

TIBURON PENINSULA CLUB  
JUNIOR TENNIS CLUB PROJECT  
Draft Environmental Impact Report

March 2018

Prepared for:  
Town of Tiburon

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Prepared by:  
Leonard Charles & Associates

**Tiburon Peninsula Club – Junior Tennis Club Project**  
**Draft Environmental Impact Report**

**State Clearinghouse No. 2017012020**

**March 2018**

**Prepared for:**           **Town of Tiburon**  
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## **1.0 EXECUTIVE SUMMARY CHAPTER**

### **1.1 Summary of the Proposed Project**

The Tiburon Peninsula Club (TPC) seeks Town approval of a Conditional Use Permit to construct a Junior Tennis Center that would be used to expand its current junior clinic program and provide tennis lessons for members and non-members. The main improvements that would be constructed for this tennis center are described below.

A one-story structure will be constructed adjacent to the north side of the existing lower tennis courts that will include two bathrooms and storage for TPC-owned tennis-related equipment. North of this structure will be a landscaped entry to a 792-square foot covered entrance (with a translucent roof) to the facility. The entryway will include folding gates and a card reader. Adjacent to the proposed entry area will be a screened outdoor area open to the sky and screened from public view by a wall and doors.

Pole lights will be installed to light the six existing courts so that current afterschool programs can be extended to 7:30 p.m. during the winter months. Lighting will be used from September 8th to April 14th only. During the season when lights are necessary, classes and activities will cease at 7:30 and the lights will stay on until 7:45 allowing 15 minutes for cleanup. The lighting will use LED lights that will have individual on-off switching and motion sensors, be screened and shielded, and be “dark sky” compliant.

### **1.2 Areas of Controversy**

#### **A. Areas of Controversy and Issues to Be Resolved**

The proposed project raises issues and some areas of controversy that will be considered by Town decision-makers. Controversial issues are known through expressions of public opinion that are documented in the record or obtained through public meetings. Prior to circulating the Draft EIR, the Town circulated a Notice of Preparation (NOP) to agencies and interested parties. The Town received nine comment letters during this NOP review period as well as oral comments made at a Public Scoping Meeting on this EIR. These letters and comments are summarized in Section 2.3 of this EIR.

Some areas of controversy are not within the purview of CEQA because that statute focuses on evaluation of significant effects to the *physical environment*. The areas of controversy identified in the comment letters and oral comments that relate to physical impact issues are the potential for increased light pollution and glare, increased noise, biological impacts to the Railroad Marsh, and traffic impacts on the intersection of State Route 131 (Tiburon Boulevard) and Mar West Street.

Pursuant to CEQA Guidelines Section 15123, the issues to be resolved include the choice among alternatives and whether or how to mitigate the significant effects. This EIR has presented mitigation measures and project alternatives, and the Town Planning Commission will consider

the Final EIR when considering the proposed project. In considering whether to approve the project, the Town Planning Commission will take into consideration the environmental consequences of the project with mitigation measures and project alternatives, as well as other factors related to feasibility.

### **1.3 Summary of Impacts**

All impacts and mitigation measures identified in this EIR are summarized in Table 1.3-1, Summary of Impacts and Mitigations, at the end of this chapter. For a full discussion of potential environmental impacts, the reader is referred to the appropriate sections of Chapter 4. Table 1.3-1 summarizes the project impacts and the mitigation measures recommended to address those impacts. The first column of Table 1.3-1 describes the impact that would result from the project. Following that impact is a description of the level of significance the impact has. Levels of significance include "less than significant" (listed as LTS in the table), "potentially significant" (i.e., significant prior to implementation of mitigation measures; listed as PS in the table), and "significant and unavoidable" (listed as SU in the table).

The next column lists the recommended mitigation measures for the impact. Finally, there is a column that describes the significance of the impact after mitigation measures have been implemented.

The proposed construction phase of the project would not result in any significant direct impacts that cannot be mitigated to a less-than-significant level. Operation of the project, after inclusion of EIR-recommended mitigation measures, would not result in any significant and unavoidable impacts.

### **1.4 Summary of Project Alternatives**

As described in Section 5.5 of this EIR, the EIR analyzed the following two alternatives to the proposed project:

1. *No Project Alternative.* Under this alternative, none of the improvements included in the proposed project would be built.
2. *Project Redesign.* Under this alternative, components of the project would be redesigned or relocated to reduce the environmental effects

#### *Environmentally Superior Alternative*

The alternatives analysis contained in Section 5.5 of this EIR concludes that the No Project Alternative is the environmentally superior alternative, though it does not meet any of the project objectives. The Project Redesign Alternative would be the environmentally superior alternative that meets most basic project objectives.

TABLE 1.3-1 - IMPACT AND MITIGATION SUMMARY

IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
<b>4.1</b>	<b>Visual Quality</b>		
4.1-A	The project would not have a substantial adverse effect on a scenic vista. The impact would be less than significant.	LTS	No mitigation is required.
4.1-B	The project would not substantially affect the existing visual character or quality of the site and its surrounding visual resources or views.	LTS	No mitigation is required.
4.1-C	The project may create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.	PS	4.1-C.1 The existing TPC parking lights will be replaced with LED lights that will be screened, shielded, and dark sky compliant (as defined by the International Dark-Sky Association). The luminaires will be installed parallel to the ground surface. The LED lighting will be limited to 4000K.
4.1-D	Changes in the viewshed associated with the project in combination with other local development would not result in significant cumulative visual impacts.	LTS	No mitigation is required.
<b>4.2</b>	<b>Traffic and Circulation</b>		
4.2-A	The project would add trips during the PM peak hour. Increasing delay for drivers turning from Mar West Street onto Tiburon Boulevard by one second.	LTS	No mitigation is required.
4.2-B	Project development, in conjunction with other projected development could result in traffic impacts.	PS	4.2-B.1 Applicable traffic mitigation fees shall be paid by the applicant at the time of issuance of the building permit. The Town shall apply to Caltrans for signalization or installation of a rotary/traffic circle at the intersection of Mar West Street and Tiburon Boulevard once a signal warrant is met. The Town shall employ its own criteria for ranking and prioritization, including other signal warrants and accident history, when considering the need and timing for traffic signal or a rotary/traffic circle installation. The Town shall coordinate with Caltrans when planning and implementing the mitigation, but the final decision regarding signalization or a rotary/traffic circle lies with Caltrans.
<b>4.3</b>	<b>Noise</b>		
4.3-A	Noise generated by construction activities would not result in a substantial temporary noise increase at adjacent land uses.	LTS	No mitigation is required.
4.3-B	Project operations would not result in a permanent noise increase at adjacent land uses that would be greater than the noise standards adopted by the Town.	LTS	No mitigation is required.

TABLE 1.3-1 - IMPACT AND MITIGATION SUMMARY

IMPAIRMENTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
4.3-C	Noise associated with the project in combination with other local development would not result in significant cumulative noise impacts.	LTS	No mitigation is required	LTS
<b>4.4</b>	<b>Air Quality</b>			
4.4-A	Project construction and operation would not generate significant amounts of emissions of criteria pollutants, and consequently the project would be consistent with the Bay Area 2017 Clean Air Plan.	PS	<p>4.4-A.1 In accordance with the BAAQMD CEQA Guidelines (BAAQMD, 2017), the project shall implement the following actions (that are pertinent to this project) to control dust from escaping from the site:</p> <ol style="list-style-type: none"> <li>1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day if construction occurs during dry weather.</li> <li>2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.</li> <li>3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.</li> <li>4. All vehicle speeds on unpaved roads shall be limited to 15 mph.</li> <li>5. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.</li> <li>6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.</li> <li>7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.</li> <li>8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District’s phone number shall also be visible to ensure compliance with applicable regulations.</li> </ol>	LTS
4.4-B	Project operation would generate emissions of criteria air pollutants that could contribute to existing nonattainment conditions or degrade air quality.	LTS	No mitigation is required	LTS
4.4-C	Project operation would not expose sensitive receptors to substantial pollutant concentrations.	LTS	No mitigation is required	LTS

TABLE 1.3-1 - IMPACT AND MITIGATION SUMMARY

IMPACTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
4.4-D	Project construction could emit toxic air contaminants.	LTS	No mitigation is required.	LTS
4.4-E	Project development, in conjunction with projected Town Planning Area buildout could result in cumulative air quality impacts.	LTS	No mitigation is required.	LTS
<b>4.5</b>	<b>Global Climate Change</b>			
4.5-A	Construction and use of the project would increase the emission of greenhouse gases.	LTS	No mitigation is required.	LTS
4.5-B	Project-generated emission of greenhouse gases could conflict with a plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	LTS	No mitigation is required.	LTS
<b>4.6</b>	<b>Energy</b>			
4.6-A	The project could result in a wasteful expenditure of energy.	LTS	No mitigation is required.	LTS
4.6-B	The project would not contribute to a significant cumulative impact related to energy use	LTS	No mitigation is required.	LTS
<b>4.7</b>	<b>Biological Resources</b>			
4.7-A	Project construction and operation could injure or kill special-status species and/or damage habitat used by special-status species.	PS	<p>4.7-A.1 The project shall not damage native vegetation in the buffer zone (defined as the 5-foot setback from trees as shown on Figure 3.1-3. The boundary of the buffer zone shall be staked and flagged in the field with a highly visible color coded system and all construction and equipment operators shall be instructed to remain outside this no-disturbance boundary for the duration of construction.</p> <p>4.7-A.2 The project shall not injure or destroy habitat used by California red-legged frogs (CRLF). To accomplish this standard, a qualified biologist, capable of monitoring projects with potential habitat for California red-legged frogs (CRLF) shall be present at the site to implement the following:</p> <ol style="list-style-type: none"> <li>1. Install exclusion fencing outside the buffer area. Prior to and within 3 days of installation of the exclusion fencing, the biologist shall survey the location of the installation for the presence of CRLF. In addition, should any burrows be observed, the burrows shall be inspected by the biologist to determine if they are being used by the species. Should CRLF be observed, the area shall be vacated and re-inspected in one week. If no animal use is noted, the burrows shall be carefully excavated using a small trowel or shovel. Careful prodding using a blunt object will aid in determining the course of the tunnel such that</li> </ol>	LTS

TABLE 1.3-1 - IMPACT AND MITIGATION SUMMARY

IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
		<p>the tunnel is excavated from the sides rather than the top, reducing the potential for any injury should an animal be present. Excavated burrows with no CRLF shall be left open so they cannot be re-occupied. If any non-listed species are located, they shall be translocated outside of the construction zone. Should any individual CRLF be found during the field survey or excavation, the area where that individual has been found shall remain undisturbed. If any life stage of the CRLF is found during these surveys or excavations, the Department of Fish and Game and the US Fish and Wildlife Service shall be contacted immediately, and activities that could result in take shall be postponed until appropriate actions are taken to allow project activities to continue.</p> <p>2. During installation of the construction zone exclusion fencing, the biological monitor shall be present and will oversee the installation of all construction fencing.</p> <p>3. Immediately following installation of exclusion fencing, the biological monitor shall survey the enclosed construction zone for the presence of CRLF. If any life stage of the CRLF is found during these surveys, the Department of Fish and Game and the U.S. Fish and Wildlife Service shall be contacted immediately, and activities that could result in take shall be postponed until appropriate actions are taken to allow project activities to continue.</p> <p>4. The biological monitor shall coordinate with the construction contractor to ensure that all workers understand not to intrude past the exclusion fencing.</p> <p>5. The biological monitor shall conduct weekly site visits when construction is occurring to verify that all construction zone exclusionary fencing is in place and functioning as intended. Any repair or maintenance to the fencing deemed necessary by the biological monitor shall be completed under the monitor’s supervision. Such maintenance activities include adequate removal of vegetation at the construction fence line to ensure that vegetation “ladders” for species access are not allowed to establish.</p> <p>4.7-A.3 A qualified biologist shall inspect the project site prior to construction to ensure there are no active nests of salt marsh common yellowthroat near the construction area. If active nests are discovered, a 50-foot buffer will be</p>	

TABLE 1.3-1 - IMPACT AND MITIGATION SUMMARY

IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
		established between the nest and the construction site. Travel and other human activity should be prohibited within the nest area for the duration of construction.	
4.7-B	PS	Mitigation Measure 4.9-B.1 in the Hydrology and Water Quality section of this EIR also applies to this impact.	LTS
4.7-C	PS	<p>4.7-C.1 Surveys for breeding birds are recommended if construction were to occur during of the nesting season (February 15 to August 15). Surveys for nesting birds should be completed within 14 days of the beginning of construction between February 15 and August 15. Once construction starts and occurs continuously, surveys are not recommended. If a lapse in construction were to occur longer than 14 days, then the surveys for nesting birds shall resume.</p> <p>If raptors are observed nesting within 250 feet of the construction area, the behavior of the raptors shall be observed to determine the width of a suitable buffer. Typical raptor buffers are 250 – 300 feet wide.</p> <p>If songbirds are observed nesting near the construction area, a 50-foot buffer shall be established between the nest and construction until the nest is no longer used. Travel and other human activity should be prohibited within the nest buffers for the raptors and songbirds.</p>	LTS
4.7-D	PS	Implement Mitigation Measure 4.9-B.1.	LTS
4.7-E	PS	Implement Mitigation Measures 4.7-C.1 and 4.9-B.1.	LTS
<b>4.8</b>		<b>Cultural Resources and Tribal Cultural Resources</b>	LTS
4.8-A	PS	<p>4.8-A.1 If buried archeological resources, such as chipped or ground stone, historic debris, building foundations, or human bone, are inadvertently discovered during ground-disturbing activities, work would stop in that area and within 100 feet of the find until the FIGR Tribal Heritage Preservation Office (THPO) is contacted about the finds. The THPO will determine whether a qualified archaeologist should assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the Town and other appropriate agencies, or whether an alternative approach is warranted for the finds.</p> <p>4.8-A.2 If human remains of Native American origin are discovered during project construction, it is necessary to comply with state laws relating to the disposition of</p>	LTS

TABLE 1.3-1 - IMPACT AND MITIGATION SUMMARY

IMPAIRMENTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
		<p>Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (NAHC) (PRC 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <ul style="list-style-type: none"> <li>• The county coroner has been informed and has determined that no investigation of the cause of death is required; and</li> <li>• If the remains are of Native American origin, the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98.</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>• The NAHC was unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified by the commission.</li> </ul> <p>4.8-A.3 If human remains are discovered during any construction activities, all ground-disturbing activity within a 100-meter radius of the remains shall be halted immediately, and the Marin County coroner shall be notified immediately, according to Section 5097.98 of the state Public Resources Code and Section 7050.5 of California’s Health and Safety Code. If the remains are determined by the County coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The Town shall consult with FIGR or the Most Likely Descendant, if any, identified by the NAHC regarding the treatment and disposition of the remains.</p> <p>4.8-A.4 Should paleontological resources be identified at any project construction site, the construction manager shall cease operation within a 100-meter radius of the discovery and immediately notify the Town. The project proponent shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the consulting paleontologist, the Town shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, land use assumptions,</p>	

TABLE 1.3-1 - IMPACT AND MITIGATION SUMMARY

IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION	
			and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for paleontological resources is carried out.	
4.8-B	Project development, in conjunction with other foreseeable development in the Town could result in cumulative impacts to cultural and paleontological resources.	PS	Implement Mitigation Measures 4.8-A.1 through 4.8-A.4.	LTS
<b>4.9</b>	<b>Hydrology and Water Quality</b>			
4.9-A	Project development would increase runoff from the site that could exceed the capacity of the downstream stormwater drainage system and cause flooding.	PS	4.9-A.1 A registered civil or hydrologic engineer shall calculate pre- and post-project runoff from the site for the 2-year and 100-year storm events. If there will be an increase in site runoff, then a drainage plan will be prepared that demonstrates to the Town's satisfaction that post-project runoff volumes will not exceed pre-project volumes. Excess runoff can be detained on-site using underground storage facilities with timed release or other means of detaining and releasing peak flows to maintain the pre-existing conditions.	LTS
4.9-B	Runoff from the new facilities could transport pollutants from the facilities to Railroad Marsh. A reduction of water quality could adversely affect biological species inhabiting or dependent on Railroad Marsh.	PS	4.9-B.1 The applicant shall prepare a Stormwater Control Plan (SCP), following the procedures outlined by MCSTOPPP. The SCP shall include the required Construction Erosion and Sediment Control Plans. Bioretention features will be designed following the guidance found in MCSTOPPP's stormwater quality manual and the California Storm Water BMP Handbook for New and Redevelopment. The Plan shall be prepared by a registered engineer for review and approval by the Town Department of Public Works. Once approved, an agreement will be executed by property owner and Town and recorded against the property to insure the ongoing operation of the SCP.	LTS
4.9-C	Constructing the project could expose soils to erosion, and eroded sediment could wash off the site and adversely affect water quality of Railroad Marsh.	PS	Implement the Construction Erosion and Sediment Control Plan required as part of Mitigation Measure 4.9-B.1	LTS
4.9-D	Project development, in conjunction with buildout in the Town, could result in cumulative hydrology and water quality impacts.	PS	Implement Mitigation Measures 3.9-A.1 and 4.9-B.1.	LTS

TABLE 1.3-1 - IMPACT AND MITIGATION SUMMARY

IMPACTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
<b>4.10</b>	<b>Land Use and Plan Consistency</b>			
4.10-A	The proposed project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	No mitigation is required.	LTS
4.10-B	The proposed project, in combination with buildout of the Tiburon Planning Area, would not contribute to potential cumulative land use impacts.	LTS	No mitigation is required.	LTS
<b>4.11</b>	<b>Other Resources</b>			
4.11-1	The project is subject to soil constraints and seismic hazards.	PS	4.11-1 The project shall be constructed to withstand the maximum probable earthquake and to withstand other geologic and soil constraints or hazards on the site. All new development shall be constructed consistent with the seismic design requirements of the 2013 California Building Code (as referenced in the Town's Municipal Code) or any successor code in effect at the time of building permit issuance. The 2001 Kleinfelder, Inc. geotechnical report shall be revised to identify any geologic design requirements that comply with the current Building Code seismic and soil treatment requirements for the improvements proposed north of the existing tennis courts. The project shall be constructed consistent with all recommendations for site grading, seismic design for structures, foundation design, and site drainage contained in that revised report.	LTS

## 2.0 INTRODUCTION CHAPTER

### 2.1 Purpose of the EIR

This Draft Environmental Impact Report (EIR) addresses the potential environmental impacts of constructing and operating a Junior Tennis Center on the site of the Tiburon Peninsula Club in Tiburon, California.

This EIR has been prepared in conformance with the provisions of the *California Environmental Quality Act (CEQA) Guidelines* as amended to date. CEQA requires that public agencies prepare and certify an EIR before carrying out projects that may have significant effects on the environment (Public Resources Code Section 21080). Preparation of an EIR is the responsibility of the "lead agency," the public agency that has the principal responsibility for carrying out or approving the project (Public Resources Code, Section 21067). The Town of Tiburon is the lead agency for this EIR.

This EIR is an informational document intended to inform the Town (the Lead Agency), other public agency decision-makers, and the public of the significant environmental effects of the proposed project and alternatives to the proposed project. The Town will consider the information in this EIR along with other information presented during the decision-making process when determining whether to approve the project. The information contained in this EIR does not control the Town's ultimate decision on the project. If the Town decides to approve the project, however, then the Town must respond to each significant effect identified in the EIR by making findings under Section 15091 of the *CEQA Guidelines* and, if necessary, making a Statement of Overriding Consideration under Section 15093.

### 2.2 Scope of the EIR

This EIR has been prepared by the Town of Tiburon as Lead Agency in conformance with the California Environmental Quality Act (CEQA). As such, it provides objective information addressing the environmental consequences of the proposed project and possible ways to reduce or avoid these impacts.

This EIR addresses all the areas of potentially significant impact as well as other potential impact areas that CEQA requires an EIR to investigate. The environmental effects of the project are analyzed for each impact area. The *CEQA Guidelines* define the effects of a project as changes from the environmental setting (i.e., existing conditions) that are attributable to the project. Particularly pertinent sections of the *CEQA Guidelines* are listed below.

1. **Section 15121(a) (Information Document)** states that an EIR "is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

2. **Section 15151 (Standards for Adequacy of an EIR)** states that “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 a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the 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.”
3. **Section 15003(i and j) (Policies)** states that technical perfection is not necessary, but adequacy, completeness, and a good-faith effort at full disclosure are required. "CEQA requires that decisions be informed and balanced. It must not be subverted into an instrument for the oppression and delay of social, economic, or recreational development or advancement."
4. **Section 15143 (Emphasis)** states that the EIR shall focus on the significant effects on the environment. The significant effects will be discussed with emphasis in proportion to their severity and probability of occurrence. Effects dismissed in the Initial Study as clearly insignificant and unlikely to occur need not be discussed further in the EIR. Discussion of each major topic includes criteria used to evaluate whether an environmental impact is significant or insignificant.
5. **Section 15002(g) (Significance)** states that a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project. The significance criteria for each topic in this EIR have been developed based on guidelines set forth in the *CEQA Guidelines* as modified in some cases by standards established by the Town as set forth in its *Environmental Review Guidelines*. This EIR lists the thresholds of significance for each area of impact and assesses whether the project's impacts exceed these thresholds. If the impact does not exceed the threshold or if the recommended mitigation measures reduce the impact below the thresholds, then the impact is considered to be less-than-significant.

## **2.3 Public Review and CEQA Process**

### **A. Introduction**

The proposed Junior Tennis Club Project is a private project proposed by the Tiburon Peninsula Club. The Tiburon Planning Commission is the principal decision-making body and has the authority to approve the project. If the Planning Commission's decision is appealed, then the Tiburon Town Council would be the final decision-maker.

CEQA provides three opportunities for public participation during the EIR process. These points are during the Notice of Preparation (NOP), when the public is informed that an EIR is to be prepared and is asked to comment on the scope and contents of the proposed EIR; upon circulation of the Draft EIR, when the public and agencies can comment on the adequacy of the environmental document; and finally, after circulation of the Final EIR, when the public and agencies can evaluate the lead agency's responses to comments submitted on the Draft EIR. The Town's Local CEQA Guidelines provide additional opportunities for public input.

### ***Project History***

The project applicant originally proposed the project in 2016. After the close of the public review period on the Initial Study prepared for that original project, the applicant revised the project, and a new Initial Study was prepared for that revised project.

#### ***B. Notice of Preparation***

The Town filed a Notice of Preparation (NOP) of an EIR for the original project proposal with the Office of Planning and Research (OPR) in September 2016. That 2016 NOP and accompanying Initial Study were circulated to the public, local and state agencies, and other interested parties to solicit comments on the proposed project. As described above, subsequent to closure of the public review period, the project applicant revised the proposed project. A Revised Initial Study and NOP was filed with OPR on April 5, 2017. The NOP comment period ended on May 15, 2017. The Revised Initial Study and NOP are included in Appendix A of this EIR.

#### ***Original NOP***

The Town received five written responses during the comment period on the original 2016 NOP from: Caltrans, the Native American Heritage Commission (NAHC), the Federated Indians of Graton Rancheria, Michael Parker, and Joyce and David Albert. These letters are included in Appendix A of this EIR. These comment letters do not comment on the current project. Nevertheless, the following summarizes the comments in these five letters.

1. ***Caltrans.*** The EIR should include a Vehicle Miles Travelled (VMT) analysis for the project. The project should be conditioned to ensure connections to existing bike lanes and multi-use trails. To reduce VMT, the Town is encouraged to establish a Transportation Management Association (TMA) to pursue aggressive trip reduction targets. Caltrans recommends several Travel Demand Management elements to be considered by the TMA. The Town should identify traffic impact fees for the project. *(Questions regarding traffic impacts are addressed in Section 4.2, Traffic and Circulation of this EIR).*
2. ***NAHC.*** NAHC submitted a standard form letter recommending consultation with the local tribe. The letter outlines how the consultation should be conducted to comply with current State laws and regulations.

3. **Federated Indians of Graton Rancheria.** The Federated Indians of Graton Rancheria (FIGR) requested they be notified in case cultural resources are discovered on the site during any grading or construction phase.
4. **Michael Parker.** He requested that the EIR address his concerns about lighting, noise, and traffic. He is especially concerned about light pollution. He suggested that planting tall trees to shield views on lights in the parking area be considered. *(Questions related to visual impacts are addressed in the subsequent Section 4.1, Visual Resources. Questions relating to noise impacts are addressed in Section 4.3, Noise.)*
5. **Joyce and David Albert.** They are concerned about light and noise pollution from existing TPC facilities and want the EIR to address these issues for the expanded facilities.

### ***NOP on Revised 2017 Project***

The Town received nine comment letters on the NOP on the revised project. They are included in Appendix A. The following summarizes comments relevant to the scope of the EIR.

1. **Caltrans.** Caltrans requested updated trip generation and distribution information, especially related to impacts to State Route 131 and Mar West Street.
2. **Serge Martial.** He expressed concerns over lighting and noise impacts from existing TPC facilities and wanted these impacts addressed in the EIR. *(It is noted that impacts from existing facilities and operations are not impacts caused by the currently proposed project and, consequently, are not considered project impacts under CEQA.)*
3. **Tiburon Vista Townhouse Association Board of Directors.** The Association Board is concerned about lighting and noise impacts from existing TPC facilities and opposes additional court lighting.
4. **Priscilla Embry.** The commenter is concerned about lighting and noise impacts from existing TPC facilities and opposes additional court lighting.
5. **Petra Trouerbach.** The commenter is concerned about visual and noise impacts from existing TPC facilities and opposes the project.
6. **Harbor Hill Condominium Association.** The commenter is concerned about lighting and noise impacts from existing TPC facilities and opposes additional court lighting.
7. **Daniel Goldberg.** He is concerned about new lighting impacts.
8. **Polly and Mark Ely.** They are concerned about additional lighting impacts.

9. **Barbara Salzman and Phil Peterson, Marin Audubon Society.** The Audubon Society had several comments that are summarized below, but the reader is directed to their full letter in Appendix A for additional details on their concerns and recommendations. They requested that the EIR include:

- an independent review of impacts to nesting and migratory birds with discussion of the importance of the pond for migratory birds;
- surveys for red-legged frogs;
- clarification of the areas considered wetland and marsh;
- a figure showing the marsh, wetland, and riparian habitat edges;
- clarification of the project's relationship to pond cattails;
- further discussion of the wetland, marsh, and riparian buffers;
- further discussion or project impacts on marsh/pond water quality;
- discussion of mitigation for wetlands; and
- development of a project alternative that reduces impacts to the marsh/wetlands/riparian community.

*(These requests are addressed in the subsequent section on Biological Resources, Section 4.7.)*

#### **D. Public Scoping Meetings**

Agencies and the public were notified about a Public Scoping Meeting on the EIR. The Public Scoping Meeting on the original 2016 proposal was held at the Town Council Chambers on January 25, 2017. It was attended by Town staff, representatives on the applicant, and members of the public. Following the Town staff's presentation of the project and the applicant's summary of the proposed project, several Town Planning Commissioners asked for clarification about proposed project elements. The meeting was then opened for public comment on the scope of the EIR. One member of the public (Maureen Miekle) offered comments. She stated that she looks down on the project site and requested additional analysis of bathroom and entrance lighting as well as further discussion of the number of homes that would be affected by new project lighting. Also, noise impacts on nearby residents should be addressed.

The Commission Chair returned the meeting to the Planning Commission. Three commissioners had specific comments:

1. **Commissioner Corcoran** stated that installing a cover to block lights from the entryway and courts should be considered.
2. **Chair Williams** agreed with Ms. Miekle that the EIR should assess the number of homes that would be impacted and the level of impact.
3. **Commissioner Weiner** suggested that if new lighting is found to be significant that a mitigation to be considered would be to offset the impact by lowering the brightness and glare of the existing parking area lights.

An EIR scoping meeting for the revised 2017 project was held at the Town Council Chambers on April 26, 2017. Following the staff and applicant's presentations, the following members of the public made comments:

1. **Daniel Goldberg** requested that the EIR assess noise and lighting impacts.
2. **Suzanne White** was concerned about lighting impacts.
3. **Jim White** wanted lighting impacts addressed, including light reflecting off the courts.
4. **Mark Healy** was concerned about lights and requested that something with lights on it be installed to give the community a week to review it.

Several Planning Commissioners made comments following the close of the public hearings, including the following that are relevant to the EIR scope:

1. **Commissioner Weller** stated that light impacts should be mitigated to the level feasible prior to the Town making a decision on the project.
2. **Commissioner Welner** stated that the EIR should address issues raised during the scoping process. The Commissioner stated that there are mitigation opportunities with regard to lighting, particularly in reducing the levels of existing lighting in the parking lots. He said changes to the existing lights should be considered as mitigation for new light impacts.

#### **E. Distribution of the Draft EIR**

A public review period of at least 45 days is provided for this Draft EIR. This review period begins on the publication date of the Notice of Completion of the Draft EIR. During the public review period, the Town will hold one public hearing on the Draft EIR. In addition, public agencies and interested individuals may submit comments in writing to the Tiburon Planning Manager, Town of Tiburon, 1505 Tiburon Boulevard, Tiburon, CA 94920.

**F. Certification of the Final EIR**

As required by CEQA Guidelines Section 15088, the Town will evaluate the written and oral comments received on the Draft EIR. Once the public review period is closed, a Final EIR will be prepared. The Final EIR will incorporate this Draft EIR by reference, and it will contain all comments on this Draft EIR, responses to those comments, and any revisions to the text of this Draft EIR warranted by the comments received and responses to those comments. The Final EIR will be considered by the Tiburon Planning Commission. When the Planning Commission considers the EIR to be complete and accurate, it will certify the document. The Final EIR must be certified before any action on the proposed project can occur. After the Commission has certified the EIR, it will consider the merits of the project and determine whether to approve the project, approve a project alternative, or deny the project. If it approves the project or a project alternative, a Notice of Determination will be filed with the State Office of Planning and Research and the Marin County Clerk.

Before the project is approved, the Planning Commission would be required for each significant impact of the project (per CEQA Guidelines Section 15091) to find: that changes in the project would avoid or substantially lessen the significant impact; that such changes are within the responsibility or jurisdiction of a public agency other than the Town; or that specific economic, legal, social, technological, or other considerations make the mitigation measures and alternatives infeasible. For impacts that the Town determines cannot be mitigated to a less than significant level, it would be necessary for the Council to adopt a Statement of Overriding Considerations (per CEQA Guidelines Section 15093), which describes how benefits of the project outweigh those impacts before approving the project.

The decision of the Planning Commission to certify the EIR can be appealed to the Town Council, whose decision is final.

**2.4 Intended Uses of the EIR**

**A. Approvals Required From Lead Agency (Town of Tiburon)**

The proposed project would require the Town of Tiburon to certify the Final EIR, adopt Findings for the project, and approve the Conditional Use Permit.

**B. Approvals Required From Other Agencies**

Carrying out the project and developing the site may require approvals from the following agencies, in addition to the Town of Tiburon. These agencies could use this EIR or require further environmental review to make their decisions about the project and the permits it has the authority to grant for future site development.

- **U.S. Army Corps of Engineers** – regulates potential “Waters of the U.S.” under Section 404 of the Federal Clean Water Act (Section 404 permit) and navigable waters under Section 10

of the Rivers and Harbors Act. It is not expected that construction of project improvements would include any work within wetlands.

- **U.S. Fish and Wildlife Service (USFWS)** – administers the Federal Endangered Species Act and the Marine Mammal Protection Act. The USFWS operates under a number of statutory and administrative authorities. It has responsibility for protecting listed special status species and for conducting Section 7 consultations and granting relevant permits if activities involved with a project would result in the "take" of a listed species. The USFWS is an advisory agency to the Army Corps of Engineers on Section 404 and Section 10 projects.
- **California Department of Fish and Wildlife (CDFW)** – has authority to oversee work done in streams pursuant to California Fish and Game Code Sections 1601 and 1603. Project modification of permanent and seasonal drainages would require approval of a Streambed Alteration Agreement. Any waterway subject to CDFW jurisdiction is subject to Corps regulations. A Streambed Alteration Agreement would be a prerequisite for obtaining any Corps permit. The CDFW is also responsible for the protection of plant and wildlife populations and for overseeing the California Endangered Species Act. The CDFW would require approval of a Mitigation Agreement and Mitigation Plan for plants listed as rare under the Native Plant Protection Act.
- **San Francisco Bay Regional Water Quality Control Board (RWQCB)** – has jurisdiction over discharges affecting water quality. The RWQCB regulates discharges to land and/or waterways through the adoption of Waste Discharge Requirements (WDR) and National Pollution Discharge Elimination System (NPDES) permits. The RWQCB would issue WDR for this project. The WDR would cover ongoing inspection, monitoring and reporting for the community wastewater system and for any On-site Wastewater Management District Zone inspections, monitoring, and reporting. Projects must comply with General Construction Activity Stormwater Permit requirements. The RWQCB may use the EIR to determine project consistency with the General Construction Permit requirements. The RWQCB issues the State certification for any required Corps permit. The RWQCB also has regulatory authority in connection with the CDFW's Streambed Alteration Agreement to grant Water Quality Certification (or Waiver) to cover any in-channel construction associated with landslide and channel stabilization.
- **Bay Area Air Quality Management District (BAAQMD)** – has jurisdiction over regional air quality issues pursuant to Section 401 of the federal Clean Air Act and could require Authority to Construct and Permission to Operate permits. BAAQMD will review the EIR to ensure that the project is consistent with its regulations.
- **Native American Heritage Commission** – is mandated to preserve and protect places of special religious or cultural significance pursuant to Section 5097 et seq. of the Public Resources Code.

- **California State Historic Preservation Officer** - consultation with the California State Historic Preservation Officer (SHPO) is required pursuant to Section 106 of the National Historic Preservation Act for potential impacts to cultural resources (archaeological and historical).

### C. **Other Agencies**

In addition to the agencies listed above, the Draft EIR will be sent to local agencies that provide services in the area or that could be affected by the project. These include:

- **Marin Municipal Water District** – provides water to the project site.
- **Sanitary District No. 5** – provides wastewater collection, treatment and disposal services for that district.
- **Tiburon Fire Protection District** – provides fire and emergency response for that district.

## 2.5 EIR Organization

The Draft EIR is organized as follows:

- **Chapter 1.0 – Summary** identifies areas of controversy, highlights the important effects of implementing the project, and identifies the measures available to mitigate significant adverse impacts.
- **Chapter 2.0 - Introduction** provides background on the CEQA requirements and review process.
- **Chapter 3.0 – Project Description** describes the proposed project.
- **Chapter 4.0 – Environmental Impact Analysis** describes existing environmental conditions in the area affected by the proposed project, identifies probable direct and indirect impacts from implementing the project, and describes mitigation measures required to substantially reduce or eliminate potentially significant adverse impacts.
- **Chapter 5.0 – Other Required CEQA Sections** discusses growth-inducing impacts, cumulative impacts, irreversible environmental changes, and project alternatives. It assesses the difference in outcome between the project and five alternatives. This chapter also identifies an environmentally superior alternative among the alternatives.
- **Chapter 6.0 – Report Preparation** includes the report preparers, the people and organizations consulted, and the bibliography.
- **Chapter 7.0 – Appendix** includes technical background material supporting the Draft EIR text.

### **3.0 PROJECT DESCRIPTION**

#### **3.1 Project Location and Setting**

The proposed project is located on the southern portion of the Tiburon Peninsula Club's (TPC) property at 1600 Mar West Street in the Town of Tiburon (see Figures 3.1-2 and 3.1-3). The TPC is located near the south end of a small valley that extends southwest from the Tiburon Ridge. The Old St. Hilary's Open Space Preserve lies to the northwest, and Railroad Marsh borders the south side of the southern tennis courts. The slopes of this valley are relatively heavily developed with residential units, many of which have views down onto the project site. The east-facing hillside has some single-family residences and several large multi-family complexes, while the west-facing slope has mainly single-family units.

The tennis club was originally established in 1950 (as the Southern Marin Recreation Center) and originally served approximately 150 families. The name of the Club was changed to the Tiburon Peninsula Club in 1961. The Club's facilities have been renovated and numerous times over the intervening years (including the addition of six tennis courts south of Mar West Street), and currently serve 700 families and 175 senior memberships. Most of the Club's recreational facilities are located north of Mar West Street and include lit tennis courts, swimming pools, a fitness building, sports court, locker rooms, a clubhouse, and other facilities. Six unlighted tennis courts and most of the Club's parking are located on the southern portion of the site (the Judge Field portion of the property). The parking area is surfaced with gravel and is lit by four light standards with double lights on each standard.

Railroad Marsh is immediately south of the six unlit courts. It is largely located on land dedicated to the Town by the TPC and the developer of Point Tiburon (the former railroad yard) in the 1980s. The marsh was historically part of the Belvedere Lagoon and supported saltmarsh and tidal mudflat habitat. In the 1880s, the site was cut off from tidal action by construction of the Northwestern Pacific Railroad yard. Railroad Marsh currently serves as a holding basin for runoff from the Downtown watershed that includes the TPC property, much of Old St. Hilary's Open Space Preserve, and the residentially-developed areas throughout the watershed. Railroad Marsh also provides wildlife habitat and a visual amenity.

#### **3.2 Proposed Project Description**

The TPC seeks Town approval of a Conditional Use Permit to construct a Junior Tennis Center that would be used to expand its current junior clinic program and provide tennis lessons for members and non-members.

##### ***Proposed Improvements***

The main improvements are listed below, and shown on Figure 3.1-3.

Diagram 1.4-1 Tiburon Planning Area

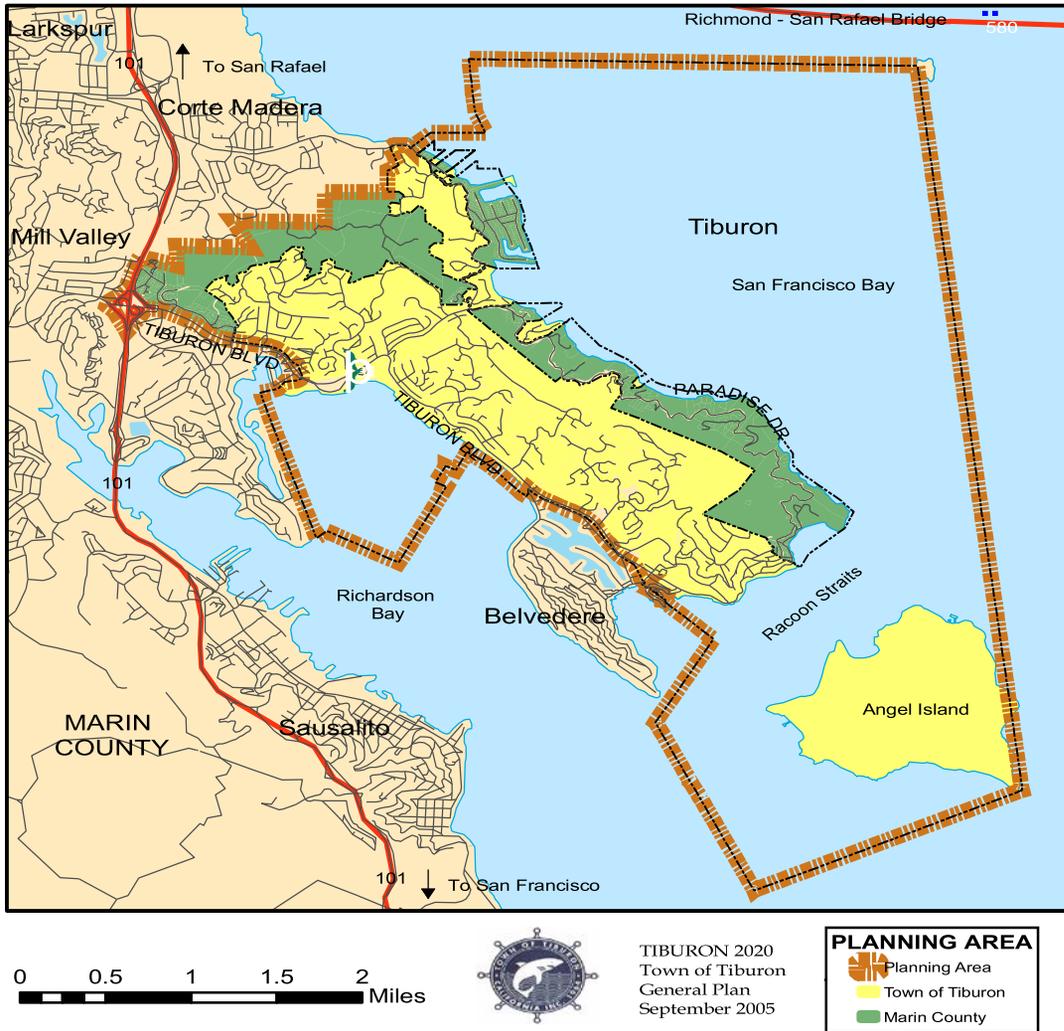


Figure 3.1-1 PROJECT VICINITY

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Figure 3.1-2: PROJECT LOCATION

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**LEGEND:**

1. 6 EXISTING TENNIS COURTS - LIGHTS ADDED
2. CURRENT 9,855 SF OVERFLOW PARKING AREA - UNCHANGED
3. CURRENT FORMAL PARKING TO REMAIN UNCHANGED
4. 5 EXISTING "TOUGH SHEDS", 4 DUMPSTERS, ± 8 TRASH BINS MOVED BEHIND SCREENING WALL
5. CANOPY OVER ENTRY
6. TWO NEW BATHROOMS AND STORAGE LOCKER FOR TENNIS GEAR
7. CONNECTION TO PUBLIC WALK
8. FOUR EXISTING TALL PARKING LOT LIGHT POSTS AND FIXTURES .

- - - - - 5' SETBACK FROM TREES
- - - - - LINE OF WETLANDS
- - - - - LINE OF 100' BACK FROM EDGE OF MARSH  
NEW PARKING LOCATED BEHIND 100' LINE



Figure 3.1-3  
Overall Site Plan

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ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF THE ARCHITECT. ANY REPRODUCTION OR TRANSMISSION IN ANY FORM OR BY ANY MEANS, WITHOUT THE EXPRESS WRITTEN PERMISSION OF MILES BERGER, A.I.A.

OVERALL SITE PLAN  
REVISED DESIGN

SCALE: 1" = 30' - 0"

DRAWN BY: MLB

PROJECT No.: 14Q4

DATE: 1.23.2017 AO.O

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1. A one-story structure will be constructed adjacent to the north side of the existing lower tennis courts that will include two bathrooms (a total of 550 square feet) and 300 square feet of storage for TPC-owned tennis related equipment.
2. North of this structure will be a landscaped entry to a 792-square foot covered entrance (with a translucent roof) to the facility. The entryway will include folding gates and a card reader.
3. Adjacent to and east of the proposed entry area will be a 1,340-square foot screened outdoor area open to the sky and screened from public view by a wall and doors. It will be coordinated with the tennis facility program to accommodate the temporary maintenance and storage structures on the site (five Tuff Sheds, four dumpsters, and eight trash bins). This facility will be screened but not covered.

This project description has been revised from that contained in the original 2016 Initial Study. The revisions were at the request of the applicant. The revised project is a pared-down version of the originally proposed project. In addition to the elements described above, the original project proposal also called for construction of a viewing patio above the storage area, two new tennis courts with associated lighting, additional paved parking areas, and two bioswales in different locations from the one currently proposed.

#### ***Environmental Mitigations Incorporated into the Proposed Project***

The applicant has eliminated or reduced several potential project impacts by including several self-mitigating design components and approaches in the project application. These include the following:

1. Reducing visual impacts by limiting outdoor tennis court lighting to no later than 7:30 PM and installing types of lights that eliminate views of direct light illumination from off the site. The lighting will be LED lights with individual on-off switching and motion sensors. The lights would be switched off when a court is not in use. All lighting would have concealed sources that are mounted below the height of floor elevations of adjacent residences on Mar West Street and residences at higher elevations to the north. To further reduce lighting effects, 1) luminaires (i.e., the complete light units) would be installed parallel to the court surface, not include adjustable knuckle mounts, and not permit future adjustment; 2) the LED lighting would be limited to 4000K (“natural white” color); and 3) the average paint reflectance of the tennis court playing and out-of-bounds surfaces would be 10% or less.
2. Reducing biological impacts by maintaining construction setbacks of at least 100 feet from the pond edge, 25 feet from the wetland edge, and 5 feet from the dripline of native trees.
3. Reducing impacts to water quality by installing a 500-square foot bioswale to naturally filter site roof runoff prior to its discharge to Railroad Marsh. The bioswale would be constructed on the north side of the existing courts, adjacent to the west side of the proposed

bathrooms and locker structure. It would collect runoff from the roof of the covered entryway and adjacent bathrooms and storage locker. A 4-inch outlet pipe will collect biofiltered water from below the filtration level of the bioswale and transport it to a discharge point in the existing concrete-lined drainage swale leading to the marsh. No ground surface runoff will be collected. The depth of the 4-inch drainage line is between 1.5 and 2 feet. The bioswale would comply with the Marin County Stormwater Pollution Prevention Program (MCSTOPPP). MCSTOPPP requires a minimum of an 18-inch infiltration zone plus a slope to allow runoff to enter the treatment area. The treated water would need to be removed via a perforated pipe to the discharge point.

### ***Usage***

TPC currently has 700 Family memberships and 175 Senior memberships. TPC currently has programs teaching the game of tennis to young beginners through advanced tournament play. The project would allow an expansion of the current junior clinic program and group lessons for both TPC members and non-members. The applicant estimates that the proposed project would increase usage of the lower courts by 20 more students per day between September and mid-April, or 6 more students at any given time. The applicant expects that the traffic increase would be minimal as some students can access the site by walking or bicycling. There would be no increase of court usage during the months when natural sunlight is adequate to light the courts.

### ***Project Objectives***

The applicant's objective is to develop a facility that can provide a complete tennis learning experience for the children of the Tiburon Peninsula. It is intended to teach the game of tennis to young players from an introduction to the game through top-level tournament competition. It is also intended to foster the wholesome interaction and friendships that grow from shared athletic experience under young adult mentors and role models. The applicant believes that the project would allow TPC to expand its role as an asset to the community both for TPC members and non-members.

## **4.0 ENVIRONMENTAL IMPACT ANALYSIS CHAPTER**

### **1. Introduction**

This chapter of the EIR addresses the interaction of the proposed project with its physical environment. Each area or topic of environmental concern is discussed using the format described below.

#### **A. *Setting***

This section includes a description of the existing physical and environmental conditions as regards the particular environmental factor under consideration as well as the regulatory framework (per *CEQA Guidelines* Section 15125).

#### **B. *Potential Impacts***

This section begins with a list of the criteria that are used to determine impact significance. The criteria are based on the list of impacts typically considered significant as listed in the *CEQA Guidelines* Environmental Checklist and the Town of Tiburon's *Environmental Impact Review Guidelines*.

This section includes a description of any environmental constraints that could affect project implementation, and an analysis of all potentially significant direct and indirect impacts from project construction and operations that would or could occur if the proposed project is approved (per *CEQA Guidelines* Section 15126.2a and b). Mitigation measures are provided for all potentially significant impacts.

The section also discusses cumulative impacts resulting from project construction and operation in combination with other approved but not constructed and proposed projects. If it is determined that a cumulative impact is or may be significant, then an analysis is done to determine if the project's contribution to that impact is cumulatively considerable. If the contribution is deemed cumulatively considerable, then mitigation measures are provided.

## **4.1 VISUAL RESOURCES**

### **A. Setting**

#### **1. Existing Views**

The project site is located adjacent to the six southern tennis courts of the TPC (i.e., the TPC courts located south of Mar West Street). The proposed construction would primarily be located immediately north of those courts in an area currently occupied by storage facilities and parking.

The site is located toward the southeastern edge of a small valley that trends south from Tiburon Ridge toward Richardson Bay. The valley's hillsides are primarily developed with multi-family complexes to the west and northwest and mainly multi-family homes to the north and west and with primarily single-family residences to the east. The Old St. Hilary's Open Space Preserve occupies the hillside to the north. Railroad Marsh, which is largely surrounded by willows and other vegetation, is located along the mouth of the valley to the south. Immediately south of the marsh are condominiums.

The southern end of the valley is largely occupied by the Tiburon Peninsula Club (TPC) facilities. Mar West Street runs through the center of the TPC property. Currently a swim center with three pools, a tennis facility with six tennis courts, and other facilities are located north of Mar West Street. South of Mar West Street there are six additional tennis courts, the parking lot, and overflow parking areas.

From the elevated vantage points on the surrounding hillsides, current views of the project vicinity encompass existing TPC infrastructure, including blue-and-green painted tennis courts; swimming facilities; a parking lot with associated parked vehicles; and scattered landscaping.

A dense band of trees along the north edge of Railroad Marsh shields the project site from the Point Tiburon Marsh Condominiums that are located just south of the open water of the marsh. This band of vegetation also shields views from Tiburon Boulevard and buildings along that street, including the Belvedere-Tiburon Public Library, the Tiburon Town Hall, and other commercial buildings. During the winter when deciduous trees bordering the marsh lose their leaves, the vegetation may provide less shielding from some vantage points south of the marsh. However, site surveys in mid-February, 2018 found that it was not possible to see the Point Tiburon Marsh Condominiums from the proposed project site (which is not to say that residents of those condominiums, especially second floor units, may have a view of some portion of the tennis courts through the intervening vegetation).

#### **2. Public View Points**

Views from public vantage points are largely limited to views from Mar West Street and from trails and hillsides on Old St. Hilary's Open Space Preserve. The EIR preparers drove the public streets that provide access to residences located at upper elevations in the viewshed valley

and, except for the westernmost section of Vistazo West Street (just before its terminus at the gate to Old St. Hilary's Open Space Preserve), were unable to find sections of road with a view down onto the site. Views were blocked by fences, buildings, and street-side landscaping. However, it is possible that there are other isolated locations where a view of the site may be possible between the residences located along the street.

The existing tennis courts are visible from the western leg of Mar West Street. As one travels north from Tiburon Boulevard beyond the western end of Railroad Marsh and passes the TPC parking lot, one can look across the parking lot and see the fencing around the existing tennis courts in the background. Behind the tennis courts one can see residences and landscaping on the hillside above (east of Mar West Street). Due to roadside vegetation, the tennis courts are not visible from the eastern leg of Mar West Street except through roadside vegetation for one section that is less than 100 feet long.

The project site is visible from various vantage points on Old St. Hilary's Open Space Preserve including the Vistazo West Fire Road, the Heathcliff Fire Road, and a number of unofficial trails across the southwest-facing hillsides. The site is not visible from Old St. Hilary's Church. Views from these various vantage points on the Preserve are of the TPC facilities, including the project site, with Railroad Marsh behind the project site and urban development along Tiburon Boulevard further south; Richardson Bay, San Francisco, and other distant landmarks in the background.

### **3. Private View Points**

The project site is in view of over a dozen multi-family residential complexes (containing an unknown number of units) on the east-facing hillside, 30+ single-family residences at higher elevations on the east-facing hillside, and 30+ single-family residences on the west-facing hillside.<sup>1</sup> Views from these private residential units will vary depending on the orientation of the vantage point, intervening vegetation and structures, and distance from the project site. However, in general, where views of the site are possible, they would be similar to those described above. Namely, views down the undeveloped part of the valley to the tennis courts and other recreational facilities on TPC north of Mar West Street; the TPC parking lot and six existing tennis courts south of Mar West Street; the band of trees and other vegetation on the east side of the project site and between the project site and the open water of Railroad Marsh; urban development south of the marsh; and distant views of the Richardson Bay, bridges, and San Francisco in the background. The green and blue tennis courts are quite visible and stand out from the surrounding vegetation to the north of Mar West Street, and the vegetation and the gravel parking lot south of the street.

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<sup>1</sup> Estimates of the number of units that actually have a view of the project site are very approximate as the site cannot be seen from streets that access these residences, and the EIR preparers did not have access to private property.

#### **4. Lighting**

Existing lighting in the area includes four street lights along Mar West Street in the project area, six elevated lights in the TPC parking lot, residential lighting on the hills above the project site, and residential and commercial lighting to the south. Figures 4.1-4b, 4.1-5b, and 4.1-6b show existing lighting from three viewing locations in the viewshed.

#### **B. Regulatory Framework**

##### ***Tiburon 2020 General Plan***

Pertinent policies related to the protection of visual resources of the Tiburon 2020 General Plan include the following.

**Goal OSC-B:** To provide and permanently preserve as much open space as possible to protect shorelines, open water, wetlands, significant ridgelines, streams, drainageways, riparian corridors, steep slopes, rock outcroppings, special status species and their habitat, woodlands, and areas of visual importance, such as views of and views from open space.

**Goal OSC-C:** To permanently protect to the maximum extent feasible, the unique open space character of the Town which is attributable to its large amounts of undeveloped land and open water.

**Policy OSC-28:** Principal vistas, viewpoints, and view corridors on land subject to development shall be identified and preserved to the maximum extent feasible.

**Policy OSC-30:** Development shall be encouraged in areas where it least interferes with views of and from open space to the maximum extent feasible.

**Policy OSC-31:** The preservation of visual qualities, views, and the view potential of the natural and built environment shall be a major consideration of the Town in any development project review.

**Policy LU-16:** Outside lighting shall be allowed for safety purposes. The Town shall limit excessive light spillage and glare resulting from site lighting.

##### ***Tiburon Municipal Code***

The following sections of the Tiburon Municipal Code are pertinent to this project.

**Section 16-30.070 - Lighting.** General lighting design and development shall comply with the following standards:

- A. Exterior lighting shall not invade the privacy of other properties, or produce glare or light pollution; yet shall provide adequate illumination for safety and security purposes.
- B. All proposed exterior lighting shall be shielded downlighting.

C. All skylights shall be bronzed or tinted and shall not utilize frosted glass, and no lights shall be placed in or directed up into the wells.

D. Baffles, shields or other structural elements may be required to limit light pollution from exterior lights and skylights.

## **C. Potential Impacts and Mitigations**

### **1. Criteria Used to Determine Impact Significance**

The impact analysis section considers the project's potential to result in significant impacts based on standards of significance derived from CEQA Guidelines Appendix G. As such, the project would have a significant impact if it meets any of the following criteria.

1. Has a substantial adverse effect on a scenic vista.<sup>2</sup>
2. Substantially damages scenic resources along a State scenic highway.
3. Substantially degrades the existing visual character or quality of the site and its surroundings.
4. Creates a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Due to the location and characteristics of the project, certain conditions are not associated with the project, and, therefore, are not considered potential impacts. These conditions are addressed briefly below and are not discussed further in this document.

#### *Effects on Scenic Highways*

As the proposed project is not in the vicinity of a designated State scenic highway, CEQA Checklist Criterion 2 (above) is not further analyzed in this EIR.

### **2. Impact Analysis**

#### **Impact 4.1-A The project would not have a substantial adverse effect on a scenic vista. The impact would be less than significant.**

Given the developed state of the site, which includes the six existing tennis courts and is bordered on three sides by a parking lot, a public street, and active recreational and residential uses, it is questionable whether the site constitutes a valued landscape. However, distant, higher elevation vantage points do provide an elevated view of the undeveloped Railroad Marsh to the south of the tennis courts. The vegetation and open water of the marsh are a

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<sup>2</sup> A "scenic vista" is typically defined for CEQA purposes as a vantage point that provides expansive views of a highly valued landscape for the benefit of the general public.

visual island amidst urban development and the existing facilities and parking lot on the TPC property.

As stated in the Setting section, distant vantage points that may allow some view of the undeveloped Railroad Marsh are primarily private vantage points from windows and decks of residential units on the surrounding hillsides. Public views are generally limited to trails and hillsides on the Old St. Hilary's Open Space Preserve. Again, existing views are of the six tennis courts, small temporary structures at the north and of the tennis courts, and the adjacent parking lot (and during much of the daylight hours, there are parked vehicles in the lot). The project site is bordered by residential development to the west, east and north, additional TPC recreational facilities to the north, Railroad Marsh to the south, and multi-family residential development and commercial and administrative buildings further south. Public vantage points on trails on Old St. Hilary's Open Space are similar to those described above.

As shown on Figure 3.1-3 in the earlier Project Description section, a one-story structure would be constructed adjacent to the north side of the existing tennis courts that would include two bathrooms (a total of 550 square feet) and 300 square feet of storage for TPC-owned tennis related equipment. North of this structure would be a landscaped entry to a 792-square foot covered entrance (with a translucent roof) to the facility (see Figures 4.1-1 and 4.1-2 that show a rendering of the project's exterior and building elevations). Adjacent to and east of the proposed entry area, the project would add a 1,340-square foot screened outdoor area open to the sky and screened from public view by a wall and doors. It would accommodate the temporary maintenance and storage structures on the site (five Tuff Sheds, four dumpsters, and eight trash bins). This facility would be screened but not covered. The courts would be lit by lights installed on 38 poles that would be 22 feet in height. The poles would be located along the sides of each court and installed within the current fenceline of the tennis courts.

Given the distance between the proposed improvements and most vantage points in the hills to the east, west, and north, the improvements would not substantially change the existing viewshed. The improvements would be small and, in most cases, inevident.

The proposed light poles and new building would be required to go through the Town's Design Review process. During that review, the Town may require modifications in the design, layout, color, or other design components to mitigate any concerns that the Town identifies about the project's design.

To summarize, the site is not part of what is typically defined as a scenic vista. It is a developed site surrounded by urban forms of development. It has limited public vantage points that are relatively distant. In addition, the construction of a low-lying, small structure and installation of light poles adjacent to existing development would not substantially change views in the viewshed even if the site were considered to be a part of a scenic vista. Therefore, the impact to scenic vistas would be less than significant. See the subsequent discussion under Impact 4.1-C regarding the impact of lighting on the nighttime visual environment.



4.1-1 Visual Rendering of the Project

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JUNIOR TENNIS FACILITY - ENTRY ELEVATION NORTH



JUNIOR TENNIS FACILITY - ELEVATION TOWARD PARKING, WEST

Figure 4.1-2: ELEVATIONS

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**Impact 4.1-B      The project would not substantially affect the existing visual character or quality of the site and its surrounding visual resources or views. This impact would be less than significant.**

The project improvements may be noticeable to residents of many multi-family residences to the west and northwest and to residents of single-family residents at upper elevations to the northwest and on the east hillside. Given the distance of most of these residences from the project site, it is likely that the new light poles would be inevent. The new building and entryway would be visible to some of these residents. Again the distance from residential vantage points to these proposed improvements would likely make these improvements inevent. As one can see In Figure 4.1-4a existing lighting poles on the site as well as telephone poles along Mar West Street are inevent elements in the view. The new entryway and building would replace the temporary structures (three storage sheds, two portapotties, and a debris box) and materials stored on the ground. One can see these temporary structures and storage in Figure 4.1-4a. The new building would replace these existing facilities. The small size of the new building and roofed entry and its replacing of existing facilities devoid of visual interest would reduce any impact to the character and quality of the view to a less-than-significant level. It is expected that a similar impact would affect other residences at a higher elevation in the viewshed.

The one exception is the view from 10-12 single-family residences on Mar West Street immediately to the east of the tennis courts. These homes are with 130-250 feet of the nearest part of the tennis courts; Figure 4.1-4a shows an example of the visibility of the existing tennis courts from the second floor deck of one of these residences. The addition of poles and the relatively small building and roofs at the north end of the tennis courts may be visible depending on the house's orientation and intervening vegetation. Though potentially visible, these additions would not be expected to make a substantial change to the existing visual character or quality from these residences. The proposed improvements do not substantially change the views of active recreational development of the site. While there could be some effect on the site's visual quality, the visual changes emanating from the new light poles and new entry improvements would not typically rise to the level of a significant adverse impact on visual quality and character. In addition, the new buildings and entryway would replace the view of the temporary sheds, portapotties, and loosely stored materials. For residents along this section of Mar West Street who do have a view of the north end of the tennis courts, this new building and entry may be a beneficial effect of the project.

It is possible that people using trails on Old St. Hilary's Open Space Preserve would be able to see project improvements. However, the nearest Open Space District-maintained trail is over 800 feet distant. Given the distance and the small footprint of proposed improvements, it is expected that the change in views from trails on this preserve would be inevent and not substantially affect the character or quality of these views.

Gauging visual impacts is relatively subjective, particularly regarding impacts to private views. This is one reason that the current proposed revisions to the CEQA Guidelines (expected to be adopted by the end of 2018) would no longer require that an EIR assess visual impacts to

private views. As is currently the case for many jurisdictions (though not Tiburon), visual analyses in the future will focus on impacts to public views (assuming adoption of the Draft CEQA Guidelines revision).

Notwithstanding the subjectivity of conclusions about visual impacts, this current analysis concludes that the proposed project is consistent with adjacent site development. The project would not cause the loss of natural open space or other desirable visual elements. There are existing tennis courts and a parking lot adjacent to the project as well as other TPC tennis courts and recreational buildings on the north side of Mar West Street. The project does not add significant new visual elements to the viewshed. With the one exception noted above, most vantage points are located at a considerable distance, and the new project elements would likely be unnoticeable or ineydent from these private and public vantage points. Accordingly, it is concluded that while some project elements may be visible, they would not make a major change to the existing daytime views in the viewshed. The changes do not rise to the level of substantially impacting the visual quality or character from vantage points in the viewshed. Therefore, the impact is less than significant.

**Impact 4.1-C      The project may create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area. This impact would be less than significant.**

One of the principal objectives of the proposed project is to add lighting to the six tennis courts on the project site. This lighting would allow TPC to expand its junior clinic program and provide additional tennis lessons. The proposed project includes the installation of lighting at the six existing courts on the project site (see Figure 3.1-3). Lighting would be of the following three different types:

- Single dimmable horizontal LED fixture
- Back-to-back dimmable horizontal LED fixtures
- Two 120 degree angled fixtures

Each light would be installed atop a 22-foot-tall pole, affixed via a 3-foot-long horizontal arm. Rather than using a “standard” system—a shoebox HID light—the applicant’s design describes the specified LED lights as being energy efficient and generating “no off-site glare” and “no upward light pollution”. The lighting would use LED lights and would have individual on-off switching and motion sensors, be screened and shielded, and be “dark sky” compliant (as defined by the international Dark-Sky Association). The light system would use an astronomic clock for switching, which would automatically adjust daily to reflect the changing sunset hour.

The applicant has proposed the following mitigations to reduce new lighting impacts:

1. Luminaires (i.e., the complete light units) will be installed parallel to the court surface, not use adjustable knuckle mounts, and not permit future adjustment.

2. The LED lighting will be limited to 4000K (i.e., the color temperature, with 4000K having the appearance of Natural White color).
3. The average paint reflectance of the tennis court playing and out-of-bounds surfaces must be 10% or less; most tennis court paints that are dark green, dark blue, or dark red meet this qualification.

Public comments during the scoping process expressed concerns about potential light pollution impacts of the proposed project, especially affecting residents who have views down onto the site. Although a precise definition does not exist, light pollution is generally considered wasted light that does nothing to increase nighttime safety, utility, or security. Such wasted light produces glare, clutter, light trespass, and wastes energy. A product of light pollution is urban sky glow, the brightening of the night sky due to manmade lighting.

To assist the assessment of lighting impacts in the viewshed, three nighttime photosimulations were prepared by the applicant. The photosimulation methodology and conclusions were peer reviewed by the EIR's visual consultant (Environmental Vision) to ensure that the photosimulations are accurate representations of future nighttime views. The peer review is contained in Appendix B of this EIR. That review concluded that while there were some minor methodological errors, the simulation images convey a general sense of the proposed project's nighttime appearance. Town staff approved the use of these photosimulations for EIR analysis. The applicant purposely selected vantage points with a clear view of the tennis courts to present a worst case visual impact.

Figure 4.1-3 shows the vantage points where the photographs were taken from. Figures 4.1-4a through 4.1-6c show three sets of images: 1) a daytime photograph from the vantage point; 2) a photograph of the existing site lighting from the vantage point; and 3) the photosimulation that adds the proposed lighting to the existing lighting photograph. The following summarizes the views presented in these three sets of images

#### Vantage Point No. 1 – East of the Project Site

Existing View Photograph No. 1 (Figure 4.1-4a) shows the daytime view from the vantage point. The photograph was taken from the second deck of a residence on Mar West Street just east of the existing tennis courts. From here, one looks down onto the tennis courts with the parking area in the midground. Residential development on the hillsides to the east and northeast are evident in the background. Existing Lighting Photograph No. 1 (Figure 4.1-4b) shows that the lighting of the TPC parking lot and the existing TPC facilities located north of Mar West Street are the dominant feature of the nighttime visual environment. This lit area on the valley floor is bordered by residential lighting of units on the east- and south-facing ridges. The area south of the parking lot is dark. Photosimulation No. 1 (Figure 4.1-4c) shows how the proposed lighting would extend the lit area on TPC to the south and southeast. The new lighting would be less bright than the existing TPC lighting. Because of the light shielding for the tennis court lights, there is not the glare that is generated by the existing lighting. However, during the

period when the tennis courts are lit, there would be an evident change in the nighttime visual environment from this vantage point.

A similar change in views would likely be possible from several of the approximately 10-12 residences located just above Mar West Street to the east of the tennis courts. From residences further up the ridge to the east and north, the lit courts would not be as evident due to the distance to the courts, plus there would be screening from other residences and vegetation.

#### Vantage Point No. 2 – South of Railroad Marsh

Existing View Photograph No. 2 (Figure 4.1-5a) shows the view from a second floor deck on a Point Tiburon Marsh Condominium located immediately south of the open water of Railroad Marsh. From this vantage point one can see the open water in Railroad Marsh with marsh vegetation behind it and backdropped by views of open hillside on Old St. Hilary's Open Space Preserve as well as scattered residential development to the northeast. Existing Lighting Photograph No. 2 (Figure 4.1-5b) shows a mainly dark nighttime view, except for the scattered lights on residences to the northeast.

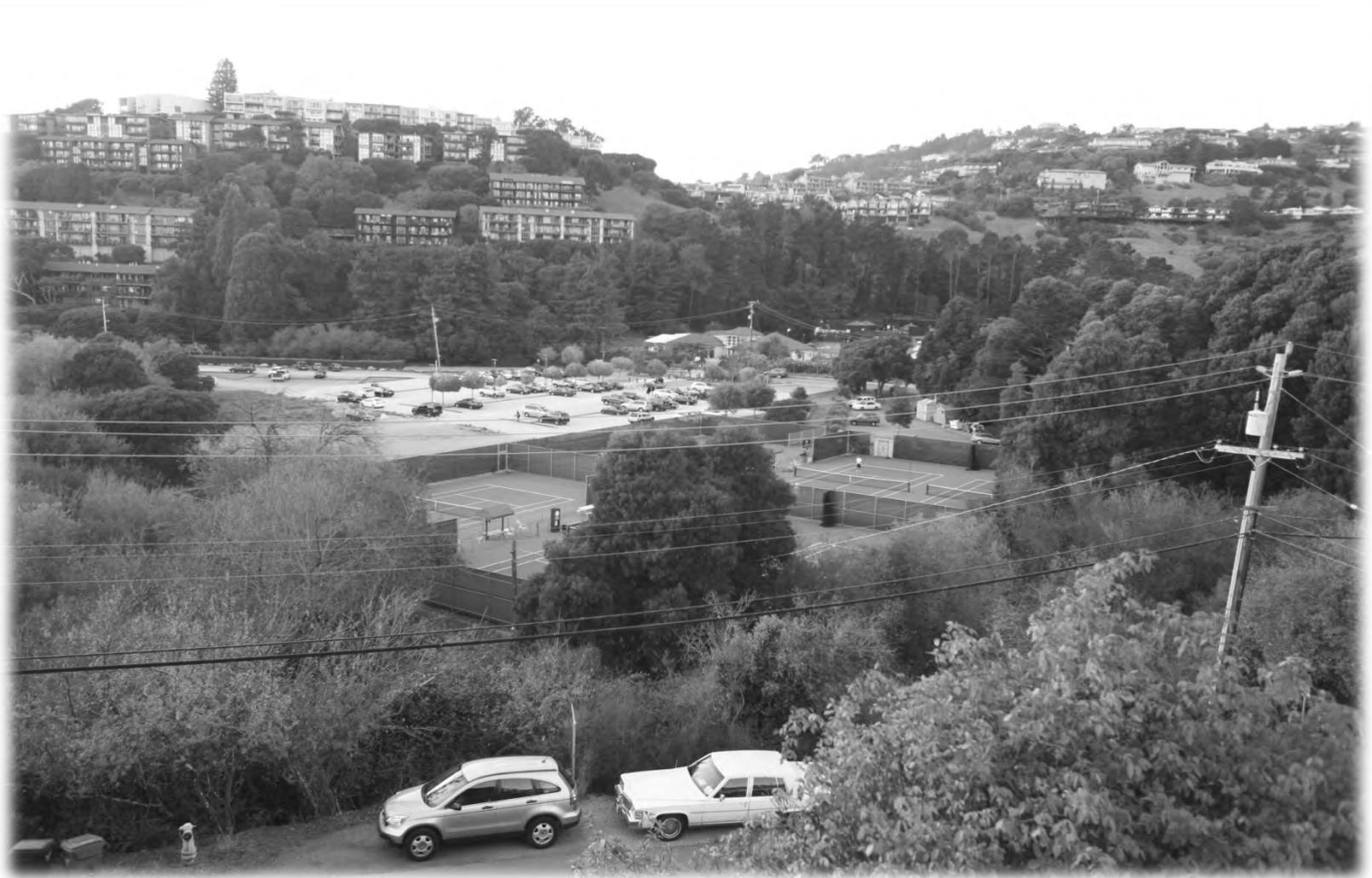
Photosimulation No. 3 (Figure 4.1-5c) shows that the top of five lights are just visible over the top of Railroad Marsh trees. The lights do not illuminate any land, but they do introduce a small lighting element into what was a dark view from the marsh towards the top of Tiburon Ridge. It is expected that a similar change in views would occur at other second floor Point Tiburon Marsh Condominiums units that face the north.

The new lighting is not a substantial change in the nighttime views. In addition, the lighting would occur for a limited time, ending by 7:45 p.m. when the lights would be turned off. The impact to viewers living south of the project site would be less than significant.

#### Vantage Point No. 3 – West of the Project Site

Existing View Photograph No. 3 (Figure 4.1-6a) was taken from a second story deck in a multi-family complex with a view to the east/southeast. From this vantage point, one can see the roofs of other residential units in the foreground, the tennis courts and Railroad Marsh in the midground, and residential and urban development in the background. Distant views include Angel Island, Richardson Bay, and San Francisco. The dominant lighting from this vantage point is the lighting of downtown Tiburon framed with the lights of the San Francisco skyline.

Existing Lighting Photograph No. 2 (Figure 4.1-6b) shows the lighting of the TPC parking lot on the valley floor below the residential unit in the foreground. The tennis courts are dark except as light from the parking lot lights illuminate them. The photograph shows some residential lighting in the foreground, background lights on the ridge on the other side of the valley and in downtown Tiburon to the south, with distant lights of San Francisco in the distance.



4.1-4a Photosimulation Viewpoint 1:  
Viewshed being studied

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Figure 4.1-4b: Photosimulation Viewpoint 1  
Existing Lighting

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Figure 4.1-4c: Photosimulation Viewpoint 1  
Proposed New Lighting

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4.1-5a Photosimulation Viewpoint 2:  
Viewshed being studied

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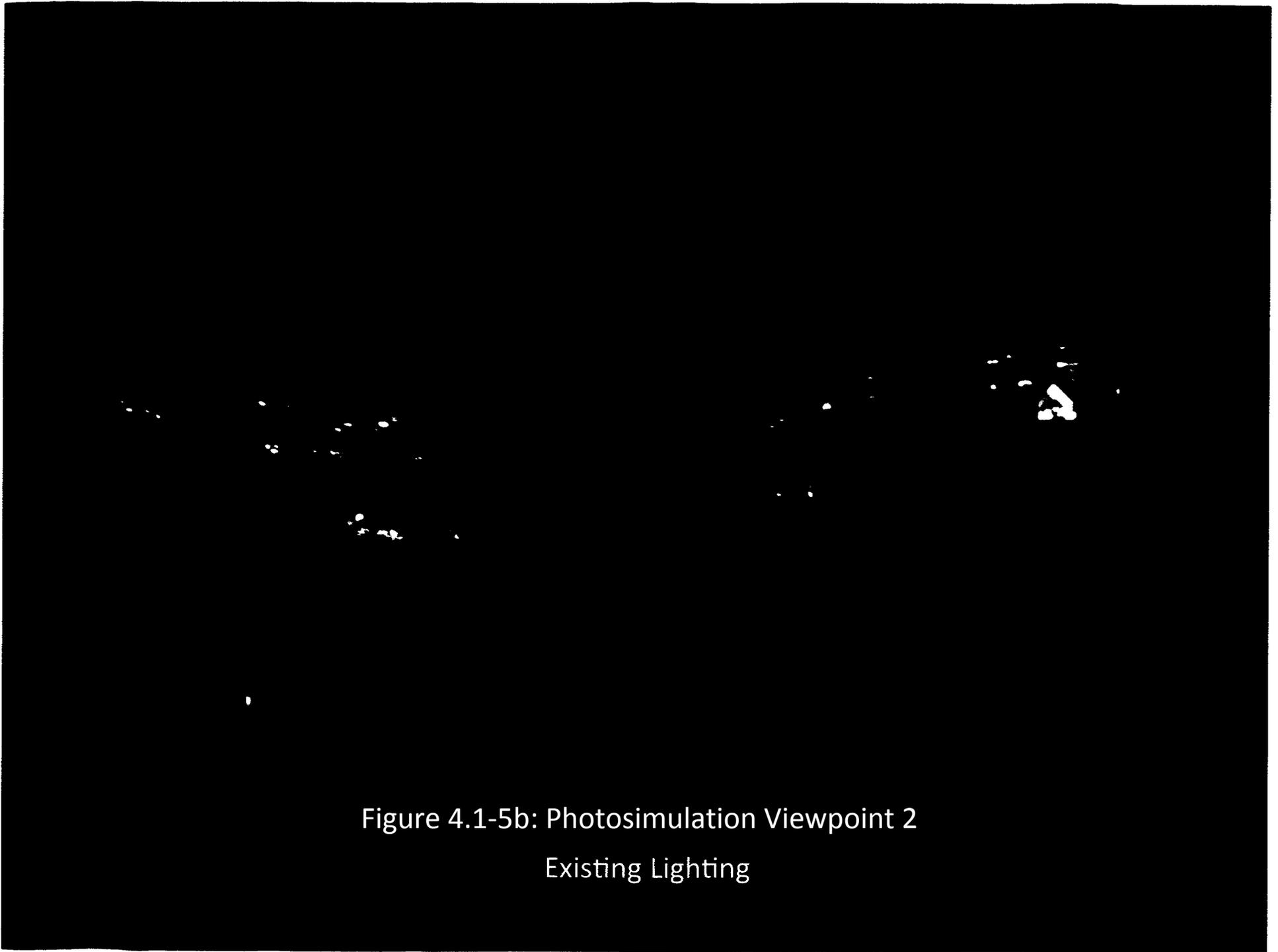


Figure 4.1-5b: Photosimulation Viewpoint 2  
Existing Lighting

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Figure 4.1-5c: Photosimulation Viewpoint 2  
Proposed New Lighting

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4.1-6a Photosimulation Viewpoint 3:  
Viewshed being studied

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Figure 4.1-6b: Photosimulation Viewpoint 3  
Existing Lighting

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Figure 4.1-6c: Photosimulation Viewpoint 3  
Proposed New Lighting

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Photosimulation No. 3 shows the lighting of the tennis courts. Though the new lighting would not be as bright as the parking lot lighting, the new lighting is quite obvious from this vantage point. However, the bright lights of the downtown and the distant San Francisco lighting remain the dominant components of the nighttime visual environment.

Other residences above (east) of this vantage point would likely also have additional views of the lit area on the project site. However, the further up the hill or to the north, more views of the site would be screened by topography, buildings, and vegetation, and the distance from the site would make the change less evident.

### Impact Discussion

Photosimulations 1 and 3 show that the new lighting would be quite evident to residents of the homes from where the photos were taken. These simulations were done for vantage points that are representative of those most likely to be affected. Residents with unimpeded, relatively near views of the tennis courts could find the additional lighting in the area offensive.

Overall, the project lighting would be added to a well lit nighttime environment typical of many urban environments. There is extensive residential development on both ridges bordering the site. The lights along Tiburon Boulevard and in downtown Tiburon provide a concentration of lighting to the south backdropped by the lights of the San Francisco skyline. Though no photosimulation was taken from Old St. Hilary's Open Space Preserve, nighttime surveys from Vistazo West Fire Road on the Preserve show that one looks down onto the existing lit tennis courts on the northern portion of TPC with views of the TPC parking lot and the other surrounding lighting described previously. Views of the existing lit tennis courts and parking area are also possible for many residents living along the ridges to the north.

The assessment issue for this EIR is whether potentially offensive nighttime impacts to some residents rise to the level of significance given the CEQA Guidelines lighting criterion that states: *Creates a new source of substantial light or glare which would adversely affect day or nighttime views in the area.* The following discusses whether project lighting would meet this criterion.

- Due to the type of lighting proposed, the project lighting would not add glare to the viewshed.
- The project would not be a new light source in an otherwise dark nighttime viewshed. The new lighting would be an incremental change to existing nighttime lighting.
- The lights would be used only from September 8th to April 14th. During the season when lights are necessary, classes and activities would cease at 7:30 p.m., and the lights would stay on until 7:45 p.m. allowing 15 minutes for cleanup. Therefore, the new lighting would be visible for a limited time during the early evening during the late autumn to mid-spring each year. This added lighting for a few hours a day would not be considered a "source of substantial light."

The visual consultants working on the photosimulation review for this EIR concluded that (t)he visual simulations demonstrate the incremental change to existing nighttime lighting conditions would not represent a substantial aesthetic change in the project area.

Therefore, while recognizing the subjectivity of such visual assessments made in the absence of Town-adopted visual impact methodology and guidelines, it is concluded that the time-restricted addition of shielded lighting to an existing recreational facility in a relatively well-lit viewshed would be a less-than-significant impact.

It is noted that the Town Municipal Code states that “(e)xterior lighting shall not invade the privacy of other properties, or produce glare or light pollution.” The proposed project lighting results in an area of new illumination for a portion of the early evening hours. However, it would not result in glare nor invade the privacy of other properties. This EIR concludes that it would not cause significant light pollution. However, the Town will make the final decision on whether the project is consistent with this Code requirement as well as with General Plan Policy LU-16 that states that outside lighting shall be allowed for safety purposes and that it shall not produce light pollution.

### ***Mitigation Measures***

Though mitigation is not required given the conclusion that the impact would be less than significant, the Town may wish to required the following mitigation to further reduce lighting impacts.

- 4.1-C.1      The existing TPC parking lights will be replaced with LED lights that will be screened, shielded, and dark sky compliant (as defined by the International Dark-Sky Association). The luminaires will be installed parallel to the ground surface. The LED lighting will be limited to 4000K.

### ***Impact Significance After Mitigation***

The impact is less than significant without mitigation. The suggested mitigation would further reduce the adverse effects from the proposed new lighting.

## **3.      *Cumulative Impacts***

**Impact 4.1-D      Changes in the viewshed associated with the project in combination with other local development would not result in significant cumulative visual impacts.**

The geographic area for visual impacts is the viewshed that includes the proposed project site. No other projects are proposed or planned at the TPC or in the project area. There are no vacant parcels near the project site that might be developed during the period the project is being constructed. As such, the project would not combine with construction of other nearby projects to cause a cumulative visual impact.

## **4.2 TRAFFIC AND CIRCULATION**

### **A. Setting**

A traffic analysis of the proposed project was conducted for this EIR by Parisi Transportation Consulting. The full traffic report is included in Appendix C of this EIR. It contains a description of the methodology used and the technical analyses that were done to calculate the level of service at critical intersections. The subsections below summarize pertinent information contained in the appended report. The reader is encouraged to review the appended report for a full presentation of the quantitative traffic analysis and results.

#### **1. Roadway System**

The project site is one quarter-mile northeast of the Tiburon Boulevard and Mar West Street intersection. The Tiburon Boulevard / Mar West Street intersection was identified by the Town as the study intersection for this EIR since it provides the primary local access to the project site. This study intersection is unsignalized with stop sign-controlled eastbound and westbound approaches from Mar West Street; it has left turn bays in both directions on Tiburon Boulevard. Local access to the project site from Mar West Street is provided via a project driveway located off that street.

The Tiburon General Plan identifies Mar West Street as an east-west collector street that loops from Tiburon Boulevard in the west to Paradise Drive in the east. In the vicinity of the project site, Mar West Street is a two-lane roadway with a posted speed limit of 25 mph. Sidewalks are provided on both sides of the street. Bicyclists traveling along Mar West Street share the roadway with motor vehicles, as there are no dedicated bicycle facilities provided on the street.

Regional access to and from the project site is provided via Tiburon Boulevard (State Route 131), which runs between U.S. 101 and Paradise Drive. Tiburon Boulevard connects the municipalities of Belvedere and Tiburon to other communities in the county and beyond. The General Plan identifies Tiburon Boulevard as a minor arterial roadway between Trestle Glen Boulevard to Main Street; west of Trestle Glen Boulevard, Tiburon Boulevard is designated a major arterial. Tiburon Boulevard is a two-lane facility running in the north-south direction and has a posted speed limit of 30 mph at the Mar West Street intersection. Tiburon Boulevard has sidewalks and Class II bike lanes along each side. South of the Tiburon Boulevard / Mar West Street intersection is the east end of the Old Rail Trail multi-use path that provides a separated bike and pedestrian path.

Transit access to the site is provided by Marin Transit and Golden Gate Transit. The nearest bus stop is located on the east side of the Tiburon Boulevard / Mar West Street intersection.

#### **2. Existing Conditions**

Vehicle turning movement counts were conducted at the study intersection during the morning peak period (7:00 AM to 9:00 AM) and the evening peak period (4:00 PM to 6:00 PM). The

counts were conducted on a fair weather mid-week day (Tuesday, September 19, 2017) when nearby schools were in session. The AM peak hour occurs from 8:00 AM to 9:00 AM and the PM peak hour occurs from 4:15 PM to 5:15 PM. It was also determined that the highest traffic volumes occur on the through movements in both directions of Tiburon Boulevard (approximately 850 vehicles per hour). Mar West Street experiences moderate right and left turning movements with no more than 130 vehicles per peak hour. Lagoon Road, located across Tiburon Boulevard from Mar West Street experiences no more than 10 vehicles per peak hour.

Intersection performance was evaluated at the study intersection. A level of service (LOS) analysis was conducted in accordance with the Highway Capacity Manual 2010 LOS methodology and analyzed using Trafficware Synchro 10 software. The analysis provides estimates of motorist delays experienced at the study intersection under existing and future conditions. A level of service (LOS) grade was assigned to the intersection. The General Plan Policy C-14 (see subsequent discussion of General Plan policies for the full language of the policy) identifies an acceptable signalized intersection in the project area as one that operates during the average peak hour of LOS C or above. However, locations where Complete Streets roadway engineering improvements are necessary to ensure safe access for pedestrians and bicyclists will be valued on a case-by-case basis, weighing safety with traffic delay considerations. In addition, the Town acknowledges that actual conditions may not meet the above LOS levels during certain peak periods.

Under AM peak period existing conditions the Lagoon Road stop sign-controlled approach to the study intersection operates at LOS C with an average delay of 18 seconds per vehicle (i.e., on average, a vehicle turning from Lagoon Road onto Tiburon Boulevard or crossing Tiburon Boulevard to Mar West Street must wait 18 seconds before there is a sufficient gap in the traffic flow to allow a safe turn onto or crossing of the street). The Mar West Street stop sign-controlled approach operates at LOS C with a delay of 16 seconds per vehicle. The stop sign-controlled movements as well as the intersection as a whole are operating under acceptable conditions during the AM peak period (average delay for the intersection as a whole is 2 seconds). During the PM peak period the intersection as a whole operates acceptably (average of 4 second delay).

## **B. Regulatory Framework**

### **Tiburon 2020 General Plan**

The Tiburon General Plan contains the following specific policies and programs that are pertinent to this project:

***Policy C-5: Multimodal Access.*** The Town shall facilitate multimodal access along appropriate corridors, to major facilities destinations such as Blackie’s Pasture, schools, and Downtown Tiburon.

**Policy C-12: Transportation Mitigation Fee.** All new projects shall be required to pay a pro rata share of needed multimodal access improvements (a transportation mitigation fee) in accordance with the burden created by such new project.

**Policy C-14: Level of Service.** For signalized intersections in the Tiburon Peninsula area, the Town shall strive to achieve and maintain the average peak hour level of service (LOS) at LOS C, with the exception of.

1. Intersections from U.S. Highway 101 interchange to E. Strawberry Drive/Bay Vista Drive (inclusive), which the Town shall strive to achieve and maintain at LOS D.
2. Locations where Complete Streets roadway engineering improvements are necessary to ensure safe access for pedestrians and bicyclists, which shall be evaluated on a case-by-case basis, weighing safety with traffic delay considerations.

The Town acknowledges that actual conditions may not meet the above LOS levels during certain peak periods.

**Policy C-15: Traffic Signals.** At such time as any unsignalized intersection along Tiburon Boulevard meets signal warrants, the Town shall approach Caltrans to approve and/or provide signalization or other appropriate improvements.

**Policy C-18: Roundabouts.** Where feasible, the Town shall consider roundabouts as an intersection traffic control option with demonstrated air quality, safety, and mobility benefits. In particular, the Town shall further study installing a roundabout at the intersection of Tiburon Boulevard and Mar West Street, due to the importance of this location as a gateway to Downtown, and potential traffic flow and safety benefits.

**Policy C-26: Roadway Classification.** From Mar West Street to Ferry Plaza, Tiburon Boulevard is classified as a downtown thoroughfare (a type of local street), with priority given to pedestrians and bicyclists.

**Policy C-59: Contractors.** The Town shall encourage contractors working on building renovations and repairs to arrive and depart outside of peak travel periods to reduce congestion on Tiburon Boulevard.

### **Transportation Agency of Marin (TAM)**

The Transportation Authority of Marin (TAM) is designated as both the County's Congestion Management Agency and the transportation sales tax authority for Marin County. As the Congestion Management Agency (CMA), TAM addresses Marin's transportation issues, fulfilling the legislative requirements of Propositions 111 and 116, approved in June 1990. The Authority is responsible for managing a variety of transportation projects and programs in Marin County, receiving federal, state, regional, and local funds, working closely with all eleven cities and

towns as well as the County. TAM administers the expenditure plans for both Measure A, the 20-year 1/2-cent Transportation Sales Tax, and Measure B, the \$10 Vehicle Registration fee.

### **Marin County Congestion Management Plan**

The 2015 Marin County Congestion Management Program (CMP) Update is a document of the Transportation Authority of Marin (TAM), the designated Congestion Management Agency (CMA) for Marin County. The 2015 biennial update is required by State statute. The Plan describes the County's designated road system and the levels of service the County identifies as acceptable for those roads. The Plan summarizes the performance of the roadway system, travel demand management in the county, the correlation of land use and the roadway system, the County's travel demand model, and the capital improvement program for roadways. As described previously, the County identifies LOS D as the lowest acceptable level of service for arterial roadways. The 2014 CMP identifies the Tiburon Boulevard arterial as operating at LOS A, and no Actions are recommended for this arterial in the CMP.

## **C. Potential Impacts and Mitigation Measures**

### **1. Criteria Used For Determining Impact Significance**

The impact analysis section considers the project's potential to result in significant impacts based on standards of significance derived from CEQA Guidelines Appendix G. As such, a project-related traffic impact or cumulative traffic impact is considered to be significant if it meets any of the following criteria:

1. Conflicts 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. Conflicts with the Town of Tiburon Level of Service standards for an unsignalized intersection. Results in an increase in delay of five seconds or more and results in the Caltrans peak hour signal warrant being met.
3. Deteriorates regional roadway (Tiburon Boulevard) from LOS D to E during the PM peak hour period.
4. Results in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
5. Substantially increases hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
6. Results in inadequate emergency access.

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

Due to the location and characteristics of the project, certain conditions are not associated with the project, and, therefore, are not considered potential impacts. These conditions are addressed briefly below and are not discussed further in this document.

#### *Air Traffic*

The project site is not near an airport and would not result in changes to air traffic patterns or create a safety risk.

#### *Roadway Hazard*

The project would not result in any new roads and would not create a safety hazard through design or use of incompatible vehicles.

#### *Emergency Access*

The project would not obstruct emergency access. The small number of new trips would not increase roadway congestion to a level that impedes emergency access.

#### ***Vehicle Trip Generation and Trip Distribution***

To analyze the Project's impact on the existing transportation system, the project's vehicle trip generation and distribution was estimated. It was estimated that the project would generate an additional 20 student trips per day between September and April when the lighting is in use. Each student was assumed to generate two vehicle trips per class. This assumes that, similar to existing conditions, each student is dropped off at the TPC and the driver remains at the club for the duration of the lesson. This would result in an estimated 40 (20 inbound, 20 outbound) additional vehicle trips per day during this time frame.

This methodology should be considered conservative as it is likely that the resulting vehicle trip generation would be lower. It assumes that each trip to the project is a unique trip rather than being part of a trip the driver would be taking for other purposes. In addition, students might carpool, walk, or bike to the club. However, this conservative assumption compensates for some parents who may not stay at the club for the duration of each lesson. Based on the class schedule, it is expected that these project-generated trips would occur between 3:00 PM and 7:45 PM in the winter with half of the 20 new inbound trips occurring during the evening peak period of 4:15 – 5:15 PM and all of the 20 new outbound trips occurring outside of the peak period.

Based on a member travel behavior survey (see the appended traffic report for additional details), nine of the ten project-generated inbound PM peak hour trips would be added to the Tiburon Boulevard / Mar West Street intersection.

## **2. Impact Analysis**

**Impact 4.2-A The project would add trips during the PM peak hour, increasing delay for drivers turning from Mar West Street onto Tiburon Boulevard by one second. This would be a less-than-significant impact.**

The number of trips generated by the project were added to the study intersection and analyzed to determine LOS. Intersection operating conditions during the AM peak hour would not be affected by the project because the new trips generated by the project would occur between 3:00 and 7:45 PM.

Under existing plus project conditions, the addition of project-generated vehicle trips to the study intersection would not change the operation of the intersection as a whole. The intersection would continue to operate at LOS D. Both stop sign-controlled movements from Mar West Street would increase delay per vehicle by one second, but this would not change the LOS for the intersection. While the two stop-controlled movements are currently considered unacceptable because of delays, the intersection as a whole itself operates acceptably. Therefore, the project would not significantly affect operations at this intersection.

The project would not significantly impact transit, bicycle, and pedestrian facilities as most new trips generated by the project would likely be vehicular trips. Any additional trips by other modes would be minor and could be accommodated by the existing transit, pedestrian, and bicycle facilities.

Caltrans requested in a comment letter on the NOP that the EIR traffic analysis include a discussion of project impacts resulting from an increase in Vehicle Miles Travelled (i.e., the number of miles travelled per new trip generated by the project). The project would be expected to generate 40 new trips per day over approximately 220 days (September 8 to April 15). Conservatively assuming that an average trip is 3 miles (it is 2 miles from the site to Trestle Glen Boulevard and about 4 miles to Highway 101), the project would add 120 VMT per day or about 26,000 VMT per year (or 71 VMT per average day, which is about the equivalent of the annual VMT generated by two single-family residences). This is a very small increase in VMT generated in Tiburon. In addition, the increase may not be this great as there is mass transit available on Tiburon Boulevard as well as sidewalk connections from the project site to Tiburon Boulevard and the Class I bicycle path and walkway on Old Rail Trail across that street. Consistent with Caltrans' recommendations, the site is a facility that is near walking and bicycling facilities and mass transit stops. Other trip reduction actions suggested by Caltrans in their NOP response seem unwarranted for a project that generates so few new trips. Caltrans recommends that the Town establish a Transportation Management Association in partnership with developments in the area to pursue aggressive trip reduction targets, but such a program

is outside the authority of the project proponents to implement. Though not warranted by the project size, the Town may wish to require the applicant to establish a formal carpooling plan that encourages carpooling of all students to the Junior Tennis Center.

### **3. Cumulative Impacts**

#### **Impact 4.2-B Project development, in conjunction with other projected development could result in traffic impacts. This is a potentially significant cumulative impact.**

Under the baseline cumulative conditions (see the appended traffic report for the calculations used to determine the future baseline conditions from cumulative development in the area), the stop-controlled movements at the study intersection would operate at LOS F. Under cumulative baseline plus the addition of project-generated traffic, the stop-controlled movements would also be expected to behave at a LOS F with a delay greater than 80 seconds per vehicle. Project-related traffic would increase vehicular delay at these approaches by more than five seconds and could potentially result in a significant impact. Intersection operations under both the cumulative and cumulative plus project conditions exceed the Town's significance threshold of a LOS D for the study intersection during the PM peak hour. Accordingly, the project would make a cumulatively considerable contribution to the cumulative impact on LOS operations for this intersection.

The Town's significance criteria requires a signal warrant analysis for any intersection in which vehicular delay would be increased by five seconds or more as a result of the addition of new project trips. The peak hour signal warrant analysis was done and determined that under both cumulative and cumulative plus project conditions, the study intersection would meet the peak hour traffic signal warrant. Although the project does increase delay at the Tiburon Boulevard / Mar West Street intersection, a traffic signal is warranted without the addition of the Project-generated trips. The Project's contribution to the intersection once it is signalized is 0.51% of total intersection volume under the Cumulative plus Project condition. Therefore, the project would make a less than cumulatively considerable contribution to the cumulative impact on operations of the study intersection once it is signalized.

The Tiburon Boulevard / Mar West intersection is in Caltrans jurisdiction and Caltrans requires a roundabout to be considered at any intersection that meets the traffic signal warrant. An LOS analysis was done at the study intersection operating as a roundabout under both cumulative and cumulative plus project conditions.

Under cumulative conditions, a roundabout at the Tiburon Boulevard / Mar West Street intersection would operate at an LOS D with an average intersection delay of 28 seconds per vehicle. The addition of project-generated vehicles would add one second of delay per vehicle across the intersection, and the intersection would continue to operate at an LOS D.

### ***Mitigation Measures***

- 4.2-B.1 Applicable traffic mitigation fees shall be paid by the applicant at the time of issuance of the building permit. The Town shall apply to Caltrans for signalization or installation of a rotary/traffic circle at the intersection of Mar West Street and Tiburon Boulevard once a signal warrant is met. The Town shall employ its own criteria for ranking and prioritization, including other signal warrants and accident history, when considering the need and timing for traffic signal or a rotary/traffic circle installation. The Town shall coordinate with Caltrans when planning and implementing the mitigation, but the final decision regarding signalization or a rotary/traffic circle lies with Caltrans.

### ***Impact Significance After Mitigation***

The recommended mitigation ensures that the project pays its fair share of signalization or installing a roundabout at the study intersection at the time such improvement is warranted and approved by the Town and Caltrans. The mitigation reduces the project's incremental increase of trips to a level that is less than cumulatively considerable.

## **4.3 NOISE**

### **A. Setting**

#### **1. Background Information on Noise and Vibration**

##### *a. Fundamentals of Noise*

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of a sound could be caused by its pitch or its loudness. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A decibel (dB) is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 4.3-1.

There are several methods of characterizing sound. The most common in California is the A-weighted sound level or dBA. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 4.3-2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called  $L_{eq}$ . The most common averaging period is hourly, but  $L_{eq}$  can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

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

*b. Effects of Noise*

The effects of noise on people can be placed into three categories:

1. Subjective effects of annoyance, nuisance, dissatisfaction;
2. Interference with activities such as speech, sleep, learning; and
3. Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no agreed upon method to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Therefore, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

1. Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived;
2. Outside of the laboratory, a 3 dB change is considered a just-perceivable difference;
3. A change in level of at least 5 dB is required before any noticeable change in human response would be expected; and
4. A 10 dB change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

**Table 4.3-1  
Definitions of Acoustical Terms**

<b>Term</b>	<b>Definitions</b>
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
$L_{01}$ , $L_{10}$ , $L_{50}$ , $L_{90}$	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Equivalent Noise Level ( $L_{eq}$ )	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level ( $L_{dn}$ )	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 p.m. and 7:00 a.m.
$L_{max}$ , $L_{min}$	The maximum and minimum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: *Handbook of Acoustical Measurements and Noise Control*, Harris, 1998.

**Table 4.3-2  
Typical Noise Levels in the Environment**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	<b>110 dBA</b>	Rock band
Jet fly-over at 1,000 feet		
	<b>100 dBA</b>	
Gas lawn mower at 3 feet		
	<b>90 dBA</b>	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	<b>80 dBA</b>	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	<b>70 dBA</b>	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	<b>60 dBA</b>	
		Large business office
Quiet urban daytime	<b>50 dBA</b>	Dishwasher in next room
Quiet urban nighttime	<b>40 dBA</b>	Theater, large conference room
Quiet suburban nighttime		
	<b>30 dBA</b>	Library
Quiet rural nighttime		Bedroom at night
	<b>20 dBA</b>	
		Silent broadcast/recording
	<b>10 dBA</b>	
	<b>0 dBA</b>	

Source: Technical Noise Supplement (TeNS), California Department of Transportation, September 2013.

**2. Existing Noise Environment**

The project site is in a relatively quiet area as it is distant from heavily traveled streets. A noise report prepared in 2004<sup>3</sup> for the then proposed improvements to the TPC (including two new tennis courts adjacent to the proposed project site) stated that average 24-hour noise levels at the four nearest residences to the proposed 2004 improvements ranged from 49 dBA  $L_{dn}$  to 53 dBA  $L_{dn}$ , which meets the Town’s “Normally Acceptable” noise criteria for residential uses of 60 dBA  $L_{dn}$  or below.

Additional noise measurements were made in December 2017 to establish baseline ambient conditions in the residential areas along Mar West Street to the east and south of the TPC tennis courts. The unattended measurements (LT-1) were made in consecutive 10 minute intervals beginning at 2:00 p.m. on Wednesday, December 6, 2017 and concluding at 10:10 a.m. on Thursday, December 07, 2017 opposite the driveway entrance to 1645 Mar West Street (Figure 4.3-1). The measurement was made approximately 25 feet west from the Mar West Street centerline and approximately 180 feet northeast from the center of the six tennis courts. During the mid-afternoon measurements, construction activities at TPC were elevating background noise levels in the area. The construction stopped around 4:00 p.m. and did not affect the measured levels between the hours of 5:00 p.m. and 8:00 p.m. when the proposed lighting would allow the extended use of the courts during the winter. Hourly average noise levels at this location typically ranged from 40 to 52 dBA  $L_{eq}$  during the day (excluding the hours where construction occurred) and from 34 to 48 dBA  $L_{eq}$  at night. The measured levels are summarized in Figure 4.3-2.

A short-term (ST-1) attended noise measurement was made at the same location as LT-1 on the morning of Thursday, December 7, 2017 while adult tennis lessons were occurring at all six TPC tennis courts. During this measurement, no construction was occurring in the area. Noise levels from adult speech on the tennis courts ranged from 50 to 58 dBA  $L_{max}$ . Noise levels from tennis ball strikes ranged from 47 to 51 dBA  $L_{max}$ . Cars/trucks that passed by during the short-term measurement generated noise levels ranging from 60 to 62 dBA  $L_{max}$ . The 10-minute average noise level measured at this location between 10:00 a.m. and 10:10 a.m. on Thursday, December 7, 2017 was 51 dBA  $L_{eq}$ . Table 4.3-3 summarizes the results of the short-term measurement.

**Table 4.3-3  
Summary of Short-Term Noise Measurement Data (dBA)**

Noise Measurement Location	$L_{max}$	$L_{(1)}$	$L_{(10)}$	$L_{(50)}$	$L_{(90)}$	$L_{eq}$
ST-1: Opposite driveway entrance of 1645 Mar West Street. (12/7/2017, 10:00 a.m. - 10:10 a.m.)	62	60	55	49	45	51

<sup>3</sup> Charles M. Salter Associates, Inc. 2004.

## **B. Regulatory Framework**

### ***Tiburon 2020 General Plan***

The Tiburon General Plan Noise Element contains policies and programs pertinent to noise, including:

***Policy N-1:*** The Town shall use the Noise and Land Use Compatibility Guidelines contained herein to determine where noise levels in the community.

For residential uses, an exterior  $L_{dn}$  of up to 60 decibels is considered “normally acceptable.” For commercial uses, up to 65 decibels is considered “normally acceptable.”

***Policy N-4:*** If the projected noise environment for a project exceeds the standards identified in the Noise and Land Use Compatibility Guidelines, the Town shall require an acoustical analysis so that noise mitigation measures can be incorporated into the project design.

***Policy N-6:*** Hours of use of recreation and commercial facilities should be regulated to minimize offensive noise to ensure compatibility between such facilities and nearby residential areas.

***Policy N-10:*** Standard quiet construction methods shall be used where feasible and when construction activities take place within 500 feet of noise sensitive areas.

### ***Tiburon Municipal Code***

The Tiburon Municipal Code (Title 4, Chapter 13-6) limits construction to the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday and 9:30 a.m. to 4:00 p.m. on Saturday (on Saturday only “quiet work” is allowed, which would be work that does not generate noise audible beyond the property line). Additionally, heavy equipment can only be used from 8:00 a.m. to 5:00 p.m. on Monday through Friday.

## **C. Potential Impacts and Mitigations**

### ***1. Criteria Used to Determine Impact Significance***

A project would typically have a significant impact if it meets any of the following criteria.

1. Exposes people to, or generates, noise levels in excess of the thresholds set forth in the Tiburon 2020 General Plan or Municipal Code.
2. Causes a substantial permanent increase in ambient noise levels in the project vicinity above the noise levels existing without the project. A noise impact would be identified if the permanent noise level increase resulting from the project is 3 dBA  $L_{dn}$  or greater.

**Figure 4.3-1  
Noise Measurement Locations**

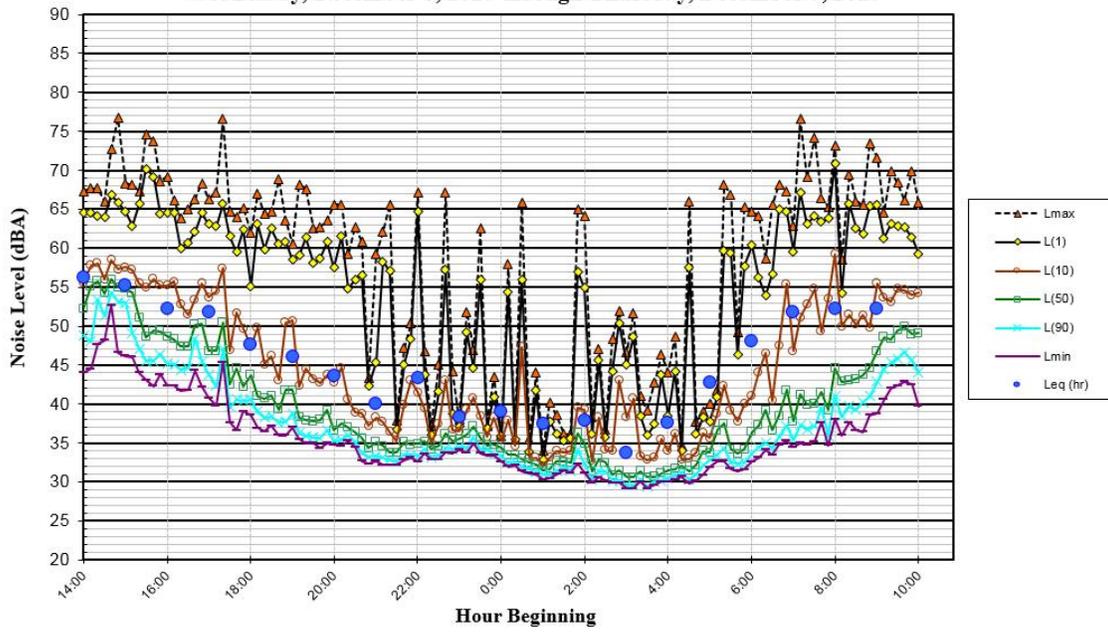


Source: Google Earth

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**Figure 4.3-2**

**Noise Levels at Noise Measurement Site LT-1  
In Front of 1645 Mar West St, ~25 Feet from Mar West St Centerline  
~100 Feet from Center of Closest Tennis Court  
Wednesday, December 6, 2017 through Thursday, December 7, 2017**



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3. Causes a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. The Town of Tiburon does not have adopted limits for construction noise other than to regulate the hours construction can occur. Commonly, a substantial temporary noise increase is defined as construction noise levels that exceeds 60 dBA  $L_{eq}$  and the ambient noise environment by at least 5 dBA  $L_{eq}$  for a period of more than one year.<sup>4</sup>
4. Exposes people to or generates excessive groundborne vibration or ground-borne noise levels.
5. Exposes people residing or working in the project area to excessive noise levels; applies to projects located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project.
6. Exposes people residing or working in the project area to excessive noise levels; applies to projects within the vicinity of a private airstrip.

Due to the location and characteristics of the project, certain conditions are not associated with the project, and, therefore, are not considered potential impacts. These conditions are addressed briefly below and are not discussed further in this document.

#### *Groundborne Vibrations*

Project construction would not require substantial or prolonged use of heavy equipment that would cause significant groundborne vibrations on or off the TPC property. The Initial Study found that potential impacts per Criterion 4 were less than significant and did not require additional analysis.

#### *Airport Noise*

Construction of the project would not expose people to excessive noise from airports, so there would be no impact per Criteria 5 and 6.

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<sup>4</sup> The rationale of the standard is as follows. 1) The one-year duration defines what would be considered “temporary”. One-year is representative of the amount of time typically required to construct most projects and consistent with most people’s expectations for a project’s duration. In the noise consultants’ professional opinion, one-year is a reasonable amount of time for persons of normal sensitivity to be subject to daytime construction noise. 2) The 60 dBA  $L_{eq}$  noise level threshold is derived from speech interference studies. Noise levels above 60 dBA  $L_{eq}$  begin to result in speech interference and persons must raise their voices to be clearly heard. Exterior noise levels exceeding 60 dBA  $L_{eq}$  can also result in activity interference indoors. 3) The construction noise must also be 5 dBA  $L_{eq}$  above the ambient to be clearly noticeable. The noise level limits and construction duration, combined, are used to assess the potential for a substantial temporary noise increase.

## 2. *Impact Analysis*

**Impact 4.3-A      Noise generated by construction activities would not result in a substantial temporary noise increase at adjacent land uses. This impact would be less than significant.**

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

Policy N-10 of the Town's General Plan states that standard quiet construction methods shall be used where feasible when construction activities take place within 500 feet of noise sensitive areas. In addition, the Town's Municipal Code limits construction to the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday and 9:30 a.m. to 4:00 p.m. on Saturday (on Saturday only "quiet work" is allowed, which would be work that does not generate noise audible beyond the property line). Heavy equipment can only be used from 8:00 a.m. to 5:00 p.m. Monday through Friday.

Existing residences to the east and south of the project site along Mar West Street would have existing daytime ambient noise levels similar to the noise levels recorded at LT-1. Based on these data, the existing ambient average hourly noise level during daytime construction hours at these residences would be 52 dBA  $L_{eq}$ .

Noise-sensitive land uses would be temporarily exposed to noise from construction activities. Table 4.3-4 presents the typical range of hourly average noise levels generated by different phases of construction measured at a distance of 50 feet. The construction of the proposed project would consist of site preparation, grading, trenching, and building/finishing. Hourly average noise levels generated by equipment associated with the project are calculated to range from 71 to 83 dBA  $L_{eq}$  measured at a distance of 50 feet assuming the minimum required equipment would be present at the site.

**Table 4.3-4  
Typical Ranges of Noise Levels at 50 Feet from Construction Sites (dBA L<sub>eq</sub>)**

	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious Amusement & Recreations, Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84

Source: United States Environmental Protection Agency, 1973, Legal Compilation on Noise, Vol. 1, p. 2-104.

Notes: I – All pertinent equipment present at site.  
II – Minimum required equipment present at site.

Noise levels decrease by about 6 dBA for each doubling of the distance between the noise source and the receptor. Shielding by buildings or terrain often result in lower construction noise levels at distant receptors. There are two components of the project that would have construction activities; the new building and the lights on the tennis courts. The nearest residence along Mar West Street east of the TPC is 175 feet from the center of the proposed building development at the north end of the existing courts and 240 feet from the center of the six tennis courts. At these distances, residents at the nearest home would periodically experience noise levels of 60 to 72 dBA L<sub>eq</sub> from the building site and 57 to 69 L<sub>eq</sub> from the tennis courts lights. There are six other residences along Mar West Street that are approximately 270 feet from the center of the building development site and 240 feet from the center of the tennis courts. At these distances, the other residences along Mar West Street would periodically experience noise levels of 56 to 68 dBA L<sub>eq</sub> from the building site and 57 to 69 L<sub>eq</sub> from the tennis courts lights.

The additional residences in the neighborhood to the west and southwest overlooking the project site are approximately 500 to 600 feet from the center of the construction areas for both the building and tennis courts lights. Construction noise levels at these residences would be expected to range from 51 to 63 dBA L<sub>eq</sub>.

At the closest noise sensitive receptors, temporary construction noise levels would be above the 60 dBA L<sub>eq</sub> threshold and exceed the ambient noise environment by 5 dBA L<sub>eq</sub>. Construction for the proposed project is expected to last approximately seven months. Standard quiet construction methods shall be used where feasible, as stipulated by the Town’s General Plan, since the project’s construction activities take place within 500 feet of noise sensitive areas. The allowable hours of construction, as stipulated in the Town’s Municipal Code, will be in effect. Given these controls and the duration of the noise generating construction period is less than one year, the project would not cause a significant noise impact.

**Impact 4.3-B      Project operations would not result in a permanent noise increase at adjacent land uses that would be greater than the noise standards adopted by the Town. This impact would be less than significant.**

Increased Use of the Tennis Courts

The project would allow an expansion of the current junior clinic program and group lessons for both TPC members and non-members. The applicant estimates that the proposed project would increase usage of the lower courts by 20 more students per day between September and mid-April, or 6 more students at any given time.

Extensive measurements of noise levels generated during tennis matches were conducted for a facility in Palo Alto, California.<sup>5</sup> The noise surveys found that there are two dominant noise sources during matches; the ball being hit and the squeak of tennis shoes sliding on the court surface. Voices were found to be occasionally audible during matches but do not significantly contribute to measured noise levels. During youth matches, the maximum noise levels ranged from 64 to 70 dBA measured at a distance of 25 feet. When volleying, maximum instantaneous noise levels were typically in the range of 50 to 60 dBA measured at a distance of 25 feet. Shoe squeaks fall within the range of volleying, at levels of approximately 50 to 60 dBA measured at a distance of 25 feet.

Noise data gathered during the December 2017 measurements occurred during adult tennis lessons at all six courts. During this activity, as opposed to tennis matches described above, the voices of the instructors and students were the dominant sources of noise. The talking was continuously audible and ranged from 50 to 58 dBA  $L_{max}$  at 180 feet from the center of the six tennis courts. Noise levels from tennis ball strikes ranged from 47 to 51 dBA  $L_{max}$  at 180 feet from the center of the six tennis courts. Considering the noise adjustment for distance, this noise data corresponded well with the previous data described above. Assuming this level of activity occurred for an hour, the average hourly noise level during tennis playing was 51 dBA  $L_{eq}$  at a distance of 180 feet.

The nearest residences to the center of the six tennis courts are 240 feet east of the site. At this distance, average hourly noise levels from the tennis courts at the closest residences would be 49 dBA  $L_{eq}$ . The existing ambient noise levels during the 5:00 p.m. through 8:00 p.m. hours ranged from 46 dBA  $L_{eq}$  to 52 dBA  $L_{eq}$ . The predicted noise levels from tennis activities fall within the range of existing noise levels. Although the extended tennis noise into the evening hours would be audible at the nearest residences and may be perceived as a nuisance by some neighbors, it would not be a substantial noise increase.

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<sup>5</sup> *Proposed Tennis Facility at 3009 Middlefield Road, Palo Alto, California, Third Party Review of the Noise Issues*, prepared for City of Palo Alto, Department of Planning and Community Environment, by Illingworth & Rodkin, Inc., April 1997.

The Town's establishes 60 dBA  $L_{dn}$  as the normally acceptable noise level at residential land uses. The permanent noise level increase due to the project's extended hours of tennis activities would be up to 1 dBA  $L_{dn}$  at noise-sensitive receptors in the project vicinity. Existing ambient noise levels in the project vicinity range from 49 to 53 dBA  $L_{dn}$ . Therefore, noise levels with the project would continue to fall within the normally acceptable threshold. Furthermore, the proposed project would not cause a substantial (3 dBA  $L_{dn}$  or greater) permanent noise level increase in the  $L_{dn}$  at the nearby noise-sensitive receptors.

#### Increased Traffic

The project would generate new trips on Mar West Street. Noise from passing vehicles could be audible to residents in the project vicinity. Given existing traffic volumes, the maximum daily average increase of 40 trips during the winter that the project would generate (this is a worst-case trip generation that assumes all additional students would be transported by motor vehicles and no carpooling or walking), the project would not measurably affect hourly or daily noise levels along Mar West Street or more distant streets. The noise increase would be expected to be less than 1 dBA  $L_{eq}/L_{dn}$ .

### **3. Cumulative Impacts**

#### **Impact 4.3-C Noise associated with the project in combination with other local development would not result in significant cumulative noise impacts.**

The geographic area for noise impacts is the area containing projects close enough to the proposed project where both the noise would be audible at the same time and where the noise could combine to result in a louder noise level than caused by the project itself; or where the combined traffic would cause a cumulative noise impact.

No other projects are proposed or planned at the TPC or in the project area. There are no vacant parcels near the project site that might be developed during the period the project is being constructed. As such, the project would not combine with construction of other nearby projects to cause a cumulative noise impact.

Traffic volumes under the Cumulative and Cumulative Plus Project scenarios were compared to the Existing scenario to calculate the relative increase in traffic noise attributable to the project. The project traffic would not make a measurable noise contribution to the noise levels at any of the roadway segments analyzed in the traffic study. There would be no cumulative traffic noise impact.

## **4.4 AIR QUALITY**

### **A. Setting**

The project is located within the San Francisco Bay Area (Bay Area) Air Basin. Air quality in the Bay Area Air Basin is governed by the Bay Area Air Quality Management District (BAAQMD). The Bay Area Air Basin is currently classified as non-attainment for the 1-hour State ozone standard as well as for the federal and State 8-hour standards. Additionally, the Bay Area Air Basin is classified as non-attainment for the State 24-hour and annual arithmetic mean PM10 standards as well as the State annual arithmetic mean and the federal 24-hour PM2.5 standards.

BAAQMD is the agency responsible for regulating air pollutant emissions in the San Francisco Bay Area Air Basin. BAAQMD is responsible for implementing emissions standards and other requirements of federal and state laws. The air basin, including Marin County, is considered a “nonattainment area” for the 1-hour State ozone standard as well as for the federal and State 8-hour standards and for the State 24-hour and annual arithmetic mean PM10 standards as well as the State annual arithmetic mean and the federal 24-hour PM2.5 standards. In September 2010, the BAAQMD adopted the Bay Area 2010 Clean Air Plan (CAP). In May 2017, BAAQMD adopted updated CEQA Air Quality Guidelines, including thresholds of significance and new screening criteria, which advise lead agencies on how they can evaluate potential air quality impacts using these screening criteria.

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

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM10) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM2.5). Elevated concentrations of PM10 and PM2.5 are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

## **Criteria Air Pollutants**

Air quality is described by the concentration of various pollutants in the atmosphere. Units of concentration are generally expressed in parts per million (ppm) or micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). The significance of a pollutant concentration is determined by comparing it to an appropriate ambient air quality standard. Depending on the pollutant and its associated effects, the standards may be short term, from one to twenty-four hours, or an annual average. In general, short-term standards represent the maximum acceptable concentrations that may be reached but not exceeded more than once per year. Annual standards are maximum acceptable concentrations that may be reached but not exceeded. Potential health effects and primary sources of criteria pollutants are described below.

- **Ozone.** Ground-level ozone (ozone) is the principal component of smog. Ozone is not directly emitted into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>) in the presence of sunlight. VOCs and NO<sub>x</sub> are known as precursor compounds for ozone. Ozone levels are highest during late spring through early summer when precursor emissions are high and meteorological conditions are favorable for the complex photochemical reactions to occur. Ozone is a regional air pollutant since it is not emitted directly by sources, but is formed downwind of sources of VOCs and NO<sub>x</sub> emissions. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infection, impairs lung defense mechanisms, and leads to emphysema and chronic bronchitis. Ground-level ozone is also one of the most harmful pollutants for vegetation, and can damage many other common materials such as nylon, rubber, dyes, and paints
- **Particulate Matter.** Respirable particulate matter, PM<sub>10</sub>, and fine particulate matter, PM<sub>2.5</sub>, consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. PM<sub>10</sub> and PM<sub>2.5</sub> represent fractions of particulate matter that can be inhaled and cause adverse health effects. PM<sub>10</sub> and PM<sub>2.5</sub> are a health concern, particularly at levels above the PM<sub>10</sub> federal and State ambient air quality standards. PM<sub>2.5</sub> (including diesel exhaust particles) can have greater effects on health than PM<sub>10</sub> because these particles are so small they are able to penetrate to the deepest parts of the lungs. Scientific studies have identified links between fine particulate matter and numerous health problems including asthma, bronchitis, acute and chronic respiratory symptoms such as shortness of breath and painful breathing. Children are more susceptible to the health risks of PM<sub>2.5</sub> because their immune and respiratory systems are still developing. Very small particles of certain substances (e.g., sulfates and nitrates) can also cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health.

Several forms of particulate matter, in particular diesel particulate matter, have adverse health effects at concentrations well below the standards established for PM<sub>10</sub> or PM<sub>2.5</sub>. The CARB identified diesel exhaust particulate matter as a toxic air

contaminant based on its potential to cause cancer, premature death, and other health problems. Diesel exhaust also contributes to fine particulate matter (PM<sub>2.5</sub>) air quality problems. Thus, diesel particulate matter presents both an air quality concern, as well as a health risk concern. As such, diesel particulate matter emissions require separate evaluation as a toxic air contaminant in order to assess potential health risks.

Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as mining and demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. In addition to health effects, particulates also can damage materials and reduce visibility. Dust comprised of large particles (diameter greater than 10 microns) settles out rapidly and is more easily filtered by human breathing passages. This dust is of concern more as a soiling nuisance rather than a health hazard.

- **Nitrogen Dioxide.** Nitrogen dioxide is a reddish-brown gas that is a by-product of combustion processes. During combustion processes at high temperatures, nitrogen from the atmosphere and the fuels being burned combines with oxygen to form various oxides of nitrogen. Nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>) are the most significant air pollutants generally referred to as NO<sub>x</sub>. Nitric oxide is a colorless and odorless gas that quickly converts to NO<sub>2</sub> and is easily measured in the atmosphere. Nitrogen dioxide also contributes to ground-level ozone formation. Adverse health effects associated with exposure to high levels of nitrogen dioxide include the risk of acute and chronic respiratory illness.
- **Carbon Monoxide.** Carbon monoxide (CO) is a non-reactive pollutant that is colorless and odorless, and is toxic in high concentrations. It is formed by the incomplete combustion of fuels. The largest source of CO emissions is motor vehicles. Wood stoves and fireplaces also contribute to high levels of CO, particularly in the wintertime. Unlike ozone and NO<sub>2</sub>, CO is directly emitted to the atmosphere without additional chemical conversion. The highest CO concentrations generally occur during the nighttime and early mornings in late fall and winter. CO levels are strongly influenced by meteorological factors such as wind speed and atmospheric stability. High CO concentrations can develop during periods of light winds combined with ground-level temperature inversions, typical of wintertime conditions during the evening through early morning hours. Adverse health effects of carbon monoxide include the impairment of oxygen transport in the bloodstream, increase of carboxyhemoglobin, aggravation of cardiovascular disease, impairment of central nervous system function, fatigue, headache, confusion, and dizziness. Exposure to carbon monoxide can be fatal in the case of very high concentrations.
- **Sulfur Dioxide.** Sulfur dioxide is a colorless gas with a strong odor and potential to damage materials. It is produced by the combustion of sulfur containing fuels such as oil and coal. Refineries, chemical plants, and pulp mills are the primary industrial

sources of sulfur dioxide emissions. Adverse health effects associated with exposure to high levels of sulfur dioxide include aggravation of chronic obstruction lung disease and increased risk of acute and chronic respiratory illness.

- **Lead.** Lead occurs in the atmosphere as particulate matter. Historically, it was primarily emitted by gasoline-powered motor vehicles; however, the use of lead in fuel has been virtually eliminated. As a result of lead being eliminated from fuels, levels throughout the U.S. have dropped dramatically in the past 20 years. Dust from old lead paints represent very localized lead problems. Lead concentrations measured at ambient monitoring stations in California are well below the ambient standards.

### **Toxic Air Contaminants**

Toxic Air Contaminants (TAC) are a large group of compounds known to cause short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects. TACs are considered separately from criteria pollutants in the regulatory process. Unlike criteria pollutants, there are no ambient air quality standards for evaluation of TACs. Instead, TAC emissions are generally evaluated based on the degree of health risk that could result from exposure to these pollutants.

In August 1998, CARB identified particulate emissions from diesel-fueled engines (diesel particulate matter, or DPM) as TACs. CARB subsequently developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (CARB, 2000). The document represents proposals to reduce diesel particulate emissions, with the goal of reducing emissions and associated health risks by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra low sulfur diesel fuel on diesel-fueled engines.

CARB published the Air Quality and Land Use Handbook: A Community Health Perspective in 2005 (CARB, 2005). The primary goal in developing the handbook was to provide information that will help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution. The handbook highlights recent studies that have shown that public exposure to air pollution can be substantially elevated near freeways and certain other facilities (i.e., distribution centers, rail yards, chrome platers, etc.). However, the health risk is greatly reduced with distance. For that reason, CARB provided some general recommendations aimed at keeping appropriate distances between sources of air pollution and sensitive land uses, such as residences.

## **B. Regulatory Framework**

### **Federal**

The Federal Clean Air Act (Federal Act) was established in an effort to assure that acceptable levels of air quality are maintained in all areas of the United States. Air quality is characterized by the presence of pollutants that fall into two basic categories; criteria air pollutants and toxic or hazardous air contaminants. Criteria air pollutants refer to a group of pollutants for which the

regulatory agencies have adopted ambient air quality standards and pollution management and control strategies. Toxic or hazardous air contaminants refer to a category of air pollutants that have potential adverse health effects but do not have an associated ambient air quality standard. These pollutants are called hazardous air pollutants (HAPs) in federal law and toxic air pollutants (TACs) in California law.

The Federal Act requires the EPA to establish ambient air quality standards for air pollutants that cause or contribute to air pollution and that may reasonably be anticipated to endanger public health. Pollutants with air quality standards are called criteria pollutants. National Ambient Air Quality Standards (NAAQS or national standards) have been established for seven pollutants: carbon monoxide (CO), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), particulate matter, which includes both respirable particulate matter (PM<sub>10</sub> - particulate matter 10 microns or less in diameter) and fine particulate matter (PM<sub>2.5</sub> - particulate matter 2.5 microns or less in diameter), sulfur dioxide (SO<sub>2</sub>), and lead (Pb).

### **State**

Air pollution in California is regulated under the provisions of the California (State Act). These statutes provide the basis for implementing the Federal Clean Air Act (Federal Act). The California Air Resources Board (CARB) is responsible for establishing and reviewing the State standards, compiling California's plans to meet the federal NAAQS, securing approval of that plan from the EPA, and identifying toxic air contaminants. CARB also regulates mobile emission sources in California, such as construction equipment, trucks, and automobiles. The State Act divides implementation responsibility between the CARB and local or regional agencies called air quality management districts or air pollution control districts.

### **Bay Area Air Quality Management District**

The air districts, including the Bay Area Air Quality Management District (BAAQMD), are primarily responsible for implementing and enforcing federal and State regulations for stationary sources at industrial and commercial facilities within their jurisdictions and for preparing the regional air quality plans that are required to meet State and Federal requirements. The local air districts also have the responsibility and authority to adopt transportation control measures and emission reduction programs for indirect and area-wide emission sources.

BAAQMD is the agency responsible for regulating air pollutant emissions in the San Francisco Bay Area Air Basin. The air basin, including Marin County, is considered a "nonattainment area" for the 1-hour State ozone standard as well as for the federal and State 8-hour standards and for the State 24-hour and annual arithmetic mean PM<sub>10</sub> standards as well as the State annual arithmetic mean and the federal 24-hour PM<sub>2.5</sub> standards.

In September 2010, the BAAQMD adopted the comprehensive Bay Area 2010 Clean Air Plan (CAP). In April 2017, the BAAQMD adopted an update to that plan, titled, *Bay Area 2017 Clean Air Plan (CAP)*. The 2017 Clean Air Plan, *Spare the Air, Cool the Climate (2017 Plan)*, focuses on health and protecting the climate. Consistent with the GHG reduction targets adopted by the

state of California, the plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

In 2010 and 2011, BAAQMD adopted the BAAQMD CEQA Air Quality Guidelines. These were updated in May 2017. These guidelines include thresholds of significance and new screening criteria, which advise lead agencies on how they can evaluate potential air quality impacts using these screening criteria. The guidelines include community risk thresholds that address impacts associated with TACs.

### **Tiburon 2020 General Plan**

The Town General Plan contains the following policies pertinent to air quality:

**Policy OSC-56:** The Town shall promote the reduction of particulate matter from construction sites, roads, parking lots, and other sources through best management practices (BMPs).

**Policy OSC-57:** The Town shall require the use of feasible control measures to reduce PM10, NOx, and diesel particulate matter related to construction activities.

**Policy OSC 58:** The Town shall, through implementation of Circulation Element policies, encourage the reduction of the number of single-occupant vehicle trips and cumulative emissions that result from auto use.

## **C. Potential Impacts and Mitigation Measures**

### **1. Criteria for Determining Impact Significance**

The CEQA Guidelines provide that a project would have a significant impact on air quality if it would meet any of the following criteria:

1. Conflicts with or obstructs implementation of the applicable air quality plan.
2. Violates any ambient air quality standard or contributes substantially to an existing or projected air quality violation.
3. Results 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. Exposes sensitive receptors to substantial pollutant concentrations.
5. Creates objectionable odors affecting a substantial number of people.

## Significance Thresholds

The *BAAQMD CEQA Air Quality Guidelines* were prepared to assist lead agencies in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. The 2011 version of the *BAAQMD CEQA Air Quality Guidelines* were amended to include a risk and hazards threshold for new receptors and modify procedures for assessing impacts related to risk and hazard impacts. The 2017 version of the guidelines retains these thresholds as an option for lead agencies to consider when evaluating the impacts of projects that include sensitive receptors. The significance thresholds identified by BAAQMD and used in this analysis are summarized in Table 4.4-1.

**Table 4.4-1. Air Quality Significance Thresholds**

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (Exhaust)	82	15
PM <sub>2.5</sub>	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
<b>Health Risks and Hazards</b>	<b>Single Sources Within 1,000-foot Zone of Influence</b>	<b>Combined Sources (Cumulative from all sources within 1,000 foot zone of influence)</b>	
Excess Cancer Risk	>10 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual PM <sub>2.5</sub>	>0.3 µg/m <sup>3</sup>	>0.8 µg/m <sup>3</sup>	
<b>Odors</b>			
Odors	5 confirmed complaints per year averaged over 3 years		
Note: ROG = reactive organic gases, NO <sub>x</sub> = nitrogen oxides, PM <sub>10</sub> = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM <sub>2.5</sub> = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less.			

## Less than Significant Impacts

Due to the location and characteristics of the project, certain conditions are not associated with the project, and, therefore, are not considered potential impacts. These conditions are discussed in the Initial Study and addressed briefly below and are not discussed further in this document.

### *Health Risks and Hazards*

The project would not be an operational source of TACs and, therefore, would not result in long-term cancer risks or air contaminant hazards. The project operation would also not be a source of localized PM2.5 emissions, so annual concentrations of PM2.5 would not be affected by the project. Construction of the project would result in temporary emissions of TACs and PM2.5 from diesel exhaust. Since the emissions are temporary and not immediately adjacent to sensitive receptors, the impact in terms of health risks or hazards is considered less than significant. These emissions are addressed in term of air pollutant emissions, and mitigation measures to further reduce this impact are identified.

### *Odors*

Because the project is a recreation-related project, it would not be expected to generate objectionable odors.

## **2. Impact Analysis**

**Impact 4.4-A Project construction and operation would not generate significant amounts of emissions of criteria pollutants, and consequently the project would be consistent with the Bay Area 2017 Clean Air Plan. The impact would be less than significant with standard construction mitigations applied.**

The project will result in emissions of air pollutants, primarily particulate matter. Construction-related emissions would result from the likely use of off-road, heavy equipment operating at the project site to construct the new facilities and from truck trips associated with deliveries and construction workers commuting to and from the project site. Emissions associated with project operation would include those from car trips and maintenance activities.

To determine the significance of the project air quality impact, the Town uses the screening criteria provided in BAAQMD's 2017 CEQA Air Quality Guidelines. If a proposed project exceeds the screening criteria, it is expected that its emissions would exceed the thresholds of significance included in the Guidelines, and a detailed air quality analysis would be required. The screening criteria do not specifically include a category for tennis courts and tennis programs. However, the threshold for racquet clubs is 277,000 square feet for construction-related emissions and 291,000 square feet for operational emissions. The proposed project (approximately 1,700, square feet of development) is substantially smaller than these screening

thresholds. Therefore, construction and operation of the project would not result in a violation of an air quality standard or contribute significantly to an existing or projected air quality violation with implementation of the standard construction air quality controls required by the BAAQMD.

To ensure that project construction does not cause significant project-level or cumulative air quality impacts, the BAAQMD has identified a set of feasible air quality control measures for construction activities (i.e., Basic Construction Mitigation Measures Recommended for All Proposed Projects). The project includes those controls as Mitigation Measure 4.4-A.1 described below, to reduce the effects of construction activities.

### ***Mitigation Measures***

4.4-A.1 In accordance with the BAAQMD CEQA Guidelines (BAAQMD, 2017), the project shall implement the following actions (that are pertinent to this project) to control dust from escaping from the site:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day if construction occurs during dry weather.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

***Impact Significance After Mitigation***

Implementation of these standard construction mitigation measures would reduce air pollutant emissions to levels that the BAAQMD recognizes as being acceptable. Accordingly, it is expected that the impact would be reduced to a level that is less than significant.

**Impact 4.4-B      Project operation would generate emissions of criteria air pollutants that could contribute to existing nonattainment conditions or degrade air quality. This is a less-than-significant impact.**

The primary source of emissions from the project would be changes to traffic. As discussed previously in the preceding Traffic section, the project could generate a maximum daily average of 40 new trips from September to April (as discussed under Traffic, this is a worst case trip generation that assumes all additional students would be transported by motor vehicles and there would be no carpooling). As discussed under Impact 4.4-A, the project size (and trips generated) would be well below screening criteria contained in the BAAQMD CEQA Air Quality Guidelines for similar types of uses of a project that could generate significant emissions. Accordingly, it is expected that the project would not contribute to existing nonattainment conditions or degrade air quality such that there would be new or worse projected air quality violations.

**Impact 4.4-C      Project operation would not expose sensitive receptors to substantial pollutant concentrations. This is a less-than-significant impact.**

As described in the previous two impacts, the project, with mitigation, would not result in significant construction impacts. Emissions from new trips generated by the project would be below BAAQMD screening criteria. Accordingly, the project would not expose nearby neighbors nor other sensitive receptors to substantial pollutant concentrations.

**Impact 4.4-D      Project construction could emit toxic air contaminants. This is a less-than-significant impact.**

The only source of TAC emissions would be from equipment use during project construction. These would be temporary emissions associated with the construction of relatively small facilities. Large diesel-powered construction equipment used for grading or excavation is not anticipated for more than a few weeks. In addition, sensitive receptors are not located in close proximity to construction areas. Significant impacts from construction period TAC emissions are chronic in nature (i.e., excess lifetime cancer risk and increased annual PM2.5 concentrations), so short-term impacts have little effect. As a result, the impact is considered less than significant.

### 3. Cumulative Impacts

**Impact 4.4-E Project development, in conjunction with projected Town Planning Area buildout could result in cumulative air quality impacts. This is a less-than-significant cumulative impact.**

The EIR prepared for the Town's General Plan found that the plan is consistent with the Bay Area Clean Air Plan, and the General Plan remains consistent with the Clean Air Plan. As described in previous impact discussions in this section, the project would not emit pollutants that exceed significance thresholds and the use of the project would not change traffic patterns that would affect off-site emissions such that the project would be in conflict with the Clean Air Plan. In addition, the project would not make a cumulatively considerable contribution to any cumulative effect on air quality.

## **4.5 GLOBAL CLIMATE CHANGE**

### **A. Setting**

Climate change is caused by greenhouse gases (GHGs) emitted into the atmosphere around the world from a variety of sources, including the combustion of fuel for energy and transportation, cement manufacturing, and refrigerant emissions. GHGs are those gases that have the ability to trap heat in the atmosphere, a process that is analogous to the way a greenhouse traps heat. GHGs may be emitted a result of human activities, as well as through natural processes. Over the last 150 years, GHGs have been accumulating in the earth's atmosphere at a much faster rate than has occurred historically. Increasing GHG concentrations in the atmosphere are leading to global climate change.

Carbon dioxide (CO<sub>2</sub>) is the most important anthropogenic GHG because it comprises the majority of total GHG emissions released per year and it is very long-lived in the atmosphere. Other common GHGs include methane, nitrous oxides, and halocarbons (a group of gases containing fluorine, chlorine, or bromine). Typically, GHG emissions are expressed as carbon dioxide equivalents, or CO<sub>2</sub>e, which is a means of weighting the global warming potential (GAP) of the different gases relative to the global warming effect of CO<sub>2</sub>, which has a GAP value of one. Other GHGs, such as methane and nitrous oxide which are commonly found in the atmosphere, but at much lower concentrations, have Gaps of 23 and 296, respectively. In the United States, CO<sub>2</sub> emissions account for about 85 percent of the CO<sub>2</sub>e emissions, followed by methane at about eight percent and nitrous oxide at about five percent.

An individual project cannot generate enough GHG emissions to effect a discernible change in global climate. However, the project may participate in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of GHGs which, when taken together, may influence global climate change. Because these changes may have serious environmental consequences, this section will evaluate the potential for the project to have a significant effect upon California's environment as a result of its potential contribution to the enhanced greenhouse effect.

It is widely recognized that anthropogenic emissions of greenhouse gases and aerosols are contributing to changes in the global climate, and that such changes are having, and will increasingly have, adverse effects worldwide. The major changes to California include sea-level rise (and flooding) and changes to rainfall, snowfall and snowpack, air and water quality, and ecosystems and biodiversity.

### **B. Regulatory Framework**

In response to the increasing body of evidence that GHGs will continue to affect the global climate, the State has enacted key legislation and implemented regulations, directives and policies in an effort to reduce the State's contribution to climate change.

## **Local Plans and Policies**

The Town's *Climate Action Plan* recommends a number of actions to reduce GHG emissions in the Town. These include increasing and/or improving the facilities to encourage walking and biking for local trips; increasing energy efficiency in commercial buildings installing solar energy systems in commercial buildings purchasing Marin Clean Electricity, and reducing solid waste and water use.

## **Bay Area Air Quality Management District**

BAAQMD implements a Climate Protection Planning Program. The goal of this program is to reduce greenhouse gas emissions in the Bay Area. Keys to these efforts include establishing GHG reduction goals, developing and implementing the 2017 Clean Air Plan, and working with local governments to reduce GHG emissions through local programs and plans. In support of this program, BAAQMD measures and reports GHG emissions in the Bay Area, updates inventories of GHG emissions, including a consumption-based inventory, which is GHG emissions from goods and services consumed by Bay Area residents, produced within and outside of the Bay Area, imposes fees on GHG emissions from large permitted emission sources, provides grants and incentives to help reduce emissions and engages the community on the issue through outreach programs. The District's CEQA Air Quality Guidelines address GHG emissions and encourage communities to develop and implement GHG reduction plans.

## **Methods of Assessing Global Climate Change**

The BAAQMD CEQA Air Quality Guidelines contain methodology and thresholds of significance for evaluating GHG emissions from land use type projects. The BAAQMD thresholds were developed specifically for the Bay Area after considering the Bay Area GHG inventory and the effects of Assembly Bill 32 (AB 32) scoping plan measures that would reduce regional emissions. BAAQMD intends to achieve GHG reductions from new land use developments to close the gap between projected regional emissions with AB 32 scoping plan measures and the AB 32 targets. The BAAQMD has developed different thresholds for evaluating GHG emissions from projects:

- Compliance with a qualified greenhouse gas reduction strategy; or
- Annual emissions of less than 1,100 metric tons or 4.6 metric tons per capita per year.

The California Emissions Estimator Model (CalEEMod) was used to estimate construction and operational emissions from the proposed project. Emissions of GHG are computed as CO<sub>2</sub>e that considers the global warming potential of other gases emitted from typical land use projects such as methane and nitrous oxide. In this analysis, project emissions are computed and the project's consistency with the City's GHG Emission Reduction strategy is assessed.

## **C. Potential Impacts and Mitigations**

### **1. Criteria Used to Determine Impact Significance**

The impact analysis section considers the project's potential to result in significant impacts based on standards of significance derived from CEQA Guidelines Appendix G. As such, the project's global climate change impact is considered significant if it meets the following criteria:

1. Generates greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

### **2. Cumulative Impacts**

By definition, impacts to climate change are cumulative impacts since no single project by itself can emit pollutants that would change the global climate.

#### **Impact 4.5-A Construction and use of the project would increase the emission of greenhouse gases. This impact would be less than significant.**

The use of heavy equipment to construct the proposed facilities would result in the temporary emissions of GHG. However, the emissions would be minimal since construction using heavy equipment would occur for a few weeks. As described in the Traffic section (Checklist Item XI), future use of the project would generate emissions from a maximum daily estimate of 40 new trips during the winter (this is a worst-case trip generation that assumes all additional students would be transported by motor vehicles and there would be no carpooling). The BAAQMD's 2010 screening level size criteria below which a project-specific GHG analysis is not required is 46,000 square feet for a racquet club. As was the case for emission of criteria air pollutants, the project emissions would be well below the BAAQMD screening criteria for GHG emissions. Accordingly, these GHG emissions would be expected to make a less than cumulatively considerable contribution to the cumulative impact on global climate change. In addition, the proposed project is expected to be consistent with recommendations set forth in the Town's Climate Action Plan.

Although below the BAAQMD project screening sizes described above, the CalEEMod model was used to model both temporary construction emissions and operational emissions (see Appendix D of this EIR). The project type and size were entered into the model along with the anticipated construction activity and daily traffic projections. Based on the modeling, project construction would generate a total of 59 metric tons of CO<sub>2</sub>e. This would occur within a one-year period. Operation of the project would generate approximately 24 metric tons per year. These emissions levels are well below the most stringent thresholds recommended by BAAQMD of 1,100 metric tons annually.

**Impact 4.5-B      Project-generated emission of greenhouse gases could conflict with a plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be less than significant.**

The Town has adopted a Climate Action Plan (CAP) that establishes strategies to reduce the GHG emissions known to contribute to climate change, to conserve energy and other natural resources, and to prepare the community for the expected effects of global warming. The CAP includes specific goals and objectives to reduce GHG emissions, including policies, programs, and actions that facilitate the efforts of residents and businesses to reduce their own greenhouse gas emissions. Specifically, the CAP addresses uses that generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Specific strategies recommended in the CAP include ways to reduce trips and vehicular travel (local shopping, support for safe routes to schools, etc.). Given the type of project and the very low emissions anticipated, the project would not interfere with local, BAAQMD or State planning efforts to reduce GHG emissions.

## **4.6 ENERGY**

This section was prepared pursuant to Public Resources Code Section 21100(b)(3), CEQA Guidelines Section 15126(c), and Appendix F (Energy Conservation of the Guidelines), which require that EIRs include a discussion of the potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

### **A. Setting**

#### **1. Background Information**

Energy consumption is analyzed in an EIR because of the environmental impacts associated with its production and usage. Such impacts include the depletion of nonrenewable resources (oil, natural gas, coal, etc.) and emissions of pollutants during both the production and consumption phases.

#### **2. Existing Conditions**

##### **a. Electricity and Natural Gas**

Electricity consumption in California is projected to grow at a rate of 1.2 percent per year from 2010-2020, with demand during peak use periods (i.e., hottest days of the year during the afternoon) growing at a rate of 1.3 percent per year. In 2010, approximately 275,000 kWh (kilowatt hours) of electricity were consumed in the state. Under the State of California Energy Action Plan, a “loading order” has been established for providing for future electricity needs. The State and its electricity providers would invest first in energy efficiency and demand-side resources, followed by renewable resources, and only then in clean conventional electricity supply to meet its energy needs. The Energy Action Plan is an ongoing process, subject to change and updating over time. The most recent update to the Energy Action Plan was in 2008.

With the adoption of SB 1078, California established its Renewable Portfolio Standard (RPS) program, with the goal of increasing the percentage of renewable energy in the state’s electricity mix by at least 1 to 20 percent per year by 2017. The RPS program aims to ensure that a minimum amount of renewable energy is included in the portfolio of electricity resources.

#### County of Marin - PG&E and MCE

Pacific Gas and Electric Company (PG&E) and Marin Clean Energy (MCE) provide electricity in the county. MCE provides opportunities for customers to purchase electricity that is produced with less emission of GHGs. transmits and delivers natural gas to residents and businesses in the Tiburon area. It provides natural gas and electric service to approximately 15 million people throughout a 70,000 square mile service area in northern and central California. PG&E’s

operations are regulated by the California Public Utilities Commission. Electricity and natural gas supplies are regulated by the California Energy Commission (CEC).

The natural gas is provided via natural gas lines stretching from Oregon to Arizona. Gas is delivered from basins in California, Canada and the Western United States by transmission mains. Natural gas consumption in California is projected to grow at a rate of 0.7 percent per year from 2010-2018. PG&E estimates that natural gas consumption for its service areas will grow at a rate of 0.5 percent per year from 2010-2018.

**b. Fuels**

Transportation fuels, including gasoline and diesel fuels, are produced by refining crude oil. Approximately 38 percent of crude oil used in California is produced in-state; the remaining percent comes from Alaska (14 percent) and foreign sources (48 percent). All imported crude supplies and products arrive to California by ship through marine terminals. In recent years, Californians consumed approximately 40 million gallons of gasoline a day and about eight million gallons of diesel a day. Overall, California is experiencing a downward trend in sales for gasoline, diesel, and jet fuel. It is anticipated that this downward trend will continue due to high fuel prices, efficiency gains, competing fuel technologies, and mandated increases of alternative fuel use.

**B. Regulatory Framework**

Many federal, State, and local statutes and policies address energy conservation. At the federal level, energy standards apply to numerous products (e.g., the EnergyStar™ program) and transportation (fuel efficiency standards). At the State level, Title 24 of the California Administrative Code sets forth energy standards for buildings; rebates/tax credits are provided for installation of renewable energy systems; and the Flex Your Power program promotes conservation in multiple areas. In addition, in January 2010, the State of California adopted the California Green Building Standards Code (CALGreen) that establishes mandatory green building standards for all buildings in California.

The California Green Building Standards Code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. These standards include a mandatory set of minimum guidelines, as well as more rigorous voluntary measures, for new construction projects to achieve specific green building performance levels. This Code went into effect as part of local jurisdictions' building codes on January 1, 2011.

***Tiburon General Plan***

***Policy OSC-61:*** The Town shall continue to pursue opportunities to improve energy efficiency and reduce resource consumption in Town-owned facilities and operations.

**Policy OSC-63:** The Town shall integrate energy efficiency, conservation, and other green building incentives into the zoning permit and building permit processes.

As discussed previously in the section on Greenhouse Gas Emissions, the Town’s Climate Action Plan includes recommendations for future development to reduce gasoline consumption by encouraging public transit; building and improving bicycle/pedestrian facilities; accelerating adoption of electric vehicles; reducing energy consumption in commercial structures and businesses; installing solar energy systems; enrolling in Marin Clean Energy programs; and reducing water consumption and solid waste.

### **C. Potential Impacts and Mitigations**

#### **1. Criteria Used to Determine Impact Significance**

The impact analysis section considers the project’s potential to result in significant impacts based on standards of significance derived from Public Resources Code Section 21100(b)(3), CEQA Guidelines Appendix F. As such, an energy impact is considered significant if the project would result in a wasteful, inefficient, and unnecessary consumption of energy. Significance criteria include whether the project would:

1. Result in energy use inefficiencies at any stage of the project including construction, operation, maintenance and/or removal.
2. Result in energy needs exceeding the energy supplier’s capacity with existing or planned supplies.
3. Affect peak and base period demands for electricity.
4. Adversely affect energy resources.

#### **2. Impact Analysis**

**Impact 4.6-A      The project could result in a wasteful expenditure of energy. The impact would be less than significant.**

A screening-level energy analysis assessed the direct and indirect energy impacts of the proposed project, using outputs from the CalEEMod air quality modeling (see Appendix D). Direct energy is the amount of fuel consumed by vehicles over a given period of time. Factors that influence fuel consumption include: speed, grade, intersection delay time, traffic density (free flowing or congested), and changing fuel economy due to newer more fuel-efficient vehicles on the road. Indirect energy is the remaining energy consumed to construct, operate and maintain the proposed project. Indirect energy also includes the manufacture and maintenance of vehicles using the roadway.

Constructing the project would result in the expenditure of approximately 309 MMBtu (Million British Thermal Units). This includes fuel use from operation of construction equipment, truck hauling and construction worker travel. There would be some minor energy usage from electrical line power use during construction but that would be small compared to fuel combustion.

The project would result in an increase in energy usage due to new vehicle trips, increased electricity needs and some projected increase in natural gas consumption. This would result in an annual increase of 335 MMBtu. This would be a small increase in energy, equivalent to about the energy use of two single-family residences.

### **3. Cumulative Impacts**

#### **Impact 4.6-B The project would not contribute to a significant cumulative impact related to energy use.**

The geographic area for the analysis of energy impacts includes all projects in the State. Construction and operation of new projects in California will require expenditure of a substantial amount of energy. The State has expended considerable effort at developing programs requiring fuel economy and conservation. Regulations governing vehicle fuel economy will become more stringent as time goes on, and it is expected that further development of alternative energy sources will also reduce the use of fossil fuel-generated energy. For example, the project would need to meet the new State Building codes that require energy efficient measures. This means new construction will be more than 25% more efficient in the future. As described above, the project would result in a very small increase in energy use. In either case, the project would not make a cumulatively considerable contribution to any State-wide cumulative impact related to wasteful, inefficient, or unnecessary consumption energy.

## 4.7 BIOLOGICAL RESOURCES

### A. Setting

#### 1. Background

A biological report was prepared for the project and is included in Appendix E of this EIR. The Town has accepted this biological report as an objective analysis of site biology and project impacts prepared by reputable biological consultants (LSA). The same biologist and firm prepared the biological resources section of the Environmental Data Submission in 2004 for previous improvements to the TPC. The analysis of potential biological impacts in both the Initial Study and this EIR is partly based on these reports as well as other reports prepared for the Tiburon Peninsula Club and other projects in the area of the Railroad Marsh.

#### 2. Project Site Conditions

The project site is located between a serpentine hillside on the Old St. Hilary's Open Space Preserve to the north and Railroad Marsh to the southwest. Part of the TPC property encompasses a northern portion of this marsh. The proposed project is located adjacent to the existing parking lot and tennis courts located on the south side of Mar West Street. The biological report states that other than the marsh, the TPC property has low biological value. The area to the north and east of the existing tennis courts near where the new entry would be developed contains non-native vegetation with a heavy stand of black acacia and French broom between the courts and Mar West Street.

The approximately 10-acre Railroad Marsh is a sensitive natural community and is the preeminent biological resource near the project site. The marsh was historically part of the Belvedere Lagoon and supported saltmarsh and tidal mudflat habitat. In the 1880s, the site was cut off from tidal action by construction of the Northwestern Pacific Railroad yard. The marsh is surrounded by urban development and is replenished by runoff from these developed areas and a stream that flows from Tiburon Ridge to the north. Subsequent siltation and construction converted the marsh to a freshwater marsh and reduced the open water portion of the marsh to about one acre by the 1960s.

Figure 3.1-3 in the Project Description section shows the wetlands on the site (which could include jurisdictional wetlands) along with a 25-foot setback from the edge of the wetlands. The figure also shows an additional 5-foot setback from the edge of native trees (oaks and willows.) The open water of the Railroad Marsh pond is south of the project property. Figure 3.1-3 shows that development would be outside the 100-foot setback from the marsh open water edge.

The marsh vegetation is dominated by willow (*Salix* sp.) with cattail (*Typha* sp.), French broom (*Genista monspessulana*), acacia trees (*Acacia* sp.), blackberry (*Rubus* sp.), pampas grass (*Cortaderia selloana*) and poison hemlock (*Conium maculatum*). The riparian vegetation

adjacent to the project site, as well as the wetlands and open waters within the marsh, provides habitat for a variety of wildlife species including resident and migratory birds.

### **3. Special Status Species**

Railroad Marsh's willow riparian habitat exists along the southern property boundary of the TPC and could provide nesting habitat for the *salt marsh common yellowthroat* (*Geothlypis trichas sinuosa*), a California species of special concern. There is also potential habitat for *California red-legged frog* (*Rana draytonii*), a federal Threatened species. These species were last reported during a site investigation in 1982. No special status species were observed during preparation of the project biological report. No nests or roosts of special status species of birds were observed during preparation of the project biological report. The biological report concludes that there is a low likelihood of special status wildlife species occurring at the marsh due to its isolation from other habitat areas, its location near the tip of the Tiburon Peninsula, and its immediate urban surroundings. No special status species of plants were observed. However, there is historic evidence of California red-legged frogs and the salt marsh common yellowthroat in the marsh area. The developed portion of the project site north of the marsh is not expected to support any special status species of plants or wildlife.

### **4. Sensitive Habitats**

The site of the existing courts is developed with tennis courts, storage facilities and parking areas. There is no sensitive habitat on the site proposed for development. As described above, south of the developed portion of the TPC property are willow riparian habitat, wetlands, a few native oaks, and marsh habitat.

## **B. Regulatory Framework**

The following plans, acts, and regulations are related to preservation of Special Status Species and biotic habitat.

### **Federal**

#### ***Federal Endangered Species Act***

Under FESA, the Secretary of the Interior and the Secretary of Commerce have joint authority to list a species as threatened or endangered (16 USC 1533[c]). Two federal agencies oversee FESA: the USFWS has jurisdiction over plants, wildlife, and resident fish, and the National Marine Fisheries (NMFS) has jurisdiction over anadromous and marine fish as well as marine mammals. FESA prohibits the "take"<sup>6</sup> of any fish or wildlife species listed as threatened or endangered, including the destruction of habitat that could hinder species recovery. Section 10 of FESA requires the issuance of an incidental take permit before any public or private action

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<sup>6</sup> "Take" is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct.

may be taken that could harm, harass, injure, kill, capture, collect, or otherwise hurt any individual of an endangered or threatened species. The permit requires preparation and implementation of a habitat conservation plan that provides specific measures to offset project impacts on endangered or threatened species.

Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed threatened or endangered species could be present in the project area and whether the project action would have a potentially significant impact on such species. In addition, the agency is required to determine whether the project action is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[3], [4]).

Similarly, the permitting responsibilities of the Army Corps of Engineers include consultation with the USFWS and NMFS when federally listed species (i.e., listed under the FESA) are at risk. At both the State and federal levels, the process requires that a Biological Assessment be prepared to determine the effects on listed species.

### ***The Migratory Bird Treaty Act***

The Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.), Title 50 Code of Federal Regulations (CFR) Part 10, prohibits taking, killing, possessing, transporting, and importing of migratory birds, parts of migratory birds, and their eggs and nests, except when specifically authorized by the Department of the Interior. As used in the act, the term "take" is defined as meaning, "to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires." Many bird species are considered migratory under the MBTA. Disturbance that causes nest abandonment and/or loss of reproductive effort or loss of habitat upon which these birds depend would be in violation of the MBTA.

### ***U.S. Fish and Wildlife Service (USFWS)***

USFWS administers the Federal Endangered Species Act (ESA) and the Marine Mammal Protection Act. The U.S. Fish and Wildlife Service (USFWS) operates under a number of statutory and administrative authorities. Its basic responsibilities concern migratory birds, anadromous fish, and endangered species. If a project involves a "take" of a federally listed species, then USFWS must approve the permit for this "taking."

The USFWS is an advisory agency to the Army Corps on Section 404 and Section 10 projects. The USFWS will review mitigation plans for these projects. The USFWS identifies four different resource categories with criteria and mitigation goals for each. The Fish and Wildlife Service will review the resources on a site and assign a category to each. Each category has a specific set of mitigation requirements.

***National Oceanic and Atmospheric Administration-National Marine Fisheries Service (NMFS or NOAA-Fisheries) Regulations***

NMFS administers the Federal Endangered Species Act and the Marine Mammal Protection Act as they pertain to marine and anadromous species. The service also advises the Army Corps of Engineers on Section 7 and Section 404 permits for projects that could affect fish habitat.

**State**

***California Department of Fish and Wildlife***

The California Department of Fish and Wildlife (CDFW) administers a number of laws and programs, discussed below, designed to protect fish and wildlife resources.

*California Endangered Species Act*

The California Endangered Species Act of 1984 (CESA) – Fish and Game Code Section 2050 et seq – regulates the listing and “take” of endangered and threatened species. A “take” of such a species may be permitted by CDFW through issuance of permits pursuant to Fish and Game Code Section 2081, except for designed “fully protected” species (see subsection below).

*Fully Protected Species*

The classification of “fully protected” was the CDFW’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA.

*Protection of Nesting Birds*

Section 3503.5 of the California Fish and Game Code states that it is “unlawful to take, possess, or destroy the nests or eggs of any such bird of prey (i.e., species in the orders Falconiformes and Strigiformes) except otherwise provided by this code or any other regulation adopted hereto.” Active nests of all other birds (except English sparrow (*Passer domesticus*) and European starling (*Sturnus vulgaris*)) are similarly protected under Section 3503 of the California Fish and Game Code, as well as birds designated in the International Migratory Bird Treaty Action under Section 3513 of the California Fish and Game Code. Disturbance that causes nest abandonment and/or loss of reproductive failure is considered a take by the CDFW. This statute does not provide for the issuance of an incidental take permit.

*Native Plant Protection Act*

California Fish and Game Code Section 1900–1913, also known as the Native Plant Protection Act, is intended to preserve, protect, and enhance endangered or rare native plants in California. The act directs CDFW to establish criteria for determining what native plants are rare or endangered. Under Section 1901, a species is endangered when its prospects for survival

and reproduction are in immediate jeopardy from one or more cause. A species is rare when, although not threatened with immediate extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens. The act also directs the California Fish and Wildlife Commission to adopt regulations governing the taking, possessing, propagation, or sale of any endangered or rare native plant.

### **3. California Rare Plant Ranks**

Regional committees made up of professional botanists review current status information and recommendations for changes made by the California Natural Diversity Database of CDFW and the CNPS, and comment on whether changes are warranted. Changes are made if there is a consensus that this is warranted. In April 2011 the California Native Plant Society (CNPS) officially changed the name “CNPS List” to “California Rare Plant Rank.” The definitions of the ranks and the ranking system have remained essentially unchanged. California Rare Plant Ranks include the following categories:

- 1A. Presumed extinct in California; extirpated or rare in other states.
- 1B. Rare, threatened, or endangered in California and elsewhere.
- 2A. Presumed extirpated in California, but more common elsewhere.
- 2B. Rare, threatened, or endangered in California, but more common elsewhere.
- 3. Plants for which more information is needed.
- 4. Plants of limited distribution – a “watch” list.

Additionally, endangerment codes are assigned to each taxon as follows:

- 1. Seriously endangered in California (over 80 percent of occurrences threatened/high degree of immediacy of threat).
- 2. Fairly endangered in California (20-80 percent occurrences threatened).
- 3. Not very endangered in California (<20 percent of occurrences threatened or no current threats known).

Plants designated CRPR 1A, 1B, and 2 may qualify for State listing, and are given consideration under CEQA during project review.

### **4. Local**

#### ***Tiburon 2020 General Plan***

The Tiburon 2020 General Plan contains the following policies for protection of biological resources that are pertinent to this project.

***Policy OSC-20:*** Buffer zones of at least 100 feet shall be provided, to the maximum extent feasible, between development and wetland areas.

**Policy OSC-25:** A diversity and abundance of wildlife and marine life shall be protected and maintained. The Town shall strive to preserve and protect to the greatest extent feasible wildlife habitat in the open spaces, shoreline, marshes, mudflats, and other biologically sensitive areas.

**Policy OSC-32:** Protected trees, as defined in the Municipal Code, tree stands, and tree clusters shall be preserved to the maximum extent feasible.

**Policy OSC-33:** The Town shall protect natural habitat, and natural wooded areas shall be preserved to the maximum extent feasible.

**Policy OSC-26:** To the maximum extent feasible, and as required by federal and state laws, development and construction shall not affect special status species or special communities.

**Policy OSC-52:** Water quality should be maintained or enhanced in order to promote the continued environmental health of natural waterway habitats.

### ***Tiburon Tree Ordinance***

The Town's Tree Ordinance (Chapter 15A of the Town Municipal Code) mandates protection for certain species of native trees of a defined minimum circumference of 20 inches at 24 inches above the ground surface or height (15 feet).

### ***Railroad Marsh Management Plan***

In the 1980s, the Town initiated efforts to restore the marsh (per the original *Tiburon Freshwater Marsh Restoration Plan*, WRA 1985). In implementing that plan, the Town has dredged the marsh sediment basins, installed sediment traps, replanted the margins with native plants, and manipulated the water level to control cattails. In 2000, the Town had the Marsh Restoration Plan revised to address maintenance problems including effects of increased public access and trash. The Plan requires a vegetated buffer 50 feet from the shore of Railroad Marsh.

## **C. Potential Impacts and Mitigation Measures**

### ***1. Criteria Used For Determining Impact Significance***

The impact analysis section considers the project's potential to result in significant impacts based on standards of significance derived from CEQA Guidelines Appendix G. As such, the project would have a significant impact on biological resources if it meets any of the following criteria:

1. Has a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional

plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service.

2. Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service.
3. Has a substantial adverse effect on federally protected wetlands as defined by section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) or tributary to an already impaired water body, as defined by section 303(d) of the Clean Water Act through direct removal, filling, hydrological interruption, or other means.
4. Interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

Due to the location and characteristics of the project, certain conditions are not associated with the project, and, therefore, are not considered potential impacts. These conditions are addressed briefly below and are not discussed further in this document.

#### *Conflict with Habitat Conservation Plan*

The project site is not part of a approved local, regional, or State habitat conservation plan. There would be no impact per this criterion.

## **2. Impact Analysis**

**Impact 4.7-A Project construction and operation could injure or kill special-status species and/or damage habitat used by special-status species. This is a potentially significant impact.**

The project does not include any construction within the 100-foot setback from Railroad Marsh as well as a 25-foot setback from the nearest area containing wetlands. The project site itself does not support any special-status species of plants and animals. As described in the Setting section, except for the California red-legged frog and salt marsh common yellowthroat, there is no evidence of the site supporting special-status plants or breeding or nesting habitat for any special-status wildlife species. Though neither this frog nor bird have been sighted here in 35

years, it is possible that they could inhabit the area or travel into the proposed construction area. Consequently, project construction could result in injury or death to this threatened frog species and a bird listed as a California species of special concern.

The proposed project includes lighting tennis courts until 7:30 in the evenings. Proposed lights will face toward the surfaces of the tennis courts. They will be screened and shielded, and be “dark sky” compliant (as defined by the International Dark-Sky Association). The proposed design would minimize leakage of light to the willow trees south of the courts. Such lighting is not likely to affect wildlife because species inhabiting or visiting the marsh area are accustomed to lighting in the area around the marsh. For instance, there is substantial ambient light generated by TPC parking lot lights (that are not shielded, are on taller light standards than the proposed court lighting, and on later into the night) In addition, there are lights at nearby residences, offices, and the Belvedere-Tiburon Library, as well headlights from existing vehicular traffic on Mar West Street. There is considerable light spillage into the marsh area from these existing light sources. The proposed project lights would be on until 7:30 p.m. from October through March. The lights would not be on during most of the bird breeding season. The suggested Mitigation Measure 4.1-3.a would reduce the light spillage from the existing parking lot lights, which are on later than the proposed tennis court lights. With this mitigation, the project may result in a reduction in light spillage from the TPC property on the marsh. The impact on special-status species from lighting would therefore be considered less than significant.

### ***Mitigation Measures***

- 4.7-A.1 The project shall not damage native vegetation in the buffer zone (defined as the 5-foot setback from trees as shown on Figure 3.1-3. The boundary of the buffer zone shall be staked and flagged in the field with a highly visible color coded system and all construction and equipment operators shall be instructed to remain outside this no-disturbance boundary for the duration of construction.
  
- 4.7-A.2 The project shall not injure or destroy habitat used by California red-legged frogs (CRLF). To accomplish this standard, a qualified biologist, capable of monitoring projects with potential habitat for California red-legged frogs (CRLF) shall be present at the site to implement the following:
  - 1. Install exclusion fencing outside the buffer area. Prior to and within 3 days of installation of the exclusion fencing, the biologist shall survey the location of the installation for the presence of CRLF. In addition, should any burrows be observed, the burrows shall be inspected by the biologist to determine if they are being used by the species. Should CRLF be observed, the area shall be vacated and re-inspected in one week. If no animal use is noted, the burrows shall be carefully excavated using a small trowel or shovel. Careful prodding using a blunt object will aid in determining the course of the tunnel such that the tunnel is excavated from the sides rather than the top, reducing the potential for any injury should an animal be present. Excavated burrows with no CRLF shall be left

open so they cannot be re-occupied. If any non-listed species are located, they shall be translocated outside of the construction zone. Should any individual CRLF be found during the field survey or excavation, the area where that individual has been found shall remain undisturbed. If any life stage of the CRLF is found during these surveys or excavations, the Department of Fish and Game and the US Fish and Wildlife Service shall be contacted immediately, and activities that could result in take shall be postponed until appropriate actions are taken to allow project activities to continue.

2. During installation of the construction zone exclusion fencing, the biological monitor shall be present and will oversee the installation of all construction fencing.
3. Immediately following installation of exclusion fencing, the biological monitor shall survey the enclosed construction zone for the presence of CRLF. If any life stage of the CRLF is found during these surveys, the Department of Fish and Game and the U.S. Fish and Wildlife Service shall be contacted immediately, and activities that could result in take shall be postponed until appropriate actions are taken to allow project activities to continue.
4. The biological monitor shall coordinate with the construction contractor to ensure that all workers understand not to intrude past the exclusion fencing.
5. The biological monitor shall conduct weekly site visits when construction is occurring to verify that all construction zone exclusionary fencing is in place and functioning as intended. Any repair or maintenance to the fencing deemed necessary by the biological monitor shall be completed under the monitor's supervision. Such maintenance activities include adequate removal of vegetation at the construction fence line to ensure that vegetation "ladders" for species access are not allowed to establish.

4.7-A.3 A qualified biologist shall inspect the project site prior to construction to ensure there are no active nests of salt marsh common yellowthroat near the construction area. If active nests are discovered, a 50-foot buffer will be established between the nest and the construction site. Travel and other human activity should be prohibited within the nest area for the duration of construction.

### ***Impact Significance After Mitigation***

The mitigation measures will ensure that no native vegetation is removed during project construction. The mitigations also ensure that special-status species will not be injured or killed during project construction. Accordingly, the impact would be reduced to a less-than-significant level.

**Impact 4.7-B      Project construction and operation could adversely affect sensitive natural communities including wetlands. This is a potentially significant impact.**

Part of the TPC property extends into the wetland portion of Railroad Marsh. As shown on Figure 4.7-1, all project improvements would be constructed at least 100 feet from the pond shore and 25 feet from the wetland edge. There would be a 90 to 145 foot buffer from the tree edge on the project site to the marsh shore. In addition, all improvements would be set back at least five (5) feet from all native trees. Given the setbacks incorporated into the project description, there would be no construction-related impact to wetlands or other sensitive habitats. In addition, no actual new construction would occur in the part near the edge of the wooded area adjacent to the marsh. The tennis courts are an existing facility. Lights would be added to these courts but there would be no grading nor construction of new buildings. New structures would be located at least an additional 250 feet north of the edge of the woodlands. No additional facilities would be added west of the existing courts along the woodland edge. An earlier version of the proposed project included development of additional tennis courts and parking west of the existing courts. The current project does not include these facilities or any construction of new facilities west of the existing courts near the marsh woodland edge.

New runoff from proposed facility roofs could carry pollutants to the marsh, thereby adversely affecting marsh water quality and biological organisms dependent on good water quality. This water quality impact is assessed in more detail in the subsequent Section 4.9 (Hydrology and Water Quality) The project includes installation of a bioswale that is intended to protect the water quality of stormwater leaving the project site. While it is likely that the bioswale will meet all stormwater discharge requirements established by the Marin County Stormwater Pollution Protection Plan (MCSTOPPP), subsequent Mitigation Measure 4.9-B.1 ensures that these requirements will be met.

***Mitigation Measures***

Mitigation Measure 4.9-B.1 in the Hydrology and Water Quality section of this EIR also applies to this impact.

***Impact Significance After Mitigation***

The project will be built on already developed land and would have no direct impact on the marsh. The water quality mitigation measures will ensure that wetlands and sensitive natural communities are not significantly impacted by project operations. This impact would be reduced to a less-than-significant level.

**Impact 4.7-C      Project construction and operation could interfere with wildlife travel and wildlife nursery sites. The impact is potentially significant.**

The site is surrounded by urban development. It is likely that common area wildlife residents such as deer (which were seen on the site during a site visit), raccoons, opossums, and other wildlife make their way between surrounding development across the lower parking area and

trees bordering the south side of the existing courts to Railroad Marsh. However, the proposed project additions would not block this already impeded travel route. The area to be developed does not include suitable nesting or nursery sites.

The pond and adjacent riparian and marsh habitat of the Railroad Marsh are important habitat for not only resident birds and wildlife but for birds migrating through the area. As described in the Regulatory Framework section, migrating birds are afforded protections under existing federal and State laws and regulations. As discussed above under Impact 4.7-A, the marsh is surrounded by urban development, much of it lit throughout evening and night. While a new source of light in an otherwise unlit pond or marsh area could dissuade migrating birds from stopping at such a site, this is not the case for this pond and marsh that is located amidst well lit environs. As noted under the discussion of lighting in Impact 4.7-A, recommended mitigations for lighting impacts could decrease the amount of light and the duration of the lighting in the area on TPC property adjacent to the marsh.

Breeding birds are a concern as construction activity could cause the abandonment or failure of an active nest. For instance, breeding birds could abandon a nest with eggs or nestlings if construction activity was so close as to flush the birds from the nest. This would be a violation of the Migratory Bird Treaty Act and Sections 3503 & 3513 of the Fish and Game Code. This is a potentially significant impact.

### ***Mitigation Measures***

4.7-C.1 Surveys for breeding birds are recommended if construction were to occur during of the nesting season (February 15 to August 15). Surveys for nesting birds should be completed within 14 days of the beginning of construction between February 15 and August 15. Once construction starts and occurs continuously, surveys are not recommended. If a lapse in construction were to occur longer than 14 days, then the surveys for nesting birds shall resume.

If raptors are observed nesting within 250 feet of the construction area, the behavior of the raptors shall be observed to determine the width of a suitable buffer. Typical raptor buffers are 250 – 300 feet wide.

If songbirds are observed nesting near the construction area, a 50-foot buffer shall be established between the nest and construction until the nest is no longer used. Travel and other human activity should be prohibited within the nest buffers for the raptors and songbirds.

### ***Impact Significance After Mitigation***

Implementation of these protections would reduce construction impacts to nesting birds. Because the project site is within an urban area with intense human use, where the tennis courts are in frequent use, the library and Town Hall on the other side of Railroad Marsh are heavily used, and heavy traffic occurs along Tiburon Boulevard and Mar West Street, any

nesting raptor would be acclimated to human activity and a buffer shorter than 250 feet may be suitable. These standard mitigations would reduce the impact to a less-than-significant level.

**Impact 4.7-D      The project would be consistent with policies protecting biological resources. This is a potentially significant impact.**

The project would not remove native trees. As such, it would be consistent with the Town's Tree Ordinance. The project includes the marsh buffers required by the Town General Plan. As described in the previous three impacts, the project would not significantly affect wildlife, sensitive natural communities, or wooded area. Any operational impact to water quality would be mitigated by the aforementioned Mitigation Measure 4.9-B.1, which would reduce any possible inconsistency with Town Policy OSC-52. With the previously required mitigation, the project would be consistent with Town policies relevant to protecting biological resources.

One potential inconsistency is that the project would not include a buffer zone of at least 100 feet between development and wetland areas. However, the project would provide over a 100-foot setback from the tennis courts to the water edge of the marsh pond. This is twice the setback called for in the Town's Marsh Restoration Plan for Railroad Marsh. That plan, recognizing that the marsh is already surrounded by urban development, calls for a 50-foot setback from the pond edge. In adopting the Marsh Restoration Plan, the Town found it consistent with its General Plan. Accordingly, the project would also be consistent with General Plan Policy OSC-20.

**3.      *Cumulative Impacts***

**Impact 4.7-E      Project development, in conjunction with projected buildout in the Town, could result in cumulative impacts to biological resources associated with Railroad Marsh. This is a potentially significant impact.**

The geographic area for the analysis of cumulative impacts for biological resources is the Railroad Marsh watershed. The cumulative analysis considers the past, present, and probable future impacts of buildout of that portion of the Town draining to Railroad Marsh.

The only potentially significant impacts that could result from the proposed project are impacts to special status species and nesting birds and indirect water quality-related effects on species inhabiting the marsh, with a corresponding impact as regards consistency with policies aimed at protecting nesting species and marsh water quality. Other projects in the Railroad Marsh watershed would not be located adjacent to the marsh, and, therefore, not have a potential direct impact on special-status species residing in or using the marsh. These other projects could have similar impacts to nesting species. It is expected that where a potential impact is possible for those projects, the lead agency (the Town) would require mitigation similar to what is recommended for this project, given the legal mandates of the Federal Migratory Bird Treaty Act and Fish and Game Codes 3503 and 3503.5. For example, the Belvedere-Tiburon Library Expansion Project had similar mitigations imposed on it. Furthermore, the recommended Mitigation Measure 4.7-C.1 reduces the project's impact to a less-than-significant level so that

even if there were a cumulative impact on nesting birds, the project would not make a considerable contribution to that impact.

As discussed in more detail in the subsequent Hydrology and Water Quality section of this EIR, other projects in the Railroad Marsh watershed could cause erosion as well as pollutant-laden runoff with consequent deposition of sediments and pollutants in the marsh. Like this proposed project, other projects within the Town are required to comply with the water quality protection provisions of MCSTOPPP. It is expected that with compliance with federal, State, Town, and MCSTOPPP regulations that the cumulative impact would be less than significant. Further, even if there were a significant cumulative impact, the project, as mitigated, would make a less-than-cumulatively considerable contribution to that significant impact.

### ***Mitigation Measures***

Implement Mitigation Measures 4.7-C.1 and 4.9-B.1.

### ***Impact Significance After Mitigation***

The recommended Mitigation Measure 4.7-C.1 reduces the project's impact to a less-than-significant level so that even if there were a cumulative impact on nesting birds, the project would not make a cumulatively considerable contribution to that impact. Mitigation Measure 4.9-B.1 controls pollution from the project and ensures that pollutants from the project would not substantially affect water quality in the marsh. Therefore, with mitigation, the project would not make a cumulatively considerable contribution to any significant cumulative biological impact.

## **4.8 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES**

### **A. Setting**

A Records Search for cultural resources was requested from the Northwest Information Center (NWIC) at Sonoma State University; see Appendix A. NWIC states that based on an evaluation of the environmental setting and features associated with known sites, Native American resources in this part of Marin County have been found along the San Francisco Bay margins, on protected terraces, and under the bay muds. The project area was historically located in a small coastal inlet on the Tiburon Peninsula. The majority of the project area contains Holocene era San Francisco Bay Mud. Additionally, there is approximately a quarter or more of the proposed project area within the Latest Pleistocene to Holocene Alluvium, which was less marshy. There is no record of archaeological or historic resources on the site. However, given the similarity of one or more of these environmental factors, there is a moderately high potential for unrecorded Native American resources in the proposed project area. NWIC states that their review of historical literature and maps gave no indication of the possibility of historic-period activity within the proposed project area.

### **B. Regulatory Framework**

#### **State Regulations**

The California Register of Historical Resources (the California Register) and the California Environmental Quality Act (CEQA) provide the statutory basis for this study for the Town-level review. The California Register legislation was signed into law in September 1992 and its implementing regulations became effective on January 1, 1998. Guidelines for the California Register have been incorporated into the October 26, 1998 revisions to CEQA. CEQA requires the lead agency to prepare an environmental impact report for a project determined to have a significant impact on the environment, including substantial adverse changes to historical resources. Historical resources are, by definition, those resources determined eligible to the California Register by virtue of meeting one or more of the following criteria:

- Association with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Association with the lives of persons important in our past;
- Embodiment of the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
- Has yielded, or may be likely to yield, information important in prehistory or history.

A resource is also automatically included in the California Register if it is listed or eligible for listing in a local register of historic resources, or determined to be significant by the lead agency as the result of substantial evidence.

Buildings, sites, structures, objects, and districts representative of California and United States history, architecture, archaeology, engineering, and culture convey significance when they also possess integrity of location, design, setting, materials, workmanship, feeling, and association. Integrity is the authenticity of a property's physical identity – the presence of characteristics which were present during the resource's period of significance. Enough of these characteristics must remain to convey the reasons for their significance.

The State's Office of Historic Preservation (OHP) has primary responsibility for the administration of historic preservation programs in California through the *California's Comprehensive Statewide Historic Preservation Plan*, as well as other laws and regulations.

The California Native American Heritage Commission works to identify, catalogue and protect places of special religious or social significance, graves, and cemeteries of Native Americans per the authority given the Commission in Public Resources Code 5097.9.

Public Resources Code, Section 5097, implements a number of federal laws and specifies procedures in the event that human remains are discovered during any site disturbance activity. The disposition of Native American burials falls within the jurisdiction of the California Native American Heritage Commission. California Code of Regulations Section 15064.5(f) and Health & Safety Code Section 7050.5(b) identify the need to establish procedures in the event of discovery during construction of buried cultural resources on nonfederal land.

Paleontological resources also are afforded protection by environmental legislation set forth under CEQA. Appendix G (Part V) of the CEQA Guidelines provides guidance relative to significant impacts on paleontological resources, stating that a project would normally result in a significant impact on the environment if it would "...disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study." Paleontological resources are also protected by several federal and State statutes, most notably by the 1906 Federal Antiquities Act and other subsequent federal legislation and policies and by the State. However, these statutes only apply to projects occurring on State or federal lands.

### **Tiburon 2020 General Plan**

The Tiburon General Plan contains the following policy pertinent to the protection of cultural resources:

**OSC-47:** The Town shall protect significant geological, ecological, archaeological, and paleontological resources and historic sites.

## **C. Potential Impacts and Mitigation Measures**

### **1. Criteria Used For Determining Impact Significance**

The impact analysis section considers the project's potential to result in significant impacts based on standards of significance derived from CEQA Guidelines Appendix G. As such, the

project would typically have a significant impact on cultural resources if it meets any of the following criteria.

1. Causes a substantial adverse change in the significance of a historical resource pursuant to §15064.5 of the CEQA Guidelines.
2. Causes a substantial adverse change in the significance of an archaeological resource as defined in §15064.5 of the CEQA Guidelines.
3. Directly or indirectly destroys a unique paleontological resource or site.
4. Disturbs any human remains, including those interred outside of formal cemeteries.

For Tribal Cultural Resources the following criteria apply:

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

## **2. Impact Analysis**

**Impact 4.8-A Project construction could damage or destroy archeological and paleontological resources or disturb human remains. This is a potentially significant impact.**

As was reported in the Initial Study for the project, while no cultural or paleontological resources were reported on the site, there is a chance that buried archaeological and paleontological resources are present and could be discovered while constructing the project. The project area is reportedly on a fill slope that was historically created to prepare the relatively flat area for the existing tennis courts and the TPC parking area. No grading plan has been submitted, so the extent and depth of grading is currently unknown. NWIC recommends that if project grading would disturb soils below this fill, then there would be the potential to damage currently undiscovered archaeological resources and that would be a potentially significant impact.

As recommended by NWIC and the Native American Heritage Commission, the local Native American tribe (the Federated Indians of Graton Rancheria, or FIGR) was contacted by the Town about the project to gather their concerns and recommendations. FIGR responded in their comment letter on the NOP (see their letter in Appendix A), the tribe requests that their Tribal Heritage Preservation Officer be contacted in case archaeological resources are uncovered during grading or construction.

### **Mitigation Measures**

4.8-A.1 If buried archeological resources, such as chipped or ground stone, historic debris, building foundations, or human bone, are inadvertently discovered during ground-disturbing activities, work would stop in that area and within 100 feet of the find until the FIGR Tribal Heritage Preservation Office (THPO) is contacted about the finds. The THPO will determine whether a qualified archaeologist should assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the Town and other appropriate agencies, or whether an alternative approach is warranted for the finds.

4.8-A.2 If human remains of Native American origin are discovered during project construction, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (NAHC) (PRC 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner has been informed and has determined that no investigation of the cause of death is required; and
- If the remains are of Native American origin, the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98.

Or

- The NAHC was unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

4.8-A.3 If human remains are discovered during any construction activities, all ground-disturbing activity within a 100-meter radius of the remains shall be halted immediately, and the Marin County coroner shall be notified immediately, according to Section 5097.98 of the state Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the County

coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The Town shall consult with FIGR or the Most Likely Descendant, if any, identified by the NAHC regarding the treatment and disposition of the remains.

- 4.8-A.4 Should paleontological resources be identified at any project construction site, the construction manager shall cease operation within a 100-meter radius of the discovery and immediately notify the Town. The project proponent shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the consulting paleontologist, the Town shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for paleontological resources is carried out.

### ***Impact Significance After Mitigation***

The recommended mitigation measures ensure that any cultural resources, paleontological resources, and/or human remains found during project construction will be treated, preserved, curated, and/or disposed of consistent with pertinent federal and State laws and regulations. Therefore, the impact would be reduced to a less-than-significant level.

### **3. Cumulative Impacts**

**Impact 4.8-B Project development, in conjunction with other foreseeable development in the Town could result in cumulative impacts to cultural and paleontological resources. This is a potentially significant impact.**

The geographic scope for cumulative impacts to cultural and paleontological resources includes a one-mile radius from the project site. Analysis of cumulative impacts takes into consideration the entirety of impacts that projected buildout of the Town would have on cultural resources. This geographic scope of analysis is appropriate because the archaeological, historical, and paleontological resources within this radius are expected to be similar to those in the project site because of their proximity; similar environments, landforms, and hydrology would result in similar land-use, and thus, site types. Similar geology within this vicinity would likely yield fossils of similar sensitivity and quantity.

The region contains an important archaeological and historical record that, in many cases, has not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity to disturb landscapes that may contain known or unknown cultural resources. The potential construction impacts of the proposed project, in combination with other projects in the area, could contribute to a cumulatively significant impact on cultural

resources. However, this analysis includes mitigation to reduce potential project impacts to cultural resources during construction of the proposed project. Future projects with potentially significant impacts to cultural resources would be required to comply with federal, State, and local regulations and ordinances protecting cultural resources through implementation of similar mitigation measures during construction.

Excavation activities associated with the proposed project in conjunction with other projects in the area could contribute to the progressive loss of fossil remains, as-yet unrecorded fossil sites, associated geological and geographic data, and fossil bearing strata.

***Mitigation Measures***

Implement Mitigation Measures 4.8-A.1 through 4.8-A.4.

***Impact Significance After Mitigation***

With implementation of Mitigation Measures 4.8-A.1 through 4.8-A.3 the proposed project would not make a cumulatively considerable contribution to impacts to archaeological resources and human remains. Additionally, with the implementation of Mitigation Measure 4.8-A.4 the proposed project would not make a cumulatively considerable contribution to impacts to paleontological resources.

## **4.9 HYDROLOGY AND WATER QUALITY**

### **A. Setting**

The TPC lies at the lower end of a watershed that begins at Tiburon Ridge and discharges to the Railroad Marsh. The project site drains directly via sheet flow to the Railroad Marsh or to a paved drainage ditch along the east side of the lower (south) tennis courts, which transports collected runoff to an outfall that leads to the marsh. The Railroad Marsh is a pond/marsh feature that serves as a flood control feature for the Mar West (upper and lower) watershed. The water level in the marsh is controlled by two outlet structures. The primary outlet drains to a culvert (the Lagoon Vista storm drain) that discharges to Raccoon Strait, while the secondary outlet drains south to Belvedere Lagoon. A small portion of the southwest corner of the site is within the 100-year flood elevation (Zone AE).

### **B. Regulatory Framework**

Water resources are regulated by a variety of local, State, and federal statutes. Agencies with regulatory and enforcement jurisdiction in Tiburon include the San Francisco Bay Regional Water Quality Control Board (RWQCB), the State Water Resources Control Board (SWRCB), the California Department of Fish and Wildlife, the Federal Emergency Management Agency (FEMA), the U.S. Army Corps of Engineers (Corps), and the U.S. Environmental Protection Agency (EPA). Plans, policies, and regulations pertaining to hydrology and water quality in the project area are outlined below.

#### **Federal**

##### ***Clean Water Act***

The Clean Water Act (CWA) was enacted by Congress in 1972 and amended several times since inception. It is the primary federal law regulating water quality in the United States, and forms the basis for several state and local laws throughout the country. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The CWA prescribed the basic federal laws for regulating discharges of pollutants as well as set minimum water quality standards for all waters of the United States. Several mechanisms are employed to control domestic, industrial, and agricultural pollution under the CWA. At the federal level, the U.S. Environmental Protection Agency (EPA) administers the CWA. In California, the CWA is administered and enforced by the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs). The State of California has developed a number of water quality laws, rules, and regulations, in part to assist in the implementation of the CWA and related federally mandated water quality requirements. In many cases, the laws, rules, and regulations adopted by the SWRCB and RWQCBs are more protective of the environment than the federal requirements.

## **State**

### ***Porter-Cologne Water Quality Control Act***

The Porter-Cologne Water Quality Control Act establishes the SWRCB and the RWQCBs as the principal state agencies having primary responsibility for coordinating and controlling water quality in California. The Porter-Cologne Act establishes the responsibility of the RWQCBs for adopting, implementing, and enforcing water quality control plans (Basin Plans), which set forth the state's water quality standards (i.e., beneficial uses of surface waters and groundwater) and the objectives or criteria necessary to protect those beneficial uses.

### ***State and Regional Water Quality Control Board***

Per the Porter-Cologne Act, the San Francisco Bay RWQCB is responsible for the development, adoption, and implementation of the Water Quality Control Plan (Basin Plan) for the San Francisco Bay region. The Basin Plan is the master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the San Francisco Bay Region. The Basin Plan identifies beneficial uses of surface waters and groundwater within its region and specifies water quality objectives to maintain the continued beneficial uses of these waters. The proposed project would be required to adhere to all applicable water quality objectives identified in the Basin Plan.

### ***National Pollutant Discharge Elimination System (NPDES)***

Section 402 of the CWA establishes a framework for regulating nonpoint source (NPS) storm water discharges through the National Pollutant Discharge Elimination System (NPDES). In California, the SWRCB and RWQCBs are responsible for supervising the NPDES program. Under the NPDES program, the project sponsor is required to submit a Notice of Intent (NOI) with the SWRCB Division of Water Quality. The NOI includes general information on the types of activities that will occur during construction of the project. The project sponsor is also required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that includes a description of appropriate Best Management Practices (BMPs) to minimize the discharge of pollutants from the project. It is the responsibility of the project sponsor to obtain the NPDES permit prior to initiating site construction activities.

## **Regional**

### ***Marin County Stormwater Pollution Prevention Program (MCSTOPPP)***

The Marin County Stormwater Pollution Prevention Program (MCSTOPPP), which is administered by the Marin County Department of Public Works/Flood Control District, was formed in 1993 as a joint effort of Marin's cities, towns, and unincorporated areas to prevent stormwater pollution and to enhance local waterways. In 2004, MCSTOPPP began receiving coverage under the NPDES Phase II General Permit of the SWRCB. As part of the permit requirements, MCSTOPPP developed its *Action Plan 2010*, which describes planned MCSTOPPP stormwater management activities for the period July 2005 through June 2010. The *Action*

*Plan* includes a section of performance standards and pollution prevention practices that MCSTOPPP member agencies have committed to implement. MCSTOPPP “Best Management Practices” (BMPs) for storm water management and procedures for BMP maintenance and inspection are based on the recommendations of the Bay Area Stormwater Management Agencies Association (BASMAA), which are described in the BASMAA manual *Start at the Source* (1999 Edition). Both private-sponsored and public capital improvement projects in Marin County are governed by MCSTOPPP requirements. MCSTOPPP also requires Construction Erosion and Sediment Control Plans (ESCPs) for new development in the county. Municipalities must review and, if adequate, approve the applicant’s ESCP prior to issuing a permit for certain projects that involve soil disturbing activities

### **Tiburon 2020 General Plan**

The Tiburon 2020 General Plan has policies related to hydrology and water quality that are pertinent to this project. They are listed below.

**Policy OSC-52:** Water quality should be maintained or enhanced in order to promote the continued environmental health of natural waterway habitats.

**Policy SE-12:** On-site detention of stormwater runoff shall be utilized to ensure that post-development peak flow rates from a site resulting from both the two-year and 100-year design rainstorms are not increased by new subdivisions or other permitted development projects.

## **C. Potential Impacts and Mitigation Measures**

### **1. Criteria Used For Determining Impact Significance**

The impact analysis section considers the project’s potential to result in significant impacts based on standards of significance derived from CEQA Guidelines Appendix G. As such, the project would have a significant impact if it meets any of the following criteria.

1. Violates any water quality standards or waste discharge requirements.
2. Substantially depletes groundwater supplies or interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
3. Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

4. Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increases the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
5. Creates or contributes runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provides substantial additional sources of polluted runoff.
6. Otherwise substantially degrades water quality.
7. Places housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map.
8. Places structures within a 100-year flood hazard area that would impede or redirect flood flows.
9. Exposes people or structures to significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
10. Is subject to inundation by seiche, tsunami, or mudflow.

As described in the Initial Study prepared for the proposed project, due to the location and characteristics of the project, certain conditions are not associated with the project, and, therefore, are not considered potentially significant impacts. Impacts considered to be less than significant are listed below.

2. The project would not substantially reduce recharge to any aquifer beneath the site.
3. The project would not cause grading or sufficient siltation to alter the existing drainage pattern of the site or area.
- 7-9. The project would have no impact as regards placement of housing or structures within a 100-year floodplain nor expose people or structures to flooding.
10. The project is located outside the tsunami zone and does not contain large bodies of water subject to seiche. There are no large dams upstream of the site, so dam failure is not a risk.

## 2. *Impact Analysis*

**Impact 4.9-A Project development would increase runoff from the site that could exceed the capacity of the downstream stormwater drainage system and cause flooding. This is a potentially significant impact.**

The project would include construction of impervious surfaces in areas that are already heavily compacted by vehicles and pedestrians. It is not expected that adding approximately 1,650 square feet of roofs would measurably increase project site runoff. As reported in the Initial Study, it is also not expected that the relatively small increase in impervious surface on the site would result in a substantial increase in flood elevations or the frequency of flooding in Railroad Marsh or the storm drain system that drains excess water from the marsh. To corroborate these expectations and ensure that the project is consistent with Tiburon 2020 General Plan policy (Policy SE-12) that requires that new development maintains the post-development 2-year and 100-year peak flow at the pre-development level, mitigation is required.

### ***Mitigation Measures***

4.9-A.1 A registered civil or hydrologic engineer shall calculate pre- and post-project runoff from the site for the 2-year and 100-year storm events. If there will be an increase in site runoff, then a drainage plan will be prepared that demonstrates to the Town's satisfaction that post-project runoff volumes will not exceed pre-project volumes. Excess runoff can be detained on-site using underground storage facilities with timed release or other means of detaining and releasing peak flows to maintain the pre-existing conditions.

### ***Impact Significance After Mitigation***

If warranted, preparing and implementing a plan to retain peak flows so they do not exceed pre-project flows would reduce any downstream impact to the stormwater system to a less-than-significant level. The project would not cause downstream flooding.

**Impact 4.9-B Runoff from the new facilities could transport pollutants from the facilities to Railroad Marsh. A reduction of water quality could adversely affect biological species inhabiting or dependent on Railroad Marsh. This is a potentially significant impact.**

The project would result in approximately 1,650 square feet of new roof surface. Runoff from these roofs could transport airborne pollutants that collect on the roof or other pollutants to the project storm drain system and then to Railroad Marsh. Other portions of the site will continue to be drained by existing drainage features and would not cause a new impact. To reduce water quality impacts from the project as well as to comply with MCSTOPPP requirements, the project includes installation of a new bioswale to filter site roof and storage area runoff prior to its discharge to Railroad Marsh. The bioswale would be constructed on the

north side of the existing courts, adjacent to the west side of the proposed bathrooms and locker structure. It would collect runoff from the roof of the covered entryway and adjacent bathrooms and storage locker. A 4-inch outlet pipe will collect biofiltered water from below the filtration level of the bioswale and transport it to a discharge point in the existing concrete-lined drainage swale leading to the marsh. No ground surface runoff will be collected. The depth of the 4-inch drainage line is between 1.5 and 2 feet. Unless this bioswale is properly installed, it may not sufficiently filter new runoff, and this would remain a potentially significant impact.

### ***Mitigation Measures***

4.9-B.1 The applicant shall prepare a Stormwater Control Plan (SCP), following the procedures outlined by MCSTOPPP. The SCP shall include the required Construction Erosion and Sediment Control Plans. Bioretention features will be designed following the guidance found in MCSTOPPP's stormwater quality manual and the California Storm Water BMP Handbook for New and Redevelopment. The Plan shall be prepared by a registered engineer for review and approval by the Town Department of Public Works. Once approved, an agreement will be executed by property owner and Town and recorded against the property to insure the ongoing operation of the SCP.

### ***Impact Significance After Mitigation***

The mitigation will ensure that the site drainage system operates acceptably, which will reduce the water quality impact to a less-than-significant level.

**Impact 4.9-C Constructing the project could expose soils to erosion, and eroded sediment could wash off the site and adversely affect water quality of Railroad Marsh. This is a potentially significant impact.**

The project is expected to require very little grading. Nevertheless, uncontrolled grading can result in erosion and silt entering the storm drain system, with consequent impacts on water quality. This is a potentially significant impact.

### ***Mitigation Measures***

The Construction Erosion and Sediment Control Plan required as part of Mitigation Measure 4.9-B.1 will address this potential impact.

### ***Impact Significance After Mitigation***

The mitigation will ensure that erosion is controlled to meet MCSTOPPP and Town requirements. This would reduce the impact to a less-than significant level. Mitigation Measure 4.9-B.1 would ensure that the project would not violate any water quality standards or waste discharge requirements.

### 3. *Cumulative Impacts*

**Impact 4.9-D      Project development, in conjunction with buildout in the Town, could result in cumulative hydrology and water quality impacts. This is a potentially significant impact.**

The geographic area for the analysis of cumulative impacts for hydrology and water quality is the Railroad Marsh and the two storm drain stems that drain it to Raccoon Straits or Belvedere Lagoon watersheds. The cumulative analysis considers the past, present, and probable future projects projected as buildout of the Town and its Planning Area

Concurrent implementation of the proposed project and other cumulative projects could result in an increase in the amount of impermeable surface in the watershed and could cause localized flooding in ditches or small tributaries. The Town's existing regulations require that new projects not adversely affect site runoff or flood elevations. The Town's regulations also require that new development be served by adequately sized drainage facilities. Per the Town's existing regulations, drainage improvements similar to those required for the proposed project may be required for other proposed development; these measures would be determined during the project-specific CEQA analysis for those projects. These existing Town regulations and the ability for the Town to further review potential drainage and flood constraints for new development applications would reduce the cumulative impact to a less-than-significant level.

In addition, the runoff from the project would make a very small addition to any future increase in runoff. Even if there were a significant cumulative impact, the project would make a less than cumulatively significant contribution to said impact.

Concurrent implementation of the proposed project and other cumulative projects could result in long-term impacts related to water quality. Construction and use of other impermeable surfaces results in residues of petrochemicals, heavy metals, pesticides, and other materials used by residents and businesses being deposited on streets, roofs, and other surfaces. These residues can be washed off during storms and transported to the bay where they can adversely affect the water quality of the bay. As described under Impact 4.9-B, the project would not contribute significantly to water quality impacts. The Town requires new development to comply with water quality protection requirements of MCSTOPPP and as included in the Town Code. This EIR codifies these requirements in Mitigation Measure 4.9-B.1. Per Town Code and MCSTOPPP requirements the Town would require a similar mitigation during the project-level CEQA review for other new applications. Existing Town, MCSTOPPP, and State regulations and the Town's ability to review new development for compliance with these requirements and constraints (and consequently apply standard site-specific mitigations when warranted by the specific project and site conditions) would reduce the cumulative impact to a less-than-significant level, and no additional mitigation is required for this project. Further, with implementation of Mitigation Measure 4.9-B.1 in this EIR, the project would not result in a

cumulatively considerable contribution toward any cumulative water quality impact that might occur.

***Mitigation Measures***

Implement Mitigation Measures 3.9-A.1 and 4.9-B.1.

***Impact Significance After Mitigation***

The mitigation would control flooding as well as erosion and transport of pollutants to Railroad Marsh in compliance with MCSTOPPP, Town, State, and federal laws and regulations, thereby reducing any possible contribution of the project to a cumulative water quality impact to a less than cumulatively considerable level. Therefore, the proposed project would not contribute to any significant adverse cumulative hydrologic impacts when considered together with past, present, pending and reasonably foreseeable development.

## **4.10 LAND USE AND PLAN CONSISTENCY**

### **A. Setting**

#### **1. Land Use Setting**

The proposed project is located on the southern portion of the TPC property at 1600 Mar West Street in the Town of Tiburon (see Figures 3.3-1 and 3.3-2). The TPC is located near the south end of a small valley that extends southwest from the Tiburon Ridge. The Old St. Hilary's Open Space Preserve lies to the northwest, and Railroad Marsh borders the south side of the southern tennis courts. South of the marsh is the Point Tiburon Marsh Condominiums. Southwest of the marsh are the Town offices and the Belvedere-Tiburon Library. The slopes of this valley are relatively heavily developed with residential units, many of which have views down onto the project site. The east-facing hillside has some single-family residences and several large multi-family complexes, while the west-facing slope has mainly single-family units.

The tennis club was originally established in 1950 (as the Southern Marin Recreation Center) and originally served approximately 150 families. The name of the Club was changed to the Tiburon Peninsula Club in 1961. The Club's facilities have been renovated and expanded (including the addition of six tennis courts south of Mar West Street) numerous times over the intervening 67 years, and currently serve 700 families and 175 senior memberships. Most of the Club's recreational facilities are north of Mar West Street and include lit tennis courts, swimming pools, a fitness building, sports court, locker rooms, a clubhouse, and other facilities. Six unlighted tennis courts and most of the Club's parking are located on the southern portion of the site (the Judge Field portion). The parking area is surfaced with gravel and four light standards with double lights on each standard that provide illumination for the parking area.

The TPC is designated as Public/Quasi-Public (P) in the Town's General Plan and zoned Public/Quasi-Public (P).

### **B. Potential Impacts and Mitigations**

#### **1. Criteria Used to Determine Impact Significance**

The impact analysis section considers the project's potential to result in significant impacts based on standards of significance derived from CEQA Guidelines Appendix G. As such, the project would typically have a significant impact if it meets any of the following criteria:

1. Physically divides an established community.
2. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Due to the location and characteristics of the project, certain conditions are not associated with the project, and, therefore, are not considered potential impacts. These conditions were addressed in the appended Initial Study and are addressed briefly below; they are not discussed further in this document.

*Physical Division of a Community*

The project entails making additions to an existing tennis court facility. These improvements would not further divide the community.

**2. Impact Analysis**

**Impact 4.10-A The proposed project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.**

Mitigation measures are included in this EIR that would reduce project impacts to a less-than-significant level. Even if there were a potential inconsistency with individual policies does not mean the project is inconsistent with the General Plan as a whole. Whether or not, on balance, the project furthers the General Plan or hinders its implementation is determined by the decision-making body. Additionally, a recent court case determined that EIRs are required only to discuss any inconsistencies with plans. EIRs are not required to explain why the project is consistent with applicable plans or to provide support for a conclusion that there are no plan inconsistencies.<sup>7</sup>

Table 4.10-1 below lists the pertinent policies from the Town's 2020 General Plan. The analysis finds that the proposed project, complete with mitigation measures recommended in this EIR, would be consistent with all the listed policies.

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<sup>7</sup> Crenshaw Subway Coalition v Los Angeles County Metro. Trans. Authority, CD Cal, Sept. 22 2015, No. CV11-9603FMO (JCx) 2015 US Dist Lexis 143642, 2015 WL 6150847

**Table 4.10-1  
Project Consistency with 2020 General Plan Policies**

<b>Policy</b>	<b>Consistency Summary</b>
<b>LU-2:</b> The Town shall limit the type and amount of uses within the Town to those that are compatible with the nature, character and image of the Town as a quiet, small-town residential community with a village-like commercial area.	<i>Consistent.</i> The project adds to the existing recreational uses on the site that the Town has previously permitted through a Conditional Use Permit. The project would not include a new type of use of the site.
<b>LU-3:</b> The Town shall strive to preserve to the greatest extent feasible wildlife habitat in the open ridges, shoreline, marshes, mudflats, and other biologically sensitive areas.	<i>Consistent.</i> The project would not displace wildlife habitat. Any lighting impacts on Railroad Marsh can be reduced to a less-than-significant level.
<b>LU-9.</b> <i>The following land use districts and densities and intensities are established:</i>  <i>P = Public/Quasi-Public</i>	<i>Consistent.</i> This land use designation allows recreational uses as are proposed by the project.
<b>LU-16:</b> Outside lighting shall be allowed for safety purposes. The Town shall limit excessive light spillage and glare resulting from site lighting.	<i>Consistent.</i> Project lighting is intended for recreational purposes. The proposed lighting would be consistent with Town approval of a use permit that allows for recreational uses of a tennis facility. Mitigations included in this EIR would prevent excessive light spillage and glare.
<b>OSC-20:</b> Buffer zones of at least 100 feet shall be provided, to the maximum extent feasible, between development and wetland areas.	<i>Consistent.</i> The project provides at least a 100-foot buffer from the marsh water edge. This is consistent with the Town-adopted Marsh Restoration Plan, which, in turn, is consistent with the General Plan.
<b>OSC-25:</b> A diversity and abundance of wildlife and marine life shall be protected and maintained. The Town shall strive to preserve and protect to the greatest extent feasible wildlife habitat in the open spaces, shoreline, marshes, mudflats, and other biologically sensitive areas.	<i>Consistent.</i> The project would not displace wildlife habitat. Any lighting impacts on Railroad Marsh can be reduced to a less-than-significant level.
<b>OSC-26:</b> To the maximum extent feasible, and as required by federal and state laws, development and construction shall not affect special status species or special communities.	<i>Consistent.</i> Given recommended mitigations, the project would not impact special status species or special communities. All development would be done consistent with pertinent federal and state laws.
<b>OSC-28:</b> Principal vistas, viewpoints, and view corridors on land subject to development shall be identified and preserved to the maximum extent feasible.	<i>Consistent.</i> The project site is a developed site that would not typically be considered part of a principal vista or view corridor, and it does not contain significant viewpoints.

Policy	Consistency Summary
<p><b>OSC-30:</b> Development shall be encouraged in areas where it least interferes with views of and from open space to the maximum extent feasible.</p>	<p><i>Consistent.</i> The project will be visible from St. Hilary’s Open Space Preserve. The additional structures added to the existing facilities would not be noticeable from these distant vantage points. The addition of new lights would not substantially affect views from these vantage points given existing TPC lighting, other ambient lighting, the distance between the open space and the site, and the limited time the lights would be on.</p>
<p><b>OSC-31:</b> The preservation of visual qualities, views, and the view potential of the natural and built environment shall be a major consideration of the Town in any development project review.</p>	<p><i>Consistent.</i> The project shall undergo Town design review, and the Town will consider project visual effects when considering approval of the Conditional Use Permit.</p>
<p><b>OSC-32:</b> Protected trees, as defined in the Municipal Code, tree stands, and tree clusters shall be preserved to the maximum extent feasible.</p>	<p><i>Consistent.</i> The project will not remove or damage any protected trees.</p>
<p><b>OSC-33:</b> The Town shall protect natural habitat, and natural wooded areas shall be preserved to the maximum extent feasible.</p>	<p><i>Consistent.</i> The project would not remove natural habitat. Indirect effects on natural habitat and from runoff pollution and light trespass can be mitigated to a less-than-significant level, thereby protecting natural habitat values.</p>
<p><b>OSC-47:</b> The Town shall protect significant geological, ecological, archaeological, and paleontological resources and historic sites.</p>	<p><i>Consistent.</i> Mitigation measures recommended for the project will protect these resources.</p>
<p><b>OSC-52:</b> Water quality should be maintained or enhanced in order to promote the continued environmental health of natural waterway habitats.</p>	<p><i>Consistent.</i> The project will include a bioswale to treat new runoff. This will maintain water quality leaving the site.</p>
<p><b>OSC-56:</b> The Town shall promote the reduction of particulate matter from construction sites, roads, parking lots, and other sources through best management practices (BMPs).</p>	<p><i>Consistent.</i> The project will be required to reduce and control particulate emissions during construction.</p>
<p><b>OSC-57:</b> The Town shall require the use of feasible control measures to reduce PM10, NOx, and diesel particulate matter related to construction activities.</p>	<p><i>Consistent.</i> The project will be required to reduce and control particulate emissions during construction.</p>
<p><b>OSC 58:</b> The Town shall, though implementation of Circulation Element policies, encourage the reduction of the number of single-occupant vehicle trips and cumulative emissions that result from auto use.</p>	<p><i>Consistent.</i> The project will generate few new trips and less-than-significant emissions of air pollutants.</p>
<p><b>SE-12:</b> On-site detention of stormwater runoff shall be utilized to ensure that post-development peak flow rates from a site resulting from both the two-year and 100-year design rainstorms are not increased by new subdivisions or other permitted development projects.</p>	<p><i>Consistent.</i> This EIR requires project compliance with this policy. The applicant will be required to show that post-project flows do not exceed pre-project flows.</p>

Policy	Consistency Summary
<p><b>C-12: Transportation Mitigation Fee.</b> All new projects shall be required to pay a pro rata share of needed multimodal access improvements (a transportation mitigation fee) in accordance with the burden created by such new project.</p>	<p><i>Consistent.</i> The applicant will pay the required fee.</p>
<p><b>C-15: Traffic Signals.</b> At such time as any unsignalized intersection along Tiburon Boulevard meets signal warrants, the Town shall approach Caltrans to approve and/or provide signalization or other appropriate improvements.</p>	<p><i>Consistent.</i> This EIR recommends that the Tiburon Boulevard/Mar West Street intersection be considered for signalization when warranted.</p>
<p><b>N-1:</b> The Town shall use the Noise and Land Use Compatibility Guidelines contained herein to determine where noise levels in the community are acceptable or unacceptable. For residential uses, an exterior CNEL of up to 60 decibels is considered “normally acceptable.” For commercial uses, up to 65 decibels is considered “normally acceptable.”</p>	<p><i>Consistent.</i> These standards were used when assessing project-generated noise impacts.</p>
<p><b>N-4:</b> If the projected noise environment for a project exceeds the standards identified in the Noise and Land Use Compatibility Guidelines, the Town shall require an acoustical analysis so that noise mitigation measures can be incorporated into the project design</p>	<p><i>Consistent.</i> The project would not exceed the “normally acceptable” standard. Nevertheless, an acoustic analysis was prepared for the project.</p>
<p><b>N-10:</b> Standard quiet construction methods shall be used where feasible and when construction activities take place within 500 feet of noise sensitive areas.</p>	<p><i>Consistent.</i> Project construction noise will be less than significant, and no mitigation is required in this EIR. The Town may add additional noise reduction measures as conditions of approval, if the project is approved.</p>

### 3. Cumulative Impacts

**Impact 4.10-B The proposed project, in combination with buildout of the Tiburon Planning Area, would not contribute to potential cumulative land use impacts.**

The cumulative geographic context of the proposed project for land use and planning consideration consists of the Tiburon Planning Area since cumulative effects must be considered in relationship to policies or regulations that apply town-wide. As analyzed in this section, the proposed project would not result in a significant land use impact by physically dividing an established community or by conflicting with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

As described in the previous impact discussion, the project would be consistent with Town 2020 General Plan policies aimed at protecting environmental resources. When adopting its current general plan, the Town certified an EIR for that plan that addressed the cumulative

impacts of projected buildout of the Town and its Planning Area. That EIR identified several significant cumulative impacts from this projected buildout. These cumulative impacts and whether the project would make a cumulatively considerable contribution to said impacts are listed below.

*A contribution to significant congestion on U.S. Highway 101.* Project generated traffic would be expected to occur within the Town Planning Area with no to very few trips originating outside the Town. The project would not make a contribution to this cumulative impact.

*Loss of wildlife habitat and movement opportunities.* As described in Section 4.7 of this EIR, the project would not remove wildlife habitat and not create any new impediments to wildlife movement across the site.

*Unavailability of water during peak load water supply and inadequate water supply.* MMWD has stated that it can serve the proposed project and has supplies to do so. Since the General Plan EIR was written, MMWD has implemented water conservation programs that have reduced the water supply shortage (at the time the General Plan EIR was prepared, MMWD did not have sufficient proven supplies to serve customers during drought situations). MMWD's Water Resources Plan 2040 (WRP) concludes that MMWD has adequate water sources to meet projected 2040 demand except for a portion of the fifth and sixth years of a Six Year Severe Drought scenario. The WRP concludes that additional resources are not needed at this time. Accordingly, the small amount of additional water demand from the project would not result in a cumulative impact on MMWD's water supply.

*Inadequate school capacity.* The project would not generate additional students, so it would not contribute to this cumulative impact.

*Need for additional park and recreational facilities.* The project would not generate additional population growth nor a need for additional park and recreational facilities. In addition, the project is expanding the recreational facilities available to Town Planning Area residents.

*Inadequate wastewater capacity along Paradise Drive.* The project is not located on Paradise Drive and would have no effect as regards wastewater collection and treatment for that area.

*Loss of scenic vistas and scenic resources.* As described in Section 4.1 of this EIR, given its small size on an already developed site, the project would have no effect on scenic resources and a less-than-significant impact on scenic vistas. Accordingly, the project would make a less-than-cumulatively considerable contribution or loss of open space views or significant changes to public or private views of scenic resources or important scenic vistas in the Town.

*Loss of significant ridgelines.* The project is not located on or near a significant ridgeline, so there would be no contribution to this cumulative impact.

*Adverse effects on the visual character of the Town.* As discussed above, the project would not make a significant contribution to cumulative impacts on scenic vistas or scenic resources.

However it would add some additional lighting of the site up to 7:30 p.m. during the months when natural lighting is not available that late. This lighting impact was identified as a potentially significant impact for the project, and mitigation measures were identified for this impact. With mitigation, it was concluded that the lighting impact of the project would be less-than-significant. Given the site's location, existing development and lighting on the site and in the vicinity, it is concluded that the project would not make a cumulatively considerable contribution to the cumulative impact on the Town's visual character. In addition, the project would be consistent with the General Plan Policy LU-16 that outside lighting of projects shall not have excessive light spillover nor glare. This policy was recommended by the General Plan EIR to reduce the cumulative lighting impact to a less-than-significant level.

Therefore, the proposed project would not make a cumulatively considerable contribution to any significant adverse cumulative land use impacts when considered together with past, present, pending and reasonably foreseeable future development.

## **4.11 OTHER RESOURCES**

This section summarizes the potential impacts regarding agricultural and forestry resources; geology and soils; hazards and hazardous materials; mineral resources; population and housing; public services; and utilities and service systems. Given the Initial Study analysis of these resource areas, further analyses of impacts on these resources is not warranted (refer to the appended Initial Study).

### **Agricultural and Forestry Resources**

#### *Agricultural Use*

The areas to be disturbed to construct and operate the project would not occur on lands with agricultural uses. There would be no impact to agricultural resources, operations, or Williamson Act contracts.

#### *Farmlands*

The project site is not mapped by the State as having Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland).

#### *Forest Lands*

The project site not zoned forest land, timberland, or timberland zoned Timberland Production. The project would not result in the loss of forest land, Timberland, or Timberland Production.

### **Geology and Soils**

#### *Seismic Hazard*

The site is flat and was previously graded. Accordingly, there is no risk of rupture during an earthquake or landslides. The additional structures would be at risk of failure during a seismic event from ground shaking and/or liquefaction, See Mitigation Measure 4.11-1 below that addresses this standard impact.

#### *Soil Erosion*

The project will require minimal grading. Any soil erosion impact would be mitigated by the previously described Mitigation Measure 4.9-B.1.

#### *Soil Building Constraints*

The site may contain unstable and soils that could result in building failure. A geologic report of the project site was prepared for the original tennis court construction. That report provided standard geologic and soil mitigations to address impacts regarding seismic hazard and soil

constraints. The following mitigation was recommended in the Initial Study to address these geologic and soil impacts. This mitigation would reduce geologic and soil impacts to a less-than-significant level.

- 4.11-1 The project shall be constructed to withstand the maximum probable earthquake and to withstand other geologic and soil constraints or hazards on the site. All new development shall be constructed consistent with the seismic design requirements of the 2013 California Building Code (as referenced in the Town's Municipal Code) or any successor code in effect at the time of building permit issuance. The 2001 Kleinfelder, Inc. geotechnical report shall be revised to identify any geologic design requirements that comply with the current Building Code seismic and soil treatment requirements for the improvements proposed north of the existing tennis courts. The project shall be constructed consistent with all recommendations for site grading, seismic design for structures, foundation design, and site drainage contained in that revised report.

### **Hazards and Hazardous Materials**

#### *Hazardous Materials Impacts*

The project would not involve the use of regulatory amounts of hazardous substances to construct or operate. There would be no impact regarding spills, nor any emissions near schools or other sensitive receptors. The project site is not a listed hazardous materials site.

#### *Airport Safety*

The project site is not near a public or private airport. There would be a less-than-significant impact on airport operations and a less-than-significant safety impact from airplanes injuring people on the site.

#### *Wildland Fires*

The project site is not mapped in the Tiburon General Plan as an area susceptible to wildfire. There would be no impact per this criterion.

### **Mineral Resources**

There are no identified mineral resources within the project area. The project would not directly or indirectly affect any known mineral resources nor mineral resource recovery sites.

### **Population and Housing**

The project is on the grounds of a private recreational club. No dwelling would be removed nor would any people be displaced. The project does not include the construction of new housing nor employment centers. Therefore, the project would not increase the Town population.

## **Public Services**

The Initial Study describes how the project would not increase the Town population and, therefore, have no impact on schools or parks. Both the Tiburon Police Department and the Tiburon Fire Protection District have stated the project would not substantially affect their abilities to provide service.

## **Recreation**

The project would not increase the Town population and, correspondingly, would not increase the demand for or use of Town recreational facilities.

## **Utilities and Service Systems**

### *Wastewater*

Sanitary District No. 5 has sufficient collection, treatment, and disposal capacity to serve the project, and the project would have no impact on that service provider.

### *Water*

The Marin Municipal Water District has sufficient resources and distribution facilities to serve the project, and the project would have no impact on that service provider.

### *Solid Waste*

Redwood Landfill has adequate capacity to serve the project, and the project would have no impact on that service.

## **Cumulative Impacts**

The Initial Study concluded that the project would not result in a cumulative impact or make a cumulatively considerable contribution to any cumulative impact to resources listed in this section of the EIR.

## **5.0 OTHER REQUIRED CEQA TOPICS CHAPTER**

Consistent with CEQA Guidelines Section 15126.2, this section summarizes the findings with respect to the project's growth-inducing effects, cumulative impacts (when considered with other projects), significant unavoidable environmental impacts, significant irreversible environmental changes, and project alternatives.

### **5.1 GROWTH-INDUCING IMPACTS**

CEQA mandates that an EIR assess potential growth-inducing impacts of a project. The *CEQA Guidelines* describe the required assessment in the following way:

*Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment (CEQA Guidelines, Section 15126.2(d)).*

Growth-inducing impacts typically arise when a project would provide new infrastructure or public services that could then be used to serve other future projects. The proposed project includes relatively modest changes to existing recreational facilities. It does not add new infrastructure, roads, or public services. It is not expected that the project would induce any new development not already projected by the Town in the General Plan EIR. Therefore, the project would be expected to have no or less-than-significant growth-inducing impacts.

### **5.2 CUMULATIVE IMPACTS**

#### **1. Introduction**

Development of the proposed project, if approved, would occur while other development is also occurring in the vicinity. Together, these developments could cause changes in environmental conditions. Therefore, this EIR assesses the impacts of the project, as well as the project plus anticipated future projects in the area. The latter are assessed as "cumulative impacts."

CEQA defines cumulative impacts as two or more individual impacts which, when considered together, are substantial or which compound or increase other environmental impacts. The cumulative analysis is intended to describe the "incremental impact of the project when added

to other, closely related past, present, or reasonably foreseeable future projects” that can result from “individually minor but collectively significant projects taking place over a period of time” (CEQA Guidelines Section 15355). The analysis of cumulative impacts is a two phase process that first involves the determination of whether the project, together with existing and reasonably foreseeable projects, would result in a significant impact. If there would be a significant cumulative impact of all such projects, the EIR must determine whether the project’s incremental contribution to the effect is cumulatively considerable, in which case, the project itself is deemed to have a significant cumulative effect (CEQA Guidelines Section 15130). As defined in Section 15355 of the CEQA Guidelines, an EIR should not discuss impacts that do not result in part from the project evaluated in the EIR. As such, the discussion in this section focuses specifically on those impacts of the project that would result in cumulative effects, and does not consider cumulative impacts to which the project would not contribute.

Consistent with CEQA Guidelines Section 15130(a), the discussion of cumulative impacts in this EIR focuses on significant or potentially significant cumulative impacts. CEQA Guidelines Section 15130(b) provides as follows: “The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects that do not contribute to the cumulative impact.”

The *CEQA Guidelines* identify two basic methods for establishing the cumulative environment in which the project is to be considered: the use of a list of past, present, and reasonably anticipated future projects, or the use of adopted projections from a general plan or other regional planning document. The Town of Tiburon uses the latter approach. The Town identified projected buildout of the Town and its Planning Area when adopting its Tiburon 2020 General Plan. The General Plan projected that at buildout, the Town could add as many as 220 housing units, or 485 people, and 56,000 square feet of commercial space. The total Planning Area at buildout could add 395 housing units or 880 people and 60,500 square feet of commercial space. The Town considers these buildout projections accurate for current planning purposes.

A two-step approach was used to analyze cumulative impacts. The first step was to determine whether the combined effects from the proposed project (to the degree that it was not included in the buildout projections and planning area buildout) would be cumulatively significant. Where the combined effect of the projects was determined to result in a significant cumulative impact, the second step was to evaluate whether the proposed project’s incremental contribution to the combined significant cumulative impact would be cumulatively considerable as required in Section 15064(h)(1) of the CEQA Guidelines.

## **2. Geographic Scope**

The potential for project-generated impacts to contribute to a significant cumulative impact would arise if they are located within the same geographic area. The geographic area varies

depending on the resource being assessed. Table 5.2-1 describes the geographic range where other projects' impacts can be expected to combine with project impacts to have a potentially significant cumulative impact.

**Table 5.2-1  
Geographic Range Used for Identifying Possible Cumulative Impacts**

<b>Resource</b>	<b>Geographic Range</b>
Geology/Soils	Project site and immediate environs
Hydrology/Water Quality	Lagoon Vista storm drain watershed and Belvedere Lagoon watershed
Biological Resources	Railroad Marsh
Cultural Resources	Project site
Traffic	Tiburon Boulevard and subsidiary roadways
Air Quality	Tiburon Planning Area
Greenhouse Gas	State of California
Energy	State of California
Noise	Valley that includes the project site
Visual Resources	Valley that includes the project site
Public Services/Utilities	Tiburon Planning Area
Land Use	Tiburon Planning Area

### **3. Cumulative Impacts**

The identification of potentially significant cumulative impacts is included in the impact discussion of each resource section in Chapter 4 of this EIR. Those analyses concluded that the project would make no or a less than cumulatively considerable contribution to all cumulative impacts.

### **5.3 Significant Unavoidable Impacts**

In accordance with CEQA Section 21083, and with CEQA Guidelines Sections 15064 and 15065, an EIR must identify impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the implementation of the proposed project, or by other mitigation measures that could be implemented, as described in Chapter 4. As described in each section in Chapter 4, all impacts of the project can be reduced to a less-than-significant level. Accordingly, there are no remaining significant unavoidable impacts.

### **5.4 Significant Irreversible Environmental Effects**

CEQA Guidelines Section 15126.2(c) specifies that the EIR shall discuss the significant irreversible environmental changes associated with certain types of projects, including adoption of a plan, ordinance or policy; adoption of a resolution by a local agency formation commission; or a project subject both to CEQA and NEPA. The current project does not fit any

of these requirements. Nevertheless, it is noted that construction of the project represents a commitment of nonrenewable resources, such as concrete and other building materials and fossil fuels used during construction.

## **5.5 PROJECT ALTERNATIVES**

### **1. Introduction**

CEQA requires that the EIR assess alternatives to the project if the project would have potentially significant environmental impacts, even if these impacts can be mitigated to a level that would be less-than-significant. As noted in Chapter 4.0 of this EIR, the project would have a number of potentially significant impacts. This EIR therefore assesses alternatives to the project.

The CEQA Guidelines offer a number of requirements and recommendations regarding the alternatives analysis. The more pertinent issues are summarized as follows:

- Alternatives must be ones that could feasibly attain most of the basic objectives of the proposed project and could avoid or substantially lessen one or more of the significant effects of the project. While alternatives can impede the attainment of the objectives, they should not substantially impede those objectives. Alternatives that fundamentally change the nature of the project do not meet the basic objectives of the project.
- The alternatives must be potentially feasible. Feasibility takes into account factors such as site suitability, economic viability, availability of infrastructure, consistency with the Tiburon General Plan, other plans and regulatory limitations, jurisdictional boundaries, and ability to acquire, control, or gain access to alternative sites.
- The analysis of each alternative must determine whether the alternative reduces the significant impacts identified for the project. If the alternative would generate additional significant impacts, those must also be identified and discussed.
- One of the alternatives to be assessed must be the “no project” alternative (see discussion below under that heading).
- The EIR must assess the identified alternatives and determine which among them is environmentally superior. If the no project alternative is identified as the environmentally superior option, then one of the other remaining alternatives must be identified as environmentally superior.

### **2. Alternatives Selected for Consideration**

Using the guidelines listed in Section 1 above, the Town has identified the following alternatives to the project as proposed:

1. No Project
2. Mitigated Project
3. Project Relocation

The following describes the three alternatives, each followed by a discussion of its impacts and how they differ from those of the proposed project. As permitted by CEQA, the significant effects of the alternatives are discussed in less detail than are the effects of the project (CEQA Guidelines, Section 15126.6[d]). However, the analysis is conducted at a sufficient level of detail to provide project decision-makers adequate information to fully evaluate the alternatives and to approve any of the alternatives without further environmental review.

The impacts for each alternative are compared to the impacts of the project, and a conclusion is provided whether the impacts would be Lesser, Similar, or Greater as compared to the project impacts. In the final subsection, these alternatives are compared to the project as proposed and to one another to identify the environmentally superior alternative.

### **3. Alternative 1 – No Project**

#### **a. Description**

This alternative would maintain the status quo on the project site. The proposed new construction and lighting would not occur. The site would maintain its existing zoning that would allow other possible future property improvements to the applicant's recreational facilities.

Under the No Project Alternative, none of the impacts reported in this EIR would occur. The specific differences in impacts are summarized in the following subsection.

#### **b. Impacts**

*Visual Resources.* As no construction would occur, there would be no daytime or nighttime changes to the viewshed. [Lesser]

*Traffic and Circulation.* No new trips would be generated. There would be no increased congestion at the Tiburon Boulevard / Mar West Street intersection nor on any roadways in Tiburon. There would be no increase in Vehicle Miles Travelled (VMT). [Lesser]

*Noise.* As no construction would occur, noise impacts from that construction would be eliminated. [Lesser]

*Air Quality.* There would be no emission of particulates or other criteria pollutants during construction. There would be no emission of air pollutants from increased vehicle use. [Lesser]

*Global Climate Change.* Because no construction would occur, there would be no emissions of GHG from construction equipment. There also would be no emission of GHGs from increased motor vehicle use. [Lesser]

*Energy Use.* As no construction would occur, there would be no expenditure of energy to construct improvements. Energy would not be used by vehicles accessing the project. [Lesser]

*Biological Resources.* As there would be no construction activities, the potential impacts to nesting birds and special-status would be eliminated. Potential water quality impacts to special-status species inhabiting Railroad Marsh would be eliminated. [Lesser]

*Cultural Resources.* As no construction would occur, the potential impact to currently unknown but possible cultural resources, human remains, and paleontological resources would be eliminated. [Lesser]

*Hydrology and Water Quality.* No construction would occur, and no new impermeable surfaces would be added. The potential impacts to flooding, storm drain adequacy, and water quality would be eliminated. The existing drainage system on the project site would continue. [Lesser]

*Land Use and Plan Consistency.* There would be no change to land use. The facility would remain consistent with the Town's General Plan. [Same]

*Other Resources.* As no construction would occur, there would be no demand on water, wastewater, solid waste facilities, and, like the proposed project, no substantial demand on other service providers. As no construction would occur, there would be no risk of spills of hazardous materials that would be used in building the project. No new grading or excavation would occur under this alternative. The project's impacts regarding seismic hazard, soil constraints, and soil erosion would be eliminated. [Lesser]

*Ability of the Alternative to Meet Project Objectives.* This alternative would not meet the project objectives aimed at expanding the Junior Tennis Club and the availability of tennis instruction and games for TPC members and members of the public.

#### **4. Alternative 2 – Mitigated Project**

##### **a. Description**

This alternative would incorporate all of the mitigation measures recommended in this EIR as well as three additional measures that are not specifically needed to reduce a project impact to a less-than-significant level.

The EIR-recommended mitigations include:

1. Require the applicant to retrofit existing parking lot lights (Mitigation Measure 4.1-C.1).

2. Require the applicant to pay its fair share of any future improvements to the Tiburon Boulevard / Mar West Street intersection (Mitigation Measure 4.2-B.1).
3. Require particulate emission controls during project construction (Mitigation Measure 4.4-A.1).
4. Establish exclusion zones to protect special-status species (Mitigation Measure 4.7-A.1 to 4.7-A.3).
5. Avoid construction near nesting birds (Mitigation Measure 4.7-C.1).
6. Retrofit parking lot lights to reduce light trespass into marsh area, thereby benefitting wildlife (Mitigation Measure 4.1-C.1).
7. Protect currently unidentified cultural and paleontological resources (Mitigation Measures 4.8-A.1 to 4.8-A.4).
8. Ensure that post-project runoff does not exceed pre-project levels (Mitigation Measure 4.9-A.1).
9. Ensure that project bioswales are designated and operated to protect water quality leaving the site (Mitigation Measure 4.9-B.1).
10. Construct the project to meet geotechnical requirements ensuring building integrity given soil constraints and seismic risk (Mitigation Measure 4.11-1).

This alternative includes a reduction in the time when tennis court lighting would be allowed. Tennis lessons are one hour in duration with players typically playing after the lesson ends. The applicant states that a “turn” (i.e., lesson plus time to end one lesson and start another) is approximately 1.5 hours. This alternative would restrict night lighting to 6:30 p.m. with an additional 15 minutes for cleaning up, which provide for two full “turns” (since lessons start at 3:30 p.m.).

This alternative also includes a requirement that TPC establish a formal ridesharing program for all students attending the Junior Tennis Program. The program would be reviewed and approved by the Town. This requirement would further reduce traffic impacts as well as the emission of greenhouse gas from the increase in VMT generated by the project.

This alternative also includes a restriction on any tournaments being held on the lit courts. This would decrease noise impacts.

**b. Impacts**

*Visual Resources.* Implementing suggested Mitigation Measure 4.1-A.1 would further reduce the project’s nighttime visual impact. Reducing the lighting time by one hour would further

reduce the visual impact. [Lesser]

*Traffic and Circulation.* Implementing Mitigation Measures 4.2-B.1 would reduce potential project impacts to the Tiburon Boulevard / Mar West Street intersection to a less-than-significant level. Implementing the additional recommended ridesharing program requirement would further reduce impacts to that intersection as well as decrease the project-generated VMT. [Lesser]

*Noise.* Construction and operational noise would be the same as described for the project as proposed. Eliminating the potential for tournaments during the time courts are lit would reduce noise impacts. Reducing the time that the courts are lit would reduce noise from court use. [Lesser]

*Air Quality.* Implementing Mitigation Measure 4.4-A.1 would reduce any potential project construction impacts to air quality to a less-than-significant level. The recommended ridesharing program would reduce VMT and, correspondingly, the emission of air pollutants. [Lesser]

*Global Climate Change.* Implementing the recommended ridesharing program would reduce the VMT and, correspondingly, emissions of GHG from motor vehicle use. [Lesser]

*Energy Use.* Implementing the recommended ridesharing program would reduce the VMT and, correspondingly, energy expenditure for motor vehicle use. [Lesser]

*Biological Resources.* Implementing Mitigation Measures 4.7-A.1 to 4.7-A.3 and 4.7-C.1 would reduce any potential project impacts to nesting birds and special-status to a less-than-significant level. Potential water quality impacts to special-status species inhabiting Railroad Marsh would be reduced to a less-than-significant level by implementing Mitigation Measures 4.9-B.1 and 4.11-1. Mitigation Measure 4.1-C.1 would reduce light trespass into the marsh area. [Lesser]

*Cultural Resources.* Implementing Mitigation Measures 4.8-A.1 to 4.8-A.4 would reduce any potential project impacts to currently unknown but possible cultural resources, human remains, and paleontological resources to a less-than-significant level. [Lesser]

*Hydrology and Water Quality.* Implementing Mitigation Measures 4.9-A.1 and 4.9-B.1 would reduce any potential project impacts to flooding, storm drain adequacy, and water quality to a less-than-significant level. [Lesser]

*Land Use and Plan Consistency.* The project would be consistent with the Town's General Plan under either the proposed project or this alternative. [Same]

*Other Resources.* The alternative would have the same impacts on other secondary resources. The one difference is that Mitigation Measure 4.11-1 would ensure that project improvements would be designed to withstand site soil constraints or damage from seismic activity. [Lesser]

*Ability of the Alternative to Meet Project Objectives.* This alternative would partially meet the project objectives. The reduction in time when the courts could be lit would not fully meet the project objectives

**5. Alternative Location**

**a. Description**

CEQA requires an EIR to examine an alternative that would include construction of the project at an alternative location. Large parcels in the Town designated for commercial or non-residential uses are already developed. Town staff is unaware of any parcels where such a land use as proposed could be allowed that is vacant as well as being available for sale.<sup>8</sup> Therefore, this EIR finds that an alternative of purchasing another site and constructing the project as proposed on that site to be infeasible. Instead, this alternative will assess constructing new tennis courts and the other proposed improvements at an alternative site on the TPC property. The alternative site would be located at the north end of the TPC parking lot. This alternative would include the following features.

1. Six new tennis courts would be constructed with lights as proposed for the project.
2. A new entryway, bathrooms, and storage facilities similar to the proposed project features would be included.
3. The existing tennis courts would be removed and parking would be installed.
4. The new courts would be located in the parking area currently lit by the four parking lot light standards. These four light standards would be removed.
5. New parking lot lighting would be shielded and oriented so there would be as little light as feasible directed toward the marsh area.

**b. Impacts**

*Visual Resources.* The court lighting would still be visible from approximately the same vantage points that have views of the proposed project lighting, though there would be less illumination visible from the Point Tiburon Marsh Condominiums and, possibly from the single-family residences on the east side of Mar West Street adjacent to the existing courts. Removing the existing courts would reduce views of the courts from residences on the east side of Mar West Street, but views of new courts would be visible to residences to the west. The impact on the overall viewshed would be approximately the same as would occur with the project as proposed. [Same]

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<sup>8</sup> Personal conversations with Dan Watrous, Town Planning Manager, and Scott Anderson, Town Community Development Director; January 16, 2018.

*Traffic and Circulation.* The project would generate the same number of new trips as the proposed project. Requiring the applicant to pay the appropriate traffic mitigation fees would reduce the impact to a less-than-significant level. [Same]

*Noise.* The alternative would require substantially more construction than the proposed project. Residents both to the west and east would experience construction-generated noise from construction of the new courts and removal of the existing courts. Operational noise levels would be the same as described for the project as proposed. The alternative would have less noise impact on residences on the east side of Mar West Street near the existing courts as well as possibly on the Point Tiburon Marsh Condominiums, though that noise was not found to significantly impact these sensitive receptors. Residents to the west of Mar West Street would be exposed to additional noise, though as is the case for the project as proposed, it is expected that this noise would be less than significant. In both cases, the noise impacts would be less than significant. [Same]

*Air Quality.* The alternative would have more construction-generated emissions than the proposed project. Implementing Mitigation Measure 4.4-A.1 would reduce any potential project construction impacts to air quality to a less-than-significant level. Emissions from operations would be the same as the proposed project, and that impact is less than significant for both alternatives. [More]

*Global Climate Change.* The alternative would result in more construction-related GHG emissions than the proposed project. In both cases, the impact would be less than significant. [More]

*Energy Use.* The alternative would result in more construction-related energy use than the proposed project. In both cases, the impact would be less than significant. [More]

*Biological Resources.* The alternative site would be located farther from the marsh. There is a gravel parking area between the wetland vegetation and the site. There would be no construction-related impacts on special-status species potentially inhabiting the marsh and adjacent vegetation. The relocation of court lights would reduce light trespass into the marsh. There is a stand of trees across Mar West Street from the alternative site, so there could be a possible impact to nesting birds, but the impact would be expected to be less than the possible nest disturbance at the proposed site near the marsh. The same mitigation measure to protect nesting birds would be required for this alternative. Water quality impacts on the marsh wildlife would be the same as for the proposed project. [Lesser]

*Cultural Resources.* The alternative would have the same possibility of damaging unknown cultural resources. Implementing Mitigation Measures 4.8-A.1 to 4.8-A.4 for this alternative would reduce any potential project impacts to currently unknown but possible cultural resources, human remains, and paleontological resources to a less-than-significant level. [Same]

*Hydrology and Water Quality.* The alternative would have similar impacts as the proposed project regarding additional runoff and potential impacts to storm drains and flooding. However, the project would require substantially more grading with a consequent risk of soil erosion. Implementing Mitigation Measure 4.9-A.1 would reduce this impact to a less-than-significant level. Impacts to water quality also would be similar. It is recommended that for this alternative, Mitigation Measure 4.9-B.1 be revised to require a bioswale system that would capture and treat not only tennis court-related runoff but runoff for the area where the existing tennis courts are located and possibly other portions of the parking area. This would reduce potential impacts to water quality. [Lesser]

*Land Use and Plan Consistency.* The project would be consistent with the Town's General Plan under either the proposed project or this alternative. [Same]

*Other Resources.* The alternative would have the same impacts on other secondary resources. The one mitigation required under this section would also be required for this alternative. [Same]

*Ability of the Alternative to Meet Project Objectives.* This alternative would meet the project objectives of expanding the Junior Tennis Program. However, it would not meet the applicant's likely, though unstated, objective to maximize use of existing facilities on the site.

## **6. Environmentally Superior Alternative**

The CEQA Guidelines require the EIR to identify the environmentally superior alternative. Alternative 1 (No Project) would eliminate all project impacts. As discussed earlier, if the no project alternative is identified as the environmentally superior option, then one of the other remaining alternatives must be identified as environmentally superior.

Among the remaining alternatives, Alternative 2 (Mitigated Project Alternative) would have reduced visual, traffic, noise, air quality, climate change, energy, biological resources, cultural resources, hydrology, and geologic impacts. Otherwise, impacts would be similar to the proposed project, though any additional potentially significant impacts can likely be mitigated to a less-than-significant level. Alternative 3 (Alternative Location) would have reduced biological and water quality impacts. It would have greater impacts as regards air quality, climate change, and energy use. Other impacts would remain overall about the same as for the proposed project except that different residents will be exposed to the noise and visual impacts. Therefore, Alternative 2 would be the environmentally superior alternative after the No Project alternative.

## 6.0 REPORT PREPARATION

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Town of Tiburon

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WRA

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Town of Tiburon

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WRA

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## 6.2 Persons Contacted

Miles Berger	Architect and Applicant's Representative
Chris Borjian	Marin Municipal Water District
Tony Rubio	Sanitary District No. 5 Manager
Dan Watrous	Town of Tiburon Planning Manager

### 6.3 Preparers of the Report

This report was prepared by an environmental study team led by Leonard Charles and Associates under a contract with the Town of Tiburon. The EIR preparation was overseen and coordinated by Dan Watrous, Planning Manager, Town of Tiburon. The following individuals worked on this EIR:

#### ***Leonard Charles and Associates***

Leonard Charles, Ph.D.	Project Manager
Lynn Milliman, M.A.	Environmental Analyst
Jacoba Charles, M.S., M.A.	Environmental Analyst

#### ***Illingworth & Rodkin, Inc.***

James Reyff	Meteorologist
Casey Zaglin	Noise Consultant

#### ***Parisi Transportation Consulting***

David Parisi	Licensed Civil and Traffic Engineer
Hadar Albo	Traffic Consultant

#### ***Environmental Vision***

Marsha Gail	Photosimulation Reviewer
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## **Appendix A**

### **NOP and Initial Study**

**NOTICE OF PREPARATION (NOP)  
OF A DRAFT ENVIRONMENTAL IMPACT REPORT (DRAFT EIR)  
FOR THE TIBURON PENINSULA CLUB EXPANSION PROJECT  
1600 MAR WEST STREET  
TIBURON, MARIN COUNTY, CALIFORNIA**

The Town of Tiburon is the Lead Agency for the preparation and review of an Environmental Impact Report (EIR) for the Tiburon Peninsula Club Expansion Project. The Town is soliciting the views of interested persons and agencies on the scope and content of the environmental information to be included in the EIR. Agencies should comment on the scope and content of the environmental information that is relevant to the agencies' statutory responsibilities, as required by Section 15082 of the California Environmental Quality Act (CEQA) *Guidelines*. Agencies will need to use the EIR prepared by our agency when considering any subsequent permits or approvals for the project. The Town will also accept written comments concerning the scope and content of the EIR from interested persons and organizations concerned with the project, in accordance with *State CEQA Guidelines* Section 15083. Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than thirty (30) days after receipt of this notice. **The 30-day NOP review and comment period begins January 4, 2017 and ends at 5:30 p.m. on February 6, 2017.**

All written public and agency comments should be directed to **Daniel M. Watrous, Planning Manager, Town of Tiburon, 1505 Tiburon Boulevard, Tiburon, CA 94920, (415) 435-7393, or [dwatrous@townoftiburon.org](mailto:dwatrous@townoftiburon.org)**. Please include the name of a contact person for your agency, if applicable. There will be additional opportunities for comment during the public review period following completion of the Draft EIR. **A public scoping session will be held on January 25, 2017, at 7:30 p.m. at the Tiburon Town Council Chambers, 1505 Tiburon Boulevard, Tiburon, California.**

**PROJECT TITLE:** Tiburon Peninsula Club Expansion Project

**PROJECT LOCATION:** As shown in Figure 1, the Tiburon Peninsula Club (TPC) is located at 1600 Mar West Street on four assessor parcels on both sides of Mar West Street between Tiburon Boulevard and Esperanza Street. The project site (also known as Judge Field) would consist of land located on the south side of Mar West Street. The project site is currently developed with six tennis courts and an unpaved parking lot.

**ASSESSOR PARCEL NUMBERS:** 058-171-17, 058-171-76, and 058-171-84

**PROJECT DESCRIPTION:** As shown in Figure 2, the proposed project would construct a Junior Tennis Center that would be used to expand its current junior clinic program and provide lessons for members and non-members. The project would include the following improvements:

1. Two new tennis courts will be constructed in the overflow parking area adjacent to the west side of the existing lower (southern) tennis courts.
2. Pole lights will be installed to light the six existing courts and the two new courts. The proposed lighting will include eight (8) lamps per court (one court will have nine lamps). The lamps will be mounted on 22-foot high poles. Some of the poles will hold two lamps that will illuminate adjacent courts; there would be 49 poles. Lighting of these courts will be provided until 7:30 PM at the latest during the months when natural illumination is not adequate prior to 7:30 PM.
3. A 650-square foot, one-story structure will be constructed adjacent to the north side of the existing lower tennis courts that will include bathrooms and tennis-related storage. North of this structure will be a landscaped entry to a covered entrance (translucent roof) to the facility.
4. Adjacent to and east of the proposed entry area will be a patio with shaded seating, (including seating for tournaments) and instruction areas. During tournaments, existing portable bleachers (capacity of 100 spectators) currently used for the upper (northern) courts may be erected here.
5. Immediately north of the proposed patio, a 1,230-square foot maintenance and storage facility will be constructed to replace the temporary storage structures on site.
6. Three new formal parking areas containing 30 parking spaces will be developed with permeable gravel surfaces to replace the existing 24 overflow parking spaces that would be displaced by the other improvements.

**PROJECT PROPONENT:** Tiburon Peninsula Club  
1600 Mar West Street  
Tiburon, CA 94920

**Potential environmental impact areas to be addressed in the Draft EIR include, but are not necessarily limited to:** aesthetics, air quality, biological resources, cultural resources, geology and soils, hydrology and water quality, land use and planning, recreation, transportation and traffic, and cumulative impacts. An initial study has been prepared for this project and is attached, and is also available for review at the Community Development Department at Tiburon Town Hall, 1505 Tiburon Boulevard, Tiburon, CA 94920, or on the Town's website at [www.townoftiburon.org](http://www.townoftiburon.org).

Signature: \_\_\_\_\_  
Daniel M. Watrous, Planning Manager  
Town of Tiburon

Date: **January 2, 2017**

**Comment Letters  
on Revised NOP**

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 4

P.O. BOX 23660

OAKLAND, CA 94623-0660

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www.dot.ca.gov

*Making Conservation  
a California Way of Life!*

May 11, 2017

Mr. Daniel Watrous  
Planning Manager  
Town of Tiburon  
1505 Tiburon Boulevard  
Tiburon, CA 94920

04-MRN-2017-00051  
SCH# 2017012020

**Tiburon Peninsula Club Expansion – Notice of Preparation (NOP)**

Dear Mr. Watrous:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced project. In tandem with the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy (SCS), Caltrans mission signals a modernization of our approach to evaluating and mitigating impacts to the State Transportation Network (STN). Caltrans' *Strategic Management Plan 2015-2020* aims to reduce Vehicle Miles Travelled (VMT) by tripling bicycle and doubling both pedestrian and transit travel by 2020. This letter incorporates outstanding comments from our letter dated February 1, 2017 by reference.

***Travel Demand Analysis***

As stated under Section XVI (Transportation/Traffic) of the Initial Study, a 2004 Traffic Study was conducted for the Tiburon Peninsula Club Project and a 2010 Traffic Analysis was conducted for the Belvedere-Tiburon Library Expansion project. However, the 2004 Traffic Study is too old for the use and it is inapplicable to use a traffic study for another project as each project has its own impacts. Please provide an updated travel demand analysis for Caltrans to review.

The project has not supplied updated trip generation and distribution information which is necessary to determine the scope and significance of issues that may arise from the project's potential conflicts. Caltrans requests this information due to the potential for increased project generated trips using State Route (SR) 131 and Mar Street to present a source of conflict. We are concerned with the ability to contain left turning vehicles within the available storage. A spillover of vehicles has the potential to create significant speed differentials and increase the number of conflicts. The California Environmental Quality Act does not exempt these type of operational concerns from evaluation. The applicant did not provide an analysis or the data necessary to undertake an assessment. Please provide an assessment of our concerns.

Mr. Daniel Watrous, Town of Tiburon  
May 11, 2017  
Page 2

Should you have any questions regarding this letter, please call Stephen Conteh at 510-286-5534 or [stephen.conteh@dot.ca.gov](mailto:stephen.conteh@dot.ca.gov).

Sincerely,



PATRICIA MAURICE  
District Branch Chief  
Local Development - Intergovernmental Review

c: State Clearinghouse

# Serge Martial

P.O. Box 84 – Tiburon, CA 94920

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Friday, January 27, 2017

Daniel M. Watrous  
Planning Manager  
Town of Tiburon  
1505 Tiburon Blvd.  
Tiburon, CA 94920

Re: Tiburon Peninsula Club (TPC) Expansion Project  
Via: e-mail and hand delivery

Dear Mr. Watrous:

Ever since I moved to Tiburon in 1978, my family has been impacted by the presence of the TPC, first when living at 1410 Vistazo West, then at 90 Lyford Drive. While I fully understand that TPC was existing since the 1950s, the club was no longer the original recreational center open to any resident of Southern Marin. Hence, the continuously growing and expanding club impacted the surrounding community for exclusive private use.

Over the past 39 years, I have expressed my concerns and complaints about the on-going negative noise and visual impact the club imposes on the neighborhood. These concerns were echoed by many surrounding property owners and residents but it seemed that TPC always found a way to overcome our objections and continued its day and night time expansion with the town approval.

The town of Tiburon has imposed what I would call welcomed restrictions on property owners to limit the excessive noise and limit the night lighting of homes and street to a strict minimum in order to avoid the visual impact on the incredible water and city views we should enjoy at night. Such restrictions do not seem to apply to TPC and one could wonder how this club has managed to overcome the massive opposition from its immediate neighbors.

On April 20, 2015, I was at a TPC initial presentation of their latest expansion plan. In the audience, I only could see and hear opposition to the plan, mainly because of the visual and traffic impact this expansion would create. Ludicrous and insulting arguments were used by the TPC representatives to justify this expansion, including the claim their new lighted tennis courts and club expansion would benefit the community children. Let's be honest for a moment and recognize that TPC is an exclusive private club that benefits its members first and foremost.

415 - 435 - 4000

EXHIBIT 6 p. 1 of 2

# Serge Martial

P.O. Box 84 – Tiburon, CA 94920

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Just Say No to TPC Expansion plan – Page two

During that meeting, I reminded the TPC representatives of the on-going problems with the noise and lights from the north side of the club property. I gave them specific examples that included excessive day and evening noise from both the pool and the tennis courts, and the tremendous impact the existing lights have on our views of the San Francisco bay and city. These lights are super bright, reflect the bright colors of the recently renovated tennis courts, and often create a halo that resembles to the "Encounter of the Third Kind" poster. This visual impact is even more unacceptable when one considers that new lighting technology exist but, mainly, when the lighted courts are totally empty.

Today, the TPC is still trying to ignore its negative impact on the community by asking for further expansion of their private club. My family is adamantly opposed to this plan and we also think that all existing light installations should be replaced, managed better, or simply removed. At a minimum, the light use permit should restrict such use of lights to no later than 6:00PM. Adversely affecting the quality of life of the community and residents for the private benefit of a privileged few is unacceptable and should not be permitted.

I hope that your department and the town of Tiburon will deny the TPC request for expansion and further review the existing use of the club's facilities.

Thank you for your review and consideration.

Cordially,



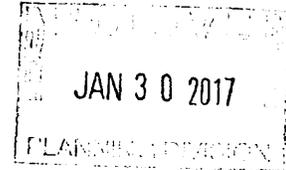
EXHIBIT 6 p. 2 of 2

415 - 435 - 4000

# TIBURON VISTA TOWNHOUSES Inc.

January 30, 2017

Daniel M. Watrous  
Planning Manager  
Town of Tiburon  
1505 Tiburon Blvd.  
Tiburon, CA 94920



Re: Tiburon Peninsula Club (TPC) Expansion Project  
Via: e-mail and hand delivery

Dear Mr. Watrous:

We are in receipt of your notice to inform the community of TPC's plans to expand its club, tennis courts and structures.

As you know, our ten-unit townhouse property, 90 Lyford Drive, is located directly above TPC, on the hillside that forms a natural amphitheater behind it. For the past forty years, we have had to endure the never-ending saga of the TPC's expansions and encroachments to the quiet enjoyment of our complex and our neighborhood. Despite multiple instances of opposing feedback and concerns of the negative impact that the club has imposed to the immediate and extended environment, not much has been done to address and alleviate the on-going problem of noise and visual impact.

Often, sounds on the TPC property are amplified naturally and through systems, and carried uphill. In the summer, that includes the non-stop staccato of tennis balls hitting the court with the associated screaming well into the darkness. During the daytime, the noise of the swimming program with its loud buzzer is with us as well. Weekends can be punctuated with the amplified music of multiple profitable events that are booked at the club.

In addition, the visual impact of the club has become worse over the years with the thinning canopy of trees that were supposed to screen the club from uphill and surrounding neighbors. We now have an increasing unobstructed view of the tennis courts and pool. It is not unusual to see the existing tennis court's lights remaining on long into the night, or even all night, without anyone using them. This light dilutes, diminishes and pollutes our ability to fully enjoy the evening and night views, something that undermines the value and enjoyment of our properties. Property owners and residents of Tiburon are strongly encouraged by the town to minimize the visual impact of lights and most has been accomplished to that effect. No other properties other than TPC are allowed to have such powerful lights that create a halo of visual pollution.

EXHIBIT 7 p. 1 of 2

# TIBURON VISTA TOWNHOUSES

Inc.

Now, TPC is asking for further expansion of their private club that will include more of the same negative impact to the neighborhood. Ironically, the exclusive private Tiburon Peninsula Club is trying to convince everyone that such expansion would serve the children of our community at large through the promotion of a private tennis school open to non-members of the club. That is an insult to our intelligence and the integrity of the neighbors who have been steamrolled each time the TPC has requested extended activities and expansion.

Our association vehemently opposes the TPC expansion plans, especially the need of lighted courts and we further ask the town of Tiburon to remove or reduce the use permit of lights in the existing courts to no later than 6:00 in the evening.

It is unfair to the tax paying community in Tiburon that members of this private elite club are allowed to continue to impose continued day and night time noise and view pollution on all of it's neighbors. It is up to the town of Tiburon to protect the rights of all of the community.

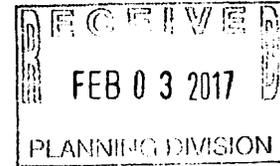
**WE DO NOT SUPPORT ANY MORE EXPANSION.**

Thank you for your consideration.

Tiburon Vista Townhouses Association  
Board of Directors

EXHIBIT 7 p. 2 of 2

Priscilla Embry  
76 Red Hill Circle  
Tiburon, CA 94920  
[Pembry76@yahoo.com](mailto:Pembry76@yahoo.com)



Daniel M. Watrous  
Planning Manager  
Town of Tiburon  
1505 Tiburon Boulevard  
Tiburon, CA 94920

Dear Mr. Watrous,

I am writing to you in opposition to the proposed Tiburon Peninsula Club Expansion Project.

The proposed expansion will generate a huge increase in noise and light pollution in my neighborhood. From Red Hill Circle, I can't help but notice that there's a lot of yelling that accompanies the tennis down at the Tiburon Peninsula Club. I cringe when it's a lesson for children and the staff yells at them. The adult players seem to need to yell and holler at each other too, in aggressive ways. I don't want the players to have to give up their tennis, by any means. However, in planning an expansion it's important to acknowledge that in the acoustic bowl that is downtown Tiburon, everyone has to listen if someone chooses to be loud and unpleasant. The Tiburon Peninsula Club creates a substantial amount of noise and disruption, yet the institution benefits only a few Tiburon residents. In its present form, neighbors who object to the noise from TPC's courts can take comfort that sunset will bring an end to it. The idea that tennis would be extended beyond the daylight hours is unacceptable. It would really change things in the neighborhood. Everyone is entitled to a quiet, dark night without light pollution or the sounds of people screaming abuse at each other.

We chose our home on Red Hill Circle because it has a beautiful view of San Francisco and the Bay. As the sun sets, the glow reflects off the tall buildings across the Bay. At night, we hear birds settling down and an owl who calls from the neighbor's tree. Darkness is important for human health and well-being, and it's important to appreciate it! Forty-nine 22-foot lighted poles, some with double lights, will change all that. It seems selfish of the Tiburon Peninsula Club to propose this project, while the neighbors around them preserve the night sky with dark sky compatible lighting.

Thank you for considering these objections.

Dr. Priscilla Embry

A handwritten signature in black ink that reads "Dr. Priscilla Embry".

EXHIBIT NO. 8

**Dan Watrous**

---

**From:** Trouerbach Family [trouerbach@gmail.com]  
**Sent:** Monday, February 06, 2017 4:18 PM  
**To:** Dan Watrous  
**Subject:** Tiburon Peninsula Club Expansion Project

Dear Mr. Watrous,

Thank you for your notice regarding the expansion plans of the Tiburon Peninsula Club. My family lives directly above the TP Club and already the sound from the Club's tennis court is very dominant, seemingly being amplified by the bowl-shape of the hill. Also visually the Club and its tennis courts are very dominant in the landscape, both for us and for the numerous residents who like to walk on the fire road, with or without their dogs. We believe that expansion of the club would benefit a very small segment of the population at the expense of the enjoyment of the neighborhood and recreation area of many. Therefore we would urge the planning commission to reject the TP Club's expansion plans.  
Sincerely,

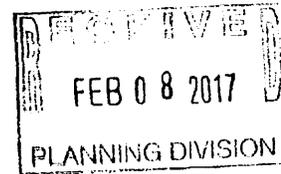
Petra Trouerbach

EXHIBIT NO. 9



*"Professional Management, Personal Service"*

February 6, 2017



Daniel M Watrous  
Planning Manager  
Town of Tiburon  
1505 Tiburon Blvd  
Tiburon, CA 94920

**RE: Tiburon Peninsula Club Expansion**

Mr Watrous,

Our association represents 54 condominium properties residing directly above the Tiburon Peninsula Club. Property addresses are on both Corinthian Court and Harbor Oak.

We have become aware of the Tiburon Peninsula Club's intent to enhance its overall complex, including tennis courts. We currently endure the noise from the Club (bouncing tennis balls throughout the evening), as well as extremely bright lights which impact our coveted views. In short, we already face challenges with the Club's current operations.

Our association not only opposes the expansion, but also would be in favor of the Town mandating restrictions on current lighting lumens/wattage.

Harbor Hill Condominium Association

EXHIBIT NO. 10

## Dan Watrous

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**From:** Daniel Goldberg [dgoldbergsf@gmail.com]  
**Sent:** Thursday, April 06, 2017 9:24 AM  
**To:** Dan Watrous  
**Cc:** Adrea Goldberg; Danny Goldberg  
**Subject:** TPC Lighting Project

Dan,

I live at 143 Esperanza Street with a primary view over the TPC parking lot and lower courts. As both a neighbor and a member of the club, I am writing to voice my opposition to the Tiburon Peninsula Club's proposed lower tennis court lighting project. I have a home with beautiful western views of wetlands and the foothills of Mt Tam, which will be severely and adversely impacted by the proposed project's light pollution. TPC architects and board members have reached out and tried to get us comfortable with this project but to no avail.

The town of Tiburon has an extremely stringent but prudent Outdoor Lighting Ordinance (Section 16-30.070) that residents must adhere to in all situations. In my reading of this section, it seems like very straight forward language that helps preserve our town's fantastic view corridors from unwanted light pollution. Why am I not allowed to up-light a tree with a low voltage bulb in my backyard but we are considering allowing a private tennis club to light up 6 "additional" tennis courts with light poles?

The current exterior light pollution emitted from the Tiburon Peninsula Club seems to be some of the worst light pollution anywhere in the entire town. The existing back tennis court lights illuminate the entire night sky as you walk through Old Saint Hillary's open space fire road. To me this defines "light pollution" (there is no comparison to the parking lot lights which are also bad). I am extremely concerned that we are contemplating allowing even more light pollution to be created in the primary view corridor of so many town residents.

I am hoping to get the word out among my neighbors both on the Mar West side and the Lyford side of the project to help voice our collective opinion that we do not believe the town's lighting ordinance should be conveniently overlooked at the cost of people's views and early Winter evening darkness. As a member of the club and a parent of young children that take tennis lessons at the club, I do not feel that using the youth tennis program as the excuse for this project is appropriate.

Lastly, I want to be clear that I am only opposed to the lighting component of the project and have no issues with any other proposed improvements. I also would like to propose that, prior to any official hearing on this lighting project, TPC first replace the upper court lighting with these (non-light polluting) LED fixtures to show the neighbors that all of their renderings and statements are factual.

Respectfully,

Daniel Goldberg

143 Esperanza Street

EXHIBIT NO. 12

## Dan Watrous

---

**From:** Polly Ely [pollysely@gmail.com]  
**Sent:** Friday, April 07, 2017 10:18 AM  
**To:** Dan Watrous  
**Subject:** Strong Opposition to the TPC development project

I live at 145 Esperanza Street with a primary view over the TPC parking lot and lower courts. I am a neighbor and ex- member of the club, I am writing to voice my STRONG opposition to the Tiburon Peninsula Club's proposed lower tennis court development project. Our quality of life at home will be severely and adversely impacted by the proposed project's light and NOISE pollution.

I oppose the project in total due to the incredible noise pollution that comes with it (people grunting loudly, loud and constant slapping of tennis balls and coaches yelling all day long) It begins at 6-7am in the morning and the existing noise never stops until after sundown. And now with a bunch more lighting the noise will inevitably be able to go on well into the night. I OBJECT completely to this ADDITIONAL noise and light pollution.

More light pollution will completely change our ability to view the night sky. I do not want lighting to further obstruct our ability to relax in our yard (which is already inhibited by the TPC because of the noise). The existing light pollution created by the TPC is disturbing and flies in the face of ALL Tiburon lighting restrictions.

I am STRONGLY OPPOSED to having every moment of my outdoor time in my yard to be eclipsed by the TPC's Tennis program. This will profoundly diminish my experience in my yard and in the yards of my neighbors. It will reduce the value of my home since no one will want to listen to the NON STOP unending noise pollution that echoes through the valley throughout every day all year long.

To echo Danny Goldberg's suggestion: I also would like to propose that, prior to any official hearing on this lighting project, TPC first replace the upper court lighting with these (non-light polluting) LED fixtures to show the neighbors that all of their renderings and statements are factual.

Please stop this development as it will completely ruin the quiet and dark of our old town experience.

respectfully,  
Polly and Mark Ely  
415-706-7637

EXHIBIT NO. 13



# Marin Audubon Society

P.O. Box 599 | MILL VALLEY, CA 94942-0599 | MARINAUDUBON.ORG

February 28, 2017

Scott Anderson, Director  
Community Development  
Town of Tiburon  
1505 Tiburon Blvd  
Tiburon, CA 94920

Re: Tiburon Peninsula Club Expansion Project Environmental Impact Report

Dear Mr. Anderson:

The Marin Audubon Society appreciates the opportunity to comment on the EIR for the Tiburon Peninsula Club Expansion. We fully support the need to prepare an EIR for this project because it has the potential to result in significant environmental impact in a number of areas. We did not find a deadline for scoping comments, only a date for a meeting to receive scoping comments, which we could not make. We request that you consider our questions and concerns which are focused on biological impacts. The DEIR will be inadequate if it does not respond to our concerns. The information provided in the Initial Study is insufficient to enable us to evaluate the potential impacts of the project.

The Tiburon Pond/Marsh is one of the very few fresh water resources in Southern Marin. This is a valuable resource that needs to be protected and enhanced as habitat for resident and migratory wildlife and for special status species. We ask that the EIR provide the following:

1. An independent review of the potential impact of the proposed lighting on nesting birds in the adjacent marsh and riparian/willow habitat and on migratory birds using the pond.
2. A discussion of the use of and the importance of the pond for migratory birds during the months they overwinter in the bay area and other species that are protected by legislation. Wetland and other aquatic habitats are important not only for special status species but for migratory birds as well. The Migratory Bird Treaty Act protects migratory species and other federal and state laws protect certain species, such as raptors, particularly eagles. Federal and state legislation that protects wildlife species should be reviewed and compliance of the project should be evaluated.
3. Surveys for red-legged frog and other special status species that potentially use the site. Discuss possible use of the willow/cattail shoreline bordering the pond by red-legged frog and Common Yellowthroat and impacts of the project on the birds and their habitat.
4. A more clear and comprehensive explanation for what is considered marsh/wetlands in the adjacent Pond. What areas are being considered wetlands and what areas marsh? To us they are pretty much the same thing. Define the adjacent wetland/marsh habitats in terms of the

federal 404 jurisdictional and other waters definition. The IS preparers and/or the applicant appear to be using some other definitions. What is a "blue water" marsh edge shown on figure 7? The water levels in the pond will vary depending on the time of year, weather conditions and management of the water levels in the pond. The wetland/marsh boundary should be determined at the highest level, without flooding of adjacent properties.

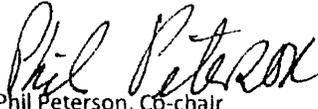
5. A Figure that identify the riparian habitat and show where it is considered to be. Figure(s) showing the edge of the marsh and wetlands are also needed. The current figures show numbers but there is no clear line connected to the numbers on any figure.
6. Consideration of cattails. How are the cattails in the pond, which the Town removes, being considered in terms of definition of marsh/wetland edge? We see only a tiny patch of cattails adjacent to the pond, when actually there is an extensive population which has been cleared by the Town and that has eliminated extensive habitat. These management actions which alter the wetlands should not be ignored and dismissed.
7. A comprehensive discussion of wetland/marsh/riparian buffers. Discuss buffers from the wetland/marsh habitats as well as the riparian habitat. Lines 8 and 6 (showing buffer and marsh edge) are unclear on figures. Line 6 is the 100' buffer from the edge of the marsh but the edge of the water appears to be being considered the edge of the water. MAS policy is that a minimum 100-foot buffer is necessary to provide a complete habitat because wetland/marsh dependent wildlife need adjacent uplands for nesting, feeding and as cover from predators, and to protect wetlands/marsh from adjacent uses. We are unable to tell from the IS explanations where the 100 feet buffer from the marsh edge is and the 25 feet buffer from the wetland edge begins and ends.
8. More complete discussion of water quality. Provide a more comprehensive explanation of the bioswales. We are also unable to tell where the two bioswales would be or what they would consist of. The design for the bioswales should be presented along with a figure showing their location. Without the design and evaluation of its effectiveness the public and decision-makers will be unable to evaluate the adequacy of the facility to "reduce water quality impacts." (Mitigation Measure HWQ-1)The DEIR should also explain what the water will be reduced from, the current or under the project. The discussion should explain the current water quality and that which would occur post-proposed project. Simply saying that "BMPs will address treating runoff" is not sufficient nor is relying on agencies to regulate water quality. This takes the issue out of the public review, which is not in the public interest.
9. Discussion of mitigation for impacts to wetlands. The project has the clear potential to cause significant impacts on wetland/marsh habitat and special status and migratory species that depend on it. The parking area would extend closer to the marsh/pond habitat and bring more developed uses and people closer to the habitat, squeezing the wildlife into a narrower linear habitat than exists now. Loss of riparian/wetland vegetation is also possible. Mitigation should be provided for direct and indirect impacts. The preferred mitigation alternative in CEQA is to avoid impacts. The DEIR should assess alternatives that would mitigate these impacts. MAS's recommendation is discussed below.

10. An Environmentally Preferred Alternative. We request that an Alternative be developed that locates the additional parking in areas away from the pond. There is a large area shown on figures where highly invasive plants (acacia) are growing. These areas are not adjacent to the pond. We request that the environmentally preferred alternative locate the new tennis courts, parking and other features in these large areas away from the pond. This would appear to enable adverse impacts on the pond/marsh to be avoided and should, therefore, be the environmentally preferred alternative.

Thank you for considering our input.

Sincerely,

  
Barbara Salzman, Co-chair  
Conservation Committee

  
Phil Peterson, Co-chair  
Conservation Committee

**Comment Letters on  
Original NOP**

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 4

P.O. BOX 23660

OAKLAND, CA 94623-0660

PHONE (510) 286-5528

FAX (510) 286-5559

TTY 711

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*Serious Drought.  
Help save water!*

February 1, 2017

04-MRN-2016-00034

SCH # 2017012020

Mr. Dan Watrous  
Planning Manager  
Town of Tiburon  
1505 Tiburon Boulevard  
Tiburon, CA 94920

**Tiburon Peninsula Club Expansion – Notice of Preparation (NOP)**

Dear Mr. Watrous:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced project. In tandem with the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy (SCS), Caltrans mission signals a modernization of our approach to evaluating and mitigating impacts to the State Transportation Network (STN). Caltrans *Strategic Management Plan 2015-2020* targets aim to reduce Vehicle Miles Travelled (VMT) by tripling bicycle and doubling both pedestrian and transit travel by 2020. Our comments are based on the NOP.

***Project Understanding***

The proposed project would include a Conditional Use Permit to construct a Junior Tennis Center that would be used to expand the current junior clinic program at 1600 Mar West Street in the Town of Tiburon. The proposed project would mainly be constructed in an area that is currently used as overflow parking for the existing Tiburon Peninsula Club (TPC) adjacent to six tennis courts. Main improvements include:

- Two tennis courts;
- A 650 square foot (sf) structure to include bathrooms and tennis-related storage;
- Landscaped entry to a covered entrance to the facility;
- Patio with shaded area with portable bleachers for tournaments;
- A 1,230 sf maintenance and storage facility; and
- Three new formal parking areas with 30 parking spaces.

Access to the project would be provided via the intersection of State Route (SR) 131 and Mar West Street. As mentioned in Mitigation Measure T-1, the Town plans to apply to Caltrans for signalization or installation of a rotary/traffic circle at above mentioned intersection once a signal warrant is met.

### ***Lead Agency***

As the Lead Agency, the Town of Tiburon is responsible for all project mitigation, including any needed improvements to the STN or reduction in VMT. The project's fair share contribution, financing, scheduling, implementation responsibilities and Lead Agency monitoring should be fully discussed for all proposed mitigation measures.

### ***Travel Demand Analysis***

As stated under Section XVI (Transportation/Traffic) of the Initial Study, a 2004 Traffic Study was done for the TPC and a 2010 Traffic Analysis was done for the Belvedere-Tiburon Library Expansion project. However, the 2004 Traffic Study is too old for use and it is inapplicable to use a Traffic Study for another project as each project has its own impacts. Please provide an updated travel demand analysis to Caltrans for review.

With the enactment of Senate Bill (SB) 743, Caltrans is focusing on transportation infrastructure that supports smart growth and efficient development. Recently approved guidance for incorporating SB 743 (*Local Development-Intergovernmental Review Program Interim Guidance, November 2016*) intends to ensure that development projects align with State policies through the use of efficient development patterns, innovative travel demand reduction strategies, and necessary multimodal roadway improvements. In Caltrans' *Smart Mobility 2010: A Call to Action for the New Decade*, this project falls under **Place Type 4 Suburban Communities - Neighborhoods**, which includes areas with residential subdivisions and complexes including housing, public facilities and local-serving commercial uses, typically separated by arterial corridors. As this Place Type is characterized by a low level of integration of housing with jobs, retail, and services, poorly connected street networks, low levels of transit service, and typically leads to high levels of VMT and corresponding low levels of active transportation, we ask that VMT analysis be included in the travel demand analysis.

### ***Multimodal Planning***

The project should be conditioned to ensure connections to existing bike lanes and multi-use trails to facilitate walking and biking to the project site. Specifically, the proposed project should provide connections to the existing Class I Bikeway/Multi-Use Path on Tiburon Boulevard as shown in the *2008 Marin County Unincorporated Area Bicycle and Pedestrian Master Plan*. Providing these connections with streets configured for alternative transportation modes will reduce VMT by creating multi-modal links to increase ridership of nearby Marin Transit Bus Routes 119 and 219 and Golden Gate Transit Bus Route 8.

### ***Vehicle Trip Reduction***

Given the intensification of use and the opportunities to reduce VMT in this Place Type, we encourage the Town of Tiburon to establish a Transportation Management Association (TMA) in partnership with other developments in the area to pursue aggressive trip reduction targets with Lead Agency monitoring and enforcement. In addition, the Transportation Demand Management (TDM) elements described below should be included in the program to promote

smart mobility and reduce regional VMT and traffic impacts to the STN:

- Project design to encourage walking, bicycling, and convenient transit access;
- Lower parking ratios;
- Transit fare incentives for guests, visitors, and employees such as subsidized transit passes on a continuing basis;
- Carpooling incentives and dedicated parking spaces for carpooling employees;
- Enhanced bus stops including bus shelters;
- Designated bicycle parking at the facility entrance;
- Charging stations and designated parking spaces for electric vehicles; and
- Reducing headway times of nearby Marin Transit Bus Routes 119 and 219 and Golden Gate Transit Bus Route 8.

For additional TDM options, please refer to Chapter 8 of FHWA's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference*, regarding TDM at the local planning level. The reference is available online at:

<http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf>. For information about parking ratios, please see MTC's report, *Reforming Parking Policies to Support Smart Growth*, or visit the MTC parking webpage:

[http://www.mtc.ca.gov/planning/smart\\_growth/parking](http://www.mtc.ca.gov/planning/smart_growth/parking).

### ***Traffic Impact Fees***

Please identify project-generated travel demand and estimate the costs of public transportation improvements necessitated by the proposed project; viable funding sources such as development and/or transportation impact fees should also be identified. We encourage a sufficient allocation of fair share contributions toward multi-modal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. We also strongly support measures to increase sustainable mode shares, thereby reducing VMT.

### ***Encroachment Permit***

Please be advised that any work or traffic control that encroaches onto the State ROW requires an encroachment permit that is issued by Caltrans. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW must be submitted to the following address: David Salladay, District Office Chief, Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. See the website linked below for more information: <http://www.dot.ca.gov/hq/traffops/developserv/permits>.

Mr. Watrous, Town of Tiburon  
February 1, 2017  
Page 4

Should you have any questions regarding this letter, please call Erik Bird at 510-286-5521 or Erik.Bird@dot.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Patricia" with a stylized flourish at the end.

PATRICIA MAURICE  
District Branch Chief  
Local Development - Intergovernmental Review

c: State Clearinghouse

## NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., Suite 100  
West Sacramento, CA 95691  
Phone (916) 373-3710  
Fax (916) 373-5471  
Email: [nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)  
Website: <http://www.nahc.ca.gov>  
Twitter: @CA\_NAHC



April 28, 2017

Daniel Watrous  
City of Tiburon

Sent by Email: [dwatrous@townoftiburon.org](mailto:dwatrous@townoftiburon.org)

RE: SCH#2017012020, Tiburon Peninsula Club Expansion Project, Marin County

Dear Mr. Watrous:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

**CEQA was amended significantly in 2014.** Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

#### AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or

tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- a. A brief description of the project.
  - b. The lead agency contact information.
  - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
  - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).
2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
- a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).
3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
- a. Alternatives to the project.
  - b. Recommended mitigation measures.
  - c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).
4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
- a. Type of environmental review necessary.
  - b. Significance of the tribal cultural resources.
  - c. Significance of the project's impacts on tribal cultural resources.
  - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).
5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).
6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
- a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
  - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).
7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
- a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
  - b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).
  
9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).
  
10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
  - a. Avoidance and preservation of the resources in place, including, but not limited to:
    - i. Planning and construction to avoid the resources and protect the cultural and natural context.
    - ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
  - b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
    - i. Protecting the cultural character and integrity of the resource.
    - ii. Protecting the traditional use of the resource.
    - iii. Protecting the confidentiality of the resource.
  - c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
  - d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
  - e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
  - f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).
  
11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
  - a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
  - b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
  - c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: [http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation\\_CalEPAPDF.pdf](http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf)

#### SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: [https://www.opr.ca.gov/docs/09\\_14\\_05\\_Updated\\_Guidelines\\_922.pdf](https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf)

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
  - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>

#### NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center ([http://ohp.parks.ca.gov/?page\\_id=1068](http://ohp.parks.ca.gov/?page_id=1068)) for an archaeological records search. The records search will determine:
  - a. If part or all of the APE has been previously surveyed for cultural resources.
  - b. If any known cultural resources have been already been recorded on or adjacent to the APE.
  - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
  - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
  - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.
3. Contact the NAHC for:
  - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

- b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
- 4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
  - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
  - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
  - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions, please contact me at my email address: [sharaya.souza@nahc.ca.gov](mailto:sharaya.souza@nahc.ca.gov).

Sincerely,



Sharaya Souza  
Staff Services Analyst  
cc: State Clearinghouse

**From:** THPO@gratonrancheria.com [mailto:THPO@gratonrancheria.com]  
**Sent:** Tuesday, April 25, 2017 4:48 PM  
**To:** Dan Watrous  
**Subject:** Tiburon Peninsula Club Expansion Project, 1600 Mar West Street, Tiburon, Marin County

Dear Dan Watrous,

The Federated Indians of Graton Rancheria (FIGR) has received your project notification, and has reviewed your project and concluded that the project may impact Tribal Cultural Resources. Due to the location of the project's area of potential effect (APE) and the proximity to a site, there is a possibility for an inadvertent discovery of cultural resources, both prehistoric and historic. The project should have a notification provision to contact the FIGR Tribal Heritage Preservation Officer (THPO) if cultural resources are encountered during any ground disturbing activities.

Sincerely,

Buffy McQuillen

Tribal Heritage Preservation Officer (THPO)

Native American Graves Protection and Repatriation Act  
(NAGPRA)

Office: 707.566.2288; ext. 137

Cell: 707.318.0485

FAX: 707.566.2291

**Antonette Tomic**

THPO Administrative Assistant

**Federated Indians of Graton Rancheria**

6400 Redwood Drive, Suite 300

Rohnert Park, CA 94928

Office: 707.566.2288, ext. 143

Fax: 707.566.2291

[atomic@gratonrancheria.com](mailto:atomic@gratonrancheria.com)

**P** please consider our environment before printing this email.

**Federated Indians of Graton Rancheria and Tribal TANF of Sonoma & Marin - Proprietary and Confidential****CONFIDENTIALITY NOTICE:** This transmittal is a confidential communication or may otherwise be privileged. If you are not the intended recipient, you are hereby notified that you have received this transmittal in error and that any review, dissemination, distribution or copying of this transmittal is strictly prohibited. If you have received this communication in error, please notify this office at 707-566-2288, and immediately delete this message and all its attachments, if any. Thank you

Michael Parker  
25 Harbor Oak Drive  
Tiburon CA 94920

JAN 30 2017  
PLANNING DIVISION  
January 6, 2017

Daniel M Watrous  
Planning Manager  
Town of Tiburon  
1505 Tiburon Blvd  
Tiburon CA 94920

**RE: Tiburon Peninsula Club Expansion Project – Draft EIR**

As property owner of 50 Harbor Oak Drive, a six unit apartment building and manager of 40 Harbor Oak Drive, a twelve unit building; I would like to express some concerns regarding the proposed additional expansion of the Tiburon Peninsula Club.

These two properties are located directly above the TPC and are, along with 1645 Mar West; the closest residential units to the TPC and therefore most affected by activities at the club. The issues are primarily the long-standing ones of noise, traffic and light pollution. These concerns have been aired and addressed in previous public meetings and I assume will be considered in regard to this current proposal.

One specific point I would like to make is in regards to trees and landscaping which I hope will be part of any plan to add a further expanse of lighted courts; keeping in mind that our units look down from the hill directly toward the proposed expansion. Trees that would be taller than the standard parking lot variety would help soften the view from higher elevations. That area is one of the few here in Tiburon that could tolerate tall trees without blocking any views. There are in fact Redwoods along the North side of Mar West doing very well, only requiring topping once to retain views from 40 Harbor Oak.

Light pollution is a real concern; I know that if I want to put a skylight in my roof, the neighbor's night view and strict control of lighting spill is part of any such approval. Several orders of magnitude brighter; the blue green glow of a lighted tennis court can probably be seen from outer space. Please consider that without proper screening; the evening views of the neighboring residents could be lost in the glare.

Sincerely;



Michael Parker

EXHIBIT NO. 5

Scott Anderson

---

**From:** Dan Watrous  
**Sent:** Wednesday, January 25, 2017 11:36 AM  
**To:** Scott Anderson  
**Subject:** Fwd: No! to TPC expansion

Sent from my iPhone

Begin forwarded message:

**From:** Joyce Bell-Albert <[beezer1@me.com](mailto:beezer1@me.com)>  
**Date:** January 25, 2017 at 11:08:44 AM PST  
**To:** <[dwatrous@townoftiburon.org](mailto:dwatrous@townoftiburon.org)>  
**Subject:** No! to TPC expansion

Dear Mr Watrous.

It has been many years since we last contacted you, so our greetings to you and thanks for all of the help that you have extended to us over the years that we have lived up at 90 Lyford Drive. Now we are asking you for your help once again.

We strongly oppose the expansion of TPC, as you are aware the hillside behind TPC acts like an amphitheater magnifying the sounds at the base of the hill and broadcasting that sound to all of the 100's of homes and residents on this hillside. As it is, the current tennis courts at TPC create a disturbing amount of light pollution at night, expanding the amount of courts and lights would further pollute the night time vista.

TPC is not a good neighbor , during the summer we are subject to day long sounds of the tennis balls that are as loud as construction hammers, yelling, a horrible buzzer for swim meets, and music so heavy in base that our house vibrates. TPC does nothing for the community, with an entry fee of some 18K + annual dues it caters to an affluent membership, which is fine..However, why should the members of this PRIVATE club be allowed to disturb the quiet enjoyment of an entire community of homeowners that reside on this hillside and receive no benefit from this club.

As a private homeowner, we are prohibited from installing lighted skylights in our home, yet there is no provision to limit the huge amount of light pollution that this club emits at the base of our hillside. As a private homeowner we could not have the number of live music parties that TPC has without the neighbors calling the police. We strongly believe that TPC has reached and in some cases exceeded, the amount of noise, and visual disturbance that this club inflicts on it's neighborhood.

No more expansion...Please...just no,

Joyce and David Albert  
90 Lyford Drive  
Tiburon.

RECEIVED  
JAN 25 2017

# **Tiburon Peninsula Club – Junior Tennis Club Project**

## **Revised Initial Study**

**April 2017**

**Prepared for:       Town of Tiburon  
1505 Tiburon Boulevard  
Tiburon, CA 94920**

**Prepared by:       Leonard Charles and Associates  
7 Roble Court  
San Anselmo, California 94960**

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## **1.0 Introduction and Background**

This Revised Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code 21000 *et seq*, the *State CEQA Guidelines*, California Code of Regulations Section 15000 *et seq*, and the *Town of Tiburon Environmental Review Guidelines*. The project assessed in this Revised Initial Study consists of the Tiburon Peninsula Club's (TPC) recently-scaled back project now proposing to construct two restrooms, a new entry to the southern tennis courts, and storage facilities; to consolidate current temporary storage structures to allow additional parking; and to add lighting to the existing six southern tennis courts. All work associated with the project is proposed on the Judge Field portion of the TPC site, located on the south side of Mar West Street adjacent to Railroad Marsh.

## **2.0 Project Location and Setting**

The proposed project is located on the southern portion of the Tiburon Peninsula Club's (TPC) property at 1600 Mar West Street in the Town of Tiburon (see Figures 1 and 2). The TPC is located near the south end of a small valley that extends southwest from the Tiburon Ridge. The Old St. Hilary's Open Space Preserve lies to the northwest, and Railroad Marsh borders the south side of the southern courts. The slopes of this valley are relatively heavily developed with residential units, many of which have views down onto the project site. The east-facing hillside has some single-family residences and several large multi-family complexes, while the west-facing slope has mainly single-family units. The proposed project has been reduced in scale from a previous project design.

The tennis club was originally established in 1950 (as the Southern Marin Recreation Center) and originally served approximately 150 families. The name of the Club was changed to the Tiburon Peninsula Club in 1961. The Club's facilities have been renovated and expanded (including the addition of six tennis courts south of Mar West Street) numerous times over the intervening 67 years, and currently serve 700 families and 175 senior memberships. Most of the Club's recreational facilities are north of Mar West Street and include lighted tennis courts, swimming pools, a fitness building, sports court, locker rooms, a clubhouse, and other facilities. Six unlighted tennis courts and most of the Club's parking are located on the southern portion of the site (the Judge Field portion). The parking area is surfaced with gravel and four light standards with double lights on each standard that provide illumination for the parking area.

Railroad Marsh is located on land dedicated to the Town by the TPC and the developer of Point Tiburon (the former railroad yard) in the 1980s. The marsh was historically part of the Belvedere Lagoon and supported saltmarsh and tidal mudflat habitat. In the 1880s, the site was cut off from tidal action by construction of the Northwestern Pacific Railroad yard. Railroad Marsh currently serves as a holding basin for runoff from the Downtown watershed that includes the TPC property, much of Old St. Hilary's Open Space Preserve, and the residentially-developed areas throughout the watershed. Railroad Marsh also provides wildlife habitat and a visual amenity.

### 3.0 Proposed Project Description

The TPC seeks Town approval of a Conditional Use Permit to construct a Junior Tennis Center that would be used to expand its current junior clinic program and provide lessons for members and non-members.

#### ***Proposed Improvements***

The main improvements are listed below, and shown on Figure 3.

1. A one-story structure will be constructed adjacent to the north side of the existing lower tennis courts that will include two bathrooms (a total of 550 square feet) and 300 square feet of storage for TPC-owned tennis related equipment.
2. North of this structure will be a landscaped entry to a 792-square foot covered entrance (translucent roof) to the facility. The entryway will include folding gates and a card reader.
3. Adjacent to and east of the proposed entry area will be a 1,340-square foot screened outdoor area open to the sky and screened from public view by a wall and doors to be coordinated with the tennis facility program to accommodate the temporary maintenance and storage structures on the site (five Tough Sheds, four dumpsters, and eight trash bins). This facility will be screened but not covered.
4. Pole lights will be installed to light the six existing courts so that afterschool programs can extend until the “before dinner” hours. Lighting will be used from September 8th to April 14th only. The earliest sunset occurs at 4:50 p.m. in December, and ranges to 7:45 and later in April through September when the lights are never turned on. The lights will turn on 30 minutes before full sunset (varies from day to day). During the season when lights are necessary, classes and activities will cease at 7:30 and the lights will stay on until 7:45 allowing 15 minutes for cleanup.

The proposed lighting will include eight (8) lamps per court. All 48 lamps will be mounted on 22-foot high poles. Three different types of pole-and-light configurations are specified, with each pole holding one, two, or four individual lights.

The lighting will be LED and will have individual on-off switching and motion sensors, be screened and shielded, and be “dark sky” compliant (as defined by the international Dark-Sky Association). All light sources will be set below the floor level of neighboring houses on Mar West Road. The light system will use an astronomic clock for switching, which will automatically adjust daily to reflect the changing sunset hour.

This project description has been revised from that in the original Initial Study, which was publicly circulated on January 4, 2017. The revisions are at the request of the applicant, and assess the potential impacts from a project that is smaller than the project assessed

in the circulated Initial Study. The revised project is a pared-down version of the originally proposed project. In addition to the elements described above, the original project proposal also called for construction of a viewing patio above the storage area, two new tennis courts with associated lighting, additional paved parking areas, and two bioswales in different locations from the one currently proposed.

### ***Environmental Mitigations Incorporated into the Proposed Project***

The applicant has eliminated or reduced several potential project impacts by including several self-mitigating design components and approaches in the project application. These include the following:

1. Reducing visual impacts by limiting outdoor tennis court lighting to no later than 7:30 PM and installing types of lights that eliminate views of direct light illumination from off the site. The lighting will be LED lights with individual on-off switching and motion sensors. The lights would be switched off when a court is not in use. All lighting would have concealed sources that are mounted below the height of floor elevations of adjacent residences on Mar West Street and residences at higher elevations to the north. To further reduce lighting effects, 1) luminaires (i.e., the complete light units) would be installed parallel to the court surface, not include adjustable knuckle mounts, and not permit future adjustment; 2) the LED lighting would be limited to 4000K (“natural White” color); and 3) the average paint reflectance of the tennis court playing and out-of-bounds surfaces would be 10% or less.
2. Reducing biological impacts by maintaining construction setbacks of at least 100 feet from the marsh edge, 25 feet from the wetland edge, and 5 feet from native trees.
3. Reducing impacts to water quality by installing a 500 square foot bioswale to naturally filter site roof and patio runoff prior to its discharge to Railroad Marsh. The bioswale would be constructed on the north side of the existing courts, adjacent to the west side of the proposed bathrooms and locker structure. It would collect runoff from the roof of the covered entryway and adjacent bathrooms and storage locker. A 4-inch outlet pipe will collect biofiltered water from below the filtration level of the bioswale and transport it to a discharge point in the existing concrete-lined drainage swale leading to the marsh. No ground surface runoff will be collected. The depth of the 4-inch drainage line is between 1.5 and 2 feet.
4. The Marin County Stormwater Pollution Prevention Program (MCSTOPPP) requires a minimum of an 18-inch infiltration zone plus a slope to allow runoff to enter the treatment area. The treated water would need to be removed via a perforated pipe to the discharge point.

### ***Usage***

TPC currently has 700 Family memberships and 175 Senior memberships. TPC currently has programs teaching the game of tennis to young beginners through advanced tournament play. The project would allow an expansion of the current junior clinic program and group lessons for both TPC members and non-members. The applicant estimates that the proposed project would increase usage of the lower courts

by 20 more students per day between September and mid-April, or 6 more students at any given time. The applicant expects that the traffic increase would be minimal as some students can access the site by walking or bicycling. There would be no increase of court usage during the months when natural sunlight is adequate to light the courts

### ***Project Objectives***

The applicant's objective is to develop a facility that can provide a complete tennis learning experience for the children of the Tiburon Peninsula. It is intended to teach the game of tennis to young players from an introduction to the game through to top-level tournament competition. It is also intended to foster the wholesome interaction and friendships that grow from shared athletic experience under young adult mentors and role models. The applicant believes that the project would allow TPC to expand its role as an asset to the community both for TPC members and non-members.

## **4.0 Lead Agency Information**

### **A. Project Title**

Tiburon Peninsula Club – Junior Tennis Center

### **B. Lead Agency Name and Address**

Tiburon Community Development Department  
Town of Tiburon  
1505 Tiburon Boulevard  
Tiburon, CA 94920

### **C. Contact Person and Phone Number**

Dan Watrous, Planning Manager  
415.435.7393

## **5.0 Regulatory Oversight**

This Initial Study is being circulated to the public for review and comment. All agencies and departments that have jurisdiction over the subject property or the natural resources affected by the project have received a copy of the original Initial Study. Because the project has been reduced in scale and size, that Initial Study identified more impacts than are identified in this Revised Initial Study. As such, the Revised Initial Study was not recirculated to these other agencies. The agencies and departments that the original Initial Study was sent include: Tiburon Public Works Department; Tiburon Fire Protection District; Tiburon Police Department; the California Department of Fish and Wildlife; the San Francisco Regional Water Quality Control Board; the Bay Area Air Quality Management District; the Marin Municipal Water District; and Sanitary District No. 5. It was also sent to the Federated Indians of Graton Rancheria and the Torres Martinez Desert Cahuilla Indians.

## 6.0 Initial Study Checklist

This Initial Study is based on CEQA's Environmental Checklist Form. Each item on the checklist is answered as either "potentially significant impact," "less than significant with mitigation incorporated," "less than significant," or "no impact" depending on the anticipated level of impact. The checklist is followed by explanatory comments corresponding to each checklist item.

A "no impact" response indicates that it is clear that the project will not have any impact. In some cases, the explanation accompanying this response may include reference to an adopted plan or map. A "less than significant impact" response indicates that there will be some impact but that the level of impact is insufficiently substantial to be deemed significant. The text explains the rationale for this conclusion. A "less than significant impact with mitigation incorporated" response indicates that there will be a potentially significant impact, but the Initial Study determines there are adequate mitigations, which are described and have been included in the project, to reduce the impact to an insignificant level. Finally, a "potentially significant impact" response would indicate that there is insufficient analysis to conclude that there is not reasonable evidence of a significant impact or the Initial Study cannot identify mitigation measures to adequately reduce the impact to a level that is less than significant. In the case of this response, an EIR would be required.

### Discussion of Environmental Impacts

#### I. Aesthetics

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>a. Have a substantial adverse effect on a scenic vista?</i>			X	
<i>b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</i>				X
<i>c. Substantially degrade the existing visual character or quality of the site and its surroundings?</i>			X	
<i>d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</i>	X			

#### Setting

The project site is located adjacent to the six southern tennis courts of the TPC (i.e., the TPC courts located south of Mar West Street). The proposed construction would primarily be located immediately north of those courts in an area currently occupied by a storage area and parking.

The site is located toward the southeastern edge of a small valley that trends south from Tiburon Ridge toward Richardson Bay. The valley's hillsides are primarily developed with multi-family complexes and single-family homes to the west and with primarily single-family residences to the east. The Old St. Hilary's Open Space Preserve occupies the hillside to the northeast. Railroad Marsh, which is largely surrounded by willows and other vegetation, is located along the mouth of the valley to the south.

The southern end of the valley is largely occupied by the Tiburon Peninsula Club facilities. Mar West Street runs through the center of the TPC property. Currently a swim center with three pools, a tennis facility with six tennis courts, and other facilities are located north of Mar West Street. South of Mar West Street there are six additional tennis courts, the parking lot, and overflow parking areas.

From the elevated viewpoints on the surrounding hillsides, current views of the project vicinity encompass existing TPC infrastructure, including blue-and-green painted tennis courts; swimming facilities; a parking lot with associated parked vehicles; and scattered landscaping. The TPC is substantially surrounded by trees and other vegetation.

A dense band of trees along the north edge of Railroad Marsh largely shields the site from view from Tiburon Boulevard and buildings along that street, including the Belvedere-Tiburon Public Library and the Tiburon Town Hall—as well as other public and commercial buildings and residences located on the flat land to the south (including the Point Tiburon Marsh Condominiums). During the winter when deciduous trees bordering the marsh lose their leaves, the vegetation provides less shielding from some vantage points south of the marsh. As a result, current public views of the site are primarily limited to those from Mar West Street as it passes through the TPC, from a few locations along some residential streets in the surrounding hills, and from portions of the Old St. Hilary's Open Space Preserve. The site may be visible during the winter months from certain vantage points to the south of the marsh, such as the Point Tiburon Marsh Condominiums.

The site is in view of more than 100 private residences located on the surrounding hills, including condominiums, apartments, and single-family residences. Despite the amphitheater-like topography, current public views of the project site from the streets and sidewalks on the hillsides and on Mar West Street are partially or completely obscured in most places by mature trees and man-made structures such as fences and residences. Presumably many of the private residences that screen public views from the streets would themselves have full or partial views of the project site.

Existing lighting includes street lights along Mar West Street in the project area, four elevated lights in the TPC parking lot, residential lighting on the hills above the project site, and residential and commercial lighting to the south. The proposed project would include installation of lighting at the six existing courts. The illumination would be visible from the hillsides, and the lights themselves could be visible from some residential units such as those on Point Tiburon Marsh Condominiums. Lighting is discussed in more detail below.

## **Potential Impacts**

- a. *Have a substantial adverse effect on a scenic vista. Less than significant impact.*

The Town's General Plan states that the views that community members enjoy from their homes and open spaces are among the most valued characteristics of the community. Consequently, the Town has the following relevant goals and policies regarding protection of scenic views. These goals and policies also identify the types of views that could be considered scenic vistas.

Goal OSC-B: To provide and permanently preserve as much open space as possible to protect shorelines, open water, wetlands, significant ridgelines, streams, drainageways, riparian corridors, steep slopes, rock outcroppings, special status species and their habitat, woodlands, and areas of visual importance, such as views of and views from open space.

Goal OSC-C: To permanently protect to the maximum extent feasible, the unique open space character of the Town which is attributable to its large amounts of undeveloped land and open water.

Policy OSC-31: The preservation of visual qualities, views, and the view potential of the natural and built environment shall be a major consideration of the Town in any development project review.

The proposed project is a relatively minor addition to the existing tennis courts, and in keeping with the adjacent development. Accordingly, the impact on daytime views is deemed less than significant. The immediate area is already moderately developed, with tennis courts and parking lots adjacent to the project site and on both sides of Mar West Street. The project would not cause the loss of views of natural open space or other desirable views. The project site is largely shielded from view from hiking trails on the Old St. Hilary's Open Space Preserve by topography and surrounding trees. Other than the adjacent Railroad Marsh to the south, the site is surrounded by urban development. It is expected that the proposed new facilities would not substantially change views from surrounding residences and open space located above and distant from the project site.

The construction of low-lying structures with a small footprint would not substantially change the visual character of the site nor affect a scenic vista. Therefore, the impact to scenic vistas would be less than significant. The proposed lighting could affect scenic resources; that potential lighting impact is addressed below under Checklist Item I(d).

- b. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? No impact.*

This site is not adjacent to or within the viewshed of a State Scenic Highway or other designated scenic roadway. There would be no impact per this criterion.

- c. *Substantially degrade the existing visual character or quality of the site and its surroundings?* **Less than significant impact.**

The proposed project is in keeping with adjacent site development. There are existing tennis courts and parking lots adjacent to the project and on both sides of Mar West Street. The project would not cause the loss of natural open space or other desirable visual elements. The site is largely shielded from public vantage points such as surrounding roads and hiking trails by vegetation, topography, and residential housing, though there are three residences situated above the site on the eastern leg of Mar West Street that have a clear view down to the site. However, the project additions would not introduce new types of structures nor substantially change or degrade the existing visual character or quality of the site or its surroundings. There would be a less-than-significant impact per this criterion.

- d. *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?* **Potentially significant impact.**

The proposed project includes the installation of lighting at the six existing courts on the south side of Mar West Street (see Figure 4). Lighting would be of the following three different types:

- Single dimmable horizontal LED fixture
- Back-to-back dimmable horizontal LED fixtures
- Two 120 degree angled fixtures

Each light would be atop a 22-foot-tall pole, affixed via a 3-foot-long horizontal arm. Rather than using a “standard” system—a shoebox HID light—the applicant’s design describes the specified LED lights as being energy efficient and generating “no off-site glare” and “no upward light pollution”.

The site is likely fully or partially visible from at least 100 residential units (see Figure 5 for the lighting photosimulation submitted as part of the project application). The applicant’s visual analysis concluded that there would be a less-than-significant impact from the lighting if the following mitigation measures are incorporated:

1. Luminaires (i.e., the complete light units) should be installed parallel to the court surface, do not use adjustable knuckle mounts, and do not permit future adjustment.
2. The LED lighting should be limited to 4000K.
3. The average paint reflectance of the tennis court playing and out-of-bounds surfaces must be 10% or less; most tennis court paints that are dark green, dark blue, or dark red meet this qualification.

A survey of the existing nighttime lighting from the vantage point of hillside residences and open space conducted for this Initial Study indicates that the

impact to the overall nighttime views may be small, given existing lights on the site and in the area. The proposed project is adjacent to a parking lot that is equipped with four lampposts, each of which is equipped with two lights. Looking south from the estimated 100+ hillside residences, the project site would be set against a backdrop of commercial lighting associated with the businesses and parking lots flanking Tiburon Boulevard, downtown Tiburon, and the waterfront. The project would add new lighting, but the area is already well lit. In addition, the lighting would occur only during that part of the year where there is insufficient natural lighting until 7:30 PM; lights would be left on no later than 7:30 PM. There would therefore be no lighting impact after that time.

However, other than the adjacent parking lot, the nighttime lighting environment on the south side of Mar West Street primarily consists of a patchwork of unlit areas, scattered streetlights along that street, and the illumination associated with residences. The proposed lighting would be a bright patch in that milieu and could adversely affect nighttime views from higher elevation vantage spots such on the open space to the north of the TPC or from some of the adjacent residential housing. Additionally, it is possible that the new lights will be visible when looking north from southern vantage points, including the 34-unit Point Tiburon Marsh Condominiums (particularly from second floor units).

In conclusion, given the high degree of visibility of the site and absent additional technical peer review of the applicant's submitted photosimulations and lighting plan, there is a fair argument that the project could have a significant impact. There is also the possible impact to residents living south of the marsh, and no photosimulations were prepared from a southern vantage point. In addition, the new lighting could have a cumulative impact on nighttime views when added to the existing lit courts on TPC. The possibility of an adverse impact cannot be conclusively determined without additional studies. Therefore, the impact remains potentially significant. Possible mitigations might include retrofitting the existing parking lot lights to reduce offsite impacts from those lights as well as additional limits to the number of lights and/or the time of use proposed by the applicant.

**II. Agriculture and Forestry Resources**

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</i>				X
b. <i>Conflict with existing zoning for agricultural use, or a Williamson Act contract?</i>				X
c. <i>Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section</i>				X

12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

- |   |   |
|---|---|
| d. Result in the loss of forest land or conversion of forest land to non-forest use?  | x |
| e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | x |

### **Setting**

The project site is located in an urban setting. This setting is not suitable for commercial agriculture or forestry. Accordingly, the site is not designated nor zoned for these commercial uses.

### **Potential Impacts**

- a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? **No impact.**

The project site is not mapped as Farmland by the State.

- b. Conflict with existing zoning for agricultural use, or a Williamson Act contract? **No impact.**

There are no agricultural uses in the project area, and the site is not under a Williamson Act contract.

- c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? **No impact.**

The site is not zoned as forest land or timberland.

- d. Result in the loss of forest land or conversion of forest land to non-forest use? **No impact.**

The site does not contain forest land, also it would not result in conversion of such land to other uses.

- e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? **No impact.**

There is no Farmland in the area, so proposed construction of the project would not result in conversion of Farmlands to other uses.

### III. Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?		X		
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		X		
d. Expose sensitive receptors to substantial pollutant concentrations?		X		
e. Create objectionable odors affecting a substantial number of people?				X

### Setting

The project is located within the San Francisco Bay Area (Bay Area) Air Basin. Air quality in the Bay Area Air Basin is governed by the Bay Area Air Quality Management District (BAAQMD). The Bay Area Air Basin is currently classified as non-attainment for the 1-hour State ozone standard as well as for the federal and State 8-hour standards. Additionally, the Bay Area Air Basin is classified as non-attainment for the State 24-hour and annual arithmetic mean PM10 standards as well as the State annual arithmetic mean and the federal 24-hour PM2.5 standards.

BAAQMD is the agency responsible for regulating air pollutant emissions in the San Francisco Bay Area Air Basin. BAAQMD is responsible for implementing emissions standards and other requirements of federal and state laws. The air basin, including Marin County, is considered a “nonattainment area” for the 1-hour State ozone standard as well as for the federal and State 8-hour standards and for the State 24-hour and annual arithmetic mean PM10 standards as well as the State annual arithmetic mean and the federal 24-hour PM2.5 standards. In September 2010, the BAAQMD adopted the Bay Area 2010 Clean Air Plan (CAP). BAAQMD adopted updated CEQA Air Quality Guidelines, including new thresholds of significance, in June 2010, which advise lead agencies on how to evaluate potential air quality impacts using screening criteria though

these criteria have been eliminated from the most recent May 2012 guidelines.<sup>1</sup> However, the updated BAAQMD 2012 guidelines contain the same thresholds of significance as the 2010 guidelines.

### **Potential Impacts**

- a. ***Conflict with or obstruct implementation of the applicable air quality plan? Less than significant with mitigation incorporated.***

Though the revised project has been reduced from the one originally proposed, it will still result in emissions of the reactive organic gases (ROGs) carbon monoxide, nitrogen oxides, sulfur oxides, and particulates. Construction-related emissions would result from the likely use of off-road, heavy equipment operating at the project site to construct the new facilities and from truck trips associated with deliveries and construction workers commuting to and from the project site. Emissions associated with project operation would include those from car trips and maintenance activities.

To determine the significance of the project impact that would be related to the potential for it to cause or contribute to an air quality standard violation, Tiburon utilizes the screening criteria provided in BAAQMD's 2010 CEQA Air Quality Guidelines. If a proposed project exceeds the screening criteria, it is expected that its emissions would exceed the thresholds of significance included in the Guidelines, and a detailed air quality analysis would be required. The screening criteria do not specifically include a category for tennis courts and tennis programs. However, the threshold for racquet clubs is 277,000 square feet for construction-related emissions and 291,000 square feet for operational emissions (the thresholds for racquetball clubs is 277,000 square feet for construction-related emissions and 128,000 square feet for operational emissions). The proposed project (approximately 1,700, square feet of development) is substantially smaller than these screening thresholds. Therefore, construction and operation of the project would not result in a violation of an air quality standard or contribute significantly to an existing or projected air quality violation with implementation of the standard construction air quality controls required by the BAAQMD.

To ensure that project construction does not cause significant project-level or cumulative air quality impacts, the BAAQMD has identified a set of feasible air

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<sup>1</sup> BAAQMD's adoption of the thresholds was called into question by an order issued March 5, 2012, in *California Building Industry Association v. BAAQMD* (Alameda Superior Court Case No. RG10548693). The order requires BAAQMD to set aside its approval of the thresholds until it has conducted further environmental review under CEQA. The claims made in the case concerned the environmental impacts of adopting the thresholds, that is, how the thresholds would indirectly affect land use development patterns. Those issues are not relevant to the scientific soundness of the BAAQMD's analysis of what levels of pollutants should be deemed significant, or the threshold to use in assessing any health risk impact a project will have on the existing environment. The Town agrees that those thresholds are supported by substantial evidence. Moreover, the thresholds will not cause any indirect impact in terms of land use development patterns insofar as this project is concerned, because the proposal to develop the project site was not influenced by the BAAQMD guidelines. Accordingly, the analysis herein uses the updated thresholds and methodologies from BAAQMD's 2010 CEQA Air Quality Guidelines to determine the potential impacts of the project on the existing environment.

quality control measures for construction activities (i.e., *Basic Construction Mitigation Measures Recommended for All Proposed Projects*). The project includes those controls as Mitigation Measure AQ-1 described below, to reduce the effects of construction activities.

### **Mitigation Measure AQ-1**

In accordance with the BAAQMD CEQA Guidelines (BAAQMD, 2012), the project shall implement the following actions (that are pertinent to this project) to control dust from escaping from the site:

1. If construction occurs during the dry season, water all exposed surfaces twice daily;
2. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard;
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited;
4. All areas to be paved shall be completed as soon as possible;
5. Minimize idling time 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]);
6. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation; and
7. 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.

### **Impact Significance After Mitigation**

Implementation of these standard construction mitigation measures would likely reduce air pollutant emissions to levels that the BAAQMD recognizes as being acceptable. It is expected that the impact would be reduced to a level that is less than significant.

- b. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?* **Less than significant with mitigation incorporated.**

As noted above, the project would include the BAAQMD-required control measures so that project construction is not expected to violate any air quality standard. As discussed later in this report under Traffic (Checklist Item XVIa), the project could generate a maximum daily average of 80 new trips in the winter (as discussed under Traffic, this is a worst case trip generation that assumes all

additional students would be transported by motor vehicles and there would be no carpooling). The project size (and trips generated) would be below the screening criteria for a project that could generate significant emissions. Accordingly, it is expected that the project would not violate any air quality standard nor contribute significantly to any projected air quality violation.

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

As noted above, the project will include the BAAQMD-required control measures so that the project is not expected to contribute a substantial amount of any criteria pollutant. Because the project is below the screening criteria, it would not be expected to exceed the thresholds of significance and, therefore, have a less-than-significant cumulative impact to air quality.

- d. *Expose sensitive receptors to substantial pollutant concentrations?* **Less than significant with mitigation incorporated.**

As described in the previous three responses, the project, with mitigation, would not result in significant construction or operational-related impacts. Accordingly, it would not expose nearby neighbors nor other sensitive receptors to substantial pollutant concentrations.

- e. *Create objectionable odors affecting a substantial number of people?* **No impact.**

The recreation-related project would not be expected to generate objectionable odors.

#### IV. Biological Resources

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?</i>		x		
b. <i>Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?</i>		x		
c. <i>Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</i>		x		
d. <i>Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</i>		x		
e. <i>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</i>				x
f. <i>Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</i>				x

#### Setting

A biological report was prepared for the project; it is included in the appendix of this Initial Study. Much of the analysis described below was taken from data in this appended report.

The project site is located between a serpentine hillside on the Old St. Hilary's Open Space Preserve to the north and Railroad Marsh to the southwest. Part of the TPC property encompasses a northern portion of this marsh. The proposed project is located adjacent to the existing parking lots and tennis courts located on the south side of Mar West Road. The biological report states that other than the marsh, the TPC property has low biological value. The area to the north and east of the existing tennis courts near

where the new entry would be developed contains non-native vegetation with a heavy stand of black acacia and French broom between the courts and Mar West Street.

The approximately 10-acre Railroad Marsh is a sensitive natural community and is the preeminent biological resource near the project site. The marsh was historically part of the Belvedere Lagoon and supported saltmarsh and tidal mudflat habitat. In the 1880s, the site was cut off from tidal action by construction of the Northwestern Pacific Railroad yard. The marsh is surrounded by urban development and is replenished by runoff from these developed areas and a stream which flows from Tiburon Ridge to the north. Subsequent siltation converted the marsh to a freshwater marsh and reduced the open water portion of the marsh to about one acre by the 1960s. In the 1980s, the Town initiated efforts to restore the marsh (per the original *Tiburon Freshwater Marsh Restoration Plan*, WRA 1985). In implementing that plan, the Town has dredged the marsh sediment basins, installed sediment traps, replanted the margins with native plants, and manipulated the water level to control cattails. In 2000, the Town had the Marsh Restoration Plan revised to address maintenance problems including effects of increased public access and trash.

As shown on Figure 6, the marsh vegetation is dominated by willow (*Salix* sp.) with cattail (*Typha* sp.), French broom (*Genista monspessulana*), acacia trees (*Acacia* sp.), blackberry (*Rubus* sp.), pampas grass (*Cortaderia selloana*) and poison hemlock (*Conium maculatum*). The riparian vegetation adjacent to the project site, as well as the wetlands and waters within the marsh, provides habitat for a variety of wildlife species including resident and migratory birds.

Railroad Marsh's willow riparian habitat exists along the southern property boundary of the TPC and could provide nesting habitat for the *salt marsh common yellowthroat* (*Geothlypis trichas sinuosa*), a California species of special concern. There is also potential habitat for *California red-legged frog* (*Rana draytonii*), a federal Threatened species. These species were last reported during a site investigation in 1982. No special status species were observed during preparation of the project biological report. No nests or roosts of special status species of birds were observed during preparation of the project biological report. The biological report concludes that there is a low likelihood of special status wildlife species occurring at the marsh due to its isolation from other habitat areas, its location near the tip of the Tiburon Peninsula, and its immediate urban surroundings. No special status species of plants were observed. However, there is historic evidence of California red-legged frogs and the salt marsh common yellowthroat in the marsh area. The developed portion of the project site north of the marsh is not expected to support any special status species of plants or wildlife.

The biological report mapped the marsh shore and the wetlands between the shore and the proposed project. Figure 7 shows the 100-foot setback from the shore, the 25-foot setback from wetlands, and a 5-foot setback from willow and oaks.<sup>2</sup>

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<sup>2</sup> Wetlands south of the project site occur at the foot of the fill slope starting on the project site. A formal wetland delineation would be required to determine the wetland status of this area.

## **Potential Impacts**

- a. *Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service. **Less than significant with mitigation incorporated.***

The revised project does not include any intrusion of new facilities into the 100-foot wetland setback. As described in the Setting section, except for the California red-legged frog, there is no evidence of the site supporting special-status plants or breeding or nesting habitat for any special-status wildlife species. Though none of these frogs has been sighted here in 35 years, it is possible that they could inhabit the area or travel into the proposed construction area. Consequently, project construction could result in injury or death to this threatened species.

### **Mitigation Measure BR-1**

The project shall not damage native vegetation in the buffer zone (defined as the 5-foot setback from trees as shown on Figure 7. The boundary of the buffer zone shall be staked and flagged in the field with a highly visible color coded system and all construction and equipment operators shall be instructed to remain outside this no-disturbance boundary for the duration of construction.

### **Mitigation Measure BR-2**

The project shall not injure or destroy habitat used by California red-legged frogs (CRLF). To accomplish this standard, a qualified biologist, capable of monitoring projects with potential habitat for California red-legged frogs (CRLF) shall be present at the site to implement the following:

1. Install exclusion fencing outside the buffer area. Prior to and within 3 days of installation of the exclusion fencing, the biologist shall survey the location of the installation for the presence of CRLF. In addition, should any burrows be observed, the burrows shall be inspected by the biologist to determine if it is being used by the species. Should CRLF be observed, the area shall be vacated and re-inspected in one week. If no animal use is noted, the burrows shall be carefully excavated using a small trowel or shovel. Careful prodding using a blunt object will aid in determining the course of the tunnel such that the tunnel is excavated from the sides rather than the top, reducing the potential for any injury should an animal be present. Excavated burrows with no CRLF shall be left open so they cannot be re-occupied. If any non-listed species are located, they shall be translocated outside of the construction zone. Should any individual CRLF be found during the field survey or excavation, the area where that individual has been found shall remain undisturbed. If any life stage of the CRLF is found during these surveys or excavations, the Department of Fish and Game and the US Fish and Wildlife Service shall be contacted

immediately, and activities that could result in take shall be postponed until appropriate actions are taken to allow project activities to continue.

2. During installation of the construction zone exclusion fencing, the biological monitor shall be present and will oversee the installation of all construction fencing.
3. Immediately following installation of exclusion fencing, the biological monitor shall survey the enclosed construction zone for the presence of CRLF. If any life stage of the CRLF is found during these surveys, the Department of Fish and Game and the U.S. Fish and Wildlife Service shall be contacted immediately, and activities that could result in take shall be postponed until appropriate actions are taken to allow project activities to continue.
4. The biological monitor shall coordinate with the construction contractor to ensure that all workers understand not to intrude past the exclusion fencing.
5. The biological monitor shall conduct weekly site visits when construction is occurring to verify that all construction zone exclusionary fencing is in place and functioning as intended. Any repair or maintenance to the fencing deemed necessary by the biological monitor shall be completed under the monitor's supervision. Such maintenance activities include adequate removal of vegetation at the construction fence line to ensure that vegetation "ladders" for species access are not allowed to establish.

### **Impact Significance After Mitigation**

The mitigation measures would reduce the impact of constructing all proposed improvements to a less-than-significant level.

- b. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?* **Less than significant impact.**

Part of the TPC property extends into the wetland portion of Railroad Marsh. As shown in the biological report map, all project improvements would be constructed at least 100 feet from the marsh shore and 25 feet from the wetland edge. There would be 90 to 145 foot buffer from the tree edge on the project site to the marsh shore. In addition, all improvements would be set back at least five (5) feet from native trees (as was recommended in the project biological report).

- c. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?* **Less than significant impact.**

See the discussion under Item IV(b) above.

- d. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? **Less than significant with mitigation incorporated.***

The site is surrounded by urban development. It is likely that common area wildlife residents such as deer (which were seen on the site during a site visit), raccoons, opossums, and other wildlife make their way between surrounding development across the lower parking area and trees bordering the east side of the existing courts to Railroad Marsh. However, the proposed project additions would not block or seriously impede this already impeded travel route. The area to be developed does not include suitable nesting or nursery sites. The project biological report found that so long as new lighting is not directed toward the willow area on the marsh, it would not be expected to affect wildlife because of existing ambient light generated by residential and commercial development and headlights on Mar West Street.

Breeding birds are a concern if construction activity could cause the abandonment or failure of an active nest. For instance, breeding birds could abandon a nest with eggs or nestlings if construction activity was so close as to flush the birds from the nest. This would be a violation of the Migratory Bird Treaty Act and Sections 3503 & 3513 of the Fish and Game Code. This is a potentially significant impact.

**Mitigation Measure BR-5**

The following mitigation was recommended in the biological report submitted by the project applicant.

Surveys for breeding birds are recommended if construction were to occur during of the nesting season (February 15 to August 15). Surveys for nesting birds should be completed within 14 days of the beginning of construction between February 15 and August 15. Once construction starts and occurs continuously, surveys are not be recommended. If a lapse in construction were to occur longer than 14 days, then the surveys for nesting birds shall resume.

If raptors are observed nesting within 250 feet of the construction area, the behavior of the raptors shall be observed to determine the width of a suitable buffer. Typical raptor buffers are 250 – 300 feet wide.

If songbirds are observed nesting near the construction area, a 50-foot buffer shall be established between the nest and construction until the nest is no longer used. Travel and other human activity should be prohibited within the nest buffers for the raptors and songbirds.

### **Impact Significance After Mitigation**

Implementation of these protections would reduce construction impacts to nesting birds. Because the project site is within an urban area with intense human use, where the tennis courts are in almost constant use, the library on the other side of Railroad Marsh is heavily used, and traffic occurs along Tiburon Boulevard and Mar West Street, any nesting raptor would be acclimated to human activity and a buffer shorter than 250 feet may be suitable. These standard mitigations would reduce the impact to a less-than-significant level.

- e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? **No impact.***

The Town's Tree Ordinance regulates the removal of Protected Trees, which are native oaks; Heritage Trees with a minimum circumference of 60 inches at 24 inches above ground level and Dedicated Trees (trees designated as having special significance). The project would not remove any Protected Trees.

- f. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? **No impact.***

The project construction activities would not conflict with any Habitat Conservation Plans, Natural Conservation Community Plans, or any approved local, regional, or State habitat conservation plans.

## V. Cultural Resources

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?</i>		x		
b. <i>Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?</i>		x		
c. <i>Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</i>		x		
d. <i>Disturb any human remains, including those interred outside of formal cemeteries?</i>		x		
e. <i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:</i>				
1) <i>Listed or eligible for listing in the Caltrans Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or</i>				X
2) <i>A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</i>				X

### Setting

A Records Search for cultural resources was requested from the Northwest Information Center (NWIC) at Sonoma State University; see Appendix A. NWIC states that based on an evaluation of the environmental setting and features associated with known sites, Native American resources in this part of Marin County have been found along the San Francisco Bay margins, on protected terraces, and under the bay muds. The project area was historically located in a small coastal inlet on the Tiburon Peninsula. The majority of the project area contains Holocene era San Francisco Bay Mud.

Additionally, there is approximately a quarter or more of the proposed project area within the Latest Pleistocene to Holocene Alluvium, which was less marshy. Given the similarity of one or more of these environmental factors, there is a moderately high potential for unrecorded Native American resources in the proposed project area. NWIC

states that their review of historical literature and maps gave no indication of the possibility of historic-period activity within the proposed project area.

Given the small construction footprint of the revised proposed project combined with the already disturbed nature project site, there is a low potential for unrecorded historic-period archaeological resources in the proposed Tiburon Peninsula Club's Tennis Facilities project area.

### ***Potential Impacts***

- a. *Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? **Less than significant with mitigation incorporated.***

While no resources were reported on the site, there is a chance that buried archaeological resources are present and could be discovered while constructing the project. The project area is reportedly on a fill slope that was historically created to prepare the relatively flat area for the existing tennis courts and the TPC parking area. No grading plan has been submitted, so the extent and depth of grading is currently unknown. NWIC recommends that if project grading would disturb soils below this fill, then there would be the potential to damage currently undiscovered archaeological resources and that would be a potentially significant impact.

As recommended by NWIC, the local Native American tribe (the Federated Indians of Graton Rancheria) was contacted by the Town about the project to gather their concerns and recommendations (see request letter in Appendix A). No response was received.

### **Mitigation Measure CR-1**

The revised geotechnical report required in subsequent Mitigation Measure GS-1 will determine if the grading or excavation below the existing fill soil layer is needed. If it is, then a qualified archaeological consultant will conduct an investigation. Field study may include, but is not limited to, pedestrian survey, hand auger sampling, shovel test units, or geoarchaeological analyses as well as other common methods used to identify the presence of archaeological resources.

If archaeological resources are encountered during construction, work should be temporarily halted in the vicinity of the discovered materials and workers should avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. Project personnel should not collect cultural resources. Native American resources include chert or obsidian flakes, projectile points, mortars, and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic-period resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.

It is recommended that any identified cultural resources be recorded on DPR 523 historic resource recordation forms, available online from the Office of Historic Preservation's website.

**Impact Significance After Mitigation**

Assessing and curating any archaeological resources found during construction per Mitigation Measure CR-1 would reduce the impacts to potential archaeological resources to a less than significant level.

- b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?* **Less than significant with mitigation incorporated.**

As described above, archaeological resources could occur on the project site. Damaging such resources would constitute a significant adverse impact. Mitigation Measure CR-1 applies also to this impact, and this mitigation measure would reduce the impact to a less-than-significant level.

- c. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?* **Less than significant with mitigation incorporated.**

While not expected, it is possible that paleontological resources occur on the project site, which could be damaged by excavation and project construction. This would be a potentially significant impact.

**Mitigation Measure CR-2**

If paleontological resources are found, all work in the vicinity of the find must cease, and a paleontologist and Town staff must be notified to develop proper mitigation measures required for the discovery. No earthwork in the vicinity of the find shall commence until a mitigation plan is approved and completed subject to the review and approval of the paleontologist and Town staff. This condition shall be noted on all grading and construction plans and provided to all contractors and superintendents on the job site.

**Impact Significance After Mitigation**

Assessing and curating any resources found during construction per Mitigation Measure CR-2 would reduce the impacts to potential paleontological resources to a less-than-significant level.

- d. *Disturb any human remains, including those interred outside of formal cemeteries?* **Less than significant with mitigation incorporated.**

See the discussion under Impact V(a). While there is no reason to suspect the presence of human remains on the project site, it is possible that currently unknown remains may occur.

### **Mitigation Measure CR-3**

This mitigation incorporates the requirement established in Mitigation Measure CR-1 and adds the requirements that in the event that human remains are encountered, the contractor shall stop work in the area and the Town shall contact the Marin County Coroner in accordance with Section 7050.5 of the State Health and Safety Code. This condition shall be noted on all grading and construction plans and provided to all contractors and superintendents on the job site.

### **Impact Significance After Mitigation**

The recommended mitigation will ensure that any unknown human remains found on the site would be accorded appropriate reburial or disposition. The impact will be reduced to a less-than-significant level.

- e. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the Caltrans Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), **No Impact.***

There is no evidence of significant tribal resources on the site. The local Native American tribe (the Federated Indians of Graton Rancheria) did not respond to a letter notifying them of the project. The project site is not listed or eligible for listing in the Caltrans Register of Historical Resources, or in a local register of historical resources.

*Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. **No Impact.***

As noted previously, there is no evidence of significant tribal resources on the site.

## VI. Geology and Soils

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</i>				
i. <i>Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</i>				X
ii. <i>Strong seismic ground shaking?</i>		X		
iii. <i>Seismic-related ground failure, including liquefaction?</i>		X		
iv. <i>Landslides?</i>				X
b. <i>Result in substantial soil erosion or the loss of topsoil?</i>				X
c. <i>Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</i>		X		
d. <i>Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</i>		X		
e. <i>Have soils incapable of adequately supporting the use of septic tanks or alternative water disposal systems where sewers are not available for the disposal of waste water?</i>				X

### **Setting**

No geotechnical analysis nor grading plan has been submitted as part of the project application. However, a geotechnical analysis of the project site was done as part of TPC's 2004 application package for the two westernmost of the existing southern tennis courts (the other four courts were in place before 2000).<sup>3</sup> That report describes the site as an old out-slope created when the original site grading was done for the then-existing site facilities. The site is relatively flat, though it slopes gradually south towards the marsh. The site contains fill overlaying alluvial sediments that overlay Holocene Bay Mud strata. Based on the boring logs done for that report, it appears that there was no evidence of landsliding or seepage on the project site. No faults were found on the site,

<sup>3</sup> Kleinfelder, Inc, 2001.

but the site like the surrounding area is subject to a high degree of ground shaking during earthquakes on the San Andreas and Hayward Faults.

### ***Potential Impacts***

- a. *Expose people or structures to potential substantial adverse effects, including the loss, injury, or death involving:*
  - i. *Rupture of known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. **No impact.***
  - ii. *Strong seismic ground shaking? **Less than significant with mitigation incorporated.***
  - iii. *Seismic-related ground failure, including liquefaction? **Less than significant with mitigation incorporated.***
  - iv. *Landslides? **No impact.***

The previous geotechnical reports did not address the seismic risk for the new structures to be constructed at the north entry to the existing courts. Potential seismic impacts to these structures would be a potentially significant impact.

### **Mitigation Measure GS-1**

The project shall be constructed to withstand the maximum probable earthquake and to withstand other geologic and soil constraints or hazards on the site. All new development shall be constructed consistent with the seismic design requirements of the 2013 California Building Code (as referenced in the Town's Municipal Code) or any successor code in effect at the time of building permit issuance. The 2001 Kleinfelder, Inc. geotechnical report shall be revised to identify geologic design requirements that comply with the Building Code seismic and soil treatment requirements for the improvements proposed north of the existing tennis courts. The project shall be constructed consistent with all recommendations for site grading, seismic design for structures, foundation design, and site drainage contained in that revised report.

### **Impact Significance After Mitigation**

It is expected that seismic design requirements contained in the Town's adopted building code and the seismic design recommendations for other buildings on the TPC property that were included in the 2001 Kleinfelder report would apply to the proposed bathrooms, storage areas, and entry and would reduce the impact to a less-than-significant level as was the case for the previously approved improvements.

- b. *Result in substantial soil erosion or the loss of topsoil?* **Less than significant.**

Minimal grading would be necessary as the site is level and already compacted, and the footprint of the revised project is quite small. The impact would be less than significant.

- c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?* **Less than significant with mitigation incorporated.**

The 2001 Kleinfelder report noted that the four tennis courts occupying the site before 2000 had settled approximately two inches towards the marsh. Constructing the new facilities to the north would be subject to the California Building Code requirements and design recommendations set forth in the required revised geotechnical report required in Mitigation Measure GS-1. This mitigation would reduce all geologic impacts to a less-than-significant level.

- d. *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1974), creating substantial risks to life or property?* **Less than significant with mitigation incorporated.**

There are compressible soils on the site. Mitigation Measure GS-1 would address this stability impact, and the required fill compaction would reduce the impact to a less-than-significant level.

- e. *Have soils incapable of adequately supporting the use of septic tanks or alternative water disposal systems where sewers are not available for the disposal of waste water?* **No impact.**

The project does not require construction of waste disposal systems.

## VII. Greenhouse Gas Emissions

<i>Would the project:</i>		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	<i>Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</i>			X	
b.	<i>Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</i>			X	

## **Setting**

Climate change is caused by greenhouse gases (GHGs) emitted into the atmosphere around the world from a variety of sources, including the combustion of fuel for energy and transportation, cement manufacturing, and refrigerant emissions. GHGs are those gases that have the ability to trap heat in the atmosphere, a process that is analogous to the way a greenhouse traps heat. GHGs may be emitted as a result of human activities, as well as through natural processes. GHGs have been accumulating in the earth's atmosphere at a faster rate over the last 150 years than has occurred historically. Increasing GHG concentrations in the atmosphere are leading to global climate change. To address this crisis, the Town adopted a *Climate Action Plan* in 2011. The plan outlines strategies that the Town and the community can take to reduce GHG emissions and address climate change.

## **Potential Impacts**

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

The use of heavy equipment to construct the proposed facilities would result in the emission of greenhouse gas (GHG). However, the emissions would be minimal since construction using heavy equipment would occur for a few weeks. As described in the Traffic section (Checklist Item XI), future use of the project would generate emissions from a maximum daily estimate of 80 new trips during the winter (this is a worst case trip generation that assumes all additional students would be transported by motor vehicles and there would be no carpooling). The BAAQMD's 2010 screening level size criteria below which a project-specific GHG analysis is not required is 46,000 square feet for a racquet club. As was the case for emission of criteria air pollutants, the project emissions would be well below the BAAQMD screening criteria for GHG emissions. Accordingly, these GHG emissions would be expected to make a less than cumulatively considerable contribution to the cumulative impact on global climate change. In addition, the proposed project is expected to be consistent with recommendations set forth in the Town's Climate Action Plan.

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

Because the emission of GHGs would be small, the project would not conflict with the BAAQMD's Clean Air Plan or its CEQA Guidelines. The project is consistent with recommendations set forth in the Town's *Climate Action Plan*. Given the limited GHG emissions, the project would not conflict with the Town's goals as expressed in that plan.

**VIII. Hazards and Hazardous Materials**

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</i>			x	
b. <i>Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?</i>			x	
c. <i>Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</i>				x
d. <i>Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?</i>				x
e. <i>For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, would the project result in a safety hazard for people residing or working in the project area?</i>				x
f. <i>For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?</i>				x
g. <i>Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</i>				x
h. <i>Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?</i>			x	

**Setting**

The project site is currently undeveloped land located between one of the parking areas and the tennis courts. No hazardous materials are used on the site. The site contains little vegetation and is unlikely to be subject to a wildfire spreading from the wildland-urban interface to the north.

## **Potential Impacts**

- a. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? **Less than significant impact.***

As regards transport, use, and disposal of hazardous materials, project construction would involve the routine transport and use of gasoline and diesel. Use of these types of substances would not occur in significant (that is, regulatory) amounts or frequencies to constitute a potential hazard to the public or environment. Once constructed, it is not expected that TPC would use hazardous materials to maintain their facilities in significant (that is, regulatory) amounts or frequencies to constitute a potential hazard to the public or environment.

- b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? **Less than significant impact.***

See the previous response to Item VIII(a).

- c. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? **No impact.***

Reed Elementary School is over 0.4 miles from the nearest part of the proposed project. The school is not within one-quarter mile of the project site. In addition, as described in Response VIII(a), no regulatory amounts of hazardous materials would be expected to be used at the project. Accordingly, students at this school would not be at risk from hazardous materials spills.

- d. *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? **No impact.***

There are no known hazardous material sites on or near the project site.

- e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, would the project result in a safety hazard for people residing or working in the project area? **No impact.***

The site is not within the area of any airport land use plan.

- f. *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? **No impact.***

The project is not within the vicinity of a private airstrip.

- g. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?* **No impact.**

The project is on private land off of Mar West Street and would not block or interfere with emergency access or evacuation.

- h. *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?* **Less than significant impact.**

The project site is not mapped in the Tiburon General Plan as an area susceptible to wildfire.

## IX. Hydrology and Water Quality

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Violate any water quality standards or waste discharge requirements?</i>		x		
b. <i>Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</i>			x	
c. <i>Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?</i>			x	
d. <i>Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?</i>		x		
e. <i>Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?</i>		x		
f. <i>Otherwise substantially degrade water quality?</i>				x
g. <i>Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</i>				x
h. <i>Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</i>				x
i. <i>Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?</i>			x	
j. <i>Inundation by seiche, tsunami, or mudflow?</i>				x

### Setting

The project site drains directly via sheet flow to the Railroad Marsh or to a paved drainage ditch along the east side of the lower (south) tennis courts, which transports collected runoff to an outfall that leads to the marsh. The Railroad Marsh is a pond/marsh feature that serves as a flood control feature for the Mar West (upper and

lower) watershed. The water level in the marsh is controlled by two outlet structures. The primary outlet drains to a culvert (the Lagoon Vista storm drain) that discharges to Raccoon Strait, while the secondary outlet drains south to Belvedere Lagoon. A small portion of the southwest corner of the site appears to be within the 100-year flood elevation (Zone AE).<sup>4</sup>

It is expected that project site soils have limited permeability. The project application shows a new bioswale to be constructed along the north side of the existing courts. Runoff from the roof(s) of the new structures would be collected and transported to the bioswale prior to its existing outlet to the marsh.

A Drainage Analysis was prepared in 2004 for the then proposed improvements to TPC.<sup>5</sup> That analysis determined that the improvements proposed at that time would have a less than significant impact on stormdrains and flooding.

### ***Potential Impacts***

- a. *Violate any water quality standards or waste discharge requirements?* **Less than significant with mitigation incorporated.**

The project application describes how roof runoff from the new facilities will be directed to a new bioswale located outside the marsh and wetlands setback lines. After treatment at the bioswale, runoff will be directed via a 4-inch pipe to an outfall leading to the marsh. Unless the bioswale is adequately sized, designed, constructed, and maintained, project runoff could adversely affect the water quality of the marsh. This has the potential of significantly affecting water quality.

#### **Mitigation Measure HWQ-1**

The applicant shall prepare a Stormwater Control Plan (SCP), following the procedures outlined by MCSTOPPP. The SCP shall include the project SWPPP (see Mitigation Measure GS-2 above) as well as a description of post-construction BMPs being implemented. Bioretention features will be designed following the guidance found in MCSTOPPP's stormwater quality manual and the California Storm Water BMP Handbook for New and Redevelopment. BMPs will address treating runoff from proposed parking areas. The Plan shall be prepared by a registered engineer for review and approval by the Town Department of Public Works. Once approved, an agreement will be executed by property owner and Town and recorded against the property to insure the ongoing operation of the SCP.

#### **Impact Significance After Mitigation**

The mitigation will ensure that the site drainage system operates acceptably, which will reduce the water quality impact to a less-than-significant level.

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<sup>4</sup> Christopher Josephs Associates

<sup>5</sup> ILS & B Associates, Inc. 2004.

- b. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?* **Less than significant impact.**

The project would reduce the amount of water that could enter a local groundwater aquifer, though the reduction would be minimal given the small size of the site. More importantly, groundwater is not used as a source of potable water in the Town so any reduction in recharge, if it did occur, would not have a significant impact on area water supplies.

- c. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?* **Less than significant impact.**

Project grading would not substantially alter the site or area drainage pattern. Site runoff would continue to flow to Railroad Marsh either as sheet flow or as sheetflow after being treated and distributed from the proposed bioswale.

- d. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?* **Less than significant with mitigation incorporated.**

The reduced project would include construction of impervious surfaces in areas that are already heavily compacted by vehicles and pedestrians. It is not expected that adding approximately 1,700, square feet of roofs would measurably increase project site runoff. It is not expected that the relatively small increase in impervious surface on the site would result in a substantial increase in flood elevations or the frequency of flooding in Railroad Marsh or the storm drain system that drains excess water from the marsh. However, there is no technical data or analysis to support this expectation. In addition, it has not been shown how the Tiburon General Plan 2020 policy (Policy SE-12) of maintaining the post-development 100-year peak flow at the pre-development level would be met. Accordingly, the impact remains potentially significant.

#### **Mitigation Measure HWQ-2**

The applicant shall prepare pre- and post-project runoff calculations showing that there would be no increase in site runoff. If there will be an increase in site runoff, then a drainage plan will be prepared that demonstrates to the Town's satisfaction that post-project runoff volumes will not exceed pre-project volumes. Excess runoff can be detained on-site using underground storage facilities or other means of detaining and releasing peak flows to maintain the pre-existing conditions.

### **Impact Significance After Mitigation**

It is not expected that post-project runoff volumes would be significantly greater than occurs now. Detaining the excess runoff until the peak runoff period passes is feasible. This would reduce the impact to a less-than-significant level.

- e. *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?* **Less than significant with mitigation incorporated.**

Because project-generated runoff would travel to Railroad Marsh as sheetflow or through a pipe, the project is not expected to have an impact on Town stormdrains. Flows from Railroad Marsh to the bay could be affected, though the amount of new impervious surface added by the project makes this unlikely. Impact HWQ-2 described above would reduce the possible impact to a less-than-significant level.

- f. *Otherwise substantially degrade water quality?* **No impact.**

Beyond the impacts described in Checklist Item IX(a), there are no other elements of the project that would degrade water quality.

- g. *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?* **No impact.**

The project does not include any proposed housing.

- h. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows.* **No impact.**

The southwest corner project site is within the 100-year flood hazard area. However, no structures are proposed for this area.

- i. *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?* **Less than significant impact.**

The project site is not downstream of a levee or a dam. Flooding during a 100-year event would only affect one proposed parking area on the site.

- j. *Inundation by seiche, tsunami, or mudflow?* **No impact.**

The project site is not mapped as an area that could be affected by tsunami, seiche, or substantive mudflows.

## X. Land Use and Planning

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Physically divide an established community?</i>				X
b. <i>Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</i>	X			
c. <i>Conflict with any applicable habitat conservation plan or natural community conservation plan?</i>				X

### Setting

The project site is located on the partially developed strip of land north of the tennis courts.

### Potential Impacts

- a. *Physically divide an established community?* **No impact.**

The project site is a currently undeveloped. Development of this site would not divide the community.

- b. *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?* **Potentially significant impact.**

The project site is designated Commercial in the Town's General Plan and zoned Public/Quasi-Public. The proposed improvements are similar to those approved by the Town in the past; most recently the improvements approved in 2005. As was the case with past improvements to the property, the Town requires its approval of a Conditional Use Permit in order for the project to be constructed and used.

The following assesses project consistency with pertinent General Plan policies. It should be noted that CEQA requires that an Initial Study discuss any inconsistencies between the proposed project and applicable general plans and regional plans. For purposes of this Initial Study, an apparent inconsistency of the project with a policy reflected in the Town's general plan or its municipal code would not, in and of itself, constitute a significant impact on the environment. Rather, the policies of the General Plan and the regulations included in the Town Municipal Code are used as sources of criteria for assessing potential

environmental effects identified throughout this Initial Study. Ultimately, the Town Planning Commission and Town Council will determine the consistency of the project with the General Plan and other Town plans and regulations and the project site's suitability for the proposed use.

1. Project lighting could adversely affect nighttime views from Old St. Hilary's Open Space Preserve. This impact could make the project inconsistent with Open Space and Conservation Policy OSC-30 that states that development shall be encouraged in areas that least interfere with views from open space.
2. Given the described uncertainty about the visual impacts of the proposed project lighting, it is possible that the project may be inconsistent with Section 16-30.070 of the Zoning Code that requires new lighting to not produce light pollution.
3. Given the uncertainty about possible effects of construction impacts to California red-legged frogs, the project may be inconsistent with Policy OSC-26 that states to the maximum extent feasible that new development shall not affect special status species.

Other than these three possible inconsistencies, the project appears consistent with other Town policies and regulations.

- c. *Conflict with any applicable habitat conservation plan or natural community conservation plan? **No impact.***

There is no adopted habitat conservation plan or natural community conservation plan for the area that would be affected by the project.

## **XI. Mineral Resources**

<i>Would the project:</i>	Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?</i>				X
b. <i>Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?</i>				X

- a. *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? **No impact.***

There are no identified mineral resources within the project area. The project would not directly or indirectly affect any known mineral resources.

- b. *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?* **No impact.**

The Tiburon General Plan does not identify a mineral resource recovery site near the project site.

## **XII. Noise**

<i>Would the project result in:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>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?</i>			X	
b. <i>Exposure of persons to or generation of excessive groundborne vibration of groundborne noise levels?</i>				X
c. <i>A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?</i>			X	
d. <i>A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?</i>			X	
e. <i>For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?</i>				X
f. <i>For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?</i>				X

### **Setting**

The project site is in a relatively quiet area as it is distant from heavily traveled streets. A noise report prepared in 2004 for the then proposed improvements to the TPC (including two new tennis courts adjacent to the proposed project site) stated that average 24-hour noise levels at the four nearest residences to the proposed 2004 improvements ranged from 49 decibels (dBA Ldn) to 53 dBA Ldn, which meets the Town's "Normally Acceptable" noise criteria for residential uses of Ldn 60 dB or below. That 2004 noise study did not specifically address the new tennis courts at the southern end of the TPC property, which is where the currently proposed project would be located.<sup>6</sup>

<sup>6</sup> Charles M. Salter Associates, Inc. 2004.

## **Potential Impacts**

- a. *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?* **Less than significant impact.**

Project construction will involve the use of equipment that generates noise. Equipment likely to be used for constructing the project includes heavy equipment and generators. This equipment typically generates 80 to 85 decibels of noise (Lmax dBA) at 50 feet from the construction.

Noise levels decrease by about 6 dBA for each doubling of the distance between the noise source and the receptor. The nearest residence along Mar West Street east of the TPC is within 100 feet of the proposed development at the north end of the existing courts. There are six other residences along Mar West Street within 200-300 feet of project development sites. Residents at the nearest home would periodically experience noise levels of 74-79 of dBA while more distant residences along Mar West Street would experience noise levels of 62-67 dBA. The nearest condominium on Point Tiburon Marsh Condominiums is about 500 feet from the nearest proposed tennis court. Future noise levels at this condominium would be expected to be about 60 dBA, though intervening vegetation could further reduce the noise exposure.

While this noise may periodically be audible at nearby residences, it would not be expected to be considered significant given that it would occur periodically and not constantly, only for a short length of time, and given consistency with Town requirements that construction be limited to the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday and 9:30 a.m. to 4:00 p.m. on Saturday (on Saturday only “quiet work” is allowed, that is work that does not generate noise audible beyond the property line). Additionally, heavy equipment can only be used from 8:00 a.m. to 5:00 p.m. on Monday through Friday. The Town’s General Plan also contains Policy N-10 requiring standard quiet construction methods when construction activities occur within 500 feet of noise sensitive areas. Given these regulations and the cited policy, the Town’s General Plan EIR concluded that construction noise impacts resulting from buildout of the town would be less than significant.

Given existing traffic volumes, the maximum daily average increase of 80 trips during the winter the project would generate (this is a worst case trip generation that assumes all additional students would be transported by motor vehicles and no carpooling), the project would not measurably affect noise levels along Mar West Street or more distant streets. The noise increase would be expected to be less than 1 dBA.

While use of the courts may result in voices of players or spectators occasionally being audible at nearby residences, the short-term and sporadic nature of this noise would not be expected to increase average noise levels by more than one decibel. However, such noise may be perceived as a nuisance by some neighbors.

- b. *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?* **No impact.**

Excavation of the site and site grading would not be expected to cause substantial groundborne vibration or groundborne noise levels. The grading is typical for such urban site development. Site geology would not indicate the need for unusual or prolonged site grading and excavation.

- c. *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?* **Less than significant impact.**

As noted above under Item XII(a), traffic generated by the project would not significantly affect the noise environment along Mar West Street or more distant streets. Future recreational use of the tennis courts for a few hours after darkness falls in the winter months would be similar to noise created by use of the existing courts, and would not be expected to cause a substantial noise increase at nearby residences.

- d. *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?* **Less than significant impact.**

As described above under Impact XI(a), project construction would generate short-term noise. However, as described under that impact, it is expected that the impact would be less than significant given the required limits on when construction can occur. As described under Impact XI(c), noise caused by increased use of the courts would not increase substantially, and the impact would be expected to be less than significant.

- e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?* **No impact.**

The project site is 13 miles from the nearest public airport.

- f. *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?* **No impact.**

The project is not near a private airstrip, and the project does not include housing or employment where people would be susceptible to noise.

### **XIII. Population and Housing**

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?</i>				X
b. <i>Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?</i>				X
c. <i>Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?</i>				X

#### **Setting**

The 2015 Census data lists the population of Tiburon as 9,214 people. As of the most recent data (2010) the Town included 4,025 dwelling units.

#### **Potential Impacts**

- a. *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?* **No impact.**

The project would not add housing nor increase employment; it would not increase the Town population.

- b. *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?* **No impact.**

The project site does not contain housing, and the project would not require that residences be demolished or removed.

- c. *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?* **No impact.**

The project site does not contain housing, and no people would be displaced during project construction or operation.

**XIV. Public Services**

<i>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Fire protection?</i>			X	
<i>Police protection?</i>			X	
<i>Schools?</i>				X
<i>Parks?</i>				X
<i>Other public facilities?</i>				X

**Setting**

Fire protection for the project would be provided by the Tiburon Fire Protection District, while police protection would be provided by the Tiburon Police Department.

**Potential Impacts**

- a. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*

*Fire protection?* **Less than significant impact.**

The TFPD has reviewed the project application and required that the “folding shades” to be used on the project comply with flame propagation performance criteria and flame spread index as per CBC 3105.4. Otherwise, the District had no comments on the project. It is not expected that the addition of bathrooms, storage facilities, and other entry improvements would substantially increase the demand for fire protection.

*Police protection?* **Less than significant impact.**

It is not expected that the addition of bathrooms, storage facilities, and other entry improvements would substantially increase the demand for police protection.

*Schools? No impact.*

The project does not include new housing or employment opportunity. Therefore, it would not generate new students and would have no effect on local schools.

*Parks? No impact.*

The project would not generate additional population. There would be no impact to public parks.

*Other public facilities? No impact.*

The project would not increase the Town's population and would have no effect on other public facilities.

**XV. Recreation**

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?</i>				X
b. <i>Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?</i>	X			

**Setting**

The TPC is a private club that provides recreational facilities for 700 families and 175 seniors, 85% of which reside within the 94920 zip code.

**Potential Impacts**

a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? No impact.*

The project would increase recreational opportunities for TPC and non-TPC members. It would not increase demand or use of Town-operated facilities.

b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? Potentially significant impact.*

The project does include recreational facilities. As reported in this Initial Study, the project does have potentially significant impacts to aesthetic/visual resources.

**XVI. Transportation/Traffic**

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>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?</i>		x		
b. <i>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?</i>		x		
c. <i>Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</i>				x
d. <i>Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</i>				x
e. <i>Result in inadequate emergency access?</i>				x
f. <i>Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?</i>				x

**Setting**

Public access to the project site is provided by Mar West Street. Mar West Street intersects with Tiburon Boulevard to the west and to Beach Road to the east that also connects with Tiburon Boulevard (see Figure 2). Tiburon Boulevard is a State Highway (State Route 131) operating under the jurisdiction of Caltrans.

**Potential Impacts**

- a. *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?* **Potentially significant impact.**

The applicant estimates that the project would result in 20 more students per day in the winter months. Some of these students will walk or bicycle to and/or from the facility. It is unknown whether drivers who drive students to the facility would stay at the TPC while the one hour lesson took place or whether they would return home or combine the trip with shopping or traveling to other destinations in the downtown area. Given this uncertainty, the project could generate a maximum of 80+ trips in the fall/winter (20 trips to TPC + 20 trips home + 20 trips back to TPC to collect the students + 20 trips home). It is more likely that the number of new trips would be lower as not every parent or driver delivering or picking up students would drive to TPC and their residence twice a day plus some students would carpool, walk, or bicycle. It is expected that these trips would occur between 3:00 p.m. and 7:45 p.m. in the winter.

In addition, the lighted courts would be available for use by other TPC members. While the applicant does not expect there would be many non-Junior Tennis Club members using the courts, it is possible. Such use would add some unknown, but likely small, number of additional trips. The applicant also assumes that the project would not increase membership in the Junior Tennis Program. If an increase were to occur, it could result in additional court usage in the winter. Therefore, the project could generate more new trips than estimated by the applicant. Conversely, there will be days in the winter when weather conditions will likely eliminate or reduce use of the courts.

The 2004 traffic study done for the TPC improvements proposed at that time determined that the traffic generated by that project plus existing traffic would generate 881 weekday trips, 969 Saturday trips, and 793 Sunday trips.<sup>7</sup> Based on that analysis, the number of daily trips generated by the current project would be expected to be less than the worst case estimate.

The intersection of Tiburon Boulevard and Mar West Street currently operates at Level of Service (LOS) B during the p.m. peak hour (which is the 4:00 p.m. to 6:00 p.m. period).<sup>8</sup> Some of the new project-generated traffic would travel through this intersection during the p.m. peak hour period, which would increase the travel delay at that intersection.

It is possible, but unlikely, that project-generated traffic could cause the LOS at this intersection to drop to an unacceptable LOS E. The project-generated traffic would make a contribution to future cumulative traffic affecting this intersection. The traffic analysis done in 2010 for the Belvedere-Tiburon Library Expansion Project Draft EIR calculated that at buildout of the Town, the intersection would operate at LOS D. That cumulative impact analysis did not include additional trips from the Tiburon Peninsula Club as part of the buildout scenario assessed in that EIR. Therefore, it is possible that the additional trips generated by the proposed

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<sup>7</sup> Alta Planning + Design, 2004.

<sup>8</sup> Traffic data from the *Belvedere-Tiburon Library Expansion Project Draft EIR, 2010, Christopher A. Joseph & Associates.*

project could result in a lower level of service than reported in that EIR. That previous EIR also determined that buildout traffic would satisfy a peak-hour signal warrant for the intersection under cumulative conditions. The proposed project would make a contribution to this cumulative impact. This would be a potentially significant impact.

### **Mitigation Measure T-1**

Applicable traffic mitigation fees shall be paid by the applicant at the time of issuance of the building permit. The Town shall apply to Caltrans for signalization or installation of a rotary/traffic circle at the intersection of Mar West Street and Tiburon Boulevard once a signal warrant is met. The Town shall employ its own criteria for ranking and prioritization, including other signal warrants and accident history, when considering the need and timing for traffic signal or a rotary/traffic circle installation. The Town shall coordinate with Caltrans when planning and implementing the mitigation, but the final decision regarding signalization or a rotary/traffic circle lies with Caltrans.

### **Impact Significance After Mitigation**

This mitigation is similar to the mitigation the Town required for the library expansion project. As was the case for the library approval, it is expected that the mitigation would reduce the cumulative impact to a less-than-significant level.

- b. *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? **Less than significant with mitigation incorporated.***

The designated CMP system within the study area is Tiburon Boulevard between U.S. Highway 101 and Main Street. The EIR prepared for the Belvedere-Tiburon Library Expansion Project assessed future roadway conditions along Tiburon Boulevard and concluded that the roadway would operate at an acceptable LOS with the addition of the new library-generated traffic. It is expected that this would be the case for the addition of the current proposed project's traffic. Caltrans in commenting on the original EIR stated that the EIR prepared for the Belvedere-Tiburon Library Expansion Project was too old to be used for assessing traffic impacts of this proposed project. Even if the project's contribution is cumulatively considerable, it is expected that Mitigation Measure T-1 would reduce the impact to a less-than-significant level.

- c. *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? **No impact.***

The project is over 18 miles from the nearest public airport and would not cause any change in air traffic patterns.

- d. *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?* **No impact.**

The project would not result in any new streets or driveways.

- e. *Result in inadequate emergency access?* **No impact.**

The project site has adequate emergency access via public streets.

- f. *Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?* **No impact.**

The project would not conflict with any Town plans or policies to encourage alternative means of transportation such as bicycles.

### **XVII. Utilities and Service Systems**

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?</i>			X	
b. <i>Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</i>				X
c. <i>Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</i>		X		
d. <i>Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</i>			X	
e. <i>Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?</i>			X	
f. <i>Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?</i>			X	
g. <i>Comply with federal, state, and local statutes and regulations related to solid waste?</i>			X	

## **Setting**

Public water for the project site would be provided by the Marin Municipal Water District (MMWD). Wastewater collection, treatment, and disposal would be provided by Sanitary District No. 5.

## **Potential Impacts**

- a. *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? **Less than significant impact.***

Sanitary District No. 5 operates its main treatment and disposal plant on Point Tiburon. The main treatment plant was constructed to be able to handle buildout flows from development within the area potentially served by Sanitary District No. 5. Since the plant was constructed, the Tiburon General Plan has been revised to decrease potential buildout within the District's service area. In addition, some lands that were projected for development have been purchased as open space, and some properties have had approved developments that were less than predicted when the plant was designed. As such, the main treatment plant has capacity to serve the project and buildout within its service area.

The project would add bathroom facilities to better serve users of the southern courts. Currently users of the southern courts either use porta-potties at the site or walk across Mar West Street to access the restroom facilities on the northern part of the TPC. The wastewater collector line serving the project area has sufficient capacity to deliver the additional wastewater from the proposed project to the pumping facility, and the District has sufficient treatment and disposal capacity to serve the project.<sup>9</sup> Therefore, it is not expected that the project would exceed wastewater treatment requirements.

- b. *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? **No impact.***

The small amount of water used to operate the restroom facilities and serve a drinking fountain would not substantially increase existing water usage nor require the expansion of water facilities. The small amount of wastewater generated can be served by Sanitary District No. 5. The project would not require constructing additional water or wastewater treatment facilities.

- c. *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? **Less than significant with mitigation incorporated.***

Site runoff would flow to existing or new on-site storm drains that would be extended to Railroad Marsh, which is maintained by the Town. As reported under Checklist Item IX(d), it is not expected that the relatively small increase in

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<sup>9</sup> Tony Rubio, personal communication, 8/16/16

impervious surface on the site would result in a substantial increase in flood elevations or the frequency of flooding in Railroad Marsh or the storm drain system that drains excess water from the marsh. However, as described in the previous section on Hydrology, there is no engineering data or analysis to support this expectation. In addition, it has not been shown how the Tiburon General Plan 2020 policy of maintaining the post-development 100-year peak flow at the pre-development level would be met. Accordingly, though unlikely, it is possible that downstream drainage facilities may require expansion or alteration. Mitigation Measure HWQ-1 applies to this impact, and it would reduce the impact to a less-than-significant level.

- d. *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? **Less than significant impact.***

MMWD has reviewed the proposed project and determined that it can provide water service to the project so long as its standard water hookup requirements are met. These requirements include completing water service applications; paying fees and charges; verifying that indoor fixtures comply with district requirements; submittal of a landscape plan, irrigation plan, and grading plan; and compliance with backflow prevention requirements and gray water recycling requirements (where practicable).<sup>10</sup>

- e. *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? **Less than significant impact.***

See Response XVII(a) above.

- f. *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? **Less than significant impact.***

Currently, the Redwood Landfill has sufficient capacity to dispose of the small amount of non-recycled solid waste generated by the tennis players and the occasional spectators at tournaments. The landfill is currently permitted to accept 2,300 tons per day.

- g. *Comply with federal, state, and local statutes and regulations related to solid waste? **Less than significant impact.***

The Redwood Landfill or other area landfills have sufficient capacity to dispose of the very small amount of non-recycled solid waste that might be generated by tennis players and tournament spectators. All solid waste would be disposed of in compliance with applicable regulations related to solid waste.

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<sup>10</sup> Letter from Chris Borjian, Engineering Technician, MMWD to Leonard Charles dated September 8, 2016; on file with the Tiburon Community Development Department.

## XVIII. Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</i>	x			
b. <i>Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?</i>	x			
c. <i>Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</i>	x			

- a. *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?* **Potentially significant impact.**

As described in the previous assessments of Checklist Item IV, the project could significantly affect the California red-legged frog listed as federally "threatened".

- b. *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?* **Potentially significant impact.**

Implementation of the traffic mitigation measures recommended in this Initial Study would be expected to reduce the project's potential contribution to any significant cumulative traffic impact to a less-than-considerable level. The project's potentially significant lighting impacts could make a considerable contribution to significant cumulative visual quality/aesthetic impacts (cumulative impacts to scenic resources and nighttime views) resulting from Town buildout as identified in the EIR prepared for the Town General Plan. The project would not make a considerable contribution to the other significant cumulative impacts

(cumulative loss of wildlife habitat and wildlife movement opportunities; and water, wastewater, school and park/recreational services} identified in the General Plan EIR.

- c. *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?* **Potentially significant impact.**

As discussed under Checklist Item I, the project could adversely affect nighttime views from surrounding open space, streets, and residences.

## 7.0 Determination of Significant Effect

On the basis of this Initial Study, I find that the proposed project could have a significant effect on the environment. An Environmental Impact Report will be prepared.

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Dan Watrous, Planning Manager  
Town of Tiburon

Date

## 8.0 Sources and References

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## **B. Persons Contacted**

Chris Borjian  
Tony Rubio  
Dan Watrous

Marin Municipal Water District  
Sanitary District No. 5 Manager  
Town of Tiburon Planning Manager

## **C. Report Preparation**

- Leonard Charles, Ph.D., Project Manager and Environmental Analyst
- Lynn Milliman, M.A., Environmental Analyst
- Jacoba Charles, M.S. & M.A., Environmental Analyst

## **Appendix B**

### **Photo-simulation Data**

## **Peer Review Evaluation of Nighttime Visual Simulations Tiburon Peninsula Club – Junior Tennis Club Improvements**

Prepared for Leonard Charles and Associates

February 21, 2018

### **1. Introduction**

Environmental Vision was retained to review and evaluate a set of nighttime visual simulations prepared by project applicant for proposed improvements to the existing Tiburon Peninsula Club (TPC) tennis facility. The overall approach to conducting the peer review focused on determining whether the visual simulation images are generally accurate and provide a reasonable illustration of the proposed changes to existing nighttime visual conditions with respect to lighting. Environmental Vision performed this evaluation to support the City CEQA process.

### **2. Proposed Project**

The proposed project as detailed in the Revised Initial Study (March 2017) involves modifications to the existing TPC facility including new lighting for six existing tennis courts, a new one-story structure, and new landscaping near the entrance. A total of 48 shielded LED luminaires will be mounted on 22-foot high poles. This will include eight lights per court. The new lighting will be used from September 8 to April 14, and until 7:45 pm at night. The proposed building will be approximately 44 feet long, 40 feet wide, 14 feet tall, and will include two bathrooms, tennis equipment storage, and covered entryway.

### **3. Methodology**

A combination of field observation and computer modeling techniques were employed to complete this peer review study. As an initial step, the following materials were obtained and reviewed:

- 1) Visual Simulations – sets of existing view and digital visual simulation images from three selected view locations (Benya Burnett Consultancy);
- 2) Map showing the three simulation photograph viewpoint locations (Miles Berger);
- 3) Existing facilities plan drawing (Miles Berger);
- 4) Lighting Plan (Visionaire Lighting);
- 5) Plan, elevation drawings, and 3D digital model of proposed building (Wayne Meyer Works);
- 6) Preliminary Landscape Plan (Abey Arnold Associates);
- 7) Revised Initial Study for Tiburon Peninsula Club (Leonard Charles and Assoc.);
- 8) Aerial photography (Esri).

In January 2018 Environmental Vision conducted a site visit to observe the TPC site during daylight and nighttime conditions. Observations were conducted from the three viewpoints used for the visual simulation photographs. The site visit also included observations at the project site and adjacent parking lot.

Environmental Vision completed three dimensional (3D) digital modeling of the project by combining the site plan, aerial photos, and 3D building model. The digital modeling employed project design data and existing conditions data including topography. Proposed lights were included based on the project lighting plan. Digital perspective views matching the three simulation photographs were set up based upon camera and lens information, and simulation viewpoint location data. "Wireframe" perspective plots were then digitally overlaid on the simulation

photographs to verify scale and placement of project elements including the proposed new lights and building structure.

The evaluation and comments below are based on the results of comparing the output from the 3D modeling with the simulation images prepared by the applicant as well as the results of field observations and review of available project information.

#### 4. Evaluation and Conclusion

Results of Environmental Vision's review of the nighttime visual simulations and computer modeling indicate that the simulation images provide a reasonable illustration of the proposed changes to existing nighttime visual conditions with respect to level of illumination.

The visual simulation images generally appear to be reasonably accurate overall in terms of scale or placement of the proposed new tennis court lighting and new building. However, to varying degrees there are some inaccuracies. Specific discrepancies or inaccuracies are detailed below under discussion of each of the nighttime simulation views.

**View 1** is from a residence on Mar West Street looking northwest toward the project. In the nighttime simulation, the new light poles are shown in approximately the correct locations; however, the pole heights do not appear to be tall enough in the simulation. The poles are shown about 14 to 15 feet tall rather than the 22-foot pole heights in the project design data. Notwithstanding this pole height discrepancy, the nighttime simulation from the Mar West viewpoint shows the proposed project area with relatively accurate levels of illumination. The simulation shows the proposed new building in approximately the correct location.

**View 2** is from the back of a multi-family residence on Marsh Road looking northeast. From this location at nearly the same elevation as the tennis courts, the lighted court surfaces and new building would not be visible. The nighttime simulation shows some new light sources near the center of the nighttime simulation. Comparison with the computer modeling results indicates that the location of these new light sources (the luminaires at the top of the light poles) should be shown further to the right in this simulation view and that these new lights may be shown too high as well. However, because of the tall intervening vegetation, it is reasonable to anticipate that many of the proposed new luminaires may not be visible from this viewpoint location. The nighttime simulation from Viewpoint 2 along Marsh Road shows the levels of illumination at the proposed project area with reasonable accuracy notwithstanding potential discrepancies in the placement of proposed new poles as noted above.

**View 3** is from the back of a multi-family residence on Harbor Oak Drive looking southeast. The nighttime simulation shows the proposed project area and levels of illumination with reasonable accuracy. However, the simulation does not show the subtle illumination of the trees adjacent to the tennis courts that would be expected from the new lighting at the tennis courts. We note that this effect was observed during field observations and is shown in the nighttime simulation for view 2. The visual simulation also does not show the proposed new building which would be visible at the left side of the tennis courts from this location. In addition, the nighttime simulation shows some existing storage containers on the tennis courts that would be removed under the proposed project.

As described above, the set of visual simulation images convey a general sense of the proposed project's nighttime appearance, notwithstanding the relatively minor inaccuracies noted. Therefore

the three simulations are considered to provide reasonably accurate depictions of the project, as seen from the selected viewpoints. The visual simulations demonstrate the incremental change to existing nighttime lighting conditions would not represent a substantial aesthetic change in the project area. Independent field observations conducted by Environmental Vision indicate the presence of existing lighting near the project site at the Tiburon Peninsula Club, including parking lot and tennis court lighting. Additionally existing commercial lighting south of the site along Tiburon Boulevard and beyond is readily seen in View 3. The proposed new lights will only be used from September 8 to April 14, and until 7:45 pm at night in order to reduce the incremental change to nighttime lighting conditions. In addition, the Revised Initial Study suggests mitigation to modify existing lighting in the adjacent parking lot. If implemented, this measure could reduce the off-site visibility of existing nighttime parking lot lighting as seen from the three viewpoints.

## **Appendix C**

### **Traffic Report**

# Transportation Impact Study for Tiburon Peninsula Club

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October 2017

Prepared for:

**Leonard Charles and Associates**

Prepared by:



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# Transportation Impact Study

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## INTRODUCTION

This Transportation Impact Study (“study”) evaluates potential transportation impacts associated with the proposed Tiburon Peninsula Club (TPC) Expansion Project, hereafter referred to as the “Project”. The study was conducted by Parisi Transportation Consulting (Parisi) on behalf of the Tiburon Peninsula Club for subsequent submittal to the Town of Tiburon (Town). This study serves as a supplement to the *Tiburon Peninsula Club – Junior Tennis Club Project Revised Initial Study* (March 2017), hereafter referred to as the “*Initial Study*”.

Under existing conditions, the Tiburon Peninsula Club site encompasses 566,000 square feet and consists of four swimming pools, a fitness center, 12 tennis courts, a clubhouse and deck amenities. The TPC currently has 700 family memberships and 175 senior memberships. Eighty-five (85) percent of club members reside within the Town of Tiburon and its surrounding areas (94920 zip code). The club offers tennis lessons which run from 3:00 PM until 7:00 PM. The 12 tennis courts serve an average of 20 students per day, from Monday through Thursday. Vehicular parking for club members is provided at the southern portion of the club adjacent to the lower tennis courts via Mar West Street.

The Project proposes the installation of luminaires to provide lighting for six of the existing tennis courts; an expansion of the TPC to include an outdoor landscaped area and a one-story structure to provide additional bathrooms and storage.

The additional lighting would primarily be used during from September 8<sup>th</sup> to April 14<sup>th</sup>. During these months, the additional Project-proposed lighting would allow the club to extend scheduled classes another two hours, from 5:30 PM to 7:30 PM. The lights would remain on for an additional 15 minutes (until 7:45 PM) for cleanup activities.

This study assessed the existing and proposed traffic conditions around the Project area, and analyzed potential transportation-related impacts, and proposed (as necessary) mitigation measures to, associated with the proposed changes to the TPC.

## ENVIRONMENTAL SETTING

The Tiburon Peninsula Club is located at 1600 Mar West Street in Tiburon, California. The project site is one quarter-mile northeast of the Tiburon Boulevard and Mar West Street intersection. The Tiburon Boulevard / Mar West intersection was identified as a study intersection as it provides primary local access to the TPC. The study intersection is unsignalized with stop-controlled

## Tiburon Peninsula Club Expansion Project

eastbound and westbound approaches and has left turn bays in both directions on Tiburon Boulevard.

Local access to the Project site is provided via a project driveway located along Mar West Street. The *Town of Tiburon General Plan* (September 2005), hereafter referred to as "*General Plan*", identifies Mar West as an east-west collector street that loops from Tiburon Boulevard in the west to Paradise Drive in the east. In the vicinity of the project site, Mar West is a two-lane roadway with a posted speed limit of 25 mph. Sidewalks are provided on both sides of the street. Bicyclists traveling along Mar West share the roadway with motor vehicles, as there are no dedicated bicycle facilities provided on the street.

Regional access to and from the Project site is provided via Tiburon Boulevard (State Route 131), which runs between from U.S. 101 and Paradise Drive. Tiburon Boulevard connects the town of Belvedere and Tiburon to the greater County of Marin. The *General Plan* identifies Tiburon Boulevard as a minor arterial roadway on the Tiburon peninsula. In the study area, Tiburon Boulevard is a two-lane facility running in the north-south direction and has a posted speed limit of 30 mph. Tiburon Boulevard has sidewalks and Class II bike lanes along each side.

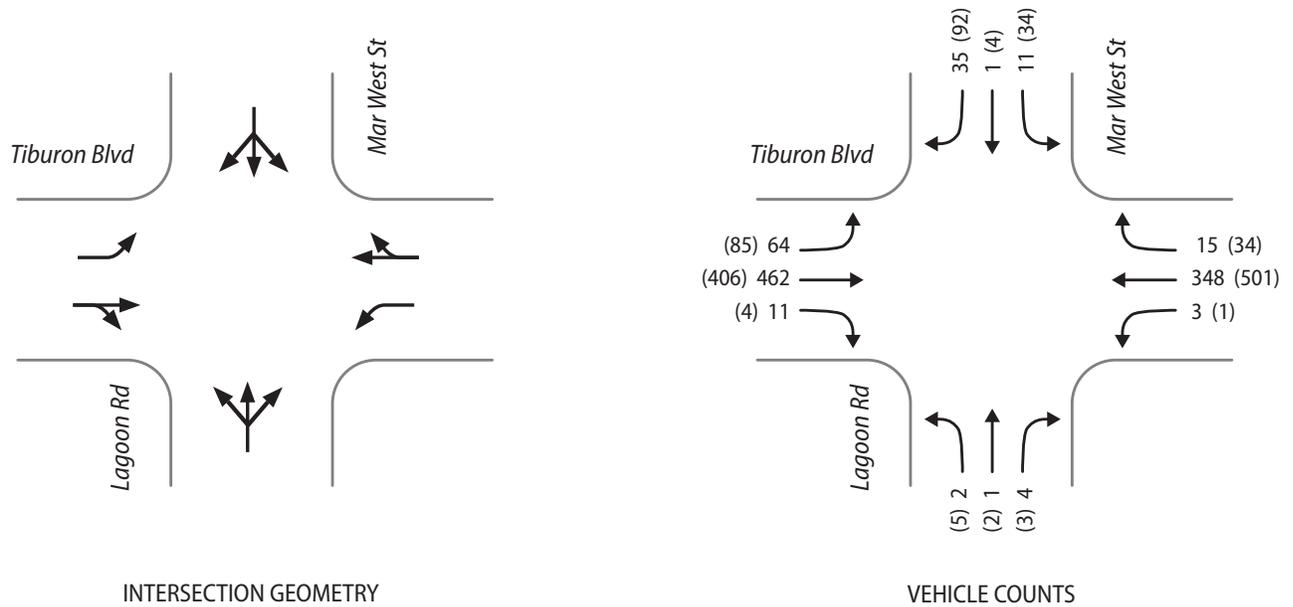
Transit access to and from the site is provided by Marin Transit and Golden Gate Transit. The nearest bus stop is located on the north side of the intersection.

## EXISTING CONDITIONS

Vehicle turning movement counts were conducted at the study intersection during the morning peak period (7:00 AM to 9:00 AM) and the evening peak period (4:00 PM to 6:00 PM). The counts were conducted on a fair weather mid-week day (Tuesday, September 19) when nearby schools were in session. The results of the counts are shown in Figure 1.

The collected counts were reviewed and peak-hour volumes, consisting of the four consecutive 15-minute periods with the highest traffic volume, were identified. The AM peak hour occurs from 8:00 AM to 9:00 AM and the PM peak hour occurs from 4:15 PM to 5:15 PM. It was also determined that the highest traffic volumes occur on the through movements in both directions of Tiburon Boulevard (approximately 850 vehicles per hour). Mar West Street experiences moderate right and left turning movements with no more than 130 vehicles per peak hour. Lagoon Road, located across Tiburon Boulevard from Mar West experiences no more than 10 vehicles per peak hour.

Intersection performance was evaluated at the study intersection. A level of service (LOS) analysis was conducted in accordance with the *Highway Capacity Manual 2010* LOS methodology and analyzed using Trafficware *Synchro 10* software. The analysis provides estimates of motorist delays experienced at the study intersection under existing and future conditions. A level of service grade



LEGEND: xx AM (xx) PM

**Figure 1: Traffic Volumes – Existing Conditions**  
**Tiburon Peninsula Club Expansion Project**

was assigned to the intersection. The *General Plan* identifies an acceptable intersection as one that operates at an LOS C or above.

Two-way stop-controlled intersection level of service is based on the approach with the longest delay. This study focused on the delay individual stop-controlled movements as well as the average delay at the intersection. Table 1 shows level of service criteria for unsignalized intersections.

**Table 1: Unsignalized Intersection Level of Service Definitions**

Level of Service	Average Control Delay per Vehicle (in Seconds)
A	≤ 10
B	> 10 – 15
C	> 15 – 25
D	> 25 – 35
E	> 35 – 50
F	> 50

Source: Transportation Research Board, 2010

The level of service for the study intersection’s stop sign-controlled movements was analyzed under existing conditions during both the morning and evening peak periods. The results of this analysis are presented in Table 2.

**Table 2: Intersection Level of Service Summary - Existing Conditions**

Intersection	Control	Existing Conditions (AM)				
		Intersection	EB Approach		WB Approach	
Tiburon Blvd / Mar West St	TWSC	Delay	LOS	Delay	LOS	Delay
		2 sec.	C	18 sec.	C	16 sec.
		Existing Conditions (PM)				
		Intersection	EB Approach		WB Approach	
		Delay	LOS	Delay	LOS	Delay
		4 sec.	D	31 sec.	D	30 sec.

Notes: LOS = Level of service; TWSC = two-way stop controlled; Delay is measured in average seconds per vehicle. EB approach refers to Lagoon Road; WB Approach refers to Mar West Street.

Source: Parisi Transportation Consulting, 2017.

As shown, under AM peak period existing conditions the Lagoon Road stop sign-controlled approach operates at LOS C with a delay of 18 seconds per vehicle. Mar West stop sign-controlled approach operates at LOS C with a delay of 16 seconds per vehicle. The sign-controlled movements as well as the intersection as a whole are operating under acceptable conditions during the AM peak period. During the PM peak period, the EB approach operates at LOS D with

a delay of 31 seconds per vehicle and the WB approach operates with a delay of 30 seconds per vehicle. Although the intersection as a whole performs acceptably, the two stop-controlled movements are considered unacceptable.

### **VEHICLE TRIP GENERATION**

To analyze the Project's impact on the existing transportation system, the Project's vehicle trip generation and distribution was estimated as part of this study.

Vehicle trip generation results were estimated by reviewing the initial study methodology.

Under existing conditions, tennis classes are 90 minutes long and occur between 3:30 to 5:30 PM with 15 students on the courts at a time. The Project-proposed lighting will increase class hours from ending at 5:30 PM under existing conditions to 7:30 PM under Project conditions. Classes will continue to be 90 minutes long with three tennis lessons (15 students) occurring concurrently at any given time.

The estimated increase in student trips was determined by evaluating the number of additional students per class for the proposed new class schedule. It was estimated that the project would generate an additional 20 student trips per day between September and April when the lighting is in use. Each student was assumed to generate two vehicle trips per class. This assumes that, similar to existing conditions, each student is dropped off at the TPC and the driver remains at the club for the duration of the lesson. This would result in an estimated 40 (20 inbound, 20 outbound) additional vehicle trips per day during this time frame.

Although students may walk, bike, or take public transit to reach the TPC, the study assumes that all new trips generated by the Project are vehicular. Based on these calculations, the installation of court lighting would result in on average 20 additional student-trips per day between September and April, resulting in 40 vehicle-trips per day.

This methodology should be considered extremely conservative as it is likely that the resulting vehicle trip generation would be lower. Students might carpool, walk, or bike to the club. Based on the class schedule, it is expected that these project-generated trips would occur between 3:00 PM and 7:45 PM in the winter with half of the 20 new inbound trips occurring during the evening peak period of 4:15 – 5:15 PM and all of the 20 new outbound trips occurring outside of the peak period. The study assumes that ten inbound vehicle-trips and zero outbound vehicle trips will be added to the peak period as a result of the project.

### **TRIP DISTRIBUTION**

As part of the initial study, a member travel behavior survey was conducted to determine TPC member travel patterns. The survey results revealed that 83% of members use Mar West Street from the north to reach the TPC, while 17% use Mar West Street from the south. Review of the area based on location of housing and other nearby facilities align with these numbers. Based on this

distribution, nine of the ten project-generated inbound PM peak hour trips would be added to the Tiburon Boulevard / Mar West intersection.

## PROJECT IMPACT ANALYSIS

### ENVIRONMENTAL IMPACTS

The Project's net new travel demand was assessed according to the Town of Tiburon's significance criteria<sup>1</sup>. According to the Town's guidelines, the Project would have a significant effect on the environment if it:

- Conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities;
- Conflicts with the Town of Tiburon Level of Service standards for an Unsignalized intersection;
  - Results in an increase in delay of five seconds or more and results in the Caltrans peak hour signal warrant being met
- Deteriorates regional roadway (Tiburon Boulevard) from LOS D to E during the PM peak hour period;
- Results in project traffic or roadway design results in a substantial increase in unsafe circulation conditions;
- Results in conflicts with adopted policies and plans supporting alternative transportation;
- Results in inadequate emergency access
- Results in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

The following sections assess the Project's impacts on nearby transportation facilities based on the significance criteria presented above.

California Senate Bill 743 (2013) replaces intersection Level of Service with Vehicle Miles Traveled (VMT) as a measure of project impact significance. VMT is a performance measure that correlates vehicle-trip mobility to performance of traffic facilities within a predefined location. VMT is typically estimated from travel demand models and is calculated based on the number of vehicles

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<sup>1</sup> The Level of Service Significance Criteria was referenced from *Belvedere-Tiburon Library Expansion Project, Draft Environmental Impact Report* approved by the Town of Tiburon in 2010.

multiplied by the distance traveled by each vehicle. The project is expected to generate 40 new trips per day over approximately 220 days (September 8 to April 14). Eighty-five (85) percent of TPC members live within a three mile-radius of the site, which is located two miles from Trestle Glenn and four miles from Highway 191. Conservatively assuming that an average trip to / from the project site is three miles, the project could add up to 26,400 VMT per year (120 VMT per day between September and April). An average day would see an increase of 71 VMT per day. Based on the Metropolitan Transportation Commission's (MTC) current travel model, this would be a 0.036 percent increase in VMT generated per day in Tiburon.

This estimate conservatively assumes that all new trips generated by the project are primary vehicle trips, i.e., trips made for the specific purpose of visiting the site and not trips associated with any other purpose. The analysis also assumes all project generated trips would be vehicular trips although there is mass transit available on Tiburon Boulevard. Bicycle and pedestrian access is also provided via a sidewalk connecting the project site to Tiburon Boulevard and a Class I path located in the vicinity of the project site. It is likely that not all future trips would be made by vehicle. Considering these conservative assumptions, VMT contribution would likely be substantially less than presented.

VMT analysis is still relatively new and the Town of Tiburon and other cities in Marin have not yet adopted significance thresholds for this concept. This analysis therefore focused on impacts to level of service as discussed below.

### EXISTING CONDITIONS PLUS PROJECT

The number of trips generated by the project were added to the study intersection and analyzed to determine LOS. Intersection operating conditions during the AM peak hour would remain consistent with that under existing conditions because the net-new trips generated by the Project would occur between 3:00 and 7:45 PM. The LOS analysis to the PM peak hour is shown in Table 3 below.

**Table 3: Intersection Level of Service Summary - Existing Conditions Plus Project**

Intersection	Control	Existing Conditions (PM)				
		Intersection	EB Approach		WB Approach	
Tiburon Blvd / Mar West St	TWSC	<b>Delay</b>	<b>LOS</b>	<b>Delay</b>	<b>LOS</b>	<b>Delay</b>
		4 sec.	D	31 sec.	D	30 sec.
		Existing Conditions Plus Project (PM)				
		Intersection	EB Approach		WB Approach	
		<b>Delay</b>	<b>LOS</b>	<b>Delay</b>	<b>LOS</b>	<b>Delay</b>
		4 sec.	D	32 sec.	D	31 sec.

Notes: LOS = Level of service; TWSC = two-way stop-controlled; Delay is measured in average seconds per vehicle.  
Source: Parisi Transportation Consulting, 2017.

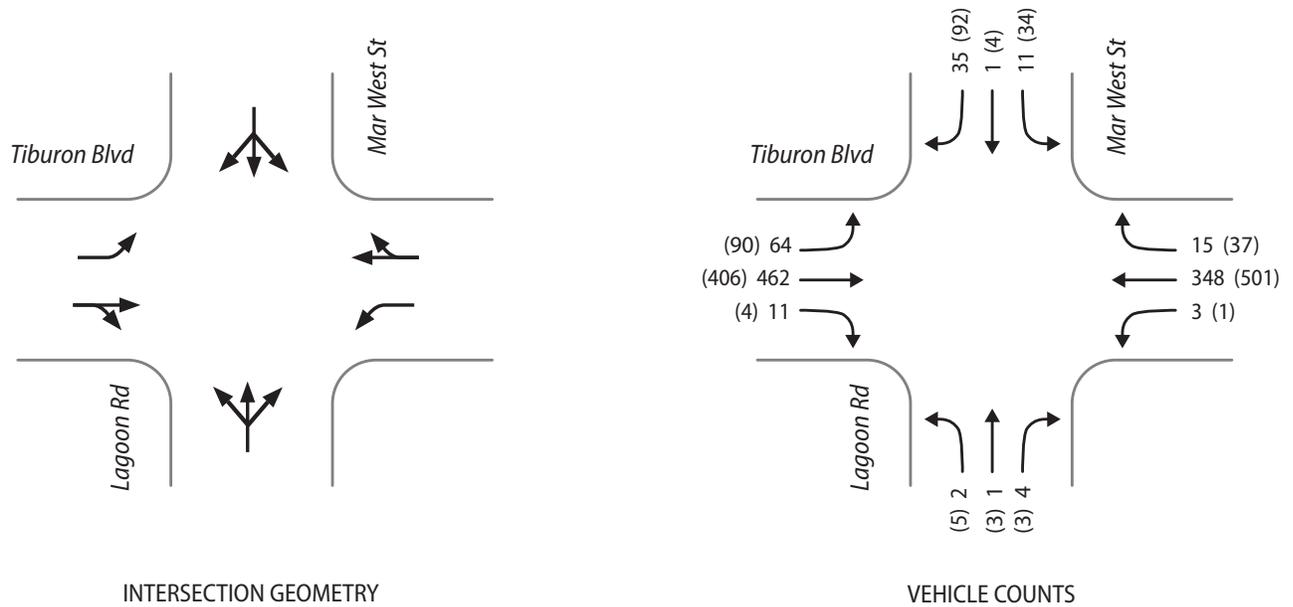
## Tiburon Peninsula Club Expansion Project

Under existing plus project conditions, the addition of project-generated vehicle trips to the study intersection would not change the operation of the intersection as a whole. Both stop controlled movements would increase in delay per vehicle by one second and remain at LOS D. While the two stop-controlled movements are considered unacceptable, the intersection itself operates acceptably.

The Project would not significantly impact transit, bicycle, and pedestrian facilities as the net-new trips generated by the Project would likely be vehicular trips. Any additional trips by other modes would be minor and could be accommodated by the existing transit, pedestrian, and bicycle facilities.

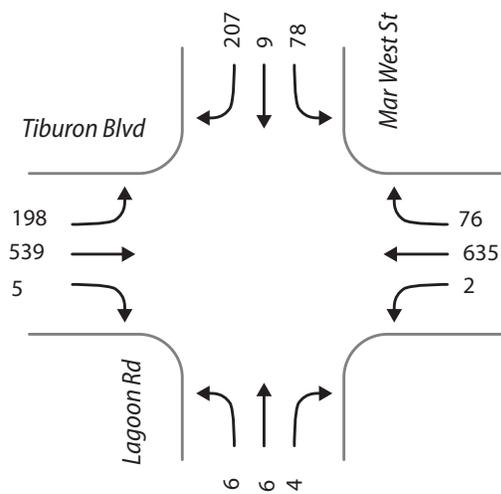
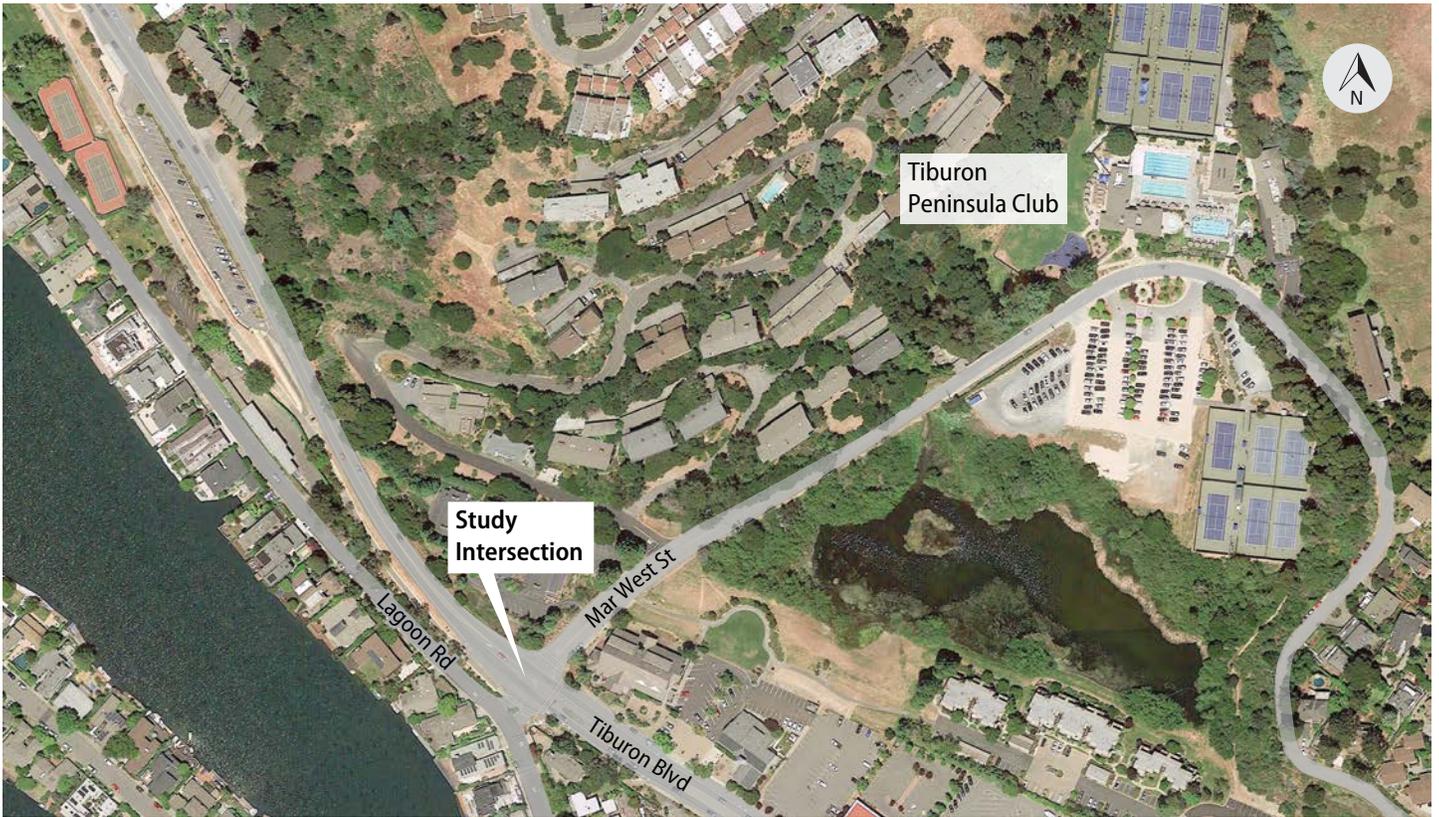
The Project site has adequate emergency access via public streets. The changes to the Tiburon Peninsula Club would not result in closure of any of the emergency access routes. On-site emergency vehicle access paths would remain consistent with those under Existing Conditions. Therefore, the Project would not result in any significant impacts to emergency vehicle access.

The Project does not propose any features that would substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

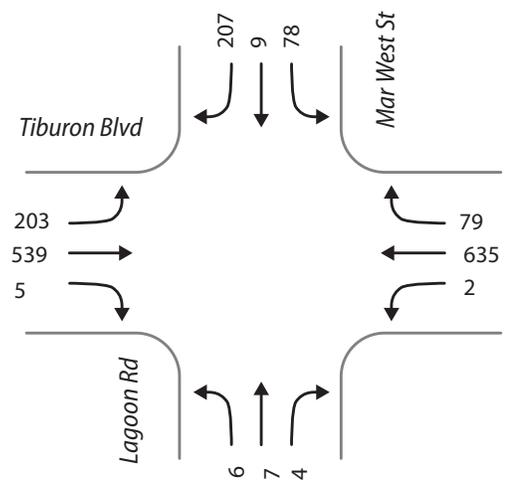


LEGEND: xx AM (xx) PM

**Figure 2: Traffic Volumes – Existing Plus Project Conditions**  
**Tiburon Peninsula Club Expansion Project**



CUMULATIVE PM CONDITIONS



CUMULATIVE PLUS PROJECT PM CONDITIONS

**Figure 3: Traffic Volumes – Cumulative Conditions**  
*Tiburon Peninsula Club Expansion Project*

## CUMULATIVE CONDITIONS

The Project’s potential impacts on the surrounding transportation network were evaluated for a 2040 cumulative forecast year.

To evaluate the cumulative no project scenario, *Belvedere-Tiburon Library Expansion Project Environmental Impact Report (2010)* was reviewed. The *Belvedere-Tiburon Library Expansion EIR* referenced growth rate projections from the *Town of Tiburon General Plan Year 2020 Update* to determine growth at the Tiburon Boulevard / Mar West Street intersection. This study compared the intersection vehicular traffic growth from existing to cumulative conditions estimated a part of the *Belvedere-Tiburon Library Expansion EIR*. It was determined that the project’s growth rate plus the trips generated by the approved library expansion would result in a traffic growth increase of about 0.5 percent per year.

This growth rate was applied to the Tiburon Boulevard / Mar West intersection for the purposes of evaluating this Project’s impact under the cumulative year conditions. The results of this analysis are present in Table 4. The analysis focused on the evening peak hour as the Project is not expected to generate new trips during the morning peak hour.

**Table 4: Intersection Level of Service – Cumulative plus Project Conditions (PM Peak Hour)**

Intersection	Control	Cumulative Conditions			
		EB Approach		WB Approach	
		LOS	Delay	LOS	Delay
Tiburon Blvd / Mar West St	TWSC	F	>80 sec.	F	>80 sec.
		Cumulative Conditions			
		EB Approach		WB Approach	
		LOS	Delay	LOS	Delay
		F	>80 sec.	F	>80 sec.

Notes: LOS = Level of service; TWSC = two-way stop-controlled; Delay is measured in average seconds per vehicle. Bold indicates intersection is operating below acceptable standards.

Source: Parisi Transportation Consulting, 2017.

Under the baseline cumulative conditions, the stop-controlled movements would operate at a LOS F. Under cumulative plus project conditions, the stop-controlled movements would be expected to behave at a LOS F with a delay greater than 80 seconds per vehicle. Project-related traffic would increase vehicular delay at these approaches by more than five seconds and could potentially result in a significant impact. Intersection operations under both the cumulative and cumulative plus project conditions exceed the Town’s significance threshold of a LOS D for the study intersection during the PM peak hour.

The Town’s significance criteria requires a signal warrant analysis for any intersection in which vehicular delay would be increased by five seconds or more as a result of the addition of new project trips. Both cumulative and cumulative plus project PM peak hour conditions would result in a delay of over five seconds.

Cumulative volumes with and without project-trip contributions were evaluated to determine if the intersection meets the peak hour traffic signal warrant in the year 2040. The signal warrant analysis was conducted using the methodology published in the *California Manual of Uniform Traffic Control Devices* (Caltrans, 2014) guidelines for Peak Hour Traffic Signal Warrant for the cumulative and cumulative plus project PM peak hour conditions. The results of the traffic signal warrant analysis are shown in Table 5.

**Table 5: Traffic Signal Warrant Analysis for Cumulative and Cumulative Plus Project Conditions**

Intersection	Major Street (Total Volume)	Minor Street (Highest Volume) <sup>2</sup>	Signal Warrant Met
Tiburon Blvd / Mar West St	<b>Cumulative Conditions</b>		
	1,455	294	Yes
	<b>Cumulative Plus Project Conditions</b>		
	1,463	294	Yes

Source: Parisi Transportation Consulting, 2017.

The peak hour signal warrant analysis determined that under both cumulative and cumulative plus project conditions, the study intersection would meet the peak hour traffic signal warrant. Although the Project does increase delay at the Tiburon Blvd / Mar West intersection, a traffic signal is warranted without the addition of the Project-generated trips. The Project’s contribution to the intersection is shown in Table 6 below.

**Table 6: Project Contribution to Cumulative and Cumulative Plus Project Conditions**

Intersection	Intersection Volume		
	Total Volume	Project Trips	
		Volume	Share
Tiburon Blvd / Mar West St	<b>Cumulative Conditions</b>		
	1,765	0	N/A
	<b>Cumulative Conditions Plus Project</b>		
	1,774	9	0.51%

Source: Parisi Transportation Consulting, 2017.

<sup>2</sup> The Peak Hour signal warrant analysis is done using the total volume on all approaches of the major street and the minor street approach with the highest volume. The total volume of the minor street approaches is higher under cumulative plus project conditions, however under both cumulative and cumulative plus project conditions the higher approach on the minor street (eastbound) has the same volume of 294 vehicles.

As shown, the Project would contribute to the study intersection less than one percent of total intersection volume under the Cumulative plus Project condition.

The Tiburon Boulevard / Mar West intersection is in Caltrans jurisdiction and Caltrans requires a roundabout to be considered at any intersection that meets the traffic signal warrant. A LOS analysis was done at the study intersection operating as a roundabout under both cumulative and cumulative plus project conditions. The results of the analysis are shown below.

**Table 7: Roundabout Level of Service – Cumulative plus Project Conditions (PM Peak Hour)**

Intersection	Control	Cumulative Conditions			Cumulative Plus Project Conditions		
		LOS	Delay <sup>1</sup>	Movement	LOS	Delay <sup>1</sup>	Movement
Tiburon Blvd / Mar West St	Roundabout	D	28 sec.	NB	D	29 sec.	NB

Notes: LOS = Level of service; TWSC = two-way stop-controlled; Delay is measured in average seconds per vehicle.

Bold indicates intersection is operating below acceptable standards.

1: This analysis was done using Synchro 10 software which has limited capacity to analyze roundabout operations.

Source: Parisi Transportation Consulting, 2017.

Under cumulative conditions, a roundabout at the Tiburon Boulevard / Mar West intersection would operate at an LOS D with an average intersection delay of 28 seconds per vehicle. The addition of project-generated vehicles would add one second of delay per vehicle across the intersection and the intersection would continue to operate at an LOS D.

The project would make a significant contribution under existing unsignalized conditions, but would not make a significant contribution to the intersection if it were operating under signalized conditions or with the installation of a roundabout.

## CONCLUSION

The study reviewed the existing traffic conditions at the study intersection within the vicinity of the Tiburon Peninsula Club in Tiburon. The intersection currently operates at acceptable condition during both the morning and evening peak periods. The Project would not significantly impact traffic operations during the AM peak period. Based on very conservative “worst-case” assumptions, during the PM peak period nine net-new vehicle trips would be added to the Tiburon Boulevard / Mar West intersection resulting in an increase in delay of one second per vehicle. However, the intersection would continue to operate at LOS D.

The Study referenced cumulative conditions from the *Belvedere-Tiburon Library Expansion EIR* to evaluate cumulative and cumulative plus project conditions at the Tiburon Boulevard / Mar West intersection for a 2040 forecast year. The addition of Project-generated trips to the study intersection would increase delay by more than five seconds per vehicle. However, the

## Tiburon Peninsula Club Expansion Project

intersection is expected to operate at an unacceptable condition of LOS F under the Cumulative no Project conditions. The addition of the project further increases delay experienced per vehicle.

A Traffic Signal Warrant Analysis was conducted for the Cumulative and Cumulative plus Project conditions at the Tiburon Boulevard / Mar West intersection. Signalization of the intersection is warranted under both scenarios. It should be noted that a traffic signal would be warranted without the addition of Project generated trips. However, the Project would increase delay per vehicle at the intersection by more than five seconds, and Project trips would account for under one percent of trips under cumulative plus project conditions. Since the project contributes less than one percent of trips that would contribute to the traffic signal warrant, it is recommended that TPC contribute their fair share (as determined by the Town of Tiburon) to the installation of a traffic signal at the intersection.

In addition to a Traffic Signal Warrant Analysis, a Level of Service Analysis was done for the intersection operating as a roundabout under both cumulative and cumulative plus project conditions. A roundabout would operate at LOS D under both conditions. The addition of project-generated trips would increase average delay at the intersection by one second per vehicle.

The Project is not expected to have any impacts to transit, pedestrian, or bicycle operations within the vicinity of the Project site.

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# Appendix A

## Trip Generation

**Table A1: Trip Generation Calculation**

<b>Tennis Class Characteristics</b>	<b>Existing Conditions</b>	<b>Existing Plus Project</b>	<b>Change</b>
Duration of Daily Classes	3:30 - 5:30 PM	3:30 - 7:30 PM	2 Hours
Duration of Single Class	1.5 Hours	1.5 Hours	-
Students Per Court	3	3	-
Courts in Use	5	5	-
Students Per Day	20	40	<b>20</b>

October 2017

# Appendix B

## Vehicular Traffic Volumes

**TRAFFIC COUNTS PLUS**

mietekm@comcast.net  
925.305.4358

TOWN OF TIBURON

Latitude: 37.877064  
Longitude: -122.462135

File Name : mar west-tiburon-a

Site Code : 1  
Start Date : 9/19/2017  
Page No : 1

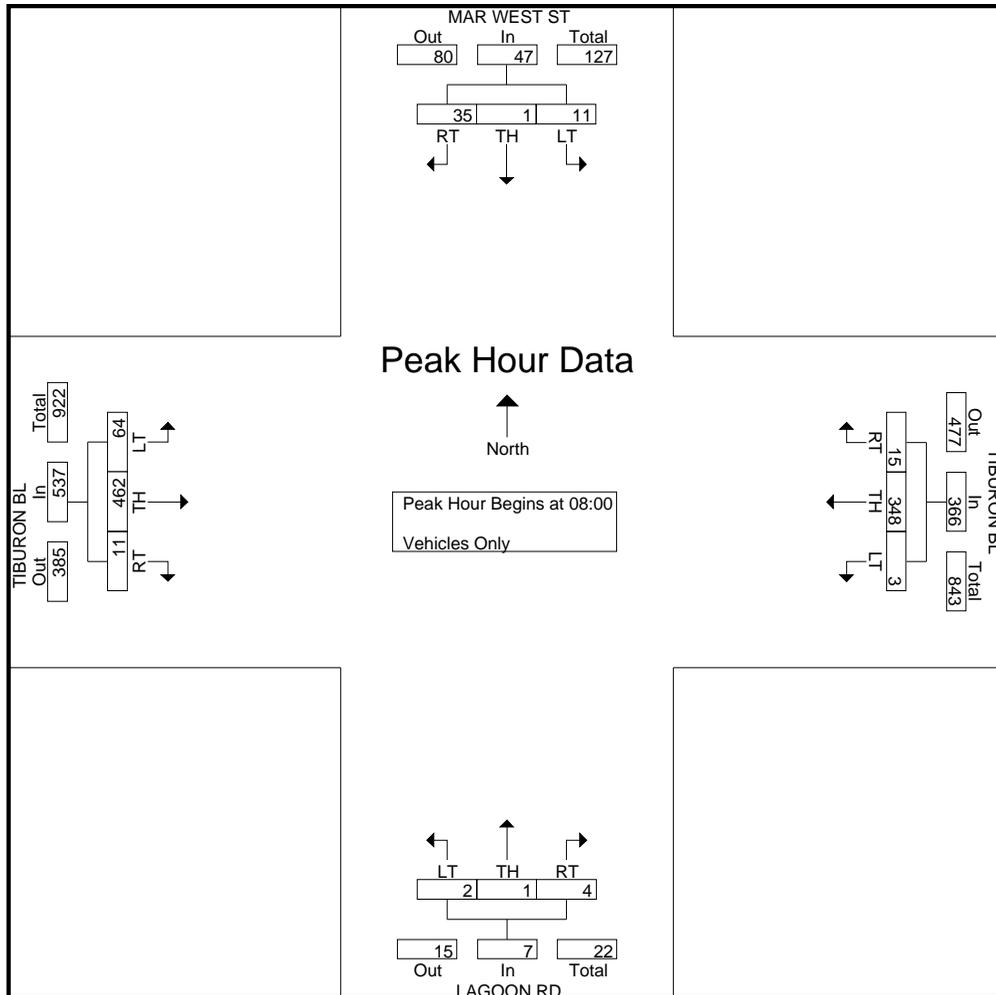
**Groups Printed- Vehicles Only**

Start Time	MAR WEST ST Southbound				TIBURON BL Westbound				LAGOON RD Northbound				TIBURON BL Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
07:00	5	0	0	5	1	71	1	73	0	0	0	0	0	72	5	77	155
07:15	15	1	2	18	5	85	0	90	1	0	0	1	1	53	9	63	172
07:30	10	1	0	11	1	73	1	75	1	0	2	3	1	110	12	123	212
07:45	8	0	5	13	2	87	2	91	1	0	2	3	0	111	7	118	225
Total	38	2	7	47	9	316	4	329	3	0	4	7	2	346	33	381	764
08:00	8	0	1	9	2	87	0	89	0	0	0	0	2	90	10	102	200
08:15	6	0	3	9	3	90	0	93	0	1	0	1	4	133	20	157	260
08:30	7	0	3	10	6	81	0	87	3	0	1	4	5	102	15	122	223
08:45	14	1	4	19	4	90	3	97	1	0	1	2	0	137	19	156	274
Total	35	1	11	47	15	348	3	366	4	1	2	7	11	462	64	537	957
Grand Total	73	3	18	94	24	664	7	695	7	1	6	14	13	808	97	918	1721
Apprch %	77.7	3.2	19.1		3.5	95.5	1		50	7.1	42.9		1.4	88	10.6		
Total %	4.2	0.2	1	5.5	1.4	38.6	0.4	40.4	0.4	0.1	0.3	0.8	0.8	46.9	5.6	53.3	

Start Time	MAR WEST ST Southbound				TIBURON BL Westbound				LAGOON RD Northbound				TIBURON BL Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
08:00	8	0	1	9	2	87	0	89	0	0	0	0	2	90	10	102	200
08:15	6	0	3	9	3	90	0	93	0	1	0	1	4	133	20	157	260
08:30	7	0	3	10	6	81	0	87	3	0	1	4	5	102	15	122	223
08:45	14	1	4	19	4	90	3	97	1	0	1	2	0	137	19	156	274
Total Volume	35	1	11	47	15	348	3	366	4	1	2	7	11	462	64	537	957
% App. Total	74.5	2.1	23.4		4.1	95.1	0.8		57.1	14.3	28.6		2	86	11.9		
PHF	.625	.250	.688	.618	.625	.967	.250	.943	.333	.250	.500	.438	.550	.843	.800	.855	.873

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00



**TRAFFIC COUNTS PLUS**

mietekm@comcast.net  
925.305.4358

TOWN OF TIBURON  
Latitude: 37.877064  
Longitude: -122.462135

File Name : mar west-tiburon-p  
Site Code : 1  
Start Date : 9/19/2017  
Page No : 1

**Groups Printed- Vehicles Only**

Start Time	MAR WEST ST Southbound				TIBURON BL Westbound				LAGOON RD Northbound				TIBURON BL Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
16:00	20	1	8	29	10	112	0	122	4	0	3	7	3	94	24	121	279
16:15	20	1	10	31	6	132	0	138	0	0	0	0	1	86	17	104	273
16:30	15	0	8	23	10	124	1	135	0	0	2	2	1	92	17	110	270
16:45	20	2	7	29	9	122	0	131	2	2	1	5	0	110	25	135	300
Total	75	4	33	112	35	490	1	526	6	2	6	14	5	382	83	470	1122
17:00	37	1	9	47	9	123	0	132	1	0	2	3	2	118	26	146	328
17:15	22	1	7	30	7	95	4	106	1	0	3	4	2	94	13	109	249
17:30	27	0	8	35	9	98	5	112	2	0	0	2	0	90	12	102	251
17:45	13	0	3	16	6	82	1	89	1	0	2	3	1	102	15	118	226
Total	99	2	27	128	31	398	10	439	5	0	7	12	5	404	66	475	1054
Grand Total	174	6	60	240	66	888	11	965	11	2	13	26	10	786	149	945	2176
Apprch %	72.5	2.5	25		6.8	92	1.1		42.3	7.7	50		1.1	83.2	15.8		
Total %	8	0.3	2.8	11	3	40.8	0.5	44.3	0.5	0.1	0.6	1.2	0.5	36.1	6.8	43.4	

Start Time	MAR WEST ST Southbound				TIBURON BL Westbound				LAGOON RD Northbound				TIBURON BL Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
16:00	20	1	10	31	6	132	0	138	0	0	0	0	1	86	17	104	273
16:30	15	0	8	23	10	124	1	135	0	0	2	2	1	92	17	110	270
16:45	20	2	7	29	9	122	0	131	2	2	1	5	0	110	25	135	300
17:00	37	1	9	47	9	123	0	132	1	0	2	3	2	118	26	146	328
Total Volume	92	4	34	130	34	501	1	536	3	2	5	10	4	406	85	495	1171
% App. Total	70.8	3.1	26.2		6.3	93.5	0.2		30	20	50		0.8	82	17.2		
PHF	.622	.500	.850	.691	.850	.949	.250	.971	.375	.250	.625	.500	.500	.860	.817	.848	.893

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:15

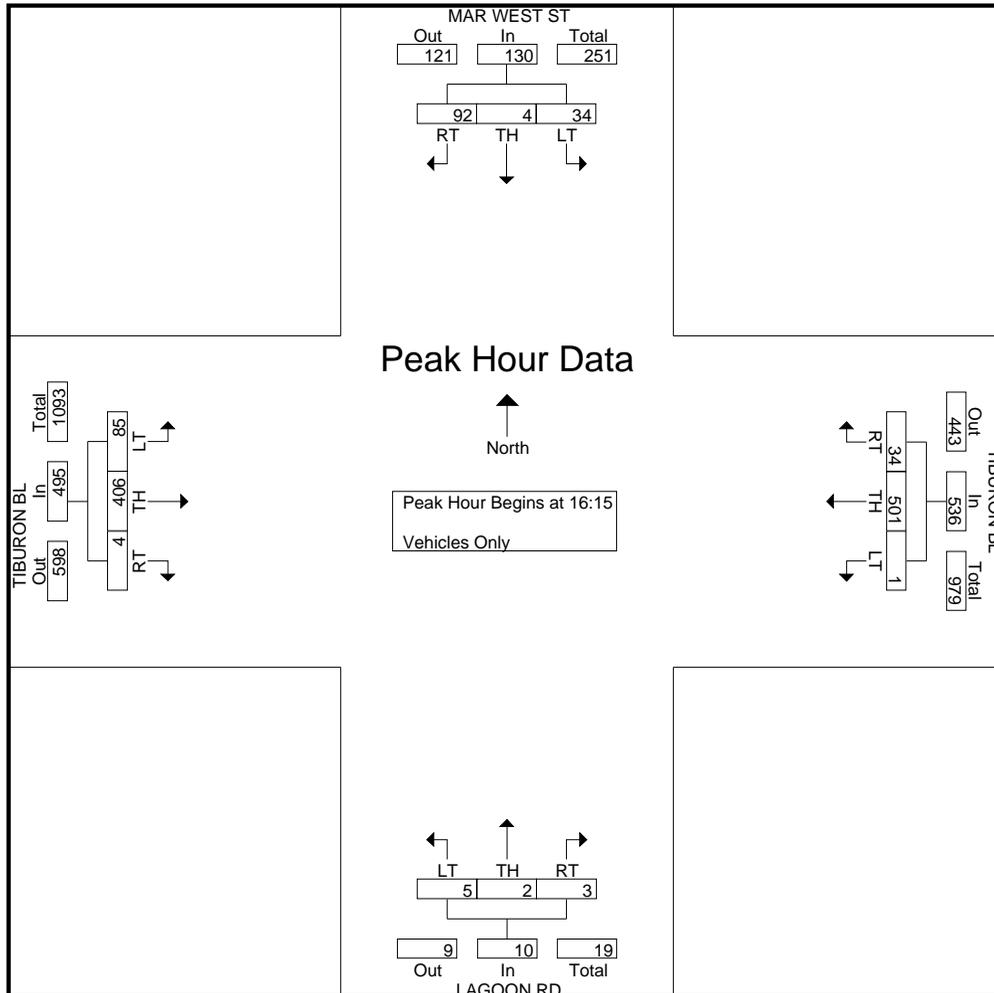


Table B1: Vehicular Traffic Volumes Summary

Intersection	Direction	Existing Conditions		Project Trips Distribution		Project Volumes Inbound		Project Volumes Outbound		Existing +Project Volumes Total		
		AM Peak	PM Peak	Inbound	Outbound	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	
Tiburon Blvd / Mar West St	NB	L	3	1							3	1
		T	348	501							348	501
		R	15	34	30%			3			15	37
	EB	L	2	5							2	5
		T	1	2	3%			1			1	3
		R	4	3							4	3
	SB	L	64	85	45%			5			64	90
		T	462	406							462	406
		R	11	4							11	4
	WB	L	11	34		30%					11	34
		T	1	4		5%					1	4
		R	35	92		40%					35	92
	Total		957	1171				9		0	957	1180

October 2017

# Appendix C

## Level of Service Analysis

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	1	4	11	1	35	3	348	15	64	462	11
Future Vol, veh/h	2	1	4	11	1	35	3	348	15	64	462	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1	5	13	1	40	3	400	17	74	531	13

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1121	1109	538	1104	1107	409	544	0	0	417	0	0
Stage 1	686	686	-	415	415	-	-	-	-	-	-	-
Stage 2	435	423	-	689	692	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	183	210	543	188	210	642	1025	-	-	1142	-	-
Stage 1	438	448	-	615	592	-	-	-	-	-	-	-
Stage 2	600	588	-	436	445	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	162	196	543	176	196	642	1025	-	-	1142	-	-
Mov Cap-2 Maneuver	162	196	-	176	196	-	-	-	-	-	-	-
Stage 1	437	419	-	613	590	-	-	-	-	-	-	-
Stage 2	560	586	-	403	416	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.1		15.9		0.1		1	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1025	-	-	282	385	1142	-
HCM Lane V/C Ratio	0.003	-	-	0.029	0.14	0.064	-
HCM Control Delay (s)	8.5	-	-	18.1	15.9	8.4	-
HCM Lane LOS	A	-	-	C	C	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0.2	-

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	2	3	34	4	92	1	501	34	85	406	4
Future Vol, veh/h	5	2	3	34	4	92	1	501	34	85	406	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	2	3	38	4	103	1	563	38	96	456	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1288	1253	458	1237	1236	582	460	0	0	601	0	0
Stage 1	650	650	-	584	584	-	-	-	-	-	-	-
Stage 2	638	603	-	653	652	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	141	172	603	153	176	513	1101	-	-	976	-	-
Stage 1	458	465	-	498	498	-	-	-	-	-	-	-
Stage 2	465	488	-	456	464	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	102	155	603	139	159	513	1101	-	-	976	-	-
Mov Cap-2 Maneuver	102	155	-	139	159	-	-	-	-	-	-	-
Stage 1	458	419	-	498	498	-	-	-	-	-	-	-
Stage 2	368	488	-	407	419	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	31.1		29.5		0		1.6	
HCM LOS	D		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1101	-	-	149	289	976	-
HCM Lane V/C Ratio	0.001	-	-	0.075	0.505	0.098	-
HCM Control Delay (s)	8.3	-	-	31.1	29.5	9.1	-
HCM Lane LOS	A	-	-	D	D	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	2.7	0.3	-

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	3	3	34	4	92	1	501	37	90	406	4
Future Vol, veh/h	5	3	3	34	4	92	1	501	37	90	406	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	3	3	38	4	103	1	563	42	101	456	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1300	1267	458	1249	1248	584	460	0	0	605	0	0
Stage 1	660	660	-	586	586	-	-	-	-	-	-	-
Stage 2	640	607	-	663	662	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	138	169	603	150	173	512	1101	-	-	973	-	-
Stage 1	452	460	-	496	497	-	-	-	-	-	-	-
Stage 2	464	486	-	450	459	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	99	151	603	135	155	512	1101	-	-	973	-	-
Mov Cap-2 Maneuver	99	151	-	135	155	-	-	-	-	-	-	-
Stage 1	452	412	-	496	497	-	-	-	-	-	-	-
Stage 2	367	486	-	398	411	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	31.9		30.4		0		1.6	
HCM LOS	D		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1101	-	-	146	284	973	-
HCM Lane V/C Ratio	0.001	-	-	0.085	0.514	0.104	-
HCM Control Delay (s)	8.3	-	-	31.9	30.4	9.1	-
HCM Lane LOS	A	-	-	D	D	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	2.7	0.3	-

Intersection												
Int Delay, s/veh	149.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	6	6	4	78	9	207	2	635	76	198	539	5
Future Vol, veh/h	6	6	4	78	9	207	2	635	76	198	539	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	7	4	88	10	233	2	713	85	222	606	6

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1934	1855	609	1819	1816	756	612	0	0	798	0	0
Stage 1	1053	1053	-	760	760	-	-	-	-	-	-	-
Stage 2	881	802	-	1059	1056	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	50	74	495	~ 60	78	408	967	-	-	824	-	-
Stage 1	274	303	-	398	414	-	-	-	-	-	-	-
Stage 2	341	396	-	271	302	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	15	54	495	~ 43	57	408	967	-	-	824	-	-
Mov Cap-2 Maneuver	15	54	-	~ 43	57	-	-	-	-	-	-	-
Stage 1	273	221	-	397	413	-	-	-	-	-	-	-
Stage 2	143	395	-	190	221	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	224.7		\$ 879.2		0		2.9	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	967	-	-	31 119	824	-	-
HCM Lane V/C Ratio	0.002	-	-	0.58 2.776	0.27	-	-
HCM Control Delay (s)	8.7	-	-	224.7\$ 879.2	11	-	-
HCM Lane LOS	A	-	-	F F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	1.9 30.5	1.1	-	-

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection												
Int Delay, s/veh	158.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	6	7	4	78	9	207	2	635	79	203	539	5
Future Vol, veh/h	6	7	4	78	9	207	2	635	79	203	539	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	8	4	88	10	233	2	713	89	228	606	6

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1948	1871	609	1833	1830	758	612	0	0	802	0	0
Stage 1	1065	1065	-	762	762	-	-	-	-	-	-	-
Stage 2	883	806	-	1071	1068	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	49	72	495	~ 59	76	407	967	-	-	822	-	-
Stage 1	269	299	-	397	414	-	-	-	-	-	-	-
Stage 2	340	395	-	267	298	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	14	52	495	~ 41	55	407	967	-	-	822	-	-
Mov Cap-2 Maneuver	14	52	-	~ 41	55	-	-	-	-	-	-	-
Stage 1	268	216	-	396	413	-	-	-	-	-	-	-
Stage 2	142	394	-	184	215	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	245.9		\$ 936.3		0		3	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	967	-	-	30	114	822	-
HCM Lane V/C Ratio	0.002	-	-	0.637	2.898	0.277	-
HCM Control Delay (s)	8.7	-	-	245.9	\$ 936.3	11.1	-
HCM Lane LOS	A	-	-	F	F	B	-
HCM 95th %tile Q(veh)	0	-	-	2.1	31	1.1	-

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection				
Intersection Delay, s/veh	27.4			
Intersection LOS	D			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	18	331	800	834
Demand Flow Rate, veh/h	18	338	816	850
Vehicles Circulating, veh/h	934	736	240	102
Vehicles Exiting, veh/h	18	320	712	972
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.7	20.5	35.5	22.7
Approach LOS	A	C	E	C
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	18	338	816	850
Cap Entry Lane, veh/h	444	541	889	1020
Entry HV Adj Factor	0.992	0.979	0.980	0.981
Flow Entry, veh/h	18	331	800	834
Cap Entry, veh/h	441	530	871	1001
V/C Ratio	0.041	0.624	0.918	0.833
Control Delay, s/veh	8.7	20.5	35.5	22.7
LOS	A	C	E	C
95th %tile Queue, veh	0	4	13	10

Intersection				
Intersection Delay, s/veh	28.5			
Intersection LOS	D			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	19	331	804	840
Demand Flow Rate, veh/h	19	338	820	857
Vehicles Circulating, veh/h	941	736	248	102
Vehicles Exiting, veh/h	18	332	712	972
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.8	20.5	37.7	23.3
Approach LOS	A	C	E	C
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	19	338	820	857
Cap Entry Lane, veh/h	441	541	882	1020
Entry HV Adj Factor	0.992	0.979	0.980	0.980
Flow Entry, veh/h	19	331	804	840
Cap Entry, veh/h	437	530	864	1000
V/C Ratio	0.043	0.624	0.930	0.840
Control Delay, s/veh	8.8	20.5	37.7	23.3
LOS	A	C	E	C
95th %tile Queue, veh	0	4	14	10

## **Appendix D**

### **GHG and Energy Modeling Data**

**Tiburon Tennis Club Emissions**

**Construction Assumptions**

Phase/Equip	Days	hrs/day	Vendor			HP Hours		
			Worker trips	trips	Haul Truck trips			
Trenching	17			136	0	10		
concrete saw	11		5.2				81	0.73 3366.931765
backhoe	13		6.1				97	0.37 2854.310588
compactor	4		1.9				8	0.43 25.90117647
Site Prep	20			160	0	4		
auger	2		0.8				205	0.5 164
bobcat (skid steer loader)	2		0.8				64	0.37 37.888
Gradall (crane)	15		6.0				226	0.29 5898.6
Building Grading	20			160	0	2		
Track loader	20		8.0				255	0.4 16320
small excavator	20		8.0				162	0.38 9849.6
plate compactor	20		8.0				8	0.43 550.4
Exterior Building Construction	50			400	0	2		
Gradall (crane at 1/2 time)	25		4.0				226	0.29 6554
forklift	40		6.4				89	0.2 4556.8
bobcat (skid steer loader at 1/2 time)	25		4.0				64	0.37 2368
Interior Construction	120			960	0	0		
air compressors	120		6				78	0.48 26956.8

**Construction Energy Usage**

Construction	VMT:	19613	0	360 miles	79503 HP hours:
	fuel eff (mpg)	25		6	1 horsepower (hp) = 2,544.43 btu per hour
	gallons	785		65	1 gal gasoline = 124000 , 1gal diesel = 139000btu
	mmBTU	97		9.098181818	202.2904074 mbtu
	<b>Total mmBTU =</b>	<b>309</b>			

**Operation Energy Usage**

mobile	VMTann:	38272 cars	35976	trucks	6123.5 miles
	gallons		1564		471.0
	mmBTU		194		65.5
	<b>Mobile mmBTU =</b>	<b>259</b>			
nat. gas	kBTU (CalEEMod)	37125			
	<b>NatGas mmBTU</b>	<b>37</b>			
Elect	kWh (CalEEMod)	11340			
	<b>Elec mmBTU</b>	<b>39</b>			3412.14 btu per kw hr
<b>Operation</b>		<b>335</b>			

<i>Average Home</i>			
Mobile	118	21819 vmt/year	
Nat gas	53	45 therms/month	50264 + 2615 kBtu
Elec	37	10766 kw/year	
total MMBtu	207		

Tiburon Tennis Club - Marin County, Annual

**Tiburon Tennis Club  
Marin County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Racquet Club	1.50	1000sqft	0.03	1,500.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	69
<b>Climate Zone</b>	5			<b>Operational Year</b>	2019
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	335	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - Existing PG&E rate

Land Use - new structures

Construction Phase - Based on provided schedule and equipment usage

Off-road Equipment - Based on provided schedule and equipment usage

Off-road Equipment - Based on provided schedule and equipment usage

Off-road Equipment - Based on provided schedule and equipment usage - conservative interpretation

Off-road Equipment - Based on provided schedule and equipment usage - conservative assumption

Off-road Equipment - use default as no equipment specified

Grading - Enter hauling in trips tab

Trips and VMT - Based on provided schedule and equipment usage and defaults

Vehicle Trips - 15 trips per day comes out to about the same as traffic report for 365 day operation (note similar to model default)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	120.00
tblConstructionPhase	NumDays	100.00	50.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	1.00	20.00
tblConstructionPhase	PhaseEndDate	11/20/2018	3/22/2019
tblConstructionPhase	PhaseEndDate	11/6/2018	10/5/2018
tblConstructionPhase	PhaseEndDate	6/19/2018	7/27/2018
tblConstructionPhase	PhaseEndDate	6/15/2018	7/27/2018
tblConstructionPhase	PhaseStartDate	11/14/2018	10/6/2018
tblConstructionPhase	PhaseStartDate	6/20/2018	7/28/2018
tblConstructionPhase	PhaseStartDate	6/16/2018	7/1/2018
tblConstructionPhase	PhaseStartDate	6/15/2018	7/1/2018
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	AcresOfGrading	0.00	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	335
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	1.00	8.00
tblVehicleTrips	ST_TR	21.35	15.00
tblVehicleTrips	SU_TR	17.40	15.00
tblVehicleTrips	WD_TR	14.03	15.00

## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0542	0.4698	0.2989	5.5000e-004	0.0662	0.0259	0.0921	0.0346	0.0243	0.0589	0.0000	49.2142	49.2142	0.0113	0.0000	49.4959
2019	0.0126	0.0548	0.0605	1.1000e-004	1.8600e-003	3.8100e-003	5.6700e-003	4.9000e-004	3.8100e-003	4.3100e-003	0.0000	9.2438	9.2438	6.8000e-004	0.0000	9.2608

Maximum	0.0542	0.4698	0.2989	5.5000e-004	0.0662	0.0259	0.0921	0.0346	0.0243	0.0589	0.0000	49.2142	49.2142	0.0113	0.0000	49.4959
---------	--------	--------	--------	-------------	--------	--------	--------	--------	--------	--------	--------	---------	---------	--------	--------	---------

### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0542	0.4698	0.2989	5.5000e-004	0.0662	0.0259	0.0921	0.0346	0.0243	0.0589	0.0000	49.2142	49.2142	0.0113	0.0000	49.4958
2019	0.0126	0.0548	0.0605	1.1000e-004	1.8600e-003	3.8100e-003	5.6700e-003	4.9000e-004	3.8100e-003	4.3100e-003	0.0000	9.2438	9.2438	6.8000e-004	0.0000	9.2608
Maximum	0.0542	0.4698	0.2989	5.5000e-004	0.0662	0.0259	0.0921	0.0346	0.0243	0.0589	0.0000	49.2142	49.2142	0.0113	0.0000	49.4958

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2018	8-31-2018	0.3600	0.3600
2	9-1-2018	11-30-2018	0.1316	0.1316
3	12-1-2018	2-28-2019	0.0759	0.0759
4	3-1-2019	5-31-2019	0.0180	0.0180
		Highest	0.3600	0.3600

### 2.2 Overall Operational

#### Unmitigated Operational

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

Category	tons/yr										MT/yr					
	Area	6.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000
Energy	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	3.7043	3.7043	1.9000e-004	7.0000e-005	3.7290
Mobile	6.4100e-003	0.0193	0.0638	1.7000e-004	0.0142	2.2000e-004	0.0144	3.8100e-003	2.1000e-004	4.0200e-003	0.0000	15.4645	15.4645	6.2000e-004	0.0000	15.4800
Waste						0.0000	0.0000		0.0000	0.0000	1.7356	0.0000	1.7356	0.1026	0.0000	4.2998
Water						0.0000	0.0000		0.0000	0.0000	0.0282	0.1019	0.1300	2.9000e-003	7.0000e-005	0.2234
<b>Total</b>	<b>0.0133</b>	<b>0.0212</b>	<b>0.0653</b>	<b>1.8000e-004</b>	<b>0.0142</b>	<b>3.6000e-004</b>	<b>0.0146</b>	<b>3.8100e-003</b>	<b>3.5000e-004</b>	<b>4.1600e-003</b>	<b>1.7637</b>	<b>19.2706</b>	<b>21.0343</b>	<b>0.1063</b>	<b>1.4000e-004</b>	<b>23.7322</b>

### Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Area	6.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Energy	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	3.7043	3.7043	1.9000e-004	7.0000e-005	3.7290
Mobile	6.4100e-003	0.0193	0.0638	1.7000e-004	0.0142	2.2000e-004	0.0144	3.8100e-003	2.1000e-004	4.0200e-003	0.0000	15.4645	15.4645	6.2000e-004	0.0000	15.4800
Waste						0.0000	0.0000		0.0000	0.0000	1.7356	0.0000	1.7356	0.1026	0.0000	4.2998
Water						0.0000	0.0000		0.0000	0.0000	0.0282	0.1019	0.1300	2.9000e-003	7.0000e-005	0.2234
<b>Total</b>	<b>0.0133</b>	<b>0.0212</b>	<b>0.0653</b>	<b>1.8000e-004</b>	<b>0.0142</b>	<b>3.6000e-004</b>	<b>0.0146</b>	<b>3.8100e-003</b>	<b>3.5000e-004</b>	<b>4.1600e-003</b>	<b>1.7637</b>	<b>19.2706</b>	<b>21.0343</b>	<b>0.1063</b>	<b>1.4000e-004</b>	<b>23.7322</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### 3.0 Construction Detail

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trenching	Trenching	6/15/2018	7/9/2018	5	17	all trenching + compaction
2	Site Preparation	Site Preparation	7/1/2018	7/27/2018	5	20	light pole foundations
3	Grading	Grading	7/1/2018	7/27/2018	5	20	building
4	Exterior Building Construction	Building Construction	7/28/2018	10/5/2018	5	50	Month 2-3.5
5	Interior Construction	Architectural Coating	10/6/2018	3/22/2019	5	120	Month 3.5-7

**Acres of Grading (Site Preparation Phase): 0.5**

**Acres of Grading (Grading Phase): 0.5**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,250; Non-Residential Outdoor: 750; Striped Parking Area: 0**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Interior Construction	Air Compressors	1	6.00	78	0.48
Trenching	Concrete/Industrial Saws	1	5.20	81	0.73
Trenching	Tractors/Loaders/Backhoes	1	6.10	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Exterior Building Construction	Cranes	1	4.00	231	0.29
Exterior Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	0	8.00	187	0.41
Trenching	Plate Compactors	1	1.90	8	0.43
Site Preparation	Bore/Drill Rigs	1	1.00	221	0.50
Site Preparation	Skid Steer Loaders	1	1.00	65	0.37
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Exterior Building Construction	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Site Preparation	Cranes	1	6.00	231	0.29
Grading	Tractors/Loaders/Backhoes	0	6.00	97	0.37

Grading	Excavators	1	8.00	158	0.38
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Plate Compactors	1	8.00	8	0.43

### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Interior Construction	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Exterior Building	3	8.00	0.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Construction	3	8.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	8.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Trenching - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.6700e-003	0.0391	0.0361	6.0000e-005		2.7000e-003	2.7000e-003		2.6000e-003	2.6000e-003	0.0000	4.8653	4.8653	8.1000e-004	0.0000	4.8854
<b>Total</b>	<b>4.6700e-003</b>	<b>0.0391</b>	<b>0.0361</b>	<b>6.0000e-005</b>		<b>2.7000e-003</b>	<b>2.7000e-003</b>		<b>2.6000e-003</b>	<b>2.6000e-003</b>	<b>0.0000</b>	<b>4.8653</b>	<b>4.8653</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>4.8854</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.6500e-003	5.2000e-004	0.0000	8.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3901	0.3901	2.0000e-005	0.0000	0.3907
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.0100e-003	1.0000e-005	5.4000e-004	0.0000	5.4000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.5084	0.5084	1.0000e-005	0.0000	0.5088
<b>Total</b>	<b>3.3000e-004</b>	<b>1.8600e-003</b>	<b>2.5300e-003</b>	<b>1.0000e-005</b>	<b>6.2000e-004</b>	<b>1.0000e-005</b>	<b>6.3000e-004</b>	<b>1.6000e-004</b>	<b>1.0000e-005</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.8985</b>	<b>0.8985</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.8994</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.6700e-003	0.0391	0.0361	6.0000e-005		2.7000e-003	2.7000e-003		2.6000e-003	2.6000e-003	0.0000	4.8653	4.8653	8.1000e-004	0.0000	4.8854
<b>Total</b>	<b>4.6700e-003</b>	<b>0.0391</b>	<b>0.0361</b>	<b>6.0000e-005</b>		<b>2.7000e-003</b>	<b>2.7000e-003</b>		<b>2.6000e-003</b>	<b>2.6000e-003</b>	<b>0.0000</b>	<b>4.8653</b>	<b>4.8653</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>4.8854</b>

**Mitigated Construction Off-Site**

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

Hauling	5.0000e-005	1.6500e-003	5.2000e-004	0.0000	8.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3901	0.3901	2.0000e-005	0.0000	0.3907
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.0100e-003	1.0000e-005	5.4000e-004	0.0000	5.4000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.5084	0.5084	1.0000e-005	0.0000	0.5088
<b>Total</b>	<b>3.3000e-004</b>	<b>1.8600e-003</b>	<b>2.5300e-003</b>	<b>1.0000e-005</b>	<b>6.2000e-004</b>	<b>1.0000e-005</b>	<b>6.3000e-004</b>	<b>1.6000e-004</b>	<b>1.0000e-005</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.8985</b>	<b>0.8985</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.8994</b>

### 3.3 Site Preparation - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7400e-003	0.0576	0.0232	6.0000e-005		2.4200e-003	2.4200e-003		2.2300e-003	2.2300e-003	0.0000	5.2355	5.2355	1.6300e-003	0.0000	5.2762
<b>Total</b>	<b>4.7400e-003</b>	<b>0.0576</b>	<b>0.0232</b>	<b>6.0000e-005</b>	<b>2.7000e-004</b>	<b>2.4200e-003</b>	<b>2.6900e-003</b>	<b>3.0000e-005</b>	<b>2.2300e-003</b>	<b>2.2600e-003</b>	<b>0.0000</b>	<b>5.2355</b>	<b>5.2355</b>	<b>1.6300e-003</b>	<b>0.0000</b>	<b>5.2762</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.6000e-004	2.1000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1560	0.1560	1.0000e-005	0.0000	0.1563
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.5000e-004	2.3700e-003	1.0000e-005	6.3000e-004	0.0000	6.3000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5981	0.5981	2.0000e-005	0.0000	0.5985
<b>Total</b>	<b>3.5000e-004</b>	<b>9.1000e-004</b>	<b>2.5800e-003</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>6.7000e-004</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.7541</b>	<b>0.7541</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.7548</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7400e-003	0.0576	0.0232	6.0000e-005		2.4200e-003	2.4200e-003		2.2300e-003	2.2300e-003	0.0000	5.2355	5.2355	1.6300e-003	0.0000	5.2762
<b>Total</b>	<b>4.7400e-003</b>	<b>0.0576</b>	<b>0.0232</b>	<b>6.0000e-005</b>	<b>2.7000e-004</b>	<b>2.4200e-003</b>	<b>2.6900e-003</b>	<b>3.0000e-005</b>	<b>2.2300e-003</b>	<b>2.2600e-003</b>	<b>0.0000</b>	<b>5.2355</b>	<b>5.2355</b>	<b>1.6300e-003</b>	<b>0.0000</b>	<b>5.2762</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.6000e-004	2.1000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1560	0.1560	1.0000e-005	0.0000	0.1563
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.5000e-004	2.3700e-003	1.0000e-005	6.3000e-004	0.0000	6.3000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5981	0.5981	2.0000e-005	0.0000	0.5985
<b>Total</b>	<b>3.5000e-004</b>	<b>9.1000e-004</b>	<b>2.5800e-003</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>6.7000e-004</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.7541</b>	<b>0.7541</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.7548</b>

**3.4 Grading - 2018**

**Unmitigated Construction On-Site**



Off-Road	0.0150	0.1592	0.0788	1.4000e-004		7.7100e-003	7.7100e-003		7.1000e-003	7.1000e-003	0.0000	12.8533	12.8533	3.9400e-003	0.0000	12.9517
<b>Total</b>	<b>0.0150</b>	<b>0.1592</b>	<b>0.0788</b>	<b>1.4000e-004</b>	<b>0.0605</b>	<b>7.7100e-003</b>	<b>0.0682</b>	<b>0.0331</b>	<b>7.1000e-003</b>	<b>0.0402</b>	<b>0.0000</b>	<b>12.8533</b>	<b>12.8533</b>	<b>3.9400e-003</b>	<b>0.0000</b>	<b>12.9517</b>

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.3000e-004	1.0000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0780	0.0780	0.0000	0.0000	0.0781
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.5000e-004	2.3700e-003	1.0000e-005	6.3000e-004	0.0000	6.3000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5981	0.5981	2.0000e-005	0.0000	0.5985
<b>Total</b>	<b>3.4000e-004</b>	<b>5.8000e-004</b>	<b>2.4700e-003</b>	<b>1.0000e-005</b>	<b>6.5000e-004</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.6761</b>	<b>0.6761</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6767</b>

### 3.5 Exterior Building Construction - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0138	0.1477	0.0834	1.4000e-004		8.3700e-003	8.3700e-003		7.7000e-003	7.7000e-003	0.0000	12.7466	12.7466	3.9700e-003	0.0000	12.8458
<b>Total</b>	<b>0.0138</b>	<b>0.1477</b>	<b>0.0834</b>	<b>1.4000e-004</b>		<b>8.3700e-003</b>	<b>8.3700e-003</b>		<b>7.7000e-003</b>	<b>7.7000e-003</b>	<b>0.0000</b>	<b>12.7466</b>	<b>12.7466</b>	<b>3.9700e-003</b>	<b>0.0000</b>	<b>12.8458</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.3000e-004	1.0000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0780	0.0780	0.0000	0.0000	0.0781
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	6.1000e-004	5.9200e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.4953	1.4953	4.0000e-005	0.0000	1.4963
<b>Total</b>	<b>8.4000e-004</b>	<b>9.4000e-004</b>	<b>6.0200e-003</b>	<b>2.0000e-005</b>	<b>1.6000e-003</b>	<b>1.0000e-005</b>	<b>1.6100e-003</b>	<b>4.2000e-004</b>	<b>1.0000e-005</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>1.5733</b>	<b>1.5733</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.5745</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0138	0.1477	0.0834	1.4000e-004		8.3700e-003	8.3700e-003		7.7000e-003	7.7000e-003	0.0000	12.7466	12.7466	3.9700e-003	0.0000	12.8458
<b>Total</b>	<b>0.0138</b>	<b>0.1477</b>	<b>0.0834</b>	<b>1.4000e-004</b>		<b>8.3700e-003</b>	<b>8.3700e-003</b>		<b>7.7000e-003</b>	<b>7.7000e-003</b>	<b>0.0000</b>	<b>12.7466</b>	<b>12.7466</b>	<b>3.9700e-003</b>	<b>0.0000</b>	<b>12.8458</b>

**Mitigated Construction Off-Site**

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

Hauling	1.0000e-005	3.3000e-004	1.0000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0780	0.0780	0.0000	0.0000	0.0781
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	6.1000e-004	5.9200e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.4953	1.4953	4.0000e-005	0.0000	1.4963
<b>Total</b>	<b>8.4000e-004</b>	<b>9.4000e-004</b>	<b>6.0200e-003</b>	<b>2.0000e-005</b>	<b>1.6000e-003</b>	<b>1.0000e-005</b>	<b>1.6100e-003</b>	<b>4.2000e-004</b>	<b>1.0000e-005</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>1.5733</b>	<b>1.5733</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.5745</b>

### 3.6 Interior Construction - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.9800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1100e-003	0.0612	0.0566	9.0000e-005		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	7.7874	7.7874	7.4000e-004	0.0000	7.8059
<b>Total</b>	<b>0.0131</b>	<b>0.0612</b>	<b>0.0566</b>	<b>9.0000e-005</b>		<b>4.5900e-003</b>	<b>4.5900e-003</b>		<b>4.5900e-003</b>	<b>4.5900e-003</b>	<b>0.0000</b>	<b>7.7874</b>	<b>7.7874</b>	<b>7.4000e-004</b>	<b>0.0000</b>	<b>7.8059</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0100e-003	7.5000e-004	7.2200e-003	2.0000e-005	1.9200e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.8242	1.8242	5.0000e-005	0.0000	1.8255
<b>Total</b>	<b>1.0100e-003</b>	<b>7.5000e-004</b>	<b>7.2200e-003</b>	<b>2.0000e-005</b>	<b>1.9200e-003</b>	<b>1.0000e-005</b>	<b>1.9400e-003</b>	<b>5.1000e-004</b>	<b>1.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>1.8242</b>	<b>1.8242</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.8255</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.9800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1100e-003	0.0612	0.0566	9.0000e-005		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	7.7874	7.7874	7.4000e-004	0.0000	7.8059
<b>Total</b>	<b>0.0131</b>	<b>0.0612</b>	<b>0.0566</b>	<b>9.0000e-005</b>		<b>4.5900e-003</b>	<b>4.5900e-003</b>		<b>4.5900e-003</b>	<b>4.5900e-003</b>	<b>0.0000</b>	<b>7.7874</b>	<b>7.7874</b>	<b>7.4000e-004</b>	<b>0.0000</b>	<b>7.8059</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0100e-003	7.5000e-004	7.2200e-003	2.0000e-005	1.9200e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.8242	1.8242	5.0000e-005	0.0000	1.8255
<b>Total</b>	<b>1.0100e-003</b>	<b>7.5000e-004</b>	<b>7.2200e-003</b>	<b>2.0000e-005</b>	<b>1.9200e-003</b>	<b>1.0000e-005</b>	<b>1.9400e-003</b>	<b>5.1000e-004</b>	<b>1.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>1.8242</b>	<b>1.8242</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.8255</b>

**3.6 Interior Construction - 2019**

**Unmitigated Construction On-Site**



Off-Road	7.8600e-003	0.0541	0.0543	9.0000e-005		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	7.5321	7.5321	6.4000e-004	0.0000	7.5480
<b>Total</b>	<b>0.0117</b>	<b>0.0541</b>	<b>0.0543</b>	<b>9.0000e-005</b>		<b>3.8000e-003</b>	<b>3.8000e-003</b>		<b>3.8000e-003</b>	<b>3.8000e-003</b>	<b>0.0000</b>	<b>7.5321</b>	<b>7.5321</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>7.5480</b>

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.9000e-004	6.4000e-004	6.2000e-003	2.0000e-005	1.8600e-003	1.0000e-005	1.8700e-003	4.9000e-004	1.0000e-005	5.1000e-004	0.0000	1.7117	1.7117	4.0000e-005	0.0000	1.7128
<b>Total</b>	<b>8.9000e-004</b>	<b>6.4000e-004</b>	<b>6.2000e-003</b>	<b>2.0000e-005</b>	<b>1.8600e-003</b>	<b>1.0000e-005</b>	<b>1.8700e-003</b>	<b>4.9000e-004</b>	<b>1.0000e-005</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>1.7117</b>	<b>1.7117</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.7128</b>

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.4100e-003	0.0193	0.0638	1.7000e-004	0.0142	2.2000e-004	0.0144	3.8100e-003	2.1000e-004	4.0200e-003	0.0000	15.4645	15.4645	6.2000e-004	0.0000	15.4800
Unmitigated	6.4100e-003	0.0193	0.0638	1.7000e-004	0.0142	2.2000e-004	0.0144	3.8100e-003	2.1000e-004	4.0200e-003	0.0000	15.4645	15.4645	6.2000e-004	0.0000	15.4800

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Racquet Club	22.50	22.50	22.50	38,272	38,272
Total	22.50	22.50	22.50	38,272	38,272

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Racquet Club	9.50	7.30	7.30	11.50	69.50	19.00	52	39	9

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Racquet Club	0.581869	0.044060	0.201715	0.114585	0.018910	0.005088	0.010143	0.010297	0.002003	0.003903	0.005948	0.000680	0.000800

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1.7232	1.7232	1.5000e-004	3.0000e-005	1.7361
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1.7232	1.7232	1.5000e-004	3.0000e-005	1.7361

NaturalGas Mitigated	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	1.9811	1.9811	4.0000e-005	4.0000e-005	1.9929
NaturalGas Unmitigated	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	1.9811	1.9811	4.0000e-005	4.0000e-005	1.9929

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Racquet Club	37125	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	1.9811	1.9811	4.0000e-005	4.0000e-005	1.9929
<b>Total</b>		<b>2.0000e-004</b>	<b>1.8200e-003</b>	<b>1.5300e-003</b>	<b>1.0000e-005</b>		<b>1.4000e-004</b>	<b>1.4000e-004</b>		<b>1.4000e-004</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>1.9811</b>	<b>1.9811</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.9929</b>

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Racquet Club	37125	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	1.9811	1.9811	4.0000e-005	4.0000e-005	1.9929
<b>Total</b>		<b>2.0000e-004</b>	<b>1.8200e-003</b>	<b>1.5300e-003</b>	<b>1.0000e-005</b>		<b>1.4000e-004</b>	<b>1.4000e-004</b>		<b>1.4000e-004</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>1.9811</b>	<b>1.9811</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.9929</b>

## 5.3 Energy by Land Use - Electricity

### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Racquet Club	11340	1.7232	1.5000e-004	3.0000e-005	1.7361
<b>Total</b>		<b>1.7232</b>	<b>1.5000e-004</b>	<b>3.0000e-005</b>	<b>1.7361</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Racquet Club	11340	1.7232	1.5000e-004	3.0000e-005	1.7361
<b>Total</b>		<b>1.7232</b>	<b>1.5000e-004</b>	<b>3.0000e-005</b>	<b>1.7361</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
<b>Total</b>	<b>6.6400e-003</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.1300	2.9000e-003	7.0000e-005	0.2234
Unmitigated	0.1300	2.9000e-003	7.0000e-005	0.2234

### 7.2 Water by Land Use

#### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Racquet Club	0.0887147 / 0.0510706	0.1300	2.9000e-003	7.0000e-005	0.2234
<b>Total</b>		<b>0.1300</b>	<b>2.9000e-003</b>	<b>7.0000e-005</b>	<b>0.2234</b>

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Racquet Club	0.0887147 /	0.1300	2.9000e-003	7.0000e-005	0.2234
<b>Total</b>		<b>0.1300</b>	<b>2.9000e-003</b>	<b>7.0000e-005</b>	<b>0.2234</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.7356	0.1026	0.0000	4.2998
Unmitigated	1.7356	0.1026	0.0000	4.2998

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Racquet Club	8.55	1.7356	0.1026	0.0000	4.2998
<b>Total</b>		<b>1.7356</b>	<b>0.1026</b>	<b>0.0000</b>	<b>4.2998</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Racquet Club	8.55	1.7356	0.1026	0.0000	4.2998
<b>Total</b>		<b>1.7356</b>	<b>0.1026</b>	<b>0.0000</b>	<b>4.2998</b>

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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**Tiburon Tennis Club Emissions**

**Construction Assumptions**

Phase/Equip	Days	hrs/day	Vendor			HP Hours		
			Worker trips	trips	Haul Truck trips			
Trenching	17			136	0	10		
concrete saw	11		5.2				81	0.73 3366.931765
backhoe	13		6.1				97	0.37 2854.310588
compactor	4		1.9				8	0.43 25.90117647
Site Prep	20			160	0	4		
auger	2		0.8				205	0.5 164
bobcat (skid steer loader)	2		0.8				64	0.37 37.888
Gradall (crane)	15		6.0				226	0.29 5898.6
Building Grading	20			160	0	2		
Track loader	20		8.0				255	0.4 16320
small excavator	20		8.0				162	0.38 9849.6
plate compactor	20		8.0				8	0.43 550.4
Exterior Building Construction	50			400	0	2		
Gradall (crane at 1/2 time)	25		4.0				226	0.29 6554
forklift	40		6.4				89	0.2 4556.8
bobcat (skid steer loader at 1/2 time)	25		4.0				64	0.37 2368
Interior Construction	120			960	0	0		
air compressors	120		6				78	0.48 26956.8

**Construction Energy Usage**

Construction	VMT:	19613	0	360 miles	79503 HP hours:
	fuel eff (mpg)	25		6	1 horsepower (hp) = 2,544.43 btu per hour
	gallons	785		65	1 gal gasoline = 124000 , 1gal diesel = 139000btu
	mmBTU	97		9.098181818	202.2904074 mbtu
	<b>Total mmBTU =</b>	<b>309</b>			

**Operation Energy Usage**

mobile	VMTann:	38272 cars	35976	trucks	6123.5 miles
	gallons		1564		471.0
	mmBTU		194		65.5
	<b>Mobile mmBTU =</b>	<b>259</b>			
nat. gas	kBTU (CalEEMod)	37125			
	<b>NatGas mmBTU</b>	<b>37</b>			
Elect	kWh (CalEEMod)	11340			
	<b>Elec mmBTU</b>	<b>39</b>			3412.14 btu per kw hr
<b>Operation</b>		<b>335</b>			

<i>Average Home</i>			
<i>Mobile</i>	<i>118</i>	<i>21819 vmt/year</i>	
<i>Nat gas</i>	<i>53</i>	<i>45 therms/month</i>	<i>50264 + 2615 kBtu</i>
<i>Elec</i>	<i>37</i>	<i>10766 kw/year</i>	
<i>total MMBtu</i>	<i>207</i>		

**Appendix E**

**Biology Report**

October 10, 2014

Miles Berger, AIA  
14 Raccoon Lane  
Tiburon, CA 94920

Subject: Biological Report for Junior Tennis Center Project  
Tiburon Peninsula Club, Tiburon, Marin County, California

Dear Miles:

This letter presents the results of the biological survey of the Tiburon Peninsula Club project site in the Town of Tiburon, Marin County (Figure 1). The project site consists of the area across Mar West Street consisting of the gravel parking area near Railroad Marsh. The vegetation and wildlife values and the potential for the occurrence of special-status species are discussed in this report. In addition, applicable regulations for biological resources are also described. Recommendations are discussed at the end of the report.

## PROJECT LOCATION

The Tiburon Peninsula Club is located on Mar West Street near the tip of the Tiburon Peninsula. Old St. Hillary's preserve is located immediately to the east of the Tiburon Peninsula Club. Railroad Marsh is also located adjacent to the Tiburon Peninsula Club.

## REGULATORY CONTEXT

Biological resources on the site may fall under agency jurisdictions and be subject to regulations, as described below.

### Special-status Species

**Federal Endangered Species Act.** The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over species formally listed as threatened or endangered under the Federal Endangered Species Act (FESA). The FESA protects listed wildlife species from harm or "take." The term "take" is broadly defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." An activity is defined as a "take" even if it is unintentional or accidental.

Section 9 of the FESA and its applicable regulations restrict certain activities with respect to endangered and threatened plants. Nevertheless, these restrictions are less stringent than those applicable to animal species. The provisions of the FESA prohibit the removal of, malicious damage to, or destruction of any listed plant species "from areas under federal jurisdiction." Furthermore, listed plants may not be cut, dug up, damaged or destroyed in, or removed from any other area (including private lands) in known violation of a state law or regulation.

An endangered species is one that is considered in danger of becoming extinct throughout all, or a significant portion of its range. A threatened species is one that is likely to become endangered within the foreseeable future. In addition to endangered and threatened species, which are legally protected under the FESA, there are informal lists of species of special concern. These informal lists include *candidate species* and *species of concern*. A *candidate species* is one for which the USFWS currently has enough information to support a proposal to list it as a threatened or endangered species. A *species of concern* is one for which there is insufficient information available to support a proposal to list it as threatened or endangered.

**California State Endangered Species Act.** The California Department of Fish and Wildlife (CDFW) has jurisdiction over threatened or endangered species that are formally listed by the state under the California Endangered Species Act (CESA). The CESA is similar to the FESA both in process and substance; it is intended to provide additional protection to threatened and endangered species in California. The CESA does not supersede the FESA, but operates in conjunction with it. Species may be listed as threatened or endangered under both acts (in which case the provisions of both state and federal laws apply) or under only one act.

**Fully Protected Species.** The classification of “Fully Protected” was developed by CDFW prior to the passage of the Endangered Species Act. The “Fully Protected” designation protects those animals from take except for authorized scientific study. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The Fish and Game Code sections (fish at §5515, amphibians and reptiles at §5050, birds at §3511, and mammals at §4700) lists the fully protected species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFW to authorize take resulting from recovery activities for state-listed species.

**Species of Special Concern.** Additionally, the CDFW maintains an informal list of *species of special concern*. These are broadly defined as species that are of concern to the CDFW because of population declines and restricted distributions, and/or they are associated with habitats that are declining in California. These species are inventoried in the California Natural Diversity Data Base (CNDDB) regardless of their legal status. Impacts to *species of special concern* may be considered significant under CEQA.

**Native Plant Protection Act.** In addition to the CESA, the California Native Plant Protection Act (NPPA) provides protection to endangered and “rare” plant species, subspecies, and varieties of wild native plants in California. The NPPA’s definition of “endangered” and “rare” closely parallels the CESA definitions of “endangered” and “threatened” plant species.

**California Rare Plant Rank.** The California Native Plant Society (CNPS), in conjunction with agency, academic, and consulting biologists has developed lists of sensitive plants called the rare plant rank (RPR). A RPR List 1A plant is a species, subspecies, or variety that is considered to be extinct. A List 1B plant is considered rare, threatened, or endangered in California and elsewhere. A List 2A plant is considered extirpated from California but more common elsewhere. A List 2B plant is considered rare, threatened, or endangered in California but is more common elsewhere. A List 3 plant is potentially endangered but additional information on rarity, endangerment, and/or taxonomy is needed. A List 4 plant has a limited distribution but is presently not endangered. Impacts to List 1 and 2 plants are frequently considered significant under CEQA, depending on the lead agency.

## **Migratory Birds**

**Migratory Bird Treaty Act.** The Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.), Title 50 Code of Federal Regulations (CFR) Part 10, prohibits taking, killing, possessing, transporting, and importing of migratory birds, parts of migratory birds, and their eggs and nests, except when specifically authorized by the Department of the Interior. With a few exceptions, most native birds are considered migratory under the MBTA. Selected non-native species including English sparrows (*Passer domesticus*) and European starlings (*Sturnus vulgaris*) are not covered under the MBTA. Any activity (such as construction close to an active bird nest) that would disrupt the nesting of native birds and cause abandonment of the nest with eggs or chicks present would be a violation of the MBTA.

**California Fish and Game Code Sections 3503 & 3513.** According to Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird protected by the MBTA. Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the take or possession of any migratory non-game bird. Disturbance, such as construction close to a nest, that causes nest abandonment and/or loss of reproductive effort is considered “take” by the CDFW.

## **Wetland and Watercourse Protections**

**Federal Clean Water Act.** The U.S. Army Corps of Engineers (Corps) is responsible under Section 404 of the Clean Water Act for regulating the discharge of fill material into waters of the United States. Waters of the U.S. and their lateral limits are defined in 33 CFR Part 328.3 (a) and include streams that are tributary to navigable waters and their adjacent waters. Wetlands that are not adjacent to waters of the U.S. are termed “isolated wetlands” and may not be subject to Corps jurisdiction.

In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the U.S. The type of permit depends on the amount of acreage involved and the purpose of the proposed fill. A minor amount of fill is sometimes covered by a variety of nationwide permits in which wetland losses may be mitigated by creation of compensatory wetlands (after minimizing loss to the extent possible). Public review is generally not required. An Individual Permit is usually required for projects that result in more than a “minimal” impact on wetlands, i.e., usually required for fill that is greater than a tenth to a third of an acre. Individual permits require: 1) evidence that wetland impacts have been avoided to the greatest extent possible; 2) mitigation of wetland loss; and 3) a review of the project by the public.

Projects that are authorized under a Corps permit for discharge of dredge or fill material must obtain water quality certification from the Regional Water Quality Control Board (RWQCB), a state agency, pursuant to Section 401 of the Clean Water Act. Section 401 ensures that the project will uphold state water quality standards through the State’s Water Quality Certification Program. The RWQCB may impose mitigation requirements even if the Corps does not.

**Porter-Cologne Water Quality Control Act.** The State’s Porter-Cologne Water Quality Control Act is also administered by the RWQCB to protect “Waters of the State.” Waters of the State are defined by the Porter-Cologne Water Quality Control Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The RWQCB protects all waters in its regulatory

scope including isolated wetlands that may not be regulated under Section 404 of the CWA. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to waters of the State, the RWQCB has the option to regulate such activities under its State authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

**Streambed Alteration Agreement.** The CDFW also has jurisdiction over lakes and streams and requires a Streambed Alteration Agreement (Section 1603 of the Fish and Game Code) for disturbance to the bed or bank.

### **Town of Tiburon's Tree Ordinance**

The Town of Tiburon regulates the removal of protected trees with a permit process. Protected trees are defined as 1) Heritage tree – any tree which has a trunk with a circumference exceeding 60 inches, measured 24 inches from the ground surface, 2) Oak tree – includes coast live oak, blue oak, California black oak, interior live oak, canyon live oak, Engelmann oak, or valley oak, 3) Dedicated tree – a tree of special significance that was so designated by a resolution of the Town Council. Trees are defined by the ordinance as 1) a woody perennial plant that has a trunk circumference of 20 inches measured at 24 inches above the ground surface, or 2) a woody perennial plant at least 15 feet in height that usually has a single trunk. The Town of Tiburon requires a permit for the removal or alteration of any protected tree on any property or any tree on undeveloped property.

### **METHODS**

Prior to the field visit, the California Natural Diversity Data Base (CDFW 2014) was accessed for all known records of special-status habitats and species in the project vicinity. The quadrangles queried were Mare Island, Novato, Oakland West, Petaluma Point, Point Bonita, Richmond, and San Rafael, and the Marin County portions of San Francisco North and San Quentin. Lists of potentially present, sensitive plant communities/habitats and special-status species were generated from the data base records and from LSA's knowledge of biological resources in the vicinity of the project site.

LSA biologist Clinton Kellner, Ph.D., visited the site on August 18, 19, 27, and September 19, 2014. The site visits included surveys of the gravel parking area and the adjacent Railroad Marsh. The wetland boundary for Railroad Marsh was determined by mapping the edge of the fill slope and the occurrence of hydrophytic vegetation. Other portions of the Tiburon Peninsula Club property were not examined for wetland status. Nevertheless, portions of the willow area between the tennis courts and Mar West Street might be a jurisdictional wetland.

### **SETTING**

The Tiburon Peninsula is noted for its biological richness. The peninsula supports a variety of cover; types that occur in very close proximity to each other and which results in the presence of a diversity of plant and wildlife species.

The Tiburon Peninsula Club is located on a bend of Mar West Street between a serpentine hillside of St. Hillary's Preserve and Railroad Marsh. Part of the Tiburon Peninsula Club's property

encompasses a portion of the Railroad Marsh, which supports high biological values. The rest of the Tiburon Peninsula Club's holdings support large areas of non-native, ornamental vegetation (lawn, shrubs, and trees) that have a much reduced biological value as compared to natural areas.

The area adjacent to Railroad Marsh has been filled in the past presumably for the tennis courts and parking. The fill extends within the canopy of the willow and oak trees. In addition to the native willow and oak, the fill supports non-native grassland and French broom vegetation.

### **Vegetation and Other Cover Types**

Cover types present on the project area consist of willow, non-native grass, ruderal, French broom, Himalayan blackberry, myoporum, cattail, developed, and bare areas. Figure 2 shows the vegetation and other project features.

**Willow.** Stands of willow composed of arroyo willow (*Salix lasiolepis*) and yellow willow (*Salix lucida* ssp. *lasiandra*) occur on and adjacent to the Tiburon Peninsula Club property. The willow trees surround the large freshwater pond of Railroad Marsh that is adjacent to the project site. They also grow in a swale that is between Mar West Street and tennis courts. Mixed with these willows are a few black acacia trees (*Acacia melanozylon*), French broom (*Genista monspessulana*), and Pampas grass (*Cortaderia* sp.), all of which are non-native, and native coast live oak trees (*Quercus agrifolia*). The arroyo willows grow to 20 feet tall and the yellow willow exceeds 30 feet tall. The diameter of the arroyo willows can exceed 12 inches, and the diameter of the yellow willow approaches 18 inches. The growth of the native willows is dense and impenetrable with the exception of a few trails that course through the willow thicket.

The non-native Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*), and Veldt grass (*Erharta calcina*), grow beneath the canopy of the willow trees. Native understory species include poison oak (*Toxicodendron diversilobum*), chain fern (*Woodwardia fimbriata*), horse tail (*Equisetum* sp.), water parsley (*Oenanthe sarmentosa*), and bulrush (*Scirpus microcarpus*). These native species grow where it is very wet or inundated but in a sparse aggregation due to the shading by the willow trees.

A native sedge (*Carex* sp.) grows in the swale, dominated by arroyo willow, between Mar West Street and the tennis courts. Sedge is the dominant vegetation but the native silverweed (*Potentilla anserina*) is also abundant. The native hedge nettle (*Stachys ajugoides*) and the non-native velvet grass (*Holcus lanatus*) also grow here. Black acacia and arroyo willow grow beside this area. This swale supports hydrophytic vegetation and portions could possibly qualify as jurisdictional wetland.

**Acacia.** Black acacia dominates an area between the tennis courts and Mar West Street. The cover of the acacia trees approaches 100 percent. Many of these trees are over 40 feet tall and are greater than 12 inches in diameter at breast height (DBH). Ornamental plum (*Prunus cerasifera*) and giant reed (*Arundo donax*), both non-natives, occur in a portion of the acacia vegetation beside Mar West Street. The understory plant species are absent from the acacia vegetation because of high overstory cover.

**French Broom.** French broom occurs individually and in sparse and dense stands on the property. It occurs adjacent to the willow vegetation and on slopes between Railroad Marsh and Mar West Street.

**Himalayan Blackberry.** Himalayan blackberry grows in dense patches in open areas and as a vine twining among the branches of the arroyo willow scrub. These patches can be several hundred square feet in size and up to 6 feet in height.

**Non-native Grass.** Areas between the gravel parking area and the willow vegetation and areas beside the existing tennis courts are dominated by non-native grass. Dominant species include rip-gut brome (*Bromus diandrus*) and wild oats (*Avena* sp.). Non-native forbs that occur in this area include bristly ox-tongue (*Helminthotheca echioides*), bull thistle (*Cirsium vulgare*), and stinkwort (*Dittrichia graveolens*). This area is regularly mowed.

**Ruderal.** Ruderal vegetation consists of wild radish (*Raphanus* sp.), mustard (*Brassica* sp.) and other non-native forbs. Non-native grass species also occur in the ruderal vegetation but at a lesser density.

**Myoporum.** Myoporum (*Myoporum* sp.) is a non-native tree that was planted along Mar West Street and has colonized the willow vegetation of Railroad Marsh.

**Cattail.** Cattail grows in a dense band at the edge of the ponded portion of Railroad Marsh. It occurs as an emergent plant along with bulrush. Willow grows along the upland edge of the band of cattail.

**Developed.** The developed areas of the property include the tennis courts, roads, parking areas, and any buildings.

**Drainages.** A drainage receives flow from a culvert by the tennis courts and flows in a cement-lined ditch until just before it reaches Railroad Marsh. The cement-lined ditch discharges to an earthen ditch before discharging to Railroad Marsh. The average width of this watercourse is 2 feet, and water was flowing at less than 1 gallon per minute on August 18, 2014. This drainage is shaded by willows and is largely bare of vegetation until it reaches the marsh. Plants growing within and beside the drainage, at the marsh, included common monkey flower (*Mimulus guttatus*), hedge nettle, bulrush, and Pacific rush (*Juncus effusus*). This drainage would not be under the jurisdiction of the Corps and RWQCB if the source of the flow was irrigation runoff.

A constructed swale occurs in the fill area that discharges within the willow vegetation. This swale supports upland plant species including non-native grassland and does not exhibit scour. Its habitat value is similar to the adjacent non-native grassland and it would not be considered jurisdictional by the Corps, RWQCB, and CDFW.

**Wetland.** The wetland boundary occurs at the toe of the fill slope beneath the canopy of the arroyo willow trees. Species that dominated the wetland in the understory included water parsley and bulrush. Wetland species growing in sunny areas beside the willow canopy included water parsley, bulrush, Pacific rush, cattail, and common monkey flower. The willow vegetation with the sedge understory to the east of the tennis courts may be a jurisdictional wetland. A formal wetland delineation would be required to determine the wetland status of this area.

## Wildlife

The wildlife value of the willow vegetation on the Tiburon Peninsula Club property and in Railroad Marsh is relatively high for an urban environment because the willows grow in a dense and large

stand. They provide cover and nesting habitat for a number of bird species. Species observed within or beside the willows are American robin (*Turdus migratorius*), house finch (*Carpodacus mexicanus*), song sparrow (*Melospiza melodia*), black-crowned night-heron (*Nycticorax nycticorax*), green heron (*Butorides virescens*), belted kingfisher (*Ceryle alcyon*), American coot (*Fulica americana*), black phoebe (*Sayornis nigricans*), chestnut-backed chickadee (*Poecile rufescens*), and bushtits (*Psaltriparus minimus*).

Mammals use the willows for foraging and cover. Mammals expected to occur in the willows include striped skunk (*Mephitis mephitis*), northern raccoon (*Procyon lotor*), and Virginia opossum (*Didelphis virginiana*). Mule deer (*Odocoileus hemionus*) were observed foraging adjacent to Railroad Marsh. These species all occur in urban environments, are commensals with human habitation, and would forage within the willows and in the adjacent residential areas.

Amphibians would be represented by Sierran treefrog (*Pseudoacris sierra*) and western toad (*Anaxyrus boreas*). These species would be expected to breed in the open water of Railroad Marsh and forage in the adjacent willow habitat. The federally-threatened California red-legged frog (*Rana draytonii*) had been observed a number of years ago at the marsh (White and Davis 1982). A single unidentified ranid-type frog was observed two times entering an off-site tributary to Railroad Marsh. This frog could be the federally-threatened California red-legged frog, the non-native bullfrog (*Lithobates catesbiana*), or another species of frog that was a released pet.

Salamanders, such as the arboreal salamander (*Aneides lugubrus*) and the slender salamander (*Batrachoceps attenuatus*) are expected to occur in the willow vegetation and beneath leaf litter and any other cover that is present on site.

Reptiles that are expected from the site are western fence lizard (*Sceloporus occidentalis*) and northern and/or southern alligator lizards (*Elgaria caerulea* and *Elgaria multicarinata*). These species would occur in sunny areas with cover. Western pond turtles (*Emys marmorata*) possibly occur in Railroad Marsh adjacent to the Tiburon Peninsula Club although records are lacking.

### Special-status Species

The California Natural Diversity Database was queried for records of the potentially-occurring special-status species on the Tiburon Peninsula Club project site.

**Criteria.** A special-status species meets one or several of the following criteria:

- Officially listed by the CDFW as rare, threatened, or endangered and/or by the USFWS as threatened or endangered.
- A federal or state candidate species for listing as threatened or endangered. These species may become formally listed in the course of a project.
- A federal species of concern or a state species of special concern. A species of concern is one for which the USFWS or state lacks sufficient biological information to make a determination of whether or not it is threatened or endangered.
- Listed as 1A, 1B, 2A, or 2B by the RPR (CNPS 2014). (See Regulatory Context/California Rare Plant Rank for inclusion criteria.)

**Special-status Species Potentially Present at the Tiburon Peninsula Club.** Two special-status species are known from Railroad Marsh and therefore could potentially occur on the marsh portion of the Tiburon Peninsula Club property. These species are the federally-threatened California red-legged frog and the California species of special concern saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*). They were observed during the field work conducted for a biological study of Railroad Marsh (White and Davis 1982). They would not be expected to occur on the developed or non-native grassland portion of the Tiburon Peninsula Club property.

Other special-status species have not been observed on the Tiburon Peninsula Club property or adjacent Railroad Marsh based on our current study and the following literature: the Railroad Marsh Management Plan (WRA 2001), a Draft and Final Environmental Impact Report (EIR), that was prepared in 1994 (Parsons 1999), a Supplemental EIR (Parsons 1999), analyses by LSA Associates (Swaim 1993, LSA Associates 2005), and Draft (Christopher Joseph 2010) and Revised Draft and Final Belvedere-Tiburon Library Expansion Project (Leonard Charles 2011a, b), and the California Natural Diversity Data Base (CDFW 2014).

## **POTENTIAL EFFECTS**

### **Special-status Species**

The California red-legged frog and saltmarsh common yellowthroat are potentially present. In addition, breeding birds are protected by state and federal regulations. Construction activities could potentially impact these species.

Other special-status species are presumed to be absent. The likelihood of the occurrence of other special-status species at the Tiburon Peninsula Club is low because the natural habitats have been altered by landscaping, existing roads and buildings, and an existing parking area. Although habitat for special-status species occurs at Railroad Marsh, isolation from other habitat areas, its location near the tip of the Tiburon Peninsula, and the urban surroundings reduce the likelihood of the occurrence of special-status species. The likelihood of occurrence of special-status species is addressed in Tables A and B.

### **Sensitive Cover Types**

Jurisdictional wetlands and other waters are present and could be impacted by the proposed project. Willow stands and native oaks are present and could also be impacted by the proposed project. Construction practices such as uncontrolled runoff could adversely affect these sensitive cover types in addition to the potential for direct impacts.

## **RECOMMENDATIONS**

The following describes our recommendations for the proposed addition of tennis courts, expansion of parking, and adding lights to the Tiburon Peninsula Club. We did not have a precise mapping of the edge of the proposed new development and our recommendations are presented to avoid or lessen impacts.

### **Tree Canopy and Buffer Beside Railroad Marsh**

A precise boundary for the proposed development was not available for the preparation of this report. As a consequence, potential impacts to the willow stands and oaks could not be quantified. Impacts could be avoided or at least minimized by (1) adopting a 50-foot no development buffer from the edge of Railroad Marsh (open water) or (2) adopting a 5-foot no development buffer from the edge of the willow and oak canopy. Infringements into either of these buffer zones could be mitigated by converting existing non-native vegetation on the project site to native cover.

The Tiburon 2020 General Plan Policy OSC-20 requires buffers between proposed development and wetlands of 100 feet. The Railroad Marsh Management Plan, Item 3, requires a vegetated buffer and fence 50 feet from the shore of Railroad Marsh. The Town of Tiburon, when drafting the Environmental Impact Report on the Belvedere-Tiburon Library Expansion Project (Leonard Charles 2011a, b), selected a 35-foot buffer from the shore of Railroad Marsh (or a 25-foot buffer from the edge of wetlands) to the edge of the parking lot. The low wildlife values of the adjacent lands protected by this buffer may have been a factor determining the width of this buffer. Nevertheless, the revised draft EIR (Leonard Charles 2011a) concluded that this 35-foot buffer would have a significant unavoidable effect and recommended a 50-foot buffer from the edge of Railroad Marsh. (This measure would be consistent with the Railroad Marsh Management Plan.)

The edge of the canopy of arroyo willow and coast live oak trees varies from 90 to 145 feet from the shore on the Tiburon Peninsula Club side of Railroad Marsh. A ruderal grassy area, which varies between 10 and 60 feet wide, separates the willow/oak canopy from a gravel parking area. This ruderal grassland is used by song sparrows (*Melospiza melodia*) and other birds for foraging but is otherwise of low wildlife value. The parking area does not provide habitat value with respect to Railroad Marsh.

The proposed tennis courts and parking lot could potentially affect the canopy of arroyo willow and coast live oak trees that grow at the edge of Railroad Marsh. The recommendation in 2005 (LSA 2005) was to avoid the willow canopy and include a 5-foot buffer between the willows and tennis courts. This recommendation is applicable to this project because: (1) oak trees are considered a protected tree by the Town of Tiburon's tree ordinance and damage or removal requires a permit, and (2) willow trees are generally considered valuable wildlife habitat.

If the willow and oak canopy is affected, then a plan should be developed to increase willow and/or oak in other portions of the Tiburon Peninsula Club property. This would be accomplished by removal of non-native species including acacia and eucalyptus trees, Himalayan blackberry, French broom, poison hemlock (*Conium maculatum*), bristly ox-tongue, and stinkwort and replacing with a cover of native coast live oak and/or arroyo willow.

### **Wetlands and Drainages**

The wetland boundary occurs within the canopy of willow trees. Fill or excavation within the wetland or jurisdictional watercourse should be avoided. The non-jurisdictional swale is of low resource value and is not regulated by the agencies. Impacts to it would not require mitigation.

### **California Red-legged Frog**

California red-legged frogs are known from Railroad Marsh (White and Davis 1982). Direct impacts to the California red-legged frog should be avoided. Exclusion fencing should be installed between Railroad Marsh and areas proposed for construction to prevent California red-legged frogs from entering the construction area. A qualified biologist should coordinate with the construction contractor on the location of the fence and the biologist should monitor the installation of the fence. Full-time presence by the biologist is not recommended if the fence is outside of the willow canopy. After installation, the biologist should monitor the fence on a weekly basis to ensure that it is functioning adequately.

### **Breeding Birds**

Breeding birds are a concern if construction activity could cause the abandonment or failure of an active nest. For instance, breeding birds could abandon a nest with eggs or nestlings if construction activity was so close as to flush the birds from the nest. This would be a violation of the Migratory Bird Treaty Act and Sections 3503 & 3513 of the Fish and Game Code.

Surveys for breeding birds would not be recommended if construction were to occur outside of the nesting season (February 15 to August 15). Surveys for nesting birds should be completed within 14 days of the beginning of construction between February 15 and August 15. Once construction starts and occurs continuously, surveys would not be recommended. If a lapse in construction were to occur longer than 14 days, then the surveys for nesting birds should resume.

If raptors were observed nesting within 250 feet of the construction area, the behavior of the raptors should be observed to determine the width of a suitable buffer. Typical raptor buffers are 250 – 300 feet wide, but the project site is within an urban area with intense human use. The tennis courts are in almost constant use, the library on the other side of Railroad Marsh is heavily used, and traffic occurs along Tiburon Boulevard and Mar West Street. Any nesting raptor would be acclimated to human activity and a buffer shorter than 250 feet may be suitable.

If songbirds were observed nesting near the construction area, a 50-foot buffer should be established between the nest and construction until the nest is no longer used. Travel and other human activity should be prohibited within the nest buffers for the raptors and songbirds.

### **Construction and Post-construction Practices**

General recommendations to address run-off are during and after construction are presented below. The project engineer should develop a detailed design and protocols based on standard practices and current regulations.

**Runoff During Construction.** Any runoff that occurs during the construction could carry sediment to Railroad Marsh. A silt fence should be installed to prevent silt from entering Railroad Marsh in the event of rain occurring during construction. This silt fence could also serve as the exclusion fence for the California red-legged frog.

**Runoff During Project Operation after Construction.** The proposed project would result in the construction of a parking lot, tennis courts, and possibly landscaping beside Railroad Marsh. Post-construction runoff from the parking lot could carry oil and grease and runoff from any landscaping could contain pesticides and fertilizers. The runoff could result in pesticides, fertilizers, oil, and grease entering Railroad Marsh and could increase peak flows to the marsh.

The runoff should be directed to the existing storm drainage system or to one or more created swales designed to filter pollutants from runoff and/or retain runoff to reduce peak flows. These created swales could discharge to the wetland by overland flow but should not result in excavation or fill of wetland.

The swale(s) should be planted with herbaceous species designed to maximize filtration and retention of pollutants within the runoff. Species that could be used to vegetate the swale are meadow barley (*Hordeum brachyantherum* ssp. *brachyantherum*), spike rush (*Eleocharis* sp.), sedge (*Carex* sp.), and rush (*Juncus balticus*, *Juncus xiphioides*, and/or *Juncus phaeocephalus*). The herbaceous swale(s) should be large enough to accommodate the anticipated amount of runoff during the average storm.

Suitable areas for locating these swales could be beside the willow/oak canopy. This area beside the willow/oak canopy should be sufficiently sunny to support a dense growth of plants needed for filtration. Locating the swales beneath the canopy would not provide enough light for growth of plants needed for filtration.

If the runoff is directed to an existing storm drainage system, an oil and grease trap should be installed to prevent oil-based pollutants from entering the storm drainage system.

**Trash Removal.** Trash is currently not abundant at Railroad Marsh and the wire mesh over the cement drainage reduces the number of tennis balls entering the marsh. Nevertheless, additional trash could be generated as a result of the additional tennis courts and parking. Pick-up of trash and tennis balls should be continued.

**Night Lighting.** The proposed project entails lighting tennis courts until 7:30 in the evenings. These lights should be faced toward the tennis courts and parking. They should be shaded to minimize leakage of light to the willow trees. Such lighting is not likely to affect wildlife because of existing ambient light generated by nearby residences and existing vehicular traffic. Animals are accustomed to the light cast by a bright full moon which would be greater than the leakage of the light on the tennis courts and parking lot.

Please review these recommendations and contact me to discuss them further.

Sincerely,  
**LSA ASSOCIATES, INC.**



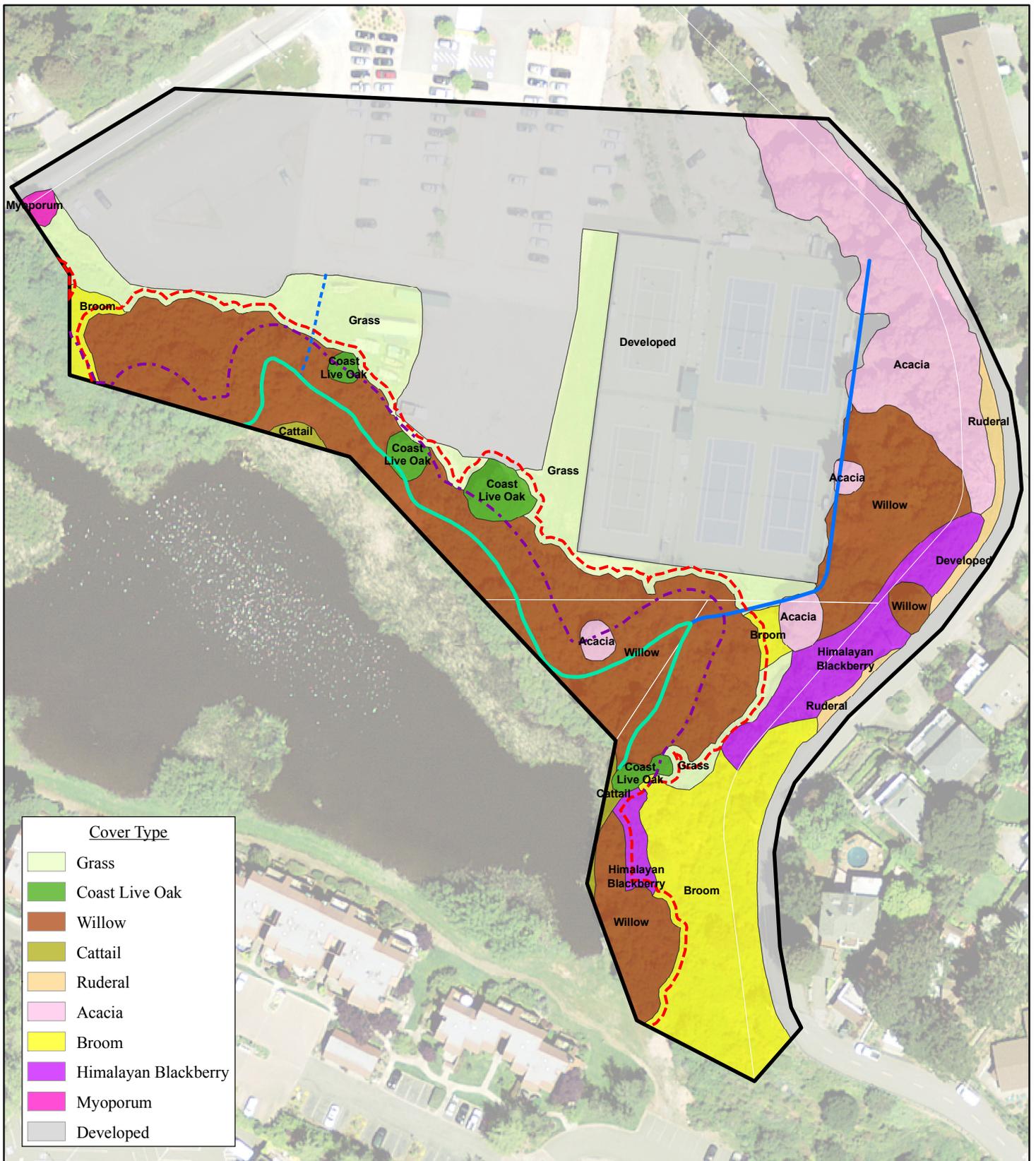
Clinton Kellner, Ph.D.

cc: Roger Harris, LSA

Attachments: (1) Literature Cited, (2) Figure 1, (3) Tables A and B

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Cover Type	
	Grass
	Coast Live Oak
	Willow
	Cattail
	Ruderal
	Acacia
	Broom
	Himalayan Blackberry
	Myoporium
	Developed

LSA

LEGEND

-  Study Area
-  Wetland Edge
-  Drainage Ditch
-  25-foot Buffer from Wetland Edge
-  Non-jurisdictional Swale
-  5-foot Buffer from Willow and Oak Canopy

FIGURE 1



SOURCE: USGS Orthoimagery (04/2011).

E:\TIP1401\GIS\Maps\Landcover\Figure 1\_Cover Types.mxd (10/3/2014)

Tiburon Peninsula Club  
Junior Tennis Center  
Cover Types

**Table A: Special-Status Plant Species Potentially Occurring in the Vicinity of the Tiburon Peninsula Club Property, Tiburon, Marin County, California**

Species	Status* (Federal/ State/RPR)	Habitat Requirements	Blooming Period	Potential for Occurrence
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	-/-/1B	Openings in broad-leafed upland forest, chaparral, cismontane woodland. 150–2,000 meters.	April–July	Unlikely to occur because not observed during surveys.
<i>Amsinckia lunaris</i> Bent-flowered fiddleneck	-/-/1B	Coastal bluff scrub, cismontane woodland, valley and foothill grassland. 50–500 meters.	March–June	Unlikely to occur because not known from the Tiburon Peninsula and grassland habitats composed entirely of non-native species on fill soil.
<i>Arctostaphylos montana</i> ssp. <i>montana</i> Mt. Tamalpais manzanita	-/-/1B	Serpentine slopes in chaparral, valley and foothill grassland. 160–760 meters.	February–April	Not observed during survey. Suitable serpentine habitat not present.
<i>Arctostaphylos virgata</i> Marin manzanita	-/-/1B	Broad-leafed upland forest, closed-cone coniferous forest, chaparral, North Coast coniferous forest. Sandstone or granitic soils. 60–700 meters.	January–March	Not observed during survey. Suitable forest and chaparral habitat not present.
<i>Calochortus tiburonensis</i> Tiburon mariposa lily	FT/ST/1B	Open, rocky slopes in serpentine grassland. 50–150 meters.	March–June	Not expected to occur. Serpentine habitat absent.
<i>Castilleja affinis</i> ssp. <i>neglecta</i> Tiburon Indian paintbrush	FE/ST/1B	Rocky serpentine sites in valley and foothill grassland. 75–400 meters.	April–June	Not expected to occur. Serpentine habitat absent.
<i>Chloropyron maritimum</i> ssp. <i>palustris</i> Point Reyes bird's-beak	-/-/1B	Coastal salt marsh. 0–15 meters.	June–October	Not expected to occur. Salt marsh habitat absent.
<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i> San Francisco Bay spineflower	-/-/1B	Sandy soil on terraces and slopes in coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub. 5–550 meters.	April–August	Not expected to occur. Sandy soil habitat absent and not observed during surveys.
<i>Cirsium andrewsii</i> Franciscan thistle	-/-/1B	Grass and riparian herbs in seeps, wet areas, watercourse edges. Mostly along immediate coast.	March–July	Not observed during surveys.
<i>Cirsium hydrophilum</i> var. <i>vaseyi</i> Mt. Tamalpais thistle	-/-/1B	Serpentine seeps and streams in broad-leafed upland forest and chaparral. 265–620 meters.	May–August	Not expected to occur. Serpentine habitat absent.
<i>Collinsia multicolor</i> San Francisco collinsia	-/-/1B	Openings in closed cone coniferous forest and coastal scrub.	March–May	Unlikely to occur because grassland habitats composed entirely of non-native species on fill soil.
<i>Erigonum luteolum</i> var. <i>caninum</i> Tiburon buckwheat	-/-/1B	Serpentine soils in chaparral, coastal prairie, valley and foothill grassland. 10–500 meters.	June–September	Not expected to occur. Serpentine habitat absent.
<i>Fritillaria lanceolata</i> var. <i>tristulis</i> Marin checker lily	-/-/1B	Coastal bluff scrub, coastal scrub, coastal prairie. 30–300 meters.	February–April	Not expected to occur at this inland site; only known from coastal areas.
<i>Helianthella castanea</i> Diablo helianthella	-/-/1B	Rocky, azonal soil in broad-leafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. 25–1150 meters.	April–June	Not expected to occur because only known from a single historic collection from the Mt. Tamalpais area, not expected to occur on disturbed soils, and not observed during surveys.

Species	Status* (Federal/ State/RPR)	Habitat Requirements	Blooming Period	Potential for Occurrence
<i>Hemizonia congesta</i> ssp. <i>congesta</i> Seaside tarplant	-/-/1B	Coastal scrub, valley and foothill grassland. 25–365 meters.	April–October	Unknown from the Tiburon Peninsula, not detected during surveys; unlikely to occur.
<i>Hesperolinon congestum</i> Marin western flax	FT/ST/1B	Serpentinite in chaparral, valley and foothill grassland. 30–365 meters.	April–July	Not expected to occur. Suitable serpentine habitat not present.
<i>Holocarpha macradenia</i> Santa Cruz tarplant	FT/SE/1B	Heavy clay soil that retains moisture late in year in coastal prairie, valley and foothill grassland. 10–260 meters.	June–October	Not expected to occur because not detected during surveys and not known from the Tiburon Peninsula.
<i>Horkelia tenuiloba</i> Thin-lobed horkelia	-/-/1B	Mesic, sandy openings in coastal scrub, chaparral. 45–500 meters.	May–July	Not expected to occur. Sandy soil habitat absent.
<i>Kopsiopsis hookeri</i> Small groundcone	-/-/2	North Coast coniferous forest. 90–885 meters; parasitic on plants of the Ericaceae.	April–August	Not expected to occur because suitable host plants absent.
<i>Lessingia micradenia</i> var. <i>micradenia</i> Tamalpais lessingia	-/-/1B	Serpentine soils in chaparral and valley and foothill grassland, often on roadsides. 100–305 meters.	June–October	Not expected to occur. Suitable serpentine habitat absent.
<i>Microseris paludosa</i> Marsh microseris	-/-/1B	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 5–300 meters.	April–June	Not expected to occur in disturbed fill soils dominated by non-native species and not known from the Tiburon Peninsula.
<i>Navarretia rosulata</i> Marin County navarretia	-/-/1B	Rocky, sometimes serpentine soil in closed-cone coniferous forest and chaparral. 200–636 meters.	May–July	Not expected to occur on disturbed soils and not observed during surveys.
<i>Pentachaeta bellidiflora</i> White-rayed pentachaeta	FE/SE/1B	Open dry rocky slopes and grassy areas usually on soil from serpentine bedrock in valley and foothill grassland. 35–620 meters.	March–May	Not expected to occur on disturbed fill soils dominated by non-native species and not known from the Tiburon Peninsula.
<i>Plagiobothrys glaber</i> Hairless popcorn flower	-/-/1A	Alkaline meadows and seeps, coastal salt marshes and swamps. 5–180 meters.	March–May	Not expected to occur. Suitable alkaline wet areas absent.
<i>Pleuropogon hooverianus</i> North Coast semaphore grass	-/ST/1B	Saturated soils of broad-leafed upland forest, meadows and seeps. Wet grassy, usually shady areas; sometimes freshwater marsh. 10–1150 meters.	May–August	Not expected to occur. Not observed during surveys, and not known from the Tiburon Peninsula.
<i>Polemonium carneum</i> Oregon polemonium	-/-/2	Coastal prairie, often rocky opening in coastal scrub and lower montane coniferous forests.	April–September	Suitable rocky areas absent; not likely to occur.
<i>Quercus parvula</i> var. <i>tamalpaisensis</i> Tamalpais oak	-/-/1B	Lower montane coniferous forest. 100–750 meters.	March–April	Not expected to occur because not detected during surveys.
<i>Sidalcea calycosa</i> ssp. <i>rhizomata</i> Point Reyes checkerbloom	-/-/1B	Marshes and swamps. 3–75 meters.	April–September	Not expected to occur. Not observed during surveys.
<i>Sidalcea hickmanii</i> ssp. <i>viridis</i> Marin checkerbloom	-/-/1B	Chaparral on serpentine or volcanic soils, sometimes after burns. 0–430 meters.	May–June	Not expected to occur. Serpentine chaparral habitat absent.
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	-/-/1B	On seaward slopes, soil derived from sandstone shale or serpentine in broad-leafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub. 10–500 meters.	April–May	Not expected to occur because usually occurs on seaward slopes.

Species	Status* (Federal/ State/RPR)	Habitat Requirements	Blooming Period	Potential for Occurrence
<i>Streptanthus batrachopus</i> Tamalpais jewel-flower	-/-/1B	Closed-cone coniferous forest, talus serpentine outcrops in chaparral. 305–650 meters.	April–June	Not expected to occur. Serpentine habitat absent.
<i>Streptanthus glandulosus</i> ssp. <i>pulchellus</i> Mount Tamalpais bristly jewel-flower	-/-/1B	Serpentine slopes in chaparral, valley and foothill grassland. 150–800 meters.	May–July	Not expected to occur. Serpentine habitat absent.
<i>Streptanthus glandulosus</i> ssp. <i>niger</i> Tiburon jewel-flower	FE/SE/1B	Shallow rocky serpentine slopes in valley and foothill grassland. 30–150 meters.	May–June	Not expected to occur. Serpentine habitat absent.
<i>Trifolium amoenum</i> Two fork clover	FE/-/1B	Coastal bluff scrub, valley and foothill grassland (sometimes serpentinite). 5–560 meters.	April–June	Not detected during surveys; not likely to occur on fill soils dominated by non-native species.

\*Status:

FE = federally endangered  
FT = federally threatened  
SE = State endangered  
ST = State threatened

1A = Rare Plant Rank (RPR) 1A: species presumed extinct.  
1B = RPR 1B: plants considered rare, threatened, or endangered in California and elsewhere.  
2 = RPR 2: plant considered rare, threatened, or endangered in California but more common elsewhere.

**Table B: Special-status Animal Species Potentially Occurring in the Vicinity of the Tiburon Peninsula Club Property, Tiburon, Marin County, California**

Species	Status* (Federal/ State/CDFG)	Habitat Requirements	Potential for Occurrence
<b>Invertebrates</b>			
Tiburon microblind harvestman <i>Microcina tiburona</i>	-/-/ <sup>1</sup>	Beneath moist serpentine rocks in serpentine grassland	Not expected to occur; serpentine substrates are absent.
Marin blind harvestman <i>Calicina dimuna</i>	-/-/ <sup>1</sup>	Beneath moist serpentine rocks in serpentine grassland	Not expected to occur; serpentine substrates are absent.
San Bruno elfin butterfly <i>Callophrys mossii bayensis</i>	FE/-/-	Coastal, mountainous areas with grassy ground cover. Dependent on larval host plant <i>Sedum spathulifolium</i> . Known only from San Francisco and San Mateo counties.	Not expected to occur. Suitable host plant absent and site outside known range of species.
Monarch butterfly winter aggregations <i>Danaus plexippus</i>	-/-/ <sup>2</sup>	Protected areas in groves of trees with openings within dense canopy cover and nearby water and nectar sources.	Not expected to occur. Canopy too closed.
Mission blue butterfly <i>Plebejus icarioides missionensis</i>	FE/-/-	Coastal grassland supporting <i>Lupinus albifrons</i> , <i>Lupinus variicolor</i> , or <i>Lupinus formosus</i> that are fed upon by Mission blue larvae.	Suitable lupine food plants absent; in Marin County only known from the Marin Headlands.
California freshwater shrimp <i>Syncaris pacifica</i>	FE/SE/-	Low elevation, low gradient streams where riparian cover is moderate to heavy in shallow pools away from main streamflow.	Would not occur because watercourse habitat absent.
<b>Fish</b>			
Coho salmon (central California coast ESU <sup>3</sup> ) <i>Oncorhynchus kisutch</i>	FE/SE/-	Coastal rivers and streams with cold water and deep pools and runs; for spawning, requires clean, silt-free gravel beds, with clear flowing water and shaded stream reaches. Spawning adults occur during winter high water.	Would not occur because watercourse habitat absent.
Steelhead (central California coast DPS <sup>3</sup> ) <i>Oncorhynchus kisutch</i>	FE/SE/-	Coastal rivers and streams with cold water and deep pools and runs; for spawning, requires clean, silt-free gravel beds, with clear flowing water and shaded stream reaches. Spawning adults occur during winter high water.	Would not occur because watercourse habitat absent.
Tidewater goby <i>Eucyclogobius newberryi</i>	FE/-/CSC	Lower reaches of coastal streams, typically in freshwater estuaries behind seasonal barrier beaches. The open estuaries of relatively large streams/ rivers (e.g., Napa River) do not generally provide suitable habitat. This California endemic may be extirpated from the San Francisco Estuary.	Would not occur because watercourse habitat absent.
Tomales roach <i>Lavinia symmetricus</i> spp. <sup>2</sup>	-/-/SSC	Redwood, California bay, alder, ash riparian with sand, gravel, and bedrock substrate	Would not occur because watercourse habitat absent.

<sup>1</sup> The Tiburon microblind harvestman is not a California species of special concern, but it is only known from 3 areas of serpentine on the Tiburon Peninsula and is considered a sensitive species in environmental documents prepared for projects on the Tiburon Peninsula. The Marin blind harvestman is only known from a site on Mt. Burdell.

<sup>2</sup> Although monarch butterfly is not a special-status species, overwintering aggregations are rare and therefore considered sensitive by the CDFG

<sup>3</sup> ESU = evolutionarily significant unit; DPS = distinct population segment.

Species	Status* (Federal/ State/CDFG)	Habitat Requirements	Potential for Occurrence
Longfin Smelt <i>Spirinchus thaleichthys</i>	-/-/SSC	Open water of estuaries in middle and bottom of water column; also occurs in salt and fresh water; some are anadromous	Would not occur because watercourse habitat absent.
Eulachon <i>Thaleichthys pacificus</i>	-/-/SSC	Occurs in San Francisco Bay and spawns in lower reaches of watercourses on sand, pea gravel, and woody debris	Would not occur because watercourse habitat absent.
<b>Amphibians and Reptiles</b>			
California red-legged frog <i>Rana draytonii</i>	FT/-/CSC	Ponds, streams, drainages and associated uplands; requires areas of deep, still, and/or slow-moving water for breeding.	Potentially occurs because observed in Railroad Marsh in 1982 and an unidentified frog observed during fieldwork for this project.
Foothill yellow-legged frog <i>Rana boylei</i>	-/-/CSC	Partly shaded, shallow streams and riffles with a rocky substrate.	Not expected to occur because rocky substrate habitat absent from watercourses and drainages.
Western pond turtle <i>Emys marmorata</i>	-/-/CSC	Ponds, streams, drainages, and associated uplands.	Could potentially occur in the open water of Railroad Marsh.
<b>Birds</b>			
Great egret <i>Ardea albus</i> Great blue heron <i>Ardea Herodias</i> Snowy egret <i>Egretta thula</i> Black-crowned night heron <i>Nycticorax nycticorax</i>	Nesting areas sensitive	Constructs nests in tall trees including eucalyptus	Roosts not observed and not known from the project site.
White-tailed kite <i>Elanus leucurus</i>	-/-/CFP	Forages in open grasslands, meadows, or marshes. Require dense-topped trees or shrubs for nesting and perching.	Not known to nest on-site; white-tailed kite not observed, foraging habitat absent.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/-/SSC	Sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	None. Suitable habitat absent.
California black rail <i>Laterallus jamaicensis coturniculus</i>	-/ST/CFP	Salt marshes bordering larger bays, also found in brackish and freshwater marshes.	Not expected to occur. Suitable salt marsh habitat absent.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/SE/CFP	Tidal salt marshes with sloughs and substantial cordgrass ( <i>Spartina</i> sp.) cover.	Not expected to occur. Suitable salt marsh habitat absent.
Burrowing owl <i>Athene cunicularia</i>	-/-/CSC	Open habitats (e.g., grasslands, agricultural areas) with mammal burrows or other features (e.g., culverts, pipes, debris piles) suitable for nesting and roosting.	Not observed and not expected to occur. Suitable habitat (burrows, extensive open terrain) absent.
Black swift <i>Cypseloides niger</i>	-/-/SSC	Nests on rock faces behind waterfalls	None. Suitable habitat absent.
Salt marsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	-/-/CSC	Salt, brackish, and freshwater marshes; and riparian woodlands. Nests on or near ground in low vegetation near water.	Potentially occurs because observed in Railroad Marsh in 1982. Suitable nesting and foraging habitat present in Railroad Marsh.
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	-/-/CSC	Tidal and muted salt marshes on the fringes of San Pablo Bay, Tomales Bay, and Richardson Bay. Nests primarily in pickleweed and gumplant.	Not expected to occur. Suitable salt marsh habitat absent.

Species	Status* (Federal/ State/CDFG)	Habitat Requirements	Potential for Occurrence
<b>Mammals</b>			
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	-/-/CSC	Roosts primarily in caves and abandoned mines, occasionally in buildings, bridges, rock crevices, and hollow trees; forages in open woodlands and along woodland edges.	Although large hollows or cavities were not observed in on-site trees, not all trees were examined and pallid bat could potentially occur on-site in large trees in Railroad Marsh.
Pallid bat <i>Antrozous pallidus</i>	-/-/CSC	Roosts in caves, tunnels, buildings, under bridges, and in tree hollows; forages over variety of habitats.	Although large hollows or cavities were not observed in on-site trees, not all trees were examined and pallid bat could potentially occur on-site in large trees in Railroad Marsh.
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/SE/CFP	Tidal salt marshes of San Francisco Bay and its tributaries. Requires tall, dense pickleweed for cover.	Not expected to occur. Salt marsh habitat absent.
Southern sea otter <i>Enhydra lutris nereis</i>	FT/-/-	Ocean and bay environments	Marine habitat absent.
American badger <i>Taxidea taxus</i>	-/-/CSC	Open, dry habitats (e.g., grasslands) with friable soils.	Burrows and other sign not observed; Not expected to occur.
Pt. Reyes jumping mouse <i>Zapus trinotatus orarius</i>	-/-/CSC	Bunch grass marshes, wet meadows, grasslands, and coastal scrub, near the coast.	Mesic coastal habitats absent; unlikely to occur.

\*Status

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FT = federally threatened

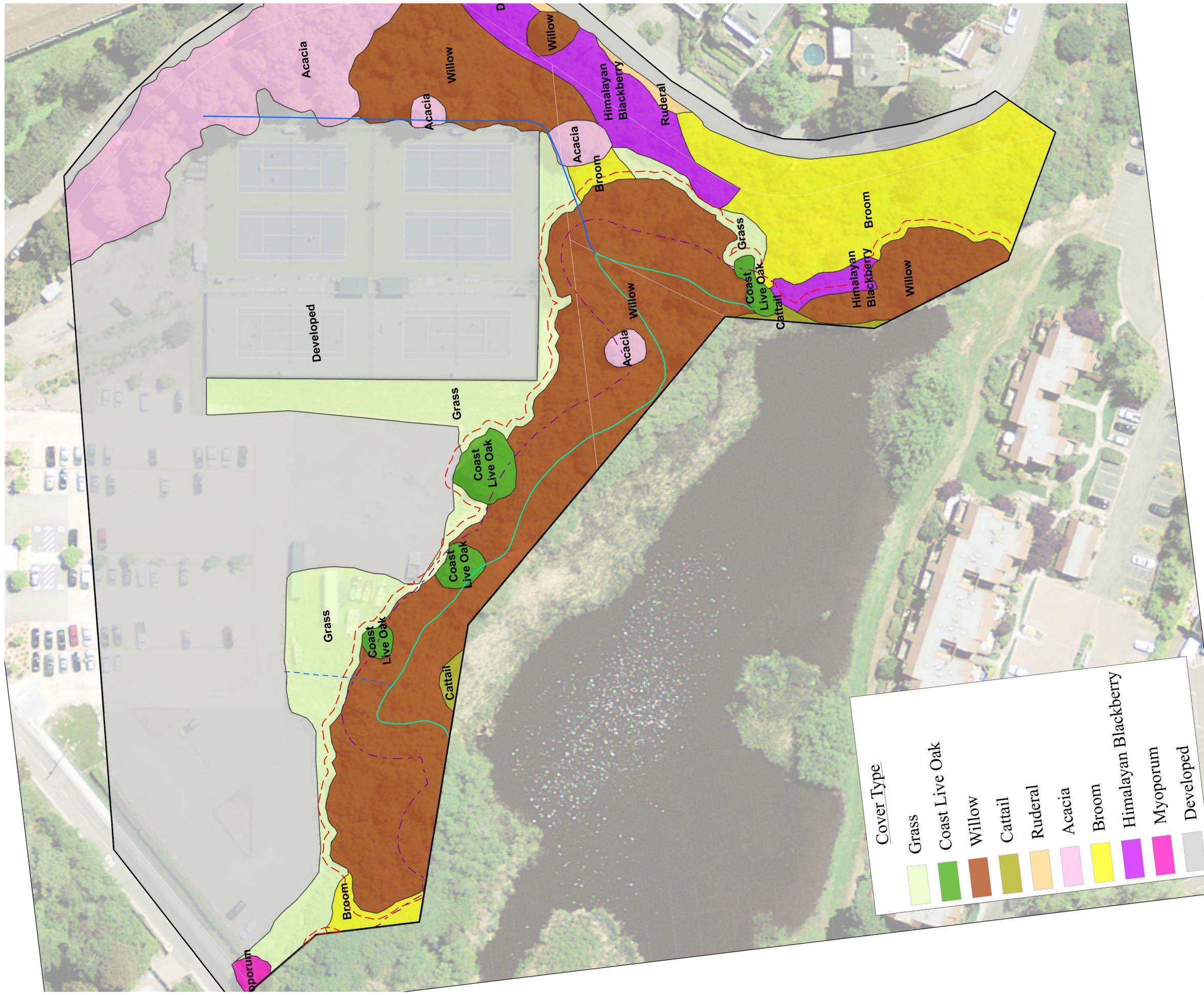
SE = State endangered

ST = State threatened

CSC = California Species of Special Concern

CFP = California Fully Protected Species

Although not considered a California Species of Special Concern, monarch butterfly overwintering aggregations are rare and therefore considered sensitive



**Cover Type**

Grass
Coast Live Oak
Willow
Cattail
Ruderal
Acacia
Broom
Himalayan Blackberry
Myoporum
Developed

**LEGEND**

- Wetland Edge
- 25-foot Buffer from Wetland Edge
- 5-foot Buffer from Willow and Oak Canopy
- Study Area
- Drainage Ditch
- Non-jurisdictional Swale

**LSA**

