 2019. <https://www.eia.gov/state/?sid=CA#tabs-2>.

United States Department of Energy. Energy Independence & Security Act of 2007. Accessed April 1, 2019. <http://www.afdc.energy.gov/laws/eisa>.

United States Department of the Interior. M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take. <https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf>.

United States Environmental Protection Agency. Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles. Accessed March 29, 2019.

https://www.bts.gov/archive/publications/national_transportation_statistics/table_04_23

West Yost Associates. *Technical memorandum, City of Redwood City Sewer Master Plan Update*. January 28, 2013.

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SECTION 9.0 LEAD AGENCY AND CONSULTANTS

9.1 LEAD AGENCY

City of Redwood City

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SECTION 10.0 ACRONYMS AND ABBREVIATIONS

<u>Acronym/Abbreviation</u>	<u>Definition</u>
AAC	Architectural Advisory Committee
ABAG	Association of Bay Area Governments
ACM	Asbestos containing material
ADA	Americans Disability Act
ADWF	Average dry weather flow
AIA	Airport Influence Area
ALUCP	Comprehensive Airport Land Use Compatibility Plan
BAAQMD	Bay Area Air Quality Management District
BASMAA	Bay Area Stormwater Management Agencies Association
CalARP	California Accidental Release Prevention
CalEPA	California Environmental Protection Agency
Cal Fire	California Department of Forestry and Fire Protection
Cal Green Code	California Green Building Standards Code
Cal/OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CalRecycle	Department of Resources Recycling and Recovery
CBC	California Building Standards Code
C/CAG	City/County Association of Governments of San Mateo County
CDFW	California Department of Fish and Wildlife
CERCLA (or Superfund)	Comprehensive Environmental Response, Compensation, and Liability Act
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CMA	Congestion Management Agency
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
DNL	Day/Night Average Sound Level
DTSC	Department of Toxic Substances Control

<u>Acronym/Abbreviation</u>	<u>Definition</u>
EIR	Environmental Impact Report
EOP	Emergency Operations Plan
EPA	United States Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
FRAP	Fire and Resource Assessment Program
GHG	Greenhouse gas
HABS	Historic American Buildings Survey
HCM	Highway Capacity Manual
HRAC	Historic Resources Advisory Committee
LID	Low Impact Development
LOS	Level of service
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
MND	Mitigated Negative Declaration
MRP	San Francisco Bay Region Municipal Regional Stormwater NPDES Permit
MTC	Metropolitan Transportation Commission
NAHC	Native American Heritage Commission
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollution Discharge Elimination System
NWIC	Northwest Information Center
OITC	Outdoor-Indoor Transmission Class

<u>Acronym/Abbreviation</u>	<u>Definition</u>
OPR	Office of Planning and Research
PCBs	Polychlorinated biphenyls
PG&E	Pacific Gas and Electric
PPV	Peak Particle Velocity
PWWF	Peak wet weather flow
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Allocation
RWQCB	Regional Water Quality Control Board
SBSA	South Bayside System Authority
SFHA	Special Flood Hazard Areas
SHMA	Seismic Hazards Mapping Act
SMARA	Surface Mining and Reclamation Act
SMCEHD	San Mateo County Health Department, Environmental Health Division
SMDCP	Stormwater Management and Discharge Control Program
STC	Sound Transmission Class
SVCW	Silicon Valley Clean Water
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCR	Tribal Cultural Resources
TIA	Transportation Impact Analysis
TPZ	Tree Protection Zone
USACE	US Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
UWMP	Urban Water Management Plan
VMSC	Veterans Memorial Senior Center
VMT	Vehicle miles traveled