



Flood County Park Landscape Plan

Draft Revised Environmental Impact Report

SCH#2016112040

prepared by

County of San Mateo Parks Department

455 County Center – Fourth Floor

Redwood City, California 94063

Contact: Samuel Herzberg, Senior Planner

prepared with the assistance of

Rincon Consultants, Inc.

449 15th Street, Suite 303

Oakland, California 94612

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RINCON CONSULTANTS, INC.

Environmental Scientists | Planners | Engineers

rinconconsultants.com

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Executive Summary

This section summarizes the characteristics of the project as well as the environmental impacts, mitigation measures, and residual impacts associated with implementation of the project.

Project Synopsis

Project Applicant

County of San Mateo Parks Department
455 County Center – Fourth Floor
Redwood City, California 94063

Project Location

The project site consists of the 24.5-acre Flood County Park, located in the city of Menlo Park in San Mateo County. Single-family residences primarily surround the park, and Bay Road bounds the site to the southwest. The Town of Atherton is located adjacent to and southwest of the park, across Bay Road. A San Francisco Public Utilities Commission (SFPUC) right-of-way for water pipelines crosses the site and the surrounding area.

Project Description

The proposed project entails a Landscape Plan for the long-term redevelopment of San Mateo County's Flood County Park in the city of Menlo Park. This plan is intended to optimize preservation of large oak and bay trees, increase offerings of sports, and provide a variety of active and passive uses for a range of user groups. It is anticipated that the proposed recreational facilities would be developed within ten years. The largest recreational facilities would be sited in the northern portion of the park, where the existing ballfield would be reconstructed and a soccer/lacrosse field would be installed at the eastern corner, replacing the existing pétanque court and a portion of the existing tennis courts. A promenade would run eastward across the center of the park from the parking lot. Picnic areas clustered in the southern half of the park would be reconstructed. The Parks Department would preserve existing adobe buildings on-site, with the exception of demolishing the adobe Restroom D located west of the existing tennis courts. The adobe administrative building in the southwest part of the park would be rehabilitated for seismic stability.

More detail about the proposed project is included in Section 2, *Project Description*.

Areas of Controversy

Primary areas of controversy known to the lead agency include noise from athletic and other park events, loss of visual quality, impacts to historic adobe structures, air pollution, loss of mature trees, traffic congestion, traffic safety, and parking availability on local streets. A summary of comments received during the scoping process for this Revised EIR is included in Table 2.

Project Objectives

The objectives of the proposed project are to:

- To repair and update park features and core infrastructure components
- To meet demand for active recreation facilities in San Mateo County by increasing offerings of sports
- To provide a variety of uses for a range of user groups, including youth
- To optimize preservation of oak woodland

Alternatives

Pursuant to Section 15126.6 of the State *CEQA Guidelines*, the County considered the following alternatives to the proposed project:

- Alternative 1: No Project (no change to existing conditions)
- Alternative 2: Reduced Athletic Programming
- Alternative 3: Multi-Use Field

The No Project Alternative assumes that the proposed Landscape Plan is not implemented and that the County continues operating and maintaining Flood County Park in its current condition. The Reduced Athletic Programming Alternative would introduce the same new recreational facilities as planned for in the Landscape Plan, and in the same phases of construction, but would prohibit the organized use of proposed athletic fields on weekdays during afternoon peak hours (4-6 P.M.). The Multi-Use Field Alternative would introduce a new multi-use athletic field in the location of the existing ballfield, while eliminating the Landscape Plan's proposed soccer/lacrosse field.

Among the park redevelopment options, the Reduced Athletic Programming Alternative would be the most environmentally superior relative to the proposed project. This alternative would substantially reduce vehicle trips associated with athletic activity, avoiding a significant and unavoidable impact on traffic congestion at the intersection of Bay Road and Ringwood Avenue during Saturday peak hours under cumulative traffic conditions. However, the Reduced Athletic Programming Alternative would not avoid a significant and unavoidable impact on traffic congestion at this intersection during weekday P.M. peak hours under existing plus project traffic conditions or cumulative traffic scenarios. Because this alternative would have a significant and unavoidable impact, a Statement of Overriding Considerations would still be required for approval of this alternative. The Multi-Use Field Alternative also would be environmentally preferable to the proposed project, yet it would not avoid the project's significant and unavoidable impact on traffic congestion. Neither alternative for improving recreational facilities at the park would fully meet the project objectives.

Refer to Chapter 7, *Alternatives*, for the complete alternatives analysis.

Summary of Impacts and Mitigation Measures

Table 1 includes a brief description of the environmental issues analyzed both in this Revised EIR and in the original EIR, the identified environmental impacts, proposed mitigation measures, and residual impacts. Impacts are categorized by significance. Significant and unavoidable impacts require a statement of overriding considerations to be issued per *CEQA Guidelines* Section 15093 if

the project is approved. Impacts that are less than significant after mitigation can be feasibly mitigated to less than significant levels and require findings to be made under *CEQA Guidelines* Section 15091. Less than significant impacts would not exceed significance thresholds and therefore would not require mitigation.

The summary table provides a comprehensive list of environmental impacts analyzed in both the original Flood County Park Landscape Plan Draft EIR, published in September 2017, and in this Revised EIR. Section 3, *Environmental Impact Analysis*, of the Revised EIR analyzes impacts related to air quality, energy, greenhouse gas emissions, noise, transportation and circulation, and wildfire. Refer to the original Draft EIR for an analysis of impacts related to aesthetics, biological resources, cultural resources, geology and soils, and tribal cultural resources.

Table 1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Mitigation Measure	Residual Impact
Aesthetics		
Impact AES-1: The Landscape Plan would not affect scenic vistas or corridors; however, it would alter views from existing residences, primarily by the removal of mature trees and installation of netting around the proposed soccer/lacrosse field. This impact would be less than significant with mitigation for tree replacement and appropriate netting design.	Mitigation Measure AES-1: Athletic Netting Color. If the County installs athletic netting around the proposed soccer/lacrosse field, this netting shall have a neutral color (e.g., forest green, black, gray) that blends in with the natural environment at Flood County Park. Mitigation Measure BIO-2(a): Tree Replacement (see full measure under Impact BIO-2)	Less than significant after mitigation
Impact AES-2: While the Landscape Plan would largely preserve historic adobe building, it would involve removal of mature trees that serve as scenic resources. This impact on scenic resources would be less than significant with mitigation to replant trees of suitable species and protect remaining trees from construction activity.	Mitigation Measure BIO-2(a): Tree Replacement (see full measure under Impact BIO-2) Mitigation Measure BIO-2(b): Tree Avoidance and Minimization Measures (see full measure under Impact BIO-2)	Less than significant after mitigation
Impact AES-3: The Landscape Plan would preserve the majority of scenic mature trees and adobe buildings as well as open fields for passive recreational use, maintaining the park's overall existing visual character. The impact on visual character or quality would be less than significant.	None required	Less than significant without mitigation
Air Quality		
Impact AQ-1: The project would not contribute to population growth and would be consistent with the growth assumptions in the BAAQMD 2017 Clean Air Plan. This impact would be less than significant.	None required	Less than significant without mitigation
Impact AQ-2: While Project construction would generate temporary increases in localized air pollutant emissions, these emissions would not exceed BAAQMD's significance thresholds. Therefore, this impact would be less than significant. However, implementation of BAAQMD's Basic Construction Mitigation Measures to reduce fugitive dust and NO _x emissions is recommended to further reduce construction emissions.	None required; however, the BAAQMD's Basic Construction Mitigation Measures are recommended to reduce fugitive dust and NO _x emissions.	Less than significant without mitigation

Impact	Mitigation Measure	Residual Impact
Impact AQ-3: Operation of the proposed project would generate air pollutant emissions, but emissions would not exceed BAAQMD significance thresholds. Impacts related to operational emissions would be less than significant.	None required	Less than significant without mitigation
Impact AQ-4: The project would not expose sensitive receptors to substantial pollutant concentrations associated with construction dust, CO hotspots, or toxic air contaminants. Impacts related to these localized pollutants would be less than significant.	None required	Less than significant without mitigation
Biological Resources		
Impact BIO-1: The Landscape Plan may result in direct and indirect impacts to listed special-status species. Impacts would be less than significant with mitigation to protect nesting birds and roosting bats.	<p>Mitigation Measure BIO-1(a): Bird Protection Measures. This mitigation measure shall apply to all proposed Phase I, II, and III recreational elements.</p> <ol style="list-style-type: none"> If possible, trees and shrubs that would be impacted by construction activities shall be removed during the non-nesting season (typically between September 1 and January 31). If trees and shrubs are removed during the nesting season (February 1 to August 31), all suitable nesting habitat within the limits of work shall be surveyed by a qualified biologist prior to initiating construction-related activities. A pre-construction survey shall be conducted within five days prior to the start of work. If no nests are observed, construction activities shall be initiated within five days. If more than five days pass and construction has not been initiated, another survey will be required. If, during the nesting season, an active nest is discovered in trees or shrubs to be removed, the vegetation shall be protected using orange construction fence or the equivalent. The protective fencing shall be placed around the vegetation at the following distance(s) depending on species and upon recommendation from a qualified biologist: 100-250 feet from the drip line of the vegetation for passerines and non-raptors; and 300-500 feet from the drip line of the vegetation for raptors. No parking, storage of materials, or work would be allowed within this area until the end of the nesting season or until the young have fledged, as determined by a qualified biologist. <p>Mitigation Measure BIO-1(b): Bat Protection Measures. This mitigation measure shall apply to construction under the Landscape Plan that involves tree removal.</p> <ol style="list-style-type: none"> A qualified biologist shall conduct a pre- 	Less than significant after mitigation

Impact	Mitigation Measure	Residual Impact
	<p>construction survey for roosting bats at least two weeks prior to, but not more than 30 days prior to, the start of construction. The pallid bat could potentially roost in hollow trees. The survey shall be conducted within 200 feet of all planned construction activities within two weeks prior to any removal of trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities).</p> <p>b. A buffer zone of 100 feet that excludes construction activities or other disturbances shall be established around active bat roosts.</p> <p>c. If active maternity roosts or non-breeding bat hibernacula are found in trees scheduled to be removed, relocation or other measures shall be determined in consultation with the County of San Mateo and/or CDFW, as appropriate, and a qualified biologist.</p>	
<p>Impact BIO-2: Construction of proposed recreational improvements may directly or indirectly affect heritage trees protected by San Mateo County. The impact on protected trees would be less than significant with mitigation to replace protected trees that are removed and to protect remaining trees during construction.</p>	<p>Mitigation Measure BIO-2(a): Tree Replacement. The County shall replace protected trees that are removed from Flood County Park at 1:1 ratio. Suitable replacement trees shall be those species specified as heritage trees. Where mature trees are removed within 25 feet of residential property lines, the County shall plant replacement trees that upon maturation would be sufficient to restore the pre-existing level of privacy of adjacent residents.</p> <p>Mitigation Measure BIO-2(b): Tree Avoidance and Minimization Measures. The following measures to avoid and protect trees shall apply to individual recreational elements of all proposed Phase I, II, and III improvements:</p> <p>a. The County shall monitor heritage trees with CRZs impacted by construction activities (canopies and roots) during construction for signs of distress. The CRZ is defined as the area of soil around a tree trunk where roots are located that provide stability and uptake of water and minerals required for tree survival by the ISA's Best Management Practices – Managing Trees During Construction handbook.</p> <p>b. Excavation/Trenching shall avoid CRZs to the greatest extent feasible. The following measures shall be applied when excavation and trenching occurs near heritage trees:</p> <ul style="list-style-type: none"> ▪ Where appropriate tunneling shall be used to preserve roots two inches in diameter, and wherever possible 	<p>Less than significant after mitigation</p>

Impact	Mitigation Measure	Residual Impact
	<p>underground lines shall occupy common trenches.</p> <ul style="list-style-type: none"> ▪ When root cutting occurs, exposed major roots (greater than two inches in diameter or within five feet of the trunk) shall not be ripped by construction equipment. Roots shall be cleanly cut and made at right angles to the roots. ▪ A Certified Arborist shall be present if more than 30 percent of the root zone is impacted or roots greater than two inches or within five feet of the trunk will be cut, to document impacts to the CRZ. ▪ Absorbent tarp or heavy cloth fabric shall cover new grade cuts and be overlain by compost or woodchip mulch. <p>c. The County shall stage construction equipment outside of the CRZs and apply precautions, such as steel traffic plates and fencing, to protect sensitive root zones.</p> <p>d. The County shall install protective fencing around heritage trees prior to any earthwork and remain until all work is complete, or until adjacent construction activity no longer threatens tree health. Fencing shall be six foot high chain link fencing (or comparable material) and installed at the outermost edge of the CRZ, or eight feet from the trunk of the heritage tree, whichever is greatest. Signs stating “Tree Protection Zone – Keep Out” shall be posted on the fence.</p> <p>e. Pruning for clearance, if needed, shall be done to prevent damage to branches with large equipment. All above-ground pruning shall be in accordance with the Tree Pruning Guidelines (International Society of Arboriculture) and/or the ANSI A300 Pruning Standard (American National Standard for Tree Care Operations) and adhere to the most recent edition of ANSI Z133.1. Pruning cuts or damaged bark shall be cut clean to heal. No tree seal or paint shall be used after pruning.</p>	

Impact	Mitigation Measure	Residual Impact
Cultural Resources		
<p>Impact CUL-1: The Landscape Plan would preserve existing adobe buildings that contribute to Flood County Park's eligibility as an historical resource, except for the proposed demolition of the Restroom D building. By documenting historical resources for archival purposes and adhering to the Secretary of the Interior's Standards for rehabilitation of the administrative office building, the project would have a less than significant impact on historical resources with mitigation incorporated.</p>	<p>Mitigation Measure CUL-1(a): Historic Documentation Package. Prior to issuance of demolition permits, the County shall ensure that documentation of the buildings proposed for demolition is completed in the form of a Historic American Building Survey (HABS)-like documentation that shall comply with the Secretary of the Interior's <i>Standards for Architectural and Engineering Documentation</i> (National Park Service [NPS] 1990). The documentation shall generally follow the HABS Level III requirements and include digital photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Secretary of the Interior's <i>Professional Qualification Standards for History and/or Architectural History</i> (NPS 1983). The original archival-quality documentation shall be offered as donated material to the County of San Mateo Parks Department where it would be available for current and future generations. Archival copies of the documentation also shall be submitted to the City of San Mateo Library and the San Mateo County History Museum where they would be available to local researchers. Completion of this mitigation measure shall be monitored and enforced by the lead agency.</p> <p>Mitigation Measure CUL-1(b): Standards of Review. The seismic retrofit of the adobe administrative office building shall be consistent with the Secretary of the Interior's <i>Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings</i> (Standards), thereby avoiding significant adverse direct or indirect impacts to historical resources. An architectural historian or historic architect meeting the Secretary of the Interior's Professional Qualifications Standards shall be retained prior to the start of the seismic retrofit to review proposed plans and provide input to the County to avoid any direct or indirect physical changes to the building. The findings and recommendations of the architectural historian or historic architect shall be documented in a Standards Project Review Memorandum, at the schematic design phase. This memorandum shall analyze all project components for compliance with the Standards. Should design modifications be</p>	<p>Less than significant after mitigation</p>

Impact	Mitigation Measure	Residual Impact
	<p>necessary to bring projects into compliance with the Standards, the memorandum shall document those recommendations. The document shall be subsequently submitted to County of San Mateo Parks Department for review and comment.</p>	
<p>Impact CUL-2: Ground-disturbing activities under the Landscape Plan could result in damage to or destruction of unanticipated archaeological resources or human remains. Impacts would be less than significant with mitigation incorporated.</p>	<p>Mitigation Measure CUL-2(a): Archaeological Resources. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall be halted and an archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for archaeology (NPS 1983) shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the proposed project, additional work such as data recovery excavation may be warranted to mitigate any significant impacts to historical resources.</p> <p>Mitigation Measure CUL-2(b): Unanticipated Discovery of Human Remains. If human remains are found, State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner shall be notified immediately. If the human remains are determined to be prehistoric, the coroner shall notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.</p>	<p>Less than significant after mitigation</p>
<p>Impact CUL-3: Ground-disturbing activities associated with development under the Landscape Plan could result in damage to or destruction of potential fossil resources within rock units or geologic features. This impact would be less than significant with mitigation incorporated.</p>	<p>Mitigation Measure CUL-3: Unanticipated Discovery of Paleontological Resources. In the event of a fossil discovery by construction personnel, all work in the immediate vicinity of the find shall cease and a qualified paleontologist shall be contacted to evaluate the find before restarting work in the area. The qualified paleontologist shall be an individual with an M.S. or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California, and who has worked as</p>	<p>Less than significant after mitigation</p>

Impact	Mitigation Measure	Residual Impact
	<p>a paleontological mitigation project supervisor for a least one year (SVP 2010). If the qualified paleontologist determines that the fossil(s) is (are) scientifically significant, the find shall be recovered under his/her supervision. The paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Once salvaged, significant fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection (such as the University of California Museum of Paleontology), along with all pertinent field notes, photos, data, and maps. Fossils of undetermined significance at the time of collection may also warrant curation at the discretion of the project paleontologist.</p>	
Energy		
<p>Impact E-1: The construction and operation of recreational elements under the Landscape Plan would consume energy. However, adherence to State requirements would minimize energy use from construction equipment. The Landscape Plan also would not add recreational elements that require substantially higher on-site energy use or increase vehicle miles traveled in the County. Therefore, it would not result in the wasteful, inefficient, or unnecessary consumption of energy, and this impact would be less than significant.</p>	None required	Less than significant without mitigation
<p>Impact E-2: The project would be consistent with energy efficiency goals contained in the San Mateo County Energy Efficiency Climate Action Plan. Construction and operation of the project would comply with relevant provisions of Title 24 of the California Energy Code. Impacts would be less than significant.</p>	None required	Less than significant without mitigation
Geology and Soils		
<p>Impact GEO-1: The Landscape Plan would reconstruct or rehabilitate some existing recreational facilities and on-site structures and would add new recreational facilities. Redevelopment of Flood County Park would result in an incremental increase in recreational users at the park, which would slightly increase the number of people at the project site that could be exposed to strong ground shaking. However, redevelopment of the park would not include construction of habitable structures and impacts related to strong ground shaking would be less than significant.</p>	None required	Less than significant without mitigation

Impact	Mitigation Measure	Residual Impact
Impact GEO-2: Flood County Park is located in a mapped Liquefaction Zone and redevelopment of the park could result in damage to reconstructed or rehabilitated structures due to seismically induced liquefaction. However, redevelopment of the park would not include the construction of habitable structures and adherence to California Building Codes would minimize the potential for damage of uninhabited structures from liquefaction. Impacts related to seismically induced liquefaction would be less than significant.	None required	Less than significant without mitigation
Impact GEO-3: Implementation of the Landscape Plan would involve soil disturbance that could result in soil erosion or the loss of topsoil. However, compliance with existing regulations, including the NPDES Construction General Permit, would ensure that disturbed soil is properly managed to minimize the potential for erosion. Impacts related to soil erosion or the loss of topsoil would be less than significant.	None required	Less than significant without mitigation
Impact GEO-4: The Landscape Plan would involve the rehabilitation or reconstruction of structures that could be located on expansive soils. However, soils would be evaluated for their expansive potential during grading and would be removed and replaced with non-expansive soils as necessary. Also, the Landscape Plan would not include construction of habitable structures and therefore would not place people at risk to safety hazards from expansive soils. Adherence to California Building Codes would ensure that impacts related to expansive soils would be less than significant.	None required	Less than significant without mitigation
Greenhouse Gas Emissions		
Impact GHG-1: Construction and operation of the proposed recreational facilities in the Landscape Plan would generate GHG emissions. These emissions would not hinder or delay achievement of state GHG reduction targets established by AB 32 or SB 32. Therefore, the project's impact to climate change would be less than significant.	None required	Less than significant without mitigation
Impact GHG-2: Construction and operation of the proposed recreational facilities in the Landscape Plan would be consistent with the San Mateo County Energy Efficiency Climate Action Plan. Therefore, the project's impact related to consistency with plans to address climate change would be less than significant.	None required	Less than significant without mitigation
Hydrology and Water Quality		
Impact HWQ-1: Construction and operation of the proposed recreational facilities could result in storm water runoff of pollutants such as sediment and nutrients. However, compliance with NPDES permit requirements and County landscaping standards would control sediment flow and maintain water quality. The project would have a less than significant impact on water quality.	None required	Less than significant without mitigation

Impact	Mitigation Measure	Residual Impact
Impact HWQ-2: The proposed recreational improvements would incrementally increase the area of impervious surface at Flood County Park but to the extent that groundwater recharge would be reduced. The project also would not draw its water supply from groundwater. Therefore, the Impact to groundwater supply and recharge would be less than significant.	None required	Less than significant without mitigation
Impact HWQ-3: The Landscape Plan would alter existing drainage patterns by grading activity and the addition of impervious surfaces. However, compliance with NPDES requirements would minimize erosion and avoid a substantial increase in surface runoff. Impacts would be less than significant.	None required	Less than significant without mitigation
Noise		
Impact N-1: Construction of proposed recreational facilities would generate high noise levels on and adjacent to the project site. However, construction noise would be temporary, and adherence to the County's allowed hours of construction would prevent noise disturbance during sensitive evening and nighttime hours. Therefore, the impact from construction noise would be less than significant.	None required	Less than significant without mitigation
Impact N-2: Grading activity would temporarily generate groundborne vibration on and adjacent to Flood County Park. Because construction of proposed recreational elements would occur inside the hours allowed in the County Code of Ordinances, it would not generate vibration when people normally sleep. Construction vibration would not exceed levels that may cause structural damage to historic adobe buildings on-site. The Landscape Plan would have a less than significant vibration impact.	None required	Less than significant without mitigation
Impact N-3: The Landscape Plan would add new sources of on-site operational noise from organized practices and games at the proposed athletic fields and performances at the proposed gathering meadow. Noise from whistles, sound amplification equipment, or air horns could disturb nearby residents. The impact from on-site operational noise would be less than significant with mitigation to prohibit the loudest equipment and restrict the timing of athletic events.	Mitigation Measure N-3(a): Restrict Sound Amplification Equipment and Prohibit Air Horns. The County shall only allow the use of sound amplification equipment at organized athletic games and practices and at the gathering meadow with the procurement of a special event permit in accordance with County of San Mateo Parks Department procedures. The County shall notify all groups using the proposed soccer/lacrosse field, ballfield, and gathering meadow of this requirement. The County shall prohibit the use of air horns at any park events. County staff shall periodically patrol the park during organized athletic events and performances to verify that park users are not operating air horns and are not operating sound amplification equipment without an approved Special Event Permit. Special Event Permits are required for any use of a space beyond what is considered typical use. This could include such activities as:	Less than significant after mitigation

Impact	Mitigation Measure	Residual Impact
	<p>bounce houses, amplified sound, large events (walks, runs) and those that require additional staffing or support from other agencies. Depending on the scale of the event, notification may be posted in park kiosks, on the Parks Department website or by using other communication vehicles.</p> <p>Mitigation Measure N-3(b): Timing of Athletic Events. To minimize noise that may disturb neighbors of Flood County Park, the County shall restrict athletic practices and games at the park to the hours of 9 A.M. to 8 P.M.</p>	
<p>Impact N-4: Vehicle trips associated with operation of the proposed recreational elements would increase traffic volumes on nearby roadways, resulting in greater traffic noise audible to existing noise-sensitive residences. Based on the conservative (high) estimate of new vehicle trips presented in this EIR, it is anticipated that the increase of vehicle trips from the project relative to existing traffic on Ringwood Avenue during Saturday peak hours in the summer would exceed the applicable FTA standard of 1 dBA L_{eq}. Therefore, traffic noise impacts would be significant and unavoidable.</p>	<p>None required</p>	<p>Less than significant without mitigation</p>
Transportation and Circulation		
<p>Impact T-1: Traffic generated by the project would cause traffic delay exceeding the City of Menlo Park's standards at the intersection of Bay Road and Ringwood Avenue under all modeled traffic scenarios. Queuing of vehicles at the park's entrance gate also would cause temporary traffic delay on Bay Road. Although new parking fee collection practices would minimize queuing, mitigation measures at the affected intersection would be infeasible. Therefore, the project would have a significant and unavoidable impact on traffic under existing plus project conditions.</p>	<p>The installation of a northbound left-turn lane at the intersection of Bay Road and Ringwood Avenue would improve traffic conditions during P.M. peak hours from LOS D to B under existing plus project conditions, from LOS E to C under near-term 2021 plus project conditions, and from LOS F to D under cumulative 2040 plus project conditions. However, physical constraints at the affected intersection could make implementation of such a measure infeasible. To minimize queuing on Bay Road, Mitigation Measure T-1 would be required.</p> <p>Mitigation Measure T-1: Parking Fee Collection Practices. The County shall implement parking fee collection practices to avoid the back up of vehicles entering Flood County Park onto local streets. These practices may include automated fee machines, paying upon exiting the park, or a combination of both to move the queues associated with fee collection off of City streets and on-site.</p>	<p>It may be infeasible to reconfigure the intersection of Bay Road and Ringwood Avenue to avoid a significant impact from traffic congestion. Therefore, the Landscape Plan would have a significant and unavoidable impact.</p>

Impact	Mitigation Measure	Residual Impact
Impact T-2: Project-generated traffic would have a negligible effect on vehicle miles traveled in San Mateo County. Therefore, the Landscape Plan would have a less than significant impact related to vehicle miles traveled.	None required	Less than significant without mitigation
Impact T-3: Vehicle trips generated by implementation of the Landscape Plan would not adversely affect roadways designated under the Congestion Management Plan for San Mateo County. Therefore, the project would have a less than significant impact related to conflicts with this plan.	None required	Less than significant without mitigation
Impact T-4: The project would not introduce design features that increase traffic hazards. No impact would occur.	None required	Less than significant without mitigation
Impact T-5: The project would not decrease the performance of existing or planned transit, bicycle, or pedestrian facilities. However, the lack of bicycle storage on-site and a sidewalk gap on Bay Road could result in unsafe conditions for bicyclists and pedestrians accessing the park. Impacts to transit, bicycle, and pedestrian systems would be less than significant with mitigation to install bicycle storage and pedestrian signage.	<p>Mitigation Measure T-5(a): Bicycle Storage. The County shall install a minimum of six bicycle racks near the proposed gathering plaza.</p> <p>Mitigation Measure T-5(b): Pedestrian Signage. The County shall install signage in a central location in Flood County Park that informs visitors of an alternative pedestrian route to the segment of Bay Road between Del Norte Avenue and Sonoma Avenue which lacks a sidewalk. This signage shall include a map of the alternative pedestrian route on Del Norte Avenue, Oakwood Place, and Sonoma Avenue.</p>	Less than significant after mitigation
Impact T-6: While it is estimated that parking demand during peak summer days at Flood County Park would not exceed the on-site parking supply, the Landscape Plan could result in increased parking on local residential streets. The impact on parking capacity would be less than significant impact with mitigation measures to facilitate on-site parking and discourage on-street parking by visitors to Flood County Park.	<p>Mitigation Measure T-1: Parking Fee Collection Practices (see full measure under Impact T-1)</p> <p>Mitigation Measure T-6: Parking Education and Enforcement. The County shall inform park visitors of on-street parking restrictions on nearby residential streets and shall post this information in a clearly visible location on-site. The County also shall coordinate with the City of Menlo Park to reduce parking in the adjacent neighborhoods, including proactive communication when peak use of Flood County Park is anticipated (i.e., on weekday evenings and on weekend days when all picnic areas are reserved and all athletic fields are scheduled for concurrent use) and encouraging increased random enforcement of on-street parking restrictions.</p>	Less than significant after mitigation

Impact	Mitigation Measure	Residual Impact
Tribal Cultural Resources		
Impact TCR-1: Construction of recreational improvements proposed in the Landscape Plan would involve surface excavation, which has the potential to impact previously unidentified tribal cultural resources. Impacts would be less than significant with mitigation to protect such resources in the event of their discovery.	Mitigation Measure TCR-1: Protection of Tribal Cultural Resources. In the event that archaeological resources of Native American origin are identified during construction of recreational improvements proposed in the Landscape Plan, the qualified archaeologist will consult with the County to begin or continue Native American consultation procedures. If, in consultation with the County, a discovery is determined to be a tribal cultural resource and thus significant under CEQA, the County shall avoid the resource if feasible. If the resource cannot be avoided, the County shall prepare and implement a mitigation plan in accordance with State guidelines and in consultation with Native American groups.	Less than significant after mitigation
Wildfire		
Impact WFR-1: Recreational improvements under the Landscape Plan would be designed to meet all emergency evacuation requirements and would not impair the City's Emergency Operation Plan. Impacts related to emergency access and response would be less than significant.	None required	Less than significant without mitigation
Impact WFR-2: Flood County Park is not located in a wildfire risk area and would not be altered in a way that would exacerbate fire risk. Redevelopment of the park would maintain the relatively flat topography and wildfire risk would not be increased by wind patterns. Impacts related to wildfire risks would be less than significant.	None required	Less than significant without mitigation
Impact WFR-3: Flood County Park would result in development on the project site in an urbanized area where infrastructure and roads currently exist. Installation and maintenance of new utility infrastructure would not exacerbate fire risk. Impacts would be less than significant.	None required	Less than significant without mitigation
Impact WFR-4: Being located in a relatively flat urbanized area at low risk of fires, the project would not expose people or structures to risks from downslope or downstream post-fire impacts. This impact would be less than significant.	None required	Less than significant without mitigation

1 Introduction

This document is a Revised Environmental Impact Report (EIR) for the proposed Flood County Park Landscape Plan (the “project”). The project site is located northeast of Bay Road in the city of Menlo Park in San Mateo County. It is regionally accessible from U.S. Highway 101 (U.S. 101) and locally accessible from Bay Road. The proposed project consists of a Landscape Plan for the long-term redevelopment of San Mateo County’s Flood County Park. Under the Landscape Plan, the County Parks Department would develop new recreational facilities in three phases over an anticipated ten-year period. Improvements would include a variety of active and passive recreation features. The project is described in greater detail in Section 2, *Project Description*. This section discusses:

- (1) The environmental impact report background;
- (2) The legal basis for preparing an EIR;
- (3) The scope and content of the EIR;
- (4) Lead, responsible, and trustee agencies; and
- (5) The environmental review process required under the California Environmental Quality Act (CEQA).

1.1 Environmental Impact Report Background

The County published a Draft EIR for the Flood County Park Landscape Plan on the County’s Reimagine Flood Park website in September 2017. In response to public and agency comment on the Draft EIR, the County published a Final EIR in May 2018. Both previous documents are available at <https://parks.smcgov.org/reimagine-flood-park>. The Final EIR was accepted by the County’s Parks Commission at its August 2, 2018, meeting. However, the Final EIR was not ultimately submitted to the County Board of Supervisors for certification because the Parks Department decided that public concerns warranted further analysis of the proposed project. Key concerns raised by neighbors on the Draft and Final EIR related to 1) projected growth in park visitation and use resulting from improvements accommodated under the Landscape Plan, including traffic impacts and parking demand, and 2) noise generated on-site from concurrent park events. The *State of California CEQA Guidelines* were also updated in December 2018, adding two issue areas to the Appendix G checklist of environmental issues when analyzing a project’s environmental impacts: wildfire and energy.

Therefore, the County is revising and recirculating a limited portion of the original EIR that will rely on more conservative assumptions with regard to park visitation (i.e., assumptions that will more effectively capture the increased use that may result from the project and the effects associated with such use) and that will explicitly address potential wildfire and energy impacts. A Notice of Preparation (NOP) of a recirculated portion of the EIR was distributed for agency and public review for a 30-day review period that began on May 8, 2019. The NOP and responses are presented in Appendix A to the EIR. The County received 13 comment letters responding to the NOP. Table 2 summarizes the contents of letters and oral comments as relevant to the CEQA analysis.

Table 2 Notice of Preparation Comments and Environmental Impact Report Response

Topic	Comment/Request	Where Addressed in EIR
Project Description	Commenters requested a full evaluation of all phases of the Landscape Plan and of peak use of the park. A commenter requested that dogs be allowed at the park.	As discussed in Section 2, <i>Project Description</i> , the Revised EIR evaluates Phases 1, 2, and 3 of the Landscape Plan. Each impact analysis in Section 3, <i>Environmental Impact Analysis</i> , of the Revised EIR considers all phases. This EIR assumes a conservative amount of park use under the Landscape Plan, as shown in Table 6. The Landscape Plan would not involve changing the park rules to permit dogs on-site, so the EIR does not address this concern.
Biological Resources	One commenter expressed concern about the number of trees to be removed under different field configurations and impacts on flora and fauna.	See Section 4.3, <i>Biological Resources</i> , in the original Draft EIR for an analysis of impacts on biological resources and estimates of tree removal during each phase of the Landscape Plan. See Section 4.4 of this EIR for a discussion of tree removal under an alternative layout of the Landscape Plan.
Noise	Commenters expressed concern about impulse noise from park events, the buffer between residents and the soccer/lacrosse field, combined noise from simultaneous events, and the type and frequency of events that may generate noise at the gathering meadow.	See Section 3.4, <i>Noise</i> , in this EIR for analysis of these noise impacts and mitigation measures where applicable.
Transportation/ Circulation	Several commenters expressed concern about traffic impacts, including traffic safety related to drop-off activity at side gates, parking availability, parking mitigation, and traffic congestion from park events.	See Section 3.5, <i>Transportation and Circulation</i> , in this EIR for analysis of these traffic impacts and mitigation measures where applicable.
Tribal Cultural Resources	A commenter noted regulatory requirements to protect tribal cultural resources.	See Section 4.10, <i>Tribal Cultural Resources</i> , in the original Draft EIR for a discussion of impacts to tribal cultural resources.
Alternatives	Commenters suggested alternative site layouts to the proposed Landscape Plan.	See Section 4, <i>Alternatives</i> , in this EIR for an analysis of a reasonable range of alternatives.

1.2 Purpose and Legal Authority

The project requires the discretionary approval of the County. Therefore, it is subject to the requirements of CEQA. In accordance with Section 15121 of the *CEQA Guidelines*, the purpose of this Revised EIR is to serve as an informational document that:

...will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This EIR has been prepared as a Project EIR (although limited in scope pursuant to CEQA, as discussed further below) pursuant to Section 15161. A Project EIR is appropriate for a specific development project. As stated in the *CEQA Guidelines* in Section 15161:

This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project, including planning, construction, and operation.

This limited scope EIR includes the analysis of the environmental impacts, mitigation measures, and project alternatives addressing the impacts. This EIR is to serve as an informational document for the public and County decision-makers. The process will culminate with a County hearing to consider certification of a Final EIR and approval of the project.

1.3 Scope and Content

This Revised EIR addresses the following six environmental issues that the County has determined to be potentially significant and that require revision from, or addition to, the original EIR:

- Air Quality
- Energy
- Greenhouse Gas Emissions
- Noise
- Traffic and Circulation
- Wildfire

The EIR addresses the project's potentially significant site-specific and cumulative effects in these areas, in accordance with the *CEQA Guidelines*. It recommends feasible mitigation measures, where needed and possible, that would eliminate or reduce adverse environmental effects. Outside of the six environmental issues listed above, this EIR does not address the remaining environmental issues covered in the original EIR that the County published in September 2017. The analysis of such remaining issues in the original EIR stands and does not require revisiting in this Revised EIR.

In preparing the EIR, pertinent local policies and guidelines, and other background documents were used. A full reference list is contained in Section 5, *References*.

The Alternatives section of the EIR was prepared in accordance with Section 15126.6 of the *CEQA Guidelines* and focuses on alternatives that are capable of eliminating or reducing significant adverse effects associated with the project while feasibly attaining most of the basic project objectives. In addition, the Alternatives section identifies the "environmentally superior" alternative among the alternatives assessed. The alternatives evaluated include the CEQA required "No Project" Alternative and two project alternatives.

The level of detail contained throughout this EIR is consistent with the requirements of CEQA and applicable court decisions. The *CEQA Guidelines* provide the standard of adequacy on which this document is based. The *Guidelines* state:

An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure. (Section 15151)

1.4 Lead, Responsible, and Trustee Agencies

The *CEQA Guidelines* require the identification of “lead,” “responsible,” and “trustee” agencies. The County is the “lead agency” for the proposed project because it has the principal responsibility for approving the project.

A responsible agency refers to a public agency other than the lead agency that has discretionary approval over the project. A trustee agency refers to a state agency having jurisdiction by law over natural resources affected by a project. There are no responsible or trustee agencies for the project, although the cooperation of other agencies including SFPUC and the City of Menlo Park may be required while implementing the Landscape Plan or implementing mitigation measures in this EIR.

1.5 Standards of Review

As a distinct governmental entity and lead agency for this project, the County has immunity from local standards upheld by the City of Menlo Park and the Town of Atherton. Furthermore, the County has discretion as to which standards to apply to this project when reviewing its environmental impacts. In general, this EIR applies relevant standards from the County of San Mateo’s General Plan (1986) and the San Mateo County Code of Ordinances. For example, Section 3.4, *Noise*, analyzes the Landscape Plan’s impact on sensitive land uses from construction noise based on consistency with the County’s noise ordinance. Nevertheless, the County recognizes that local standards from affected jurisdictions are routinely applied in the project vicinity. Therefore, the County has elected to apply City standards where applicable in this EIR. In Section 3.5, *Transportation and Circulation*, the County applies City of Menlo Park standards for traffic congestion because vehicle trips associated with park use would affect intersections managed by the City.

1.6 Environmental Review Process

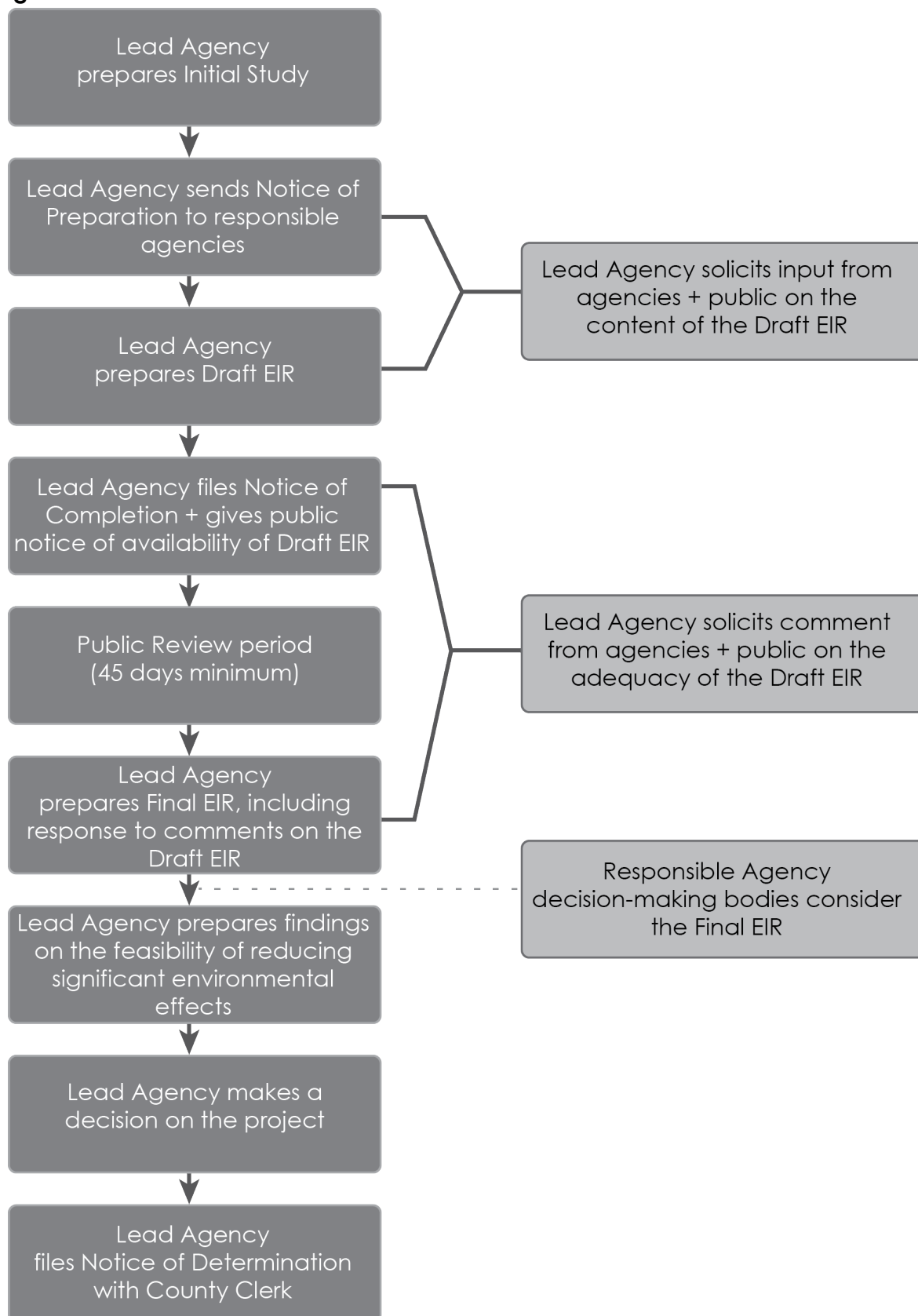
The environmental impact review process, as required under CEQA, is summarized below and illustrated in Figure 1. The steps are presented in sequential order.

- 1 **Notice of Preparation (NOP) Distributed.** Immediately after deciding that an EIR is required, the lead agency must file a NOP soliciting input on the EIR scope to “responsible,” “trustee,” and involved federal agencies; to the State Clearinghouse, if one or more state agencies is a responsible or trustee agency; and to parties previously requesting notice in writing. The NOP must be posted in the County Clerk’s office for 30 days. A scoping meeting to solicit public input on the issues to be assessed in the EIR is not required, but may be conducted by the lead agency.
- 2 **Draft EIR Prepared.** The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) alternatives; g) mitigation measures; and h) irreversible changes.
- 3 **Public Notice and Review.** The lead agency must prepare a Public Notice of Availability of an EIR. The Notice must be placed in the County Clerk’s office for 30 days (Public Resources Code Section 21092) and sent to anyone requesting it. Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a

newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The lead agency must consult with and request comments on the Draft EIR from responsible and trustee agencies, and adjacent cities and counties. The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days, unless a shorter period is approved by the Clearinghouse (Public Resources Code 21091). Distribution of the Draft EIR may be required through the State Clearinghouse.

- 4 **Notice of Completion.** The lead agency must file a Notice of Completion with the State Clearinghouse as soon as it completes a Draft EIR.
- 5 **Final EIR.** A Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments.
- 6 **Certification of Final EIR.** The lead agency shall certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project (*CEQA Guidelines* Section 15090). At the final County hearing, the CEQA documents to be certified would include the new Final EIR, with appendices showing the unmodified sections of the original Draft EIR from September 2017, as well as subsequent text changes in the May 2018 Final EIR.
- 7 **Lead Agency Project Decision.** The lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (*CEQA Guidelines* Sections 15042 and 15043).
- 8 **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible. If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that set forth the specific social, economic or other reasons supporting the agency's decision.
- 9 **Mitigation Monitoring/Reporting Program.** When the lead agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
- 10 **Notice of Determination.** The lead agency must file a Notice of Determination after deciding to approve a project for which an EIR is prepared (*CEQA Guidelines* Section 15094). A local agency must file the Notice with the County Clerk. The Notice must be posted for 30 days and sent to anyone previously requesting notice. Posting of the Notice starts a 30-day statute of limitations on CEQA challenges (Public Resources Code Section 21167[c]).

Figure 1 Environmental Review Process



2 Project Description

This section provides a description of the project, including information regarding the applicant, the location and characteristics of the project site, major project features, preliminary phasing plan, project objectives, and discretionary approvals needed.

2.1 Project Applicant

County of San Mateo Parks Department
455 County Center – Fourth Floor
Redwood City, California 94063

2.2 Project Location

The project site consists of the 24.5-acre Flood County Park, located in the city of Menlo Park in San Mateo County. Figure 2 shows the regional location of Flood County Park, which is about 20 miles southeast of San Francisco. The project site is regionally accessible from U.S. Highway 101 (U.S. 101) and locally accessible from Bay Road. Figure 3, Project Location, shows an aerial view of the project site, the San Francisco Public Utilities Commission (SFPUC) right-of-way for water pipelines that crosses the site, and the surrounding area. The Town of Atherton is located adjacent to and southwest of the park, across Bay Road.

The 24.5-acre project site includes four parcels as shown in Table 3. This table further identifies each Assessor's Parcel Numbers, ownership, and acreage.

Table 3 Parcels within the Project Site

Assessor's Parcel Number	Ownership	Acreage
055-311-010	County of San Mateo	5.0
055-312-010	County of San Mateo	16.3
093-551-020	City & County of San Francisco	1.9
093-551-030	City & County of San Francisco	1.4
Total		24.5

Note: The individual parcel acreages may not sum to 100% of the total because of rounding.

As shown in Table 3, Flood County Park includes two parcels owned by the City & County of San Francisco. Through the SFPUC, San Francisco owns these linear parcels as part of approximately 3.3 acres of real property in fee that cross the park for the Hetch Hetchy Regional Water System. The 80-foot-wide SFPUC right-of-way bisects the park in an east-to-west alignment through the existing baseball field and parking lot. The primary purpose of this right-of-way is to serve as a utility corridor with three large subsurface water transmission pipelines. This utility corridor provides dedicated land accommodating the water pipelines to enable the reliable delivery of water to the SFPUC's 2.6 million customers. The County currently holds a five-year Revocable License (#3631B), issued by SFPUC in June 2015, for the recreational use of this on-site right-of-way.

Figure 2 Regional Location

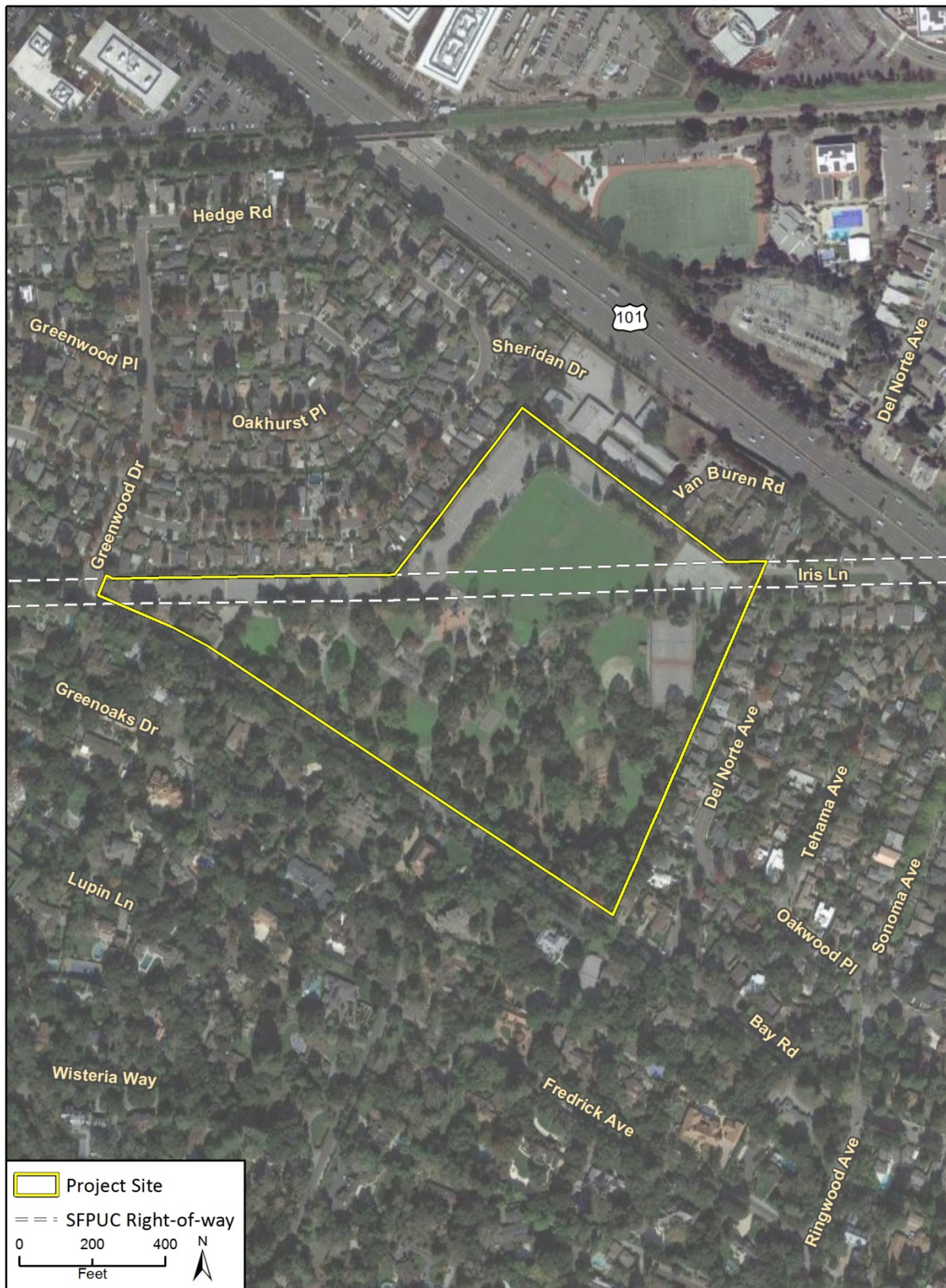


Imagery provided by ESRI and its licensors © 2016.



Fig 1 Reg Locn_8x11Portrait

Figure 3 Project Location



Imagery provided by Google and its licensors © 2017.

2.3 Existing Site Characteristics

The current characteristics of Flood County Park are summarized in Table 4 and in the discussion that follows.

Table 4 Characteristics of the Project Site and Vicinity

Project Site	
Existing Use	County Park
Land Use Designation	Parks and Recreation (City of Menlo Park General Plan) ¹
Zoning Designation	Open Space and Conservation District
Built Features	<ul style="list-style-type: none"> ▪ Adobe structures (administrative office, ranger residence, maintenance and electrical buildings, restrooms, wall) ▪ Ballfield (closed for renovation) ▪ Group picnic areas ▪ Individual picnic areas ▪ Tennis courts (4) ▪ Pétanque court ▪ Playground ▪ Surface parking lot ▪ Entrance gate ▪ Sand volleyball courts (3) ▪ Asphalt trails ▪ Water fountains
Vicinity	
Surrounding Land Uses	Northeast: vacant school site, Haven Family House Southeast: single-family residences, Iris Lane Southwest: Bay Road, single-family residences Northwest: single-family residences
Surrounding Land Use Designations	Northeast: Low Density Residential (City of Menlo Park) Southeast: Low Density Residential (City of Menlo Park) Southwest: Low Density Single Family Residential (Town of Atherton) Northwest: Low Density Residential (City of Menlo Park)
Surrounding Zoning Designations	Northeast: Single Family Urban Residential District, R-1-U (City of Menlo Park) Southeast: Single Family Urban Residential District, R-1-U (City of Menlo Park) Southwest: Residential District, R-1A (Town of Atherton) Northwest: Single Family Urban Residential District, R-1-U (City of Menlo Park)

¹ The San Mateo County General Plan (1986) also recognizes the project site as a County Park.

Sources: City of Menlo Park, Zoning Map and General Plan Land Use Diagram, Sheet 5, April 2015; Town of Atherton, General Plan, November 2002; Town of Atherton, Zoning Map, December 2011.

The project site is a neighborhood park located in a single-family residential neighborhood in the city of Menlo Park. Flood County Park originally opened in the early 1930s, and existing adobe structures on-site were constructed during that era as Works Progress Administration (WPA) projects. These adobe structures include an administrative office, a ranger residence, maintenance and electrical buildings, restrooms, and remaining fragments of an adobe wall adjacent to Bay Road. The adobe administrative office is uninhabited but used occasionally for storage.

The park has a mixture of passive recreational facilities, such as group and individual picnic areas and trails, and active recreation facilities like a ballfield, tennis courts, a playground, sand volleyball courts, and a gravel pétanque court. An asphalt trail loops eastward from the central playground through picnic areas in the southern part of the park back to the western parking lot. Chain-link fencing approximately five to nine feet tall encloses the park in all directions.

Flood County Park has an open, spacious visual character with large patches of woodland, especially in its southern half. Prominent heritage trees of the following species abound at the park:

- *Quercus agrifolia* (coast live oak)
- *Quercus lobata* (valley oak)
- *Quercus ilex* (holly oak)
- *Sequoia sempervirens* (coast redwood)
- *Umbellularia californica* (California bay laurel)
- *Ulmus* genus (elm)
- *Platanus x acerifolia* (London plane tree)
- *Pyrus calleryana* (Callery pear)
- *Fraxinus* genus (ash)
- *Acacia melanoxylon* (Australian blackwood)
- *Callitris* genus (pine)

A 2015 assessment of the property revealed that many park features and core infrastructure components are in need of major repair or replacement. The ballfield, for example, is currently in disrepair and was last used in 2010. Current visitorship is lower than its peak from the late 1990s and early 2000s; however, the number of visitors has been steadily rebounding following the park's 2011 reopening after a year-long closure for replacement of the Hetch Hetchy water pipeline in the SFPUC right-of-way.

Lands immediately surrounding the project site are occupied primarily by single-family residences with the exception of a vacant former school site and the Haven Family House to the northeast. The Haven Family House consists of two-story buildings that provide transitional housing to homeless people. The vacant school is in a deferred maintenance condition, with broken windows and graffiti. Nearby residences range from one to two stories in height. Trees and shrubs near the property lines partially obstruct views of Flood County Park from adjacent residences. The centerline of U.S. 101 is approximately 350 feet northeast of the park.

2.4 Project Features

The proposed project entails a Landscape Plan for the long-term redevelopment of San Mateo County's Flood County Park in the city of Menlo Park. The planning process for development of the Landscape Plan took place between May and December 2015. On April 7, 2016, the County Parks

and Recreation Commission voted to approve this plan as the Draft Preferred Alternative for improving Flood County Park. The Landscape Plan was refined through a series of community outreach efforts structured to identify community values, preferred uses, and site layout preferences. In response to public comment, the County has refined the proposed plan to optimize preservation of large oak and bay trees, increase offerings of sports, and provide a variety of active and passive uses for a range of user groups.

Table 5 lists the proposed recreational facilities in the Landscape Plan and their anticipated phasing.

Table 5 Proposed Recreational Facilities and Phasing

Phase	Improvements
Phase I	Baseball field replacement and bathroom Soccer/lacrosse field Two tennis courts Sand volleyball court replacement Basketball court Pump track Asphalt paths Adobe bathroom renovation Tree-lined promenade Drop off at playground area New utilities: water, electric, gas, greywater piping ¹
Phase II	Restrooms Demonstration gardens Playground replacement Individual picnic area renovations Gathering meadow (performance space)
Phase III	Rehabilitation of adobe administrative building ² Group picnic area renovations with shade shelters Completion of all pathways with exercise stations Gathering plazas Focal element (may incorporate existing water pump feature)

¹ Purple piping may be installed for the future use of greywater.

² The adobe administrative building would be rehabilitated for seismic stability and use by park visitors.

This EIR evaluates environmental impacts from all phases of the Landscape Plan, including construction and operation of the proposed improvements. Because the Landscape Plan is a high-level plan intended to guide the long-term redevelopment of the park and would not directly involve the construction of recreational facilities listed in Table 5, the EIR evaluates the environmental impacts of Phase II and III improvements at a programmatic level. At the time that Phase II or III elements are proposed for construction, the County would be required to conduct further CEQA review for any elements only if they are substantially different than described in the Landscape Plan and if they could have environmental impacts beyond those anticipated in the EIR. However, the EIR evaluates proposed Phase I improvements at a more detailed, project-specific

level to the extent feasible, as they would be constructed in the near term and their scope of physical disturbance and their construction schedule are more defined.

Figure 4 shows the layout of recreational facilities in the proposed Landscape Plan. The largest recreational facilities would be sited in the northern portion of the park, where the existing ballfield would be reconstructed (approximately 450 feet long on each side) and the soccer/lacrosse field (approximately 430 feet long by 260 feet wide) would be installed at the eastern corner, replacing the existing pétanque court and a portion of the existing tennis courts. The County has committed to siting the soccer/lacrosse field at least 100 feet away from the property line adjacent to residences on Del Norte Avenue. The promenade would run eastward across the center of the park from the parking lot. Picnic areas clustered in the southern half of the park would be reconstructed. A demonstration garden would be established in the western part of the park, near the parking lot entrance off Bay Road. In addition, the following recreational facilities would be located within the SFPUC right-of-way outlined in Figure 4: a ballfield, soccer/lacrosse field, basketball court, and promenade. The Parks Department would preserve existing adobe buildings on-site, with the exception of demolishing the adobe Restroom D located west of the existing tennis courts. The adobe administrative building in the southwest part of the park would be rehabilitated for seismic stability.

Fencing and/or netting would be installed around the proposed athletic fields. The reconstructed ballfield would be bordered by chain-link fencing of similar height and placement to the existing field. Based on the industry standard for soccer and lacrosse fields, it is assumed that fencing four to six feet in height would ring the soccer/lacrosse field (Sprecher 2012). Netting would likely be installed to contain soccer and lacrosse balls within this field. This netting is often set at a 20-foot height at the ends of the field or encircling the field (Sprecher 2012). This analysis conservatively assumes the installation of 20 to 30-foot-tall netting that encircles the soccer/lacrosse field.

Table 6 shows the estimated number of visitors to use proposed elements of the Landscape Plan during peak summer days, organized by phase of construction. These estimates of the potential seasonal capacity of recreational facilities were prepared in April 2019 by Gates + Associates, the consultant that assisted the County in designing the Landscape Plan, based on use patterns at other existing parks with similar features in the nearby cities of Belmont, Redwood City, and San Mateo. Background data collected for other existing parks included the type of athletic events, their seasonal and daily timing, peak use hours, and the number of events per day. The estimates of total use during each phase of the Landscape Plan are intended to be conservative, assuming concurrent use of multiple park features. Regular daily use over the course of a year would be considerably less than the estimated total use in Table 6. However, estimated peak use is appropriate for the purpose of a conservative analysis of impacts related to transportation and noise.

The use of athletic field improvements under the Landscape Plan (i.e., a reconstructed ballfield and new soccer/lacrosse field) would generally be highest during the summer, when the Menlo Park Legends or other athletic groups would be most active at the reconstructed ballfield. The County also anticipates that lacrosse would typically occur during the spring and fall seasons, with practices usually taking place during the week and games on the weekends. Concurrent use of the baseball and soccer/lacrosse field is anticipated. The park would typically accommodate either soccer or lacrosse use at any given time; however, soccer and lacrosse events could be concurrent on weekdays if one group were to use the ballfield. It should be noted that the proposed Landscape Plan would not, in itself, include programming and scheduling of athletic events, but the proposed athletic fields would accommodate anticipated demand from local user groups.

Figure 4 Proposed Landscape Plan



The Flood Park Preferred Plan reflects the community feedback received on the three alternatives. The plan provides a wide range of uses, both active and passive, for a variety of user groups. Fields sports (soccer and lacrosse) have been added, as well as number elements targeted to youth (basketball, pump track, adventure play).

Based on community feedback, uses have been located to minimize the removal of large Oak and Bay trees.

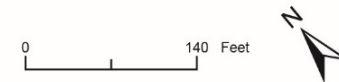


Table 6 Projected Peak Use of Flood County Park under Landscape Plan

Landscape Plan Element	Weekend Summer		Weekday Summer		Weekend Assumptions	Weekday Assumptions
	Daily	Maximum Capacity per Event	Daily	Maximum Capacity per Event		
Shade/market structure	200	75	N/A	N/A	1 event/day	N/A
Play area universal (2-5)	60	20	30	15	4 cycles/day	2 cycles/day
Play area universal (5-12)	120	40	60	30	4 cycles, 1 parent/2 kids	4 cycles, 1 parent/2 kids
Adventure play	70	35	40	20	2 cycles/day	2 cycles/day
Event/group picnic area	200	200	N/A	N/A	1 event	N/A
Small group picnic	120	120	N/A	N/A	8 areas, 15 people/area, 1 cycle/day	N/A
Tennis courts	48	16	32	16	10 playing, 10 waiting, 3 cycles/day	10 playing, 10 waiting, 1 cycle/day
Basketball	60	20	10	10	2 courts, 6 playing, 1 cycle/day	N/A
Sand volleyball	12	12	N/A	N/A		
Pump track	60	30	40	20	N/A	N/A
Ballfield	225	75	60	60	30 players, 45 spectators, 3 cycles/day	30 players, 30 parents, 1 cycle/day
Soccer/lacrosse field	225	75	60	60	30 players, 45 spectators, 3 cycles/day	30 players, 30 parents, 1 cycle/day
Demonstration garden/other passive uses	30	15	10	10	N/A	N/A
Total	1,430	733	342	241		

Source: Gates + Associates 2019

It is anticipated that organized activities at the athletic fields would occur no earlier than 9 A.M. and no later than 8 P.M. No additional lighting that would enable nighttime use of athletic facilities is proposed as part of the Landscape Plan, although path lights that could be manually turned on and off for special events may be installed. The park's existing hours of use would not change.

2.4.1 Grading and Construction

It is anticipated that implementation of the Landscape Plan would occur in three phases: Phase I, Phase II, and Phase III. The Phase I improvements are expected to be completed in approximately the first two years. The County anticipates initiating the improvements identified under Phase I within one to two years after issuance of the EIR, with construction estimated to take from a year to eighteen months. During this construction period, the portion of the park to be improved would be closed to public access. Phases II and III would be implemented subsequent to Phase I, as funding permits. While precise timeframes are uncertain, the County's goal would be to implement Phase II within five to seven years and Phase III within seven to ten years so that the revitalization of Flood County Park is completed within ten years of issuance of the EIR.

During Phase I, the northern portion of the park stretching from the proposed central promenade to the north and east would be graded. The area of grading in this phase would total approximately nine acres, including 3.4 acres at the ballfield and 1.6 acres at the soccer/lacrosse field. Grading activity would be required primarily to raise the ground surface above the SFPUC pipelines; reconstruct the ballfield; install a soccer/lacrosse field, pump track, and new underground utilities; demolish the existing playground, the adobe restroom next to the existing tennis courts, and asphalt paths; remove the foundations at the existing tennis courts; and reuse base rock from the existing pétanque court.

It is assumed that up to eight inches of existing soil would be excavated and exported offsite to prepare for construction of the ballfield and soccer/lacrosse field, and two feet of excavation would be required for the new sand volleyball courts. Soil export during construction would total an estimated 5,630 cubic yards. Based on February 2015 potholing in the SFPUC right-of-way at the ballfield, the ground surface at the reconstructed ballfield and the new soccer/lacrosse field would need to be raised by approximately six inches to provide adequate soil cover over the water pipelines. It is conservatively estimated that the County would need to import 4,370 cubic yards of soil to provide six inches of additional soil cover at the ballfield and soccer/lacrosse field, and to provide a two-foot base for the sand volleyball courts.

SFPUC's Land Engineering Requirements would restrict the type of construction activity allowed within 20 feet of the centerline of its pipelines. No mechanical excavation is allowed within 24 inches of SFPUC pipelines, and digging within 24 inches of pipeline must be done with hand tool. In addition, vibratory compaction equipment is prohibited within the right-of-way except with written approval from the Commission. SFPUC also restricts the weight class of vehicles in its right-of-way to no greater than the American Association of State Highway and Transportation Officials (AASHTO) Standard H-10 Loading.

As documented in the Tree Report prepared by Gates + Associates for the Landscape Plan in July 2016, ground disturbance for the proposed recreational facilities would involve removal of an estimated 78 trees from the Flood County Park. The Parks Department would plant or replant trees for accenting, screening, or other purposes as space allows, with a preference for native trees.

2.4.2 Site Access

The Landscape Plan would not involve changes to parking and access, except for a new drop-off area on-site. Flood County Park's existing vehicular access from Bay Road, via the entrance gate at the southwest corner of the park, would be retained, as would the existing asphalt parking lot on the western edge of the site. Pedestrians also would retain access to the park through gaps in a chain-link fence along Bay Road and at the eastern gate from Iris Lane.

2.5 Project Objectives

The applicant's objectives for the proposed Landscape Plan are as follows:

- To repair and update park features and core infrastructure components
- To meet demand for active recreation facilities in San Mateo County by increasing offerings of sports
- To provide a variety of uses for a range of user groups, including youth
- To optimize preservation of oak woodland

2.6 Required Approvals

The proposed project would require the discretionary approval of the County of San Mateo, who holds approval authority with respect to the Landscape Plan and EIR certification. In addition, the project may require approval by SFPUC of an updated Revocable License for secondary recreational use of its pipeline right-of-way.

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3 Environmental Impact Analysis

This section discusses the possible environmental effects of the project for the issue areas that were identified through the NOP process as having the potential to experience significant impacts.

“Significant effect” is defined by the *CEQA Guidelines* Section 15382 as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.”

The assessment of environmental effects contained in each issue area begins with a discussion of the setting. Following the setting is a discussion of the project’s impacts. Within the impact analysis, the first subsection identifies the methodologies used and the “significance thresholds,” which are those criteria used for this analysis to determine whether potential impacts are significant. The next subsection describes the impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. The significance of the project’s environmental impacts was identified based on the following classifications:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved.
- **Less than Significant with Mitigation.** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings to be made.
- **Less than Significant.** An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **Beneficial.** An impact that would reduce existing environmental problems or hazards.

The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other future development in the area.

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3.1 Air Quality

This section discusses the Landscape Plan's potential impacts to regional and local air quality. Both temporary impacts related to construction and long-term impacts associated with the project are discussed. Traffic projections used in emissions estimates are based on the revised Traffic Impact Study for the Flood County Park Landscape Plan prepared by W-Trans (June 2019). The traffic study is included as Appendix D to this EIR.

3.1.1 Setting

Regional Climate and Meteorology

The project site is in San Mateo County, which is located on the peninsula region of the San Francisco Bay Area Air Basin (SFBAAB). The Santa Cruz Mountains extend to the center of the peninsula, with elevations above 2,000 feet at the southern end of the peninsula, decreasing to 500 feet around South San Francisco. Coastal towns experience cool, foggy weather during the summer, while cities along the southeastern part of the peninsula experience warmer temperatures and fewer foggy days due to the ridgeline blocking the marine layer. The average daytime high temperature in the summer is in the high 70s, while the average nighttime low temperature in the winter is in the high 30s and low 40s. The winds also play a large role in controlling the climate in the area, and annual average winds range between five and ten miles per hour in this region (BAAQMD 2017a).

Air pollutant emissions within the SFBAAB are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include sources such as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources are operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment such as when high winds suspend fine dust particles.

Air Pollutants of Primary Concern

The federal and State Clean Air Acts mandate the control and reduction of certain air pollutants. Under these Acts, the U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for certain "criteria" pollutants. Ambient air pollutant concentrations are affected by the rates and distributions of corresponding air pollutant emissions, as well as by the climatic and topographic influences discussed above. The primary determinant of concentrations of non-reactive pollutants (such as carbon monoxide and suspended particulate matter) is proximity to major sources. Ambient CO levels in particular usually closely follow the spatial and temporal distributions of vehicular traffic. A discussion of primary criteria pollutants is provided below.

Ozone

Ozone is a colorless gas with a pungent odor. Most ozone in the atmosphere is formed as a result of the interaction of ultraviolet light, reactive organic gases (ROG), and oxides of nitrogen (NO_x). ROG (the organic compound fraction relevant to ozone formation, and sufficiently equivalent for the purposes of this analysis to volatile organic compounds, or VOC) is composed of non-methane hydrocarbons (with some specific exclusions). NO_x is made of different chemical combinations of nitrogen and oxygen, mainly NO and NO_2 . A highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of ozone tend to exist only while high ROG and NO_x levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional rather than local scale, ozone is considered a regional pollutant.

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless gas. CO causes a number of health problems including fatigue, headache, confusion, and dizziness. The incomplete combustion of petroleum fuels in on-road vehicles and at power plants is a major cause of CO. CO is also produced from burning wood in wood stoves and fireplaces. CO tends to dissipate rapidly into the atmosphere; consequently, violations of the State CO standard are generally associated with major roadway intersections during peak-hour traffic conditions. Localized carbon monoxide “hotspots” can occur at intersections and along roadway segment with heavy peak-hour traffic moving at slow speeds.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2 , creating the mixture of NO and NO_2 commonly called NO_x . NO_2 is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. NO_2 absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

Suspended Particulates

PM_{10} is small particulate matter measuring 10 microns in diameter or less, while $\text{PM}_{2.5}$ is fine particulate matter measuring 2.5 microns in diameter or less. Suspended particulates are mostly dust particles, nitrates, and sulfates. They are a by-product of fuel combustion and wind erosion of soil and unpaved roads, and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates ($\text{PM}_{2.5}$) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause

permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Lead

Lead is a metal found naturally in the environment, as well as in manufacturing products. The major sources of lead emissions historically have been mobile and industrial sources. As a result of the phase-out of leaded gasoline, as discussed below, metal processing currently is the primary source of lead emissions. The highest level of lead in the air is generally found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers.

In the early 1970s, the U.S. EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The U.S. EPA completed the ban prohibiting the use of leaded gasoline in highway vehicles in December 1995. As a result of the U.S. EPA's regulatory efforts to remove lead from gasoline, lead concentrations have declined substantially over the past several decades. The most dramatic reductions in lead emissions occurred prior to 1990 due to the removal of lead from gasoline sold for most highway vehicles. Lead emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries at least in part as a result of national emissions standards for hazardous air pollutants (U.S. EPA 2013).

Current Ambient Air Quality

CARB and the U.S. EPA established ambient air quality standards for major pollutants, including ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead, and fine particulates (PM₁₀ and PM_{2.5}). Standards have been set at levels intended to be protective of public health. California standards are generally more restrictive than federal standards for each of these pollutants.

Local air districts and CARB monitor ambient air quality to assure that air quality standards are met and, if they are not met, to also develop strategies to meet the standards. Air quality monitoring stations measure pollutant ground-level concentrations (typically, ten feet above ground level). Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or "non-attainment." Some areas are unclassified, which means no monitoring data are available. Unclassified areas are considered to be in attainment. Table 7 summarizes the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS) for each of these pollutants as well as the attainment status of the SFBAAB, which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD).

Table 7 Ambient Air Quality Standards & Basin Attainment Status

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone	8 Hour	0.070 ppm	N	0.070 ppm	N
	1 Hour	0.09 ppm	N		
Carbon Monoxide	8 Hour	9.0 ppm	A	9 ppm	A
	1 Hour	20 ppm	A	35 ppm	A
Nitrogen Dioxide	1 Hour	0.18 ppm	A	0.100 ppm	U
	Annual Arithmetic Mean	0.030 ppm		0.053 ppm	A
Sulfur Dioxide	24 Hour	0.04 ppm	A	0.14 ppm	A
	1 Hour	0.25 ppm	A	0.075 ppm	A
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	N		
	24 Hour	50 µg/m ³	N	150 µg/m ³	U
Particulate Matter - Fine (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	N	12 µg/m ³	U/A
	24 Hour			35 µg/m ³	N
Sulfates	24 Hour	25 µg/m ³	A		
Lead	Rolling 3 Month Average			0.15 µg/m ³	
	30 Day Average	1.5 µg/m ³			A
Hydrogen Sulfide	1 Hour	0.03 ppm	U		
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm	No information available		
Visibility Reducing particles	8 Hour (10:00 to 18:00 PST)		U		

A=Attainment; N=Nonattainment; U=Unclassified; mg/m³=milligrams per cubic meter; ppm=parts per million; µg/m³=micrograms per cubic meter
 Sources: BAAQMD 2017b

As shown in Table 7, the SFBAAB is in nonattainment for the federal standards for ozone and PM_{2.5}. The SFBAAB is also in nonattainment for the State standard for ozone as well as PM₁₀ and PM_{2.5}.

The Redwood City Monitoring Station is the only BAAQMD-operated monitoring station located in San Mateo County and is approximately 1.7 miles southeast of the project site. Table 8 summarizes the representative annual air quality data for the project site between the years 2016 and 2018 at the Redwood City Monitoring Station for all criteria pollutants, except PM₁₀ since it was unavailable. Data for PM₁₀ was obtained from the next closest station, the San Jose-Jackson Street Monitoring Station, which is located approximately 17.7 miles southeast of the project site. As shown in Table 8, 1-hour ozone exceeded the State threshold twice in 2017, 8-hour ozone exceeded State and federal thresholds twice in 2017, PM₁₀ exceeded the State threshold six times in 2017 and four times in 2018, and PM_{2.5} exceeded the federal threshold six times in 2017 and 13 times in 2018. The impact analysis below considers the project's contributions to excessive concentrations of air pollutants.

Table 8 Current Ambient Air Quality Data

Pollutant	2016	2017	2018
Ozone (ppm), Worst 1-Hour	0.075	0.115	0.067
Number of days of State exceedances (>0.09 ppm)	0	2	0
Ozone (ppm), 8-Hour Average	0.060	0.086	0.049
Number of days of State exceedances (>0.07 ppm)	0	2	0
Number of days of Federal exceedances (>0.07 ppm)	0	2	0
Carbon Monoxide (ppm), Highest 8-Hour Average	1.1	1.4	1.7
Number of days of above State or Federal standard (>9.0 ppm)	0	0	0
Particulate Matter <10 microns, $\mu\text{g}/\text{m}^3$, Worst 24 Hours	41	70	122
Number of days above State standard (>50 $\mu\text{g}/\text{m}^3$)	0	6	4
Number of days above Federal standard (>150 $\mu\text{g}/\text{m}^3$)	0	0	0
Particulate Matter <2.5 microns, $\mu\text{g}/\text{m}^3$, Worst 24 Hours	19.5	60.8	120.9
Number of days above Federal standard (>35 $\mu\text{g}/\text{m}^3$)	0	6	13

ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
 Redwood City Monitoring Station was used for all pollutants except PM_{10} , which used data from the San Jose-Jackson Street Monitoring Station.
 Source: CARB 2019

3.1.2 Regulatory Setting

The Federal Clean Air Act (CAA) governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. These laws are administered by the CARB at the State level and by the Air Quality Management Districts at the regional and local levels. The BAAQMD regulates air quality at the regional level, which includes the nine-county Bay Area.

Federal

The U.S. EPA is responsible for enforcing the federal CAA. The U.S. EPA is also responsible for establishing the National Ambient Air Quality Standards (NAAQS). The NAAQS are required under the 1977 CAA and subsequent amendments. The EPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. The agency has jurisdiction over emission sources outside state waters (e.g. beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission standards established by the CARB.

State

In California, the CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for meeting the State requirements of the federal CAA, administering the California CAA, and establishing the California Ambient Air Quality Standards (CAAQS). The California CAA, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and

visibility reducing particles. The CARB regulates mobile air pollution sources, such as motor vehicles. The agency is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. The CARB established passenger vehicle fuel specifications, which became effective on March 1996. The CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level.

Regional

The BAAQMD is primarily responsible for assuring that the federal and State ambient air quality standards are attained and maintained in the Bay Area. The BAAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, as well as many other activities.

The BAAQMD adopted the 2017 Clean Air Plan (2017 Plan) on April 19, 2017 as an update to the 2010 Clean Air Plan. The 2017 Plan, which focuses on protecting public health and the climate, defines an integrated, multi-pollutant control strategy that includes all feasible measures to reduce emissions of ozone precursors (including transport of ozone and its precursors to neighboring air basins), fine particulate matter (PM), and toxic air contaminants (TACs). To protect public health, the control strategy will decrease population exposure to PM and TACs in communities that are most impacted by air pollution with the goal of eliminating disparities in exposure to air pollution between communities. The control strategy will protect the climate by reducing greenhouse gas emissions and developing a long-range vision of how the Bay Area could look and function in a year 2050 post-carbon economy (BAAQMD 2017c).

3.1.3 Sensitive Receptors

Certain population groups are more sensitive to air pollution than the general population; in particular, children, the elderly, and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases, are considered sensitive receptors. Sensitive receptors that are in proximity to localized sources of particulate matter, toxics, and carbon monoxide are of particular concern. According to BAAQMD, sensitive receptors include residences, schools and school yards, parks and playgrounds, daycare centers, nursing homes, and medical facilities (BAAQMD 2017a). Since the project is a park in a residential neighborhood, sensitive receptors would be located at the park as well as the surrounding residences.

3.1.4 Impact Analysis

Methodology and Significance Thresholds

This analysis uses the BAAQMD's May 2017 CEQA Air Quality Guidelines to evaluate air quality. The May 2017 CEQA Air Quality Guidelines include revisions made to the 2010 Guidelines, addressing the California Supreme Court's 2015 opinion in the *Cal. Bldg. Indus. Ass'n vs. Bay Area Air Quality Mgmt. Dist.*, 62 Cal. 4th 369 (BAAQMD 2017a).

Significance Thresholds

Based on San Mateo County's *Initial Study Environmental Evaluation Checklist*, impacts related to air quality from the proposed project would be significant if the project would:

- 1 Conflict with or obstruct implementation of the applicable air quality plan;
- 2 Violate any air quality standard or contribute significantly to an existing or projected air quality violation;
- 3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- 4 Expose sensitive receptors to significant pollutant concentrations, as defined by BAAQMD;
- 5 Create objectionable odors affecting a significant number of people; and/or
- 6 Generate pollutants (hydrocarbon, thermal odor, dust or smoke particulates, radiation, etc.) that will violate existing standards of air quality on-site or in the surrounding area.

Because the project would not add new sources of odors, expose people to any existing sources of odors, or generate industrial pollutants, Thresholds 5 and 6 are discussed in Section 5, *Effects Found Not to Be Significant*, in the original Draft EIR that was published in September 2017.

The BAAQMD CEQA Air Quality Guidelines quantify air quality thresholds with defined numeric values and evaluation criteria for pollutant emissions. Although plan-level thresholds would be most appropriate for the proposed long-term Landscape Plan, the BAAQMD CEQA Air Quality Guidelines have no plan-level significance thresholds; instead, this analysis compares expected emissions from recreational elements in the Landscape Plan to quantitative project-level thresholds in the Air Quality Guidelines. These project-level thresholds, listed below, represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the Basin's existing air quality conditions.

Construction Emissions

Impacts related to the project's construction emissions would be significant if these emissions exceeded the following thresholds:

- 54 pounds per day reactive organic gases (ROG)
- 54 pounds per day oxides of nitrogen (NO_x)
- 82 pounds per day PM₁₀ (exhaust only)
- 54 pounds per day PM_{2.5} (exhaust only)

Operational Emissions

Impacts from the project's direct and/or indirect operational emissions would be significant if they exceeded the following thresholds:

- 54 pounds per day reactive organic gases (ROG)
- 54 pounds per day oxides of nitrogen (NO_x)
- 82 pounds per day PM₁₀
- 54 pounds per day PM_{2.5}

Direct emissions are emitted on a site and include emissions from stationary sources and on-site mobile equipment, if applicable. Examples of land uses and activities that generate direct emissions are industrial operations and sources subject to an operating permit by the BAAQMD. Indirect emissions come from mobile sources that access the project site, but generally are emitted off-site. For many types of land development projects, the principal source of air pollutant emissions is the motor vehicle trips generated by the project.

Localized Carbon Monoxide Concentrations

A project's indirect CO emissions would be significant if they contribute to a violation of the State standards for CO (9.0 ppm averaged over 8 hours and 20 ppm over 1 hour).

Toxic Air Contaminant Emissions

Toxic air contaminants (TACs), including fine diesel particulates (PM_{2.5}), can have significant health impacts on local communities. The BAAQMD's CEQA Air Quality Guidelines sets thresholds applicable to projects that would site new sensitive receptors in proximity to permitted or non-permitted sources of TAC or PM_{2.5} emissions. If impacts due to emissions of TACs or PM_{2.5} from any individual source would exceed any of the thresholds listed below, the project would result in a significant impact:

- Non-compliance with a Community Risk Reduction Plan
- An excess cancer risk level of more than 10 in one million (10E-06), or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 from any individual source would be a significant cumulatively considerable contribution
- An incremental increase of greater than 0.3 micrograms per cubic meter (µg/m³) annual average PM_{2.5} from any individual source would be a significant cumulatively considerable contribution

Methodology

The significance thresholds described in the previous section represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. All proposed recreational improvements in the Landscape Plan would result in temporary construction-related and long-term operational emissions. At this time, only the Phase I improvements are defined to an extent that would warrant project-level analysis. This phase is analyzed on a project-level basis. However, the proposed Phase II and III improvements are not defined to a level that would warrant project-level analysis and thus it would be speculative to include project-level impacts as part of this analysis. Rather, impacts for Phases II and III are discussed qualitatively. Because Phase I includes the most substantial recreational improvements in the Landscape Plan, the elements in following phases are assumed to result in similar or fewer emissions.

Construction Emissions

Emissions from construction activity during Phase I were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. Construction was modeled to begin in November 2019 and end in February 2021.¹ Phase I would involve demolition of structures including the

¹ Although construction of Phase I elements could begin as late as 2021, the EIR's modeling of air pollutant and greenhouse gas emissions makes a conservative assumption that construction would begin in 2019. This assumption is more conservative because State standards for energy use become progressively more stringent and fuel economy in motor vehicles is projected to improve in future years.

existing playground, tennis courts, adobe Restroom D building, asphalt paths, and concrete, which total approximately 54,000 square feet in surface area. Demolition would occur first, followed by site preparation, grading, construction of recreational facilities, and paving. Since approximately nine acres would be graded during Phase I, the grading phase was extended to 60 days based on the number of hauling trips required to account for approximately 4,370 cubic yards imported to the site and approximately 5,630 cubic yards exported from the site. Average daily emissions from project construction were calculated using CalEEMod, including both on-site and off-site activities. On-site activities would consist of the operation of off-road construction equipment, as well as on-site truck travel (e.g., haul trucks, water trucks, dump trucks, and concrete trucks), whereas off-site sources would be emissions from construction vehicle trips.

Operational Emissions

CalEEMod was used to estimate emissions from the long-term operation of Phase I improvements. Operational emissions included mobile source emissions, area source emissions, and emissions from energy use. Mobile source emissions would be generated by the increase in motor vehicle trips to and from the project site associated with operation of the project. This analysis used projections of daily project-generated vehicle trips from the Traffic Impact Study prepared by W-Trans in June 2019 (see Appendix D). Area source emissions are generated by landscape maintenance including pesticide and fertilizer use. Emissions attributed to energy use include natural gas consumption for space and water heating.

Localized Carbon Monoxide Concentrations

The BAAQMD recommends CO “hotspot” analysis for a project if the addition of project traffic would increase traffic volumes at affected intersections to more than 44,000 vehicles per hour. Based on the existing peak-hour turning volumes at intersections presented in the Traffic Impact Study prepared by W-Trans, no intersections affected by the project would handle more than 44,000 vehicles per hour (Appendix D); therefore, no intersection-specific CO modeling is required.

Toxic Air Contaminant Emissions

Local community risk and hazard impacts are associated with toxic air contaminants (TACs) and PM_{2.5} because emissions of these pollutants can have significant health impacts at the local level. BAAQMD’s CEQA Air Quality Guidelines include risk and hazard thresholds that are intended to apply to projects that would site new permitted or non-permitted sources in proximity to receptors and for projects that would site new sensitive receptors in proximity to permitted or non-permitted sources of TAC or PM_{2.5} emissions. According to CARB, parks are considered land uses where sensitive individuals are most likely to spend time. The main source of TACs at the project site is U.S. 101, which is located approximately 350 feet northeast of the project boundary.

Project Impacts

Threshold 1 Conflict with or obstruct implementation of the applicable air quality plan.

Impact AQ-1 The project would not contribute to population growth and would be consistent with the growth assumptions in the BAAQMD 2017 Clean Air Plan. This impact would be less than significant.

To be consistent with an air quality management plan (AQMP), a project must conform to the local General Plan and must not result in or contribute to an exceedance of the local jurisdiction's forecasted future population. A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding the forecasts used in the development of the AQMP. Population growth would lead to increased vehicle use, energy consumption, and associated air pollutant emissions.

As discussed in Section 5, *Effects Found Not to Be Significant*, in the original Draft EIR that was published in September 2017, the Landscape Plan would not involve the construction of infrastructure that could induce substantial population growth, such as new or increased capacity sewer or water lines, or the construction of new streets and roads. While the proposed improvements to Flood County Park would make the area more attractive future residents, the improvements in the Landscape Plan would not be a substantial growth-inducing effect in San Mateo County. Therefore, no phases of the Landscape Plan would result in or contribute to an exceedance of San Mateo County's forecasted population, housing, or employment, and the project would thereby be consistent with the BAAQMD's 2017 Clean Air Plan.

Mitigation Measure

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Thresholds 2, 3, 6

Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

Generate pollutants (hydrocarbon, thermal odor, dust or smoke particulates, radiation, etc.) that will violate existing standards of air quality on-site or in the surrounding area.

Impact AQ-2 While Project construction would generate temporary increases in localized air pollutant emissions, these emissions would not exceed BAAQMD's significance thresholds. Therefore, this impact would be less than significant. However, implementation of BAAQMD's Basic Construction Mitigation Measures to reduce fugitive dust and NO_x emissions is recommended to further reduce construction emissions.

Phase I

The construction of proposed recreational improvements during Phase I would generate temporary emissions from three primary sources: the operation of construction vehicles (e.g., scrapers, loaders, and dump trucks); ground disturbance during clearing and grading, which creates fugitive dust; and the application of asphalt, paint, or other oil-based substances. The extent of daily emissions, particularly ROGs and NO_x emissions, generated by construction equipment, would depend on the quantity of equipment used and the hours of operation for each project. The extent of fugitive dust emissions would depend upon the following factors: 1) the amount of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved; and 5) whether transporting excavated materials offsite is necessary.

Construction activities would result in temporary air quality impacts that may vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Construction equipment that would generate criteria air pollutants includes excavators and graders. It is assumed that all construction equipment used would be diesel-powered. Electrically-powered equipment would not result in criteria pollutant or ozone precursor emissions. Therefore, the assumption that equipment would be diesel-powered represents a worst-case assumption for project construction activity.

Table 9 summarizes the estimated maximum daily construction emissions that would occur during Phase I.

Table 9 Construction Emissions – Phase I

Pollutant	Maximum Daily Emissions (pounds per day)	Significance Threshold (pounds per day)	Significant Impact?
ROG	4.4	54	No
NO _x	45.6	54	No
PM ₁₀ (exhaust)	2.4	82	No
PM ₁₀ (total)	20.6	N/A	N/A
PM _{2.5} (exhaust)	2.2	54	No
PM _{2.5} (total)	12.2	N/A	N/A

See Appendix B for CalEEMod worksheets. For a conservative estimate, winter emissions were used.

As shown in Table 9, construction emissions during Phase I would not exceed BAAQMD project-level thresholds for construction. Furthermore, the maximum daily construction emissions provide a conservative estimate because grading for all Phase I improvements were modeled over a continuous 60-day period. Construction activities would not generate substantial amounts of pollutants such as hydrocarbons, thermal odor, dust or smoke particulates, or radiation. Therefore, Phase I would have a less than significant impact from construction emissions.

Phases II and III

The construction of recreational improvements during Phases II and III of the Landscape Plan would generate short-term emissions. Specific details of each improvement are not known at this time, except for Phase I, and thus emissions from Phases II and III cannot be estimated. Phase I would involve the most intensive development under the Landscape Plan, including grading of nine acres within an estimated 60 days and construction of new sports fields. Phases II and III would involve

smaller-scale improvement projects such as picnic area renovations and pathways. Projects during Phases II and III would involve far less grading and would be more distributed over time, as the County plans to implement Phase II within five to seven years and Phase III within seven to ten years. Because of the smaller scale of remaining recreational improvements, it is anticipated that they would generate fewer emissions than those shown in Table 9 for Phase I. Therefore, Phases II and III would also have a less than significant impact from construction emissions.

Mitigation Measures

Although no mitigation is required, BAAQMD recommends that all projects implement the following Basic Construction Mitigation Measures to meet the best management practices threshold for fugitive dust (BAAQMD 2017a):

- 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 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 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

In addition, the following BAAQMD measure suggested is recommended to reduce NO_x emissions from off-road equipment because these emissions would be near the threshold of 54 pounds per day (BAAQMD 2017a):

- The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NO_x reduction and 45 percent PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.

Significance After Mitigation

This impact would be less than significant without mitigation. Nonetheless, implementation of measures recommended by BAAQMD for fugitive dust and NO_x would further reduce this less than significant impact.

Thresholds 2, 3

Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

Impact AQ-3 Operation of the proposed project would generate air pollutant emissions, but emissions would not exceed BAAQMD significance thresholds. Impacts related to operational emissions would be less than significant.

Phase I

Operational emissions primarily include mobile source emissions, which are generated by the increase in motor vehicle trips to and from the project site. Operational emissions would also result from area sources, which would increase due to landscaping maintenance (pesticide and fertilizer use). To determine whether a regional air quality impact would occur, operational emissions were compared with the BAAQMD's project-level thresholds.

Table 10 summarizes the estimated daily operational emissions that would occur during Phase I of the Landscape Plan.

Table 10 Operational Emissions – Phase I

Pollutant	Maximum Daily Emissions (pounds per day)	Significance Threshold (pounds per day)	Significant Impact?
ROG	0.9	54	No
NO _x	2.7	54	No
PM ₁₀	3.1	82	No
PM _{2.5}	0.8	54	No

See Appendix B for CalEEMod worksheets. For a conservative estimate, winter emissions were used.

Because maximum daily operational emissions would not exceed the BAAQMD's project-level thresholds, Phase I would have a less than significant impact from operational emissions.

Phases II and III

As discussed above, the specific details of recreational improvements proposed for Phases II and III are not known at this time. The operation of Phase I improvements would generate the most vehicle trips and associated mobile emissions because of organized activities at the proposed athletic fields. In comparison, the smaller passive recreational facilities proposed in Phases II and III, such as picnic areas and a new playground, would generate fewer vehicle trips and mobile emissions. Thus, Phases II and III are anticipated to generate fewer operational emissions of criteria

air pollutants (less than 3.1 pounds per day) as compared to the Phase I emissions shown in Table 10. Therefore, operation of Phases II and III would not have an individually or cumulatively significant impact on air quality. In combination, Phases I through III would generate operational emissions of criteria air pollutants of no greater than 6 pounds per day, which would not exceed the significance thresholds shown in Table 10. Therefore, the Landscape Plan as a whole would have a less than significant impact from operational emissions.

Mitigation Measure

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Threshold 4

Expose sensitive receptors to significant pollutant concentrations, as defined by BAAQMD.

Impact AQ-4	The project would not expose sensitive receptors to substantial pollutant concentrations associated with construction dust, CO hotspots, or toxic air contaminants. Impacts related to these localized pollutants would be less than significant.
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Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Construction-related emissions such as dust could result in adverse health risks to nearby sensitive receptors; however, emissions during Phase I as shown in Table 9 would not exceed BAAQMD thresholds, and emissions during Phases II and III would not exceed those of Phase I. Adherence to BAAQMD's Basic Construction Mitigation Measures, as recommended in Impact AQ-2, would further reduce exposure to construction dust.

Since the project would add athletic facilities and improve existing park features, an increase in attendance at the park would be expected. Increased attendance could lead to an increase in traffic at congested roadways or intersections. The BAAQMD recommends a CO "hotspot" analysis for a project if the addition of project traffic would increase traffic volumes at affected intersections to more than 44,000 vehicles per hours. However, based on the intersection turning volumes presented in the Traffic Impact Study prepared by W-Trans, vehicle trips generated by the Landscape Plan would not result in more than 44,000 vehicles per hour at nearby intersections. Thus, the project does not require intersection-specific CO modeling and would not generate localized carbon monoxide concentrations.

The main source of toxic air contaminants (TACs) at the project site is U.S. 101, which runs approximately 350 feet northeast of the project boundary. Since an increase in public use would be expected, new users may be exposed to TACs near the project site. However, it is expected that, at a maximum, park users would only visit for a couple of hours per day (or even per week). Due to this low duration of exposure, park users would not be exposed to TACs for long periods of time that would result in an increase in cancer risk of greater than 10 in a million or a non-cancer hazard index greater than 1.0.

Mitigation Measure

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Cumulative Impacts

The SFBAAB is in nonattainment for the federal and state standards for ozone, as well as the state standard for particulate matter (PM₁₀ and PM_{2.5}) and the federal standard for 24-hour concentrations of PM_{2.5}. Any growth within the SFBAAB would contribute to existing exceedances of ambient air quality standards when taken as a whole with existing development. However, the project would not result in an increase in regional population or other growth that is not anticipated under the 2017 Clean Air Plan; therefore, implementation of the Clean Air Plan. In addition, according to BAAQMD Air Quality CEQA Guidelines, “if a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region’s existing air quality conditions.” As described above in this section, all air pollutant emissions would be below BAAQMD thresholds, and the Landscape Plan would not result in increased regional population beyond that anticipated in the Clean Air Plan. Therefore, the project’s contribution to cumulative regional air quality impacts would not be cumulatively considerable.

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3.2 Energy

This section discusses the energy impacts of proposed project, following the updated guidance for evaluation of energy impacts in Appendix G of the State *CEQA Guidelines*. Data used to prepare this section were obtained from the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), the California Energy Commission (CEC), the U.S. Department of Energy (DOE), and California Gas and Electric Utilities (CGEU).

3.2.1 Environmental Setting

Energy relates directly to environmental quality. Energy use, when sourced from fossil fuels, can adversely affect air quality and can generate greenhouse gas (GHG) emissions that contribute to climate change. Fossil fuels are burned to create electricity that powers residences and commercial/industrial buildings, heats and cools buildings, and powers vehicles. Transportation energy use is related to the fuel efficiency of cars, trucks, and public transportation; choice of different travel modes such as auto, carpool, and public transit; and miles traveled by these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy.

Energy Supply

Petroleum

CALIFORNIA

California is one of the top producers of petroleum in the nation, with drilling operations occurring throughout the State, but primarily concentrated in Kern and Los Angeles counties. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received in ports in Los Angeles, Long Beach, and the San Francisco Bay area. Crude oil production in California and Alaska is in decline, and California refineries have become increasingly dependent on foreign imports (CEC 2018a). Led by Saudi Arabia and Ecuador, foreign suppliers now produce more than half of the crude oil refined in California (CEC 2018b). According to the U.S. Energy Information Administration (EIA), California's field production of crude oil totaled 174.1 million barrels in 2017 (EIA 2018a).

MENLO PARK

In Menlo Park petroleum fuels are generally purchased by residents and employees. There are nine gas stations located within the city limits. There are existing natural gas transmissions lines, but no gasoline or oil pipelines in city (National Pipeline Mapping System [NPMS] 2019). According to the Division of Oil, Gas, and Geothermal Resources (DOGGR), no abandoned, orphaned, or operating oil wells exist in the city (DOGGR 2019).

Alternative Fuels

A variety of alternative fuels are used to reduce petroleum-based fuel demand. The use of these fuels is encouraged through various statewide regulations and plans, such as the Low Carbon Fuel

Standard and Senate Bill 32. Conventional gasoline and diesel may be replaced, depending on the capability of the vehicle with transportation fuels discussed below.

Hydrogen

Hydrogen is being explored for use in combustion engines and fuel cell electric vehicles. The interest in hydrogen as an alternative transportation fuel stems from its clean-burning qualities, its potential for domestic production, and the fuel cell vehicle's potential for high efficiency, which is two to three times more efficient than gasoline vehicles. Currently, 35 hydrogen refueling stations are located in California; however, none are located in Menlo Park (DOE 2018).

Biodiesel

Biodiesel is a renewable alternative fuel that can be manufactured from vegetable oils, animal fats, or recycled restaurant greases. Biodiesel is biodegradable and cleaner-burning than petroleum-based diesel fuel. Biodiesel can run in any diesel engine generally without alterations, but fueling stations have been slow to make it available. There are currently 10 biodiesel refueling stations in California, none of which is located in Menlo Park (DOE 2018).

Electric Vehicles

Electricity can be used to power electric and plug-in hybrid electric vehicles directly from the power grid. Electricity used to power vehicles is generally provided by the electricity grid and stored in the vehicle's batteries. Fuel cells are being explored as a way to use electricity generated onboard the vehicle to power electric motors. There are two electrical charging stations in Menlo Park (DOE 2018).

Electricity

CALIFORNIA

In 2017, California's in-state electric generation totaled 206,328 gigawatt-hours (GWh) (CEC 2018c). Primary fuel sources for the State's electricity generation in 2017 included natural gas (43.4 percent), large hydro (17.9 percent), solar photovoltaic (PV) (10.6 percent), nuclear (8.7 percent), wind (6.2 percent), geothermal (5.7 percent), small hydro (3.1 percent), biomass (2.8 percent), solar thermal (1.2 percent), coal (<1 percent), petroleum coke (<1 percent), waste heat (<1 percent), and oil (<1 percent) (CEC 2018c). In-state electricity generation capacity reached 79,644 megawatts (MW) in 2017 (CEC 2018c).

CALIFORNIA'S 2018 INTEGRATED ENERGY POLICY REPORT

Every two years, the CEC prepares the Integrated Energy Policy Report (IEPR). This year's update to the IEPR highlights the implementation of California's innovative policies and the role the State played in establishing a clean energy economy. Volume II of the 2018 IEPR was adopted in February of 2019 and provides more detail on several key energy issues and encompasses new analyses, as well as opportunities for public participation. According to the 2018 IEPR, California's electric grid relies increasingly on clean sources of energy such as solar, wind, geothermal, hydroelectricity, and biomass (CEC 2018d). As this transition advances, the grid is also expanding to serve new sectors including electric vehicles, rail, and space and water heating. California has installed more renewable energy than any other state in the United States with 22,250 MW of utility-scale systems operational (CEC 2018d). California's Renewables Portfolio Standard (RPS) establishes increasing

renewable energy procurement requirements for electricity utilities and other load-serving entities. The 2018 IEPR identifies RPS targets of 33 percent renewable energy sources by 2020 and 50 percent renewable energy sources by 2030 (CEC 2018d); however, with the adoption of Senate Bill (SB) 100, discussed further under *Regulatory Setting*, the RPS targets have been amended to 33 percent renewable sources by 2020, 50 percent renewable sources by 2026, 60 percent renewable sources by 2030, and 100 percent carbon-free sources by 2045 (California Legislative Information 2018).

MENLO PARK

Pacific Gas and Electric (PG&E) is responsible for providing power supply to the City of Menlo Park while complying with San Mateo County, State, and federal regulations. PG&E's power system is one of the nation's largest electric and gas utilities and maintains 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines (PG&E 2019a). In 2018, PG&E's power mix, including all PG&E-owned generation plus PG&E's power purchases, consisted of 33 percent renewable resources, including wind, geothermal, biomass, solar, and small hydro, 27 percent nuclear generation, 20 percent natural gas, 18 percent large hydroelectric facilities, and 2 percent unspecified power that is not traceable to specific sources by any auditable contract trail (PG&E 2019b). Although Menlo Park lies within PG&E's electricity service area, the City is a participant to the Peninsula Clean Energy program (Menlo Park 2019).

PENINSULA CLEAN ENERGY

Peninsula Clean Energy (PCE) is a community choice energy (CCE) program that uses PG&E infrastructure to deliver electricity services for energy customers in San Mateo County. PCE provides cleaner energy from renewable resources like water, wind and solar with two power mix options for consumers: one is 50 percent renewable energy (default option), and the second is 100 percent renewable energy at a higher rate. PCE member cities include Atherton, Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Foster City, Half Moon Bay, Hillsborough, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Mateo, Woodside, South San Francisco, and Unincorporated San Mateo County. PCE began providing services to customers in Menlo Park in 2016. PCE has an ambitious goal of designing a diverse power portfolio that will be 100 percent GHG free by 2021 (PCE 2019).

PG&E's 2018 INTEGRATED RESOURCE PLAN

PG&E's 2018 Integrated Resource Plan serves as a roadmap through 2030 that guides PG&E's efforts to supply reliable electricity in an environmentally responsible and cost-effective manner. The Integrated Resource Plan introduces new constraints and considerations into the power system planning process and is intended to help applicable parties understand how load serving entities plan to shape their future energy portfolios to meet the State's clean energy goals. In the 2018 Integrated Resource Plan, PG&E analyzes three scenarios for 2030 that differ in various aspects, including the share of electric vehicles in the statewide fleet and availability of different energy sources. According to these scenarios, PG&E anticipates meeting a 2030 energy load demand of between 36,922 gigawatt hours (GWh) and 37,370 GWh (PG&E 2018c).

Natural Gas

CALIFORNIA

Natural gas continues to play an important and varied role in California. The State's net natural gas production for 2017 was 162.7 billion cubic feet, or approximately 168,720 billion British thermal units (Btu), representing an increase of 3.6 percent from 2016 production (DOGGR 2018b).

The 2018 California Gas Report presents a comprehensive outlook for natural gas requirements and supplies for California through the year 2035. The report is prepared in even-numbered years, followed by a supplemental report in odd-numbered years, in compliance with California Public Utilities Commission (CPUC) Decision D.95-01-039. The projections contained in the California Gas Report are for long-term planning and do not necessarily reflect the day-to-day operational plans of the utilities (CGEU 2018).

California natural gas demand, including volumes not served by utility systems, is expected to decrease at a rate of 0.5 percent per year from 2018 to 2035. The forecast decline is due to a combination of moderate growth in the Natural Gas Vehicle market and across-the-board declines in all other market segments: residential, commercial, electric generation, and industrial markets (CGEU 2018).

Residential gas demand is expected to decrease at an annual average rate of 1.4 percent. Demand in the commercial and industrial markets are expected to increase slightly at an annual rate of 0.2 percent. Stricter codes and standards coupled with more aggressive energy efficiency programs and new goals laid out in SB 350, discussed further under *Regulatory Setting*, are making a significant impact on the forecasted load for the residential, commercial, and industrial markets (CGEU 2018).

For the purposes of load-following as well as backstopping intermittent renewable resource generation, gas-fired generation will continue to be the primary technology to meet the ever-growing demand for electric power; however, overall gas demand for electric generation is expected to decline at 1.4 percent per year for the next 17 years due to more efficient power plants, statewide efforts to minimize greenhouse gas (GHG) emissions through aggressive programs pursuing demand-side reductions, and the acquisition of preferred power generation resources that produce little or no carbon emissions (CGEU 2018).

California's existing gas supply portfolio is regionally diverse and includes supplies from California onshore and offshore sources, Southwestern United States supply sources, the Rocky Mountains, and Canada. Natural gas supplied by PG&E to Menlo Park is sourced primarily by reserves in the Rocky Mountains and Canada (CGEU 2018).

ROCKY MOUNTAIN GAS SUPPLIES

Natural gas obtained from the Rocky Mountain sources is considered to be a viable alternative to the traditional source of natural gas in the Southwestern United States. These natural gas supplies are delivered to the PG&E service area through the Ruby Pipeline via Malin. Access to Rocky Mountain gas is also available through pipeline interconnections with the San Juan Basin and through the Kern River Pipeline. Rocky Mountain gas has increasingly flowed to Midwestern and Pacific Northwest markets (CGEU 2018).

CANADIAN GAS SUPPLIES

Natural gas obtained from Canada and delivered to California is not expected to change significantly. Access to natural gas supplies in Canada are delivered to the PG&E service area through the Gas Transmission Northwest Pipeline via Malin. Only a small share of California gas supplies come from Canada due to the high cost of transport (CGEU 2018).

Biogas

There is growing interest regarding biogas² production potential in California from the following activities:

- Non-hazardous-waste landfills,
- Landfill diversion of organic waste material,
- Wastewater treatment,
- Concentrated animal feeding operations, and
- Food and green waste processing.

When biogas is conditioned and upgraded to pipeline quality specifications, it can be interconnected to a gas utility's pipeline and distributed to a specific customer. Biomethane may also be consumed on-site for a variety of uses, including electrical power generation from internal combustion engines, fuel cells, and turbines, or as a fuel source for natural gas vehicles. Currently, there are instances where biogas is being vented naturally or flared to the atmosphere, rather than being utilized as a valuable renewable resource (CGEU 2018).

MENLO PARK

As no abandoned, orphaned, or active gas wells are located within the City of Menlo Park (DOGGR 2019), the city does not produce any natural gas. The city also does not have any natural gas fueling stations. The closest natural gas fueling station to the city is located in San Carlos, CA (DOE 2019).

Energy Demand

Petroleum

CALIFORNIA

Transportation accounted for nearly 40 percent of California's total energy demand, amounting to approximately 3,116 trillion Btu in 2016 (EIA 2018b). California's transportation sector, including rail and aviation, consumed roughly 574 million barrels of petroleum fuels in 2016 (EIA 2018c). In 2016, petroleum-based fuels were used for approximately 98.4 percent of the State's total transportation activity (EIA 2018c). The CEC produces the California Annual Retail Fuel Outlet Report, which is a compilation of gasoline and diesel fuel sales data from across the State available at the county level. According to the CEC, California's 2017 fuel sales totaled 15,584 million gallons of gasoline and 3,798 million gallons of diesel (CEC 2018e).

² Biogas is a mixture of methane and carbon dioxide produced by the bacterial degradation of organic matter.

SAN MATEO COUNTY

Table 11 shows State and countywide fuel consumption. San Mateo County consumed an estimated 326 million gallons of gasoline and 17 million gallons of diesel fuel in 2017 (CEC 2018e). As the County had a 2017 population of 772,372 (California Department of Finance [DOF] 2018), its annual per capita fuel consumption in 2017 was 422.1 gallons of gasoline and 22.0 gallons of diesel fuel. As shown in Table 11, each person in San Mateo County consumed approximately 53.85 million Btu in transportation fuel in 2017.

Table 11 2017 Annual Gasoline and Diesel Consumption

Fuel Type	San Mateo County	California	Proportion of Statewide Consumption	County per Capita Consumption	County per Capita Consumption (MMBtu)
Gasoline	326,000,000	15,936,000,000	2.0%	422.1	50.83
Diesel	17,000,000	3,798,040,000	0.4%	22.0	3.02
Total	343,000,000	19,734,040,000	—	444.1	53.85

Notes: Diesel and gasoline volumes are expressed in gallons while Btu volumes are expressed in millions of Btu (MMBtu).

Source: CEC 2018e

Electricity

CALIFORNIA

According to the CEC, California consumed approximately 288,613 gigawatt-hours (GWh) in 2017, or approximately 984,749 billion Btu (CEC 2017a). According to the CEC's Energy Consumption Database, residential electricity demand accounted for approximately 32.7 percent of California's electricity consumption in 2017 while non-residential demand account for approximately 67.3 percent (CEC 2017a).

SAN MATEO COUNTY

According to the CEC, San Mateo County consumed approximately 4,367.54 GWh in 2017, or approximately 14,902 billion Btu (CEC 2017a). With a population of 772,372 in 2017 (DOF 2018), San Mateo County's 2017 per capita electricity consumption was approximately 5.6 MWh. As shown in Table 12, San Mateo County's per capita electricity consumption was approximately 19.1 million Btu in 2017.

Table 12 2017 Annual Electricity Consumption

Energy Type	San Mateo County (MWh)	California (MWh)	Proportion of Statewide Consumption	County per Capita Consumption (kWh)	County per Capita Consumption (MMBtu)
Electricity (MWh)	4,367,500	288,613,480.22	1.5%	5,600	19.1

Notes: Electricity consumption volumes for Alameda County and California are expressed in megawatt-hours (MWh) while County per capita consumption is expressed in kilowatt-hours (kWh) and millions of Btu (MMBtu).

Source: CEC 2017a

Natural Gas

CALIFORNIA

In 2017, California consumed a total of 12,571 million U.S. Therms of natural gas, or approximately 1,169 trillion Btu (CEC 2017b). According to the CEC's Energy Consumption Database, residential natural gas demand accounted for approximately 35.5 percent of California's total natural gas demand while non-residential natural gas demand accounted for approximately 64.5 percent (CEC 2017b).

SAN MATEO COUNTY

As shown in Table 13, San Mateo County consumed approximately 211.25 million U.S. Therms of natural gas in 2017, or approximately 21,120 billion Btu (CEC 2017b). With a population of 772,372 in 2017 (DOF 2018), San Mateo County's 2017 per capita natural gas consumption was approximately 27.3 million Btu

Table 13 2017 Annual Natural Gas Consumption

Energy Type	San Mateo County (U.S. Therms)	California (U.S. Therms)	Proportion of Statewide Consumption	County per Capita Consumption (U.S. Therms)	County per Capita Consumption (MMBtu)
Natural Gas	211,250,000	12,571,045,754	1.7%	273.51	27.34

Notes: Natural gas consumption volumes for Alameda County and California are expressed in U.S. Therms while County per capita consumption is expressed in U.S. Therms and millions of Btu (MMBtu).

Source: CEC 2017b

3.2.2 Regulatory Setting

Federal

Energy Independence and Security Act of 2007

The Energy Independence and Security Act, enacted in 2007, is designed to improve vehicle fuel economy and help reduce U.S. dependence on foreign oil. It expands the production of renewable

fuels, reducing dependence on oil, and confronting global climate change. Specifically, it does the following:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard, requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels
- Reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020 – an increase in fuel economy standards of 40 percent

Energy Policy and Conservation Act

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles sold in the U.S. The law placed responsibility on the National Highway Traffic and Safety Administration, a part of the U.S. Department of Transportation, for establishing and regularly updating vehicle standards. The U.S. EPA administers the Corporate Average Fuel Economy program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the Corporate Average Fuel Economy program, the average fuel economy for new light-duty vehicles steadily increased from 13.1 miles per gallon for the 1975 model year to 30.7 miles per gallon for the 2014 model year and is proposed to increase to 54.5 by 2025. Light-duty vehicles include autos, pickups, vans, and sport-utility vehicles.

Energy Star Program

In 1992, the U.S. EPA introduced Energy Star as a voluntary labeling program designed to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specification for maximum energy use established under the program are certified to display the Energy Star label. In 1996, the U.S. EPA joined with the Energy Department to expand the program, which now also includes qualifying commercial and industrial buildings, and homes.

State

California Energy Plan

The CEC is responsible for preparing the California Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The 2008 California Energy Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban designs that reduce vehicle miles travelled (VMT) and accommodate pedestrian and bicycle access.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), the CEC and CARB prepared and adopted in 2003 a joint agency report, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of

motor vehicles, and reduce per capita VMT. One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand. Furthermore, in response to the CEC's 2003 and 2005 *Integrated Energy Policy Reports*, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

Integrated Energy Policy Report

SB 1389 (Chapter 568, Statutes of 2002) required the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The CEC uses these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. The most recent assessment, the *2018 Integrated Energy Policy Report*, contains two volumes. Volume I highlights the implementation of California's innovative policies and the role they have played in establishing a clean energy economy. Volume II, scheduled for completion in February 2019, will provide more detail on several key energy issues and will encompass new analyses, as well as significant opportunities for public participation (CEC 2018d).

Senate Bill 1078: California Renewables Portfolio Standard Program

SB 1078 (Chapter 516, Statutes of 2002), and as expanded under SB 2, established the RPS for electricity supply. The RPS requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. SB 2 expanded this law and required procurement from eligible renewable energy resources to 33 percent by 2020. In addition, electricity providers subject to the RPS must increase their renewable share by at least one percent each year.

Senate Bill X1-2: California Renewable Energy Portfolio Standard

In 2011, the Governor signed SB X1-2, which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 33 percent of their electricity supply from renewable sources by 2020. The California Public Utilities Commission (CPUC) and CEC jointly implement the statewide RPS program through rulemakings and monitoring the activities of electric energy utilities in the State.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Senate Bill 100: California Renewable Energy Portfolio Standard Program: Emissions of Greenhouse Gases

Approved by the Governor on September 10, 2018, SB 100 amends the State's RPS program, which originally called for electricity retailers to ensure 33 percent of electricity generation was sourced from renewable sources by 2020, 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. With implementation of SB 100, electricity retailers must ensure 33 percent of electricity generation is sourced from renewable sources by 2020, 44 percent by 2024, 50 percent by 2026, 52 percent by

2027, and 60 percent by 2030. SB 100 further requires electricity retailers to provide 100 percent zero-carbon electricity generation by 2045.

Assembly Bill 1493: Reduction of Greenhouse Gas Emissions

AB 1493 (Chapter 200, Statutes of 2002), known as the Pavley bill, amended Health and Safety Code sections 42823 and 43018.5 requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light-duty trucks, and other vehicles used for noncommercial personal transportation in California.

Implementation of new regulations prescribed by AB 1493 required that the state of California apply for a waiver under the federal Clean Air Act. Although the U.S. EPA initially denied the waiver in 2008, EPA approved a waiver in June 2009, and in September 2009, CARB approved amendments to its initially adopted regulations to apply the Pavley standards that reduce GHG emissions to new passenger vehicles in model years 2009 through 2016. According to CARB, implementation of the Pavley regulations is expected to reduce fuel consumption while also reducing GHG emissions.

Energy Action Plan

In the October 2005 *Energy Action Plan (EAP) II*, the CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues and research and development activities. The CEC adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other federal, State, and local agencies. The State Alternative Fuels Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Bioenergy Action Plan, Executive Order S-06-06

Executive Order (EO) S-06-06, April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs State agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels in California by 2010, 40 percent by 2020, and 75 percent by 2050. EO S-06-06 also calls for the State to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 Plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications
- Create jobs and stimulate economic development, especially in rural regions of the state
- Reduce fire danger, improve air and water quality, and reduce waste

Title 24, California Code of Regulations

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-residential Buildings. The CEC established Title 24 in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. The standards are updated on an approximately three-year cycle to allow consideration and possible incorporation of new efficient technologies and methods. In 2019, the CEC is updating Title 24 standards with more stringent requirements effective January 1, 2020. All buildings for which an application for a building permit is submitted on or after January 1, 2020, must follow the 2019 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. Nonresidential buildings will use about 30 percent less energy than under the 2016 standards, due mainly to lighting upgrades (CEC 2018f). The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary due to local climatologic, geologic, or topographic conditions, provided these standards exceed those provided in Title 24.

California Green Building Standards Code (2016), California Code of Regulations Title 24, Part 11

California's Green Building Code, referred to as CALGreen, was developed to provide a consistent approach to green building in the State. Having taken effect in January 2016, the most recent version of CALGreen lays out the minimum requirements for newly constructed residential and nonresidential buildings to reduce GHG emissions through improved energy efficiency and process improvements. It also includes voluntary tiers to further encourage building practices that improve public health, safety, and general welfare by promoting a more sustainable design.

Local

San Mateo County Energy Efficiency Climate Action Plan

San Mateo County adopted an Energy Efficiency Climate Action Plan (EECAP) in June 2013. The EECAP's strategies to reduce GHG emissions would also increase energy efficiency. These strategies were based on the County's GHG emissions inventory completed for the baseline year 2005, which quantified community-wide emissions by sector. Reduction measures included in the EECAP provide a diverse mix of regulatory and incentive-based programs to help the County reach its reduction goal of 17 percent below baseline emissions by 2020. The consistency of the Landscape Plan with the EECAP's Reduction Measures 2.4, 3.3, and 3.5 is discussed below in Table 14.

3.2.3 Impact Analysis

Methodology

This analysis categorizes energy consumption in terms of “direct” and “indirect” energy. Direct energy accounts for energy consumed during operation of the project, such as fuel consumed by vehicles, natural gas consumed for power, and electricity consumed for power. Indirect energy is the energy needed for construction and maintenance of the project. The analysis of direct energy involves the quantification of anticipated transportation fuel, natural gas, and electricity consumption for the project and a qualitative discussion of the efficiency, necessity, and wastefulness of the energy consumption. Analysis of indirect energy involves a qualitative discussion of construction and maintenance energy requirements anticipated for the project.

Significance Thresholds

The following thresholds of significance were developed in accordance with Appendix G of the *CEQA Guidelines*. Energy-related impacts would be significant if the project would:

- 7 Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation
- 8 Conflict with or obstruct a State or local plan for renewable energy or energy efficiency

Project Impacts and Mitigation Measures

Threshold 1

Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Impact E-1	The construction and operation of recreational elements under the Landscape Plan would consume energy. However, adherence to State requirements would minimize energy use from construction equipment. The Landscape Plan also would not add recreational elements that require substantially higher on-site energy use or increase vehicle miles traveled in the County. Therefore, it would not result in the wasteful, inefficient, or unnecessary consumption of energy, and this impact would be less than significant.
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Phases I, II, and III

The project would involve the use of energy during construction and operation. Energy use during construction would be primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators. Temporary grid power may also be provided to construction trailers or electric construction equipment. Construction of the project would result in short-term consumption of energy from the use of construction equipment. Title 24 of the California Energy Code, including CALGreen, has specific recycling, construction materials, and energy efficiency standards that would apply to project construction and would minimize wasteful, inefficient, and unnecessary energy consumption. Therefore, construction of the project would not result in potentially significant environmental effects from wasteful, inefficient, or unnecessary consumption of energy.

The long-term operation of recreational facilities would not substantially increase energy consumption. The installation of new utility connections for water, electricity, and natural gas service during Phase I would replace existing connections that already serve the park. Passive recreational improvements proposed under Phases II and III would not require substantial new energy consumption. No additional lighting that would enable nighttime use of athletic facilities is proposed as part of the Landscape Plan, so the proposed athletic fields would not require additional electricity use. Consumption of water could incrementally increase as visitorship to the park rises, but the primary water demand for maintenance of landscaping would not substantially change from existing conditions.

In addition, operation of the project would not substantially increase fuel consumption in San Mateo County. Based on modeling of the Landscape Plan's operational emissions, it is estimated that drivers would accumulate 803,955 vehicle miles traveled to and from Flood County Park on an annual basis. These vehicle miles traveled would result in consumption of approximately 37,000 gallons of gasoline and 6,700 gallons of diesel fuel per year (Appendix B). As discussed in Impact T-2 in Section 3.5, *Transportation and Circulation*, the Landscape Plan would have a negligible effect on existing vehicle miles traveled in San Mateo County (W-Trans 2019). The renovation of the baseball field would shorten trips from active recreation users local to Menlo Park who would no longer have to travel outside the city to access quality athletic fields. It is expected that the main user of the athletic fields would be the Menlo Legends Baseball team that currently uses other fields in Menlo Park and Atherton. Therefore, the Landscape Plan would not result in a substantial increase in fuel consumption from during project operation. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Threshold 2

Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Impact E-2	The project would be consistent with energy efficiency goals contained in the San Mateo County Energy Efficiency Climate Action Plan. Construction and operation of the project would comply with relevant provisions of Title 24 of the California Energy Code. Impacts would be less than significant.
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Phases I, II, and III

As discussed above, San Mateo County adopted the Energy Efficiency Climate Action Plan (EECAP) in 2013. The EECAP builds on local and statewide planning efforts and demonstrates the County's commitment to achieve energy efficiency and mitigate its impact on climate change. Reduction measures and policies included in the EECAP provide a diverse mix of regulatory and incentive-based programs to help the County reach its goal of reducing baseline GHG emissions 17 percent by 2020. As shown in Table 14, the project would be consistent with the EECAP's GHG reduction strategies that specifically target energy efficiency. Although the EECAP's primary purpose is to reduce GHG emissions, many of the GHG reduction strategies in the EECAP target energy efficiency and renewable energy as means to achieving GHG reduction goals.

Table 14 Project Consistency with Applicable San Mateo County's Energy Efficiency Climate Action Plan Measures

EECAP GHG Reduction Strategies	Project Consistency
Reduction Measure 2.4. Facilitate energy efficiency in large institutional energy users, including golf courses, airports, and schools.	Consistent. The Landscape Plan would not involve construction of new buildings that require energy, except for minor restroom facilities.
Reduction Measure 3.3. Require tree planting, shading design, solar orientation, and “cool” hardscapes.	Consistent. A tree-lined promenade is proposed for development during Phase I. In addition, the County would replace protected trees that are removed at a 2 to 1 ratio. New and replacement trees would help meet Goal 3 of the EECAP for energy efficiency in new construction.
Reduction Measure 3.5. Promote green building practices and develop community-wide capacity for energy efficiency in new construction.	Consistent. The Landscape Plan would not involve construction of new buildings that require energy, except for minor restroom facilities.

The project would be consistent with the EECAP and the energy efficiency strategies contained therein. As described in Impact E-1, above, project construction and operation would be required to comply with relevant provisions of Title 24 of the California Energy Code, including CALGreen standards. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Cumulative Impacts

Cumulative development in the project vicinity, especially new residential and commercial projects in the Menlo Park area, would result in increased energy use. However, as for the Landscape Plan, these cumulative projects would be subject to statewide standards in Title 24 and CALGreen to minimize wasteful, inefficient, and unnecessary energy consumption. Operation of the project also would not contribute to a cumulative waste of energy because it would minimally increase energy use beyond existing conditions at Flood County Park and would have a negligible effect on vehicle miles traveled. Therefore, the Landscape Plan in combination with other Menlo Park projects would not result in wasteful or inefficient use of energy, and the project would not result in cumulatively considerable impacts related to energy.

3.3 Greenhouse Gas Emissions

3.3.1 Environmental Setting

Climate Change and Greenhouse Gases

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO₂), methane (CH₄), nitrous oxides (N₂O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills.

Man-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and SF₆ (California Environmental Protection Agency [CalEPA] 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO₂) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as “carbon dioxide equivalent” (CO₂e), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane CH₄ has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule per molecule basis (IPCC 2007).

Greenhouse Gas Emissions Inventories

Federal Emissions Inventory

Total U.S. GHG emissions were 6,586.7 million metric tons (MMT or gigatonne) CO₂e in 2015 (U.S. EPA 2017). Total U.S. emissions have increased by 3.5 percent since 1990; emissions decreased by 2.3 percent from 2014 to 2015 (U.S. EPA 2017). The decrease from 2014 to 2015 was a result of multiple factors, including: (1) substitution from coal to natural gas consumption in the electric power sector; (2) warmer winter conditions in 2015 resulting in a decreased demand for heating fuel in the residential and commercial sectors; and (3) a slight decrease in electricity demand (U.S. EPA 2017). Since 1990, U.S. emissions have increased at an average annual rate of 0.2 percent. In 2015, the industrial and transportation end-use sectors accounted for 29 percent and 27 percent of CO₂ emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16 percent and 17 percent of CO₂ emissions, respectively (U.S. EPA 2017).

California Emissions Inventory

Based on the California Air Resources Board (CARB) California Greenhouse Gas Inventory for 2000-2016, California produced 429.4 million metric tons (MMT) of CO₂e in 2016, achieving its 2020 GHG emission reduction target as emissions fell below 431 MMT of CO₂e (CARB 2018). The major source of greenhouse gas (GHG) emissions in California is associated with transportation, which contributes

41 percent of the state's total GHG emissions. The industrial sector is the second largest source, contributing 23 percent of the state's GHG emissions. Electric power accounts for approximately 16 percent of the total emissions. California's emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per-capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. The annual 2030 statewide target emissions level is 260 MMT of CO₂e (CARB 2017). With implementation of the State's 2017 Scoping Plan, regulated GHG emissions are projected to decline to 260 MMT of CO₂e per year by 2030.

San Mateo County Emissions Inventory

San Mateo County developed an inventory of community-wide emissions for the baseline year 2005, which was used to develop appropriate GHG emissions reduction strategies in the County's 2014 Energy Efficiency and Climate Action Plan. In 2005, San Mateo County produced an estimated 782,080 MT CO₂e (San Mateo County 2014). The transportation sector had the largest contribution at 61 percent, followed by commercial and industrial energy at 21 percent. Residential energy represented 12 percent while off-road represented 5 percent. Solid waste contributed only 1 percent, and agriculture, water, and wastewater represented less than 1 percent.

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The global combined land and ocean temperature data show an increase of about 0.89°C (0.69°C–1.08°C) over the period 1901–2012 and about 0.72°C (0.49°C–0.89°C) over the period 1951–2012 when described by a linear trend. Several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT as well as sea surface temperatures have increased. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014).

Potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA 2010). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could

increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Energy Commission [CEC] 2009).

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR] 2008; CCCC 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. Based on historical data and modeling DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR 2008).

Hydrology and Sea Level Rise

As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. According to *The Impacts of Sea-Level Rise on the California Coast*, prepared by the California Climate Change Center (CCCC) (CCCC 2009), climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 mm per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO] 2013). As a result, sea levels averaged over the last decade were about 8 inches higher than those of 1880 (WMO 2013). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report (2013) predicts a mean sea-level rise of 11-38 inches by 2100. This prediction is more than 50 percent higher than earlier projections of 7-23 inches, when comparing the same emissions scenarios and time periods. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to salt water intrusion. In addition, increased CO₂ emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a \$30 billion annual agricultural industry that produces half of the country's fruits and vegetables. Higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC 2006).

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) in the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006).

3.3.2 Regulatory Setting

The following regulations address both climate change and GHG emissions.

Federal

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. In 2012 the U.S. EPA issued a Final Rule that establishes the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (134 S. Ct. 2427 [2014]) held that U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).

State

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has a numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

California Advanced Clean Cars Program

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I regulates model years from 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (CARB 2011).

Assembly Bill 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020, and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO₂e. The Scoping Plan was approved by CARB on December 11, 2008, and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defines CARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 statewide goals. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (CARB 2017). As noted in the 2017 Climate Change Scoping Plan, California is on track to achieve its 2020 GHG emission reduction targets outlined in AB 32.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts.

Senate Bill 375

Senate Bill (SB) 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan

Planning Organizations (MPO) to prepare a “sustainable communities strategy” (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP).

The Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC) were assigned targets of a 7 percent reduction in GHGs from transportation sources by 2020 and a 15 percent reduction by 2035. ABAG and MTC adopted a RTP/SCS, called Plan Bay Area, which, when implemented, would meet the assigned targets by achieving a 10 percent per capita GHG emissions reduction in 2020 and a 16 percent reduction in 2035.

Senate Bill 32

On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Climate Change Scoping Plan, which provides a framework for achieving the 2030 target (CARB 2017). To meet reduction targets, the 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 1383 and SB 100. The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies.

For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted *CEQA Guidelines* provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

Regional Regulations

Consistent with statewide goals, the Bay Area Air Quality Management District (BAAQMD) has set goals in the 2017 Clean Air Plan to reduce GHG emissions to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050. The 2017 Clean Air Plan, which identifies potential rules, programs, and strategies to reduce GHG emissions, includes 85 control measures to decrease fossil fuel consumption, improve energy efficiency, and decrease emissions of potent GHGs and other pollutants.

Local Regulations

The Energy and Climate Change Element of the San Mateo County General Plan demonstrates the County’s commitment to achieve energy efficiency and mitigate its impact on climate change. The Element includes goals, policies, and implementation strategies to reduce greenhouse gases. In addition, San Mateo County adopted an Energy Efficiency Climate Action Plan (EECAP) in June 2013. The EECAP reductions strategies were based on the GHG emissions inventory completed for the

baseline year 2005, which quantified community-wide emissions by sector. Reduction measures included in the EECAP provide a diverse mix of regulatory and incentive-based programs to help the County reach its reduction goal of 17 percent below baseline emissions by 2020.

3.3.3 Impact Analysis

Based on San Mateo County's *Initial Study Environmental Evaluation Checklist*, impacts related to GHG emissions from the proposed project would be significant if the project would:

- 1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment;
- 2 Conflict with an applicable plan (including a local climate plan), policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases;
- 3 Result in the loss of forestland or conversion of forestland to non-forest uses, such that it would release significant amounts of GHG emissions, or significantly reduce GHG sequestering;
- 4 Expose new or existing structures and/or infrastructure (e.g., leach fields) to accelerated coastal cliff/bluff erosion due to rising sea levels;
- 5 Expose people or structures to a significant risk of loss, injury, or death involving sea level rise;
- 6 Place structures within an anticipated 100-year flood area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; and/or
- 7 Place within an anticipated 100-year flood hazard area structures that would impede or redirect flood flows.

Thresholds 3 through 7 are discussed in Section 5, *Effects Found Not to Be Significant*, in the original Draft EIR that was published in September 2017.

The vast majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (State *CEQA Guidelines*, Section 15355).

Significance Thresholds

In late 2015, the California Supreme Court's Newhall Ranch decision confirmed that there are multiple potential pathways for evaluating GHG emissions consistent with CEQA, depending on the circumstances of a given project (Center for Biological Diversity v. Department of Fish and Wildlife (2015) 62 Cal. 4th 204). The decision also identified the need to analyze both near term and post-2020 emissions, as applicable, stating that an "EIR taking a goal-consistency approach to CEQA significance may in the near future need to consider the project's effects on meeting longer term emissions reduction targets." While not legally binding on local land use agencies, SB 32 extends the statewide AB 32 reduction goal, requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030, and Executive Order S-03-05 has set forth a long-term reduction target to reduce GHG emissions in California by 80 percent below 1990 levels by the year 2050.

Given the recent legislative attention and judicial action regarding post-2020 goals and the scientific evidence that additional GHG reductions are needed through the year 2050, the Association of Environmental Professionals' (AEP) Climate Change Committee published a white paper in October 2016 to provide guidance on defensible GHG thresholds for use in CEQA analyses and GHG reduction targets in climate action plans in light of the change in focus on the 2030 reduction target and questions raised in the Newhall Ranch case. The following methods for assessing construction and operational emissions are described below.

Construction Emissions

The AEP Climate Change Committee white paper stated that construction emissions can be evaluated in one of two methods.

- (1) **Using best management practices (BMPs).** Construction-related emissions would be less than significant if a project implements all feasible BMPs, including alternatively fueled vehicles, reduction of worker trips, and sourcing construction materials from local sources when possible (without substantial cost implications).
- (2) **Amortizing construction emissions over the operational lifetime.** Construction-related emissions are quantified and amortized over the lifetime of a project. The amortized construction emissions are added to the operational emissions to calculate the total annualized emissions. If the annualized emissions are below quantitative thresholds, GHG emissions would be less than significant.

This analysis uses method (2) for construction emissions since it may not be possible to apply all feasible BMPs. Construction emissions were amortized over the operational lifetime in order to quantify GHG emissions.

Operational Emissions

The AEP Climate Change Committee white paper identified seven thresholds for operational emissions. The following four methods described are the most widely used evaluation criteria.

- (1) **Consistency with a qualified GHG reduction plan.** For a project located within a jurisdiction that has adopted a qualified GHG reduction plan (as defined by *CEQA Guidelines* Section 15183.5), GHG emissions would be less than significant if the project is anticipated by the plan and fully consistent with the plan. However, projects with a horizon year beyond 2020 should not tier from a plan that is qualified up to 2020.
- (2) **Bright line thresholds.** There are two types of bright line thresholds:
 - a. Standalone threshold: Emissions exceeding standalone thresholds would be considered significant.
 - b. Screening threshold: Emissions exceeding screening thresholds would require evaluation using a second tier threshold, such as an efficiency threshold or other threshold concept to determine whether project emissions would be considered significant.

However, projects with a horizon year beyond 2020 should take into account the type and amount of land use projects and their expected emissions out to the year 2030.

- (3) **Efficiency thresholds.** Land use sector efficiency thresholds are currently based on AB 32 targets and should not be used for projects with a horizon year beyond 2020. Efficiency metrics should be adjusted for 2030 and include applicable land uses.
- (4) **Percent below “Business as Usual” (BAU).** GHG emissions would be less than significant if the project reduces BAU emissions by the same amount as the statewide 2020 reductions. However, this method is no longer recommended following the Newhall Ranch ruling.

Operational emissions methods (1), (3), and (4) were not applicable. Although the City of Menlo Park has a CAP, it is not considered a qualified GHG reduction plan by BAAQMD standards. The BAAQMD has adopted efficiency thresholds of 4.6 metric tons of carbon dioxide equivalent (MT CO₂e) per service population per year; however, this threshold was based on AB 32 targets and is not applicable for SB 32 consistency. BAU emissions are no longer recommended following the Newhall Ranch ruling.

Although the BAAQMD has adopted a bright line threshold of 1,100 MT CO₂e, this figure is also based on AB 32. A conservative approach would be to assume the threshold would reduce by 40 percent, consistent with SB 32. This would mean that the project’s emissions would not be significant if emissions do not exceed 660 MT CO₂e in 2030.

3.3.4 Methodology

The significance thresholds described in the previous section represent the levels at which a project’s individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the Basin’s existing air quality conditions. All proposed recreational improvements in the Landscape Plan would result in temporary construction-related and long-term operational emissions. At this time, only the Phase I improvements are defined to an extent that would warrant project-level analysis. This phase is analyzed on a project-level basis. However, the proposed Phase II and III improvements are not defined to a level that would warrant project-level analysis and thus it would be speculative to include project-level impacts as part of this analysis. Rather, impacts for Phases II and III are broadly estimated. Because Phase I includes the most substantial recreational improvements in the Landscape Plan, the elements in following phases are assumed to result in similar or fewer emissions. The California Emissions Estimator Model (CalEEMod) version 2016.3.2 was used to calculate construction and operational emissions for Phase I. The analysis focuses on CO₂, CH₄, and N₂O because these make up 98.9 percent of all GHG emissions by volume (IPCC 2007) and are the GHG emissions that would be emitted in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF₆, were also considered for the analysis. However, because the project is a Landscape Plan for a park, the quantity of fluorinated gases would not be significant since fluorinated gases are primarily associated with industrial processes. Emissions of all GHGs were converted into their equivalent GWP in terms of CO₂ (CO₂e). Minimal amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would be emitted; however, these other GHG emissions would not substantially add to the total calculated CO₂e amounts. Calculations were based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper (CAPCOA 2008) and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (CCAR 2009).

Operational Emissions

CalEEMod provides operational emissions of CO₂, N₂O, and CH₄. Emissions associated with area sources, including landscape maintenance, were calculated in CalEEMod and utilize standard

emission rates from CARB, U.S. EPA, and emission factor values provided by the local air district (CalEEMod User Guide 2016).

Emissions from energy use include electricity and natural gas use. The emissions factors for natural gas combustion are based on EPA's AP-42, (*Compilation of Air Pollutant Emissions Factors*) and CCAR. Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CalEEMod User Guide 2016). The default electricity consumption values in CalEEMod include the CEC-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User Guide 2016). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern and Southern California.

For mobile sources, CO₂ and CH₄ emissions were quantified in CalEEMod. Because CalEEMod does not calculate N₂O emissions from mobile sources, N₂O emissions were quantified using the California Climate Action Registry General Reporting Protocol (CAPCOA 2009) direct emissions factors for mobile combustion (see Appendix B for calculations). The estimate of total daily trips associated with the proposed project was based on the traffic study (see Appendix D) and was calculated and extrapolated to derive total annual mileage in CalEEMod. Emission rates for N₂O emissions were based on the vehicle mix output generated by CalEEMod and the emission factors found in the California Climate Action Registry General Reporting Protocol.

Construction Emissions

Construction of the proposed project would generate GHG emissions on a temporary basis primarily due to the operation of construction equipment on-site as well as from vehicles transporting construction workers to and from the project site and heavy trucks to export earth materials offsite. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. CalEEMod was used to estimate emissions resulting from project construction. BAAQMD recommends disclosing construction emissions. These emissions were amortized over a 30-year period and added to operational emissions to calculate the total annualized emissions, as recommended by the AEP Climate Change Committee white paper.

Project Impacts

Threshold 1

Generate greenhouse gas (GHG) emissions (including methane), either directly or indirectly, that may have a significant impact on the environment.

Impact GHG-1	Construction and operation of the proposed recreational facilities in the Landscape Plan would generate GHG emissions. These emissions would not hinder or delay achievement of state GHG reduction targets established by AB 32 or SB 32. Therefore, the project's impact to climate change would be less than significant.
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Phase I

CONSTRUCTION EMISSIONS

Project-related construction emissions are confined to a relatively short period of time in relation to the overall life of the proposed improvements at Flood County Park. Construction of recreational improvements during Phase I would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. As shown in Table 15, this phase of construction would generate an estimated 808 MT CO₂e. Amortized over a 30-year period, construction would generate an estimated 27 MT CO₂e per year.

Table 15 Construction GHG Emissions – Phase I

Year	Phase I Emissions (MT CO ₂ e)
2019	94
2020	655 ¹
2021	59
Total	808 MT CO ₂ e total
Total Amortized over 30 Years	27 MT CO ₂ e per year

See Appendix B for CalEEMod worksheets.

¹ Estimated GHG emissions would be highest in 2020 because it is assumed that most Phase I construction activity would occur in that year.

Combined Construction, Stationary, and Mobile Source Emissions

Table 16 combines the construction, operational, and mobile GHG emissions associated with Phase I. The combined annual emissions for Phase I improvements would be approximately 354 MT CO₂e per year. Since Phase I emissions would not exceed the adjusted BAAQMD threshold, the project would not hinder or delay achievement of state GHG reduction targets established by AB 32 or SB 32.

Table 16 Total GHG Emissions – Phase I

Emission Source	Phase I Emissions (MT CO₂e)
Construction	27
Operational	
Area	<1
Energy	0
Solid Waste	<1
Water	11
Mobile	
CO ₂ and CH ₄	299
N ₂ O	17
Total Emissions	354
BAAQMD Threshold	1,100
Adjusted 2030 BAAQMD Threshold (40% below existing threshold)	660
Threshold Exceeded?	No
See Appendix B for CalEEMod worksheets.	

Phases II and III

At this time, the recreational improvements during Phases II and III are not defined to a level that would enable project-level analysis of associated GHG emissions. However, it is possible to broadly estimate emissions from these phases using Phase I emissions as a point of comparison. As shown in Table 16, the majority of GHG emissions in Phase I would result from increased mobile trips to the project site, driven primarily by new mobile trips associated with use of the proposed athletic fields. These trips to and from athletic fields would be additional to existing use, since Flood County Park does not currently have programmed events at athletic fields. Phases II and III would generate trips associated with use of passive recreational facilities. Most of these facilities would replace or refurbish existing passive recreational elements at Flood County Park (e.g., a children’s playground, picnic areas, pathways) which already generate trips. Whereas the athletic fields in Phase I would have regular events that generate trips throughout the week, the gathering meadow and rehabilitated adobe administrative office building in Phases II and III would have infrequent programmed events and would not generate mobile emissions on a regular basis. Therefore, Phases II and III would generate substantially fewer additional trips and associated mobile emissions than would Phase I.

Phases II and III of the Landscape Plan also would not involve construction of new facilities that demand energy and water, with the exception of a new restroom facility. Additional restrooms would result in a minimal increase in GHG emissions during Phases II and III. However, these phases would not involve construction of new facilities that substantially increase emissions from area sources, energy, solid waste, and water use. Because Phases II and III would generate fewer mobile emissions than Phase I and would minimally increase other operational emissions, it is anticipated that their GHG emissions would be substantially less than the estimated 354 MT CO₂e from Phase I. Therefore, emissions from Phases II and III would not exceed the threshold of 660 MT CO₂e, and

would have a less than significant impact. It is anticipated that additional GHG emissions from all phases of the Landscape Plan combined also would not exceed this threshold. Therefore, overall GHG emissions would also have a less than significant impact.

Mitigation Measure

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Threshold 2

Conflict with an applicable plan (including a local climate action plan), policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Impact GHG-2 Construction and operation of the proposed recreational facilities in the Landscape Plan would be consistent with the San Mateo County Energy Efficiency Climate Action Plan. Therefore, the project's impact related to consistency with plans to address climate change would be less than significant.

As discussed above, San Mateo County adopted the Energy Efficiency Climate Action Plan (EECAP) in 2013. The County's EECAP is a Qualified GHG Reduction Strategy that builds on local and statewide planning efforts. The project would follow Bay-Friendly principles and be consistent with applicable measures listed in the EECAP, as shown in Table 17. Therefore, although the project would generate GHG emissions, project-generated emissions would not hinder or delay achievement of state and GHG reduction targets, and the project would be consistent with the EECAP. This impact would be less than significant.

Table 17 Project Consistency with Applicable San Mateo County's Energy Efficiency Climate Action Plan Measures

EECAP GHG Reduction Strategies	Project Consistency
Reduction Measure 2.4. Facilitate energy efficiency in large institutional energy users, including golf courses, airports, and schools.	Consistent. The Landscape Plan would not involve construction of new buildings that require energy, except for minor restroom facilities. New restrooms would incrementally increase the park's use of energy for lighting and water transport. As discussed in Impact E-1, watering for landscaping would not substantially increase beyond existing conditions at the park and therefore would not require additional energy for the movement of water.
Reduction Measure 3.3. Require tree planting, shading design, solar orientation, and "cool" hardscapes.	Consistent. A tree-lined promenade is proposed for development during Phase I. In addition, protected trees removed for the proposed recreational facilities would be replaced for accenting, screening, or other purposes as space allows, with a preference for native trees.
Reduction Measure 3.5. Promote green building practices and develop community-wide capacity for energy efficiency in new construction.	Consistent. The Landscape Plan would not involve construction of new buildings that require energy, except for minor restroom facilities that would be designed consistent with the State's more stringent energy efficiency standards in the 2019 version of Title 24.
Reduction Measure 6.2. Require larger new projects (including existing projects with major renovations) to evaluate and implement appropriate traffic calming measures at the site, as determined through the plan review process.	Consistent. The Traffic Impact Study prepared by W-Trans for the project did not identify traffic calming measures as necessary to ensure traffic safety. However, Mitigation Measure T-1 to avoid queuing of motor vehicles entering the park gate would minimize the project's effects on traffic congestion and traffic safety. See Section 3.5, <i>Transportation and Circulation</i> , for more details regarding traffic.
Reduction Measure 14.2. Increase the use of grey, rain, and recycled water for landscaping and agricultural purposes throughout the community to reduce the use of potable water.	Consistent. During Phase I, the park would install new facilities, including water, electric, gas, and potentially greywater piping. Greywater piping, if used, would allow the park to use greywater for landscaping.

Mitigation Measure

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Cumulative Impacts

GHG and climate change are by definition cumulative impacts, as they affect the accumulation of greenhouse gases in the atmosphere. As discussed above, emissions associated with the proposed project would be less than significant, and the project's impacts are therefore also cumulatively less than significant.

3.4 Noise

This section evaluates the project's potential impact to local noise conditions. Both temporary construction noise and long-term noise generated by the project are evaluated.

3.4.1 Setting

Overview of Noise and Vibration Measurement

Noise

Noise is defined as unwanted sound that disturbs human activity. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with human hearing response, which is most sensitive to frequencies around 4,000 Hertz (similar to the highest note on a piano) and less sensitive to frequencies below 100 Hertz (similar to a transformer hum).

Sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dB, and a sound that is 10 dB less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is barely perceivable, while 5 dBA changes is considered readily perceivable. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while those along arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate (drop off) at a rate of 6 dB per doubling of distance from point sources such as industrial machinery. Noise from heavily traveled roads typically attenuates at about 3 dB per doubling of distance.

In addition to the instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (L_{eq}). The L_{eq} is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically, L_{eq} is summed over a one-hour period unless noted.

The time period in which noise occurs is also important since nighttime noise tends to disturb people more than daytime noise. Two commonly used noise metrics – the Day-Night average level (Ldn) and the Community Noise Equivalent Level (CNEL) - recognize this fact by weighting hourly noise level over a 24-hour period. The Ldn is a 24-hour average noise level that adds 10 dB to actual nighttime (10:00 P.M. to 7:00 A.M.) noise levels to account for the greater sensitivity to noise during that time period. The CNEL is similar to Ldn, except it also adds a 5 dB penalty for noise occurring during the evening (7:00 P.M. to 10:00 P.M.). Noise levels described by Ldn and CNEL differ by 0.5 dBA, with CNEL being higher.

Vibration

Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Groundborne vibration related to human annoyance is generally related to root mean square (RMS) velocity levels expressed in vibration decibels (VdB). However, construction-related groundborne vibration in relation to its potential for building damage can also be measured in inches per second (in/sec) peak particle velocity (PPV) (Federal Transit Administration 2006). Based on the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment* and the Caltrans' *1992 Transportation-Related Earthborne Vibration, Technical Advisory*, vibration levels decrease by 6 VdB with every doubling of distance.

The background vibration velocity level in residential and educational areas is usually 50 VdB or lower. (FTA 2018). The threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

Noise-Sensitive Receptors

Policy 16.7 in the County of San Mateo's General Plan (1986) defines noise-sensitive land uses as including, but not limited to, residences and institutional uses such as hospitals, schools, and libraries. Flood County Park is surrounded by single-family residential neighborhoods that are sensitive to noise. The nearest single-family residences to the project site are located adjacent to the southeast edge of Flood County Park on Del Norte Avenue and to the northwest on Hedge Road, both within the city limits of Menlo Park, and across Bay Road to the southwest in the town of Atherton. At the residences south of Bay Road, outdoor activity areas such as front yards and basketball courts are located as close as approximately 75 feet from Flood County Park. In addition, the Haven Family House, which provides transitional housing to homeless people, is located adjacent to the northeast side of the park.

Local jurisdictions apply more stringent standards for noise exposure to noise-sensitive receptors than to commercial or industrial uses that are not susceptible to sleep disturbance or other adverse effects. Sensitive land uses generally should not be subjected to noise levels that would be considered intrusive in character. Therefore, the location, hours of operation, type of use, and extent of new development warrant close analysis.

It is important to acknowledge that noise-sensitivity varies not only among land uses but also among individual people at each land use (Menlo Park 2013). For example, individual residents may have high sensitivity to noise for physiological reasons or because of unusual sleeping hours that result in greater sensitivity to daytime noise. Nonetheless, the quantitative noise standards in local ordinances are set with the intention of preserving the peace and quiet of "persons of normal sensitivities," as phrased in Section 4.88.220 of the San Mateo County Ordinance Code.

Existing Noise Conditions and Sources

The primary existing sources of noise near Flood County Park are motor vehicles (e.g., automobiles, buses, trucks, and motorcycles) and aircraft overflights. Roadways that generate noise at Flood County Park and surrounding neighborhoods include U.S. 101, Bay Road, and other local residential streets such as Del Norte Avenue. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create a sustained noise level, and because of its proximity to noise-sensitive uses. Airplanes also fly over and near Flood County Park on a frequent basis, taking off from and descending to airports such as San Francisco International Airport (about 13.5 miles to the northwest) and San Carlos Airport (about 4.5 miles to the northwest). Secondary sources of noise in the vicinity include recreational use and maintenance activities at Flood County Park and the operation of landscaping equipment at nearby residences.

To quantify existing noise levels on and near the project site, five 15-minute noise measurements (L_{eq} dBA) were taken using an ANSI Type II integrating sound level meter. Three measurements were taken on a Sunday afternoon at Flood County Park, April 9, 2017. These measurements were located at the children's playground, a picnic area at the southeast edge of the site, and the tennis court near the eastern corner of the site. These measurement locations were intended to be representative of on-site noise levels from weekend recreational activities, U.S. 101, and aircraft overflights. An additional two weekday measurements were taken on January 19, 2017, along Bay Road and Del Norte Avenue during P.M. peak hours, and two further measurements were taken on Bay Road and Ringwood Avenue during midday Saturday hours on June 29 and July 13, 2019. These measurements are representative of existing exposure of adjacent single-family residences to traffic noise. Figure 5 shows the location of these noise measurements, and Table 18 summarizes the noise monitoring results.

Table 18 Noise Measurement Results

Measurement Location ¹	Description	Primary Noise Sources	Approximate Sample Time	L_{eq} dBA ²
1	Flood County Park: children's playground	Children shouting	1:50 – 2:05 P.M.	58.6
2	Flood County Park: southeast picnic area	Airplanes	2:13 – 2:28 P.M.	54.8
3	Flood County Park: east of tennis courts	U.S. 101 traffic, airplanes	2:32 – 2:47 P.M.	56.3
4	Bay Road adjacent to park	Bay Road traffic	5:29 – 5:44 P.M.	70.0
5	Del Norte Avenue near Iris Lane	U.S. 101 traffic, airplanes	5:51 – 6:06 P.M.	56.1
6	Bay Road near Oakland Avenue	Bay Road traffic	12:00 – 12:15 P.M.	61.4
7	Ringwood Avenue near Fredrick Avenue	Ringwood Avenue traffic	12:59 – 1:14 P.M.	66.7

¹ Figure 5 shows the noise measurement locations.

² Measurements 1-3 were taken on April 9, 2017, measurements 4-5 were taken on January 19, 2017, measurement 6 was taken on July 13, 2019, and measurement 7 was taken on June 29, 2019.

Refer to Appendix C for noise measurement results.

As shown in Table 18, existing sound levels at Flood County Park vary by location. Near popular park amenities like the children's playground, the primary noise source is recreational activity. In passive recreational areas near Del Norte Road, where human recreational activity is more dispersed, the primary noise sources are constant traffic flow on U.S. 101 and occasional aircraft overflights.

Figure 5 Noise Measurement Locations



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Fig 12 Noise Measurement Locs

Because of the proximity of Flood County Park to airports such as San Francisco International, San Carlos Airport, and Palo Alto Airport, aircraft fly over and near the site at a relatively low altitude and generate more noise do than typical overflights. Peak-hour traffic on Bay Road generates the highest noise levels near the project site (up to approximately 70 dBA L_{eq}), as indicated by noise measurement 4 taken next to a single-family residence on Bay Road, adjacent to the park's southern corner.

3.4.2 Regulatory Setting

State

Title 24 of the California Code of Regulations codifies Sound Transmission Control requirements establishing uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than single-family dwellings. Specifically, Section 1207.4 in Title 24 states that interior noise levels attributable to exterior noise sources shall not exceed 45 dBA Ldn or CNEL in any habitable room of a new building.

While there are no State standards for vibration, for continuous, frequent, and intermittent vibration, Caltrans considers the architectural damage risk level to be somewhere between 0.08 and 0.5 inches per second (in/sec) peak particle velocity (PPV) depending on the type of building that is affected.

Local

San Mateo County Code of Ordinances

Chapter 4.88 (Noise Control) of the San Mateo County Code of Ordinances is intended to protect noise-sensitive receptors from annoying or disturbing noise generated at nearby properties. Section 4.88.330 sets maximum exterior noise levels for activities on properties in the unincorporated County, as measured at noise-sensitive receptors in either incorporated or unincorporated areas. Table 19 shows these exterior noise standards. Higher noise levels are permitted for shorter amounts of time in any one-hour time period. The exterior noise standards are more stringent during nighttime hours from 10 P.M. to 7 A.M.

Table 19 Exterior Noise Standards, dBA

Category	Cumulative Number of Minutes in Any One Hour Time Period	Daytime 7 A.M.—10 P.M.	Nighttime 10 P.M.—7 A.M.
1	30	55	50
2	15	60	55
3	5	65	60
4	1	70	65
5	0	75	70

Source: San Mateo Code of Ordinances, Section 4.88.330.

In the event the measured background noise level exceeds the applicable noise level standard in any category above, the County adjusts the applicable standard in five (5) dBA increments so as to encompass the background noise level.

Table 20 shows the County's interior noise standards at dwelling units, as written in Section 4.88.340.

Table 20 Interior Noise Standards, dBA

Category	Cumulative Number of Minutes in Any One Hour Time Period	Daytime 7 A.M.—10 P.M.	Nighttime 10 P.M.—7 A.M.
1	5	45	40
2	1	50	45
3	0	55	50

Source: San Mateo Code of Ordinances, Section 4.88.340

In addition to these quantitative noise standards, Section 4.88.350 sets a qualitative standard prohibiting “any unreasonably loud, unnecessary, or unusual noise which disturbs the peace and quiet of any neighborhood or which causes any discomfort or annoyance to any person of normal sensitivity residing in the area.” The following criteria factor into determining a disturbance to peace and quiet:

- The sound level of the objectionable noise.
- The sound level of the background noise.
- The proximity of the noise to residential sleeping or hospital facilities.
- The nature and zoning of the area from which the noise emanates and upon which the noise impacts.
- The number of persons affected by the noise sources.
- The time of day or night the noise occurs.
- The duration of the noise and its tonal, informational, or musical content.
- Whether the noise is continuous, recurrent, or intermittent.
- Whether the noise is produced by a commercial or non-commercial entity.

The County's noise ordinance also exempts certain activities from quantitative noise standards. Section 4.88.360(c) exempts noise generated by “activities conducted on parks, public playgrounds and school grounds provided such parks, playgrounds and school grounds are owned and operated by a public entity.” According to this County standard, noise generated by recreational and maintenance activities at Flood County Park would not be subject to exterior or interior standards. Section 4.88.360(e) also exempts construction activity, provided that such activity does not take place between the hours of 6:00 P.M. and 7:00 A.M. on weekdays, 5:00 P.M. and 9:00 A.M. on Saturdays, or at any time on Sundays, Thanksgiving and Christmas.

3.4.3 Impact Analysis

Methodology and Significance Thresholds

The analysis of noise impacts considers the effects of both temporary construction-related noise and long-term noise associated with operation of the project. Impacts would be significant if they would exceed the following significance criteria, based on San Mateo County's *Initial Study Environmental Evaluation Checklist*:

- 1 Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- 2 Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
- 3 A significant permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- 4 A significant temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- 5 For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure to people residing or working in the project area to excessive noise levels; or
- 6 For a project within the vicinity of a private airstrip, exposure to people residing or working in the project area to excessive noise levels.

Because Flood County Park is not located within the area covered by an airport land use plan, the proposed Landscape Plan would not increase recreational users' exposure to excessive aircraft noise. Criteria 5 and 6 related to aircraft noise are discussed in Section 5, *Effects Found Not to Be Significant*, in the original Draft EIR that was published in September 2017.

Construction Noise

This analysis estimates noise levels generated by the use of expected heavy equipment during construction of Landscape Plan elements. A preliminary list of construction equipment was derived from the California Emissions Model (CalEEMod) run prepared for the project (see Section 3.1, *Air Quality*). Construction noise is quantified based on reference noise levels reported by the Federal Transit Administration (FTA 2018) for various pieces of construction equipment at a distance of 50 feet between source and receiver. Reference noise levels from the FTA's *Noise and Vibration Impact Assessment* are used to estimate noise levels at nearby sensitive receptors, assuming a standard noise attenuation rate of 6 dBA per doubling of distance for point sources. For the purpose of this analysis, it is assumed that construction equipment would operate no closer than 25 feet to residences adjacent to Flood County Park, for two reasons. First, construction activity would typically occur in the body of the park, rather than at property lines. Second, when calculating construction noise based on reference noise levels that apply to a 50-foot distance, noise levels begin to artificially inflate at much closer distances.

As a reasonable worst-case scenario, this analysis also estimates cumulative noise from the simultaneous construction of three recreational facilities at Flood County Park. The Landscape Plan would have a significant impact if construction noise occurs outside of the County's allowed hours (i.e., between 6:00 P.M. and 7:00 A.M. on weekdays, 5:00 P.M. and 9:00 A.M. on Saturdays, or at any time on Sundays, Thanksgiving and Christmas).

Groundborne Vibration

In the absence of County standards for sources of vibration, this analysis of vibration generated during construction of recreational facilities relies on federal standards. The following vibration thresholds established by the FTA for disturbance of people are applied: 65 VdB for buildings where low ambient vibration is essential for interior operations (such as hospitals and recording studios), 72 VdB for residences and buildings where people normally sleep, including hotels, and 75 VdB for

institutional land uses with primary daytime use (such as churches and schools). These thresholds apply to “frequent events,” which the FTA defines as vibration events occurring more than 70 times per day. The thresholds for frequent events are considered appropriate because it is assumed that bulldozers would be used during grading of proposed athletic fields and that they could make more than 70 discrete movements per day when moving earth.

In addition, this analysis applies thresholds in the FTA’s *Transit Noise and Vibration Impact Assessment* (2018) for potential damage to historic adobe buildings at Flood County Park. These thresholds are expressed in terms of both maximum inches per second (in/sec) of peak particle velocity (PPV) and VdB:

Table 21 Thresholds for Building Damage from Construction Vibration

Building Category	Maximum PPV (in/sec)	Approximate L _v
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

¹ Magnitude of vibration is expressed in decibel notation (VdB), in terms of “root-mean-square” amplitude referenced to 1 micro-inch per second.

in/sec = inches per second

PPV = peak particle velocity

Source: FTA 2018

Vibration generated by construction equipment would have a potentially significant impact from damage to adobe buildings if it exceeds the FTA threshold of 0.2 PPV (in/sec) for non-engineered timber and masonry buildings. A formula provided by FTA is used to calculate the attenuation of vibration from a reference distance of 25 feet to the distances of the nearest noise-sensitive receptors:

$$PPV = PPV_{ref} \times (25/D)^{1.5} \text{ (in/sec)}$$

This formula takes into account the reference vibration level (PPV_{ref}), the distance from vibration-generating equipment to the receptor (D), and a constant value related to the attenuation rate through the ground (1.5).

On-Site Operational Noise

It is assumed that the operation of recreational facilities proposed in the Landscape Plan would generate on-site noise from organized athletic activities and maintenance equipment such as leaf blowers. In addition, it is assumed that the use of athletic field could involve temporary use of sound-amplifying equipment during events. This analysis estimates noise levels from athletic activities at the proposed soccer/lacrosse field based primarily on reference noise levels reported in a comprehensive noise study prepared by RGD Acoustics in August 2016 for lacrosse and soccer practices and games at Marin Catholic High School in Kentfield, California. This noise study graphs the fluctuation of noise levels during individual athletic events and breaks noise into components of crowd noise and whistles. Using these reference noise levels, this analysis estimates noise levels at the distance of the nearest noise-sensitive receptors along Del Norte Avenue assuming 6 dBA

attenuation of noise per doubling of distance. In addition, anticipated noise from athletic events is compared to existing measured ambient noise levels in the vicinity of Flood County Park. Noise from leaf blowers is estimated at the nearest residences based on noise measurements taken at the park.

This section evaluates on-site operational noise based on qualitative standards in the County Code of Ordinances. Because the County as lead agency is applying its noise standards to this project, and Section 4.88.360(c) of the San Mateo County Code of Ordinances exempts noise generated by activities conducted at publicly owned and operated parks, recreational and maintenance activities at Flood County Park would not be subject to quantitative noise standards. However, pursuant to Section 4.88.350 of the County Code of Ordinances, on-site operational noise would be significant if it “disturbs the peace and quiet of any neighborhood or which causes any discomfort or annoyance to any person of normal sensitivity residing in the area.”

Roadway Noise

Noise levels associated with existing and future traffic along area roadways are estimated by completing a screening analysis for traffic generated by the Landscape Plan. This analysis considers the project’s impacts under three highest-use traffic scenarios analyzed in the Traffic Impact Study prepared by W-Trans in June 2019 (see Appendix D). Typical use of the facilities during non-peak periods would result in fewer trip and lower traffic related noise levels, thus the analysis is considered conservative. The traffic noise impact under the Existing + Project scenario is discussed for informational purposes. Because the Landscape Plan would be implemented in phases, the project would not immediately add vehicle trips to existing traffic conditions. The Near-Term 2021 + Project scenario, discussed in the cumulative noise analysis, is reflective of the addition of vehicle trips associated with Phase I to existing traffic and already approved cumulative projects. In addition, the cumulative noise analysis considers the Landscape Plan’s long-term effect on traffic noise under Cumulative 2040 + Project conditions. This cumulative forecast was developed assuming the development of approved and pending projects in the Menlo Park area and a growth rate to account for growth in regional traffic. The analysis of traffic noise assumes that project-generated trips would be distributed among area roadways as shown in Table 9 in the Traffic Impact Study (W-Trans 2019).

The effect of additional vehicle trips on ambient noise depends on the relative increase in traffic volumes. This analysis estimates the relative increase in traffic volumes due to the Landscape Plan on Bay Road and Ringwood Avenue, then estimates the corresponding increase in ambient noise along these roadways. Modeling of traffic noise indicates that, in general, a 10 percent increase in traffic volume would raise traffic noise by approximately 0.4 dBA, a 20 percent increase would raise traffic noise by about 0.8 dBA, a 30 percent increase would result in an approximately 1.1 dBA increase in traffic noise, a 40 percent increase would increase traffic noise by about 1.5 dBA, a 50 percent increase would increase traffic noise by about 1.8 dBA, and so forth. While the County has not adopted standards for an increase in traffic noise due to a project, this screening analysis evaluates the Landscape Plan’s effect on traffic noise based on the FTA’s recommended standards. The FTA recommendations, listed in Table 22, are based on the idea that the allowable increase in exposure to traffic noise depends on existing noise levels; as the existing noise level rises, the allowable increase in noise exposure decreases.

Table 22 Significance of Changes in Operational Roadway Noise Exposure

Existing Noise Exposure (dBA Ldn or L _{eq})	Maximum Noise Exposure Increase (dBA Ldn or L _{eq})
45-50	7
50-55	5
55-60	3
60-65	2
65-74	1
75+	0
Source: FTA 2018.	

This analysis also considers the effects on residential exposure to traffic noise from the proposed removal of redwood trees on-site.

Project Impacts and Mitigation Measures

Threshold 4

A significant temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact N-1	Construction of proposed recreational facilities would generate high noise levels on and adjacent to the project site. However, construction noise would be temporary, and adherence to the County's allowed hours of construction would prevent noise disturbance during sensitive evening and nighttime hours. Therefore, the impact from construction noise would be less than significant.
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Phase I

Construction of the proposed Phase I elements over an anticipated two-year period would intermittently generate high noise levels on and adjacent to Flood County Park. Construction activity would primarily occur in the northern portion of the park for the ballfield replacement, new soccer/lacrosse field, and new tennis courts. During the demolition phase, the County would use jackhammers to break up existing paved surfaces in the northern part of the park, including the two tennis courts and asphalt paths, and bulldozers or similar heavy equipment to demolish the existing Restroom D building. It is expected that site preparation and grading for new utilities and athletic fields would involve the use of bulldozers, excavators, graders, and backhoes. The construction of new asphalt paths, tennis courts, and a basketball court could require the use of pavers and rollers.

Table 23 estimates maximum noise levels from construction equipment based on the combined use of construction equipment anticipated to be used concurrently during each phase of construction. Noise levels are shown for a reference distance of 50 feet from the source equipment and at other distances that correspond to various noise-sensitive receptors. Forty feet is representative of the distance between the closest edge of the existing tennis courts (to be demolished) to the adjacent residence on Del Norte Avenue, 50 feet is representative of the closest potential utility work to residences south of Bay Road, 80 feet is representative of the estimated distance between grading

activity at the southeastern edge of the park and residences on Del Norte Avenue, and 115 feet is representative of the distance between paving activity at the new tennis courts and adjacent residences on Del Norte Avenue. The noise levels shown in Table 23 are conservative because they assume the use of construction equipment next to the nearest residences, even though most construction activity would occur farther from the site boundary, and they assume simultaneous grading and construction of three recreational facilities.

Table 23 Maximum Estimated Noise Levels by Construction Phase

Construction Phase	Equipment	Estimated Noise Levels at Nearest Sensitive Receptors (dBA L _{eq})			
		40 feet	50 feet	80 feet	115 feet
Demolition	Dozer, Jackhammer, Saw	86	84	80	77
Site Preparation	Backhoe, Dozer	82	80	81	78
Grading	Backhoe, Dozer, Excavator, Grader	86	84	85	82
Facility Construction	Backhoe, Forklift, Generator, Welder	82	81	81	78
Paving	Cement Mixer, Paver, Roller	85	83	79	75

Source: FTA 2018 and 2012. See Appendix C for equipment noise impact data sheets and assumptions.

Based on Table 23, noise-sensitive receptors would experience the loudest noise during demolition of the existing tennis courts, with noise levels reaching an estimated 86 dBA L_{eq} at the nearest residences located 40 feet to the southeast. Grading would cause noise levels estimated at 85 dBA L_{eq} at residences on Del Norte Avenue. In addition, grading and excavation for new utilities extending from Bay Road also would generate estimated noise levels approaching 84 dBA L_{eq} at residences located 50 feet to the south.

These temporary noise levels during construction would exceed the existing ambient noise levels of approximately 56 dBA L_{eq} along Del Norte Avenue and 70 dBA L_{eq} during peak-hour traffic on Bay Road. However, construction activity would be prohibited outside of the County's allowed daytime hours (i.e., between 6:00 P.M. and 7:00 A.M. on weekdays, 5:00 P.M. and 9:00 A.M. on Saturdays, or at any time on Sundays, Thanksgiving and Christmas). This timing restriction would prevent construction noise during the most sensitive evening and nighttime hours. Therefore, the construction of Phase I elements would have a less than significant impact on nearby noise-sensitive receptors.

Phases II and III

Phases II and III of the Landscape Plan would involve less intensive ground disturbance than would Phase I. No demolition of buildings would occur, paving activity would be limited to new pathways and potentially gathering plazas, and grading activity would be of a smaller scale than for Phase I (restricted to individual recreational improvements such as restrooms, a playground, and gathering plazas). Because the impact from construction noise would be less than significant for Phase I, and construction activity would be of smaller scale during later phases, this impact would also be less than significant for Phases II and III.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Threshold 2

Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.

Impact N-2	Grading activity would temporarily generate groundborne vibration on and adjacent to Flood County Park. Because construction of proposed recreational elements would occur inside the hours allowed in the County Code of Ordinances, it would not generate vibration when people normally sleep. Construction vibration would not exceed levels that may cause structural damage to historic adobe buildings on-site. The Landscape Plan would have a less than significant vibration impact.
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Phase I

During Phase I of the Landscape Plan, construction of the proposed recreational elements would involve the temporary use of equipment that generates groundborne vibration. The County would use jackhammers to break up existing paved surfaces in the northern part of the park, including the two tennis courts and asphalt paths, and bulldozers to move earth over approximately nine acres. Bulldozers or similar heavy equipment might be used to demolish the existing Restroom D building.

Table 24 identifies vibration velocity levels at a reference distance of 25 feet and at distances that correspond to various noise-sensitive receptors. Forty (40) feet is representative of the distance between the closest edge of the existing tennis courts (to be demolished) to the adjacent residence on Del Norte Avenue and 80 feet is representative of the estimated distance between grading activity at the southeastern edge of the park and residences on Del Norte Avenue. The vibration levels shown in Table 24 are conservative because they assume the use of construction equipment next to the nearest residences, even though most construction activity would occur farther from the site boundary, and the use of large as well as small bulldozers.

Table 24 Vibration Levels for Construction Equipment at Noise-Sensitive Receptors

Equipment	Estimated VdB at Nearest Sensitive Receptors		
	25 Feet	40 Feet	80 Feet
Large Bulldozer	87	81	72
Jackhammer	79	73	64
Small Bulldozer	58	51	42

Source: FTA 2018

Based on Table 24, noise-sensitive receptors would experience the strongest vibration during the use of jackhammers to demolish the existing tennis courts, with vibration levels reaching an estimated 73 VdB at the nearest residence located 40 feet to the southeast. The use of large

bulldozers during grading near the southeastern property line for the proposed soccer/lacrosse field would generate similar vibration levels of approximately 72 VdB at residences on Del Norte Avenue.

Compliance with Section 4.88.360(e) of the San Mateo County Code of Ordinances would restrict construction activities to daytime hours that are generally outside of normal sleeping hours, i.e., 7:00 A.M. to 6:00 P.M. on weekdays and 9:00 A.M. to 5:00 P.M. on Saturdays. This timing restriction on construction activity would limit the exposure of nearby residences to vibration. Vibration levels would not exceed the FTA's threshold of 72 VdB for residences during normal sleeping hours. As discussed in the Setting, it is acknowledged that individual neighbors of Flood County Park may have unusual sleeping hours that result in greater sensitivity to daytime noise and vibration. Nonetheless, noise standards are typically drafted with normal sensitivity in mind. Therefore, vibration would not have significant adverse effects on residences.

Construction equipment would also generate vibration that affects nearby structures. High vibration levels could damage the structural integrity of adobe buildings at the park. Table 25 shows vibration levels at adobe buildings at distances of 25, 50, and 350 feet. The 25-foot reference distance is conservatively representative of the nearest distance between construction activity that generates vibration and adobe buildings that would remain under the Landscape Plan, such as the adobe electrical and maintenance buildings. Three hundred fifty feet is representative of the distance between vibratory rollers used to pave and compact asphalt at the new tennis courts and the nearest remaining adobe building (the electrical building).

Table 25 Vibration Levels for Construction Equipment at Adobe Buildings

Equipment	Approximate in/sec PPV at Nearest Noise-Sensitive Receptors		
	25 Feet	50 Feet	350 Feet
Vibratory Roller	0.210	0.074	0.004
Large Bulldozer	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Small Bulldozer	0.003	0.001	0.000

Source: FTA 2018

As shown in Table 25, vibration levels of up to an estimated 0.089 in/sec PPV at adobe buildings would not exceed the FTA threshold of 0.2 PPV (in/sec) for non-engineered timber and masonry buildings. Although rollers generate substantial vibration at close range, they would generate minimal vibration (0.004 in/sec PPV) at a distance of 350 feet from the nearest remaining adobe building. Therefore, construction activities during Phase I would not be expected to generate vibration levels that cause structural damage to historic adobe buildings. Vibration impacts during Phase I would be less than significant.

Phases II and III

Phases II and III of the Landscape Plan would involve less intensive ground disturbance than would Phase I. No demolition of buildings would occur, paving activity would be limited to new pathways and potentially gathering plazas, and grading activity would be of a smaller scale than for Phase I (restricted to individual recreational improvements such as restrooms, a playground, and gathering plazas). Because vibration impacts would be less than significant for Phase I, and construction

activity would be of smaller scale during later phases, vibration impacts would also be less than significant for Phases II and III.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Thresholds 1 and 3

Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

A significant permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact N-3	The Landscape Plan would add new sources of on-site operational noise from organized practices and games at the proposed athletic fields and performances at the proposed gathering meadow. Noise from whistles, sound amplification equipment, or air horns could disturb nearby residents. The impact from on-site operational noise would be less than significant with mitigation to prohibit the loudest equipment and restrict the timing of athletic events.
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Phase I

The operation of recreational facilities proposed in Phase I of the Landscape Plan would add new sources of noise at Flood County Park. Whereas existing ballfields at the park are not open for programmed athletic use, the proposed ballfield and soccer/lacrosse field would be available for organized athletic activities that would generate noise. Maintenance equipment such as leaf blowers also would generate noise at new locations in the park, depending on the siting of proposed tennis courts and asphalt paths. In addition, human activity at new passive recreational facilities would generate noise. These noise sources are analyzed below.

ATHLETIC ACTIVITIES

Organized practices and games at the proposed ballfield and soccer/lacrosse field would generate noise. Programmed athletic activities would occur throughout the year, although the County anticipates that they would generally be most frequent during the summer. It is anticipated that organized activities at the athletic fields would typically occur no earlier than 9 A.M. and no later than 8 P.M. No additional lighting that would enable nighttime use of athletic facilities is proposed as part of the Landscape Plan.

Specific noise sources associated with athletic practices and games include shouting and conversations by players, coaches, referees, and spectators, and whistles to control play. Other potential sources are air horns used by fans and sound amplification equipment to broadcast music or play-by-play commentary. These noise sources would be intermittent during athletic events, adding to background ambient noise from passive recreational use of the park, nearby traffic, aircraft overflights, and residential activities.

Noise from the proposed soccer/lacrosse field would occur as close as approximately 100 feet from the backyards of single-family residences on Del Norte Avenue to the southeast. It is assumed that this distance is representative of the nearest activity on the proposed field with respect to these residences, as well as of spectators lining the southeastern side of the field. In addition, athletic activity at the reconstructed ballfield would generate noise as close as approximately 150 feet from residents at Haven Family House on Van Buren Road to the northeast, 175 feet from residences on Hedge Road to the northwest, and 330 feet from residences on Del Norte Avenue to the southeast.

The primary athletic facility of concern with regard to noise is the proposed soccer/lacrosse field, due to its proximity to residences and the prevalence of loud impulse sounds such as whistles, shouts, and air horns. Based on noise measurements taken in 2016 at a playoff lacrosse game with 162 spectators at a representative suburban Bay Area site, Marin Catholic High School, a lacrosse game generates overall noise levels of 65-70 dBA L_{eq} at the edge of the stadium while a lacrosse practice creates noise levels of 55-60 dBA L_{eq} (RGD Acoustics 2016). These noise measurements were taken at a distance of approximately 50 feet from the edge of the lacrosse field. Based on a noise attenuation of 6 dBA per doubling distance noise levels from athletic activity, it is estimated that lacrosse activity at Flood County Park would generate noise levels of up to 64 dBA L_{eq} during games and up to 54 dBA L_{eq} during practices, as perceived at residences located 100 feet away on Del Norte Avenue. Noise levels measured from the lacrosse playoff game are also considered representative of noise from soccer games.

Average sound energy levels during lacrosse and soccer games may exceed existing ambient noise levels in the vicinity of Flood County Park. As shown in Table 18, ambient noise was measured at approximately 55-56 dBA L_{eq} on a Saturday afternoon at the southeastern edge of the park, next to residential backyards, and at approximately 56 dBA L_{eq} on Del Norte Avenue on a weekday late afternoon. Anticipated noise levels of 59-64 dBA L_{eq} during lacrosse and soccer games would exceed existing ambient noise levels by an estimated 3 to 8 dBA L_{eq} . These short-term increases in ambient noise would be perceptible to residents adjacent to the park.

In addition to events at the soccer/lacrosse field, athletic games and practices at the reconstructed ballfield would generate noise. Based on noise measurements taken at a school in Sherman Oaks, California, softball games generate an average noise level of 72 dBA L_{eq} at a distance of 20 feet from the center of activities (Arup 2006). As noted above, the ballfield would be located approximately 330 feet from residences on Del Norte Avenue. At this distance, assuming that noise from athletic activity attenuates by 6 dBA per doubling of distance from the source, it is estimated that softball activity at Flood County Park would generate an average noise level of 48 dBA L_{eq} . At the Haven Family House located approximately 150 feet from the ballfield, it is estimated that average noise from softball events would reach 55 dBA L_{eq} . These estimated noise levels from ballfield activity would not exceed the existing measured ambient noise levels of 55-56 dBA L_{eq} on a Saturday afternoon at the southeastern edge of the park. Therefore, noise from ballfield activity, in itself, would not substantially affect ambient noise levels experienced by residents.

This analysis makes the conservative assumption that athletic events generating noise at the ballfield and soccer/lacrosse field could take place concurrently. Under this scenario, the nearest residences on Del Norte Avenue would be exposed to estimated average noise levels of up to 64 dBA L_{eq} from soccer and lacrosse games, and 48 dBA L_{eq} from softball games. The combined average noise level from both types of events would be approximately 64 dBA L_{eq} . This is because the softball game noise levels would be 16 dBA lower than the soccer/lacrosse game and thus would not perceptibly increase average ambient noise relative to soccer/lacrosse noise. However, combined noise levels would exceed existing ambient noise levels by up to 8 dBA L_{eq} .

In addition to increasing average noise levels, athletic activity would generate short-term spikes in noise, such as impulse noise, that may annoy or disturb residents. Impulse noise is a sudden burst of loud noise that can startle people by its fast and surprising nature (Cirrus Research 2015). Sources of impulse noise may include shouting, whistles, and air horns. Whistles could be especially intrusive because of their shrill pitch. Spectators could use portable air horns that produce loud blasts of sound. Sound amplification equipment also could broadcast commentary or music at high volume. However, Section 3.68.130(b) of the County's noise ordinance prohibits the use of sound amplification equipment in any County Park, except if allowed under a special event permit issued by the County of San Mateo Parks Department to regulate park events. The Parks Department generally does not allow the use of sound amplification equipment even with procurement of a special event permit. This restriction would limit the exposure of residents to noise from sound amplification.

Although Section 4.88.360(c) of the County Code of Ordinances would exempt activities at Flood County Park from quantitative noise standards, the County has determined that the qualitative standard in Section 4.88.350 of disturbing the peace and quiet of neighbors would still apply to the Landscape Plan. The anticipated timing of athletic events – between 9 A.M. and 8 P.M. – would minimize disturbance to neighbors by avoiding normal sleeping hours. Perceptible athletic noise also would not necessarily disturb the peace and quiet of the surrounding neighborhood, as defined by the criteria in Section 4.88.350 of the County Code of Ordinances. The City of Menlo Park manages athletic fields located within 100 feet of nearby residences and has received few if any complaints regarding programmed athletic activities from residents since 2010 (Keith 2017). The County also would restrict the use of sound amplification equipment by athletic teams through individual agreements with teams that use the new fields. However, the use of whistles, air horns, and sound amplification equipment could result in an audible, albeit temporary, increase in ambient noise levels in the area. Furthermore, without explicit allowable hours for athletic events, early-morning and late-evening events could disturb the peace and quiet of neighbors.

For informational purposes only, this section also analyzes the impact of noise from new athletic facilities based on standards in the City of Menlo Park's noise ordinance (Section 8.06 of the Menlo Park Municipal Code). As discussed in Section 1.5, *Standards of Review*, the County has discretion as to which standards to apply to the project when reviewing its environmental impacts, and it has decided to apply the County's noise standards to the project. Nonetheless, the City's noise ordinance has an exemption for parks that is similar to that set forth in Section 4.88.360(c) of the County Code of Ordinances. Section 8.06.050(g) of the Menlo Park Municipal Code exempts from its noise standards organized athletic events or activities at parks that are owned or operated by the County, with the exception of amplified music or sound systems. Based on this provision, the use of sound amplification equipment could still disturb the peace and quiet of neighbors.

MAINTENANCE ACTIVITIES

Current maintenance activities at Flood County Park, especially the use of lawn mowers and leaf blowers, periodically generate noise. After the construction of proposed recreational facilities, the County would operate such maintenance equipment in new locations within the park. Lawn mowers would be used to cut grass in fields used for passive recreation and in athletic fields (unless artificial turf is installed). Because County employees currently use this equipment to cut grass adjacent to the southeastern park boundary, the proposed Landscape Plan would not result in the use of lawn mowers closer to residences on Del Norte Avenue. Noise levels would lawn mowers would not increase over existing conditions.

The County also uses leaf blowers to clear paved surfaces such as the existing tennis courts and asphalt paths. The existing tennis courts are located as close as approximately 40 feet from the backyards of residences on Del Norte Avenue. Based on the proposed Landscape Plan shown in Figure 4, it is estimated that new asphalt paths would be built approximately 75 feet from the backyards of residences on Del Norte Avenue, and the new tennis courts would be located about 115 feet from these noise-sensitive receptors. Current noise levels from leaf blowers at Flood County Park's existing tennis courts were measured at up to 76 dBA at a distance of 140 feet. Assuming that noise from this source attenuates by 6 dBA per doubling of distance, it is estimated that leaf blowers would generate a maximum noise level of 81 dBA at a distance of 75 feet from residential backyards. However, noise levels from leaf blowers would not increase over existing conditions because the proposed asphalt paths would be located no closer to residences than the existing tennis courts, which are as close as approximately 15 feet to residential backyards.

PASSIVE RECREATION

Phase I of the Landscape Plan would involve the construction of new passive recreational facilities including walking paths and a promenade. Similar to existing paths at the park, these features would provide opportunities for walking, bicycling, and human conversations. Therefore, they would not result in increased noise levels from recreational activity.

CONCLUSION

During organized athletic practices and games, the use of whistles, air horns, and sound amplification equipment could cause substantial temporary increase at nearby residents. Early-morning or late-evening athletic events also could result in substantial noise levels increases over ambient noise levels during those times at local residents. These adverse effects would represent a significant impact from on-site operational noise.

Phases II and III

While Phase I would involve the construction of large athletic fields, the second and third phases would add lower-intensity recreational elements such as gardens, a playground, picnic areas, gathering plazas, a gathering meadow, and pathways with exercise stations. These elements would largely support activities similar to those in the existing playground, group and individual picnic areas, and pathways. However, the gathering meadow in Phase II would be a space suitable for infrequent events including Junior Rangers, Parks Rx with County Health, and movie nights, which could involve the use of sound amplification equipment for music or commentary, although the County typically does not allow this equipment during either County-sponsored or private events at Flood County Park. The central location of this gathering meadow at the park, approximately 475 feet from the nearest residences on Del Norte Avenue, Bay Road, and Hedge Road, would reduce the exposure of noise-sensitive receptors to noise from this facility. Nonetheless, the use of sound amplification equipment at high volume during large events could produce noise that disturbs nearby residents.

Mitigation Measures

MM N-3(A) RESTRICT SOUND AMPLIFICATION EQUIPMENT AND PROHIBIT AIR HORNS

The County shall only allow the use of sound amplification equipment at organized athletic games and practices and at the gathering meadow with the procurement of a special event permit in accordance with County of San Mateo Parks Department procedures. The County shall notify all groups using the proposed soccer/lacrosse field, ballfield, and gathering meadow of this requirement. The County shall prohibit the use of air horns at any park events. County staff shall periodically patrol the park during organized athletic events and performances to verify that park users are not operating air horns and are not operating sound amplification equipment without an approved Special Event Permit.

Special Event Permits are required for any use of a space beyond what is considered typical use. This could include such activities as: bounce houses, amplified sound, large events (walks, runs) and those that require additional staffing or support from other agencies. Depending on the scale of the event, notification may be posted in park kiosks, on the Parks Department website or by using other communication vehicles.

MM N-3(B) TIMING OF ATHLETIC EVENTS

To minimize noise that may disturb neighbors of Flood County Park, the County shall restrict athletic practices and games at the park to the hours of 9 A.M. to 8 P.M.

Significance after Mitigation

Mitigation Measure N-3(a) would restrict the use of equipment that generates especially loud impulse noise during organized athletic events and performances without approval of a special event permit, while Mitigation Measure N-3(b) would restrict the timing of athletic events to prevent noise during normally quiet early-morning or late-evening hours. Even with implementation of these measures, events at Flood County Park would incrementally increase ambient noise levels. However, these measures would prevent the most adverse effects from loud equipment or the timing of events at proposed recreational facilities, reducing on-site operational noise to a less than significant level.

Thresholds 1 and 3

Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

A significant permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact N-4	Vehicle trips associated with operation of the proposed recreational elements would increase traffic volumes on nearby roadways, resulting in greater traffic noise audible to existing noise-sensitive residences. Based on the conservative (high) estimate of new vehicle trips presented in this EIR, it is anticipated that the increase of vehicle trips from the project relative to existing traffic on Ringwood Avenue during Saturday peak hours in the summer would exceed the applicable FTA standard of 1 dBA L_{eq} . Therefore, traffic noise impacts would be significant and unavoidable.
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New vehicle trips associated with organized athletic events at the proposed athletic fields and with continued growth in passive recreational use under the Landscape Plan would increase traffic volumes on roadways near Flood County Park. This increase in traffic volumes would result in greater traffic noise at nearby noise-sensitive receptors.

Table 26 shows the estimated net increase in peak-hour traffic volumes on the studied roadway segments, according to traffic data in the Traffic Impact Study prepared by W-Trans in June 2019 (see Appendix D).

Table 26 Increase in Existing Roadway Traffic Volumes with Project during Weekday P.M. and Saturday Peak Hours

Roadway Segment	Existing Trips	Net Increase in Trips	Increase in Noise Level (dBA L_{eq})
Weekday P.M. Peak Hour			
Bay Road: Marsh Road to Ringwood Avenue	465	55	< 1
Bay Road: Ringwood Avenue to Willow Road	909	38	< 1
Ringwood Avenue south of Bay Road	865	102	< 1
Saturday Peak Hour			
Bay Road: Marsh Road to Ringwood Avenue	313	118	1
Bay Road: Ringwood Avenue to Willow Road	304	84	1
Ringwood Avenue south of Bay Road	322	212	2

Source: W-Trans 2019; see Appendix D.

As shown in Table 26, Phase I of the Landscape Plan would generate the highest estimated noise level increase (2 dBA), relative to existing traffic conditions, on Ringwood Avenue south of Bay Road during peak Saturday hours of park use. Because Phase I would increase traffic volumes on nearby streets by less than the amount on Ringwood Avenue, it would not increase traffic noise by more than 2 dBA L_{eq} . Along Ringwood Avenue, existing ambient noise was measured at 66.7 dBA L_{eq} during midday Saturday hours. This noise level falls within the range of 65-74 dBA L_{eq} , in which the FTA standard of a 1 dBA L_{eq} increase in traffic noise applies. It is estimated that during peak use of Flood County Park on summer weekends, the increase in traffic noise on Ringwood Avenue would exceed the applicable standard of 1 dBA L_{eq} .

During Saturday peak hours on Bay Road, Table 26 shows that the traffic volume would increase noise levels by 1 dBA. With existing ambient noise during Saturday peak hours measured at 61.4 dBA L_{eq} along Bay Road, the FTA standard of a 2 dBA L_{eq} increase in traffic noise would apply. It is estimated that traffic generated by the Landscape Plan would not exceed this standard during peak use of Flood County Park on summer weekends.

During weekday P.M. peak hours, Table 26 shows that traffic volumes on Bay Road and Ringwood Avenue would increase noise levels by less than 1 dBA. At no time in the week would noise levels substantially exceed the 70.0 dBA L_{eq} measured at Bay Road during weekday peak hours, which are the busiest traffic period on nearby roadways. At this noise level, the FTA standard of a 1 dBA L_{eq} increase in traffic noise would apply. The expected increase in traffic noise of less than 0.4 dBA L_{eq} would not exceed the 1 dBA L_{eq} standard.

Site preparation and grading under Phase I also would involve the removal of a belt of evergreen redwood trees in the eastern corner of the park, which partially screen residences on Del Norte Avenue from exposure to highway noise from U.S. 101. Typically, vegetation does not substantially buffer noise-sensitive receptors from ambient noise. In noise modeling, at least two staggered rows of evergreen trees are required to noticeably reduce traffic noise. Because the existing redwood trees are irregularly arranged in single row, they do not substantially attenuate highway noise. The removal of this belt of trees would not expose residents to substantially higher traffic noise levels.

Because it is anticipated that increases in traffic noise would exceed FTA standards during Saturday peak hours on summer weekends, when Flood County Park would generate the highest amount of traffic, Phase I of the Landscape Plan would have a significant impact related to traffic noise.

Phases II and III

In contrast to Phase I, in which programmed active recreation would generate the lion's share of vehicle trips, Phases II and III of the Landscape Plan would generate an incremental increase in vehicle trips from continued growth in passive recreation. The cumulative analysis below estimates traffic noise generated by Phases II and III, as part of the Near-Term 2021 and Cumulative 2040 traffic scenarios.

Mitigation Measures

No mitigation is feasible to substantially reduce increases in traffic noise associated with the Landscape Plan during Saturday peak hours. Restricting the weekend use of athletic fields at Flood County Park would reduce traffic noise, but this option would not fulfill the project objective to meet demand for active recreation facilities in San Mateo County.

Significance After Mitigation

As noted above, mitigation to reduce traffic noise during Saturday peak hours would not be feasible. Therefore, the Landscape Plan would generate an increase in weekend traffic noise that exceeds applicable standards. Although this analysis is based on highly conservative estimates of trip generation that apply to peak summer days at Flood County Park, the impact would nonetheless be significant and unavoidable during that time period.

Cumulative Impacts

Long-term development in Menlo Park and Atherton, including the proposed Landscape Plan, would generate temporary noise during construction. Construction activities on cumulative residential and commercial projects in the area could generate higher noise levels than would construction of the proposed recreational facilities because of the need for more intensive demolition, grading, and building construction. However, construction noise and vibration is localized and rapidly attenuates within an urban environment. Because Flood County Park is surrounded by settled single-family residential neighborhoods that are fully built out, construction of other major projects would not occur sufficiently close to the park or its neighbors to result in a cumulative impact. Therefore, the project would not contribute considerably to temporary cumulative construction noise and vibration impacts.

Traffic associated with cumulative development through the years 2021 and 2040 would incrementally increase noise levels along roadways. Table 27 shows the project's cumulative contribution to traffic volumes on nearby road segments in the Near-Term 2021 traffic scenario.

Table 27 Cumulative Contribution to Area Roadway Traffic Levels during Weekday P.M. and Saturday Peak Hours in Near-Term 2021 Conditions

Roadway Segment	Existing Peak Hour (trips)	Cumulative + Project Increase in Peak Hour Trips	Increased Noise Level from Cumulative Trips (dBA L_{eq})	Increased Cumulative Noise Level Due to Project (dBA L_{eq})
P.M. Peak Hour				
Bay Road: Marsh Road to Ringwood Avenue	465	73	0.6	0.4
Bay Road: Ringwood Avenue to Willow Road	909	120	0.5	0.1
Ringwood Avenue south of Bay Road	865	164	0.8	0.5
Saturday Peak Hour				
Bay Road: Marsh Road to Ringwood Avenue	313	118	1.5	1.1
Bay Road: Ringwood Avenue to Willow Road	304	114	1.5	1.1
Ringwood Avenue south of Bay Road	322	182 ¹	1.9	1.8

¹ The traffic study estimates that the increase in peak-hour trips on Ringwood Avenue would be slightly lower in the Near-Term 2021 Plus Project scenario than in the Existing Plus Project scenario. This result occurs because cumulative commercial development in the Menlo Park area would draw some existing trips on Bay Road onto other roadways, resulting in a slight reduction in local traffic near the park.

Source: W-Trans 2019; see Appendix D

As shown in Table 27, under Near-Term 2021 traffic conditions on all studied roadways, cumulative growth in combination with the Landscape Plan would increase traffic noise during weekday P.M. peak hours by up to 0.8 dBA L_{eq} , along Ringwood Avenue. It is assumed that existing ambient noise during weekday P.M. peak hours along Ringwood Avenue is similar to existing noise along Bay Road, which was measured at 70.0 dBA L_{eq} during this time frame. With this existing ambient noise level, the applicable FTA standard for an increase in traffic noise would be 1 dBA L_{eq} . Therefore, the cumulative increase in traffic noise would be less than significant in this time frame, and the Landscape Plan would not have a considerable contribution to a significant impact.

Under Near-Term 2021 traffic conditions during Saturday peak hours, cumulative growth in combination with the Landscape Plan would raise traffic noise by up to 1.9 dBA along Ringwood Avenue. The existing ambient noise level during Saturday peak hours on this road segment was measured at 66.7 dBA L_{eq} . With this existing noise level, the applicable FTA standard for an increase in traffic noise would be 1 dBA L_{eq} . Therefore, the anticipated 1.9-dBA increase in traffic noise from cumulative growth would have a significant impact on noise-sensitive receptors under Near-Term 2021 conditions. Furthermore, Table 27 estimates that the Landscape Plan would be responsible for most of this increase in traffic noise (1.8 dBA L_{eq}). As a result, the Landscape Plan would have a considerable contribution to a significant cumulative impact related to traffic noise along Ringwood Avenue during Saturday peak hours.

Under Near-Term 2021 traffic conditions on Bay Road, cumulative growth in combination with the Landscape Plan would increase traffic noise along Bay Road by an estimated 1.5 dBA L_{eq} during Saturday peak hours. The existing ambient noise level during Saturday peak hours on this road segment was measured at 61.4 dBA L_{eq} . With this existing noise level, the applicable FTA standard

for an increase in traffic noise would be 2 dBA L_{eq} . Therefore, the cumulative impact related to traffic noise along Bay Road during Saturday peak hours would be less than significant, and the Landscape Plan would not have a considerable contribution to an impact at this roadway.

Table 28 shows the project's contribution in the Cumulative 2040 traffic scenario.

Table 28 Cumulative Contribution to Area Roadway Traffic Levels during Weekday P.M. and Saturday Peak Hours in Year 2040 Conditions

Roadway Segment	Existing Peak Hour (trips)	Cumulative + Project Increase in Peak Hour Trips	Increased Noise Level from Cumulative Trips (dBA L_{eq})	Increased Cumulative Noise Level Due to Project (dBA L_{eq})
P.M. Peak Hour				
Bay Road: Marsh Road to Ringwood Avenue	465	232	1.8	0.8
Bay Road: Ringwood Avenue to Willow Road	909	416	1.7	0.3
Ringwood Avenue south of Bay Road	865	463	1.9	0.7
Saturday Peak Hour				
Bay Road: Marsh Road to Ringwood Avenue	313	272	2.7	2.1
Bay Road: Ringwood Avenue to Willow Road	304	222	2.4	1.6
Ringwood Avenue south of Bay Road	322	410	3.7	3.1

Source: W-Trans 2019; see Appendix D.

As shown in Table 28, under Cumulative 2040 conditions, cumulative growth in combination with the Landscape Plan would increase traffic noise during weekday P.M. peak hours by an estimated 1.9 dBA L_{eq} on Ringwood Avenue south of Bay Road. It is assumed that existing ambient noise on this segment of Ringwood Avenue during weekday P.M. peak hours is similar to existing traffic noise on Bay Road, which was measured at 70.0 dBA L_{eq} . At this noise level, the applicable FTA standard for an increase in traffic noise would be 1 dBA L_{eq} . The cumulative increase in traffic noise would exceed 1 dBA L_{eq} and therefore would have a significant impact. Implementation of the Landscape Plan would contribute a large portion of the cumulative 1.9 dBA L_{eq} increase in traffic noise on Ringwood Avenue (estimated 0.7 dBA L_{eq}), which would considerably contribute to this significant cumulative impact.

On Bay Road under Cumulative 2040 traffic conditions, cumulative growth in combination with the Landscape Plan would increase traffic noise during weekday P.M. peak hours by up to an estimated 1.8 dBA L_{eq} . The cumulative increase in traffic noise would exceed the applicable FTA standard of 1 dBA L_{eq} and therefore would have a significant impact. Implementation of the Landscape Plan would contribute almost half of this increase in traffic noise on Bay Road (0.8 dBA L_{eq}), which would considerably contribute to this significant cumulative impact.

Table 28 shows that under Cumulative 2040 traffic conditions, cumulative growth in combination with the Landscape Plan would increase traffic noise by between 2.4 dBA L_{eq} and 3.7 dBA L_{eq} during Saturday peak hours on Bay Road and Ringwood Avenue. This cumulative increase in traffic noise would exceed the applicable FTA standards of 1 dBA L_{eq} along Ringwood Avenue and 2 dBA L_{eq} along

Bay Road, and therefore would have a significant impact. Implementation of the Landscape Plan would generate most of the increase in traffic noise, which would considerably contribute to this significant cumulative impact.

The operation of cumulative residential and commercial development would also add sources of on-site noise on properties in Menlo Park and Atherton. Noise sources associated with new private development may include heating, ventilation, and cooling (HVAC) equipment from new private development; loading activity; trash compactors; and parking lot activity. Concentrated new development could generate on-site operational noise that substantially increases ambient noise levels near noise-sensitive receptors. However, new development would be subject to local noise ordinances that are intended to prevent the generation of disturbing noise near such receptors. Furthermore, as noted above, because Flood County Park is surrounded by settled single-family residential neighborhoods that are fully built out, it is not anticipated that major new developments would occur in proximity to the park or its neighbors. Therefore, the Landscape Plan would not contribute considerably to a significant cumulative impact.

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3.5 Transportation and Circulation

This section evaluates potential impacts relating to transportation and traffic on and around the project site. The analysis is based on the Flood County Park Landscape Plan Traffic Impact Study revised by W-Trans in June 2019 (Appendix D).

3.5.1 Environmental Setting

Roadway Network

Studied Intersections

The nearest freeway to the project site is US Highway 101, and its centerline is approximately 350 feet north of the park. Based on the characteristics of the project, the project site location, and consultation with County staff, the following three intersections (shown in Figure 6) were selected for assessment of potential impacts within the study area:

- **Bay Road/Marsh Road** is a four-way signalized intersection with protected left-turn phasing on the southbound approach of Marsh Road and permitted left-turn phasing on all other approaches. Marked crosswalks, pedestrian signals, and curb ramps are provided across all four legs. Bicycle detection is marked for both approaches on Bay Road.
- **Bay Road/ Ringwood Avenue** is a five-way stop controlled intersection. Marked crosswalks are provided across all legs except the northbound Ringwood Avenue approach. Curb ramps are provided at the northwest and northeast corners of the intersection.
- **Bay Road/Willow Road** is a T-shaped signalized intersection with protected left-turn phasing on the northbound approach of Willow Road. The right-turn movement on the southbound approach of Willow Road is yield controlled. Pedestrian crossing is only permitted across Bay Road where a crosswalk, pedestrian signals, and curb ramps are provided.

Intersection Level of Service

Intersection level of service (LOS) is a qualitative assessment of an intersection's performance based on traffic volumes and roadway capacity. An intersection is characterized by a letter grade ranging from A to F, where LOS A represents free flow conditions and LOS F represents forced flow or breakdown conditions. The LOS rating is also accompanied by the level of delay.

The study intersections were analyzed using methodologies in the Highway Capacity Manual (HCM) (Transportation Research Board 2000). For intersection with a stop sign on all approaches, an "All-Way Stop-Controlled" method was used, which evaluates delay based on turning movements, opposing and conflicting traffic volumes, and the number of lanes. Average vehicle delay is computed for the intersection as a whole, which is then related to a LOS grade. Signalized intersections were evaluated based on traffic volumes, green time for each movement, phasing, whether or not the signals are coordinated, truck traffic, and pedestrian activity. This method was based on average stopped delay per vehicle in seconds, which was calculated using optimized signal timing. Table 29 summarizes the ranges of delay associated with LOS A through F.

Figure 6 Studied Intersections and Lane Configurations

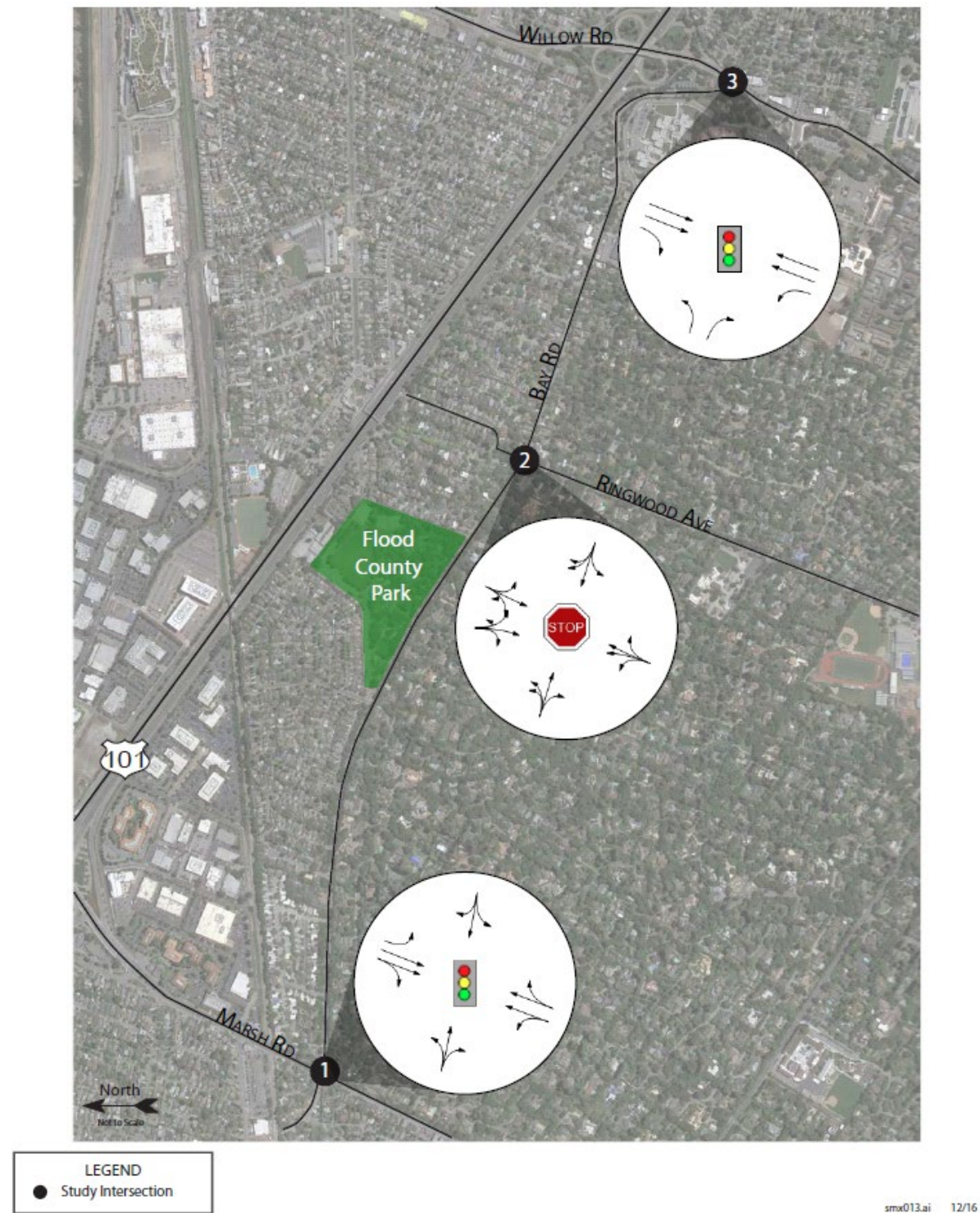


Table 29 Intersection Level of Service Criteria

LOS	All-Way Stop-Controlled	Signalized
A	Delay of 0 to 10 seconds. Upon stopping, drivers are immediately able to proceed.	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
B	Delay of 10 to 15 seconds. Drivers may wait for one or two vehicles to clear the intersection before proceeding from a stop.	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
C	Delay of 15 to 25 seconds. Drivers will enter a queue of one or two vehicles on the same approach, and wait for vehicle to clear from one or more approaches prior to entering the intersection.	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
D	Delay of 25 to 35 seconds. Queues of more than two vehicles are encountered on one or more approaches.	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
E	Delay of 35 to 50 seconds. Longer queues are encountered on more than one approach to the intersection.	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
F	Delay of more than 50 seconds. Drivers enter long queues on all approaches.	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

Source: W-Trans 2019; see Appendix D

Existing Operating Conditions

Existing operating conditions at three nearby intersections were evaluated during weekday P.M. peak (between 4:00 P.M. and 6:00 P.M.) and Saturday midday peak (between 12:00 P.M. and 4:00 P.M.) periods, using the City of Menlo Park's Vistro traffic analysis network. The weekday P.M. peak hour was selected for analysis as representative of the worst rush hour traffic conditions in the area, while the Saturday midday peak hour was selected because it aligns with peak weekly use of Flood County Park. Table 30 summarizes existing peak-hour intersection LOS.

Table 30 Existing Peak-Hour Intersection Levels of Service

Study Intersection	P.M. Peak		SAT Peak	
	Delay	LOS	Delay	LOS
Bay Road/Marsh Road	16.0	B	13.7	B
Bay Road/Ringwood Avenue	21.2	C	8.8	A
Bay Road/Willow Road	>80*	F	9.4	A

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service.

* LOS is based on unserved demand.

Source: W-Trans 2019; see Appendix D

While the Bay Road/Marsh Road and Bay Road/Ringwood Avenue intersections currently operate at an acceptable LOS, the intersection of Bay Road and Willow Road operates at an unacceptable LOS during the P.M. peak hour. According to City of Menlo Park staff, traffic conditions modeled in the

Vistro program for the Willow Road corridor during the P.M. peak hour do not accurately reflect the full extent of congestion because of “unserved demand” (Menlo Park 2016). Unserved demand is a condition of most traffic simulation models when traffic demand exceeds the capacity of a roadway (Kim and Suh 2014). In this situation, the model does not allow additional vehicles to enter an already congested roadway. Therefore, unserved demand refers to additional vehicle trips beyond those accounted for in the Vistro model.

Near-Term 2021 Conditions

The near-term scenario represents projected traffic conditions without implementation of the Landscape Plan in the year 2021, which is the assumed completion year for the proposed recreational elements that would generate the most new vehicle trips. This scenario includes traffic that would be generated by approved projects with the City. Traffic volumes that would be generated by these approved projects were obtained from the City’s Vistro traffic analysis network, where available, or developed from data published by ITE in the 9th edition of the Trip Generation Manual (2012).

In addition, a growth rate was based on the C/CAG Travel Forecast Model, which accounted for growth in regional traffic until 2021. The growth rate applied was 0.8 percent per year for both weekday P.M. peak-hour and Saturday peak-hour volumes. As shown in Table 31, near-term 2021 conditions show that Bay Road and Ringwood Avenue would operate at LOS D during the P.M. peak hour. Moreover, as in the existing conditions shown in Table 30, the Bay Road and Willow Road intersection is expected to continue operating unacceptable due to “unserved demand.”

Table 31 Near-Term 2021 Peak-Hour Intersection Levels of Service

Study Intersection	P.M. Peak		SAT Peak	
	Delay	LOS	Delay	LOS
Bay Road/Marsh Road	19.1	B	14.2	B
Bay Road/Ringwood Avenue	34.4	D	9.1	A
Bay Road/Willow Road	>80*	F	9.9	A

Source: W-Trans 2019; see Appendix D.

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service.

* LOS is based on unserved demand.

Cumulative 2040 Conditions

The cumulative scenario represents projected traffic volumes without implementation of the Landscape Plan for the horizon year 2040. This scenario includes traffic that would be generated by approved developments that were identified in the near-term scenario, traffic that would be generated by developments that are currently pending approval, and a growth rate to account for growth in regional traffic. As in the near-term 2021 scenario, the growth rate applied was 0.8 percent per year for peak-hour volumes.

Table 32 summarizes the cumulative 2040 peak-hour LOS. The Bay Road and Ringwood Avenue intersection would operate at LOS F during the P.M. peak hour under cumulative conditions. As in the existing and near-term conditions, the Bay Road and Willow Road intersection during P.M. peak hours is expected to continue operating unacceptable due to “unserved demand,” even after implementation of General Plan Goals, Policies, and Programs.

Table 32 Cumulative 2040 Peak-Hour Intersection Levels of Service

Study Intersection	P.M. Peak		SAT Peak	
	Delay	LOS	Delay	LOS
Bay Road/Marsh Road	29.1	C	16.0	B
Bay Road/Ringwood Avenue	108.9	F	9.7	A
Bay Road/Willow Road	>80*	F	10.9	B

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service.

* LOS is based on unserved demand.

Source: W-Trans 2019; see Appendix D.

Pedestrian Network

Bay Road has intermittent sidewalk coverage with substantial gaps on both sides of the street between Marsh Road and Willow Road. A sidewalk is present on the north side of Bay Road along the park frontage. A marked crosswalk connects this sidewalk with a San Mateo County Transit District (SamTrans) bus stop on the south side of Bay Road, adjacent to Greenwood Drive. In addition to the main entrance gate, pedestrian access points to Flood County Park are located at the southern corner of the park from Bay Road and at the eastern corner from Iris Lane.

Bicycle Network

A network of bike lanes provides access to and from Flood County Park. In the vicinity of the park, Bay Road has 1.7 miles of bike lanes between Marsh Road and Van Buren Road, Ringwood Avenue has 0.9 mile of bike lanes between Bay Road and Middlefield Road, and Willow Road has 1.4 miles of bike lanes between Durham Street and Bay Road. A planned extension of the Willow Road bike lanes north of Durham Street would connect to Bay Road. In addition, a mixture of separated bikeways and bike lanes are planned on Marsh Road between Middlefield Road and the Bayshore Expressway, which would connect with the existing Bay Road bike lanes.

Transit

SamTrans provides fixed route bus service in the project area. SamTrans Local Route 281 stops on Newbridge Street at Pierce Road, which is a 0.25 mile walk from Flood County Park across the U.S. 101 pedestrian bridge. This route operates weekdays with approximately 20-30 minute headways between 6:00 A.M. and 8:00 A.M. and 6:00 P.M. and 10:30 P.M., and 15 minute headways between 8:00 A.M. and 6:00 P.M. Saturday service operates with 30 minutes headways between 8:00 A.M. and 7:30 P.M., while Sunday service operates with 30 minutes headways between 8:30 A.M. and 6:30 P.M.

SamTrans Local Route 82, 83, and 88 all stop on Bay Road near the project site and also provide school bus service in Atherton and Menlo Park to Hillview Middle School and Encinal Elementary School. Routes 82 and 88 directly serve the park and operate on schooldays.

3.5.2 Regulatory Setting

State

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). SB 743 changes the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (see Pub. Resource Code, Section 21099, subd. (b)(2)). In addition to new exemptions for projects that are consistent with specific plans, the SB 743 guidelines replace congestion based metrics, such as auto delay and level of service, with vehicle miles traveled (VMT) as the basis for determining significant impacts, unless the guidelines provide specific exceptions. The deadline for transitioning to VMT for CEQA analysis is July 2020. Therefore, for the sake of thoroughness, the County has evaluated the Landscape Plan using both LOS and VMT analysis. This approach is consistent with the City of Menlo Park's currently adopted thresholds for traffic conditions, which use intersection LOS to determine impacts on the transportation system.

Local

City of Menlo Park General Plan

The City's General Plan has adopted policies and plans that apply to public transit, bicycle, and pedestrian facilities in city limits. The following General Plan Circulation Element policies are relevant to the Landscape Plan and alternative transportation modes:

- Policy CIRC-1.8 **Pedestrian Safety.** Maintain and create a connected network of safe sidewalks and walkways within the public right of way ensure that appropriate facilities, traffic control, and street lighting are provided for pedestrian safety and convenience, including for sensitive populations.
- Policy CIRC-4.3 **Active Transportation.** Promote active lifestyles and active transportation, focusing on the role of walking and bicycling, to improve public health and lower obesity.
- Policy CIRC-5.2 **Transit Proximity to Activity Centers.** Promote the clustering of as many activities as possible within easy walking distance of transit stops, and locate any new transit stops as close as possible to housing, jobs, shopping areas, open space, and parks.

3.5.3 Impact Analysis

Methodology and Significance Thresholds

Operating conditions during the weekday P.M. and Saturday midday peak periods were evaluated at the study intersections to capture the highest potential impacts of the proposed project as well as the highest volumes on the local transportation network. The weekday P.M. peak hour occurs between 4:00 and 6:00 P.M. and reflects conditions during the homeward bound commute, while the Saturday midday peak hour occurs between noon and 4:00 P.M. and typically reflects the highest level of weekend activity for a park. The following scenarios were analyzed as part of this study:

- Existing conditions
- Existing plus project conditions
- Near-term 2021 conditions
- Near-term 2021 plus project conditions
- Cumulative 2040 conditions
- Cumulative 2040 plus project conditions

The near-term 2021 scenarios were analyzed to reflect prevailing traffic conditions once Phase I of the Landscape Plan would be implemented, while the cumulative 2040 scenarios were analyzed to reflect long-term growth in traffic volumes in the Menlo Park and Atherton area.

Trip Generation

Trip generation estimates are typically developed using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 9th Edition, 2012. However, standard rates are not available or applicable to the improvements planned at the park; therefore, trip generation estimates were developed for individual recreational elements in the Landscape Plan, as detailed below..

The existing conditions at Flood County Park were derived using historic park visitor statistics from 2011 through 2015. During this time period the baseball field was not in programmed use and this time period was assumed to represent the existing conditions at the park. Driveway counts collected in November 2016 were used to validate these assumptions. This data was used to understand the magnitude of the maximum increase in park visitors. For the purposes of this traffic analysis, the maximum anticipated number of park visitors during each phase of implementing the Landscape Plan was derived from park industry data provided by Gates + Associates in April 2019. The maximum anticipated number of park users at individual elements of the Landscape Plan is shown in Appendix C of the Traffic Impact Study.

Park visitor statistics and anticipated vehicle occupancy were used to convert the maximum number of users into trip generation estimates based on the assumptions summarized in Appendix C of the Traffic Impact Study. It is anticipated that the programmed active recreation would be implemented as soon as the construction of Phase I is complete, and would generate trips under both existing and near-term conditions. Maximum trip generation for Phase II and Phase III was also developed. These estimates were only analyzed for cumulative conditions, inclusive of the Phase I trips.

The trip generation estimates were developed to be conservative, assuming that multiple activities would start and end during the same peak-hour period. The weekday P.M. trip generation estimates assume that scheduled events on both the ballfield and soccer/lacrosse field start and end during the peak hour. It was also assumed that visitors would be concurrently using the non-scheduled activity centers at the park. This weekday case represents a very busy but plausible trip generation estimate for all phases of the Landscape Plan.

The Saturday peak-hour trip generation estimates assume that scheduled games on both the ballfield and soccer/lacrosse field start and end during the peak hour. It was also assumed that visitors would concurrently use the non-scheduled activity centers. Regarding the scheduled picnic areas, it was assumed that only a quarter of the picnic area and shade structure visitors would arrive or leave the park during the peak hour. This weekend case represents a very busy but plausible trip generation estimate for all project phases during the peak summer months.

This conservative analysis does not represent typical park operations, but highlights the few instances through the year when Flood County Park has the potential to operate at maximum capacity. During the summer months, the park would be expected to have peak visitation for both passive and active recreation on weekends. During the low months, November through February, traffic impacts would be expected to be minimal. Table 33 estimates trip generation for all phases of the Landscape Plan.

Table 33 Trip Generation Summary

Park Use	Weekday Daily Trips	Weekday P.M. Peak Hour			Saturday Daily Trips	SAT Peak Hour		
		Trips	In	Out		Trips	In	Out
Phase I								
Ballfield	90	60	30	30	226	150	75	75
Soccer/lacrosse field	90	60	30	30	226	150	75	75
Tennis courts	32	32	16	16	48	32	16	16
Sand volleyball	0	0	0	0	20	20	10	10
Basketball	16	16	8	8	100	66	33	33
Pump track	32	32	16	16	48	48	24	24
Phase I Subtotal	260	200	100	100	668	466	233	233
Phase II								
Demonstration garden	16	16	8	8	50	50	25	25
Play area universal (2-5)	30	30	15	15	60	40	20	20
Play area universal (5-12)	48	32	16	16	96	64	32	32
Adventure play	40	40	20	20	70	70	35	35
Small group picnic	0	0	0	0	96	24	12	12
Phase II Subtotal	134	118	59	59	372	248	124	124
Phase III								
Shade/market structure	0	0	0	0	160	30	15	15
Event/group picnic area	0	0	0	0	160	40	20	20
Phase III Subtotal	0	0	0	0	320	70	35	35
Total Phase I, II, III Trips	394	318	159	159	1,360	784	392	392
Source: W-Trans 2019; see Appendix D.								

Trip Distribution

It was assumed that a majority of trips to and from Flood County Park under the Landscape Plan would originate locally in the Menlo Park area. These local trips would occur on local streets, while park trips from regional locations, accounting for 10 percent of all trips, would utilize U.S. 101 or I-

280 before travelling on local streets to access the park. Table 34 shows the applied trip distribution assumptions.

Table 34 Assumed Distribution of Trips Generated by Landscape Plan

Route	Percent	Weekday Daily Trips	Weekday P.M. Peak-Hour Trips	SAT Peak-Hour Trips
To/From Marsh Road east of Bay Road	12%	48	38	94
To/From Marsh Road west of Bay Road	8%	32	25	63
To/From Bay Road north of Marsh Road	5%	20	16	39
To/From Flood Park Triangle	9%	35	29	71
To/From Ringwood Avenue west of Bay Road	48%	189	153	376
To/From Willow Road east of Bay Road	13%	51	41	102
To/From Willow Road west of Bay Road	5%	20	16	39
Total	100%	394	318	784

Note: The sum of individual trip numbers may not perfectly match total trips because of rounding.

Source: W-Trans 2019; see Appendix D

Vehicle Miles Traveled

Vehicle miles traveled (VMT) is the measure of miles traveled within a specific geographic area for a given period and it provides an indication of automobile and truck travel on a transportation system. This metric is often used in noise, air quality, and greenhouse gas emissions analyses. VMT can also be used to quantify the impact of a project or plan on the larger transportation system. The California Governor’s Office of Planning and Research in the *Final Adopted Text Revisions to the CEQA Guidelines* 2018, introduced VMT as the metric to quantify a project’s impact in place of level of service. However, local jurisdictions are required to adopt the updated guidelines and San Mateo County has yet to update its own CEQA guidelines. Nonetheless, for the sake of thoroughness, this analysis includes a discussion of the Landscape Plan’s effects on countywide VMT for informational purposes.

According to the Metropolitan Transportation Commission (MTC), on average residents of the Bay Area as a whole travel a total of approximately 23 miles daily, while residents of San Mateo County drive over 25 miles daily. Land use planning in San Mateo County has historically followed a typical suburban pattern of development, and is therefore has a higher average VMT per capita than the rest of the region.

Traffic Signal Warrants

This analysis applies guidance in Chapter 4C of the *California Manual on Uniform Traffic Control Devices* (CA-MUTCD) to determine whether installation of a traffic signal should be considered at intersections.

Warrant 3 (Peak Hour Volume), which is often the first warrant to be met, has a notice that this signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time. Under the Peak Hour Warrant the need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

- A. If all three of the following conditions exist for the same one hour (any four consecutive 15-minute periods) of an average day:
 - 1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: four vehicle-hours for a one-lane approach; or five vehicle-hours for a two-lane approach, and
 - 2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
 - 3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.
- B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

Thresholds of Significance

Based on San Mateo County's *Initial Study Environmental Evaluation Checklist*, impacts related to transportation or traffic would be significant if the Landscape Plan would:

- 1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- 2 Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways;
- 3 Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in significant safety risks;
- 4 Significantly increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- 5 Result in inadequate emergency access;
- 6 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities;
- 7 Cause noticeable increase in pedestrian traffic or a change in pedestrian patterns; and/or
- 8 Result in inadequate parking capacity.

Thresholds 3 and 5 are discussed separately in Section 5.16, *Transportation and Circulation*, in the original Draft EIR that was published in September 2017.

Traffic Operation Standards

As discussed in Section 1, *Introduction*, whereas this EIR generally applies the County's standards to the proposed Landscape Plan, for the purposes of transportation analysis the County has chosen to rely on the City of Menlo Park's standards. The City's standards are most appropriate in this issue area because the proposed Landscape Plan would affect the transportation network within the city limits of Menlo Park and the City's traffic standards are stringent relative to other nearby jurisdictions. The City's 2004 Circulation System Assessment establishes standards of significance for analyzing a project's impact on the circulation network. A potentially significant impact would occur if the addition of project traffic causes an intersection or collector street operating to LOS A through C to operate at an unacceptable level (LOS D, E, or F) or have an increase of 23 seconds or greater in average vehicle delay, whichever comes first. In addition, a potentially significant impact would occur if a project causes an intersection on arterial streets or local approaches to state-controlled signalized intersections operating at LOS A through D to operate at an unacceptable level (LOS E or F) or have an increase of 23 seconds or greater in average vehicle delay, whichever comes first.

Moreover, a project can have a potentially significant impact if the addition of project traffic causes an increase of more than 0.8 second seconds of average delay to vehicles on all critical movements for intersections operating at near term LOS D through F for collector streets and at a near term LOS E or F for arterial streets. A critical movement is the phase or leg of an intersection that requires the most green time. For local approaches to state-controlled signalized intersections, a project is considered to have a potentially significant impact if the addition of project traffic causes an increase of more than 0.8 second of delay to vehicles on the critical movements for intersections operating a near term LOS E or F. Table 35 summarizes the LOS thresholds applied to the study intersections.

Table 35 Level of Service Significance

Study Intersection	Jurisdiction	LOS Significance Threshold	Significance Threshold for Unacceptable LOS
Bay Road/Marsh Road	City of Menlo Park	D	LOS becomes E or worse or delay increases by 23 seconds or more or, if LOS is currently E or F, all critical movement delay increases by 0.8 seconds.
Bay Road/Ringwood Avenue	City of Menlo Park	C	LOS becomes D or worse or delay increases by 23 seconds or more or, if LOS is currently D, E, or F, all critical movement delay increases by 0.8 seconds
Bay Road/Willow Road	State (local approach)	D	LOS becomes E or F or, if LOS is currently E or F, all critical movement delay increases by 0.8 seconds

Source: W-Trans 2019; see Appendix D.

Project Impacts

Threshold 1

Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Impact T-1	Traffic generated by the project would cause traffic delay exceeding the City of Menlo Park's standards at the intersection of Bay Road and Ringwood Avenue under all modeled traffic scenarios. Queuing of vehicles at the park's entrance gate also would cause temporary traffic delay on Bay Road. Although new parking fee collection practices would minimize queuing, mitigation measures at the affected intersection would be infeasible. Therefore, the project would have a significant and unavoidable impact on traffic under existing plus project conditions.
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Phases I, II, and III

Table 36, Table 37, and Table 38 show modeled traffic conditions at the three studied intersections near Flood County Park under existing, near-term 2021, and cumulative 2040 scenarios, respectively, both with and without implementation of the Landscape Plan.

Table 36 Existing and Existing Plus Project Peak-Hour Intersection Level of Service

Study Intersection	Existing Conditions				Existing Plus Project			
	P.M. Peak		SAT Peak		P.M. Peak		SAT Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Bay Road/Marsh Road	16.0	B	13.7	B	17.0	B	15.6	B
Bay Road/Ringwood Avenue	21.2	C	8.8	A	35.7	D	12.6	B
Addition of Northbound Left-Turn Lane	–	–	–	–	15.3	B	12.2	A
Bay Road/Willow Road	>80*	F	9.4	A	>80*	F	10.3	B

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service.

* LOS is based on unserved demand.

Source: W-Trans 2019; see Appendix D

Table 37 Near-Term 2021 and Near-Term 2021 Plus Project Peak-Hour Intersection Level of Service

Study Intersection	Near-Term Conditions				Near-Term Plus Project			
	P.M. Peak		SAT Peak		P.M. Peak		SAT Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Bay Road/Marsh Road	19.1	B	14.2	B	19.9	B	15.3	B
Bay Road/Ringwood Avenue	34.4	D	9.1	A	48.6	E	12.2	B
Addition of Northbound Left-Turn Lane	15.0	C	9.0	A	17.0	C	11.7	B
Bay Road/Willow Road	>80*	F	9.9	A	>80*	F	10.8	B

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service.

* LOS is based on unserved demand.

Source: W-Trans 2019; see Appendix D

Table 38 Cumulative 2040 and Cumulative 2040 Plus Project Peak-Hour Intersection Level of Service

Study Intersection	Cumulative Conditions				Cumulative Plus Project			
	P.M. Peak		SAT Peak		P.M. Peak		SAT Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Bay Road/Marsh Road	29.1	C	16.0	B	34.9	C	21.1	C
Bay Road/Ringwood Avenue	108.9	F	9.7	A	**	F	27.2	D
Addition of Northbound Left-Turn Lane	24.7	C	9.5	A	34.0	C	22.6	C
Signalization	13.9	B	12.0	B	15.7	B	14.7	B
Bay Road/Willow Road	>80*	F	10.9	B	>80*	F	12.7	B

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service.

* LOS is based on unserved demand.

** = delay exceeds 120 seconds.

Source: W-Trans 2019; see Appendix D

During weekday P.M. peak hours, the addition of new trips generated by the Landscape Plan is expected to degrade traffic conditions at the intersection of Bay Road and Ringwood Avenue from an acceptable LOS C to an unacceptable LOS D under existing plus project conditions and from an unacceptable LOS D to E under near-term 2021 plus project conditions. Furthermore, new vehicle

trips at this intersection would exacerbate unacceptable LOS F conditions under cumulative 2040 plus project conditions. It is worth noting that existing traffic conditions at this intersection during weekday P.M. peak hours are already approaching the City of Menlo Park's threshold of LOS D for unsignalized intersections. The addition of only 25 P.M. peak-hour trips associated with active and passive recreational use at Flood County Park would push operating conditions from LOS C to D, causing an exceedance of the City's traffic standards. For reference, one adult baseball game would generate approximately 30 P.M. peak-hour inbound trips. However, a signal warrant analysis indicates that projected traffic volumes at this intersection would not necessitate installation of a traffic signal under any traffic scenario.

The intersection of Bay Road and Willow Road is expected to continue to operate at LOS F during the P.M. peak hour under all traffic scenarios, due to "unserved demand." As discussed in the Setting, this intersection now operates unacceptably without the addition of project-generated traffic and would continue to operate deficiently due to "unserved demand" upon the addition of project-generated traffic. The project would not be responsible for pre-existing unacceptable traffic conditions at Bay Road and Willow Road and would not substantially exacerbate traffic congestion at the intersection relative to existing conditions.

The project also could increase traffic congestion on Bay Road for brief periods as vehicles queue up at the park's main entrance, waiting for admission at the fee collection booth. The County plans to move the existing entrance gate to Flood County Park farther back from Bay Road, which would increase the driveway's storage capacity for vehicles waiting to enter the park. However, queuing behavior could still occur during peak summer months, especially with the operation of the proposed athletic fields in Phase I of the Landscape Plan. Because of increased traffic congestion at the intersection of Bay Road and Ringwood Avenue and temporary queuing on Bay Road, the Landscape Plan would have a potentially significant impact under existing plus project conditions.

As a caveat to the finding of a potentially significant impact related to traffic congestion, this analysis is predicated on locally adopted LOS standards that will change in the near future. The deadline for local jurisdictions to transition to VMT as the primary metric for evaluating traffic impacts under CEQA analysis is July 2020. At present time, locally adopted traffic standards are still in terms of LOS. As discussed in Impact T-2, project-generated traffic would have a negligible effect on VMT in San Mateo County. Therefore, the Landscape Plan would have a less than significant impact related to traffic using VMT as the standard of analysis. Nevertheless, this EIR relies on the City of Menlo Park's existing adopted LOS standards for traffic congestion.

Mitigation Measures

As shown in Table 36, Table 37, and Table 38, the installation of a northbound left-turn lane at the intersection of Bay Road and Ringwood Avenue would improve traffic conditions during P.M. peak hours from LOS D to B under existing plus project conditions, from LOS E to C under near-term 2021 plus project conditions, and from LOS F to C under cumulative 2040 plus project conditions. This reconfiguration of the intersection would reduce traffic congestion relative to without-project conditions. However, physical constraints at the affected intersection would make implementation of such a measure less feasible. The San Mateo County Assessor Map confirms that Ringwood Avenue has 55 feet of right-of-way approaching Bay Road. In this right-of-way, the removal of an existing parking lane and street trees on the east side of Ringwood Avenue would be required to make room for a northbound left-turn lane. This reconfiguration also would require the relocation of existing utility poles and street drainage. Additionally, this measure would require coordination with, and approval, by the City of Menlo Park and the Town of Atherton, which cannot be

guaranteed. Therefore, it is conservatively assumed that installing a new turn lane at the intersection would be infeasible.

To minimize queuing on Bay Road, Mitigation Measure T-1 would be required.

MM T-1 PARKING FEE COLLECTION PRACTICES

The County shall implement parking fee collection practices to avoid the back up of vehicles entering Flood County Park onto local streets. These practices may include automated fee machines, paying upon exiting the park, or a combination of both to move the queues associated with fee collection off of City streets and on-site.

Significance After Mitigation

Implementation of Mitigation Measure T-1 would reduce temporary congestion on Bay Road from queuing of vehicles at the park gate. Nevertheless, as discussed above, it may be infeasible to reconfigure the intersection of Bay Road and Ringwood Avenue to avoid a significant impact from traffic congestion. Therefore, the Landscape Plan would have a significant and unavoidable impact on traffic under existing plus project, near-term 2021 plus project, and cumulative 2040 plus project conditions.

Impact T-2	Project-generated traffic would have a negligible effect on vehicle miles traveled in San Mateo County. Therefore, the Landscape Plan would have a less than significant impact related to vehicle miles traveled.
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Phases I, II, and III

It is expected that the Landscape Plan would have a negligible effect on vehicle miles traveled in San Mateo County. The reconstruction of the existing out-of-service ballfield and addition of a new soccer/lacrosse field could shorten trips by local sports teams and programs that would no longer have to travel to most distant sites to access quality athletic fields. It is expected that the main user of the athletic fields would be the Menlo Park Legends community baseball program, which currently uses other fields in Menlo Park and Atherton. Furthermore, the Landscape Plan would maintain and revitalize passive recreational elements likely to be used by local residents who would travel short distances to the park. Existing SamTrans bus stops are also available within acceptable walking distance of Flood County Park, which would incentivize the use of transit rather than driving to the site. In addition, because the City of Menlo Park has not yet adopted VMT as its primary metric for evaluating the traffic impacts on projects, there is no local significance threshold against which to judge the Landscape Plan's effects on VMT. Therefore, the project would have a less than significant impact related to VMT.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Threshold 2

Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways.

Impact T-3	Vehicle trips generated by implementation of the Landscape Plan would not adversely affect roadways designated under the Congestion Management Plan for San Mateo County. Therefore, the project would have a less than significant impact related to conflicts with this plan.
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Phases I, II, and III

The City/County Association of Governments of San Mateo County (C/CAG) serves as the Congestion Management Agency (CMA) for San Mateo County. C/CAG's most recent Congestion Management Plan (CMP), referred to as the 2013 CMP Monitoring Report, establishes the designated CMP Roadway network, which includes I-280, U.S. 101, the Bayfront Expressway (SR 84), El Camino Real (SR 82), and Willow Road (SR 114), and the LOS standard for each roadway in the network. It is expected that local residents would account for the majority of new trips associated with the Landscape Plan. Therefore, project-generated trips would not substantially affect traffic on designated CMP roadways that serve as regional corridors. The project would not conflict with C/CAG's Congestion Management Program.

Mitigation Measures

No mitigation is required.

Significance after Mitigation

This impact would be less than significant without mitigation.

Threshold 4

Significantly increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact T-4	The project would not introduce design features that increase traffic hazards. No impact would occur.
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Phases I, II, and III

The Landscape Plan would not alter the offsite circulation system and would introduce minor modifications to the on-site surface parking lot, including a pick-up and drop-off area. No potential design hazards such as sharp curves, dangerous intersections, or new incompatible uses are proposed. Existing bike lanes and sidewalks on Bay Road would safely accommodate bicyclists and pedestrians en route to the park. Therefore, the project would have no impact related to traffic hazards.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

No impact would occur without mitigation.

Thresholds 6 and 7

Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Cause noticeable increase in pedestrian traffic or a change in pedestrian patterns.

Impact T-5	The project would not decrease the performance of existing or planned transit, bicycle, or pedestrian facilities. However, the lack of bicycle storage on-site and a sidewalk gap on Bay Road could result in unsafe conditions for bicyclists and pedestrians accessing the park. Impacts to transit, bicycle, and pedestrian systems would be less than significant with mitigation to install bicycle storage and pedestrian signage.
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Phases I, II, and III

TRANSIT

Due to the nature and location of the Park, it is expected that the majority of park visitors would be from the nearby residential neighborhoods and would access the park via foot, bike, or vehicle, rather than by transit. Existing SamTrans bus stops are available within acceptable walking distance of the site for those visitors who choose to access the site via transit. Therefore, transit service to the project site would be adequate, and new transit users would not result in overcrowding on buses.

BICYCLE FACILITIES

Existing bicycle facilities, including bike lanes on Bay Road, Ringwood Avenue, Middlefield Road, and Willow Road, together with shared use of minor streets, provide adequate access for bicyclists to Flood County Park. Planned separated bikeways and bike lanes on Marsh Road and a planned extension of existing bike lanes on Willow Road, northward to Bay Road, would provide additional access to the site. Although bicyclists would easily be able to access the site, the Landscape Plan does not identify any bicycle parking or storage facilities in the park. This lack of dedicated bicycle parking may result in unsafe storage for bicyclists traveling to the park.

Pedestrian Facilities

The proposed project is not expected to generate noticeable increases in pedestrian traffic or travel patterns in the vicinity of Flood County Park. Visitors who currently live within reasonable walking distance would continue to utilize the pedestrian network to access the Park, including access points at the entrance gate, the southern corner of the park along Bay Road, and at the eastern corner of the park at the terminus of Iris Lane. However, new pedestrian trips to the park may be subject to unsafe conditions because of a gap in the existing sidewalk on the north side of Bay Road between Del Norte Avenue and Ringwood Avenue. At this gap, pedestrians must walk along the roadway shoulder or in the bike lane. Therefore, the Landscape Plan could have adverse effects on pedestrians.

The Landscape Plan would not have substantial adverse effects on public transit, bicycle, or pedestrian facilities. However, the lack of dedicated bicycle parking may result in unsafe storage for bicyclists traveling to the park. This impact would be potentially significant.

Mitigation Measures

To provide safe bicycle storage for park users, Mitigation Measure T-5(a) would require the installation of bicycle racks on-site. To protect pedestrian safety, an existing gap in the sidewalk on the north side of Bay Road between Del Norte Avenue and Ringwood Avenue could be closed; however, the removal of two mature oak trees located in the Bay Road right-of-way would be necessary to complete the sidewalk; therefore, it would not be feasible to complete the sidewalk along Bay Road. Instead of sidewalk closure, Mitigation Measure T-5(b) would require the County to install signage to inform park users of safe pedestrian routes.

MM T-5(A) BICYCLE STORAGE

The County shall install a minimum of six bicycle racks near the proposed gathering plaza.

MM T-5(B) PEDESTRIAN SIGNAGE

The County shall install signage in a central location in Flood County Park that informs visitors of an alternative pedestrian route to the segment of Bay Road between Del Norte Avenue and Sonoma Avenue which lacks a sidewalk. This signage shall include a map of the alternative pedestrian route on Del Norte Avenue, Oakwood Place, and Sonoma Avenue.

Significance After Mitigation

Installation of bicycle storage and pedestrian signage would improve access to the park for bicyclists and pedestrians and reduce safety hazards for these users. Therefore, impacts related to public transit, bicycle, and pedestrian facilities would be less than significant after mitigation.

Threshold 8

Result in inadequate parking capacity.

Impact T-6	While it is estimated that parking demand during peak summer days at Flood County Park would not typically exceed the on-site parking supply, the Landscape Plan could result in increased parking on local residential streets. The impact on parking capacity would be less than significant impact with mitigation measures to facilitate on-site parking and discourage on-street parking by visitors to Flood County Park.
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Phases I, II, and III

The Traffic Impact Study prepared for the Revised EIR identifies 375 existing parking spaces at Flood County Park, based on a November 2016 count. This amount excludes a northeastern portion of the on-site parking lot behind the ballfield, which was paved and striped for parking spaces at the time of the survey, but temporarily enclosed with chain-link fencing and covered by storage materials. This area is currently available for visitor parking. Based on site photos taken in August 2016 and Google Earth aerial imagery, the formerly closed portion of the parking lot includes approximately 20 parking spaces. Therefore, in practice Flood County Park has roughly 395 parking spaces. This

analysis of parking availability is conservative in assuming an on-site parking supply of only 375 spaces.

Maximum parking demand during peak summer days under the Landscape Plan was estimated using the maximum anticipated visitor projections provided by Gates + Associates in April 2019. The user capacity of the park and the assumed vehicle occupancy by amenity was used to derive the maximum parking demand for each recreational element of the Landscape Plan. The assumption is that all activities would be utilized at the same time, resulting in the maximum parking demand on the weekend.

Based on this data, the anticipated typical peak parking demand for the proposed project is 344 parking spaces. For a conservative analysis, no deductions to parking demand were taken for motorists that would drop off and pick up visitors rather than park in the on-site lot. In practice, pick-up and drop-off activity may occur on a daily basis for athletic events in the summer. Additionally no deductions were taken for alternative modes, although the site is generally accessible by walking and bicycling. The estimated peak demand of 344 parking spaces would not exceed the on-site parking supply of at least 375 spaces. Therefore, it is anticipated that the existing parking supply would be adequate to accommodate peak parking demand under the Landscape Plan. However, it should be noted the parking demand could still potentially exceed the capacity during very large scheduled events.

Despite the adequate supply of parking spaces on-site, new vehicle trips generated by the Landscape Plan could increase the number of visitors to Flood County Park who park on nearby residential streets. Under existing conditions, some visitors park on local streets like Del Norte Avenue rather than pay for on-site parking, including during the permit parking season on these streets.

The County would encourage on-site parking under the Landscape Plan by allowing participants in programmed active recreational activities to be dropped off and picked up inside the park without paying an entrance fee. This practice would minimize pick-up and drop-off activity near the Iris Lane gate to Flood County Park. However, off-site parking could still increase, resulting in a reduced parking capacity for residents on local streets.

Mitigation Measures

Mitigation Measure T-1 to implement parking fee collection practices, such as automated fee machines and paying upon exiting the park, would facilitate on-site parking and could reduce the incentive for off-site parking. In addition, Mitigation Measure T-6 would require education of park visitors about on-street parking restrictions and coordination with the City of Menlo Park on enforcement of parking violations.

MM T-6 PARKING EDUCATION AND ENFORCEMENT

The County shall inform park visitors of on-street parking restrictions on nearby residential streets and shall post this information in a clearly visible location on-site. The County also shall coordinate with the City of Menlo Park to reduce parking in the adjacent neighborhoods, including proactive communication when peak use of Flood County Park is anticipated (i.e., on weekday evenings and on weekend days when all picnic areas are reserved and all athletic fields are scheduled for concurrent use) and encouraging increased targeted enforcement of on-street parking restrictions.

Significance After Mitigation

With implementation of mitigation measures to facilitate on-site parking and discourage on-street parking, the Landscape Plan would have a less than significant impact related to parking capacity.

Cumulative Impacts

As discussed in Impact T-1, cumulative traffic impacts at the intersection of Bay Road and Ringwood Avenue would be significant and unavoidable under the near-term 2021 and 2040 scenarios with the addition of project-generated vehicle trips. New trips by park users would contribute to a future exceedance of the City of Menlo Park's LOS D threshold at this unsignalized intersection. Although the installation of a northbound left-turn lane on Ringwood Avenue would successfully mitigate the project's contribution to this impact, such a mitigation measure may be infeasible. Therefore, the project would have a considerable contribution to a significant cumulative traffic impact.

3.6 Wildfire

This section addresses the potential for the project to exacerbate wildfire risks. Additionally, the potential impacts related to exposure to wildfire, including smoke and subsequent flooding and runoff are assessed in this section. Data used to prepare this section were obtained from the California Department of Forestry and Fire Protection (CAL FIRE), the Western Regional Climate Center, and the County of San Mateo Hazard Mitigation Plan.

3.6.1 Environmental Setting

Overview of Wildfire

A wildfire is an uncontrolled fire in an area of combustible vegetation that is generally extensive in size. Wildfires differ from other fires in that they take place outdoors in areas of grassland, woodlands, brush land, scrubland, peatland, and other wooded areas that act as a source of fuel, or combustible material. Buildings may become involved if a wildfire spreads to adjacent communities. The primary factors that increase an area's susceptibility to wildfire include slope and topography, vegetation type and condition, and weather and atmospheric conditions. These factors, as they exist and occur relative the project site, are described below.

Slope and Aspect

Sloping land increases susceptibility to wildfire because fire typically burns faster up steep slopes (CAL FIRE 2000). Additionally, steep slopes may hinder firefighting efforts. Following severe wildfires, sloping land is also more susceptible to landslide or flooding from increased runoff during substantial precipitation events. Aspect is the direction that a slope faces, and it determines how much radiated heat the slope will receive from the sun. Slopes facing south to southwest will receive the most solar radiation. As a result, this slope is warmer and the vegetation drier than on slopes facing a northerly to northeasterly direction, increasing the potential for wildfire ignition and spread (CAL FIRE 2000). Because the project site is relatively flat and not sloping, it has no distinguishable aspect.

Vegetation

Vegetation is "fuel" to a wildfire and it changes over time. The relationship between vegetation and wildfire is complex, but generally some vegetation is naturally fire resistant, while other types are very flammable. For example, cured grass is much more flammable than standing trees (CAL FIRE 2017). Grass is considered an open fuel, in which oxygen has free access to promote the spread of fire. Additionally, weather and climate conditions, such as drought, can lead to increasing dry vegetation with low moisture content, increasing its flammability.

Vegetation cover throughout Flood County Park is ruderal and characterized by an extensive area of lawn with non-native grasses and native and non-native trees. Dominant native trees at the park included old growth valley oak, coast live oak, California bay laurel, and coast redwood. While the non-native. While the lawn area does not present a high risk of wildland fire fuel, the trees in the project site and other minor vegetative cover are susceptible to wildfire.

Weather and Atmospheric Conditions

Wind, temperature, and relative humidity are the most influential weather elements in fire behavior and susceptibility (CAL FIRE 2016). Fire moves faster under hot, dry, and windy conditions. Wind may also blow burning embers ahead of a fire, causing its spread. Drought conditions also lead to extended periods of excessively dry vegetation, increasing the fuel load and ignition potential.

The average annual precipitation in Redwood City is 19.16 inches (Western Regional Climate Center 2016).³ Generally, in an average or typical year, most precipitation is received from October through April. May through September is the driest parts of the year, and coincide with what has traditionally been considered the fire season in California. However, increasingly persistent drought and climatic changes in California have resulted in drier winters and fires during the autumn, winter, and spring months are become more common. For example, the devastating Camp Fire in Butte County ignited during November 2018.

Prevailing winds in Menlo Park are generally westerly to northwesterly (CARB 1984). Westerly to northwesterly prevailing wind means that winds generally move across the project site from the west to the east, from the Bay toward the hillside areas to the east.

Wildfire Hazards

In California, responsibility for wildfire prevention and suppression is shared by federal, state and local agencies. Federal agencies are responsible for federal lands in Federal Responsibility Areas. The State of California has determined that some non-federal lands in unincorporated areas with watershed value are of statewide interest and have classified those lands as State Responsibility Areas (SRA), which are managed by CAL FIRE. All incorporated areas and other unincorporated lands are classified as Local Responsibility Areas (LRA).

While nearly all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather and other relevant factors (Public Resources Code [PRC] 4201-4204 and California Government Code 51175-89). As described above, the primary factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE maps fire hazards based on zones, referred to as Fire Hazard Severity Zones. CAL FIRE maps three zones on SRA: 1) Moderate Fire Hazard Severity Zones; 2) High Fire Hazard Severity Zones; and 3) Very High Fire Hazard Severity Zones. Only the Very High Fire Hazard Severity Zones are mapped on LRA. Each of the zones influence how people construct buildings and protect property to reduce risk associated with wildland fires. Under state regulations, areas within very high fire hazard risk zones must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life within these areas.

According to LRA mapping, the project site is not designated as a Very High Fire Hazard Severity Zone (CAL FIRE 2008). Additionally, according to CAL FIRE, there are no SRA mapped within or around the project site (CAL FIRE 2007).

³ Redwood City is the closest Western Regional Climate Center monitoring station to Menlo Park with recent weather data.

3.6.2 Regulatory Setting

Federal

The Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 requires a State mitigation plan as a condition of disaster assistance. There are two different levels of State disaster plans: “Standard” and “Enhanced.” States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Act has also established new requirements for local mitigation plans

National Fire Plan

The National Fire Plan was developed under Executive Order 11246 in August 2000, following a historic wildland fire season. Its intent is to establish plans for active response to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity. The plan addresses firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability.

State

The California Fire Plan

The Strategic Fire Plan for California is the State’s road map for reducing the risk of wildfire. The most recent version of the Plan was finalized in August 2018, and directs each CAL FIRE Unit to prepare a locally specific Fire Management Plan (CAL FIRE 2018). In compliance with the California Fire Plan, individual CAL FIRE units are required to develop Fire Management Plans for their areas of responsibility. These documents assess the fire situation within each of the 21 CAL FIRE units and six contract counties. The plans include stakeholder contributions and priorities, and identify strategic areas for pre-fire planning and fuel treatment as defined by the people who live and work with the local fire problem. The plans are required to be updated annually.

California Office of Emergency Services

The California Office of Emergency Services (OES) prepares the State of California Multi-Hazard Mitigation Plan (SHMP). The SHMP identifies hazard risks, and includes a vulnerability analysis and a hazard mitigation strategy. The SHMP is federally required under the Disaster Mitigation Act of 2000 in order for the State to receive Federal funding. The Disaster Mitigation Act of 2000 requires a State mitigation plan as a condition of disaster assistance.

Wildland Urban Interface Building Standard

On September 20, 2007 the Building Standards Commission approved the Office of the State Fire Marshal emergency regulations amending the California Code of Regulations, Title 24, Part 2, known as the 2007 California Building Code (CBC). These codes include provisions for ignition-resistant construction standards in the wildland urban interface.

California Building Code (2016)

The 2016 Fire Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare for the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to some construction, alteration, movement enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of buildings or structures or any appurtenances connected or attached to such building structures throughout California.

Regional and Local

Association of Bay Area Governments Multi-Jurisdictional Local Hazard Mitigation Plan

The Association of Bay Area Governments' (ABAG) Multi-Jurisdictional Local Hazard Mitigation Plan covers mitigation measures that should be adopted by participating municipalities across the San Francisco Bay Area. The mitigation measures focus on hazards such as earthquake, fire, flood, and tsunami (ABAG 2011). The ABAG hazard mitigation planning process provided local governments with the tools necessary to meet federal hazard mitigation planning requirements, and this regional template has been used by numerous counties and cities within the ABAG planning area, including Union City.

San Mateo County Hazard Mitigation Plan

In August 2016, the Menlo Park City Council adopted a resolution approving an update to the Menlo Park Local Hazard Mitigation Plan Annex to the San Mateo County Hazard Mitigation Plan. In 2015 San Mateo County jurisdictions teamed together to prepare an updated countywide hazard mitigation plan. Chapter 10 of the San Mateo County Hazard Mitigation Plan addresses wildfire in the county and does not identify the population of Menlo Park as a population at high risk from wildland fire (San Mateo County 2016).

3.6.3 Impact Analysis

Methodology

The assessment of impacts related to wildfire hazards and risks were evaluated using fire hazard severity zone mapping for San Mateo County (CAL FIRE 2007), aerial imagery, and topographic mapping. Additionally, weather patterns related to prevailing winds and precipitation trends were evaluated as they relate to the spread and magnitude of wildfire.

Significance Thresholds

Based on Appendix G to the *CEQA Guidelines*, as updated in December 2018, impacts related to wildfire would be significant if the project would be located in or near SRAs or lands classified as Very High Fire Hazard Severity Zones, and would:

- 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
- 5 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

Project Impacts and Mitigation Measures

Threshold 1

Substantially impair an adopted emergency response plan or emergency evacuation plan.

Impact WFR-1 Recreational improvements under the Landscape Plan would be designed to meet all emergency evacuation requirements and would not impair the City's Emergency Operation Plan. Impacts related to emergency access and response would be less than significant.

Phases I, II, and III

The City of Menlo Park Emergency Operation Plan (EOP) describes how the City will manage and coordinate resources and personnel responding to emergency situations (Menlo Park 2011). The goals of the EOP are to provide effective safety measures and reduce property loss; provide the rapid resumption of basic services; and provide accurate documentation and records required for cost recovery efforts. The proposed recreational improvements would not alter existing hazardous conditions on the site, including wildfire hazards, in a way that would impair implementation of the EOP.

The design of the Landscape Plan also would ensure emergency vehicle access to the site. Emergency access to Flood County Park is available through the main gate and the fire access entryway at the Iris Lane gate. The Landscape Plan would maintain these emergency access points, and park users would still be able to evacuate through the main gate and other pedestrian gateways. Furthermore, the project would not involve modification of Bay Road and other nearby roadways that provide emergency access in Menlo Park. The project site also is not located in or near a SRA or a Very High Fire Hazard Severity Zone. Therefore, the proposed recreational improvements would not substantially impair an adopted emergency response plan or emergency evacuation plan, and this impact would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Threshold 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.

Impact WFR-2 Flood County Park is not located in a wildfire risk area and would not be altered in a way that would exacerbate fire risk. Redevelopment of the park would maintain the relatively flat topography and wildfire risk would not be increased by wind patterns. Impacts related to wildfire risks would be less than significant.

Phases I, II, and III

The risk of wildfires occurring in or near the project site is low due to the site's flat topography and location in an urbanized setting in Menlo Park. The San Mateo County Hazard Mitigation Plan ranks wildfire as the lowest hazard risk for the area (San Mateo County 2011). Although Flood County Park contains large trees and other vegetative areas that may be susceptible to wildland fire, the project would not increase the number of trees that could provide fuel for fire. As described above, prevailing winds in Menlo Park are generally westerly to northwesterly (CARB 1984), moving west to east across the City. The prevailing winds would move wildfire from areas of high risk in the County west of the site and the related smoke and air pollutants eastward toward developed areas of Menlo Park. However, the project would not introduce a new land use that could exacerbate fire risk due to slope, prevailing wind, or vegetative conditions. Furthermore, the park is not located in or near a SRA or a Very High Fire Hazard Severity Zone. Therefore, the project would not exacerbate wildfire risks on the site due to slope, prevailing winds, or other factors.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Threshold 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.

Impact WFR-3 Flood County Park would result in development on the project site in an urbanized area where infrastructure and roads currently exist. Installation and maintenance of new utility infrastructure would not exacerbate fire risk. Impacts would be less than significant.

Phase I

During Phase I of the Landscape Plan new utility lines including water, electric gas, and greywater piping would be installed. These features would be constructed in Flood County Park and accessed from existing infrastructure inside and outside the park in currently developed areas. Because this development would occur in urbanized areas where large tracts of vegetation cover are not present,

the installation and maintenance of utility lines would not exacerbate the risk of wildfire. This impact would be less than significant.

Phases II and III

Phase II and III of the Landscape Plan would include development of restrooms and a focal element, such as a pump feature, that may require utilities. For example, new restrooms could require new piping or an emergency water source. Similar to Phase I, project implementation under Phases II and III would be located on the project site in an urbanized area. Because this development would occur in urbanized areas where large tracts of vegetation cover are not present, the installation and maintenance of utility lines would not exacerbate the risk of wildfire. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Thresholds 4 and 5

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.

Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Impact WFR-4 Being located in a relatively flat urbanized area at low risk of fires, the project would not expose people or structures to risks from downslope or downstream post-fire impacts. This impact would be less than significant.

Phases I, II, and III

Severe wildfires damage the forest or shrub canopy, the plants below, as well as the soil. This can result in increased runoff after intense rainfall, which can put homes and other structures below a burned area at risk of localized floods and landslides. The project site and areas surrounding the project site are relatively flat and the project site is not located in an area identified with a high fire risk (CAL FIRE 2007, 2008). In addition, the area surrounding the project site is developed with minimal wildfire fuels and vegetation cover prone to ignition. If a structural fire or large urban fire were to occur near the project site the risk of flooding or landslides afterward would be negligible because of the nearly flat topography and because little soil would be exposed due to the developed conditions. In addition, Flood County Park is not identified in the San Mateo County Hazard Mitigation Plan as a facility at high risk of wildfire (San Mateo County 2016). The Hazard Mitigation Plan ranks wildfire as the lowest hazard risk for the area. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Cumulative Impacts

Cumulative development in the project vicinity would not increase the risk of wildfire because the surrounding area is already urbanized and at low risk of fires. New development would consist of redevelopment or infill development that would reduce wildfire fuel such as trees and vegetation. Therefore, cumulative development would have less than significant impacts related to exacerbating fire risk, and the proposed project would not considerably contribute to this risk.

4 Alternatives

This section identifies alternatives to the proposed Landscape Plan and evaluates their potential environmental impacts. Through comparison of these alternatives to the proposed project, the relative environmental advantages and disadvantages of each are weighed and analyzed.

As required by Section 15126.6 of the *CEQA Guidelines*, this section examines a reasonable range of alternatives. Not every conceivable alternative must be addressed, nor do infeasible alternatives need to be considered (*CEQA Guidelines* Section 15126.6(a)). Based on the *CEQA Guidelines*, several factors need to be considered in determining the range of alternatives to be analyzed in the EIR and the level of analytical detail that should be provided for each alternative. These factors include: (1) the nature of the significant impacts of the proposed project, (2) the ability of alternatives to avoid or reduce the project's significant impacts, (3) the ability of the alternatives to meet the objectives of the proposed project, and (4) the feasibility of the alternatives.

The discussion of alternatives must focus on alternatives capable of either avoiding or substantially lessening any significant environmental effects of the project, even if the alternative would impede, to some degree, the attainment of the project objectives or would be more costly (*CEQA Guidelines* Section 15126.6(b)). The analysis of alternatives need not be presented in the same level of detail as the assessment of the proposed project. Section 15126.6 of the *CEQA Guidelines* states that the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency or other plans or regulatory limitations, and jurisdictional boundaries.

The analysis in this EIR shows that the proposed Landscape Plan would result in a significant and unavoidable impact with respect to traffic congestion and traffic noise; all other impacts of the project would either be less than significant or could be mitigated to a less than significant level. A Reduced Athletic Programming Alternative (Alternative 2) is intended to reduce the project's significant and unavoidable impact from traffic congestion to the extent feasible, by prohibiting programmed use of athletic fields during P.M. peak traffic hours. In addition, a Multi-Use Field Alternative (Alternative 3) is intended to consolidate athletic activities that generate noise farther from residences adjacent to Flood County Park, reducing the project's already less than significant impact from on-site operational noise.

The following alternatives are evaluated in this section:

- Alternative 1: No Project (no change to existing conditions)
- Alternative 2: Reduced Athletic Programming
- Alternative 3: Multi-Use Field

Table 39 provides a summary comparison of the development characteristics of the project and the alternatives. A more detailed description of the alternatives is included in the impact analysis for each alternative.

Table 39 Comparison of Project Alternatives' Buildout Characteristics

Characteristic	Alternatives			
	Proposed Project	No Project	Reduced Athletic Programming	Multi-Use Field
Athletic Fields	Reconstructed ballfield New soccer/lacrosse field	Existing ballfield closed indefinitely	Reconstructed ballfield New soccer/lacrosse field	Multi-use field for softball, soccer, lacrosse
Area of Phase I Grading	9 acres	None	9 acres	7-9 acres
Timing of Programmed Athletic Activities	Full park hours	None	Morning and afternoon park hours except for 4-6 P.M. on weekdays	Full park hours

Among the alternatives shown in Table 39, this section also identifies the Environmentally Superior Alternative as required by the *CEQA Guidelines*.

As indicated above, project alternatives should feasibly be able to attain “most of the basic objectives of the project” (Section 15126.6(a) of the *CEQA Guidelines*), even though implementation of the project alternatives might, to some degree, impede the attainment of those objectives or be more costly (Section 15126.6(b) of the *CEQA Guidelines*). The following are the project objectives as described in Section 2, *Project Description*.

- To repair and update park features and core infrastructure components
- To meet demand for active recreation facilities in San Mateo County by increasing offerings of sports
- To provide a variety of uses for a range of user groups, including youth
- To optimize preservation of oak woodland

4.1 Alternatives Considered but Rejected

In addition to the Reduced Athletic Programming and Multi-Use Field alternatives, the County considered two other options for alternatives analysis. One option was to swap the proposed placement of the reconstructed ballfield and the new soccer/lacrosse field. This alternative site layout was considered with the intention of reducing the exposure of adjacent residents to noise from soccer and lacrosse activity. Whereas the proposed soccer/lacrosse field would be located approximately 100 feet away from the backyards of the nearest residences, the swapped field would be approximately 150 feet away from the nearest residences. The field-swapping alternative was rejected primarily because it is infeasible. The new ballfield would be constructed over two existing concrete hatches within the San Francisco Public Utilities Commission’s (SFPUC) pipeline right-of-way. First, the County would have to import additional soil to raise the new field to the level of the concrete hatches, which provide access to the pipelines. Second, to protect the safety of recreational users, grass or artificial plugs would need to be installed above the hatches. The County anticipates that SFPUC would not approve this restriction to pipeline access in its right-of-way. Finally, the Multi-Use Field Alternative would accomplish the same purpose of reducing noise exposure, without necessitating more grading or interfering with pipeline access.

The County also considered an alternative to increase preservation of natural and cultural resources. This resource-preservation alternative would remove the proposed soccer/lacrosse field to protect an existing grove of redwood trees and retain existing adobe structures. The primary intention would be to retain the historic feeling associated with adobe structures at Flood County Park. However, since publishing a Notice of Preparation of a Draft EIR in November 2016, the County has amended the Landscaped Plan to increase adobe preservation. When that notice was issued, the Landscape Plan called for partial demolition of the adobe administrative office building and complete demolition of an adobe maintenance building. The County has since revised the Landscape Plan to preserve these features and to repair the administrative office building for seismic stability. With these changes to the Landscape Plan, impacts related to cultural resources would be less than significant, as discussed in Section 4.4, *Cultural Resources*, of the original EIR. In addition, impacts to protected trees would be less than significant with mitigation, as discussed in Section 4.3, *Biological Resources*, of the original EIR. Because the currently proposed project would not have significant impacts on biological or cultural resources after mitigation, a resource-preservation alternative would not be necessary to analyze.

4.2 Alternative 1: No Project

This alternative assumes that the proposed Landscape Plan is not implemented and that the County continues operating and maintaining Flood County Park in its current condition. No existing elements would be removed or demolished, and no new structures or recreational elements would be constructed. It is assumed that, for safety reasons, the existing ballfield would remain indefinitely closed for use. Consistent with the recent trend of steadily increasing visitorship since a temporary closure of the park in 2011, it is likely that the number of park users and use of existing recreational facilities would continue to grow in the future.

Because the No Project Alternative would maintain Flood County Park in its current conditions, it would not alter existing residential views, visual resources, or cultural and paleontological resources. While the project would require mitigation to reduce aesthetic and cultural impacts to less than significant, this alternative would have no impact on these issue areas. Without the construction of proposed recreational improvements, the No Project Alternative would have no impact on nesting birds or roosting bats from vegetation removal, and no impact on air quality from construction emissions. Mitigation measures to protect biological resources and air quality would be unnecessary. By not constructing new athletic facilities, the No Project Alternative also would have no impact related to athletic noise or traffic congestion from athletic participants queuing at the entrance gate. This would avoid the need for mitigation to restrict the timing of programmed athletic events and to implement new parking fee collection practices. Although vehicle trips to and from the park would continue to incrementally increase, the No Project Alternative would avoid the Landscape Plan's significant and unavoidable impact related to traffic noise. This alternative also would not involve energy consumption for construction activities and would not increase on-site energy consumption during operation of the park. Therefore, impacts related to energy use would still be less than significant.

The continuation of existing conditions at Flood County Park may result in infrequent disturbance of neighbors from the use of sound amplification equipment at the park, occasional shortages in on-street parking capacity from park visitors, and safety concerns for bicyclists and pedestrians. Mitigation measures to limit sound amplification, install bicycle storage on-site, and post signage on Bay Road for pedestrians would still be applicable. Nevertheless, the No Project Alternative's overall impacts would be lower than those of the proposed project.

The No Project Alternative also would not achieve most objectives of the proposed project. Although it would optimize preserve of oak woodland, this alternative would not repair or update park features, meet demand for additional active recreation facilities in San Mateo County, or provide a greater variety of uses for a range of user groups.

4.3 Alternative 2: Reduced Athletic Programming

4.3.1 Description

The Reduced Athletic Programming Alternative focuses on revising the programming of the recreational facilities to address identified adverse traffic impacts. This alternative would introduce the same new recreational facilities as planned for in the Landscape Plan, and in the same phases of construction, but would prohibit the organized use of proposed athletic fields on weekdays during afternoon peak hours (4-6 P.M.). This alternative is intended to limit active recreational use that contributes to existing traffic congestion during the afternoon rush hour. The proposed ballfield and soccer/lacrosse field would remain available for informal, non-programmed use at this time.

This alternative would meet the proposed objectives to repair and update park features, to provide a variety of use for a range of user groups, and to optimize preservation of oak woodland. However, by closing athletic fields to programmed use during weekday late afternoons, it would not meet demand for active recreation facilities to the same extent as would the proposed project.

4.3.2 Impact Analysis

Aesthetics

Similar to the proposed Landscape Plan, this alternative would involve the installation of 20-to-30-foot netting around the soccer/lacrosse field to retain lacrosse balls and protect the safety of nearby people. Because of its height, the netting could be a prominent feature in residential views of Flood County Park, especially from adjacent properties on Del Norte Avenue. Mature trees in the eastern part of the park, which enhance the privacy of adjacent residences on Del Norte Avenue, also would be removed to clear room for the soccer/lacrosse field. Like the proposed project, the impact on residential views and privacy would be less than significant with implementation of Mitigation Measure AES-1 to use athletic netting with neutral colors and Mitigation Measure BIO-2(a) to replace removed mature trees along residential property lines.

The Reduced Athletic Programming Alternative would result in the loss of the same number of scenic mature trees as would the proposed project. Ground disturbance during construction also could encroach on the root zone of remaining mature trees, impairing their health. Therefore, similar to the project, the impact on scenic resources would be less than significant with implementation of Mitigation Measures BIO-3(a) and BIO-3(b) to replace protected trees once removed and to avoid the root zone of remaining protected trees during construction.

Air Quality

The Reduced Athletic Programming Alternative would involve the same scale of demolition, site preparation, grading, and construction as would the proposed project. Therefore, construction emissions also would not exceed BAAQMD's significance thresholds and would have a less than significant impact on air quality. Implementation of BAAQMD's basic construction mitigation

measures and reduction measures for NO_x and fugitive dust would still be recommended to further reduce emissions.

During the operation of new recreational elements, the Reduced Athletic Programming Alternative would substantially decrease the number of vehicle trips associated with athletic events by prohibiting programmed athletic activities during weekday P.M. peak hours. This restriction in athletic use relative to the project would reduce emissions of air pollutants from vehicle trips. Operational emissions would not exceed BAAQMD's significance thresholds. Therefore, this alternative would further reduce the project's already less than significant operational impact on air quality.

Similar to the proposed project, this alternative would lead to an increase in recreational users who may be exposed to toxic air contaminants (TACs) from traffic on U.S. 101. However, it is expected that, at a maximum, park users would only visit for a couple of hours per day (or even per week). Due to this low duration of exposure, park users would not be exposed to TACs for long periods of time that would affect health. The impact from exposure to substantial pollutant concentrations would still be less than significant.

Biological Resources

Similar to the proposed project, the removal of trees, shrubs, and structures during the construction of recreational facilities could adversely affect nesting birds and roosting birds if present. The impact on special-status species would still be less than significant with implementation of Mitigation Measures BIO-1(a) and BIO-1(b) to conduct surveys to identify nesting birds and roosting bats and to protect such species if present.

Similar to the proposed project, this alternative would involve the removal of approximately 80 trees, including some heritage trees protected by the County. The County would prepare a permit application for the removal of protected trees and would be subject to Mitigation Measure BIO-2(a) to replace protected trees at a 2 to 1 ratio. Construction activities also could disturb the root zone of remaining protected trees, so Mitigation Measure BIO-2(b) would still be required to avoid and protect such trees. Like the proposed project, the impact on protected trees would be less than significant with implementation of these measures.

Cultural Resources

Both the proposed Landscape Plan and this alternative would largely preserve existing adobe buildings that contribute to Flood County Park's eligibility as an historical resource, while rehabilitating the adobe administrative office building for seismic safety. Because one adobe building, Restroom D, would be demolished, this alternative also would be subject to Mitigation Measure CUL-1(a) to document historical resources. In addition, Mitigation Measure CUL-1(b) would apply to ensure that rehabilitation of the administrative office building adheres to the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*. Therefore, the impact on historical resources would still be less than significant with implementation of these measures.

Similar to the proposed project, ground-disturbing activities for the construction of recreational elements could result in the discovery of unanticipated archaeological resources, human remains, or fossils. Mitigation Measures CUL-2(a), CUL-2(b), and CUL-3 would be applicable to protect such resources in the event of their discovery. These impacts would still be less than significant with mitigation.

Energy

Similar to the proposed project, this alternative would consume energy for the construction and operation of new recreational facilities at Flood County Park. The scale of construction activity and associated energy use would be similar to that of the Landscape Plan. Prohibiting athletic events during afternoon peak hours on weekdays would reduce motor vehicle trips, and associated fuel consumption, to and from the park. However, these trips would effectively be displaced to events at other destinations with athletic fields in San Mateo County. Overall fuel consumption would not substantially differ from that caused by the proposed project. Therefore, this alternative would still have less than significant impacts related to energy use.

Geology and Soils

Similar to the proposed project, this alternative would not include construction of habitable structures and would adhere to applicable California Building Codes for the safety of uninhabited structures like the adobe administrative office building. Therefore, impacts from the exposure of people or structures to seismic-related hazards and expansive soils would still be less than significant. Although soil disturbance during construction also could result in erosion, compliance with existing regulations, including the NPDES Construction General Plan, would minimize the potential for erosion. Therefore, the impact related to erosion would also be less than significant.

Greenhouse Gas Emissions

The Reduced Athletic Programming Alternative would involve the same scale of demolition, site preparation, grading, and construction as would the proposed project. Therefore, construction-period GHG emissions would be equivalent to those of the project. During the operation of new recreational elements, this alternative would substantially reduce vehicle trips associated with athletic events by prohibiting programmed athletic activities in weekday P.M. peak hours. This restriction in athletic use relative to the project would reduce emissions of air pollutants from vehicle trips. Similar to the project, operational emissions would not exceed BAAQMD's significance thresholds. Therefore, this alternative would further reduce the project's already less than significant impact on climate change from GHG emissions.

Hydrology and Water Quality

Similar to the proposed project, storm water runoff from disturbed soils during construction could lead to sedimentation. However, because ground disturbance would cover more than one acre, this alternative would also be subject to erosion control requirements stipulated in the NPDES Construction General Permit. Adherence to the County's MS4 regulations and landscaping standards would protect water quality during the operation of recreational elements. Therefore, this alternative would still have a less than significant impact on water quality.

Phases I through III of this alternative would introduce a similar amount of grading activity and new impervious surfaces (e.g., basketball court, promenade, pathways) relative to the proposed project. Compliance with NPDES requirements for storm water discharges during construction and operation also would result in a less than significant impact related to changes in drainage patterns, storm water runoff flow, and storm water drainage systems. Because impervious surfaces would incrementally increase, this alternative would not substantially affect groundwater recharge. Like the project, this alternative would be served by water supplied by the SFPUC's Hetch Hetchy

Regional Water System, rather than by local groundwater. Therefore, the impact on groundwater supplies or recharge would still be less than significant.

Noise

This alternative would involve construction of the same recreational elements as the proposed Landscape Plan, in the same layout at Flood County Park. Construction would generate similarly high noise levels on and adjacent to the project site. However, construction noise would be temporary, and adherence to the County's allowed hours of construction would prevent noise disturbance during sensitive evening and nighttime hours. Therefore, the impact from construction noise would still be less than significant.

Similar to the proposed project, grading activity for proposed recreational elements would generate groundborne vibration. Because construction would occur inside the County's allowed hours, it would not generate vibration when people normally sleep. Like for the project, construction vibration would not exceed levels that may cause structural damage to historic adobe buildings on-site. Therefore, this alternative would also have a less than significant vibration impact.

Since the Reduced Athletic Programming Alternative would involve construction of the same recreational facilities as proposed, it would also add new sources of on-site operational noise from organized practices and games at athletic fields and performances at a gathering meadow. The prohibition on programmed athletic activity during weekday P.M. peak hours would avoid associated noise at that time. During scheduled events, however, noise from whistles, sound amplification equipment, or air horns could disturb nearby residents. Similar to the proposed project, the impact from on-site operational noise would be less than significant with implementation of Mitigation Measures N-3(a) and N-3(b) to restrict the loudest equipment without an approved special event permit and to further restrict the timing of athletic events.

Relative to the proposed project, this alternative would substantially reduce new vehicle trips during weekday P.M. peak hours by prohibiting organized athletic events. This would further reduce the project's incremental increase in weekday traffic volumes on nearby roadways, under existing plus project conditions. However, reducing vehicle trips during weekday P.M. peak hours would not affect trips to and from Flood County Park during Saturday peak hours, which would still increase ambient noise by at least 1 dBA L_{eq} . This increase in traffic noise would exceed the applicable standard. Therefore, this alternative would not avoid the Landscape Plan's significant and unavoidable impact on noise-sensitive receptors. It would also have a considerable contribution to a significant cumulative impact from weekend traffic noise.

Transportation and Circulation

Traffic Congestion

The Reduced Athletic Programming Alternative is intended to generate fewer new vehicle trips on already congested roadways during weekday P.M. peak hours. In that time frame, the alternative would prevent new trips associated with organized athletic events while, similar to the proposed project, facilitating incremental growth in trips for passive recreation. Table 40 shows the change in delay and LOS at nearby intersections under existing conditions.

Table 40 Existing and Existing Plus Alternative 2 Intersection Level of Service During P.M. Peak Hours

Study Intersection	Existing Conditions P.M. Peak		Existing Plus Project P.M. Peak		Existing Plus Alternative P.M. Peak	
	Delay	LOS	Delay	LOS	Delay	LOS
Bay Road/Marsh Road	16.0	B	17.0	B	16.3	B
Bay Road/Ringwood Avenue	21.2	C	35.7	D	25.9	D
Addition of Northbound Left-Turn Lane	–	–	15.3	C	13.8	B
Bay Road/Willow Road	>80*	F	>80*	F	>80*	F

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service.

* LOS is based on unserved demand.

Source: W-Trans 2019; see Appendix D

As shown in Table 40, the Reduced Athletic Programming Alternative would substantially reduce traffic congestion at the intersection of Bay Road and Ringwood Avenue during weekday P.M. peak hours, relative to the Landscape Plan. However, traffic delay would still exceed the City of Menlo Park’s threshold of LOS D for unsignalized intersections. This alternative would not avoid the project’s significant and unavoidable impact under existing plus project conditions.

Table 41 and Table 42 show that traffic delay would also still exceed LOS D at this intersection under near-term 2021 and cumulative 2040 conditions. Similar to the proposed project, a potential mitigation measure to install at northbound left-turn lane on Ringwood Avenue, approaching Bay Road, may be infeasible. Therefore, this alternative would still have a significant and unavoidable traffic impact during weekday P.M. peak hours under near-term 2021 and cumulative 2040 conditions. Mitigation Measure T-1 also would be applicable to minimize queuing of vehicles on Bay Road by facilitating on-site parking.

Because the Reduced Athletic Programming Alternative would not reduce new trip generation on weekends, relative to the Landscape Plan, traffic delay under cumulative 2040 conditions would still reach LOS D at the intersection of Bay Road and Ringwood Avenue during Saturday peak hours. Therefore, this alternative would also have a significant and unavoidable traffic impact during Saturday peak hours under cumulative 2040 conditions.

Table 41 Near-Term 2021 and Near-Term 2021 Plus Alternative 2 Intersection Level of Service During P.M. Peak Hours

Study Intersection	Near-Term Conditions P.M. Peak		Near-Term Plus Project P.M. Peak		Near-Term Plus Alternative P.M. Peak	
	Delay	LOS	Delay	LOS	Delay	LOS
Bay Road/Marsh Road	19.1	B	19.9	B	19.2	B
Bay Road/Ringwood Avenue	34.4	D	48.6	E	36.9	E
Addition of Northbound Left-Turn Lane	15.0	C	17.0	C	15.1	C
Bay Road/Willow Road	>80*	F	>80*	F	>80*	F

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service.

* LOS is based on unserved demand.

Source: W-Trans 2019; see Appendix D

Table 42 Cumulative 2040 and Cumulative 2040 Plus Alternative 2 Intersection Level of Service During P.M. Peak Hours

Study Intersection	Cumulative 2040 Conditions P.M. Peak		Cumulative 2040 Plus Project P.M. Peak		Cumulative 2040 Plus Alternative P.M. Peak	
	Delay	LOS	Delay	LOS	Delay	LOS
Bay Road/Marsh Road	29.1	C	34.9	C	32.6	C
Bay Road/Ringwood Avenue	108.9	F	**	F	**	F
Addition of Northbound Left-Turn Lane	24.7	C	34.0	C	28.8	C
Bay Road/Willow Road	>80*	F	>80*	F	>80*	F

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service.

* LOS is based on unserved demand.

** delays exceeds 120 seconds.

Source: W-Trans 2019; see Appendix D

Transit, Bicycle, Pedestrian Facilities

This alternative would not generate more transit, bicycle, or pedestrian trips than would the proposed project and therefore would not decrease the performance of existing or planned transit, bicycle, or pedestrian facilities. These facilities would remain adequate to serve visitors to Flood County Park and other destinations. However, similar to the project, the lack of bicycle storage on-site and a sidewalk gap on Bay Road could result in unsafe conditions for bicyclists and pedestrians accessing the park. These impacts would be less than significant with implementation of Mitigation Measure T-5(a) to install bicycle storage on-site and Mitigation Measure T-5(b) for the County to install signage for pedestrians.

Parking Capacity

Since this alternative would not generate additional vehicle trips relative to the proposed Landscape Plan, the on-site parking supply would remain adequate. However, new vehicle trips could still result in increased parking on local residential streets. Similar to the project, this impact on parking capacity would be less than significant with implementation of Mitigation Measure T-1 to facilitate on-site parking and reduce the incentive for on-street parking and Mitigation Measure T-6 to discourage on-street parking by visitors to Flood County Park.

Tribal Cultural Resources

Like the proposed project, the construction of recreational facilities would involve surface excavation with the potential to unearth previously unidentified tribal cultural resources. This impact would also be less than significant with implementation of Mitigation Measure TCR-1 for the protection of such resources in the event of their discovery during construction.

Wildfire

Similar to the proposed project, this alternative would retain adequate emergency access to the park through the main gate and the fire access entryway at the Iris Lane gate, while not modifying Bay Road and other nearby roadways that provide emergency access in Menlo Park. The project site also is not located in or near a SRA or a Very High Fire Hazard Severity Zone. Therefore, new recreational facilities would not expose park users to substantial risks from wildfire. Impacts related to wildfire would still be less than significant.

4.4 Alternative 3: Multi-Use Field

4.4.1 Description

The Multi-Use Field Alternative would introduce a new multi-use athletic field in the location of the existing ballfield, while eliminating the Landscape Plan's proposed soccer/lacrosse field. A multi-use field would cater to softball, soccer, and lacrosse without the need for additional separate athletic fields. This field would fit approximately within the dimensions of the existing ballfield, with an estimated width of 400 feet and a length of 360 feet. The Multi-Use Field Alternative would retain all other planned recreational elements in the Landscape Plan. In the eastern part of the park, the alternative could potentially involve demolition of the existing pétanque and tennis courts and construction of new passive recreational elements in lieu of the proposed soccer/lacrosse field.

This alternative would meet all four proposed objectives: to repair and update park features, to meet demand for active recreational facilities in San Mateo County, to provide a variety of use for a range of user groups, and to optimize preservation of oak woodland. It would meet demand for active recreational facilities to a lesser degree than would the proposed project because the multi-use field would have less capacity to host simultaneous athletic events.

4.4.2 Impact Analysis

Aesthetics

Similar to the proposed Landscape Plan, this alternative could involve the installation of 20-to-30-foot netting around the multi-use field to retain lacrosse balls and protect the safety of nearby

people. This netting would be installed as close as an estimated 150 feet from residences on Hedge Road and Van Buren Road and an estimated 300 feet from residences on Del Norte Avenue. Because of its height, the netting could be a prominent feature in residential views of Flood County Park, especially from two-story residences. Mature trees in the eastern part of the park, which enhance the privacy of adjacent residences on Del Norte Avenue, also could be removed for the installation of additional passive recreational facilities. Like the proposed project, the impact on residential views and privacy would be less than significant with implementation of Mitigation Measure AES-1 to use athletic netting with neutral colors and Mitigation Measure BIO-2(a) to replace removed mature trees along residential property lines.

The Multi-Use Field Alternative could reduce the loss of mature trees that serve as scenic resources at Flood County Park. If the existing pétanque and tennis courts were left in place, the County would retain a grove of redwood trees between these facilities in the eastern corner of the park. However, other mature trees would still be removed for construction of other facilities like volleyball courts and the multi-use field. Ground disturbance during construction also could encroach on the root zone of remaining mature trees, impairing their health. Therefore, similar to the project, the impact on scenic resources would be less than significant with implementation of Mitigation Measures BIO-3(a) and BIO-3(b) to replace protected trees once removed and to avoid the root zone of remaining protected trees during construction. This alternative could further reduce this less than significant impact if mature trees near the existing tennis courts are preserved.

Air Quality

As shown in Table 39, whereas Phase I of the proposed Landscape Plan would involve grading of an estimated nine acres for the construction of athletic fields, the Multi-Use Field Alternative would require grading of an estimated seven to nine acres for this phase. If no new recreational elements are constructed in lieu of the proposed soccer/lacrosse field, then the area of grading in Phase I would decrease by approximately two acres. Therefore, this alternative could incrementally reduce emissions of air pollutants during construction. Like the project, construction emissions would not exceed BAAQMD's significance thresholds and would have a less than significant impact on air quality. Implementation of BAAQMD's basic construction mitigation measures and reduction measures for NO_x and fugitive dust would still be recommended to further reduce emissions.

During the operation of new recreational elements, this alternative would incrementally reduce vehicle trips associated with athletic events. Whereas the proposed reconstructed ballfield and soccer/lacrosse field would enable simultaneous athletic events on each field, it is assumed that a multi-use field would typically accommodate one event at a time. Relative to the project, this change in athletic capacity would incrementally reduce emissions of air pollutants from vehicle trips. Similar to the project, operational emissions would not exceed BAAQMD's significance thresholds and would have a less than significant impact on air quality.

Similar to the proposed project, this alternative would lead to an increase in recreational users who may be exposed to toxic air contaminants (TACs) from traffic on U.S. 101. However, it is expected that, at a maximum, park users would only visit for a couple of hours per day (or even per week). Due to this low duration of exposure, park users would not be exposed to TACs for long periods of time that would affect health. The impact from exposure to substantial pollutant concentrations would still be less than significant.

Biological Resources

Similar to the proposed project, the removal of trees, shrubs, and structures during the construction of recreational facilities could adversely affect nesting birds and roosting birds if present. The impact on special-status species would still be less than significant with implementation of Mitigation Measures BIO-1(a) and BIO-1(b) to conduct surveys to identify nesting birds and roosting bats and to protect such species if present.

As discussed in Section 4.3, *Biological Resources*, of the original EIR, it is estimated that construction of the proposed recreational elements would involve the removal of approximately 80 trees. Because this alternative could preserve the grove of redwood trees between the existing pétanque and tennis courts, it could incrementally reduce the removal of County-protected trees. However, similar to the proposed project, the County would prepare a permit application for the removal of protected trees and would be subject to Mitigation Measure BIO-2(a) to replace protected trees at a 2 to 1 ratio. Construction activities also could disturb the root zone of remaining protected trees, so Mitigation Measure BIO-2(b) would still be required to avoid and protect such trees. Like the proposed project, the impact on protected trees would be less than significant with implementation of these measures. This alternative could further reduce the less than significant impact if mature trees near the existing tennis courts are preserved.

Cultural Resources

Both the proposed Landscape Plan and this alternative would preserve existing adobe buildings that contribute to Flood County Park's eligibility as an historical resource, while rehabilitating the adobe administrative office building for seismic safety. Similar to the proposed project, this alternative would involve demolition of one adobe building (Restroom D) to clear room for the proposed soccer/lacrosse field in the eastern corner of the park but would preserve other adobe buildings at the park. Also similar to the proposed project, this alternative would be subject to Mitigation Measure CUL-1(a) to document historical resources upon demolition of Restroom D and to Mitigation Measure CUL-1(b) to ensure that rehabilitation of the administrative office building adheres to the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*. Therefore, the impact on historical resources would still be less than significant with implementation of these measures, as applicable.

Similar to the proposed project, ground-disturbing activities for the construction of recreational elements could result in the discovery of unanticipated archaeological resources, human remains, or fossils. Mitigation Measures CUL-2(a), CUL-2(b), and CUL-3 would be applicable to protect such resources in the event of their discovery. These impacts would still be less than significant with mitigation.

Energy

Similar to the proposed project, this alternative would consume energy for the construction and operation of new recreational facilities at Flood County Park. The scale of construction activity and associated energy use would be similar to that of the Landscape Plan. By constructing only one athletic field, the Multi-Use Field Alternative would accommodate fewer simultaneous athletic events than would the proposed ballfield and soccer/lacrosse field. Therefore, it would generate incrementally fewer new vehicle trips for active recreation than would the Landscape Plan. However, these trips would effectively be displaced to events at other destinations with athletic

fields in San Mateo County. Overall fuel consumption would not substantially differ from that caused by the proposed project. Therefore, this alternative would still have less than significant impacts related to energy use.

Geology and Soils

Similar to the proposed project, this alternative would not include construction of habitable structures and would adhere to applicable California Building Codes for the safety of uninhabited structures like the adobe administrative office building. Therefore, impacts from the exposure of people or structures to seismic-related hazards and expansive soils would still be less than significant. Although soil disturbance during construction also could result in erosion, compliance with existing regulations, including the NPDES Construction General Plan, would minimize the potential for erosion. Therefore, the impact related to erosion would also be less than significant.

Greenhouse Gas Emissions

As shown in Table 39, whereas Phase I of the proposed Landscape Plan would involve grading of an estimated nine acres for the construction of athletic fields, the Multi-Use Field Alternative would require grading of an estimated seven to nine acres for this phase. If no new recreational elements are constructed in lieu of the proposed soccer/lacrosse field, then the area of grading in Phase I would decrease by approximately two acres. Therefore, this alternative could incrementally reduce greenhouse gas emissions (GHGs) associated with construction equipment.

During the operation of new recreational elements, this alternative also would incrementally reduce vehicle trips associated with athletic events. Whereas the proposed reconstructed ballfield and soccer/lacrosse field would enable simultaneous athletic events on each field, it is assumed that a multi-use field would typically accommodate one event at a time. Relative to the project, this change in athletic capacity would incrementally reduce GHGs from vehicle trips. Like the project, GHG emissions would not hinder or delay achievement of State GHG reduction targets, and the alternative would be consistent with the County's Energy Efficiency Climate Action Plan. Therefore, the alternative's impact to climate change would still be less than significant.

Hydrology and Water Quality

Similar to the proposed project, storm water runoff from disturbed soils during construction could lead to sedimentation. However, because ground disturbance would cover more than one acre, this alternative would also be subject to erosion control requirements stipulated in the NPDES Construction General Permit. Adherence to the County's MS4 regulations and landscaping standards would protect water quality during the operation of recreational elements. Therefore, this alternative would still have a less than significant impact on water quality.

Phases I through III of this alternative would introduce a similar amount of grading activity and new impervious surfaces (e.g., basketball court, promenade, pathways) to the proposed project. Compliance with NPDES requirements for storm water discharges during construction and operation also would result in a less than significant impact related to changes in drainage patterns, storm water runoff flow, and storm water drainage systems. Because impervious surfaces would incrementally increase, this alternative would not substantially affect groundwater recharge. Like the project, this alternative would be served by water supplied by the SFPUC's Hetch Hetchy Regional Water System, rather than by local groundwater. Therefore, the impact on groundwater supplies or recharge would still be less than significant.

Noise

The Multi-Use Field Alternative could incrementally reduce construction noise relative to the proposed project. Whereas the project would involve demolition of existing tennis courts within approximately 40 feet of residents on Del Norte Avenue, this alternative could leave intact these courts and other existing facilities in the eastern corner of the park. Other construction activity, however, would take place at similar distances to noise-sensitive receptors as under the project: grading activity for utility work as close as 50 feet from residences south of Bay Road; grading activity at the southeastern edge of the park, approximately 80 feet from residences on Del Norte Avenue; and paving activity at new tennis courts, approximately 115 feet from those residences. As discussed in Section 3.4, *Noise*, the demolition of tennis courts could generate estimated noise levels of 86 dBA L_{eq} at the nearest residences, while other construction activity would cause noise levels up to an estimated 85 dBA L_{eq} at a distance of 50 feet from the source. These construction noise levels would not exceed those for the proposed project. Furthermore, construction activity would be temporary and would adhere to the County's allowed hours of construction, preventing noise disturbance during sensitive evening and nighttime hours. Therefore, the impact from construction noise would still be less than significant.

Grading activity for new recreational elements would generate groundborne vibration no closer to nearby residents than for the proposed project. Because construction would occur inside the County's allowed hours, it would not generate vibration when people normally sleep. Like for the project, construction vibration would not exceed levels that may cause structural damage to historic adobe buildings on-site. Therefore, this alternative would also have a less than significant vibration impact.

The Multi-Use Field Alternative is intended to increase the distance between nearby residents and organized athletic activities that generate noise at Flood County Park. While the proposed project would plan for construction of a soccer/lacrosse field an estimated 100 feet away from residents on Del Norte Avenue, this alternative would eliminate that proposed facility. In place of a reconstructed ballfield, this alternative would add a multi-use field that caters to softball, soccer, and lacrosse, located as close as approximately 150 feet from residents on Hedge Road and Van Buren Road and an estimated 300 feet from residences on Del Norte Avenue. Because the multi-use field would be about 50 feet farther from noise-sensitive receptors than would the soccer/lacrosse field, it is estimated that average noise from lacrosse and soccer games would decrease from 59-64 dBA L_{eq} to 56-61 dBA L_{eq} at the nearest receptors. At residences located approximately 300 feet away on Del Norte Avenue, such noise would decrease to 50-55 dBA L_{eq} . Despite this reduction in average noise levels, impulse noise from whistles, sound amplification equipment, or air horns at either athletic events or the gathering meadow could still disturb nearby residents. This alternative would further reduce the project's already less than significant impact from on-site operational noise with implementation of Mitigation Measures N-3(a) and N-3(b) to restrict the loudest equipment without an approved special event permit and to further restrict the timing of athletic events.

Relative to the proposed project, this alternative would incrementally reduce new vehicle trips because the multi-use field would accommodate fewer simultaneous athletic events. This would further reduce the project's incremental increase in traffic volumes on nearby roadways, under existing plus project conditions. However, trips to and from Flood County Park during Saturday peak hours would still increase traffic noise by more than 1 dBA L_{eq} , which would exceed the applicable standard. Therefore, this alternative would not avoid the Landscape Plan's significant and unavoidable impact on noise-sensitive receptors. It would also have a considerable contribution to a significant cumulative impact from traffic noise.

Transportation and Circulation

Traffic Congestion

The Multi-Use Field Alternative would generate incrementally fewer new vehicle trips for active recreation than would the proposed Landscape Plan because it would accommodate less simultaneous athletic events. It would generate a similar amount of trips associated with passive recreation at other proposed facilities. Despite incrementally reducing new vehicle trips, this alternative would not avoid the project's significant impacts at the intersection of Bay Road and Ringwood Avenue under existing, near-term 2021, or cumulative 2040 conditions. As discussed under Impact T-1 in Section 3.5, *Transportation and Circulation*, the addition of only 25 P.M. peak-hour trips would push operating conditions at this intersection from LOS C to D, causing an exceedance of the City of Menlo Park's traffic standards. Even one adult baseball or softball game would generate an estimated 30 P.M. inbound trips (Appendix D). Therefore, a reduction in simultaneous athletic events at the park would not be sufficient to retain LOS C conditions at the affected intersection. It would be necessary to eliminate athletic events during weekday P.M. peak hours to avoid a significant impact under existing conditions. Similar to the proposed project, a potential mitigation measure to install at northbound left-turn lane on Ringwood Avenue, approaching Bay Road, may be infeasible. Therefore, this alternative would still have significant and unavoidable traffic impacts under existing, near-term 2021, and cumulative 2040 conditions.

Transit, Bicycle, Pedestrian Facilities

This alternative would not generate more transit, bicycle, or pedestrian trips than would the proposed project and therefore would not decrease the performance of existing or planned transit, bicycle, or pedestrian facilities. These facilities would remain adequate to serve visitors to Flood County Park and other destinations. However, similar to the project, the lack of bicycle storage on-site and a sidewalk gap on Bay Road could result in unsafe conditions for bicyclists and pedestrians accessing the park. These impacts would be less than significant with implementation of Mitigation Measure T-5(a) to install bicycle storage on-site and Mitigation Measure T-5(b) for the County to install signage for pedestrians.

Parking Capacity

Since this alternative would not generate additional vehicle trips relative to the proposed Landscape Plan, the on-site parking supply would remain adequate. However, new vehicle trips could still result in increased parking on local residential streets. Similar to the project, this impact on parking capacity would be less than significant with implementation of Mitigation Measure T-1 to facilitate on-site parking and reduce the incentive for on-street parking and Mitigation Measure T-6 to discourage on-street parking by visitors to Flood County Park.

Tribal Cultural Resources

Like the proposed project, the construction of recreational facilities would involve surface excavation with the potential to unearth previously unidentified tribal cultural resources. This impact would also be less than significant with implementation of Mitigation Measure TCR-1 for the protection of such resources in the event of their discovery during construction.

Wildfire

Similar to the proposed project, this alternative would retain adequate emergency access to the park through the main gate and the fire access entryway at the Iris Lane gate, while not modifying Bay Road and other nearby roadways that provide emergency access in Menlo Park. The project site also is not located in or near a SRA or a Very High Fire Hazard Severity Zone. Therefore, new recreational facilities would not expose park users to substantial risks from wildfire. Impacts related to wildfire would still be less than significant.

4.5 Environmentally Superior Alternative

Table 43 compares the physical impacts for each of the alternatives to the physical impacts of the proposed project. The No Project Alternative would be the overall environmentally superior alternative since it would avoid all project impacts. However, the No Project Alternative would not achieve most project objectives as stated in Section 2, *Project Description*.

Among the park redevelopment options, Alternative 2 (Reduced Athletic Programming) would be the most environmentally superior relative to the proposed project. This alternative would substantially reduce vehicle trips associated with athletic activity, avoiding a significant and unavoidable impact on traffic congestion at the intersection of Bay Road and Ringwood Avenue during weekday P.M. peak hours under existing plus project traffic conditions. However, this impact would still be significant and unavoidable under cumulative traffic scenarios. The reduction in vehicle trips also would avoid the project's significant and unavoidable impact from traffic noise, and its considerable contribution to a significant cumulative impact from traffic noise. In addition, reducing trips would incrementally decrease emissions of air pollutants and GHGs, further reducing the project's less than significant impacts in these resource areas. This alternative would partially meet the proposed objectives but would not make athletic fields available on weekday late afternoons. Therefore, it would not meet demand for active recreation facilities to the same extent as would the proposed project.

Alternative 3 (Multi-Use Field) also would be environmentally preferable to the proposed project, although it would not avoid the project's significant and unavoidable impacts related to traffic congestion and traffic noise. Without construction of the proposed soccer/lacrosse field near residences on Del Norte Avenue, this alternative would reduce people's exposure to operational noise. This alternative would meet all four proposed objectives: to repair and update park features, to meet demand for active recreational facilities in San Mateo County, to provide a variety of use for a range of user groups, and to optimize preservation of oak woodland. It would meet demand for active recreational facilities to a lesser degree than would the proposed project because the multi-use field would have less capacity to host simultaneous athletic events.

Table 43 Impact Comparison of Alternatives

Issue	Proposed Project Impact Classification	Alternative 1: No Project	Alternative 2: Reduced Athletic Programming	Alternative 3: Multi-Use Field
Aesthetics	Less than Significant with Mitigation	+ (Less than Significant)	= (Less than Significant with Mitigation)	= (Less than Significant with Mitigation)
Air Quality	Less than Significant	+ (Less than Significant)	+/= (Less than Significant)	= (Less than Significant)
Biological Resources	Less than Significant with Mitigation	+ (Less than Significant)	= (Less than Significant with Mitigation)	= (Less than Significant with Mitigation)
Cultural Resources	Less than Significant with Mitigation	+ (Less than Significant)	= (Less than Significant with Mitigation)	= (Less than Significant with Mitigation)
Energy	Less than Significant	= (Less than Significant)	= (Less than Significant)	= (Less than Significant)
Geology and Soils	Less than Significant	+ (Less than Significant)	= (Less than Significant)	= (Less than Significant)
Greenhouse Gas Emissions	Less than Significant	+ (Less than Significant)	+/= (Less than Significant)	= (Less than Significant)
Hydrology and Water Quality	Less than Significant	+ (Less than Significant)	= (Less than Significant)	= (Less than Significant)
Noise	Significant and Unavoidable	+ (Less than Significant with Mitigation)	+/= (Significant and Unavoidable)	+/= (Significant and Unavoidable)
Transportation and Circulation	Significant and Unavoidable	+ (Less than Significant)	+/= (Significant and Unavoidable)	= (Significant and Unavoidable)
Tribal Cultural Resources	Less than Significant with Mitigation	+ (Less than Significant)	= (Less than Significant)	= (Less than Significant)
Wildfire	Less than Significant	= (Less than Significant)	= (Less than Significant)	= (Less than Significant)
+ Superior to the proposed project (reduced level of impact) - Inferior to the proposed project (increased level of impact) = Similar level of impact to the proposed project				

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5.2 List of Preparers

RINCON CONSULTANTS, INC.

Stephen Svete, AICP, LEED AP ND, Principal
Jonathan Berlin, Project Manager
Kari Zajac, Associate Planner
Debra Jane Seltzer, Document Production Specialist

W-TRANS

Mark Spencer, PE, Principal
Nick Bleich, Assistant Engineer

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