SAN RAFAEL CITY SCHOOLS

RESOLUTION NO. 2324-51

A RESOLUTION OF THE SAN RAFAEL CITY SCHOOLS BOARD OF EDUCATION CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT, APPROVING A MITIGATION MONITORING AND REPORTING PROGRAM, AND ADOPTING FINDINGS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA); APPROVING CAPITAL FACILITY IMPROVEMENTS AT TERRA LINDA HIGH SCHOOL; AND DELEGATING AUTHORITY TO STAFF TO EXECUTE THE NOTICE OF DETERMINATION

WHEREAS, the San Rafael City Schools High School District (District) proposes to implement capital facility improvements at Terra Linda High School promulgated by San Rafael City High School District Measure B, passed on June 6, 2022 (Proposed Project); and

WHEREAS, Terra Linda High School is located at 320 Nova Albion Way in the City of San Rafael, and the Proposed Project would affect various areas of the existing school; and

WHEREAS, the Proposed Project involves three general development phases: Phase 1, the demolition of the existing swimming pool and related facilities, renovation of the southern half of Building K (locker and team rooms), reconstruction of Building H (ancillary gymnasium with dance, weight room, mat room, restrooms, storage, aquatic concessions), and upgrades to the western portion of the track and field stadium; Phase 2, the modernization of the main classroom buildings and installation of campus-wide security fencing; and Phase 3, the replacement of natural turf with artificial turf for the creation of baseball and multiuse (softball and soccer) fields, improvements at the tennis courts, and beautification of the eastern portion of the track and field stadium; and

WHEREAS, the Proposed Project would result in the removal of the existing portable Building Q/R and result in a corresponding reduction of the school's enrollment capacity of 70 seats; allow the Terra Linda High School softball program to return to the campus; and allow the community to use the modernized facilities via the Civic Center Act and District Board Policy and Administrative Regulation 1330; and

WHEREAS, the District, acting as the Lead Agency as defined in Section 21067 of the Public Resources Code, has undertaken the preparation of an Environmental Impact Report (EIR) (California State Clearinghouse No. 2023080737), an environmental assessment and study of the Proposed Project pursuant to CEQA (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (California Code Regulations, Title 14, Section 15000 et seq.). The Draft EIR and the Final EIR are collectively referred to herein as the "Final EIR" and the "EIR"; and

WHEREAS, a Notice of Preparation for the EIR for the Proposed Project was issued for a 30-day public review period on August 29, 2023, submitted to the California State Clearinghouse for distribution to potentially affected state agencies and organizations, posted in the office of the Marin County Clerk, published in a local newspaper, and distributed to property owners and residences within 500 feet of Terra Linda High School; and

WHEREAS, the District held a scoping meeting on September 14, 2023, at the Terra Linda High School Innovation Hub to receive comments regarding the scope and content

of the EIR for the Proposed Project that will assist the District in identifying the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in the EIR; and

WHEREAS, the District prepared and released the Draft EIR for a 45-day public review and comment period beginning March 1, 2024, and ending April 15, 2024; and

WHEREAS, in compliance with the CEQA Guidelines, the District submitted copies of the Draft EIR and a Notice of Completion to the California State Clearinghouse for distribution to potentially affected state agencies, submitted the Draft EIR directly to state and local agencies, and made a hard copy of the Draft EIR available for review by interested persons at the San Rafael City Schools District Administration Office (310 Nova Albion Way, Room 505). An electronic copy was made available as well on the District's Bond Program website: https://www.srcsbondprogram.org/Page/39; and

WHEREAS, the District published a Notice of Availability for the Draft EIR in the local newspaper and posted a copy of the notice at the Marin County Clerk's office; and

WHEREAS, the District prepared a Final EIR, which includes copies of all letters received in response to the Draft EIR, responses to each substantive environmental comment received, and updates to the Draft EIR; and

WHEREAS, in accordance with the CEQA Guidelines, the District submitted copies of the Final EIR to all agencies and other entities that responded to the Draft EIR for a 10-day review period; and

WHEREAS, in compliance with CEQA Guidelines, and for the record, the District has prepared: (1) Facts and Findings for the Proposed Project, which identify potentially significant environmental effects associated with the Proposed Project and how those effects will be mitigated to below significance (Exhibit A); (2) a Mitigation Monitoring and Reporting Program (Exhibit B), which provides the structure for ensuring that all mitigation measures identified in the Final EIR are implemented; (3) a Notice of Determination for filing with the Marin County Clerk's Office and California State Clearinghouse (Exhibit C), and (4) the Final EIR, including all comments on the Draft EIR and responses thereto (Exhibit D), all of which are attached and incorporated into this Resolution by reference; and

WHEREAS, prior to taking action on the Proposed Project, the District has evaluated and considered all potentially significant effects on the environment, feasible project alternatives, and the Mitigation Monitoring and Reporting Program; and

WHEREAS, the Board has read and considered all environmental documentation comprising the Final EIR, its supporting sources, and comments received from state and local agencies and other interested persons; and

WHEREAS, the Board has determined that the Final EIR is adequate, complete, and has been prepared in accordance with CEQA, and has incorporated therein the mitigation measures described in the Draft EIR and the Mitigation Monitoring and Reporting Program; and

WHEREAS, the Final EIR has been prepared in compliance with CEQA and reflects the Board's independent judgment and analysis; and

WHEREAS, the EIR and all supporting material, which constitute a record of these proceedings, are kept at the San Rafael City Schools District Administration Office, located at 310 Nova Albion Way, under the control of the Assistant Superintendent of Business Services. The District is the Custodian of Records.

NOW THEREFORE, BE IT RESOLVED that the Board of Education of the San Rafael City Schools High School District hereby finds, determines, declares, and resolves as follows:

Section 1. That the foregoing recitals are true and correct, and the Board finds and determines by incorporation herein by this reference and shall hereinafter be deemed to be the findings of the Board.

Section 2. The Board certifies that:

(1) District is the lead agency for the Project and the Custodian of Records;

(2) A full and fair public meeting was held on September 14, 2023 on the Draft EIR; likewise, the public and governmental agencies were provided a 30-day review and comment period for the NOP/Initial Study, and a 45-day review and comment period for the Draft EIR, and the District received comments thereon and provided responses thereto, which comments and responses are included in the Final EIR and have been considered by the Board. The Final EIR is attached hereto (Exhibit D) and incorporated herein by reference;

(3) the Final EIR for the Proposed Project is an adequate and complete document prepared in compliance with CEQA and the CEQA Guidelines;

(4) the Final EIR was presented to the Board, which reviewed and considered the information contained in the Final EIR and comments received prior to approving the Proposed Project; and

(5) the Final EIR reflects the Board's independent judgment and analysis.

These actions having been taken, the Board hereby approves, adopts, and certifies the Final EIR for the Project (attached hereto as Exhibit D).

Section 3. A Mitigation Monitoring and Reporting Program (MMRP) has been prepared to meet the requirements of Public Resources Code section 21081.6. The MMRP is designed to ensure compliance with mitigation measures imposed to avoid or substantially lessen the significant effects identified in the FEIR. The Board hereby makes, approves, and adopts the Mitigation Measures for the Project and the Mitigation Monitoring and Reporting Program (Exhibit B), attached hereto and incorporated herein by reference.

Section 4. The Board hereby finds, pursuant to Public Resources Code section 21081 and CEQA Guidelines section 15091, and based on the entire record, that implementation of the MMRP will reduce each and every "significant impact" identified in the EIR for the Proposed Project. The Board adopts the Facts and Findings for each environmental effect identified in the Final EIR, attached hereto and incorporated herein by reference (Exhibit A).

Section 5. The Board finds that the Project Alternatives identified in the Final EIR would not achieve the primary objectives of the Proposed Project and/or that the Project Alternatives are infeasible. Accordingly, for the reasons set forth herein, including in the EIR (Exhibit D) and the Facts and Findings (Exhibit A), the Board hereby rejects such Alternatives.

Section 6. The Board finds that information contained in various staff reports, corrections, errata, and modifications made to the Draft EIR in response to comments, and the evidence presented in written and oral testimony, do not represent significant new information so as to require recirculation of the Draft EIR pursuant to CEQA Guidelines Section 15088.5.

Section 7. The Board hereby delegates authority to the District Superintendent, or the Superintendent's designee, to cause a Notice of Determination (Exhibit C) to be executed and filed with the Marin County Clerk and the California State Clearinghouse pursuant to CEQA Guidelines section 15094.

Section 8. The findings made in this Resolution are based upon the information and evidence set forth in the Draft EIR and Final EIR and upon substantial evidence which has been presented in the record of these proceedings; the Final EIR and all supporting material, which constitute a record of these proceedings, will be kept at the San Rafael City Schools District Administration Office, located at 310 Nova Albion Way, under the control of the Assistant Superintendent of Business Services.

Section 9. The Board hereby finds that all actions required to be taken by applicable law related to the approval of the Proposed Project have been taken, and hereby approves the Proposed Project described in the Final EIR as the Terra Linda High School Capital Improvements Project ("Project").

Section 10. The Board hereby authorizes the Superintendent or her designee(s) to take all steps necessary to proceed with, carry out, and complete the Project.

ADOPTED, SIGNED, AND APPROVED by the Board of Education of the San Rafael City Schools High School District on May 13, 2024, by the following vote, to wit:

By: _____
Lucia Martel-Dow
President, Board of Education

AYES: 4
NOES: 0
ABSENT: 1
ABSTAIN: 0
Exhibit A: Facts and Findings
Exhibit B: MMRP
Exhibit C: Notice of Determination
Exhibit D: Final EIR

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STATE OF CALIFORNIA)
) SS
COUNTY OF MARIN)

I, Carmen Ghysels, [Clerk] of the Governing Board of the San Rafael City Schools of Marin County, State of California, do hereby certify that the foregoing is a true copy of a resolution adopted by the board at a regular meeting thereof, at the time and by the vote therein stated, which original resolution is on file in the office of said board.

Clerk Signature

May 14, 2024
Date

EXHIBIT A

Terra Linda High School Capital Improvements Project

Facts and Findings

Resolution 2324-51
Exhibit A

Terra Linda High School Capital Improvements Project

Facts and Findings Related to San Rafael City Schools' Terra Linda High School Capital Improvements Project Environmental Impact Report in Compliance with the California Environmental Quality Act (CEQA) and its Regulating Guidelines (CEQA Guidelines)

SCH No. 2023080737

Proposed Adoption: May 13, 2024

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San Rafael City Schools (District) proposes capital improvements at Terra Linda High School to modernize existing outdated and aging academic and physical education facilities (Project). The District has prepared these written facts and findings (Findings) related to the Terra Linda High School Capital Improvements Project Final Environmental Impact Report (EIR), dated May 2024, in accordance with CEQA and the CEQA Guidelines. These Findings are based on the entire record before the Board, as set forth in the Record of Proceedings, below. The EIR was prepared by the District acting as lead agency under CEQA to address the potential environmental effects of the Project and associated actions. The Board of Education, the decision-making body for the District, must adopt these Findings prior to carrying out or approving the Project.

I. Introduction

The California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Sections 15000, et seq.) provide that a project for which an EIR was prepared may not be approved unless either the project as approved will not have a significant effect on the environment, or the agency has eliminated or substantially lessened all significant effects on the environment where feasible as shown in findings under CEQA Guidelines Section 15091, and determined that any remaining significant effects on the environment found to be unavoidable under Section 15091 are acceptable due to overriding conditions. Specifically, CEQA Guidelines Section 15091 provides:

(a) No public agency shall approve or carry out a project for which an Environmental Impact Report (EIR) has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:

1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.

2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

3. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

(b) The findings required by subdivision (a) shall be supported by substantial evidence in the record.

(c) The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subdivision (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.

(d) When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.

(e) The public agency shall specify the location and custodian of the documents or other materials which constitute the record of the proceedings upon which its decision is based.

(f) A statement made pursuant to Section 15093 does not substitute for the findings required by this section.

The "changes or alterations" referred to in Section 15091(a)(1) that are required in, or incorporated into, the project, and which mitigate or avoid the significant environmental effects of the project, may include a wide variety of measures or actions as set forth in CEQA Guidelines Section 15370, including:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements.

II. Record of Proceedings

The District conducted an extensive environmental review for the Project that included a preliminary review, a Draft EIR, a Final EIR, appendices, referenced reports and documents, along with public review and comment periods. The implementation of the EIR scoping and review process is described in the Draft EIR and Final EIR. For purposes of CEQA and these

Findings, the Record of Proceedings for the Project includes but is not limited to the following documents:

- The Notice of Preparation (NOP) and all other public notices issued by the District in conjunction with the Project;
- Written comments received on the NOP;
- The Scoping Meeting and written comments received at the Scoping Meeting;
- The Draft EIR and technical appendices for the Project;
- All written comments submitted by agencies or members of the public on the Draft EIR and Final EIR;
- All responses prepared by the District to written comments submitted by agencies or members of the public on the Draft EIR and Final EIR;
- All written and verbal public testimony presented during a noticed public meeting for the Project at which such testimony was taken;
- The Mitigation Monitoring and Reporting Program (MMRP);
- The reports and technical memoranda included or referenced in the responses to public comments;
- All documents, studies, EIRs, or other materials incorporated by reference or cited in the Draft EIR and Final EIR;
- The Final EIR and all supplemental documents prepared for the Final EIR and submitted to the District Board of Education;
- Matters of common knowledge to the District, including but not limited to federal, state, and local laws, ordinances, plans, and regulations;
- Any documents expressly cited in these Findings;
- District staff report prepared for the public meetings related to the Project and any exhibits thereto; and
- Any other relevant materials required to be in the Record of Proceedings by CEQA pursuant to Public Resources Code Section 21167.6(e).

The Draft EIR and related technical studies were made available for review during the public review period on the District's Bond website: https://www.srcsbondprogram.org. Additional accommodations, such as the direct provision of a hard copy of the NOP and Initial Study and Draft EIR at the Bond Program Office, were located within the San Rafael City Schools District Office at 310 Nova Albion Way, Room 505, San Rafael, CA 94903.

The District retained Barbara Wu Heyman of Michael Baker International to prepare the EIR. The EIR was prepared under the supervision and direction of Tim Ryan, Senior Director of Strategic Facility Planning, San Rafael City Schools.

III. Custodian and Location of Records

The documents and other materials, which constitute the administrative record for the District's actions related to the Project, as detailed in Section II, above, are at the San Rafael City Schools District Administration Office, located at 310 Nova Albion Way, Room 505, in the City of San Rafael, under the control of the Assistant Superintendent of Business Services. The District is the custodian of all documents in the record. Copies of the documents, which constitute the Record of Proceedings, at all relevant and required times have been and will be available upon request to the Assistant Superintendent of Business Services. This information is provided in compliance with Public Resources Code Section 21081.6(a)(2) and CEQA Guidelines Section 15091(e).

IV. Project Summary

A. Project Objectives

The underlying purpose of the Project is to maintain and modernize existing facilities at Terra Linda High School with general obligation bond funds from Measure B, passed on June 6, 2022, by the San Rafael voters. The District proposes to continue making major capital improvements at the campus, based on the 2014 Master Plan, 2022 District-Wide Capital Improvements Project report, and current Target Initiatives, such as providing high performance classrooms and learning environments that can maximize teaching opportunities through technology infrastructure and flexible layouts and constructing climate-resilient and sustainable facilities, with campus safety and security in mind. With the consideration of the underlying purpose and District initiatives, the below objectives have been developed for the Project:

- Maximize the use of limited District bond funds.
- Maximize the use of District-owned property.
- Construct climate-resilient and sustainable features and implement "green building" practices.
- Improve campus safety and security for students and staff.
- Construct state-of-the-art, high-performance indoor and outdoor instructional spaces with flexible learning environments and replace outmoded teaching facilities.
- Reduce hazards at Terra Linda High School athletic facilities.
- Improve Terra Linda High School's physical education and athletic programs for its students and other students in the District who use the facilities.

- Implement District-wise Target Initiatives applicable to the District's high schools and the Terra Linda High School campus.

B. Project Location

The Project is proposed at the Terra Linda High School campus, located at 320 Nova Albion Way in the City of San Rafael, County of Marin. The Project involves improvements to existing school facilities on the 30-acre campus, which is bound by Nova Albion Way on the north and east; Devon Drive on the south and west; Golden Hinde Boulevard on the east; and Esmeyer Drive farther north and west. US Route 101 is approximately 0.75 miles east of the campus. Regional access is from the Manuel T. Freitas Parkway interchange, located 1 mile northeast of the campus and via either Northgate Drive or Nova Albion Way.

C. Proposed Improvements

The Project would be implemented in three general phases, as described below.

Phase 1

Phase 1 is composed of three components: complete renovation of the existing locker and team rooms (southern half of Building K) and upgrades to the western end of the existing track and field stadium; demolition and reconstruction of Building H (ancillary gymnasium with dance, weight room, mat room, restrooms, storage); and demolition and reconstruction of the existing pool, equipment room, storage areas, and the pool deck in its entirety.

- **Modernization of Locker/Team Rooms (Building K) and Stadium Upgrades.** The southern portion of Building K would be modernized. The existing locker rooms, bathrooms, team rooms, and other support spaces would be demolished. Nonstructural walls would be removed; no major structural modifications would be made. The renovated space would provide equal-sized team and locker rooms and restroom facilities to support Title IX requirements, as well as a gender-neutral locker room and restroom. A new pool team room would be constructed, and an east-west hallway would connect the pool team room to the track and field stadium on the east side of Building K. Seating/lounge areas would be provided along the hallway. The renovated area would have all new floor, wall and ceiling finishes, and lighting, along with new lockers, restroom fixtures, and accessories. The renovated facility would include new interior and exterior doors, windows, frames, and hardware to meet current District standards. The mechanical equipment would be replaced with new electric heat pumps. Existing plumbing, electrical, and low voltage systems would be modernized. Reclaimed waterlines would be installed to service lavatories and urinals. Domestic water would also be rerouted to accommodate the new layout of restroom facilities. The roof would be replaced, and the Pacific Gas and Electric (PG&E) feeders for the main campus switchgear, as well as the PG&E gas line servicing the school's meter, would be rerouted as part of this Project component.

  The existing portable Building Q/R (2,500 square feet), which was previously used as instructional space and now as the Bond Program's office, would be demolished, and two

new modular buildings would be constructed. Specifically, a new 183-square-foot ticket booth facility with storage and a restroom (Building Q) would be constructed in the general location of the existing portable building. The existing concession stand would be removed. New decorative fencing, landscaping, and site lighting would be installed between Building K and the stadium fence. The new fencing would improve campus security between the track and field stadium and core building area. Elevated canopies would be installed along the new fencing. A "TERRA LINDA TROJANS" sign would be installed over the pedestrian gates, and a "TICKETS" sign would be installed at the ticket booth. These improvements would create a sense of entry into the school's outdoor athletic facilities. A new restroom and concessions building of approximately 905 square feet (Building R) would be constructed near the south end of Building K. The existing space between Building K and the track would be modernized with decorative pavers, planters, retaining seat-walls, and benches to create a gathering area. Under this Project component, the track surface would also be improved with an in-kind rubberized surface. A new track runoff would be installed at the southeast corner of the track, and the jump pit would be retrofitted with sand catches. A small scoring/timing booth would be installed on the south side of the field to the east of the bleachers. Cleanouts would be installed at the track channel drain, as well. Nighttime lighting would not be installed at the track and field stadium.

- **Reconstruction of Building H.** The existing 9,469-square-foot Building H, which currently houses the weight room, wrestling mat room, dance studio (used for cheerleading and also has a climbing wall), and pump room, would be demolished. A new building of approximately 10,000 square feet would be constructed to accommodate the same ancillary gym uses. Access to these rooms would be from the north, east, and west sides of the building. The dance room would have a 20-foot-high clearance to accommodate competition-level cheerleading activities and include a replacement climbing wall. The southern side of the building would include storage rooms for both the ancillary gym uses and the proposed aquatic facility located south of Building H. It would also have restroom facilities and a concession room for the new aquatic facility. The exterior of the south side of the building would include outdoor composite lockers and showers. The exterior wall of Building H, facing the courtyard, would have similar architectural materials and colors to the Competition Gymnasium and Student Commons buildings. Two ornamental trees adjacent to the east side of Building H would be removed for the reconstruction of Building H.

- **Reconstruction of Aquatic Facility.** A new competition-level aquatic facility would be constructed to support the existing physical education (PE), swim/dive, and water polo programs. The existing pool and deck, and a lunch shelter and pool equipment building located west of the pool, would be demolished. A replacement outdoor swimming pool (132 feet by 75 feet) and new deck would be constructed. The pool would be a little over 12 feet deep on the west side, include 15 swim lanes, and accommodate a capacity of 495 occupants.

A new light-emitting diode (LED) video display scoreboard would be mounted on the west wall of Building K. The existing pool lights would be replaced with four 50-foot light poles that would be installed generally in the four corners of the aquatic facility, providing lighting to the swimming pool, pool deck, and egress/emergency access areas. They would be shielded and directed downward to limit glare and light trespass. Underwater lights would also be installed in the new pool.

A grandstand with five rows of seating would be constructed on the south edge of the pool deck and provide seating for up to 264 spectators, including 6 spaces compliant with the Americans with Disabilities Act (ADA). A new equipment and chemical storage room and a new pool storage room (Buildings S and T), each approximately 1,250 feet, would be constructed on the left and right sides of the grandstand. The proposed grandstand and Buildings S and T would be developed within the existing slope. A retaining wall would be required to support these structures. A solar array cantilever shade structure would be installed above the grandstand. Fencing would be installed along the slope to ensure students cannot climb atop the roofs and cantilever to get into the pool area.

The portion of the slope from the west side of the Student Commons building (Building B) to an existing pedestrian ramp behind Building K would be modified to accommodate the proposed grandstand and Buildings S and T.

A new 3-phase, 150 kVA battery storage facility would be installed to the east of the existing main campus switchgear located south of Building B. The battery storage facility, much like the switchgear, would be developed within the slope. A new vehicle driveway would also be constructed from the fire lane behind Building B to the basketball courts to provide new vehicular access to the southern fields. The existing pedestrian ramp south of Building K would be relocated to behind Building P, next to the new driveway. New stairs and the relocated pedestrian ramp would allow improved ADA-compliant access between the northern and southern halves of the campus.

Existing vegetation within the development footprint of the slope, including 10 trees, would be removed. New trees and shrubbery would be planted within this area, along the exterior walls of Buildings H and K, and the area between Building K and the track and field stadium. Project landscaping would comply with shade tree requirements, pursuant to California Green Building Standards Code Section 5.106.12. One- and five-gallon shrubs and 36-inch tree boxes would be planted.

This Project component would also require the rerouting of a segment of the fire lane from behind the proposed aquatic facility to the area between Building P and the new aquatic center. The rerouted fire lane would continue through the courtyard and toward the west end of the student parking lot where a curb cut would be created for fire truck ingress and egress. A second fire lane would be created on the east and south sides of Building K, also accessed from the new curb cut.

Phase 2

- **Modernization of Main Classroom Buildings.** The first and second floors of the main school buildings (Buildings A, M, and L) would be modernized to be more resilient to physical damage and comply with ADA standards. The modernized facilities would accommodate future classroom programming needs, such as a new wellness center and space for state-of-the-art technology and equipment. The improvements would affect classrooms, labs, and restrooms, as well as corridors, storage rooms, and other ancillary spaces. Room configurations may occur to better serve more modern functions; as an example, existing book storage rooms would be converted into a wellness center. The facilities would be improved with new LED lighting, flooring, counters, fixtures, painting and finishes, and technology. The restrooms would be improved to high-security, full-height partitions. The fire alarm system would be upgraded. The campus public announcement (PA) system, as well as its clock system, would be upgraded. Roofing at various buildings would be identified and replaced or coated as necessary. Mechanical systems would be evaluated and replaced, if determined necessary.

- **Campus-wide Security Fencing.** Fencing would be strategically installed throughout the campus to improve security and to prevent unauthorized pedestrian and vehicular access into the northern half of the campus. Fencing along the school frontage on Nova Albion Way would be decorative and up to 10 feet tall. New fencing and vehicle and pedestrian gates installed as a part of Phase 1 (between Buildings J and K and in the western end of the track and field stadium) would contribute to the goal of this Project component. Similar fencing would replace the existing fencing between the track and field stadium and student parking lot to the eastern property line. A new pedestrian gate would be installed between Buildings I and J, and fencing and pedestrian gates would be installed in front of the courtyard, between Buildings M and L. Access in and out of the campus before and after the school bells would be via the pedestrian gates between Buildings J and K, Buildings I and J, or Buildings M and L. During the school day, the pedestrian gates would be locked, and access would be via the administration office in Building I or the pedestrian gate between Buildings I and J.

  The proposed fencing in other areas of the campus would be either 6 or 8 feet high, no climb, and vinyl coated. On the west side of the campus, 6-foot-tall fencing would be installed between Buildings C and G, Buildings G and D, and Buildings D and B. A new electric vehicle gate would be installed across the fire lane, between the southwest corner of Building B and the northwest corner of the new battery storage facility. New 6-foot-high fence segments would be strategically placed along the top of the slope on the southern half of the campus, between Building B and the eastern property line. New 6-foot-high fencing would replace the existing fencing along the east property line, north of the slope and east of the track and field stadium.

Phase 3

- **Artificial Turf Fields.** The District proposes replacing its existing grass baseball and multipurpose fields with functioning baseball, softball, and soccer fields in the southern half of the campus. Approximately 200,000 square feet of natural turf would be replaced with permeable, artificial turf. The exact brand of material to be used has not been selected; however, no "crumb rubber" materials would be present in the synthetic turf. Two design options are proposed. Under both options, the baseball field would be in the same location and designed and striped to have the same orientation as the existing baseball field in the southeast corner of the campus. The new multipurpose field west of the baseball field would be striped for both softball and soccer uses. The backstop for the softball field would be in the northeast corner of the multipurpose field, next to the baseball field's backstop. The soccer field would be striped either in an east-west or north-south orientation.

  The new fields may include other improvements, including dugouts, portable bleacher stands, and two new scoreboards, including a replacement scoreboard for the baseball field and a new one for the multipurpose field. The existing shot put and discus throw grounds would be relocated to the track and field stadium during improvements to beautify the stadium. Other improvements may include limited site lighting, ADA-compliant pathway upgrades, new drinking fountains, batting cages, and other features generally featured on such sports fields. The artificial turf would be designed to capture any increased runoff. Flat panel drains would be strategically laid out under the fields and perforated subdrains along the perimeters to collect stormwater that would slowly release into the adjoining natural grass areas to minimize erosion and flooding. A new irrigation system would be installed to water the adjoining landscape and natural grass. Areas with impermeable improvements, such as the dugouts that could be constructed with concrete, would include storm drainage improvements that would connect to the existing system on the campus. Up to 12 trees located on the west and north sides of the fields would be removed as part of this Project component. No nighttime lighting would be installed at the artificial turf fields.

- **Tennis Court Improvements.** The existing tennis courts would be replaced, walkways would be improved to meet ADA standards, and the drinking fountain would be replaced with a new ADA-compliant fountain. The existing fencing around the tennis courts would be replaced. Improvements to the tennis courts would require the removal of up to seven trees located around the existing courts. No nighttime lighting is proposed for the tennis courts.

- **Stadium Beautification.** The remainder of the stadium would be improved under Phase 3. Improvements would enhance the appearance of the facility, including but not limited to replacing the existing fencing, painting the railings, repurposing with outdoor fitness equipment the existing natural turf areas that are in disrepair from reduced watering, relocating the long jump pit to another location, relocating the shot put and discus throw

areas currently located in the multipurpose field, paving the currently unpaved access road along the eastern property line, improving site lighting for enhanced safety, installing a new scoreboard either in situ or at the eastern end of the track, installing new drinking fountains, landscaping areas adjacent to the track and bleachers, and installing additional site furnishings. Three ornamental trees located in the northeast corner of the stadium would be removed as a part of this Project component. No nighttime lighting would be installed at the track and field stadium.

Utilities. New wet and dry utilities would be required for the Project. The Project would not require off-site utility improvements.

- Under Phase 1, new plumbing would be provided in the practice gym (Building K). Due to the depth of the existing pipes, the Project would require a sanitary sewer lift station and new manholes. Additionally, two inefficient boilers located at the practice gym and existing pool would be removed. High-efficiency electric heat pumps would be installed at the practice gym, and two high-efficiency boilers and a tankless water heater would be installed for the new aquatic facility. An existing natural gas pipeline located within the campus would be extended along the southern and eastern perimeters of the Phase 1 development footprint and connected to an existing line on the west side of the student parking lot, north of the track and field stadium.

- Phase 2 would require new plumbing and electrical improvements within the building envelope as part of the proposed modernization of the buildings. However, no utility improvements would be required outside the building envelope.

- The proposed artificial turf improvements and installation of scoreboards, under Phase 3, would require new storm drain piping, replacement water lines for watering of the remaining natural grass in the Phase 3 development footprint, and new electrical lines for the scoreboards. The modernized facilities would continue to be available for community use through the Civic Center Act and District Board Policy.

D. Project Operations

Post-Construction, Long Term Operations

Post-project, the Terra Linda High School campus would operate as follows:

- ***Academic Buildings.*** The Project would not increase the student seating capacity at Terra Linda High School. The proposed removal of Building Q/R would result in a corresponding reduction in the enrollment capacity of 70 seats, resulting in a post-Project student capacity of 1,400 seats. Classroom Buildings A, M, and L would continue to be used for classroom purposes post-Project, with no change or increase in use from existing

conditions. The facilities in Buildings A, M, and L would also continue to be available for community use.

- ***Recreational Buildings.*** The proposed replacement Building H would accommodate the same ancillary gym uses as existing conditions (weight room, wrestling mat room, dance studio, climbing wall) and would continue to be used for PE and by the wrestling team, cheerleading team, and other athletic programs similar to existing operations. Post-renovation, Building K would continue to be used as locker room, restroom, and team room facilities serving the high school's PE and athletic programs. Both Buildings H and K would also be available for community use.
- ***Aquatic Facility.*** The proposed new pool would continue to be used for PE and for the high school's junior varsity and varsity athletics, including seasonal water polo (practices and matches), and swim/dive (practices and meets). Students would continue to swim before the morning bell and after school, similar to existing operations. However, the proposed aquatic facility would meet California Interscholastic Federation standards, which would allow the existing swim/dive and water polo programs to host championship competitions. Accordingly, there would be an increase in school-sponsored aquatic events, including approximately 15 new events per year. These events would occur two to three weeks after the regular swim/dive and water polo seasons and held after school hours and over the weekends. The number of spectators would not be more than that at existing aquatic events currently held at the campus. The proposed grandstand of 264 seats would meet the existing demand for spectator seating, and spectators would no longer be required to bring their own seats to events. The replacement pool lights would also be used, as needed, between 6 AM and 9 AM and 5 PM and 10 PM, matching existing pool lighting schedules. The modernized aquatic facility would continue to be available to outside community groups, as required under the Civic Center Act, outside of school and athletic program hours and events.
- ***Multipurpose Fields.*** The proposed artificial turf at the baseball and multipurpose fields would continue to accommodate Terra Linda High School's existing PE and athletic programs. Post-Project, existing use of the baseball field for the high school's junior varsity and varsity baseball practices and games would continue at the modernized field. There would be no increase in school-sponsored programs.

  Post-Project, the high school's junior varsity and varsity soccer practices and games would return from the track and field stadium to the new multipurpose artificial turf field. The junior varsity and varsity softball practices and games currently held at the adjacent softball field at the Miller Creek School District would be relocated back to the campus. The lacrosse program would remain at the track and field stadium, as it is offered during the same season as softball, and golf would remain off-site. Although the Project would not change the existing athletic programs, including the number of events and spectators currently attending events, the improved multipurpose field would hold 150 annual, school-sponsored, junior varsity and varsity soccer and softball practices, games, and competitions. Pursuant to Board Policy, as required under the Civic Center Act, the artificial

multipurpose field would continue to be rented to community users. Use of the artificial turf fields would end at dusk, as no nighttime field lights are proposed.

- ***Track and Field Stadium.*** The track and field stadium, post-improvements, would continue to be used for PE and for the high school's junior varsity and varsity athletics, including track and field (practices and meets), cross country (practices and meets), boys' flag football (practices and games) and boys' football (practices and games). The junior varsity and varsity lacrosse practices and meets would remain at the track and field stadium and would not return to the multipurpose field, as it is offered during the same season as the softball season, and the softball program would need to use the softball field. With the soccer programs returning to the multipurpose field, there would be approximately 58 fewer annual school-sponsored events at the track and field stadium. Community use and rental of the track and field, however, would continue as existing, in accordance with Board Policy and the Civic Center Act.
- ***Tennis Courts.*** Post-construction, the tennis courts would continue to be used for PE and the junior varsity and varsity tennis teams (practices and meets). No operational changes are proposed for the tennis program, and the tennis courts would continue to be available for rental through the Civic Center Act.

Summary of School-Sponsored Operations. The Project would result in the expanded use of the modernized athletic facilities at Terra Linda High School from school-sponsored events and community rentals. **Table 1**: **Proposed School-Sponsored After-School Events** summarizes the proposed changes to school-sponsored after-school events. As discussed above and summarized below, the Project would result in a net increase of 72 events, including 57 varsity and junior varsity softball practices, games, and tournaments that are currently using the ballfield at the Miller Creek School District that would relocate to the Terra Linda High School campus and 15 aquatic events from tournaments. The number of participants and spectators at these events would not change from existing conditions.

Table 1: Proposed School-Sponsored After-School Events

Athletic Facility	Existing After-School Events Per Year	Proposed After-School Events Per Year	Change in After-School Events Per Year
Aquatic Facility	210	225	+15
Multipurpose (Soccer/Softball) Field	35	150	+115

Baseball Field	174	174	0
Track and Field Stadium	293	235	-58
Tennis Courts	165	165	0
Total	877	949	+72

Summary of Community Use and Rentals. Similar to existing conditions, pursuant to the Civic Center Act and District policy, all of the modernized athletic facilities would continue to be available for community use and rental when they are not in use by the school. At this time, the District is unaware of any potentially new renters of the proposed competition-level aquatic facility, artificial turf multipurpose soccer/softball field, artificial turf baseball field, and rehabilitated tennis courts. The District is also unaware of the demand for the rental of these athletic facilities in Marin County and San Francisco. Therefore, it would be speculative for the District to specify how much additional rental time would result from the Project. Notwithstanding the uncertainty, the District anticipates expanded rental of the facilities, based on actual 2023 facility rentals at Terra Linda High School and San Rafael High School. As there are not many competition-level pools in Marin County and San Francisco and/or pools in the area are not available year-round, the District anticipates rental of the modernized facility to increase. New users may include but are not limited to existing swim leagues in Marin County. It is assumed that rental of the modernized aquatic facility would be similar to if not slightly more than that experienced at San Rafael High School; in 2023, the San Rafael High School aquatic facility was reserved 221 hours by community users. Therefore, it is estimated the modernized aquatic facility would roughly double its existing rental operations, i.e., a proposed operation of 300 hours per year.

As the multipurpose artificial turf field would no longer have gopher holes and there would be no down time during and after heavy rain events, the District anticipates expanded community use of the modernized facility. On a worst-case basis, it is assumed the artificial turf field could be used similarly as that at San Rafael High School. In 2023, the soccer field at San Rafael High School was rented for 2,100 hours by community groups. Use of the artificial turf field would end at dusk, as no nighttime field lights exist or are proposed.

It is assumed the modernized baseball field and tennis courts would have some increased rental use. However, the District does not anticipate the increase to be substantially more than existing, as there are tennis court facilities and baseball fields locally in the Terra Linda community that are available for use and rental, including at parks and other schools. Therefore, the rental demand for tennis and baseball facilities would not be high. Moreover, although the existing baseball field at Terra Linda High School does not have artificial turf, the District has maintained the facility and there are no gopher holes; even so, in 2023, the baseball field was rented to only one user for 28 hours. The baseball field and tennis courts at San Rafael High School were rented for 51 hours and 69 hours, respectively. These are comparable to the 2023 rentals at Terra Linda High School. Therefore, any increase in the rental of the modernized baseball field and tennis courts would not be substantial.

Short Term Operations, During Construction

  - The construction schedule has been designed to limit interruptions (to the extent feasible) on school operations and allow for existing academic and athletic programs to continue under all three phases. Building modernization improvements, under Phase 2, would be phased to avoid the need for temporary student classroom facilities. However, the proposed athletic improvements, under Phases 1 and 3, would displace existing programs at the facilities proposed for improvements.

- Phase 1 improvements would affect sports programs that use the track and field, Buildings K and H, and the aquatic facility, including football, girls' flag football, wrestling, cheerleading, water polo, and swim/dive. The Phase 1 construction schedule prioritizes improvements to Building K and the western end of the track and field during the summer in an effort to minimize disruptions to the sports programs that use these facilities during the fall season of the school year. It also proposes construction activities, e.g., demolition and site preparation, during the summer when students are not present. There may be some overlap between the end of Phase 1 construction and the start of the school year. If so, the sports programs (football and girls' flag football) that use the track and field stadium during the fall season would be temporarily relocated to the fields in the southern half of the campus; home games would be played off-site. Cheerleading and wrestling would be relocated to the Competition Gym (Building J). The water polo and swim/dive programs would be relocated to an aquatic facility located within a 10-mile radius of Terra Linda High School. Soccer (winter season) and lacrosse (spring season) would not be affected by Phase 1 construction activities; they would continue to use the track and field stadium, as they do now.

- Phase 3 improvements would affect sports programs that use the baseball and multipurpose fields, tennis courts, and the eastern side of the track and field. The District proposes to initiate construction activities of each of the three Phase 3 Project components right before the start of the summer break to minimize disruptions to the academic and athletic programs. Major construction activities (demolition, site preparation, and grading) would occur during summer break when students are not on campus. Soccer and lacrosse would continue to use the track and field stadium during construction of the proposed artificial turf multipurpose field. The tennis program would not be affected, as construction of the tennis courts would be completed during summer. Softball would continue its program off-site, next door at the Miller Creek District Office, and baseball would also temporarily use the Miller Creek District Office field.

Under all three development phases, community members would not be allowed to use the campus facilities proposed for modernization during their scheduled construction period, or if such facilities were needed to temporarily house the high school's academic or athletic programs during a different phase of construction. The District would not renew existing leases with organizations that use those facilities proposed for modernization or that would be affected by construction, such as the gymnasium in Building K during the summer of 2024.

Once construction is completed, however, the facilities would be available again for community use through the Civic Center Act, and the District would be able to renew leases.

V. Findings Required Under CEQA

These Findings constitute the District Board members' best efforts to set forth the evidentiary and policy bases for its decision to approve the Project in a manner consistent with the requirements of CEQA. To the extent that these Findings conclude that various proposed mitigation measures outlined in the Final EIR are feasible and have not been modified, superseded or withdrawn, the District hereby binds itself to implement these measures. These Findings, in other words, are not merely informational, but rather constitute a binding set of obligations that will come into effect when the Board of Education adopts a resolution approving the Project.

A. Certification of Final EIR

The Final EIR for the Project is hereby certified pursuant to the CEQA and CEQA Guidelines. The Board of Education hereby certifies that the Final EIR has been completed in compliance with the requirements of CEQA. The Board of Education further certifies that the Final EIR was presented to it and that it considered the information contained in the Final EIR prior to approving the Project. Finally, the Board of Education certifies that the Final EIR reflects the Board of Education's independent judgment and analysis.

B. Changes to the Draft EIR

CEQA Guidelines Section 15088.5 requires a lead agency to recirculate an EIR for further review and comment when significant new information is added to the EIR after public notice is given of the availability of the Draft EIR but before certification of the Final EIR. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect that the project proponent declines to implement. The CEQA Guidelines provide the following examples of significant new information under this standard:

- A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
- A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.

- The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (*Mountain Lion Coalition v. Fish and Game Com.* (1989) 214 Cal.App.3d 1043.)

Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.

The Board of Education recognizes that the Final EIR incorporates new information since the Draft EIR was circulated, and contains additions, clarifications, modifications, and other changes, however such changes are not significant. The changes in the Final EIR are shown in underlined text for additions and ~~strikeout~~ for deletions. This information was incorporated into the Final EIR in response to public comments received and to clarify the Project description and further refines the environmental analysis of the Project's impacts to aesthetics. As the information added to the Final EIR merely clarifies or amplifies the prior information, makes insignificant modifications, and no new significant information has been presented, the Board of Education finds that the Final EIR meets the requirements of CEQA and CEQA Guidelines and the Draft EIR does not need to be recirculated.

C. Evidentiary Basis for Findings

The Findings and determinations contained herein are based on the competent and substantial evidence, both oral and written, contained in the entire record relating to the Project and the EIR. The Findings and determinations constitute the independent Findings and determinations by this Board of Education in all respects and are fully and completely supported by substantial evidence in the record as a whole.

Although the Findings below support of various conclusions reached, the Board of Education has no quarrel with, and thus incorporates by reference and adopts as its own, the reasoning set forth in both environmental documents, and thus relies on that reasoning, even where not specifically mentioned or cited below, in reaching the conclusions set forth below, except where additional evidence is specifically mentioned. This is especially true with respect to the Board's approval of all mitigation measures recommended in the Final EIR, and the reasoning set forth in responses to comments in the Final EIR. The Board of Education further intends that if these Findings fail to cross-reference or incorporate by reference any other part of these Findings, any finding required or permitted to be made by this Board of Education with respect to any particular subject matter of the Project must be deemed made if it appears in any portion of these Findings or Findings elsewhere in the record.

D. Findings Regarding Project Description

The Project Description as provided in the Final EIR describes the whole of the action and underlying physical activity being approved. The Project Description reflects the specifics of the proposed improvements, the project site, and its surroundings. The amount of detail provided reflects the size and scope of the Project. To the extent that some information is not available, the Final EIR contains assumptions regarding details of the project construction and

operation in order to provide complete analyses. The information is not meant to be exhaustive and meets the requirements of CEQA Guidelines Section 15124, which provides that the project description should not supply extensive detail beyond that needed for evaluation and review of the environmental impact.

The Board of Education finds that the Project Description describes the whole of the action and underlying physical activity being approved, that the Project Description provides sufficient information for the evaluation and review of the Project's environmental impacts as disclosed in the Final EIR.

E. Findings Regarding Mitigation Measures

Except as otherwise noted, the mitigation measures herein referenced are those identified in the Draft EIR or as modified in the Final EIR. Except as otherwise stated in these findings, in accordance with CEQA Guidelines Sections 15091, 15092, and 15093, the Board of Education finds that the environmental effects of the Project:

- Will not be significant; or
- Will be mitigated to a less-than-significant level by the mitigation measures adopted by the Board.

The Board of Education finds that the mitigation measures incorporated into and imposed upon the Project will not have new significant environmental impacts that were not already analyzed in the Draft EIR.

F. Findings Regarding Monitoring/Reporting of CEQA Mitigation Measures

A Mitigation Monitoring and Reporting Program (MMRP) was prepared for the Project and was approved by the Board of Education by the same resolution that has adopted these Findings (Public Resources Code Section 21081.6(a)(1); CEQA Guidelines Section 15097). The MMRP identifies enforceable mitigation measures that will be implemented during Project implementation to reduce and eliminate potentially significant environmental effects identified in the Final EIR. The District will use the MMRP to track compliance with Project mitigation measures. The MMRP will remain available for public review during the compliance period.

ENVIRONMENTAL IMPACTS

Presented below are the environmental findings made on behalf of this Board after its review of the documents referenced above, as well as the written comments and responses thereto on the Project. Factual discussion in this document summarizes the information contained in the Draft and Final EIR and the administrative record upon which this Board bases its decision to approve the Project.

The Draft EIR evaluated twelve (12) major environmental categories that had potential significant adverse impacts and were not determined to be insignificant (no impact or less

than significant impact) in the Initial Study. Both project specific and cumulative impacts were evaluated and some of the categories contained several sub-issues, which are summarized below. Of these twelve (12) major environmental categories, the Board concurs with the conclusions in the EIR that the impacts in all of these categories are or can be mitigated below a significant impact threshold.

G. Findings Regarding Environmental Impacts Found Not to be Significant

Based on the Final EIR and other supporting information in the record, the Board of Education finds that the Project would have no impact or a less than significant impact associated with the below environmental issues:

1. Aesthetics

Scenic Vistas and Designated Scenic Highways. There are no scenic vistas, scenic resources including but not limited to trees, rock outcroppings, and historic buildings, or officially designated scenic highways in close proximity to Terra Linda High School. Therefore, Project implementation would have no impact on a scenic vista or a state scenic highway.

Scenic Quality in an Urbanized Area. The Terra Linda High School campus is entirely developed with school facilities and surrounded by a residential neighborhood. It is in an "urbanized area" as the City of San Rafael has a population greater than 50,000 people. Accordingly, the impact analysis on scenic quality was based on whether the Project would conflict with any regulations governing scenic quality. The Project would comply with all applicable state codes, including the California Building Standards Code and related sections of CALGreen and the Building Energy Efficiency Standards that govern scenic quality and light pollution reduction requirements. Moreover, the proposed improvements would be consistent with the City of San Rafael Design Guidelines for nonresidential development regarding landscaping, lighting, building form, pedestrian circulation, entryways, and materials and colors and would not conflict with applicable regulations governing scenic quality of the Project site. Therefore, Project impacts to scenic quality would be less than significant.

Findings. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant impacts to scenic vistas, scenic highways, and the visual quality of the surrounding urbanized area.

2. Agricultural and Forestry Resources

The Project site is developed with a high school campus in an urban community with no existing agricultural, forestry, and timberland uses on the site or surrounding the site. Project implementation would have no impact to prime farmland, unique farmland, or farmland of statewide importance. The Project site is not zoned for agriculture and is not under a Williamson Act contract. The Project would not conflict with existing zoning or cause rezoning of forestland, timberland, or timberland zoned Timberland Production. Project implementation would not convert farmland to non-agricultural use or convert forestland to non-forest use.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will cause no impacts to agricultural and forestry resources.

3. Air Quality

Consistency with Air Quality Plan. The Bay Area Air Quality Management District's (BAAQMD) 2017 Clean Air Plan is applicable to the Project. Determination of whether the Project is consistent with the BAAQMD's 2017 Clean Air Plan is by comparing a project's estimated emissions with the BAAQMD thresholds of significance. If emissions are below the BAAQMD thresholds of significance after the application of all feasible best management practices (BMPs), the project is consistent with the goals of the 2017 Clean Air Plan. Based on the results of the air quality modeling, with the implementation of BMPs, emissions generated during Project construction and operation would not exceed the BAAQMD's significance thresholds. Therefore, the Project would not conflict with or obstruct the implementation of the 2017 Clean Air Plan. Impacts associated with compliance with the 2017 Clean Air Plan would be less than significant.

Exposure of Pollutants to Sensitive Receptors. Construction-related impacts related to cancer risk for all modeled scenarios would be below the 10-in-one-million threshold set by the BAAQMD. These calculations do not account for any pollutant-reducing remedial components inherent to the Project or the Project site. Therefore, even with the most conservative scenario, construction associated with the proposed phased improvements would not result in an elevated cancer risk to sensitive receptors, and the impact would be less than significant. Additionally, construction impacts related to non-cancer risk (chronic hazard index) as a result of Project construction would not surpass the BAAQMD significance thresholds. Therefore, construction associated with the proposed phased improvements would not result in an elevated non-cancer risk to sensitive receptors, and the impact would be less than significant.

The Project may increase community use of the proposed artificial fields and result in the potential generation of 92 new automobile trips per day. The BAAQMD provides that a carbon monoxide (CO) "hot spot" would occur if a given project increased traffic volumes at a single intersection by more than 44,000 vehicles per hour. As Project implementation would not generate traffic volumes at any intersection exceeding the BAAQMD's threshold, the Project would not result in a significant CO impact. Moreover, operation of the Project would not introduce new uses at the campus that would result in the generation of excessive toxic air contaminant emissions that are more intensive than existing conditions. Therefore, operation of the proposed improvements would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

Odors. The Project would apply standard construction techniques, and odors would be typical of most construction sites, temporary in nature, and not persist beyond the termination of construction activities. Operation of the modernized school facilities would not generate new odors at the campus. Moreover, the BAAQMD regulates nuisance odors under Regulation 7,

Odorous Substances, and Regulation 1, Rule 1-301, Public Nuisance. Therefore, any potential odors generated during construction and operation would be managed and considered less than significant.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant impacts to the applicable air quality plan, sensitive receptors with the exposure of substantial pollutant concentrations, and odors.

4. Biological Resources

The Project site is a developed high school campus within an urbanized neighborhood. No riparian, wetland habitat, or other sensitive natural community exists within the Project site or surrounding area. The Project site is not a part of or adjacent to undisturbed habitat fragments, designated wildlife migration corridors, or vital resources, nor is it part of an adopted local, regional, or state habitat conservation plan. The proposed improvements would be implemented within disturbed and developed areas of District property and not off-site, on public streets, sidewalks, or walkways.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant impacts to riparian and wetland habitats, other sensitive natural communities, migratory wildlife corridors, or local policies or ordinances protecting biological resources.

5. Cultural Resources

Historical Resources. A records search for historical resources conducted for the Project, along with an additional review of locally designated historic properties, did not identify Terra Linda High School or any properties within one-quarter mile of the Project site as listed on a national, state, or local register of historical resources. No previously recorded historic-era resources, including districts, sites, buildings, structures, objects, and landscapes, were identified within the boundaries of the Project site and one-quarter mile of the Project site. Therefore, Project implementation would not directly or indirectly cause a substantial adverse change in the significance of a known built historical or subsurface archaeological resource pursuant to CEQA Guidelines Section 15064.5.

Human Remains. There are no known cemeteries on-site. Additionally, previous construction activities at Terra Linda High School have not identified any human remains interred outside of a dedicated cemetery. If human remains are discovered, all work must stop in the immediate vicinity of the discovery. Project compliance with regulatory requirements, including Health and Safety Code Sections 7050.5 and 7051, would reduce Project impacts on undiscovered human remains to less than significant levels.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant impacts to built and subsurface historical resources and human remains.

6. Energy

Project construction and operation would require energy consumption. Construction activities would require use of automotive fuel. The Project's annual automotive fuel consumption during each of the six construction years would increase between 0.052 percent and 0.068 percent and represents a de minimis increase of the countywide fuel consumption in 2022. Construction fuel use would cease upon completion of construction activities. There are no unusual characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the state. Further, transportation fuel demand during construction would also be reduced by construction equipment fleet turnover, increasingly stringent state and federal regulations on engine efficiency, state regulations limiting engine idling times, and recycling of construction debris. Therefore, transportation fuel energy consumed during construction would not represent a significant demand on energy resources, and construction-related impacts to energy would be less than significant.

Operation of the proposed modernized facilities would consume energy, similar to existing conditions, in the forms of electricity, natural gas, and automotive fuel. The electricity consumed by the Project would be offset by the Project's proposed solar arrays, as well as the District planned installation of solar arrays on the field, south of the tennis and basketball courts (a separate, related project). Moreover, the proposed improvements would include sustainable features in compliance with the Building Standards Code, CALGreen, and Energy Efficiency standards that would reduce electricity consumption. The Project would remove inefficient boilers and replace them with high-efficiency electric heat pumps, two high-efficiency boilers, and a tankless water heater that would result in an overall reduction of natural gas consumption, compared to existing conditions, by 5.1 percent. The increased usage of the artificial turf would increase automotive fuel consumption; however, the increase would represent a de minimis annual increase of 0.025 percent compared to the 2022 Countywide use. Therefore, energy consumption during Project operation would not be wasteful, inefficient, and unnecessary, and impacts would be less than significant.

Project implementation would not impede state and local plans for renewable energy or energy efficiency. Moreover, the Project would result in a 5.1 percent reduction in natural gas consumption compared to existing conditions due to the replacement of existing inefficient boilers. Moreover, the Project would comply with the Title 24 California Building Standards Code, including CALGreen, which establishes mandatory green building standards for all buildings in California, and Energy Efficiency standards, and include a number of sustainable design features that meet state guidelines and regulations. With the implementation of the proposed design features, as well as the District's efforts to install solar arrays for the Project

and separate from the Project, the Project would be consistent with state and local plans for energy efficiency. Therefore, the impact would be less than significant.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant impacts due to wasteful, inefficient, or unnecessary consumption of energy resources or obstruct state and local plans for energy efficiency.

7. Geology and Soils

Seismic Hazards. Terra Linda High School is not within a Alquist-Priolo Fault zone and is not mapped with landslide-related deposits. However, the Project site is in a seismically active region with the closest active fault approximately 8.5 miles southwest of Terra Linda High School, which can produce strong seismic shaking at the Project site. Additionally, the Project site is mapped by the US Geological Survey within an area of moderate liquefaction susceptibility. All proposed phased improvements would be designed and constructed in compliance with the California Building Code (CBC) to minimize impacts related to seismic ground shaking and liquefaction. The Geotechnical Report prepared for Phase 1 of the Project concluded that with the implementation of recommendations, Phase 1 improvements are feasible. Geotechnical investigations may be prepared for improvements under Phase 2 and Phase 3 of the Project to ensure compliance with the CBC. All plans would be checked by the Division of the State Architect to ensure building code compliance. Therefore, impacts related to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic hazards, would be less than significant.

Soil Erosion. Construction of the proposed phased improvements would result in a total of approximately 1,397 tons of demolished debris and approximately 7,407 cubic yards of exported material. Project compliance with requirements in the Construction General Permit related to sediment and erosion control would reduce potentially significant impacts to the soil erosion or the loss of topsoil to less than significant.

Stability of Geologic Unit. The proposed phased improvements would be designed and constructed in accordance with the CBC, and all plans would be checked by the Division of the State Architect. Therefore, the Project would result in less than significant impacts related to a potential unstable geologic unit or soils that could result in landslides, liquefaction, lateral spreading, and subsidence. Impacts would be less than significant.

Expansive Soil. According to the Geotechnical Report prepared for Phase 1 of the Project, the site of the proposed aquatic center contains moderately expansive soils. Therefore, Phase 1 would be implemented with alternative foundation types commonly used in the San Francisco Bay region to reduce any potentially damaging effects of expansive soils on structures. The Project design would also implement alternative options for slabs-on-grade and pavements, including removal and replacement of expansive subgrade materials with engineered non-expansive fill and engineered treatment of expansive subgrade materials using lime or cement. The removal and replacement of expansive soils with engineered non-

expansive fill and the lime/cement treatment would reduce potentially damaging effects of expansive soils. With implementation of the recommendations of the Geotechnical Report for Phase 1 of the Project, implementation of Phase 1 would result in less than significant impacts related to expansive soils. All other improvements would comply with the CBC and applicable federal and state codes to minimize impacts related to expansive soils. Geotechnical investigations prepared for Phase 2 and Phase 3 would ensure that potential impacts related to expansive soils would be less than significant for all proposed phased improvements.

Paleontological Resources. The paleontological records search conducted by the University of California Museum of Paleontology yielded no records of fossil localities within the Project site. Additionally, no localities have been identified in the vicinity of the Project from similar geologic units as those underlying the Project site (Quaternary alluvium and Franciscan Complex rocks). The Project would be implemented in developed areas of the existing high school campus, and no paleontological resources have been encountered during previous ground-disturbing activities. Per standard assessment procedures for paleontological resources set forth by the Society of Vertebrate Paleontology, due to the fossil sensitivity of the rock formations present within the Project site, lack of records of fossils in the Project area, and no encounters during recent construction activities at the campus, the likelihood of the Project to potentially disturb paleontological resources within undisturbed sedimentary deposits and bedrock remains low. Therefore, Project impacts to paleontological resources would be less than significant.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant impacts related to seismic hazards, soil erosion, unstable geologic units or soils, expansive soils, and paleontological resources.

8. Greenhouse Gas Emissions

Construction of the proposed phased improvements would generate a maximum of 897 metric tons of carbon dioxide equivalent (CO2e) during any single year of construction, which would be below the California Air Pollution Control Officers Association's (CAPCOA) significance threshold of 900 metric tons of CO2e per year. The Project would be required to divert (recycle) 65 percent of construction waste materials generated during the construction phases. This requirement would further reduce GHG emissions by reducing decomposition at landfills and demand for natural resources. Therefore, construction-generated GHG emissions would be less than significant.

Project operations would generate similar types of GHG emissions compared to existing conditions through sources such as vehicle trips, landscape maintenance equipment operation, electricity and natural gas use, waste generation, and water usage. The Project would comply with the California Building Standards Code, which includes Building Energy Efficiency Standards and Green Building Standards, which require the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and adequate interior air quality. The Project would result in a 5.1 percent reduction in the

consumption of natural gas, compared to existing conditions, through the replacement of inefficient boilers. Thus, these improvements would reduce the operational GHG emissions at the campus compared to existing conditions, and impacts would be less than significant.

Project-generated GHG emissions would not surpass the CAPCOA GHG significance threshold, which was developed in consideration of statewide GHG reduction goals. Additionally, the Project would be designed in a manner consistent with energy conservation plans that encourage the efficient use of energy resources in development. Phase 2 of the Project would include improvements that ensure the buildings are more energy efficient and effective at reducing the need for heating and air conditioning compared to existing conditions. Further, the new facilities would have LED lighting, which have greater energy efficiency and lifespan than traditional fluorescent light bulbs.

The Project would be built to California's Energy Efficiency Standards, improving the energy efficiency of newly constructed buildings and additions/alterations to existing buildings, encouraging better energy efficiency, strengthening ventilation standards, and more. Thus, the modernization of school buildings as part of Phase 2 would result in greater energy efficiency compared to existing conditions. The Project would also replace the existing inefficient boilers with high-efficiency electric heat pumps and high-efficiency boilers, resulting in a 5.1 percent reduction in the consumption of natural gas compared to existing conditions. For these reasons, the Project would not conflict with any applicable plan, policy, or regulation related to the reduction in GHG emissions, and impacts would be less than significant.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will result in less-than-significant impacts to GHG emissions.

9. Hazards and Hazardous Materials

Through compliance with manufacturer's specifications and instructions and applicable local, state, and federal laws and regulations relating to environmental protection and the management of hazardous materials, impacts associated with the routine transport, use, or disposal of hazardous materials during construction and operation of the Project would be less than significant. The removal and disposal of hazardous materials undertaken as part of Project implementation would occur in a manner consistent with applicable regulations and at an appropriate off-site disposal facilities. Thus, through compliance with existing regulations for the safe handling of hazardous materials, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Operation of the proposed improvements would not be substantially different from that existing at the campus. The proposed use of hazardous materials, such as cleaners and common chemicals for landscaping and maintenance of the Project, including for the swimming pool, would be similar to current operations. All potentially hazardous materials

are and would continue to be handled and disposed of in accordance with manufacturers' specifications and instructions. Therefore, the risk of exposing hazardous materials and emissions to site occupants, including students, and surrounding residential areas during operation of the Project would be limited.

The Project site is not on any hazardous waste site lists, including the Department of Toxic Substances Control's EnviroStor database, which includes Cortese sites. According to the State Water Resources Control Board's GeoTracker site, there are no leaking underground storage tank cleanup sites at or within 1,000 feet of the Project site.

The Project is located 1.7 miles southwest of the San Rafael Airport, a private airstrip with minimal air traffic. The Project is located outside of the 55 decibel noise contour and would not be affected by airport noise. As the Project would involve proposed improvements to existing campus facilities, no impact would occur related to a safety hazard or excessive noise for people residing or working in the Project area. The Project would not eliminate the availability of the campus for use as a critical facility and would not impair the implementation of the City's Local Hazard Mitigation Plan.

The Project would comply with the CBC and proposed new and modernized structures would be improved to meet current requirements for all fire systems, including but not limited to sprinkler systems, fire alarm systems, fire flow, and fire protection equipment. The Project would improve existing conditions and would not exacerbate wildland fire risks at the campus or surrounding residential uses.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will result in less-than-significant impacts related to hazards and hazardous materials.

10. Hydrology and Water Quality

Construction Water Quality. The Project would be required to comply with the Clean Water Act (CWA) and the National Pollution Discharge Elimination System (NPDES) Construction General Permit. Phases 1 and 3 would affect areas larger than an acre in size; therefore, each phase would require a Storm Water Pollution Prevention Plan (SWPPP), which will identify BMPs for erosion control, sediment control, and wind erosion/dust control to reduce or eliminate sediment and other pollutants from entering into stormwater and non-stormwater discharges, before leaving the Project site and moving downstream into receiving waters, such as the Miller Creek-Frontal San Pablo Bay Estuaries. Phase 2 improvements would occur within the existing building envelope, and a SWPPP would not be required; however, construction staging and laydown areas under Phase 2 would include erosion control measures to limit potential stormwater runoff leaving the Project site. Compliance with the CWA, Construction General Permit, SWPPP, and stormwater discharge management control BMPs would reduce potentially significant Project construction impacts on water quality to less than significant.

Long-term Water Quality Management. All areas disturbed by the Project during construction would be restored with new pavement, buildings, and/or landscaping to minimize erosion. The Project would be designed to capture additional runoff from the increase in impervious surfaces. The additional stormwater runoff would not be substantial and would not result in new pollution sources. New drainage control measures, such as new stormwater collection infrastructure, would be installed. New pipes and inlets would be installed throughout the Phase 1 development footprint. The new improvements would collect stormwater runoff and water splashed from the proposed aquatic facility. The new pipes would connect to the existing underground storm drain system in the northwest portion of the campus, which has adequate capacity to accommodate the increased runoff. Stormwater runoff not collected by the underground drainage system would drain into planters and other impervious areas on the campus. The Project would not cause new stormwater runoff that would leave the site. As no new pollution sources would be introduced and the Project would not increase off-site stormwater runoff, operational impacts on water quality would be less than significant.

Groundwater. The Project site is not located within a groundwater basin. The Project would not require the use of, extraction of, or otherwise decrease groundwater. The Project would not conflict with or obstruct implementation of a sustainable groundwater management plan. Although the Project would modify the existing campus hydrology, the changes would not be substantial, and the existing school use of the Project site would not change. Therefore, Project implementation would not substantially change conditions for groundwater recharge or impact the quality of groundwater. Impacts would be less than significant.

Drainage Patterns. Project construction would not result in polluted runoff that would result in erosion or siltation on- or off-site; increase the rate or amount of surface runoff that would result in flooding on- or off-site; contribute to runoff water that would exceed the capacity of stormwater drainage system at or downstream of the campus; or add sources of polluted runoff to the Miller Creek-Frontal San Pablo Bay Estuaries. The District's adherence to regulatory requirements would ensure construction impacts would be less than significant.

Moreover, the Project would be designed to capture the additional runoff from the increase in impervious surfaces. The increase in stormwater runoff would not be substantial and would not result in new pollution sources. New drainage control measures, such as new stormwater collection infrastructure, would be installed for the proposed improvements under Phase 1 and Phase 3. Stormwater runoff not collected by the existing or new drainage systems would drain into previous areas, including planters and fields. Therefore, the Project would not increase surface runoff that would alter the drainage pattern off-site and cause flooding, erosion, or siltation on the campus or off-site, downstream from the campus.

Flood Hazard, Tsunami, Seiche Zone. The Project site and the surrounding area are within an Area of Minimal Flood Hazard (Zone X). Additionally, it is approximately 3.6 miles west of the San Francisco Bay and 14 miles east of the Pacific Ocean and not within a tsunami inundation zone. The Project site is also not near a large, enclosed body of water that could

trigger a seiche. Accordingly, the Project site is not exposed to the risk of a release of pollutants due to potential inundation cause by flooding, a tsunami, or a seiche.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will result in less-than-significant impacts to hydrology and water quality.

11. Land Use and Planning

The Project site is fully developed with an operating high school campus. Project implementation would occur within the high school campus and would not physically divide an established community. Moreover, the Project involves improvements to existing school facilities and would not conflict with the applicable land use plans, policies, and regulations, including any adopted for the purpose of avoiding or mitigating an environmental effect.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will result in less-than-significant impacts to land use and planning.

12. Mineral Resources

The Project site has been operating as a high school campus since 1959 and is surrounded by an established residential community. The Project site is not located on lands that contain identified mineral resources. Project implementation would not result in the loss of availability of a known mineral resource that would be of value to the region.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will result in no impact to mineral resources.

13. Noise

Construction Noise. Noise generated by the construction of each Project phase would not exceed the City of San Rafael's construction noise standard of 90 dBA L_{eq} at any of the off-site noise-sensitive receptors. The exterior noise level at the high school campus would exceed 65 dBA Leq during the loudest construction activities for each Project phase. However, each construction zone would be fenced; as noise levels decrease with distance (at a rate of 6 dBA for each doubling of distance from the point source), students not within the construction zone would not experience the most intense construction activities and associated noise. Construction noise inside the classroom would generally range between 40 and 45 dBA, which is within the normally acceptable noise level for schools according to the Office of Planning and Research's State of California General Plan Guidelines and would not interrupt classroom activities. Moreover, the District plans to schedule heavy construction activities when school is not in session, such as during school breaks, to further limit construction effects on students

and the learning environment. Therefore, construction noise impacts would be less than significant.

Operational Noise (Stationary). The Project would increase the number of events on the campus. However, the number of participants and spectators at events would not be different from existing events. The Project would expand the footprint of the aquatic center and include a new PA system. Accordingly, noise levels would increase, caused by people cheering, whistle blowing, and the use of an amplified sound system. Noise modeling conducted for the proposed aquatic center does not show operational noise levels exceeding the daytime or nighttime noise standards of 60 and 50 dBA Leq, respectively, at any of the off-site locations. Therefore, stationary operational noise impacts are less than significant.

Operational Noise (Mobile). The Project's expanded use of the proposed artificial turf fields would generate 92 daily vehicle trips. According to the California Department of Transportation's *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, a doubling of traffic on a roadway would likely result in an increase of 3 dB, which is the sound level at which people can detect changes. The Project site is located in an urbanized area surrounded by residential land uses; there are approximately 40 single-family residences on Nova Albion Way near Terra Linda High School, 90 single-family residences on Devon Drive, and 75 single-family residences on Esmeyer Drive that respectively generate 377, 849, and 708 daily vehicle trips, using the Institute of Transportation Engineers' *Trip Generation Manual* (10^{th} edition) average daily trip generation rate of 9.44 trips for a single-family home. As the Project's 92 daily trips would not double the existing traffic on Nova Albion Way, Devon Drive, or Esmeyer Drive, mobile noise from the Project's trips would not be perceptible. Accordingly, the increase in mobile noise would be less than significant.

Ground-borne Vibration. Construction on the Project site would have the potential to result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and the activities involved. Ground-borne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Construction-related ground-borne vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. According to the District, the use of pile drivers would not be employed. Using a worst-case analysis of the operation of heavy-duty construction equipment in the center of the Phase 2 construction area, which is closest to off-site receptors, vibration levels would not exceed the Federal Transit Administration's threshold of 0.3 peak particle velocity at the closest off-site building. Therefore, vibration caused by Project construction activities would not be excessive, and impacts would be less than significant.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant short-term construction-related or long-term operational noise and vibration impacts.

14. Population and Housing

The Project would not result in the extension of any roads or infrastructure. The Project would not increase classroom capacity, student enrollment capacity, or employment at the school. Employment for construction would be drawn from the region. Furthermore, the Project would occur on an existing high school campus and would not displace existing housing or residents, or cause the need for new housing.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant impacts to population and housing.

15. Public Services

The Project would not generate an increase in enrollment and would not generate the need for more fire protection, police protection, schools, parks, or other public facilities. Construction of the Project would slightly increase the need for fire and law protection services; however, it would not be to a level that would require the development of new facilities for these public services, which could cause environmental effects.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant impacts to public services and their facilities.

16. Recreation

The Project would serve an existing student population. It would not increase student enrollment or the population in the surrounding community, which could increase the use of neighborhood and regional parks and recreational facilities, and accelerate physical deterioration of these facilities.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant impacts to off-site, non-District recreational facilities.

17. Transportation

Transportation Facilities. The Project would have no direct effects on off-site transportation facilities, including transit, roadway, bicycle, and pedestrian facilities. The Project would include improvements to on-campus pedestrian and roadway facilities, including improved fire access around the aquatic center and western end of the track and field, as well as ADA-compliant pedestrian and vehicular access between the main campus buildings and upper fields. The Project would be consistent with all applicable programs, plans, ordinances, and policies concerning transit, roadway, bicycle, and pedestrian facilities, including the City of San Rafael General Plan Mobility Element, Transportation Authority of Marin Congestion

Management Program, Plan Bay Area 2024, and City of San Rafael Transportation Analysis Guidelines.

The Project would not increase the enrollment capacity at Terra Linda High School or result in an increase in daily transportation effects associated with normal school operations on the roadway system. The new aquatic facility would be available for additional championship aquatic events that would be scheduled outside of the standard school hours during the weekdays and on weekends during the school year. Trips associated with these events would not conflict with existing school traffic or substantially affect the local neighboring streets during typical AM and PM peak hours. The proposed relocation of the softball program back to the Terra Linda High School campus from the adjacent Miller Creek School District Office would not generate new vehicle trips. The Project would increase community use of the modernized facilities. Under the worst-case assumption, use of the artificial fields would increase; using trip rates from the Institute of Transportation Engineers' *Trip Generation Manual* for Public Park use, the fields would generate 92 additional daily vehicle trips with 0 AM peak hour trips and 23 new PM peak hour trips. Projects that generate less than the City of San Rafael threshold of 110 daily vehicle trips are not required to prepare a transportation impact analysis. Nevertheless, these additional trips would not be substantial compared to trips generated from the existing school; they would also occur when school is not in session. Therefore, Project impacts on roadway facilities are considered de minimis and less than significant.

Construction vehicle trips would also not be substantial. The highest number of construction trips would be 106 daily trips occurring from site preparation activities during Phase 3 of the Project. As this number is less than the Transportation Analysis Guidelines' threshold of 110 daily vehicle trips and the trips would mainly occur during summer when school is not in session, construction transportation impacts would be less than significant. Construction of the proposed aquatic center during Phase 1 of the Project would displace the existing aquatic programs; students would temporarily use off-site swimming facilities located within a 10-mile radius of Terra Linda High School. Assuming 50 students per program (swim/dive and water polo), approximately 100 daily trips would be generated during that season. As the use of the off-site facility would be short term and the number of daily trips would be less than the City's threshold of 110 daily trips, impacts would be considered de minimis and less than significant.

Vehicle Miles Traveled (VMT). The Project is considered a small project, i.e., generating 110 or fewer average daily vehicle trips, and is a locally servicing public facility. Therefore, the Project meets two VMT screening criteria and is exempt from a quantitative VMT assessment; therefore, the Project is not inconsistent with CEQA Guidelines Section 15064.3(b), which provides criteria for analyzing transportation impacts. Long-term operation of the Project would result in a less-than-significant transportation impact under CEQA.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant transportation impacts.

18. Tribal Cultural Resources

The Project site is not on Native American sacred lands. Based on the records search of historical resources and a review of the City of San Rafael adopted list of local historical resources, neither Terra Linda High School nor properties surrounding the Project site are listed on the California Register, pursuant to Public Resources Code Section 5024.1(c), or on the local register of historical sources, as defined in Public Resources Code Section 5020.1(k).

The Project site and surrounding area are within the traditional territory of the Coast Miwok. The Project site, however, is developed with a high school campus that has been modernized numerous times since its construction in 1959, and no tribal cultural resources have been identified to date within the Project boundary. Consultation with the Federated Indians of Graton Rancheria also did not identify any tribal cultural resources on the Project site or areas immediately surrounding the Project site. Based on its distance (0.7 miles) from the tidal marsh along the margins of the San Francisco Bay, which is known to have been inhabited during the early historic period, the Project site has a low probability of having been inhabited by Native Americans prior to its current development. There is a low probability that the Project site was associated with Native American persons important in our past and related to events that contributed to tribal history and heritage. The Project site does not meet the requirements to be listed as a historical resource for tribal significance under Public Resources Code Section 5024.1(c), and Project implementation would not cause a substantial adverse change in the significance of a tribal cultural resource listed in the California Register or a local register of historical resources.

In the event of the accidental discovery of tribal cultural resources and Native American human remains, the District and its construction contractor would comply with regulatory requirements provided in Public Resources Code Sections 5097.5(a) and 5097.98 and Health and Safety Code Sections 7050.5 and 7051. Adherence to the procedures in these codes would reduce potential impacts on unknown resources and human remains to less than significant levels. Therefore, impacts to tribal cultural resources would be less than significant.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant impacts to tribal cultural resources.

19. Utilities and Service Systems

The Project site is developed with operating school facilities. The proposed improvements would connect to existing utility systems on the Project site and not require any off-site improvements. The Project would not result in excess water use or generate excess amounts of wastewater or solid waste that would require the construction of new water or wastewater

treatment facilities. To the extent feasible and as required by state law, the District would reuse and recycle construction materials; solid waste would be taken to permitted landfills with sufficient capacity in the region, and Project implementation would not require the expansion of landfill facilities. The Project would comply with all federal, state, and local management and reduction status related to solid waste.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will not result in significant impacts to utilities and service systems.

20. Wildfire

The Project is proposed on a developed high school campus, surrounded by existing residential uses. The Project is not proposed on lands classified as a very high fire hazard severity zone. The Project would improve existing school facilities to meet current fire and life safety code requirements and would improve the existing facility conditions related to fire risk. The Project would not conflict with City plans addressing emergency response and evacuation, and the District would cooperate with the San Rafael Fire Department and San Rafael Police Department for emergency access. All proposed improvements would occur on the existing high school campus and would not expose site occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Furthermore, the Project would not require off-site improvements of associated infrastructure; new facilities would tie into existing utilities on the campus. All disturbed soils would be restored with new pavement, structures, and/or landscaping and thus would not cause runoff, post-fire slope instability, or drainage changes that would expose people and structures to downslope or downstream flooding or landslides that could be created by wildfire.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that the Project will result in less-than-significant impacts to wildfire.

H. Findings Regarding Environmental Impacts Found Not to be Significant with Mitigation Incorporated

The Final EIR determined that the Project would result in potentially significant environmental impacts related to light and glare from new exterior lighting sources, construction-related fugitive dust emissions, and construction-related activities on migratory and nesting birds and bats. However, based on the information and analyses set forth in the Final EIR and other supporting information in the record, the Board of Education finds that these potentially significant environmental effects can be avoided or substantially lessened to below significance with the incorporation of mitigation measures into the Project.

1. Aesthetics

The Project proposes stationary security and safety lighting, including on buildings and along walkways in close proximity to light-sensitive residential uses, that may create a new source in the form of spill light beyond the City of San Rafael's threshold of 1 footcandle at adjacent light sensitive, residential uses**.**

Mitigation Measure AES-A: Prior to the use of any of the exterior stationary lights during operation of the Project, the District and/or its construction contractor shall first test each light source at least 30 minutes after dusk to ensure that the illumination does not create glare or spill into the property lines of adjacent residential uses. All exterior stationary lights used during operation of the Project shall be the minimum intensity necessary, fully shielded (full cutoff), and downcast (emitting no light above the horizontal plan of the fixture). Light levels shall be below 1 footcandle at the property line, and the lamp bulb shall not be directly visible to the light-sensitive viewer.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that changes or alterations in the form of Mitigation Measure AES-A have been incorporated into the Project, which avoid or substantially lessen the potentially significant light and glare effect to a less-than-significant level (CEQA Guidelines Section 15091[a][1]). The Board of Education finds that the Project, as altered, would have no significant impacts related to aesthetics.

2. Air Quality

Construction-related activities, such as soil disturbance, grading, and material hauling, can result in fugitive dust emissions (e.g., fine particulate matter [PM2.5] and coarse particulate matter [PM10]). The BAAQMD's 2022 CEQA Guidelines require all projects to implement its basic BMPs to ensure criteria air pollutant impacts related to construction fugitive dust emissions have a less-than-significant impact.

Mitigation Measure AQ-A: The District shall implement the following Bay Area Air Quality Management District Construction Best Management Practices by inclusion of such requirements in all construction contracts:

- All exposed surfaces (e.g., unpaved parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or farther from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that changes or alterations in the form of Mitigation Measure AQ-A have been incorporated into the Project, which substantially lessen the potentially significant fugitive dust emissions (e.g., $PM_{2.5}$ and PM_{10}) to a less-than-significant level (CEQA Guidelines Section 15091[a][1]). The Board of Education finds that the Project, as altered, would have no significant impacts related to air quality.

3. Biological Resources

Project construction during each component of Phase 1 and Phase 3, including vegetation removal and earthmoving activities, could crush or trample special-status wildlife species, such as migratory and nesting birds and bats, if present. The trees and buildings in the main building area of the Terra Linda High School Campus are not likely to support roosting habitat for bat species. However, the trees along the eastern and southern perimeters of the campus may potentially provide roosting habitat for bat species. Additionally, all existing trees and shrubs on the campus may be used by a variety of native birds for nesting. Construction activities and proposed tree removal activities could impact potential nesting and/or roosting habitat for migratory bird and bat species.

Mitigation Measure BIO-A: If disturbance (including trimming of large limbs) of on-site trees along the Project Site's eastern and southern perimeters is

required to accommodate the Project, the following measure will apply:

Prior to the removal of trees along the eastern and southern perimeters of the Campus, a qualified biologist shall conduct a habitat assessment for bats. A qualified bat biologist must have: 1) at least two years of experience conducting bat surveys that resulted in detections for relevant species, such as pallid bat, with verified project names, dates, and references, and 2) experience with relevant equipment used to conduct bat surveys. The habitat assessment shall be conducted a minimum of 30 to 90 days prior to tree removal and shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, exfoliating bark, suitable canopy for foliage roosting species).

If the qualified biologist identifies potential bat habitat trees, then tree trimming and tree removal shall not proceed unless the following occurs: 1) a qualified biologist conducts night emergence surveys or completes visual examination of roost features that establishes absence of roosting bats, or 2) tree trimming and tree removal occurs only during seasonal periods of bat activity, from approximately March 1 through April 15 and September 1 through October 15, and tree removal occurs using the two-step removal process. Two-step tree removal shall be conducted over two consecutive days. The first day (in the afternoon), under the direct supervision and instruction by a qualified biologist with experience conducting two-step tree removal, limbs and branches shall be removed by a tree cutter using chainsaws only; limbs with cavities, crevices or deep bark fissures should be avoided. The second day the entire tree shall be removed.

Mitigation Measure BIO-B: To avoid impacts to nesting birds, removal of trees and shrubs (including tree trimming) shall be performed from September 1 to January 31, outside of the general nesting bird season. This seasonal avoidance may also apply to other Project activities that occur in proximity to trees and vegetation to the extent feasible, including (but not limited to) ground disturbance and the demolition of existing structures and facilities. If such avoidance is not feasible, a preconstruction nesting bird survey by a qualified biologist shall be performed no more than 14 days prior to the initiation of tree/vegetation removal under each Phase. The survey shall cover impacted vegetation/substrates and

surrounding areas (as accessible) within approximately 250 feet. If active bird nests are found during the survey, an appropriate no-disturbance buffer shall be established by the qualified biologist. Once it is determined that the young have fledged (left the nest) or the nest otherwise becomes inactive (e.g., due to predation), the buffer may be removed and work may be initiated within the formerly buffered area.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that changes or alterations in the form of Mitigation Measures BIO-A and BIO-B have been incorporated into the Project, which substantially lessen the potentially significant impacts to migratory and nesting birds and bats to less-than-significant levels (CEQA Guidelines Section 15091[a][1]). The Board of Education finds that the Project, as altered, would have no significant impacts to biological resources.

4. Recreation

The Project involves the reconstruction, modernization, and beautification of existing recreational facilities at the Terra Linda High School campus, which might have an adverse physical effect on sensitive receptors related to light and glare from the operation of new light sources and construction-related fugitive dust, as well as on migratory and nesting/roosting birds and bats due to construction-related vegetation removal and earthmoving activities.

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds, based on the Final EIR and the whole record, that changes or alterations in the form of Mitigation Measures AES-A, AQ-A, BIO-A, and BIO-B have been incorporated into the Project, which substantially lessen the potentially significant impacts related to spill light, fugitive dust, and protected bird and bat species to less-than-significant levels (CEQA Guidelines Section 15091[a][1]). The Board of Education finds that the Project, as altered, would have no significant environmental impacts caused by the proposed recreation facilities improvements at Terra Linda High School.

I. Findings Regarding Cumulative Environmental Impacts Found Not to be Significant with Mitigation Incorporated

The Final EIR evaluated the Project's environmental effects in combination with the environmental effects of other District-sponsored projects at the Terra Linda High School campus, as well as City-sponsored projects in the vicinity of Terra Linda High School. Based on the information and analysis set forth in the Final EIR and other supporting information in the record, the Board of Education finds that the Project's environmental effects, in combination of the effects from related District-sponsored and City-sponsored projects, were either not significant or as altered by the incorporation of Mitigation Measures AES-A, AQ-A, BIO-A, and BIO-B would be avoided or substantially lessened to levels below significance (CEQA Guidelines Section 15091[a][1]). Therefore, the Board of Education finds that the

Project, as altered, would not result in any cumulatively considerable environmental effects. The EIR's discussion and analysis is incorporated herein.

VI. Findings Regarding Alternatives

Under CEQA, the identification and analysis of alternatives to a project is a fundamental part of the environmental review process. Public Resources Code Section 21002.l(a) establishes the need to address alternatives in an EIR by stating that in addition to determining a project's significant environmental impacts and indicating the manner to mitigate or avoid the impacts, "the purpose of an environmental impact report is ... to identify alternatives to the project."

The CEQA Guidelines require the analysis of a no project alternative and an evaluation of alternative locations for the project, if feasible. The purpose of the no project alternative is to allow decision-makers to compare the impacts of approving the project with the impacts of not approving it. Additionally, only locations that would avoid or substantially lessen any of the project's significant effects need be considered for inclusion.

Based on the alternatives analysis, an environmentally superior alternative is to be designated. If the environmentally superior alternative is the no project alternative, then the EIR must identify an environmentally superior alternative among the alternatives analyzed. CEQA Guidelines Section 15126.6(c) also requires that an EIR identify any alternatives that were considered for analysis but rejected as infeasible and to briefly explain the reasons for the lead agency's determination.

The following alternatives were considered for the Project. However, they were rejected from further consideration due to not meeting Project objectives and/or the infeasibility of the alternatives:

- Parking Structure Alternative
- Different Project Location Alternative

Three alternatives were identified for detailed analysis in the Final EIR. In accordance with CEQA Guidelines Section 15126.6(d), each alternative was evaluated to determine whether its overall environmental impact would be less than, similar to, or greater than the corresponding impacts identified for the Project. The alternatives were selected based on their potential to implement certain components of the Project to accomplish some or most of the basic objectives of the Project and to avoid or substantially lessen one or more of the Project's significant effects.

- Alternative 1: No Project Alternative would enable decision-makers to compare the impacts of approving the Project with the impacts of not approving the Project.
- Alternative 2: No Reconstruction of Aquatic Facility Alternative evaluates an alternative that excludes reconstruction of the outdoor swimming facility and whether it would reduce any potentially significant impacts associated with the Project.

- Alternative 3: No Artificial Turf at Southeast Fields Alternative evaluates an alternative that excludes the replacement of the 200,000-square-foot natural turf multipurpose fields with permeable, artificial turf, and whether it would reduce any of the Project's potentially significant impacts.

Table 2: Comparison of Alternatives' Environmental Impacts, summarizes the environmental effects of the Project and three Project alternatives on the issues studied in the Final EIR. As shown, the No Artificial Turf at Southeast Fields Alternatives would be environmentally superior under nine environmental issues, environmentally inferior under one environmental issue, and neither environmentally superior nor inferior under two environmental issues. Accordingly, the No Artificial Turf at Southeast Fields Alternative is the environmentally superior alternative, as it would avoid and have fewer inferior environmental impacts compared to the Project. Although the No Artificial Turf at Southeast Fields Alternative is the environmentally super alternative, the District is not required to select it.

Table 2: Comparison of Alternatives' Environmental Impacts

Environmental Issue	Proposed Project	Alternative: No Project	Alternative: No Reconstruction of Aquatic Facility	Alternative: No Artificial Turf at Southeast Fields
Aesthetics	Less Than Significant Impact With Mitigation Incorporated	=	+	/
Air Quality	Less Than Significant Impact With Mitigation Incorporated	+	+	+
Biological Resources	Less Than Significant Impact With Mitigation Incorporated	+	=	=
Cultural Resources	Less Than Significant Impact	+	+	+
Energy	Less Than Significant Impact	/	/	+
Geology and Soils	Less Than Significant Impact	+	+	+
Greenhouse Gas Emissions	Less Than Significant Impact	/	/	=
Hydrology and Water Quality	Less Than Significant Impact	+	+	+
Noise	Less Than Significant Impact	+	+	+
Recreation	Less Than Significant Impact	+	+	+
Transportation	Less Than Significant Impact	+	=	+
Tribal Cultural Resources	Less Than Significant Impact	+	+	+
	Summary of Comparison	+ 9 / 2 = 1	+ 8 / 2 = 2	+ 9 / 1 = 2

\+ Indicates the alternative's impact is less than the Project. The alternative's environmental impact is environmentally superior to the Project for this issue.

/ Indicates the alternative's impact is greater than the Project. The alternative's environmental impact is environmentally inferior to the Project for this issue.

= Indicates the alternative's impact is equal to the Project. The alternative's environmental impact is neither environmentally superior nor inferior to the Project for this issue.

Table 3: Comparison of Alternatives' Ability to Meet Project Objectives, lists the Project objectives, as listed in Section IV.A, and identifies the Project and Project alternatives' ability to meet Project objectives.

Table 3: Comparison of Alternatives' Ability to Meet Project Objectives

	Proposed Project	Alternative: No Project	Alternative: No Reconstruction of Aquatic Facility	Alternative: No Artificial Turf at Southeast Fields
▪ Maximize the use of limited District bond funds.	Y	N	N	N
▪ Maximize the use of District-owned property.	Y	N	N	N
▪ Construct climate-resilient and sustainable features and implement "green building" practices.	Y	N	N	Y
▪ Improve campus safety and security for students and staff.	Y	N	Y	Y
▪ Construct state-of-the-art, high-performance indoor and outdoor instructional spaces with flexible learning environments and replace outmoded teaching facilities.	Y	N	N	N
▪ Reduce hazards at Terra Linda High School athletic facilities.	Y	N	Y	N
▪ Improve Terra Linda High School's physical education and athletic programs for its students and other students in the District who use the facilities	Y	N	N	N
▪ Implement District-wise Target Initiatives applicable to the District's high schools and the Terra Linda High School campus.	Y	N	N	N
Summary of Comparison	Y – 8 N – 0	Y – 0 N – 8	Y – 2 N – 6	Y – 2 N – 6

1. No Project Alternative

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds the No Project Alternative to be environmentally superior under nine environmental issues, environmentally inferior under two environmental issues, and neither environmentally superior nor inferior under one environmental issue. However, the Board of Education finds that the No Project Alternative will not meet any of the Project objectives. Therefore, the No Project Alternative will not be selected and implemented.

2. No Reconstruction of Aquatic Facility Alternative

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds the No Reconstruction of Aquatic Facility Alternative to be environmentally superior under eight environmental issues, environmentally inferior under two environmental issues, and neither environmentally superior nor inferior under two environmental issues. However, the Board of Education finds that the No Reconstruction of Aquatic Facility Alternative would not meet six of the eight Project objectives to the same extent as the Project. Therefore, the No Reconstruction of Aquatic Facility Alternative will not be selected and implemented.

3. No Artificial Turf at Southeast Fields Alternative

Findings. The EIR's discussion and analysis is incorporated herein. The Board of Education finds the No Artificial Turf at Southeast Fields Alternative to be environmentally superior under nine environmental issues, environmentally inferior under one environmental issue, and neither environmentally superior nor inferior under two environmental issues. However, the Board of Education finds that the No Artificial Turf at Southeast Fields Alternative would not meet six of the eight Project objectives to the same extent as the Project. Therefore, the No Artificial Turf at Southeast Fields Alternative will not be selected and implemented.

VII. CONCLUSION

The Board of Education finds that it has been presented with the Final EIR, which it has reviewed and considered, and further finds that the Final EIR is an accurate and objective statement that has been completed in full compliance with CEQA and the State CEQA Guidelines, and that the Final EIR reflects the independent judgment and analysis of the Board of Education. The Board of Education declares that no evidence of new significant impacts as defined by the State CEQA Guidelines Section 15088.5 has been received by the District after circulation of the Draft EIR, which would require recirculation.

The Board of Education finds that changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effects as identified in the Final EIR. Therefore, the Board of Education hereby certifies the EIR based on the entirety of the record of proceedings, including but not limited to the findings and conclusions reached herein.

EXHIBIT B

Terra Linda High School Capital Improvements Project

Mitigation Monitoring and Reporting Program

Resolution 2324-51

Exhibit B

Terra Linda High School
Capital Improvements Project

Mitigation Monitoring and Reporting Program

SCH No. 2023080737

1.1 INTRODUCTION

This Mitigation Monitoring and Reporting Program (MMRP) has been developed for facility improvements proposed at Terra Linda High School (Project). The MMRP provides a vehicle by which to monitor mitigation measures outlined in the Executive Summary of the Terra Linda High School Capital Improvements Final Environmental Impact Report (State Clearinghouse No. 2023080737). It has been prepared in conformance with Section 21081.6(a)(1) of the Public Resources Code:

> The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead or responsible agency, prepare and submit a proposed reporting or monitoring program.

1.2 PROJECT LOCATION

The Project is proposed at Terra Linda High School (320 Nova Albion Way, San Rafael). Nova Albion Way is north and east of the school, Miller Creek School District Office is southeast, and single-family residences along Devon Drive are to the south and west and Esmeyer Drive on the north. The Project site is approximately 1 mile west of US Route 101.

1.3 PROJECT SUMMARY

San Rafael City Schools proposes to implement capital facility improvements at Terra Linda High School promulgated by San Rafael City High School District Measure B, passed on June 6, 2022. The Project would involve three general development phases:

- Phase 1 – the demolition of the existing swimming pool and related facilities, renovation of the southern half of Building K (locker and team rooms), reconstruction of Building H (ancillary gymnasium with dance, weight room, mat room, restrooms, storage, aquatic concessions), and upgrades to the western portion of the track and field stadium;
- Phase 2 – the modernization of the main classroom buildings and installation of campus-wide security fencing; and
- Phase 3 – the replacement of natural turf with artificial turf for the creation of baseball and multiuse (softball and soccer) fields, improvements at the tennis courts, and beautification of the eastern portion of the track and field stadium.

The Project would result in the removal of the existing portable Building Q/R and result in a corresponding reduction of the school's enrollment capacity of 70 seats. The Terra Linda High School softball program would return to the campus. The community would be able to use the proposed modernized facilities via the Civic Center Act and District Board Policy and Administrative Regulation 1330.

1.4 MITIGATION MONITORING

Table 1, *Mitigation Monitoring and Reporting Program*, lists the mitigation measures adopted from the Terra Linda High School Capital Improvements Project. The numbering of the mitigation measures follows those of the Final Environmental Impact Report. Table 1 also includes best management practices identified in the Final Environmental Impact Report. On the table, mitigation measures are labeled "MM" and best management practices are labeled "BMP." Implementation of the mitigation measures and best management practices would ensure potentially significant environmental impacts caused by the Project would be eliminated or reduced to below significance.

The Mitigation Monitoring and Reporting Program identifies the mitigation measures required for the construction and/or operation of the Terra Linda High School Capital Improvements Project, the entity responsible for implementing the mitigation measure, when the mitigation measure should be conducted, the entity responsible for ensuring the mitigation measure is implemented, and space for the monitor's signature and date to document when the measure was implemented.

Table 1 Mitigation Monitoring and Reporting Program

Mitigation Measures and Best Management Practices		Responsible for Implementation	Timing	Responsible for Monitoring	Implementation (Signature & Date)		
					Ph 1	Ph 2	Ph 3
Aesthetics							
MM-AES-A	Prior to the use of any of the exterior stationary lights during operation of the Project, the District and/or its construction contractor shall first test each light source at least 30 minutes after dusk to ensure that the illumination does not create glare or spill into the property lines of adjacent residential uses. All exterior stationary lights used during operation of the Project shall be the minimum intensity necessary, fully shielded (full cutoff), and downcast (emitting no light above the horizontal plan of the fixture). Light levels shall be below 1 footcandle at the property line, and the lamp bulb shall not be directly visible to the light-sensitive viewer.	Construction Manager	Prior to the first operation of any exterior lighting under all three phases.	San Rafael City Schools (SRCS) and/or its Bond Program Manager			
Air Quality							
MM-AQ-A	The District shall implement the following Bay Area Air Quality Management District (BAAQMD) Construction Best Management Practices by inclusion of such requirements in all construction contracts: a. All exposed surfaces (e.g., unpaved parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. d. All vehicle speeds on unpaved roads shall be limited to 15 mph. e. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.	Construction Manager	During the construction of all three development phases.	SRCS and/or its Bond Program Manager			

Table 1 Mitigation Monitoring and Reporting Program

Mitigation Measures and Best Management Practices		Responsible for Implementation	Timing	Responsible for Monitoring	Implementation (Signature & Date)		
					Ph 1	Ph 2	Ph 3
	f. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. g. All trucks and equipment, including their tires, shall be washed off prior to leaving the site. h. Unpaved roads providing access to sites located 100 feet or farther from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel. i. Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.						
BMP-AQ-1	To reduce greenhouse gas emissions and the exposure of neighboring residents to toxic emissions, the District and its construction contractor will implement the following provisions: a. Limit idling time of vehicles and equipment to less than 2 minutes. b. Encourage carpools, secure bicycle parking to construction workers, and encourage use of public transportation.	Construction Manager	During the construction of all three development phases.	SRCS and/or its Bond Program Manager			
Biological Resources							
MM-BIO-A	If disturbance (including trimming of large limbs) of on-site trees along the Project Site's eastern and southern perimeters is required to accommodate the Project, the following measure will apply: Prior to the removal of trees along the eastern and southern perimeters of the Campus, a qualified biologist shall conduct a habitat assessment for bats. A qualified bat biologist must have: 1) at least two years of experience conducting bat surveys	Qualified Biologist	Prior to disturbing or removing trees on the eastern and southern perimeters of the campus, under all	SRCS and/or its Bond Program Manager			

Table 1 Mitigation Monitoring and Reporting Program

Mitigation Measures and Best Management Practices		Responsible for Implementation	Timing	Responsible for Monitoring	Implementation (Signature & Date)		
					Ph 1	Ph 2	Ph 3
	that resulted in detections for relevant species, such as pallid bat, with verified project names, dates, and references, and 2) experience with relevant equipment used to conduct bat surveys. The habitat assessment shall be conducted a minimum of 30 to 90 days prior to tree removal and shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, exfoliating bark, suitable canopy for foliage roosting species). If the qualified biologist identifies potential bat habitat trees, then tree trimming and tree removal shall not proceed unless the following occurs: 1) a qualified biologist conducts night emergence surveys or completes visual examination of roost features that establishes absence of roosting bats, or 2) tree trimming and tree removal occurs only during seasonal periods of bat activity, from approximately March 1 through April 15 and September 1 through October 15, and tree removal occurs using the two-step removal process. Two-step tree removal shall be conducted over two consecutive days. The first day (in the afternoon), under the direct supervision and instruction by a qualified biologist with experience conducting two-step tree removal, limbs and branches shall be removed by a tree cutter using chainsaws only; limbs with cavities, crevices or deep bark fissures should be avoided. The second day the entire tree shall be removed.		three development phases.				
MM-BIO-B	To avoid impacts to nesting birds, removal of trees and shrubs (including tree trimming) shall be performed from September 1 to January 31, outside of the general nesting bird season. This seasonal avoidance may also apply to other Project activities that occur in proximity to trees and vegetation to the extent feasible, including (but not limited to) ground disturbance and the demolition of existing structures and facilities. If such avoidance is not feasible, a preconstruction nesting bird survey by a qualified biologist shall be performed no more than 14 days prior to the initiation of tree/vegetation removal under each Phase. The survey shall cover impacted vegetation/substrates and surrounding areas (as accessible) within	Qualified Biologist	Prior to disturbing or removing any vegetation (including trees and shrubs), under all three	SRCS and/or its Bond Program Manager			

Table 1 Mitigation Monitoring and Reporting Program

Mitigation Measures and Best Management Practices		Responsible for Implementation	Timing	Responsible for Monitoring	Implementation (Signature & Date)		
					Ph 1	Ph 2	Ph 3
	approximately 250 feet. If active bird nests are found during the survey, an appropriate no-disturbance buffer shall be established by the qualified biologist. Once it is determined that the young have fledged (left the nest) or the nest otherwise becomes inactive (e.g., due to predation), the buffer may be removed and work may be initiated within the formerly buffered area.		development phases.				
Cultural Resources							
BMP-CUL-1	In the event that historical, unique archaeological, or paleontological resources are encountered during construction of the phased improvements, the District and its construction manager will halt construction activities in the immediate area of the find, in accordance with CEQA Guidelines Section 15064.5(f). The District will retain a qualified archaeologist and/or paleontologist to make an immediate evaluation of the significance of the find. If the find is determined to be significant, the District in conjunction with the qualified expert will make appropriate treatment of the resource. Construction activities may continue on other parts of the construction site while evaluation and treatment of the resource takes place. The District will comply with Public Resources Code Section 5097.5(a), which addresses the treatment of archaeological or historical resources and sites and paleontological features.	Qualified Archaeologist	During the construction of all three development phases.	SRCS and/or its Bond Program Manager			
BMP-CUL-2	In the event of an accidental discovery or recognition of any human remains during earth-moving activities, the District will stop further excavation or disturbance of the site and areas nearby that are reasonably suspected to overlie adjacent human remains. The District will contact the Marin County coroner to determine whether investigation of the cause of death is required. If the coroner determines the remains to be of Native American descent, he or she must contact the Native American Heritage Commission within 24 hours.	Qualified Archaeologist	During the construction of all three development phases.	SRCS and/or its Bond Program Manager			
Noise							

Table 1 Mitigation Monitoring and Reporting Program

Mitigation Measures and Best Management Practices		Responsible for Implementation	Timing	Responsible for Monitoring	Implementation (Signature & Date)		
					Ph 1	Ph 2	Ph 3
BMP-NOI-1	The District and its construction contractor will coordinate with Terra Linda High School administrators to ensure that construction activities are scheduled so as to minimize disruptions to campus programs and important test days.	Construction Manager	During the construction of all three development phases.	SRCS and/or its Bond Program Manager			
BMP-NOI-2	The District and its construction contractor will follow the construction hours adopted by the City of San Rafael, under Municipal Code Section 8.13.050, which allows construction from Monday through Friday from 7:00 AM to 6:00 PM and on Saturdays from 9:00 AM to 6:00 PM and prohibits construction on Sundays and holidays.	Construction Manager	During the construction of all three development phases.	SRCS and/or its Bond Program Manager			
BMP-NOI-3	The District and its construction contractor will implement the following BMPs during construction: a. All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, consistent with manufacturer standards. b. All stationary construction equipment shall be placed so that emitted noise is directed away from the noise-sensitive receptors nearest the Project site. c. As applicable, all equipment shall be shut off when not in use. d. To the extent feasible, equipment staging shall be located in areas that create the greatest distance between construction-related noise/vibration sources and sensitive receptors surrounding the Project site. e. Jackhammers, pneumatic equipment, and all other portable stationary noise sources shall be directed away from noise-sensitive receptors nearest the Project site to the extent possible. Either 1-inch plywood or sound blankets can be utilized for this purpose. They should reach up from the ground and block the line of sight between the equipment and the nearest off-site residences. The shielding should be without holes and cracks. f. No amplified music and/or voices shall be allowed on the construction site.	Construction Manager	During the construction of all three development phases.	SRCS and/or its Bond Program Manager			
Transportation							

Table 1 Mitigation Monitoring and Reporting Program

Mitigation Measures and Best Management Practices		Responsible for Implementation	Timing	Responsible for Monitoring	Implementation (Signature & Date)		
					Ph 1	Ph 2	Ph 3
BMP-TRA-1	For construction activities that would result in the displacement of sports programs (i.e., water polo and swim/dive) that typically use Terra Linda High School facilities, the District will encourage students to carpool to the off-site facility.	Construction Manager	During the construction of Phases 1 and 3.	SRCS and/or its Bond Program Manager			
BMP-TRA-2	The District and its construction contractor will post temporary construction signage to identify where deliveries should be made on-site to prohibit offloading of materials on Nova Albion Way, as well as identifying to prohibit construction vehicles to park on the north side of Nova Albion Way, Devon Drive, Esmeyer Drive, El Pavo Real Circle, Corte Pacheco, Cermenho Court, Don Timoteo Court, and Viscaino Way.	Construction Manager	During the construction of all three development phases.	SRCS and/or its Bond Program Manager			
BMP-TRA-3	To the extent feasible, the District and its construction contractor will announce and provide notice of anticipated lane or road changes resulting from the proposed Project on the Terra Linda High School digital sign board along Nova Albion Way.	Construction Manager	During the construction of all three development phases.	SRCS and/or its Bond Program Manager			
BMP-TRA-4	The District and its construction contractor will prepare a construction management plan that will provide an overview of how the District will handle the Project's construction phasing and logistics to reduce construction effects and nuisances. The construction management plan will be posted on the Bond website (https://www.srcsbondprogram.org /).	Construction Manager	During the construction of all three development phases.	SRCS and/or its Bond Program Manager			
Water Quality							
BMP-WQ1	The District and its construction contractor must comply with the Clean Water Act and the National Pollutant Discharge Elimination System Permit General Construction Permit. As the construction areas for Phases 1 and 3 are both larger than an acre in size, each phase would require its own Stormwater Pollution Prevention Plan. Phase 2 improvements would occur within the existing building envelope, and a Stormwater Pollution Prevention Plan would not be required; however, construction staging and laydown areas under Phase 2 would include erosion control measures, such as fencing of the staging and laydown areas with privacy screening, protection of existing storm drain inlets and catch basins, and the	Construction Manager	During the construction of Phases 1 and 3.	SRCS and/or its Bond Program Manager			

Table 1 Mitigation Monitoring and Reporting Program

Mitigation Measures and Best Management Practices	Responsible for Implementation	Timing	Responsible for Monitoring	Implementation (Signature & Date)		
				Ph 1	Ph 2	Ph 3
installation of fiber rolls along the interior perimeters of the fenced area to limit potential stormwater runoff. In accordance with the General Permit, the SWPPP for Phases 1 and 3 must be prepared by a qualified SWRCB-approved SWPPP Practitioner and must identify sources of sediment and other pollutants that can affect the quality of stormwater discharge. The SWPPP will describe the implementation of BMPs to reduce or prevent sediment and other pollutants from entering into stormwater and non-stormwater discharges, before leaving the Project site and downstream into receiving waters.						

EXHIBIT C

Terra Linda High School Capital Improvements Project

Notice of Determination

EXHIBIT D

FILED
MAY 14 2024
SHELLY SCOTT
MARIN COUNTY CLERK
BY: Olabato, Deputy

21-2024-086

Notice of Determination

To: Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814
Via CEQAsubmit/CEQAnet

County Clerk, Marin
Marin County Civic Center
3501 Civic Center Drive, Room 234
San Rafael, CA 94903

From: San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903

SUBJECT: Filing of Notice of Determination compliant with Public Resources Code Section 21152.

Terra Linda High School Capital Improvements Project
Project Title

2023080737
State Clearinghouse Number

San Rafael City Schools
Project Applicant/ Lead Agency

320 Nova Albion Way
City of San Rafael, Marin County
Project Location

San Rafael City Schools proposes capital improvements at the Terra Linda High School campus to modernize and/or replace existing outdated and aging academic and physical education facilities. The proposed Project would be implemented in three general phases. Phase 1 includes the demolition and reconstruction of the existing pool, equipment room, storage areas, and the pool deck in its entirety; complete renovation of the southern half of Building K (existing locker and team rooms); the demolition and reconstruction of Building H (ancillary gymnasium with dance, weight room, mat room, restrooms, storage, aquatic concessions); and stadium upgrades. Phase 2 consists of two components: the modernization of Buildings A, M, and L (the main classroom buildings) and installation of campus-wide security fencing. Phase 3 has four components: replacement of natural turf with artificial turf for the creation of a baseball and multiuse (softball and soccer) fields; improvements at the tennis courts; and beautification improvements to the stadium. The improved facilities would be used by students at Terra Linda High School and the community via the Civic Center Act.
Project Description

This is to advise that San Rafael City Schools, as Lead Agency, approved the above-described project on May 13, 2024, and has made the following determinations regarding the project.

1. The project will not have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures were made a condition of the approval of the project.
4. A Mitigation Monitoring and Reporting Program was adopted for this project.
5. A Statement of Overriding Considerations was not adopted for this project.
6. Findings were made pursuant to the provisions of CEQA.

This is to certify that the Final EIR with comments and responses and record of project approval is available to the general public at San Rafael City Schools District Administration Office, located at 310 Nova Albion Way.

Signature (Public Agency)

Senior Director of Strategic Facility Planning
Title

May 14, 2024
Date

Date Received for filing at OPR

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code

POSTED 5/14/24 TO 6/13/24

Terra Linda High School Capital Improvements Project

Final Environmental Impact Report

MAY 2024

SAN RAFAEL CITY SCHOOLS

TERRA LINDA HIGH SCHOOL CAPITAL IMPROVEMENTS PROJECT

FINAL ENVIRONMENTAL IMPACT REPORT | SCH NO. 2023080737

PREPARED FOR

SAN RAFAEL CITY SCHOOLS

San Rafael City Schools
Tim Ryan, Senior Director of Strategic Facility Planning
310 Nova Albion Way
San Rafael, California 94903

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Michael Baker
INTERNATIONAL

Terra Linda High School Capital Improvements Project

Final Environmental Impact Report
SCH No. 2023080737

May 2024

Prepared for:

San Rafael City Schools
Tim Ryan, Senior Director of
Strategic Facility Planning
310 Nova Albion Way
San Rafael, California 94903

Prepared by:

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ACRONYMS AND ABBREVIATIONS

AB ..... Assembly Bill
ADA..... Americans with Disabilities Act
AERMOD ..... Air Quality Dispersion Modeling System
amsl..... above mean sea level
BAAQMD..... Bay Area Air Quality Management District
BAAQMD..... Bay Area Air Quality Management District
Basin Plan..... San Francisco Bay Basin Water Quality Control Plan
bgs ..... below ground surface
BMP ..... best management practices
CA MUTCD ..... California Manual of Uniform Traffic Control Devices
CAA..... Clean Air Act
CAAQS..... California ambient air quality standards
CAISO..... California Independent System Operator
Cal/OSHA..... California Occupational Safety and Health Administration
CalEEMod..... California Emissions Estimator Model
CALGreen ..... California Green Building Standards Code
Caltrans..... California Department of Transportation
CAPCOA..... California Air Pollution Control Officers Association
CARB ..... California Air Resources Board
CBC..... California Building Code
CBC..... California Building Code
CCAA ..... California Clean Air Act
CDFW ..... California Department of Fish and Wildlife
CEC..... California Energy Commission
CEQA..... California Environmental Quality Act
CESA ..... California Endangered Species Act
CHRIS..... California Historical Resources Information System
CIF ..... California Interscholastic Federation
City..... City of San Rafael
CMP ..... congestion management program
CNDDB ..... California Natural Diversity Database
CNEL..... community noise equivalent level
CNPS ..... California Native Plant Society
CO..... carbon monoxide
CO_2e ..... carbon dioxide equivalent
CPUC..... California Public Utilities Commission
CWA..... Clean Water Act

dB ..... decibel
dBA ..... decibel with A-weighting
DD ..... Deputy Directive
District ..... San Rafael City Schools
DPM ..... diesel particulate matter
DSA ..... Division of the State Architect
DTSC ..... Department of Toxic Substances Control
EIR ..... Environmental Impact Report
EMFAC ..... Emission FACtor
Energy Code ..... Building Energy Efficiency Standards
FESA ..... Federal Endangered Species Act
FTA ..... Federal Transit Administration
General Permit ..... Construction General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities
GHG ..... Greenhouse Gases
HARP2 ..... Hotspots Analysis and Reporting Program
HVAC ..... Heating, Ventilation, and Air Conditioning
Hz ..... Hertz
IEPR ..... integrated energy policy report
kv ..... kilovolts
kWh ..... kilowatt-hours
LED ..... light-emitting diode
LOS ..... level of service
MBTA ..... Migratory Bird Treaty Act
MCE ..... Marin Clean Energy
MS4 ..... municipal separate storm sewer system
MWELO ..... Model Water Efficient Landscape Ordinance
NAAQS ..... National Ambient Air Quality Standards
NAGPRA ..... Native American Graves Protection and Repatriation Act
NAHC ..... Native American Heritage Commission
NHPA ..... National Historic Preservation Act
NO_2 ..... nitrogen dioxide
NOP ..... Notice of Preparation
NO_X ..... nitric oxides
NPDES ..... National Pollutant Discharge Elimination System
NWIC ..... Northwest Information Center
O_3 ..... ozone
OPR ..... Governor's Office of Planning and Research
OSHA ..... Occupational Safety and Health Administration

PD ..... Planned Development
PE ..... physical education
PG&E ..... Pacific Gas & Electric
PM ..... particulate matter
PM_{10} ..... coarse particulate matter
$PM_{2.5}$ ..... fine particulate matter
ppm ..... parts per million
PPV ..... peak particle velocity
PRC ..... Public Resources Code
PRD ..... Permit Registration Documents
Project ..... Terra Linda High School Capital Improvements Project
Project site ..... Terra Linda High School
RMS ..... root mean square
ROG ..... reactive organic gases
ROW ..... right-of-way
RPS ..... Renewables Portfolio Standard
RTP ..... regional transportation plans
RWQCB ..... Regional Water Quality Control Board
SB ..... Senate Bill
SCS ..... sustainable communities strategy
SFBAAB ..... San Francisco Bay Area Air Basin
SIP ..... State Implementation Plan
SO_2 ..... sulfur dioxide
SO_X ..... sulfur oxides
SR2S ..... Marin County Safe Routes to Schools
SRMC ..... City of San Rafael Municipal Code
SWPPP ..... Stormwater Pollution Prevention Plan
SWRCB ..... State Water Resources Control Board
TAC ..... toxic air contaminants
TAM ..... Transportation Authority of Marin
TMDL ..... total maximum daily load
US ..... United States
US 101 ..... US Route 101
USEPA ..... US Environmental Protection Agency
USFWS ..... US Fish and Wildlife Service
USGS ..... US Geological Survey
VMT ..... vehicle miles traveled
VOC ..... volatile organic compounds
$\mu g/m^3$ ..... micrograms per cubic meter

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PREFACE AND RESPONSE TO COMMENTS

P.1 Preface

San Rafael City Schools (District) has prepared this Final Environmental Impact Report (EIR) for the proposed Terra Linda High School Capital Improvements Project (Project) in accordance with the California Environmental Quality Act (CEQA; California Public Resources Code Sections 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000, et seq.). According to the CEQA Guidelines, Section 15132, the contents of a Final EIR shall consist of:

- The Draft EIR or a revision of the Draft EIR;
- Comments and recommendations received on the Draft EIR, either verbatim or in summary;
- A list of persons, organizations, and public agencies commenting on the Draft EIR;
- The responses of the lead agency to significant environmental points raised in the review and consultation process; and
- Any other information added by the lead agency.

This document contains the District's responses to comments received from agencies, organizations, and persons during the public review period of the Draft EIR between March 1, 2024, and April 15, 2024. It also includes the entire Draft EIR with all revisions tracked. Changes to the Draft EIR were a result of comments received, text clarification, and/or minor edits and errors discovered subsequent to the circulation of the Draft EIR for public review. The changes made to the Draft EIR text are shown in <u>underlined text</u> for additions and ~~strikeout~~ for deletions.

The District has reviewed the changes to the Draft EIR and determined that none of the revisions constitute the type of significant new information that requires recirculation of the Draft EIR for further public comment, pursuant to CEQA Guidelines Section 15088.5:

a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation include, for example, a disclosure showing that:

    1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

    2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.

4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. *(Mountain Lion Coalition v. Fish and Game Com.* (1989) 214 Cal.App.3d 1043)

b) Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.

The changes to the Draft EIR as presented herein clarify or make insignificant changes to an adequate EIR, and do not constitute significant new information. None of the new material indicates that the Project would result in a significant new environmental impact not previously disclosed in the Draft EIR. Additionally, none of the material indicates that there would be a substantial increase in the severity of a previously identified environmental impact that will not be mitigated, or that there would be any of the other circumstances requiring recirculation described in Section 15088.5. Therefore, the Draft EIR is not subject to recirculation prior to certification.

In accordance with Public Resources Code Section 21092.5, the District's written response to comments from public agencies will be forwarded to those agencies at least 10 days prior to certifying the Final EIR. The response will be forwarded with a copy of this EIR and will conform to the legal standards established for response to comments on Draft EIRs.

P.2 Response to Comments

CEQA Guidelines, Section 15204(a), outlines parameters for submitting comments and reminds persons and public agencies that the focus of review and comment of Draft EIRs should be "on the sufficiency of the document in identifying and analyzing possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible. … CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR."

CEQA Guidelines, Section 15204(c), further advises, "Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence." Section 15204(d) states, "Each responsible agency and trustee agency shall focus its comments on environmental information germane to that agency's statutory responsibility." Section 15204(e) states, "This section shall not be used to restrict the ability of reviewers to comment on the general adequacy of a document or of the lead agency to reject comments not focused as recommended by this section."

Table P1 lists the parties that provided written comments on the Draft EIR during the public review period. The comments are ordered by the date that they were received by the District. A copy of

each comment letter is included herein. Each letter and comments in the letter have been numbered for the ease of referencing the District's corresponding response.

Table P1: Draft EIR Written Comments

Letter	Commenting Person/Agency	Date of Letter	Page Number
A	Shirley Fischer, Neighbor	March 18, 2024	P-4
B	Henri and Jeanne Lese, Neighbor	March 23, 2024	P-20
C	Scott Mills and Diane Sanfilippo, Neighbor	March 28, 2024	P-23
D	Andrea Wald, Neighbor	April 5, 2024	P-28
E	Heather Patrick, Neighbor	April 8, 2024	P-68
F	Stephanie Lovette, Neighbor	April 15, 2024	P-70

Letter A

Subject: FW: EXTERNAL: Fwd: TLHS DEIR PUBLIC COMMENT
Attachments: TLHS DEIR 3-18-24 PUBLIC COMMENT.pdf

From: **Shirley Fischer** [redacted]
Date: Mon, Mar 18, 2024 at 11:01 AM
Subject: Re: TLHS DEIR PUBLIC COMMENT
To: <tryan@srcs.org>
Cc: Shirley Fischer [redacted]

Dear Mr. Ryan,
Attached are my comments in pdf format.
Thank you.
Shirley Fischer

On Mon, Mar 18, 2024 at 10:58 AM Shirley Fischer [redacted] wrote:

A-1

> Dear Mr. Ryan,
> Attached are public comments for the TLHS Capital Improvement Project DEIR.
> Please acknowledge receipt of this email.
> Thank you for including these comments for consideration by the SRCS Board.
> Best regards,
> Shirley Fischer
> [redacted]

March 18, 2024

San Rafael City Schools Board of Education
c/o Tim Ryan, Senior Director of Strategic Facility Planning
San Rafael City Schools
310 Nova Albion Way, San Rafael, CA 94903
tryan@srcs.org

Re: FOR PUBLIC COMMENT: DEIR for Terra Linda High School Capital Improvements Project

Dear SRCS Board Members,
You are reviewing the Draft Environmental Impact report on the 3-Phase Bond Measure B Capital Improvements Project for Terra Linda High School (TLHS). While this is a very thorough and well-researched document on the environmental impacts of this project, it includes several inaccurate assumptions and omits other important impacts which deserve consideration and additional mitigation.

1. **Construction Best Management Practices (BMP)**
   a. The DEIR states that, among other construction BMP, the District and its construction contractor will "post temporary construction signage to identify where deliveries should be made on-site to prohibit offloading of materials on Nova Albion Way, as well as identifying acceptable locations for contractor parking." (DEIR 3.4 p. 72)

   This BMP provision is insufficient to provide safe ingress and egress from streets and driveways along Nova Albion Way and the negative environmental impacts affect neighborhoods surrounding TLHS.

   i. During previous recent construction at TLHS, construction trucks and worker vehicles parked on the south side of Nova Albion Way. Since construction of the bike path on Nova Albion way, that parking option is no longer available.
   ii. Driving lanes on Nova Albion Way were narrowed during construction of the bike path. Vehicles parked on the north side of the street block views of the street and decrease safety for residents trying to exit driveways and streets such as El Pavo Real Circle, Corte Pacheco, Cermenho Court, Don Timoteo Court and Viscaino Way.[1]
   iii. In addition to safety concerns, the unavailability of street parking in front of single-family homes surrounding TLHS for a prolonged 6-day-per-week construction period of 5-6 years places an undue restriction on the daily lives of neighboring residents.
   iv. To enhance safety and avoid undue negative impacts on surrounding neighbors, *the BMP practices implemented by the District and its construction contractor (DEIR 3.4 p. 72) must specify that signage for "acceptable locations for contractor parking" should require construction parking to be primarily on-site and should prohibit construction parking on Nova Albion Way, Devon Drive, Esmeyer Drive, El Pavo Real Circle, Corte Pacheco, Cermenho Court, Don Timoteo Court and Viscaino Way.*

   b. To reduce GHGs and the exposure of neighboring residents to toxic emissions, *the BMP practices implemented by the District and its construction contractor (DEIR 3.4 p. 72) must also include the following BAAQMD BMP provisions:*
      i. *specify that idling time of vehicles and equipment must be less than 2 minutes.* [2]

A-2
A-3
A-4
A-5

[1] This has recently been demonstrated when construction vehicles for residences undergoing remodeling blocked street views and decreased the safety of residents turning out of these local streets and driveways.
[2] "Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than two minutes (a five-minute limit is required by the state Airborne Toxics Control Measure).6 Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure." (BAAQMD BMPs, DEIR, 4.6-6, p. 180)

ii. *Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking to construction workers and offer meal options onsite or shuttles to nearby meal destinations for construction employees.*[3]

A-5 (cont'd)

c. During previous recent construction at TLHS, no advance notification was given about road lane closures, which caused several neighbors to be late for doctor appointments, picking up kids or dropping them off at daycare, etc. While it is impractical to give notice of road changes to residents by email, as was done for the Third Street improvement project, *notice of anticipated lane or road changes should be announced on TLHS digital sign board.*

A-6

2. Aesthetics & Visual Impacts

a. One of the purposes of the DEIR is to determine if "the project, in non-urbanized areas, substantially degrade[s] the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage points.)"[4]

A-7

i. The public view of the TLHS campus from Noval Albion Way not only is important for the visual character of the school but also plays an extremely important role in the open, park-like character of the surrounding suburban neighborhood. The spacious, lively view of the TLHS track and field provides a core identity and sense of vitality in the surrounding community. At present this view is provided by a transparent chain link fence, buffered by a few mature trees between the student parking lot and the track and stadium.

ii. The sense of natural spaciousness and connection between community and student activity will already soon be compromised by the construction of solar panel canopies in the student parking that will create a more industrial atmosphere to the public view.

A-8

iii. The project proposed to remove the mature buffer trees and to replace the transparent wire fence with a 10-foot security fence of unspecified "decorative" design.[5]

b. *It is critical that the design of the new security maintain the sense of open space and connection between student activity and the surrounding community and prevent the creation of a "walled fortress" visual character of the campus.*

c. *Please involve neighboring residents in the design of this important visual feature that affects the community as much as the school.*

3. Trees

a. During the 3 phases, this project proposes to remove thirty-four (34) trees (DEIR, p. 79)

b. Although the DEIR says that the project is consistent with San Rafael Design Guidelines, which state "Trees should be planted in a variety of locations, such as along the side property lines, clustered in planting areas, or distributed throughout the parking lot, consistent with the zoning ordinance" (DEIR, 4.1.1, p. 87), the only mention of tree replacement is planting of an unquantified number of "trees and shrubbery" within the area of reconstruction of the aquatic center (DEIR, 3-4, p. 62)

A-9

c. The importance of trees for combating climate change through carbon sequestering, oxygen production, shade, cooling by transpiration, and bird habitat cannot be overstated.

d. Repeating the suggestion from community comments in DEIR scoping (DEIR 1-5, p. 33), *"Recommends a tree replacement plan and buffer landscaping to mitigate the impact of tree removal."*

[3] Ibid, p. 180

[4] AES-1, DEIR, ES-5, p. 19

[5] "Fencing along the school frontage on Nova Albion Way would be decorative and up to 10 feet tall... Fencing along the school frontage on Nova Albion Way would be decorative and up to 10 feet tall." (DEIR. 3-6, p. 63)

4. **Neighborhood Parking Impacts –School Events and Rentals of School Fields and Facilities**
   a. **Parking.** The DEIR uses an inaccurate assumption that the existing number and size of school events do not have significant impacts on the surrounding community. It also presumes that the increase in school events (net increase of 72 school-sponsored events per year[6]) will not have significant impacts because the number of users per event will not increase[7]. Similar assumptions are made about the projected increase in rental events for school facilities.[8] These assumptions are unverified and inaccurate. A-10
      i. Existing school parking conditions for students are inadequate. An informal neighbor parking study (attached) reveals about 100 students/day parking on nearby streets instead of parking on campus. A-11
      ii. Removal of 13 parking spaces on the south side of Nova Albion Way for construction of a bike path further aggravates the scarcity of on-street parking adjacent to TLHS.
      iii. Some existing school and rental events severely impact the surrounding neighborhood. During some events, such as Special Olympics, homecoming and other football games, track meets, SAT exams, and graduation ceremonies, on-street parking on surrounding neighborhood streets is saturated, sometimes even preventing residents from leaving their driveways. A-12
      iv. While the project may not increase off-site parking demand above the San Rafael Zoning Code, the impacts of off-site parking are very real for neighbors of TLHS and the impact of future frequency of events is not clear.
      v. *A coordinated calendar showing all school and facility rental events needs to be provided by the District, ideally on the TLHS website.* A-13
      vi. *The impacts of increased frequency of school events on the ability of nearby residents and their guests to park in front of their homes need to be documented during post-construction operation and mitigation measures instituted, if needed.* A-14

   b. **Traffic.** The increased usage of the artificial turf athletic fields is estimated to generate 92 additional vehicle trips per day. The District is not required to do a transportation impact analysis and the impacts of these increased trips are deemed Less Than Significant (LTS) because 92 trips are less than San Rafael trip generation screening standard of 110 trips/day.[9] Although the number of trips is below San Rafael's VMT screening standard, this does not mean that the increased daily trips will not have a significant impact on the surrounding neighborhood. A-15
      i. Traffic congestion on streets bordering TLHS has significantly increased in recent months. Some capital improvements, such as eliminating the right turn lane from Nova Albion Way to Golden Hinde Blvd, have aggravated morning and afternoon traffic, making it more difficult to move in and out of the neighborhood.
      ii. It cannot be presumed that adding 92 trips per day will not have significant impacts on traffic circulation in the neighborhoods surrounding TLHS.

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[6] DEIR, 3-9, p. 67

[7] "The Project would increase the number of events held at the aquatic facility and southern turf fields. However, these events would be similar to those currently held on the campus, as the school already holds practices, games, competitions, and tournaments, as well as community-sponsored uses. The additional events would occur outside of the standard school hours and on weekends. The Project would not increase the number of spectators at the new events, which could increase the parking demand. Therefore, parking for the increased number of events would be accommodated with the existing on-site parking spaces, and the Project would not generate an increase in off-site parking demand." (DEIR, 4.11-16, p. 250)

[8] "Although the rental frequency would increase, the number of attendees per event (and consequently the vehicle trips generated by the attendees) of the rented facility would be similar to that of the existing rental groups... Therefore, transportation impacts would be less than significant." (DEIR, 4.11-13, p. 247)

[9] DEIR, p. 4.11-13, p. 247

iii. *The impacts of increased frequency of school events on traffic congestion and delay on nearby streets needs to be documented during post-construction operation and mitigation measures instituted, if needed.*

6. **SRCS Board right and responsibility to minimize adverse effects**
   a. The California Civic Center Act (Education Code Sections 38130-38139) states that there is a Civic Center at each and every public-school facility and grounds and defines which groups are entitled to use the facility and under what conditions. It states that the governing board of any school district can grant use of school facilities or grounds upon terms and conditions the board deems proper, subject to the limitations, requirements, and restrictions set forth in this article (38131)ff.[10]
   b. SRCS Board Policy #1330: Use of School Facilities (attached) states that in permitting rentals of lighted athletic fields and stadium facilities, the District shall give consideration to the best interests of the district, students and community, including...whether there is adequate parking available to support the proposed use and whether sufficient measures can be employed to minimize adverse impacts to the school facilities and grounds and surrounding community. (Policy 1330 attached)
   c. *With the expanded use of the unlighted artificial turf fields, Policy 1330 should be expanded to apply to rentals of all athletic fields and stadiums even when not lighted.*
   d. The above recommended measures for monitoring the actual impact on traffic and parking from the post-construction increase in school and rental events need to be a high priority for the District, and *this monitoring needs to be included as a mitigation measure in the project's EIR.*

Thank you for your attention to these issues
Sincerely,
Shirley Fischer
[redacted]

Civil Grand Jury Study 12-2023.docx

SRCS Policy Manual Policy 1330.docx

[10] https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=38131.&lawCode=EDC

Parking Study

Friday December 1, 2023
Monday December 4, 2023

	Evening		During School		Difference	
Devon	20	18	67	65	47	47
El Pavo	9	5	22	22	13	17
Esmeyer	9	8	26	27	17	19
Tamarack	0	2	22	22	22	20
					99	103

A-17

Board Policy Manual San Rafael City School District

From Policy 1330: Use of School Facilities

G. **Lighted Athletic Field and Stadium Facilities**

1. District lighted athletic fields and stadium facilities shall be used primarily for the benefit of district students. District lighted athletic fields and stadium facilities shall be made available to non-district users only when and to the extent that such use will not interfere with the preservation of order in, and the protection of, school facilities and grounds; and will not infringe upon nor interfere with school activities or other school-related uses, or the best interests of the district, its students, or the community.

2. In considering whether to grant non-district applicants use of district lighted athletic fields and stadium facilities, the district shall give consideration to, among other factors determined by district, the likely number of attendees, whether there is adequate parking available to support the proposed use, and whether sufficient measures can be employed to minimize adverse impacts to the school facilities and grounds and surrounding community, including, but not limited to, necessary district or school personnel attendants, custodial services, utilities, security services, traffic control, and/or other services or conditions deemed necessary in the district's sole discretion for proper and safe management of the proposed use. If such special or additional facilities or services are required, district may impose specific requirements or conditions on the user, in district's sole discretion. The costs of such special or additional facilities or services shall be borne by the user.

A-18

3. No request for use of lighted athletic field and stadium facilities shall be granted if such use would cause the total number of events held at the lighted athletic field and stadium facilities to exceed any weekly, monthly, or annual cap on nighttime events imposed by district. 4. In the event lighted athletic fields and stadium facilities are made available to a non-district user, the user shall be required to reimburse district for direct costs, including, without limitation, Operational Direct Costs, Capital Direct Costs, and any other direct costs, such as costs of special or additional labor, facilities or services, including utilities, in accordance with district's fee schedule.

Response to Letter A – Shirley Fischer, March 18, 2024.

A-1 The comment states that two separate emails were sent to the District, each with a comment letter on the Terra Linda High School Capital Improvements Project Draft EIR.

The District reviewed both emails and comment letters; one letter was saved as a Microsoft Word file, and the other as a portable document format (PDF). Both letters have the same content. Attachments to the letters were accessed only via the Word file. These have been included as Comment A-17 and Comment A-18.

A-2 The comment states that the construction best management practice included in the EIR to post construction signage for deliveries is insufficient to maintain safe access on the surrounding streets. The comment provides that in the past, construction vehicles parked on the south side of Nova Albion Way; however, per the comment, this is not an available option anymore, as the south side of the street has been developed with a bike path and drive lanes on Nova Albion Way have been narrowed. Based on recent experience, vehicles that park on the north side of Nova Albion Way have blocked views and decreased safety for vehicles exiting driveways and streets north of Nova Albion Way, including El Pavo Real Circle, Corte Pacheco, Cermenho Court, Don Timoteo Court, and Viscaino Way.

The District acknowledges the inconvenience related to school traffic during morning drop-off and afternoon pickup, which is an existing baseline condition, as well as construction traffic and related effects. However, as set forth in the Draft EIR, construction staging and parking will be located on campus, not on surrounding roadways. (For further discussion, please refer to page 4.11-14 of the Draft EIR). Moreover, as discussed in the Draft EIR, the Project's construction trips would not exceed established thresholds. Environmental impacts from construction vehicles and traffic would be less than significant. Additional mitigation measures are not required, nor does the comment include suggested measures. (See Draft EIR, Chapter 4.11).

While previously constructed projects are outside the scope of the Draft EIR, it should be noted that the bike lane on the south side of Nova Albion Way was constructed on District property, and the development of the bike lane and sidewalk improvements did not require any reduction of the width of Nova Albion Way.

The District takes safety very seriously. As stated in the Draft EIR, construction vehicles would be able to park on the campus. Phase 1 of the Project would include the construction of a new internal access/driveway between the southern and northern halves of the school. The new driveway would start from the existing fire access road, south of Building B (Student Commons), and end at the basketball court on the upper field. When the driveway is complete, the basketball court would be available for construction staging and parking. Construction vehicles would be off the public right-of-way. Please refer to Chapter 4.11 of the Draft EIR for further discussion.

A-3 The comment states that the unavailability of street parking in front of residences surrounding Terra Linda High School for a prolonged 6-day-per-week construction period of 5 to 6 years places an undue restriction on the daily lives of neighboring residents.

The proposed construction schedule and hours for the proposed phased improvements are provided under EIR Section 3.3.4, on page 3-11. Although construction of the phased

Project is expected to commence in June 2024 and end in August 2029, it is the District's intent to schedule the bulk of construction in the summer when students are not on the campus and there is available off-street parking. The heavy construction activities associated with Phase 1 and most of Phases 2 and 3 would occur during the summer; to the extent feasible, construction would be limited during the school year in an effort to reduce impacts to the community and school program. Please also refer to Response to Comment A-2, above, with respect to the location of construction vehicle parking.

A-4 The comment requests #6 of the best management practice listed in EIR Section 3.4 (page 3-14) be augmented to include text provided by the commenter.

The District cannot prevent individuals from parking on the surrounding public streets as it is neither owned nor within the jurisdiction of the District. Nevertheless, the District has reviewed the suggested text change and has modified the best management practice as follows:

6) The District and its construction contractor will post temporary construction signage to identify where deliveries should be made on-site to prohibit offloading of materials on Nova Albion Way, as well as ~~identifying acceptable locations for contractor parking~~ to prohibit construction vehicles to park on the north side of Nova Albion Way, Devon Drive, Esmeyer Drive, El Pavo Real Circle, Corte Pacheco, Cermenho Court, Don Timoteo Court, and Viscaino Way.

A-5 The comment requests that another best management practice be included to reduce greenhouse gas emissions and the exposure of neighboring residents to toxic emissions during construction. The District has considered the request and has included the below best management practice under EIR Section 3.4.

10) To reduce greenhouse gas emissions and the exposure of neighboring residents to toxic emissions, the District and its construction contractor will implement the following provisions:

(a) Limit idling time of vehicles and equipment to less than 2 minutes.

(b) Encourage carpools, secure bicycle parking to construction workers, and encourage use of public transportation.

A-6 The comment claims advance notification was not provided regarding road lane closures during previous construction projects at Terra Linda High School, and requests notice be given to the community of lane closures and roadway changes on the school's digital sign board. Previous construction projects are not the subject of the Draft EIR. With respect to the proposed Project, the District has considered the request and has included the below best management practice under EIR Section 3.4.

11) To the extent feasible, the District and its construction contractor will announce and provide notice of anticipated lane or road changes resulting from the proposed Project on the Terra Linda High School digital sign board along Nova Albion Way.

A-7 The comment quotes one of two parts of the EIR environmental impact checklist (Table ES-1: *Summary of Project Impacts and Mitigation Measures*) concerning the degradation of the visual quality of a project site. Specifically, the comment quotes the evaluation criteria for visual quality for non-urbanized areas, i.e., whether the project would degrade

the visual character or quality of public views of the site and surroundings. The comment does not mention the second part of the checklist related to the evaluation criteria for urbanized areas, which is whether the project would conflict with zoning and regulations governing scenic quality.

The comment does not address the adequacy of the EIR. Nevertheless, as discussed in EIR Impact AES-1 on Page 4.1-8, the Project site is in an "urbanized area" as it is within a city with a population of more than 50,000 people. Accordingly, the comment inaccurately assumes the Project should be evaluated with criteria for a non-urbanized area. In fact, the EIR correctly analyzes the Project against zoning and other regulations governing scenic quality; specifically, the Project does not conflict with any state codes, including the California Building Standards Code that govern scenic quality. Additionally, although the District is not required to comply with and is not subject to local regulations, the Project would nevertheless be generally consistent with the City of San Rafael Design Guidelines for nonresidential development regarding landscaping, lighting, building form, pedestrian circulation, entryways, and materials and colors. Please refer to Chapter 4.1 of the Draft EIR for further discussion.

A-8 The comment incorrectly assumes the Project should be evaluated using criteria for non-urbanized areas and opines on the importance of maintaining Terra Linda High School's visual character both as a school and as open and park-like, as there is a spacious view of the track and field, which is currently separated from the community by a transparent chain link fence and a few mature trees. The comment further provides that the view will soon be affected by solar panel canopies in the student parking lot, which will create an industrial atmosphere, and that the project would remove trees and replace them with a 10-foot-tall fence of unspecified "decorative design." The comment requests maintaining the sense of open space and connection between student activity and the community, preventing a "walled fortress" character, and involving neighbors on the design of the fence, an important visual feature.

Previously approved projects are not the subject of the Draft EIR. Likewise, the comment does not address the adequacy of the EIR analysis. Nevertheless, the District has not finalized the details of the proposed fencing. The impetus and main criterion in the District's selection of the fencing, however, is campus security. The request to maintain an open feel is noted, however, and the District will post the selected design of the fence on the District's Bond Program website (https://www.srcsbondprogram.org/) when available.

A-9 The comment accurately states the Project proposes the removal of 34 trees. It also provides that the EIR states that the Project is consistent with the San Rafael Design Guidelines; includes a quote of the guidelines requiring the planting of trees, consistent with City zoning; states that the only mention of tree replacement in the EIR is for the reconstruction of the aquatic center; states that trees combat climate change; and reiterates a comment that the District received during the scoping period to provide a tree replacement plan and buffer landscaping to mitigate the impact of tree removal.

As disclosed in the EIR, the District Board of Education adopted Resolution No. 2324-17 on October 23, 2023, exempting the Project and the Terra Linda High School campus from zoning and land use regulations of the City of San Rafael, including, without limitation, the City's General Plan, and related ordinances and regulations that would otherwise be applicable. Accordingly, the District is not required to comply with City requirements.

Nevertheless, the EIR evaluated the Project against the San Rafael Design Guidelines for nonresidential development and found the Project to be generally consistent with the guidelines, which as provided in the Guidelines "are discretionary, and are intended to assist projects in achieving high quality design" for use by City staff and the City Design Review Board to evaluate the quality of development projects subject to City review. The Project is not a City-sponsored project and will not be reviewed by the City. The Project will be reviewed by the Division of the State Architect and is subject to state laws and regulations, including Title 24, California Building Standards Code, which includes Part 11, California Green Building Standards (CALGreen).

As provided on Page 3-4 of the EIR, "Project landscaping would comply with shade tree requirements, pursuant to California Green Building Standards Code Section 5.106.12." This section applies to all three Project phases and would require the District to plant trees at surface parking, landscape, and hardscape areas on the Terra Linda High School campus to provide shade over 50 percent, 20 percent, and 20 percent of the respective areas within 15 years. Exceptions apply, however, related to areas covered by solar photovoltaic shade structures and organized sports fields. Nevertheless, the District would be required to plant many trees to meet the CALGreen shading requirement, which does not require the District to prepare a tree replacement plan. (Please also see page 4.3 of the Draft EIR).

The District agrees that there are many benefits with trees. However, the District must also plan to improve campus safety, including improving campus supervision of students when they are outside by teachers and staff and addressing unhealthy trees that may injure passersby and trees with roots that damage walkways, cause tripping hazards, and affect the District's compliance with the American with Disabilities Act (ADA); control rodents and other pests on the campus; and reduce wildfire risks on the campus.

Accordingly, the Project proposes the removal of trees only within the main areas of the campus. As shown on EIR Figure 3-6, the 34 trees proposed for removal are those surrounding the tennis and basketball courts, along the east-west slope that separates the campus into upper and lower halves, and three ornamental trees on the northeast end of the track and field stadium. Mature vegetation and trees along the western, southern, and eastern perimeters of the campus will not be removed. Potential environmental impacts from tree removal are mitigated to a less-than-significant level. Please see Mitigation Measures BIO-A and BIO-B. Likewise, potential air quality environmental impacts resulting from the project are addressed in Chapter 4.2 and are mitigated to a less-than-significant level.

A-10 The comment states that the Project would add 72 school-sponsored events per year and asserts that the EIR inaccurately assumes the existing number and size of school events do not have significant impacts on the surrounding community and that the increase of school-sponsored events and community use will not have significant impacts because the number of users per event will not increase. The footnotes reference the Transportation section of the EIR. The comment does not set forth any basis in support of its assertion that the Draft EIR relies on an inaccurate assumption, nor does it explain why it claims the assumptions are unverified.

As set forth in Chapter 3.0 (Project Description) of the Draft EIR, the District acknowledges the increase in facility use by the school and community and the associated incremental increase in environmental effects. The additional 72 school-sponsored events are related

to relocating back to campus approximately 57 varsity and junior varsity softball practices, games, and tournaments that are currently using the ballfield at the Miller Creek School District, adjacent to the Terra Linda High School campus. These uses are baseline conditions next door that will be relocated back onto District property with implementation of the proposed Project. (See Section 3.3.2 of the Draft EIR for further discussion.) As documented in the EIR, the environmental effects associated with relocating the softball program to the Project site would not be significant as changes to traffic, parking, and noise would not be substantially different from existing conditions. (See Draft EIR Chapters 2.0 (including page 2-12), 3.0 (including pages 3-8 to 3-10), 4.9 and 4.11 (including page 4.11-13).) The other 15 school-sponsored events are from new tournaments and events at the aquatic facility. (See Chapter 3.0, pages 3-8 to 3-10.)

The EIR adequately analyzes the increase in facility use, and per comments received during the scoping period, it even assumes a worst-case analysis of operating the proposed artificial turf fields as a new park use. (See further discussion in the Draft EIR at page 4.2-16, 4.7-13, 4.11-13, and discussion in Chapters 4.1 through 4.12.) Although future use of the new facilities by the community under the Civic Center Act is speculative, potential increase in use is a reasonably foreseeable consequence of the project, and thus is addressed in the Draft EIR. The District considered historical use of facilities at both Terra Linda High School and San Rafael High School (both located in the City of San Rafael) to determine anticipated increase in use, and compared such data with the totality of available days and hours outside of school hours and District use the facilities would be available for Civic Center use. Please refer to Response to Comment F-4 for further discussion. Relocation of Terra Linda High School varsity and junior varsity softball practices, games, and tournaments back onto campus further limits such availability. Due to the deteriorated conditions of the Terra Linda High School fields, data from San Rafael High School, which operates maintained fields, was considered in conjunction with Terra Linda High School data from its maintained baseball fields to project anticipated future community use of the proposed multipurpose field more accurately. Similarly, San Rafael High School's aquatic facility is highly desired for community use, thus, although this facility has not been modernized, the District considered this data to project more accurately what the anticipated future community use of the proposed aquatic center at Terra Linda High School would be. These are realistic, well-reasoned assumptions based on credible data and historical demand. Please refer to Section 3.3.2 of the Draft EIR for further discussion. Notwithstanding the conservative analysis, the environmental effects caused by the Project, as documented throughout the EIR, do not rise beyond adopted thresholds that would require mitigation.

A-11 The comment states that existing school parking is inadequate and refers to an informal neighborhood parking study (included as Comment A-17) that "reveals about 100 students/day parking on nearby streets instead of parking on campus." It further states that the removal of 13 parking spaces on the south side of Nova Albion Way for construction of the bike path exacerbates the scarcity of on-street parking.

Previously approved or constructed projects are not the subject of the Draft EIR and are outside the scope of the proposed Project. Existing on campus parking and the loss of street parking from the construction of the bike path on Nova Albion Way are baseline conditions (Draft EIR, page 4.11-7). Although parking is usually considered a social, and not an environmental, impact not requiring analysis under CEQA, EIR page 4.11-16

analyzes the parking effects caused by the increase in facility use and finds that because the expanded use would occur after normal school hours when students have left school, on-site parking on the campus would be available for the additional facility uses, similar to existing conditions. Therefore, the Project would not trigger a demand for additional parking.

The District reviewed the parking study, included as Comment A-17, which includes counts of vehicles parked on Devon, El Pavo, Esmeyer, and Tamarack during the school day and evening of Friday, December 1, 2023, and Monday, December 4, 2023. It is unclear which segments of the streets were surveyed, the time of day the counts were conducted, what method was used or how the parking counts were performed, or who performed the parking counts. Presumably the counts reflect the number of parked cars on these streets in total rather than only the number of parked cars confirmed as student vehicles. Nevertheless, as shown, it appears that more vehicles park on the four streets surveyed during the school day, as compared to the evening. The District does not refute that students and staff may park on the surrounding streets during the school day, despite available campus parking. This is a baseline condition.

Based on comments received during the EIR scoping period, the District also considered a parking structure project alternative proposed on either existing surface lots; see EIR Section 6.2.2. This alternative was proposed to reduce potential parking impacts. However, it was eliminated from further consideration as the Project would not result in significant parking impacts as documented in the EIR, and the parking structure would likely result in greater construction-related environmental effects compared to the Project as well as potential aesthetic impacts related to public views of the existing school fields and open space, assuming the structure was developed in the student lot.

A-12 The comment states that existing school and rental events severely impact the neighborhood because attendees park on the surrounding streets and prevent residents from leaving their driveways. The comment states that the Project might not increase off-site parking demand above the City zoning requirements, but impacts are very real for the neighbors and the impact of future frequency of events is not clear.

The comment is noted. The District acknowledges that students and event attendees park on the surrounding streets. This is a baseline condition. The District agrees that vehicles should not block access in and out of private driveways and public roads and suggests that neighbors contact the San Rafael Police Department to report illegally parked vehicles. The non-emergency number for the San Rafael Police Department is (415) 485-3000.

The anticipated frequency of events is discussed in the Project Description of the Draft EIR (see section 3.3.2). Please also refer to Response to Comment A-10, above.

A-13 The comment requests a coordinated calendar showing school and facility rental events to be on the Terra Linda High School website.

The Terra Linda High School website operates a calendar of District- and school-sponsored events on the campus: https://terralinda.srcs.org/page/page_calendar?calID=125344. Large events, including homecoming and graduation, are shown on the calendar. As provided on Draft EIR, page 2-12, community use of the high school facility is via an online request and rental system.

This system is operated by a third-party vendor called Facilitron (https://www.facilitron.com/). There are 21 facilities at Terra Linda High School that are currently listed as available for community rental; availability can be determined when reviewing each facility on Facilitron. Inclusion of each facility's rental calendar on the school calendar would be unduly burdensome and overwhelming and result in an un-useful school calendar, nor would this mitigate any environmental impact under CEQA. Therefore, the District will not be combining the school calendar with rentals.

A-14 The comment requests documentation be made of post-construction operation of school events and attendees that park on the street in front of homes surrounding the school and to implement mitigation, if warranted.

The District acknowledges the inconvenience of having students and event attendees park on the surrounding residential streets. As provided in Response to Comment A-11, the EIR has adequately evaluated the Project's impacts on parking and determined that the Project would not result in increased demand for more parking. (See Draft EIR, Chapter 4.11 (Transportation).) Additionally, the 299 stalls on the campus would be available for use by the additional activities that would occur after normal school hours. Additional post-construction documentation is not warranted, nor would this mitigate any environmental impact under CEQA. Parking impacts would be less than significant, and no mitigation is required. Please refer to Chapter 4.11 of the Draft EIR for further discussion.

A-15 The comment states that the artificial turf fields would generate 92 additional daily trips and that although a traffic impact study is not required because it is less than the San Rafael screening threshold of 110 trips per day, the increase in daily trips does not mean that a significant impact on the neighborhood would not occur. The comment further provides that traffic congestion on streets bordering the campus has significantly increased in recent months and that some capital improvements, such as eliminating the right-turn lane from Nova Albion Way to Golden Hinde Boulevard, have aggravated traffic conditions. The comment states that it cannot be presumed that the additional 92 daily trips would not have significant impacts on traffic circulation in the neighborhood and requests that the proposed increase in the frequency of events be documented post-construction and mitigation measures be implement, if warranted.

The comment does not substantiate how the Project would cause a significant transportation impact. Nonetheless, as provided in Response to Comment A-10, based on comments received during the EIR scoping period, the EIR analyzed a worst-case scenario of operating the proposed artificial turf fields as a new park use. Using the fields like a park would generate 92 daily trips. These trips would be spread out throughout the day and, according to the San Rafael Transportation Analysis Guidelines, would not be substantial enough to warrant a stand-alone traffic study. The new vehicle trips caused by the Project would use the roadway system surrounding Terra Linda High School and consequently impact the roadway system. However, the impact would not rise to a level considered "significant." As documented in Impact TRA-1, under EIR Section 4.11.4, the Project (including the vehicle trips generated) would not conflict with an adopted program, plan, ordinance, or policy on the surrounding circulation system, including transit, roadway, bicycle, and pedestrian facilities. Additional post-construction documentation, as requested by the comment, is not warranted based on the San Rafael Transportation Guidelines. The Project's impact on transportation facilities is less than significant, and no mitigation is required. Please refer to Chapter 4.11 (Transportation) for further discussion.

With respect to previous capital improvement projects performed by the City of San Rafael, such projects are outside the scope of the Draft EIR.

A-16 The comment provides general information concerning civic use of school facilities under the California Civic Center Act and requests the District's consideration of community applicants' use of Terra Linda High School's non-lighted athletic fields and stadium facilities be done in accordance with District Board Policy 1330, Section G, which concerns "Lighted Athletic Field and Stadium Facilities" (included as Comment A-18). Specifically, the comment requests that the District consider whether there is adequate parking to support the proposed rental use and whether sufficient measures can be employed to minimize adverse impacts to the school facilities and grounds and surrounding community. The comment requests that Section G of Board Policy 1330, which is applicable only to lighted athletic field and stadium facilities, be applied to athletic fields and stadiums even when they are not lighted. The comment further requests that the commenter's recommended measures to monitor post-construction traffic and parking related to the increase in school and rental events be a high priority for the District and that the monitoring be included as a mitigation measure in the EIR.

This comment will be considered by the Board of Education outside of the CEQA process, but as stated above in Response to Comment A-11, even though parking impacts have been comprehensively considered in the Draft EIR, parking is typically considered a social, and not an environmental, impact thus does not require analysis under CEQA. It should be noted that as mentioned in Comment A-16, Board Policy 1330, Section G, is applicable only to lighted fields and stadiums. There are no lighted fields and stadiums at the Terra Linda High School campus, and the Project's proposed field improvements do not include the addition of lights to the Terra Linda High School fields. The District's Board Policy 1330 already provides the District sole discretion to authorize and set additional conditions around Civic Center use as deemed necessary by the District for safety or security purposes, to maintain order on school sites, or as otherwise needed to support the Civic Center Use in a safe and efficient manner (Board Policy, 1330 (A)). Moreover, as set forth in Administrative Regulation 1330, a preliminary review of each requested use is performed whereby factors such as attendance and occupancy numbers, supervision, and other factors are considered, including whether a parking attendant needs to be provided or other measures taken to monitor parking and prevent violations (Administrative Regulation, 1330 (C).) This consideration is given to each Civic Center use application that the District receives.

Moreover, this comment does not concern the adequacy of the EIR analysis. Nevertheless, as stated in Responses A-14 and A-15, the EIR has adequately addressed parking and traffic impacts and finds that the Project would result in less than significant impacts to both issues and that no mitigation is warranted. See further discussion in Chapter 4.11 (Transportation) of the Draft EIR. The request to monitor post-construction traffic and parking will not be included as a mitigation measure in the EIR as it is not required under CEQA, nor would it eliminate the less than significant transportation-related environmental impacts of the Project.

A-17 The comment is an informal survey of vehicles parked on streets located proximate to Terra Linda High School. The District's response to the survey is provided in Response to Comment A-11.

A-18 The comment is an excerpt of Section G of the San Rafael City School's Board Policy 1330. The comment underscores "whether there is adequate parking available to support the proposed use" of Section G(2). Please see Response to Comment A-16, which is the District's response to the comment's request to apply Section G of Board Policy 1330 to non-lighted athletic and stadium facilities.

Letter B

Subject: FW: EXTERNAL: Fwd: Terra Linda High School Capital Improvements Project

From: **Henri Lese** [redacted]
Date: Sat, Mar 23, 2024 at 5:59 PM
Subject: Terra Linda High School Capital Improvements Project
To: Tim Ryan <tryan@srcs.org>
Cc: Shirley Fischer <[redacted] Paul and Stephanie Lovette [redacted]>, Jack Fischer [redacted], Amir Tabassi [redacted]>, Penny Wells [redacted]

Re: DEIR for the TLHS Capital Improvements Project

Tim, I believe that you received Shirley Fischer's excellent comments in her note of March 18. I have a few additional comments.

Section 4.2, Air Quality: Any policies regarding air quality should account for the possibility that multiple projects may occur simultaneously. In particular, please consider the timing of demolition and construction activities at the Northgate Shopping Center area. Will these occur at the same time as the demolition of the old aquatics center? If so, any limitations based on air quality should be based on the SUM of both projects. B-1

Section 4.9, Noise: Any limitations on noise levels should also be based on the sum of multiple, simultaneous projects. B-2

I strongly support Shirley's comments under **Construction Best Management Practices.** Students already park on the streets mentioned in Shirley's note. Contractor parking would be an unacceptable additional burden for the homeowners on those streets. For that reason, contractor parking spaces should be made available on-site only. B-3

Henri and Jeanne Lese
[redacted]
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Please share the OLLI website - www.dominican.edu/olli - with your friends and neighbors. Urge them to sign up for any classes that are interesting to them.

1

Response to Letter B – Henri and Jeanne Lese, March 23, 2024.

B-1 The comment notes Shirley Fischer's comment letter, dated March 18, (see Comment Letter A, above) before addressing additional comments. The first comment is related to EIR Section 4.2, Air Quality, and requests that the air quality analysis account for the possibility that the construction of related projects, including the Northgate Shopping Center, may occur at the same time as the proposed demolition of the aquatic center. The District has reviewed and responded to Shirley Fischer's comments; see the District's response to Letter A.

The EIR's analysis of cumulative impacts considers the combined environmental effects of District-sponsored projects and City-sponsored projects. EIR Table 2-5: *Related Cumulative Projects*, lists four City-sponsored projects that were considered for cumulative impact analysis, including the Northgate Town Square, which is the redevelopment of the existing mall.

EIR Table 4.2-4: *Construction-Related Emissions*, shows the Project's construction-related emissions. As shown, emissions from each Project and construction phase would be below the thresholds established by the BAAQMD for reactive organic gases, nitric oxides, and coarse and fine particulate matter (PM_{10} and $PM_{2.5}$) from exhaust. Additionally, per the BAAQMD, all development projects are required to implement basic construction best management practices to minimize fugitive dust, as required in Mitigation Measure AQ-A. Accordingly, as discussed in EIR Section 4.2.5, since the Project would not result in significant air quality impacts, as mitigated, Project emissions would not combine with those from the related projects to cause cumulatively considerable emissions. Nonetheless, based on a quick review of the Northgate Mall Redevelopment Project EIR, if approved by the Board of Education, construction of the proposed aquatic center would occur before construction of the Northgate Mall Redevelopment Project.

B-2 The comment requests that noise impacts be based on the sum of the combined noise levels of related projects. As explained in the noise technical study (EIR Appendix I, Noise Impact Assessment), decibels are logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Additionally, noise and vibration dissipate with increased distance from the source. Nonetheless, EIR Section 4.9.5 addresses the cumulative noise effects of the Project with related projects. Specifically, construction noise from the Project would not combine with related projects (see EIR Table 2-5: *Related Cumulative Projects*) to create significant noise impacts since these projects, including the Northgate Town Square project, are all at least 0.4 miles from Terra Linda High School, and the campus is separated from these projects by roadways, multiple blocks of buildings and/or residential developments, and topographic features such as hillsides. Therefore, noise impacts are not cumulatively considerable.

B-3 The commenter supports Letter A comments related to construction best management practices and states that contractor parking would be a burden for surrounding residents. The comment further states that contractor parking should be made available on-site only.

Please see the District's Responses A-2 through A-6 concerning construction best management practices. The District has made changes to and added construction best management practices, per comments provided in Letter A. Additionally, as stated in Response to Comment A-2, the Project includes the development of a new vehicle access driveway to the school's basketball courts that will be used for construction contractor parking. Therefore, contractors would not need to park on the surrounding streets.

Letter C

Subject: FW: EXTERNAL: Fwd: Draft EIR for Terra Linda High School Capitol Improvements Project
Attachments: TLHS letter.pdf

From: **Scott Mills** <
Date: Thu, Mar 28, 2024 at 8:46 AM
Subject: Draft EIR for Terra Linda High School Capitol Improvements Project
To: <tryan@srcs.org>

Please accept the attachment as our written comments on the Draft EIR Terra Linda High School Capitol Improvements Project sch No. 2023080737 . C-1

Thank you,

--
Scott A. Mills, D.C., M.S.

March 28, 2024
San Rafael City Schools Board of Education
c/o Tim Ryan, Senior Director of Strategic Facility Planning
San Rafael City Schools
310 Nova Albion Way, San Rafael, CA 94903
tryan@srcs.org

Re: FOR PUBLIC COMMENT: DEIR for Terra Linda High School Capital Improvements

Dear SRCS Board Members,
You are reviewing the Draft Environmental Impact report on the 3-Phase Bond Measure B Capital Improvements Project for Terra Linda High School (TLHS).

As a member of the Terra linda community, and more specifically, a homeowner on Nova Albion Way near the school, I wanted to ask the board to thoroughly consider the impact of overall increases in traffic and parking this project will place on the surrounding community.

We are happy and proud to be part of a growing and vibrant community, including the school. But I worry the outlined plans are woefully lacking in considering the impact that increased traffic and visitors will have on our neighborhood. The report somehow makes assumptions that the increased usage of the facilities will not yield a measurable impact on traffic and parking. We believe these to be inaccurate. C-2

Current parking is already lacking as can be seen by the large number of student vehicles that park on surrounding streets during school days and events. How could it be that adding more sporting events due to the outlined capital improvements would not require any attention to traffic and parking?

These improvements to the high school are projected to bring more events and visitors to the area.That's great.The question remains, where are they parking? Prior to the completion of the work, there is an expectation of increases in local traffic and the extended presence of parked construction vehicles. Where are these addressed in the current plans and impact report? Are there designated areas for construction vehicles to park? Will the public be notified in advance of construction dates, future sporting events and the like? Or can we expect the streets to unexpectedly overflow with visiting cars as is the current state? C-3

As you can see, the neighborhood is concorned about the need for more attention and detailed plans for improved infrastructure around these proposed changes to the high school.

Thank you for your attention to these important issues.

Scott Mills & Diane Sanfilippo

Response to Letter C – Scott Mills and Diane Sanfilippo, March 28, 2024.

C-1 The comment notes that a comment letter is attached to the email. No response is required.

C-2 The comment states that the Project plans lack consideration of increased traffic and visitors in the neighborhood and that the EIR inaccurately assumes that increased use of school facilities would not yield a measurable impact on traffic and parking, as parking is currently lacking, evidenced by the large number of vehicles parking on streets during school days and events. The comment further questions how the addition of events would not require attention to traffic and parking.

The comment does not substantiate how the Project would cause a significant transportation impact. The District acknowledges the inconvenience of traffic and parking effects related to existing school operations of and events at Terra Linda High School. As discussed in the EIR, there are 299 parking spaces on the campus and an additional 29 spaces on the south side of Nova Albion Way, adjacent to the campus. The EIR has adequately analyzed transportation impacts under Impact TRA-1, which concluded that the Project, including the additional events, would affect the circulation system but, according to City policies and traffic impact guidelines, would not rise to a level considered "significant" under CEQA. The Project would not conflict with an adopted program, plan, ordinance, or policy on the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and impacts are less than significant. Please refer to Chapter 4.11 of the Draft EIR for further discussion.

C-3 The comment includes a list of questions: Where are event attendees parking? Where is the increase in local traffic and the extended presence of parked construction vehicles addressed in the current plans and impact report? Are there designated areas for construction vehicles to park? Will the public be notified in advance of construction dates, future sporting events and the like? Can vicinity residents expect the streets to unexpectedly overflow with visiting cars similar to the existing state? The District's response to the questions are provided below:

- **Where are event attendees parking?** The Project would result in 72 additional school-sponsored events; these are related to relocating approximately 57 varsity and junior varsity softball practices, games, and tournaments that are currently using the ballfield at the Miller Creek School District, which is adjacent to the Terra Linda High School campus. The remaining events are associated with 15 additional aquatic meets and tournaments. Other events would involve community use of the modernized facilities, and the District cannot specify the number of additional civic uses, although the District has conservatively projected an increase in Civic Center use, as set forth in Chapter 3.0, Project Description, of the Draft EIR. (Please see Response to Comment A-10, above, for further discussion.) Either way, the additional events would occur after the normal school day, when most students have left the campus. As discussed in the EIR, there are 299 parking spaces on the campus and an additional 29 spaces on the south side of Nova Albion Way, adjacent to the campus. Event attendees would be able to park on the campus and on the surrounding public streets.

- **Where is the increase in local traffic and the extended presence of parked construction vehicles addressed in the current plans and impact report?** The Draft EIR addresses short-term construction and long-term operational traffic and

parking impacts under Impact TRA-1, pages 4.11-9 through 4.11-20 of the Draft EIR. As analyzed, the Project would not conflict with an adopted program, plan, ordinance, or policy on the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and impacts are less than significant.

- **Are there designated areas for construction vehicles to park?** Yes, the Project includes the development of an internal vehicular driveway with direct access to the basketball courts in the southern half of the campus. The driveway would be constructed during Phase 1 of the Project and would be available for the parking of construction vehicles during all Project phases, although it is anticipated that it would be needed only during construction of Phases 1 and 3. This is discussed in Draft EIR Section 3.3.4, Project Construction, as well as in the Transportation section of the Draft EIR on Pages 4.11-14, -16, -18, -19, -20, and -22. Please also see Response to Comment A-2, above.

- **Will the public be notified in advance of construction dates, future sporting events and the like?** The proposed construction schedule of all Project components is provided under Draft EIR Section 3.3.4 on Page 3-11. Additionally, the District will announce construction lane closures on the Terra Linda High School digital sign board on Nova Albion Way. This has been added as Best Management Practice #11 under Draft EIR Section 3.4. The Terra Linda High School website (https://terralinda.srcs.org/page/page_calendar?calID=125344) currently provides a calendar of school and District-sponsored events and will continue to do so. As discussed in Response to Comment A-13, the District will not be providing a calendar of community events. However, the public may access the Facilitron website to determine if rental facilities have or have not been reserved and may contact the school directly to confirm.

- **Can vicinity residents expect the streets to unexpectedly overflow with visiting cars similar to the existing state?** Due to limited space on the Terra Linda High School campus, the proposed additional events would continue to operate similar to existing conditions. As mentioned, there are 299 parking spaces on the campus and an additional 29 spaces on the south side of Nova Albion Way, adjacent to the campus, that event attendees can use. The District also considered the possibility of constructing a parking structure on the campus (see EIR Section 6.2.2, Alternatives Considered but Dismissed from Detailed Analysis, on Page 6-3). However, this alternative was eliminated from further consideration as the Project would not cause significant parking impacts as documented in the EIR, and the parking structure would likely result in greater construction-related environmental effects compared to the Project and create potential aesthetic impacts, i.e., elimination of public views from areas north of the campus of the existing fields and open space, if the parking structure were developed in the student parking lot.

As provided, the District has considered the Terra Linda High School neighbors' concerns about traffic and parking, and the EIR has adequately addressed these issues. Transportation impacts are less than significant.

Letter D

Subject: FW: EXTERNAL: Fwd: Re EIR for Terra Linda High school
Attachments: 01 Huge amounts of plastic from artificial grass end up in the sea _ New Scientist.pdf; 03 'Forever Fields' How Pennsylvania became a dumping ground for discarded artificial turf 2.pdf; Philadelphia Inquirer Ban Turf Fields in Philly article 3-21-24.pdf; Research report - plastic turf as source of aquatic pollution.pdf; 05 PFAS-in-Artificial-Turf-Fields-1-2.pdf

From: **Andrea Wald**
Date: Fri, Apr 5, 2024 at 6:21 PM
Subject: Re EIR for Terra Linda High school
To: <tryan@srcs.org>, <lmarteldow@srcs.org>, <cmartin@srcs.org>, <mkoerner@srcs.org>, <mdenieva@srcs.org>, <mpalma@srcs.org>

Resending and including one more PDF that I inadvertently left off.

Andrea

On Fri, Apr 5, 2024 at 6:09 PM Andrea Wald wrote:

Dear Board members,

I'm writing this to you in regards to the EIR that was prepared regarding the proposal to install more artificial turf at Terra Linda High School. I hope that you might re-evaluate the use of artificial turf, resisting inertia and industry marketing. We live on a rapidly changing planet. It is increasingly clear that humans have already begun to heat our climate, yet greenhouse gas emissions worldwide continue to rise, resulting in:

—wildfires in CA and worldwide (recently Maui), even in northern latitudes like Canada and Scandinavia,
—accompanying toxic smoky air;
—drought followed by atmospheric rivers with resulting floods and mudslides in CA; D-1
—historic floods in the US, recently in VT, and worldwide;
—coastal erosion;
—intensifying hurricanes,
—hot tub temperatures off the Florida coast; and
—more-intense, longer-lasting heat waves and related deaths of both humans and wildlife.
All this climate-driven wild weather has been predicted by scientists for decades, but now we have begun to experience the destruction, sooner than expected.

In addition, we are becoming increasingly aware of wider assaults on the natural world on which we all depend. Plastic pollution and micro plastics everywhere, including in our bloodstreams, are a growing concern. The University of Barcelona did a study which concluded that huge amounts of plastic pieces they found in the water off the coast were actually coming from Artificial Turf fields.

https://www.newscientist.com/article/2383869-huge-amounts-of-plastic-from-artificial-grass-end-up-in-the-sea/

See attached PDF: New Scientist Article: Huge Amounts of Plastic from Artificial Grass End up in the Sea.

Also attached PDF - Research report - plastic turf as source of aquatic pollution

Habitat and species loss proceed. And then there is the damage that fossil fuel extraction causes, the toxicity of plastic manufacture, and the environmental injustice of foisting that pollution onto the low-income communities surrounding plastic manufacturing facilities. D-2

1

The choice between natural and artificial turf happens within this context. This is a climate decision. This is an environmental decision. This is a solid waste decision. This decision and many others will shape our future atmosphere and environment.

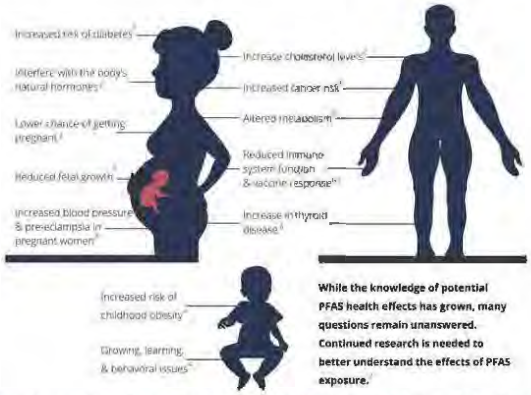
From a climate perspective, plastic grass causes greenhouse gas emissions during its manufacture and transport. In contrast, grass absorbs and sequesters carbon dioxide. In addition, artificial turf adds to the urban heat island effect. As temperatures increase, this is the opposite of what we need. And the expanding sales of plastic grass prop up the fossil fuel industry which is willfully cooking our planet.

From a broader environmental perspective, to state the obvious, plastic grass, its substrate, and the pad beneath constitute a dead zone. Artificial turf does not support healthy soils, which increase moisture-holding capacity. It does not support healthy microbes/insects; or improve water quality. It does not generate oxygen. It does not provide habitat for creatures like earthworms, of value themselves and also in the food chain. D-2 Cont'd

Artificial turf needs to be replaced every 8-10 years as it wears out and becomes unsafe to play on. It is not recyclable – contrary to industry claims that they are recycling it. It ends up in landfill, is incinerated or in many cases, simply stock piled with promises of being recycled at some point down the road. See the article entitled: 'Forever Fields' How Pennsylvania became a dumping ground for discarded artificial turf. PDF file attached.

Artificial turf is not water-free. It needs to be cleaned. And it sometimes needs to be cooled off with water. Most likely there will be increasing need for such cooling going forward.

And then there are the significant health and safety concerns. See diagram below: D-3



https://www.inquirer.com/opinion/editorials/turf-ban-pfas-chemicals-cancer-fdr-park-sports-20240321.html?query=forever%20field

(PDF file attached)

Also, please see the report from Northeastern University—PFAS in Artificial Turf Fields: Uncertainties and Causes for Concern:

https://pfasproject.com/wp-content/uploads/2023/07/PFAS-in-Artificial-Turf-Fields-1-2.pdf

(PDF file attached)

I hope you will consider the above listed impacts of Artificial Turf and of continuing to cover our precious earth with toxic plastic. I strongly urge you to look into natural grass for your athletic field upgrade. There are newer grasses on the market that use less water, need less maintenance, and can be played on for much longer periods of time – even in inclement weather. D-4

2

Andrea Wald, concerned about the state of the planet that we are leaving to future generations – their health, welfare and safety D-4

Environment

Huge amounts of plastic from artificial grass end up in the sea

Fibres from artificial grass make up 15 per cent of plastic pieces found in samples of seawater near Barcelona

By Jason Arunn Murugesu

25 July 2023

An artificial pitch damaged by flooding in Palma on the island of Mallorca, Spain
Clara Margais/Getty Images

Pieces of artificial grass can make up a large portion of the plastic /article-topic/plastic/ found in the seawater

D-5

close to a major city, a study in Spain has revealed.

Liam de Haan https://es.linkedin.com/in/liamdehaade at the University of Barcelona and his colleagues analysed 217 water samples collected off the coast of Barcelona, in north-east Spain, and 200 from the Guadalquivir river in Seville, in the south-west of the country, collected between 2014 and 2021.

They focused their analysis on plastic pieces larger than 5 millimetres, excluding smaller particles, known as microplastics /article-topic/microplastic/, because it is harder to determine where they come from, says de Haan.

Fibres that make up artificial grass are usually very thin, long and curled, and green in colour, he says, making them easy to identify.

In Barcelona, fibres from artificial grass accounted for 15 per cent of plastic pieces larger than 5 millimetres in the samples from within 1 kilometre of the shore. "We were really surprised that nobody had reported this before," says de Haan.

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The concentration of artificial grass fibres floating in the sea was as high as 213,200 fibres per square kilometre in some places. Barcelona's large population – around 1.7 million – and the large number of artificial sports pitches in the city probably account for why the figure is so high, says de Haan.

In the Guadalquivir river in Seville, the average concentration of plastic pollution from artificial grass was on average 50 times lower than in the seawater off Barcelona.

This difference could be down to the fact that the river simply flushes plastic into the ocean, whereas plastic can

accumulate more in the sea, says de Haan. Seville also has a far smaller population than Barcelona, at just over 700,000 people.

De Haan says the issue is likely to be global. "I think it's pretty implausible that this is only happening in Spain," he says. Since we don't know how much artificial grass breaks down into microplastics and nanoplastics, and how much this contributes to plastic pollution in water bodies, the problem could be even bigger, he adds.

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The dark side of artificial greening: Plastic turfs as widespread pollutants of aquatic environments☆

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ABSTRACT

Artificial turf (AT) is a surfacing material that simulates natural grass by using synthetic, mainly plastic, fibers in different shapes, sizes and properties. AT has spread beyond sports facilities and today shapes many urban landscapes, from private lawns to rooftops and public venues. Despite concerns regarding the impacts of AT, little is known about the release of AT fibers into natural environment. Here, for the first time, we specifically investigate the presence of AT fibers in river and ocean waters as major conduits and final destination of plastic debris transported by water runoff. Our sampling survey showed that, AT fibers – composed mainly of polyethylene and polypropylene – can constitute over 15% of the mesoplastics and macroplastics content, suggesting that AT fibers may contribute significantly to plastic pollution. Up to 20,000 fibers a day flowed down through the river, and up to 213,200 fibers per km^2 were found floating on the sea surface of nearshore areas. AT, apart from impacting on urban biodiversity, urban runoff, heat island formation, and hazardous chemical leaching, is a major source of plastic pollution to natural aquatic environments.

1. Introduction

Plastics are regarded as a major threat to ecosystems worldwide. Global plastic production reaches peaks of about 450 million metric tons (Mt) annually (Geyer et al., 2017), while estimates of microplastics – plastics smaller than 5 mm in size – in the oceans continue to rise (Isobe et al., 2021). It is estimated that between 19 and 23 Mt are released to aquatic environments each year as of 2016 and will likely double by the end of this decade (Borrelle et al., 2020). Rivers are the dominant pathway for the transport of plastics entering the ocean (González-Fernández et al., 2021), discharging 0.8–2.7 Mt of plastics annually (Lebreton et al., 2017; Meijer et al., 2021). However, reanalysis of plastics entering the sea through rivers suggests that riverine fluxes are up to three orders of magnitude lower, considering that only a small fraction (up to 0.3 Mt) is found floating on the ocean surface globally (Cózar et al., 2014; van Sebille et al., 2015; Weiss et al., 2021). Furthermore, recent studies have suggested that most of the positively buoyant marine plastic debris released from land-based sources is either beached or floating in coastal and especially nearshore areas (de Haan et al., 2022; Lebreton et al., 2019; Onink et al., 2021).

Even under the lower bound scenario of plastic production and waste generation, higher amounts of plastics will likely enter terrestrial and aquatic systems in the following decades, which may lead to many hardly reversible impacts (Lau et al., 2020; MacLeod et al., 2021). Besides the need of curtailing plastic emissions globally, tackling specific sources of plastics will aid in identifying key priorities in order to prevent plastics from entering the natural environments. To date, however, little information is available on the linkage between marine plastic and primary sources, including tire ware, paint coatings, micro-beads, pellets, textile fibers and artificial turf fibers and infill, which might represent up to 31% (2.5 Mt $year^{-1}$) of the plastics in the ocean (Boucher and Friot, 2017). Most of these plastics are considered microplastics, which can be transported far their source through rivers (Meijer et al., 2021), air (Dris et al., 2016) or urban waterways (Murphy et al., 2016),

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and eventually accumulate in the marine environment, all the way from the surface (Cózar et al., 2014) to the deep-sea floor (Van Cauwenberghe et al., 2013).

A particular source of primary plastics in the environment are artificial turfs (AT) – also commonly referred to as synthetic turf, artificial grass or plastic grass –, which have widely expanded in popularity as they are considered a low-cost, low-maintenance and climate-resistant alternative to natural turf. Estimates on the global artificial turf market valued it at $8.1 billion in 2021, and is expected to reach over $12 billion by 2027 (Arizton Advisory & Intelligence, 2022). By 2020, over 93,000 AT sport pitches were expected to be installed in the European Union alone, with installation rates ranging 1200–1400 fields per year, including the replacement of old fields (ECHA, 2016; Hann et al., 2018). In addition, besides sports (e.g. soccer, golf, field hockey and rugby), the use of AT has now diversified across and within multiple sectors, including indoor and outdoor urban and domestic landscaping (e.g. playgrounds, public and private lawns, rooftops, gardens and gymnasiums) or commercial applications (e.g. decoration, small businesses and many more). Such diversity in use responds to growing technological advancements in the manufacture, design and materials performance of AT surfaces, mainly throughout the 1960s and 1990s (Jastifer et al., 2019).

AT appear as a surface covered by synthetic grass fibers of varying length and properties (i.e. AT fibers, or blades; Fig. 1). AT fibers are primarily made polyethylene (PE) and polypropylene (PP), and to a lesser extent polyamide (PA). These are tufted into a one or two backing layers made of polyurethane (PUR), latex rubber, PE, PP, PET or PA (e.g. Hann et al., 2018; Olshammar et al., 2021). A granulated infill can optionally take up the space between AT fibers – mainly in sport surfaces – to maintain the fibers upright and to provide elasticity to the surface. The infill is usually made of styrene butadiene rubber (SBR) from recycled end-of-life tires (ELT), ethylene propylene diene monomer (EPDM), thermoplastics, sand, or natural materials such as cork and coconut fiber. Additional plastic components, such as a shock pad layer (SBR, PUR), drainage sheets and piping (PP, EPDM) are also often embedded during the installation within the stone and gravel substrate underneath the AT surface (Hann et al., 2018; Nilsson et al., 2006; Ramboll, 2020).

Information about the release of any of the AT components to the environment is scarce and has mainly focused on the emissions of granulated infill applied in sports fields (e.g. Lundström, 2019; Verschoor et al., 2021), and, to a lesser extent, AT fibers (e.g. Habib et al., 2022; Wang et al., 2019). In particular, little attention has been paid to the AT fluxes through rivers and concentrations at sea, and their association to rainfall. To what extent AT fibers pollute natural aquatic environments, and their significance relative to other plastic sources remain unanswered. Here we present results of multiple surveys of AT fibers performed in the lower course of the Guadalquivir River in Andalusia (SE Iberian Peninsula), and in coastal waters of the Mediterranean Sea off Catalonia (NW Iberian Peninsula) (Fig. 2). In the view of increasing usage and production trends of AT and leakage of plastics into the environment, we hypothesize that AT fibers are widespread pollutants in river and sea surface waters and predict that their leakage into aquatic environments is driven by rainfall events, which seems to play a role in the dispersal of AT to the environment through drainage water systems or nearby water streams (Lassen et al., 2015). The data here obtained represent the first quantitative characterization of AT pollutants in aquatic environments, with the aim of advancing the understanding of the magnitude of plastic leakage from AT surfaces to the nature.

2. Materials and methods

A total 417 water samples were collected between June 2014 and July 2021 (excl. 2017) from the sea surface off Catalonia in the NW Mediterranean Sea (Fig. 2A and B) and between January 2014 and December 2015 from the water column at the Guadalquivir River, which flows into the Gulf of Cadiz in the Atlantic Ocean (Fig. 2A and C). 330 (~79.0% of the total) of the samples have been previously documented and made publicly available in scientific literature (Bermúdez et al., 2021; de Haan et al., 2022, 2019; Quintana et al., 2020), and were re-analyzed for AT fibers. Samples included 200 (48.0%) water samples from Guadalquivir River collected by GUADALQUIVIR_LTER program (http://www.guadalquivir.lter.com) and processed for plastics by (Quintana et al., 2020), 124 (29.7%) water samples from waters at distances of less than 1 km from shore (i.e. hereafter defined as 'nearshore') collected by the Surfing for Science project (http://www.surfingforscience.org) and reported by de Haan et al., (2022), and 6 (1.4%) water samples at 1–5 km from shore (i.e. hereafter defined as 'coastal') collected by de Haan et al., (2019) (Fig. 2). The remaining 87 (~21%) of samples from nearshore and coastal waters are not included in any published study or data-set and were analyzed and inspected for AT fibers. This results in approximately half of the inspected water samples collected from river waters (48.0%) and about half from the sea surface (52.0%).

Guadalquivir River was sampled at two different sites, namely Bonanza and Tarfía, located 8 and 32 km from the Guadalquivir outlet, respectively (Fig. 2C). Samples were taken monthly between January 2014 and December 2015 during spring tides from a boat anchored to the bottom, and equipped with three large nets separated from the boat

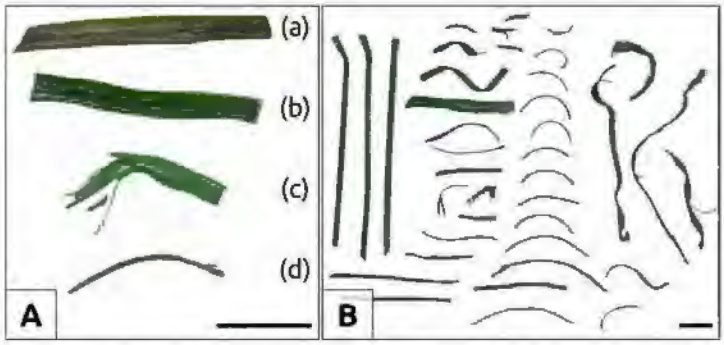

Fig. 1. Sizes and shapes of AT fibers. (A) Close-up image of AT fibers collected from the sea surface (a, c, d) and from an outdoor soccer field (b). Note the central reinforcing nerve in (a) and (b). (B) Artificial turf fibers of different sizes and shapes (i.e. straight and curled monofilaments, and fibrillated) collected from the sea surface. Picture in (A) was provided by the Animal Biodiversity Resource Center of the Universitat de Barcelona. Scale bar in (A) and (B) is 5 mm.

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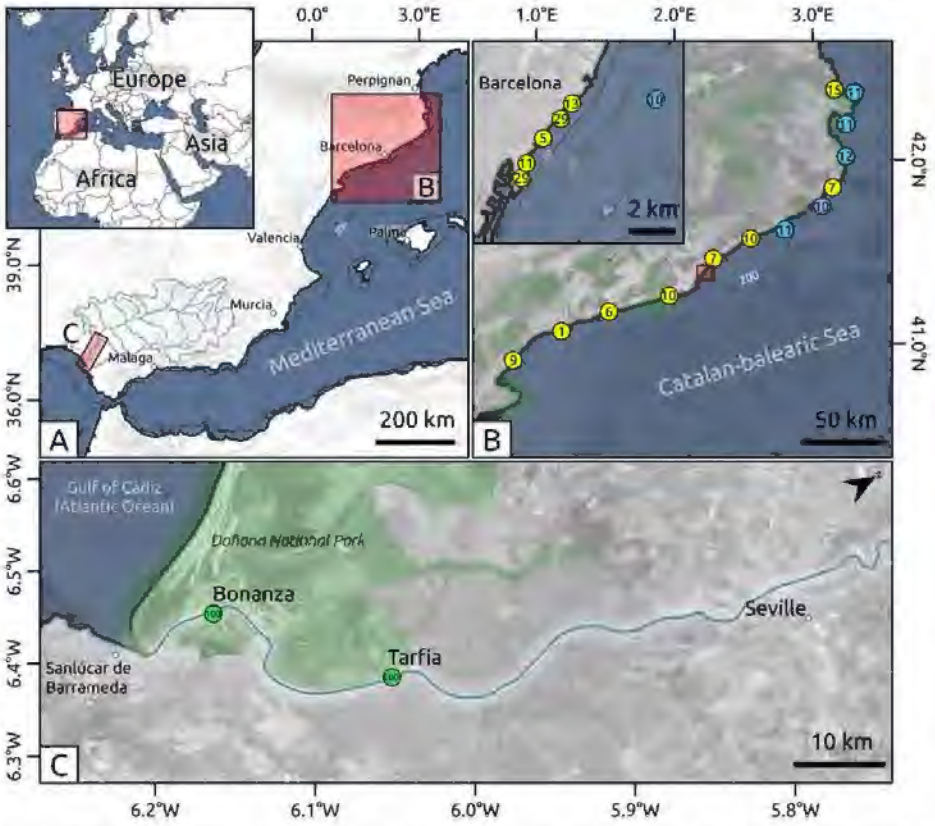

Fig. 2. Study areas and sampling locations of AT fibers. (A) Location of the two study areas (red boxes), north and south of the Iberian Peninsula. **(B)** Sea surface sampling stations at nearshore (yellow dots) and further offshore (blue dots) locations along the coastline of Catalonia. Barcelona's coastline (red square in larger map) is enlarged in the upper left box. **(C)** Water column sampling stations (green dots) in the lower Guadalquivir River. The number of collected samples at each sampling station is indicated inside each dot. Nature protection area NATURA 2000 is shown as green shaded areas in **(B)** and **(C)**. (For interpretation of the references to color in this figure legend, the reader is referred to the Web version of this article.)

that sampled in parallel along each cross-section. Each of these three nets, which were 20 m in length, had a mesh size of 1 mm and a mouth opening of 2.5 m (width) × 3 m (depth). During each spring tide sampling period, a total of 4 passive trawl fishing samples of approx. 2 h, were taken at each station, 2 during the maximum flood tide and 2 during the maximum ebb tide, covering the 24-h tidal cycle at each site. (cf. "Study area and methods" section in Bermúdez et al., (2021), and Quintana et al., (2020)). Water velocities were measured with Hydrobios flowmeters to estimate the water volume filtered by each net.

Surface nearshore samples were collected at 13 stations located at less than 1 km from shore following a weekly or bi-weekly interval from August 2019 to March 2020, and from October 2020 to July 2021. These were collected actively by citizen scientists within the frame of the Surfing for Science project using a lightweight manta trawl, or "paddle trawl", of either 0.38 × 0.30 m or 0.34 × 0.26 m mouth opening and 335 μm mesh attached to a paddle surf board or to other non-motorized crafts such as kayaks. Each citizen scientist involved in the sampling paddled/rowed for about 1 h (1–2 km) before returning to shore (cf. "Materials and methods" section in de Haan et al., (2022)). Also, 6 surface coastal sampling stations were located 1–5 km from shore (Fig. 2B). They were collected once to twice yearly between June 2014 and June 2016, and from September 2018 to July 2020 by actively towing from the side of a motorized vessel a manta trawl net with a 0.61 × 0.25 m mouth opening and a 0.20 or 0.33 mm mesh during 15–20 min (1–2 km) (cf. "Materials and methods" section in de Haan et al., (2019)).

In laboratory, all samples were analyzed or re-analyzed for AT fibers and separated from all other plastics using fine forceps. AT fibers were identified by using their dimensions, color and morphology as criteria to separate them from all other plastic items, such as fragments, films/sheets, pellets, microbeads, foam and filaments or lines. Accordingly, AT fibers were identified as planar items – as opposed to fishing netting and textile fibers –, and longer than wide in two dimensions (Fig. S1). Color and morphology were considered as a second-order criteria to further confirm the nature of an AT fiber. For instance, green-colored items and/or items that were curled, presented longitudinal splits or one or more reinforcing central nerves in their longest dimension while matching the above criteria were categorized as AT fibers (e.g. Fig. 1A). Conversely, items that were transparent or translucent, or with equal length to width ratios were conservatively excluded from the analysis as they may be easily mistaken for films/sheets or fragments. Afterwards, each AT fiber was let dry at room temperature and placed separately on a flat surface, such as a glass Petri dish, for high-resolution photographing (19.4 pixels mm^{-1}) or scanning (47.2 pixels mm^{-1}) under similar lightning conditions. Each obtained image was processed with ImageJ/Fiji v1.53

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software (Schneider et al., 2012) for AT fiber counting, and surface area (mm^2) and length (mm) measurements. The average color (i.e. RGB score) of each AT fiber was measured and assigned to the closest matching color in the 120-color palette employed by Martí et al., (2020). Finally, a subset of 234 AT fibers (~17.4% of the total) were randomly extracted and chemically inspected using a PerkinElmer Frontier FT-IR Spectrometer with a diamond crystal ATR accessory (ATR-FTIR) at the Scientific and Technological Centres of University of Barcelona (CCiTUB). The spectral range was between 4000 and 525 cm^{-1} with a 4 cm^{-1} resolution and 4 accumulations. The collected spectra were analyzed with Open Specy v0.9.3 software (Cowger et al., 2021), which allowed classifying AT fibers according to their chemical composition. (Bermúdez et al., 2021; de Haan et al., 2022, 2019). The plastic nature of the overall dataset was confirmed using chemical analysis (cf. "Materials and methods" in (de Haan et al., 2022, 2019) and "Study area and Methods in (Bermúdez et al., 2021)). Accordingly, over 94% of analyzed particles from coastal, nearshore and riverine samples (including unpublished data) were confirmed as plastics, respectively (Bermúdez et al., 2021; de Haan et al., 2022, 2019).

Plastic loads are expressed as volumetric concentration units (items m^{-3}) for the Guadalquivir River and sea surface data (i.e. nearshore and coastal samples), and in daily and annual transport of AT fibers (items and kg day^{-1} and items and kg $year^{-1}$) for the river data. Concentration data per unit area (items km^{-2}) are additionally reported for sea surface data. Furthermore, AT fiber transport was calculated from the simulated discharged river flow data obtained by the Automatic Hydrological Information System (SAIH) of the Guadalquivir River, which also includes data on total precipitation (Automatic Hydrological Information System (SAIH), 2019). Total daily precipitation for sea surface samples was acquired from the European Center for Medium Weather Range Forecasting (ECMWF) of the ERA-5 reanalysis 0.1° × 0.1° gridded hourly dataset (Muñoz Sabater, J, 2019). Pairwise comparisons were performed using the Mann–Whitney *U* test between unpaired groups and Spearman's correlation coefficient was used to test significant relationships between daily total precipitation and AT fiber concentrations. All data analyses and graphics were performed with R v4.2.0 (R Core Team, 2021), using packages dplyr, ggplot2, ggforce, stringr, lubridate, and OpenSpecy. Statistical significance level was set at $p < 0.05$.

3. Results

All AT fibers were chemically identified as plastic, either PE (86.3%) or PP (13.7%) (Fig. 3A), and were mostly green in color (82.2%), followed by yellow (13.3%), brown (3.5%) and grey (1.0%). AT fibers were found in half (50.1%) of all collected samples, with higher presence among samples from the sea surface (62.2%) than in samples from river waters (37.0%). In total, 1341 AT fibers were identified, which represents 1.2% and 0.3% of the total amount of plastics (N_{total} = 88,502) collected from the sea surface and river waters, respectively. The proportion of AT fibers were one order of magnitude higher among plastics >5 mm (i.e. meso- and macroplastics) found at the sea surface (12.2%; i.e. coastal and nearshore) and river waters (2.4%), especially in waters at less than 1 km from shore (15.6%; i.e. nearshore). In some samples, AT fibers comprised more than 11% of the sample content in river waters and 25% in surface waters (Fig. S2A), whereas among plastics >5 mm, AT fibers comprised up to 20% and 100% of the sample content in river and surface waters, respectively (Fig. S2B).

An average filtered water volume of 213 m^3 and 58,100 m^3 per sample was collected at the sea surface and river waters, respectively. The resulting concentrations were on average over 50 times higher at the sea surface (mean: 0.03 items m^{-3}; range: 0–0.82 items m^{-3}) than in the waters flowing through the Guadalquivir River (mean: 0.0006 items m^{-3}; range: 0–0.01 items m^{-3}; $p < 0.001$, Mann–Whitney *U* test) (Fig. 3B). In terms of surface area, an average 9500 items km^{-2} (range: 0–213,200 items km^{-2}) were found floating on the sea surface.

Considering the average flow rate of Guadalquivir River during the sampling period, an average of 3073 items day^{-1} – or 1.1 million items $year^{-1}$ – of AT fibers flowing towards the ocean is obtained. AT flux peaked to 19,513 items day^{-1} during and after a peak net flux rate of 236 $m^3 s^{-1}$ in early 2014, and to 6684 items day^{-1} with a net flux rate of 55 $m^3 s^{-1}$ in early 2015 (Fig. 4A and B). In terms of mass, an average 0.0025 kg day^{-1} (max.: 0.014 kg day^{-1}) are released to the Guadalquivir River waters, which is equivalent to almost 1 kg $year^{-1}$ (max.: 5.1 kg $year^{-1}$). Likewise, the monthly averaged concentrations of AT fibers on the sea surface peaked in late 2019 and 2020, with average concentrations up to 0.24 items m^{-3} and 0.15 items m^{-3}, respectively (Fig. 4C). Total precipitation had a weak but significant effect on the concentration of AT fibers in the Guadalquivir River over the sampling period (ρ = 0.21, $p < 0.01$; Fig. S3A), whereas no significant effects were observed regarding the concentration of AT fibers on the sea surface (ρ = 0.04, p = 0.52; Fig. S3B). However, peak concentrations of AT fibers were found mainly during the rainy season (October–April; Fig. 4).

About half (49.8%) of AT fibers were classified as microplastics (i.e. < 5 mm in size), followed by mesoplastics (48.9%; from 5 to 25 mm in size) and macroplastics (1.3%; >25 mm). The size of AT fibers averaged 6.3 mm and 3.28 mm^2 and were relatively longer and larger in samples from river waters (mean: 8.6 mm and 5.6 mm^2; range: 1.8–58.8 mm and 0.3–78.1 mm^2) than from the sea surface (mean: 5.8 mm and 2.8 mm^2; range: 0.3–61.7 mm and 0.1–60.6 mm^2; $p < 0.001$, Mann–Whitney *U* test) (Fig. 5). Indeed, most (>98.2%) AT fibers collected from the sea surface using a 0.33 mm-mesh were larger than 1 mm in length, which is the lower size limit of the mesh used in the collection of riverine

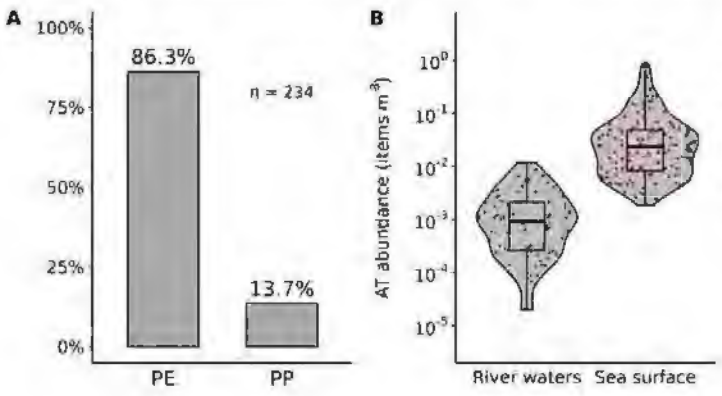

Fig. 3. (A) Chemical composition and (B) abundance of AT fibers in river waters and sea surface. Note that the vertical axis in **(B)** is in log-10 scale. Plots in **(B)** show the data 95% confidence interval (i.e. vertical lines above and below boxes), inter-quartile range (i.e. boxes), median (i.e. 50th percentile; bold horizontal lines), probability density profile at each side (i.e. grayed areas) and individual data points in red. (For interpretation of the references to color in this figure legend, the reader is referred to the Web version of this article.)

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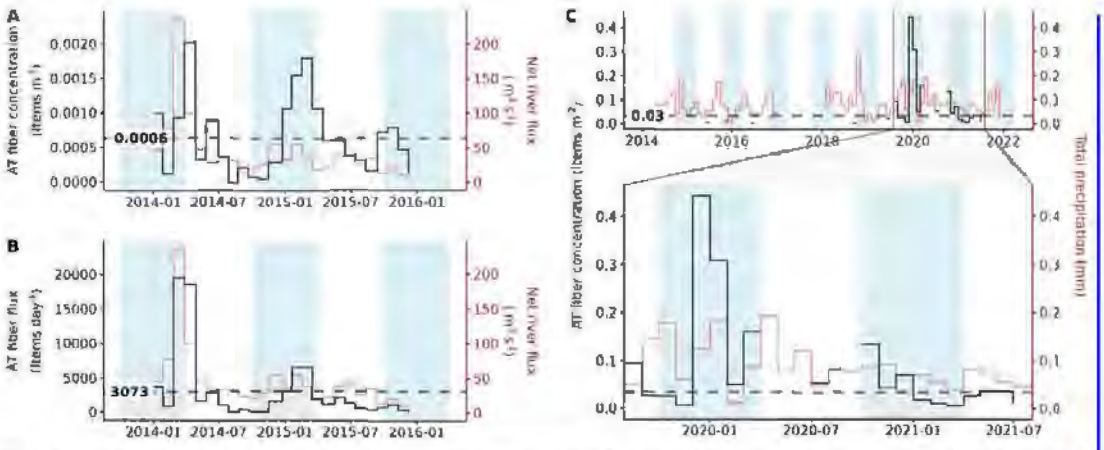

Fig. 4. (A and B) Monthly averaged concentrations and fluxes of AT fibers in Guadalquivir River and (C) monthly averaged concentrations of AT fibers at Mediterranean coastal waters. Blue shadow stripes indicate the typically more rainy months (October–April). Monthly averaged total precipitation data in (C) is averaged over Catalonia's watershed. The horizontal dashed lines indicate the average concentrations or fluxes of AT fibers. Note that the zoom-in plot in (C) mostly represents data from the nearshore (<1 km to the shoreline; see Supplementary Materials). (For interpretation of the references to color in this figure legend, the reader is referred to the Web version of this article.)

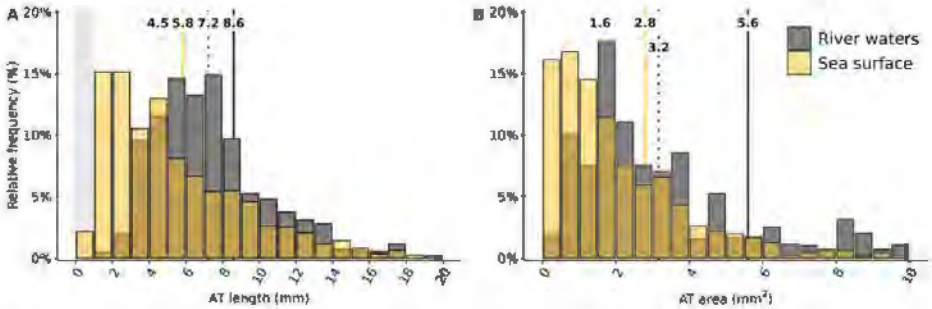

Fig. 5. Distributions of AT fibers from river waters and sea surface in terms of (A) relative size and (B) area. Grey shaded area in (A) indicates the lower and upper limits of the meshes used to collect samples at the sea surface (0.2 and 0.3 mm) and river waters (1 mm). Solid and dotted vertical lines indicate the average and median (50th percentile) estimates, respectively. Note that horizontal axis has been reduced in both plots for simplicity of the figure. The sum of relative AT abundances >20 mm and >10 mm² is 1% and 6% for river waters and 1.7% and 4% for sea surface samples, respectively (see Supplementary Materials).

samples, and >85.6% of AT fibers were larger than 2 mm (Fig. 5). As a more conservative comparison, considering only AT fibers larger than 2 mm in length (i.e. double the size of the mesh used to collect riverine samples), the resulting average concentrations of AT fibers remained over 45 times higher on the sea surface than in river waters ($p < 0.001$, Mann–Whitney U test), and on average longer and larger in river waters (8.6 mm and 5.6 mm^2) compared to the sea surface (6.7 mm and 3.2 mm^2; $p < 0.001$, Mann–Whitney U test). That being said, we consider our estimates of AT fiber concentrations at the sea surface and in riverine waters highly conservative, as visual identification of AT fibers <1 mm is in most cases challenging and there could be overall underestimated here due to higher misidentification rates with other plastic fragments or items, especially those which length approximates the width of AT fibers under 1 mm (Severn et al., 2011), which were conservatively excluded from our analysis (see above).

4. Discussion

4.1. AT fibers in river and sea surface waters

Our results unveiled a ubiquitous presence of AT fibers in marine and riverine environments. In particular, the composition of AT fibers matches current production trends and specific density profiles, with PE (ρ = 0.88–0.96 g cm^{-3}) being by far the most used polymer for AT manufacturing, followed by PP (ρ = 0.85–0.94 g cm^{-3}) and PA (ρ = 1.04–1.18 g cm^{-3}) (Hann et al., 2018). Unlike PA, PE and PP usually are buoyant in water, which is why most AT fibers are likely to be found floating or suspended in rivers and seas.

Present results demonstrate that AT fibers can represent a high proportion (i.e. over 15%) of the plastic debris in aquatic environments, especially on the sea surface and within the meso- and macroplastic size range in our samples. Observed differences in the prevalence and average concentrations of AT fibers found in samples from river waters (i.e. 32% of samples with AT fibers and 0.0006 items m^{-3}) and sea surface (i.e. 62% of samples with AT fibers and 0.01 items m^{-3})

indicates a higher degree of AT fiber pollution at the sea surface than in river waters, which may be associated to both lower retention of plastics in the river – especially those large and positively buoyant, such as AT fibers – and the long-term accumulation of AT fibers on the sea surface, especially in the coastal surface layer where plastics released years to decades from now are effectively captured before reaching the open ocean (Lebreton et al., 2019; Onink et al., 2021). Further, besides direct inputs from sources upstream, rivers are more affected by water flux variations associated to seasonal rainfall and water regulation, and may act as a pathway of AT fibers into the ocean, especially during heavy rains (Fig. 4). Such transfer processes of AT fibers may be enhanced during river flood events in many places including Mediterranean Europe (e.g. (Sanchez-Vidal et al., 2018)), or because of seasonal processes such as spring and early summer snow and ice melting in high latitudes (Peeken et al., 2018). Furthermore, these observations could also be explained by differences associated to the number, extension area, proximity, usage regimes and types of AT surfaces around populated areas upstream of the Guadalquivir River (e.g. Seville) or at locations close by our sampling stations at the sea surface, as well as the number and type of preventive measures put in place before AT leakage into the environment.

Our results show that rivers but also coastal and nearshore waters likely are a temporal reservoir of AT fibers. High concentrations found off the city of Barcelona (0.82 items m^{-3}; 213,200 items km^{-2}) underscore metropolitan areas as main contributors to AT fiber pollution, as also found by Wang et al., (2019) in mainland China. Likewise, Nakajima et al. (2021) found AT fibers on surface waters in Tokyo bay, one of the most heavily populated and highly industrialized areas in the world. Further, AT fiber concentrations also peaked during heavy rains, commonly occurring from October to April both in the Guadalquivir basins and in Catalonia's watersheds, which seem to play a role in flushing fibers towards the ocean (Fig. 4). Peak concentrations of AT fibers at the sea surface were found during the rainy season, which may concur with flood events and increased release of AT fibers to stormwater systems leading to increased plastic concentrations in coastal waters (Gündoğdu et al., 2018; Hitchcock, 2020). However, we found no significant association at an event scale. This may be explained by variations in the intensity and duration of rainfall event as well as the temporal lag periods between the occurrence of rainfall and AT fibers reaching and accumulating in the coastal area, or the small-scale spatial and temporal variability associated to local winds, waves and currents affecting plastic concentrations (e.g. Sharia et al., 2016). In either case, further investigation is required to identify the main factors influencing AT fiber leakage from land to rivers and the ocean.

Unlike other types of plastic products commonly found in rivers and ocean (Morales-Caselles et al., 2021), such as take-out packaging (e.g. beverage containers, plastic bags), AT fibers may undergo significant weathering during their operational life before entering the aquatic environment, since as surfacing material in outdoor activities (e.g. contact sports) they are directly exposed to sunlight, weather extremes and mechanical abrasion by the movement of people, various types of tools and objects, or machinery (Mehmood and Peng, 2022). For this reason, it is not known exactly whether AT fibers in our samples would have weathered during the operational life of AT or after their leakage into the aquatic environment. However, AT fibers in our samples show evidences of wearing and shedding as most of them presented shredded endings, lengthwise splits and cracks and were on average shorter (i.e. < 10 mm) than the usual length of exposed AT fibers tufted on to AT surfaces (10 to over 60 mm) (Haan et al., 2018; Severn et al., 2011; Sharma et al., 2016) (Figs. 4 and 5), which suggests that significant degradation has occurred in either of these stages. Indeed, longer and larger AT fibers found in river waters may be explained by shorter residence times and proximity to sources (cf. section 'Sources and leakage of AT fibers in the environment') compared to the sea surface, especially considering their large size and positive buoyancy in water which allows for rapid mobilization of fibers from the river towards the ocean.

4.2. Sources and leakage of AT fibers in the environment

Limited information is available regarding the total amount, type and state of AT surfaces installed globally and the release rates of AT fibers into natural environments. Current theoretical estimates on AT fiber emissions is subject to high uncertainties and is mostly constrained to sport pitches, especially soccer (Haan et al., 2018; Verschoor et al., 2021; Wang et al., 2019). This helps explaining why the contribution of AT surfaces to the floating plastic stocks is usually places below other major plastic sources, such as tire ware, land-based litter, paints, microbeads and microfibers (Verschoor et al., 2017; Wang et al., 2019). For instance, Wang et al., (2019) found that AT surfaces, including AT fibers and infill, represent around 12% (22,700–532,000 Mt $year^{-1}$) of the primary plastics entering aquatic and terrestrial environments in China after cloth fibers (29–37%) and tire dust (33–54%). A much lower figure is estimated for the OSPAR region in the NE Atlantic Ocean, ranging from 10 to 500 Mt $year^{-1}$, with an average of 250 Mt $year^{-1}$ (Verschoor et al., 2017).

Considering AT fibers alone, a recent estimate resulted in 784 to 1254 Mt $year^{-1}$ lost into the environment in the EU as of 2016 (Haan et al., 2018). Annual AT fiber loss per sports field has been estimated at 5–10% (Lassen et al., 2015), 10% (Sundt et al., 2016), and 0.5–0.8% (Haan et al., 2018). An estimated 16% of AT fibers that leave a field may end up in storm water drainage systems (Gilshammar et al., 2021). Further, the reported loads reaching surface waters are proposed to be between 0.1 and 1% (Verschoor et al., 2017), and from 3 to 6% (Lassen et al., 2015), which would represent fairly high amounts considering that AT surfaces can contain between 67,000 and 453,000 AT fibers m^{-2} (Severn et al., 2011), which is equal to over 3.2 billion AT fibers on a single full sized pitch (7140 m^2).

The above figures depend on characteristics such as age, maintenance and the type of use, which directly relate to the release ratios of AT fibers (Lassen et al., 2015; Sharma et al., 2016). Indeed, modern AT fields yield an average AT fiber pile loss of 0.2–0.5 mm $year^{-1}$ (Sharma et al., 2016), which reduces the average lifetime of a sports pitch to approximately 10–12 years before requiring rehabilitation or replacement (Re et al., 2020). Over that period, AT fibers can either flush to the surrounding environment during rains or floods, or adhere to the players' shoes or clothes – especially if wet – and then enter sewerage systems if no prevention measures are put in place (Arechabala, 2022; Weijer et al., 2017). Once released to the environment, they can likely further degrade into smaller pieces, where cost-effective remediation measures becomes more challenging.

4.3. The significance of AT fiber pollution

Despite the relevance demonstrated in this survey, to our best knowledge there have been no studies to date that have undertaken a specific study focusing on AT fibers in aquatic environments. The high ratios (i.e. over 50% of the total) of AT fibers found present in our samples would have gone unnoticed in other plastic pollution studies, especially those targeting nearshore and coastal areas. It is possible that previous studies have misidentified or classified AT fibers as fishing-related items (i.e. fishing lines) or natural plant remains, which often resemble AT fibers by their predominant color (i.e. green) or planar shape. There is a lack of knowledge on the presence and nature of such type of pollution in the environment, not being considered for example in the Master List provided by the MSFD Technical subgroup of Marine Litter (Galgani et al., 2013), or other relevant categorizations used for the monitoring of plastic pollution (Hartmann et al., 2019; Michida et al., 2019). Doing so is a crucial step towards identifying the sources, pathways and impacts of AT fibers in terrestrial and aquatic environments, and also a step towards identifying key measures to prevent further environmental degradation and mitigating the risks and harm

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associated to AT fiber pollution.

Until now, the concerns associated to AT surfaces dealt with socio-cultural aspects (Francis, 2018), their end-of-life treatment (Francis, 2018; Ramboll, 2020), the increase of urban runoff (Chang et al., 2021), potential impacts on local biodiversity (Francis, 2018; Sánchez-Sotomayor et al., 2023), leaching of potentially toxic chemicals (Cheng and Reinhard, 2010; Gomes et al., 2021; Källqvist, 2005; Lauria et al., 2022), and their contribution to climate change (Jim, 2017). We can now state that the risks of impact extend also to surrounding ecosystems due to the release and dispersal of AT debris. Extensive replacement of natural land covers by AT surfaces will likely add a significant and irreparable plastic legacy to the global nature.

5. Conclusion

Plastic pollution is recognized as a severe anthropogenic issue in the aquatic environment. Almost 60 years have passed since the first use of artificial turf surfaces as a substitute of natural turf in sports. Their production is now peaking as their use has diversified to fit multiple consumer needs. In particular, the loads and properties of artificial turf fibers in the aquatic environment is currently unknown. This is the first study focusing on the presence, concentration levels and properties of artificial turf fibers in river and sea surface waters. It contributes to increasing knowledge that artificial turfs not only contributes to other known impacts, such as climate change, chemical leaching or local biodiversity loss, but is also is a major source of plastic pollution in the aquatic environment. Concentrations peaked nearshore and near populated areas, and especially during the rainy season when release to aquatic environment may be higher. Furthermore, the properties of artificial turf fibers are described in detail for further studies to identify and monitor their presence in aquatic environments. Indeed, how many AT fibers can further accumulate on riverbanks, beaches, seabed and riverbed sediments is still completely unknown. We anticipate that this study will inspire future efforts to reduce the release and impacts of artificial turfs in the environment.

Author statement

William P. de Haan: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Software, Visualization, Writing - original draft **Rocío Quintana**: Data curation **César Vilas**: Data curation, Writing - review & editing, Funding acquisition **Andrés Cózar**: Methodology, Funding acquisition, Writing - review & editing **Miquel Canals**: Funding acquisition, Writing - review & editing **Oriol Uviedo**: Visualization, Data curation, Data acquisition **Anna Sanchez-Vidal**: Conceptualization, Funding acquisition, Methodology, Supervision, Writing - review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

All data are present in the paper and/or the Supplementary Materials. The interactive, online interface can be found online at https://litter.shinyapps.io/artificialturfs/.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.envpol.2023.122094.

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The Philadelphia Inquirer

NEWS > PENNSYLVANIA

'Forever Fields': How Pennsylvania became a dumping ground for discarded artificial turf

Danish company Re-Match secured state incentives to open a recycling plant in 2022. It hasn't happened yet. Meanwhile, thousands of rolls of the fake grass, containing PFAS, are piled up on farms.

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Over 6,000 rolls of artificial turf sit on B.D. Hill Side Farm in Nicholson, Pa., on Thursday, Oct. 26, 2023. Re-Match, a Danish recycling company, allegedly told the farm owner it would pay $96,000 a ... **Read more**
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by Barbara Laker and David Gambacorta
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Money doesn't come easily to farmland owners in the tranquil, rolling hills of Pennsylvania. So at first, Jim Halkias thought he'd hit the jackpot.

A real estate broker had approached him in late 2018, and explained that a Denmark-based recycling company called Re-Match wanted to pay $4,500 a month to store more than 1,000 rolls of used, deteriorating artificial turf on 45 acres that Halkias owns in Grantville, Dauphin County. D-7

Halkias was told that Re-Match intended to one day recycle the old turf. The

offer was enticing.

"It seemed," he said, "like a great deal."

The deal soon soured.

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Halkias claims that Re-Match stopped paying him after two years, but left hulking rows of turf, stacked 10 feet high, at the edge of a cornfield, near a farmhouse and visible from the road. Pennsylvania's Department of Environmental Protection (DEP) received a complaint about the unsightly stacks, and inspected Halkias' land.

Rolls upon rolls of artificial turf were dumped on farmland owned by Jim Halkias in Grantville, Dauphin County, Pa. Re-Match, a Denmark-based recycling company, had initially paid Halkias $4,500 ... **Read more**

Jessica Griffin / Staff Photographer

environmental laws by failing to obtain necessary permits for storing the turf.

For years, Halkias has tried to sell his farm. He says three potential buyers lost interest because of the rolls of turf. "No one will accept the property," he said, "with all this stuff, which is considered to be waste by the DEP."

There is no government agency that monitors or regulates the disposal of artificial turf, which contains toxic chemicals, including PFAS, or per-and polyfluoroalkyl substances, also known as forever chemicals because they don't break down in the environment and stay in the human body for years.

Scrap tires, often used to cushion the fake grass, cannot be dumped in landfills, yet no such regulation is on the books for rolls of turf, which, given its weight, can cost more than $20,000 per field to be discarded in landfills. D-7

The Synthetic Turf Council, a national organization that represents manufacturers, builders, and infill material suppliers, has estimated that there are as many as 13,000 artificial turf fields across the U.S. Those fields — which add up to almost 24,000 acres — need to be replaced every eight to 10 years.

Some bundles of used turf have found a second life in online marketplaces, where they're sold and used to carpet batting cages, dog runs, back yards, miniature golf courses, and paint-ball fields. In other instances, though, stockpiles of old, fake grass have found a less conventional fate: being abandoned in Pennsylvania, where the synthetic carpets decay on empty lots, in warehouses, or near quarries.

Experts and activists who monitor the artificial turf industry say that the state has become a dumping ground for cities and towns in neighboring states that want to get rid of their old turf fields. Consultants and landscape architects have even assured municipal leaders that their aging turf can be recycled in Pennsylvania.

That belief could be traced to Pennsylvania officials having announced, in 2021, that Re-Match would locate its first U.S. facility in a Luzerne County factory.

On paper, the company's outlook was encouraging. It had an existing recycling facility in Denmark, with plans to operate 24 factories in multiple countries by 2031. And the process that Re-Match used to recycle turf had been given a stamp of approval by an independent body, the European Union's Environmental Technology Verification program. Re-Match claimed that, by recycling turf — instead of burning it — the Pennsylvania facility would spare the environment from 100,000 tons of carbon dioxide.

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Behind the scenes, though, Re-Match disclosed that it might not be able to recycle 100% of the turf it collects, and that its operations could potentially cause environmental contamination, according to a prospectus that was shared with potential investors in 2021.

Now, the clock is ticking.

Re-Match's plans for Luzerne County never came to fruition; instead, it's seeking to open a factory in Rush Township, Schuylkill County. And in November, the company agreed to a consent order with Pennsylvania's DEP, which requires it to remove the rolls of turf from Halkias' property.

at two other sites — a concrete business in Jonestown, and at its planned Rush Township plant — and required Re-Match to establish a $644,000 bond to keep the "waste" at those locations.

Re-Match agreed to have its recycling facility fully operational by the end of 2024. But its troubles also extended to Wyoming County, where a farmer sued the company in federal court, claiming it owes him nearly $300,000 for about 6,200 rolls of turf that Re-Match has stored on his property since 2018. The case was settled last month. (Parties did not reveal the terms.)

"We are looking forward to start recycling in Pennsylvania," Re-Match's chief funding and expansion officer, Nikolaj Magne Larsen, wrote in an email. "The permits required for this project take time, but we continue to make great progress."

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Re-Match's slow start in Pennsylvania has coincided with mounting international concern about the impact that chemicals in artificial turf might have on human health.

Workers lay out Monsanto Co.'s AstroTurf at Veterans Stadium on Nov. 11, 1970. The turf contains PFAS, also known as forever chemicals, linked to cancer and a host of health problems. ... **Read more**

Dominic Pasquarella / File photo

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Earlier this year, an Inquirer investigation, "Field of Dread," found that AstroTurf that covered the field at Philadelphia's Veterans Stadium in the late 1970s and early 1980s contained 16 different types of PFAS, which are used in the process of manufacturing the fake grass.

These pervasive "forever chemicals" are found in a host of products, including firefighting gear and nonstick cookware, and have been linked by the EPA to cancer, asthma, thyroid disease, and decreased immunity to fight infections. Across the country, PFAS chemicals have contaminated drinking water.

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Six former Philadelphia Phillies who spent parts of their careers at the Vet between 1971 and 2003 have died from glioblastoma — about three times the average rate of this aggressive form of brain cancer among adult men in the U.S. (The Phillies have said that several brain cancer experts have told the organization that there is no evidence of a link between artificial turf and the disease.)

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Kyla Bennett is a former EPA official and leading expert on PFAS, and now

The turf recycling process, which involves separating sand and crumb rubber infill from the plastic green carpet, doesn't remove PFAS, which Bennett said renders even the recycled product contaminated.

"So what are you going to use it for? Where would it be safe?" she asked. "It's filled with toxic chemicals, so you don't want to recycle that and reuse it. You're just kicking the can down the road. You want to get rid of it somehow ... and no one has figured out a way to do that." D-7

"They call PFAS chemicals forever chemicals for a reason," Bennett said.

"These are forever fields."

More than 6,000 rolls of artificial turf sit on B.D Hill Side Farm in Nicholson, Pa. Re-Match, a Danish recycling company, allegedly told the farm owner it would pay $96,000 a year to store the dis ... **Read more**

Promise and peril

Re-Match's arrival in Pennsylvania, in December 2021, was viewed as a win for both the company and the state, which expected to gain up to 40 full-time jobs once the recycling facility became operational.

Then-Gov. Tom Wolf touted the fact that Re-Match offered a "sustainable solution" to the problem of old turf fields, which, he noted, posed a "significant challenge to the environment."

In exchange, the state offered financial assistance: a 10-year, $1.85 million loan — at just 2.5% interest — from the Pennsylvania Industrial Development Authority, and a $148,000 Pennsylvania First grant, for purchasing vital equipment for the recycling plant. (The company has yet to apply for those funds, according to the state's Department of Community and Economic Development.)

D-7

» READ MORE: FIELD OF DREAD: We tested the Vet's turf and found dangerous chemicals.

A few days after Wolf welcomed Re-Match to the state, the company shared a prospectus with potential investors. It was seeking to sell 10.9 million shares in an initial public offering of stock (IPO), and wrote that it needed to use some of the proceeds of that sale to finance the construction of the Pennsylvania factory, and another in the Netherlands.

It also included extensive warnings about the nature of its business.

"The [company] is not able to recycle 100% of the artificial turf systems," reads one section of the prospectus.

risks," and that it could be held liable by governments for land contamination. The price "for investigation and acting, such as removing or restoring land," the prospectus reads, "could be significant."

"In an IPO document, the business must state all the risks that the business could encounter, no matter how unlikely," Larsen said. "We can absolutely recycle all the turf we have in storage."

In the prospectus, Re-Match further cautioned that its recycling facilities "may not generate the expected clean products," and that its business could be imperiled if governments begin banning turf outright due to concerns about chemicals in the product.

The latter prediction has already come true.

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Last December, New York Gov. Kathy Hochul signed legislation to ban sales in the state of artificial turf that contains PFAS as of Dec. 31, 2024. Earlier this year, California legislators passed a similar turf sales ban, but Gov. Gavin Newsom vetoed the bill, citing lack of regulatory oversight. Similar laws have been proposed in Connecticut, Massachusetts, and Vermont.

In October, the NFL Players Association brought even more attention to the issue. The union called on manufacturers to disclose whether PFAS are present in artificial turf or infill material that's used by the NFL, and urged the league to replace turf playing fields at 14 stadiums with natural grass.

Jim Halkias knew little about Re-Match — or the contentious debate over artificial turf — when he agreed to let the company store turf on three or four acres for $4,500 a month.

this stuff is not really dangerous.

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He claims he was assured the company would wrap the turf in plastic bags — so the arrangement would be no different, really, than storing some bales of hay on his property.

"But they used one milliliter plastic bags and the wind would just tear them up," Halkias said. "So the plastic was just flying down the road because of the wind. And actually I was scared it might cause an accident."

Halkias said he has spent $20,000 in legal fees in an attempt to get Re-Match to pay him the money he is owed for the lease. He regrets allowing the company to use his land.

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"It was a very bad decision," he said.

He recently settled the case, and Re-Match has begun to remove some rolls from his land, Halkias said. He did not disclose the terms of the settlement.

Halkias' story echoes one that played out in Wyoming County, where the owner of B.D. Hill Side Farm alleged that Re-Match agreed in June 2018 to pay $96,000 a year to store turf on his property. The company deposited more than 400 tractor trailer loads of turf on the farm — and allegedly stopped making payments in 2019.

"These issues have been resolved," Larsen said.

Re-Match isn't the only company saying it can effectively recycle artificial turf

AstroTurf tells prospective clients that it can transport used fields to a factory in Dalton, Ga., where fake grass is separated from its infill materials, then shredded, melted, and mixed with chemical pods to create "new" material, according to its vendor contracts.

In 2017, the Synthetic Turf Council, an industry group, published a guideline for recycling, reusing, and removing synthetic turf systems.

The council wrote that the "diversity" of materials in fake grass "presents technical, economic and logistical challenges unlike other commonly recycled materials, such as plastic bottles, carpet and plastic bags."

There is no mention in the AstroTurf contract, or in the turf council's guidebook, of how to address PFAS contamination.

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Earlier this year, the council told The Inquirer that most turf doesn't contain "intentionally added PFAS."

Researchers, though, have found PFAS in the backing material of newer generations of turf, according to the Toxics Use Reduction Institute at the University of Massachusetts-Lowell. The university, in response to questions from municipalities about PFAS and turf, wrote that the chemicals might be used to ensure that blades of fake grass do not stick to turf manufacturing equipment.

In June, Melanie Taylor, the turf council's CEO and president, seemingly acknowledged that current generations of turf contain forever chemicals. In a letter to California legislators — who were advancing legislation to ban in 2024 the manufacture or sale of turf that contains PFAS — Taylor argued that manufacturers and suppliers needed more time to "develop viable

» READ MORE: Congress seeks to spend more than $100 million to rid 'forever chemicals' from firefighters' protective gear

When The Inquirer asked Re-Match about forever chemicals, Larsen cited the council's original stance that turf doesn't contain added PFAS.

"In Europe, we have conducted thorough tests and have not seen any traces of PFAS in our turf, but we will continue to monitor this," Larsen said in an email.

"The process of recycling turf is highly technical," he continued. "We have set a high standard because we want to create clean products after our recycling process that can be sold in many industries."

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The appeal of such an easy solution to an environmental nightmare surfaced at a Sharon, Mass., building committee meeting that Bennett attended in 2019.

David Warner, a Boston landscape architect, was "waxing poetic about a beautiful recycling facility in Pennsylvania," Bennett said.

Puzzled, she asked whether he was referring to Re-Match.

"He said, 'Yes. That's the one.'"

"Well guess what," Bennett told him, "it's not built yet."

Warner claimed that he'd seen a video about Re-Match's Pennsylvania factory. Bennett later followed up, and asked Warner, in an email, to share the footage with her.

On July 24, 2023, a trucking company worker tosses a strap to secure rolls of old artificial turf from a football field in Newton, Mass., that was shipped to a warehouse in Pottstown. ... Read more

Julia Malakie

D-7

An underground market

For decades, government officials have often overlooked a problem that was hiding right under their feet.

Artificial turf was pioneered and sold in the late 1960s by the Monsanto Chemical Co., as an affordable and effective way to provide children and professional athletes with durable, outdoor playing surfaces. (Philadelphia — and other cities that used turf in their municipal stadiums — discovered in the 1970s and 1980s that the fields actually had to be replaced often.)

Environmental advocates and scientists grew concerned in recent years about the health risks of crumb rubber — tiny pieces of recycled car tires

compounds such as nickel, chromium, benzene, cadmium, and arsenic.

» READ MORE: A TANGLED TIMELINE: Artificial turf was once touted as a "magic carpet." But some scientists are sounding the alarm because it typically contains "forever chemicals."

Yet it wasn't until 2019 that scientists outside of the turf industry determined that the green carpets contained another potential health risk: PFAS.

Little effort has been made, though, to regulate how old turf is reused.

Facebook Marketplace contains pages of listings for artificial turf, ranging in price from $1 to $300 a roll. Other websites offer roadmaps to establishing lucrative turf-for-sale franchises. "You could be making an average of $375 per day selling artificial grass remnants," one reads, selling remnants for dog runs, putting greens and batting cages. D-7

Some business owners are evasive about why they are stockpiling turf. Jersey Shore Steel Inc. in Jackson Township, Pa., has roughly 100 rolls of aging athletic fields that were delivered by truckload, according to a company official who would identify himself only as Randy.

He said someone — not Re-Match — is paying him to store it.

"I don't really feel comfortable talking to you about this whole thing," he said.

About three hours to the south of Jackson Township sits a massive industrial complex, next to a sewage plant in Pottstown. There, in a warehouse, Allen Waterman, owner of APW Enterprises, receives sand and

During a recent visit, about 10 to 15 cut-up fields were stacked in rolls on concrete. Large machines whirled loudly as they cleaned, dried and separated the materials. The sand and rubber would be bagged and sold to the turf industry or other manufacturers, Waterman said.

Two fields came all the way from a high school in Newton, Mass.

Fifteen trucks hauling 228 rolls arrived July 31, according to a chain of custody document. (Re-Match played no role in this transaction.)

Waterman said he sends all the carpet to "partners." When a reporter asked him who they were, he replied: "None of your business."

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The "partners" will extrude the carpet into new plastic lumber products, he said. "This is just starting up and everything is in trial phases right now in regard to the recycling portion."

Bennett and other activists say aerial photos show that Pennsylvania has received "rolls upon rolls" of discarded turf.

Cities across America spend millions to install artificial turf fields, "but nobody can figure out a way to dispose of it legally and safely," Bennett said. "Then how is it possible that it's safe for your kids to play on?"

Few people know as much about playing surfaces in Philadelphia as Michael DiBerardinis, who ran the city's Parks and Recreation Department for two mayors — Ed Rendell and Michael Nutter — and also served two years as Mayor Jim Kenney's managing director.

Children have access to nearly a dozen turf fields: five that are maintained

by the School District of Philadelphia. During his time in city government, DiBerardinis said, no one had yet sounded the alarm about PFAS in artificial turf.

» READ MORE: From Phillies icon to 'time traveler': Darren Daulton's family believes his struggles and cancer were linked to the Vet's turf D-7

When the city replaced its turf fields in prior administrations, DiBerardinis said, he had no reason to ask where the old turf would be taken.

"There's now a new understanding about the dangers associated with artificial turf," he said, "so people better be paying some attention to it."

The city's artificial turf fields are about 10 to 13 years-old, according to the Kenney administration. Industry standards suggest, then, that those fields might soon need to be replaced.

Whether that used fake grass will be recycled, resold on some secondary market, or deposited in a landfill is unclear. The city has yet to establish a process for disposing of its old artificial turf.

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https://www.inquirer.com/opinion/editorials/turf-ban-pfas-chemicals-cancer-fdr-park-sports-20240321.html?query=forever%20field

Ban turf fields in Philadelphia parks | Editorial 3-21-24

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The risks associated with the artificial fields — which contain chemicals linked to cancer, asthma, and other health issues — are not worth the benefits.

The Inquirer's investigative reports have examined troubling links to cancer involving PFAS. Artificial turf fields, which contain the so-called forever chemicals, should be banned in city parks, writes the Editorial Board.Jessica Griffin / Staff Photographer

It's never a good sign when a former Environmental Protection Agency official says the city was "bamboozled."

But that was how Kyla Bennett reacted when she learned Philadelphia officials were told that an artificial turf playing surface — the centerpiece of a $7.5 million renovation to a recreation center — was free of PFAS, the forever chemicals linked to cancer, asthma, and other health issues.

Bennett knew such a guarantee was impossible since PFAS-free turf does not exist. Even the head of the Synthetic Turf Council, which represents turf manufacturers, admitted as much in a letter to California lawmakers.

Yet, Sprinturf, the turf maker, told Philadelphia officials the surface didn't contain forever chemicals. The company provided a lab report to back its claim, a spokesperson for the city told The Inquirer.

Bennett, and two other independent experts, reviewed the test results. They found them to be flawed and concluded the turf likely contained forever chemicals.

"Their detection limits were way too high, designed to *not* detect PFAS," Bennett told Inquirer reporters David Gambacorta and Barbara Laker, who have spent the past year investigating the risks from forever chemicals.

The Inquirer's investigative reports have examined troubling links to cancer involving the protective gear worn by firefighters, the turf at Veterans Stadium, where the Phillies and Eagles once played, and turf at youth sports facilities.

The turf council said the available research has not found a significant health risk from playingon synthetic fields. But that has not calmed the fears of some parents and elected officials across the country.

Portsmouth, N.H., spent $3.5 million for a turf field after being assured it contained no toxic chemicals. After residents raised concerns, the city conducted tests and found PFAS chemicals. D-8

Similar turf battles have erupted in cities and towns in New Jersey and beyond, prompting officials to take action. California passed a measure last year that allowed municipalities to ban turf fields. New York recently banned the sale of turf fields with forever chemicals. Similar bills have been introduced in Massachusetts and Vermont.

In 2022, the mayor of Boston wisely banned the use of artificial turf in all city parks due to the risks of toxic forever chemicals. Mayor Cherelle L. Parker and City Council should follow Boston's lead.

The first step should be to remove the turf at the recreation center in South Philadelphia where the city was "bamboozled." The city should also cancel plans to install turf fields in Franklin Delano Roosevelt Park or any other city facilities.

This board voiced support for the broader renovations to FDR Park, but the risks associated with the turf fields are not worth the de minimis benefits. In addition to the forever chemicals found in the turf fields, studies show a higher rate of injuries compared with playing on grass.

Beyond the chemical and injury risks associated with turf fields, Philadelphia is also exposing taxpayers to costly lawsuits from individuals who get cancer or are hurt playing on the synthetic grass.

Turf field supporters argue the synthetic grass is easier to care for and allows more playing time. But the up-front cost is substantial, and the turf does not last forever — just the chemicals.

Over six thousand rolls of artificial turf sit on Benedict Diaz's farm in Nicholson, Pa. Re-Match, a Danish start-up, has dumped rolls of old, used turf on farm sites across the state, and is now being sued in federal court.Monica Herndon / Staff Photographer

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Disposing of old turf fields is another environmental concern. The Inquirer investigation found that Pennsylvania is a dumping ground for old turf, which the state Department of Environmental Protection considers "solid waste."

Some argue forever chemicals are already everywhere — in cookware, furniture, clothing, and toys. But that does not mean the city should add to the risk by exposing residents to more PFAS.

Of particular concern are the children who face the most risk from playing on the turf fields. The EPA warned that growing children are more susceptible to the harmful effects of forever chemicals.

Studies show that poorer neighborhoods, especially those made up largely of Black and brown residents, already face a disproportionate amount of environmental hazards. Turf fields add to the harm and inequality.

Parker and City Council should do all they can to protect the most vulnerable. Banning turf fields is a good start.

PFAS in Artificial Turf Fields: Uncertainties and Cause for Concern

PFAS Project Lab
Northeastern University

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PFAS Research, Education, and Action for Community Health

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What is Artificial Turf?

Artificial Turf (AT) fields are synthetic fields used for athletic arenas and landscaping that are meant to look like natural grass. These fields have a typical lifespan of 8-12 years depending on use and maintenance. AT is made up of 3 layers: infill, fibers, and shockpad. Common infill materials include crumb rubber made from end of life tires, sand, cork or walnut shells. Common types of fibers include nylon, polyethylene, and polypropylene. Foam is most commonly used for the shockpad.

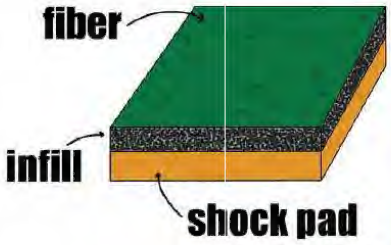
What are PFAS?

PFAS (per- and polyfluoroalkyl substances) are a class of over 12,000 chemicals used in a diverse range of products and industrial processes. PFAS do not naturally degrade in the environment and have been linked to numerous human health effects. PFAS are widely used in AT manufacturing to release plastic fibers from molds and to prevent clogging in the extrusion process. Current U.S. regulations have largely failed to protect public and environmental health from exposure to PFAS. According to the U.S. EPA, there is no safe level of exposure for certain PFAS.

What are general concerns about AT?

Communities, scientists, and athletes are concerned about AT for several reasons:

- **Health concerns** related to heat hazards, injuries, infections and toxic chemical exposure to VOCs, PAHs and heavy metals found in crumb rubber
- **Disposal and claims of "recycling"**
  - An estimated 1,200-1,500 new AT fields are installed every year
  - Old AT becomes plastic waste or is sold in unregulated secondhand markets
  - Some companies claim to have developed tools to recycle materials into new AT. This raises environmental concerns due to melting or incinerating plastic
- **Occupational and local community exposures** from production process
- **Uncertainty about ingredients** due to outsourcing raw materials from other manufactures to make AT and components
- **Chemical runoff** from fields may carry chemical contaminants that leach from AT into nearby groundwater, waterways, and habitats
- **Off-gassing** of VOCs, PAHs, and other toxic chemicals into the atmosphere



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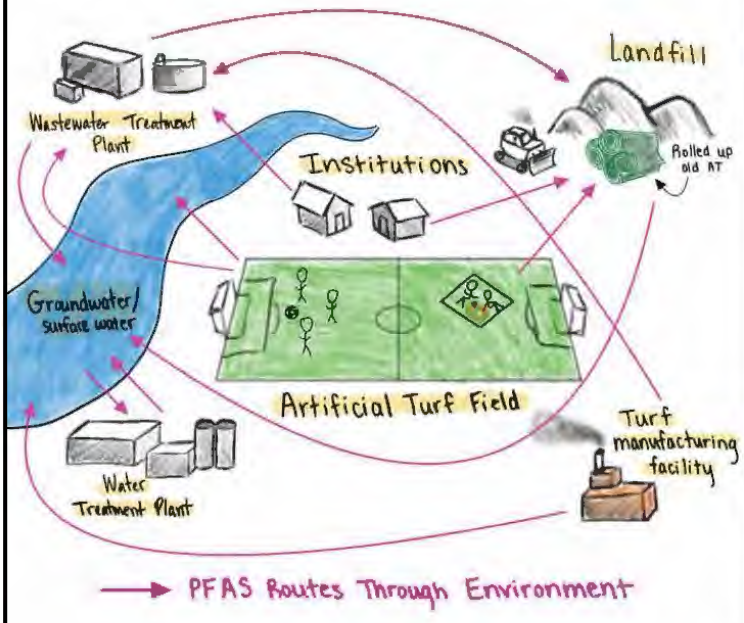

PFAS and AT

PFAS in AT have been getting more attention in recent years. However, uncertainties remain regarding the extent to which AT contributes to PFAS contamination of water and to PFAS exposures among people who use AT fields.

- Testing by scientists, NGOs, industry, and municipalities has found fluorine - an indicator of PFAS presence - in AT, through intentional use and/or unintentional contamination.
- Many uncertainties remain surrounding exposure through inhalation, ingestion, and dermal routes. Health impacts from PFAS exposure via AT are also unstudied at this time.

Cities and states are responding: Boston has banned future AT installations. States including CA and VT have also introduced bills banning PFAS in AT. Many municipalities and communities including Portsmouth, NH, Nantucket, MA, and Martha's Vineyard, MA have held hearings regarding PFAS in AT and the concerns that these communities have.

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TRC. Technical Memorandum Evaluation of PFAS in Synthetic Turf, https://drive.google.com/file/d/1EfxeL5GYiu-9tEIOKxLcCaGX8Cw0e6vc/view

Response to Letter D – Andrea Wald, April 5, 2024.

D-1 The comment states that two emails were sent; the second includes an additional attachment not in the first email. The comment requests the Board to reconsider the proposed artificial turf improvements and resist industry marketing, as the artificial turf would contribute to greenhouse gas emissions that result in wildfires, related toxic air, drought followed by floods and mudslides, coastal erosion, and extreme weather conditions, including hurricanes and heat waves. The comment further states that there is increased pollution throughout the world, including microplastics, and includes a link to and an email attachment of a news article, "Huge Amounts of Plastic from Artificial Grass End Up in the Sea," dated July 25, 2023, from *New Scientist* that summarizes a research study finding huge amounts of plastic in the ocean and river in Spain linked to artificial turf. The comment also includes the original research study, "The Dark Side of Artificial Greening: Plastic Turfs as Widespread Pollutants of Aquatic Environments," published in *Environmental Pollution Journal*. The news article and research study are included as Comment D-5 and Comment D-6, respectively.

Phase 3 of the Project proposes replacing Terra Linda High School's existing grass baseball and multipurpose fields with approximately 200,000 square feet of artificial turf. The modernized fields would include a baseball field and a functioning multipurpose field marked for softball and soccer uses. EIR Section 6.3.3 analyzed the "No Artificial Turf at Southeast Fields Alternative." This Project Alternative was identified as environmentally superior to the Project under ten environmental areas studied in the EIR (air quality, cultural resources, energy, geology and soils, greenhouse gas emissions, hydrology and water quality, noise, recreation, transportation, and tribal cultural resources); environmentally inferior under one environmental issue (aesthetics, i.e., unhealthy, brown grass with gopher holes); and neither environmentally superior nor inferior under one environmental issue (biological resources).

The Final EIR determined that this alternative would not meet six of the eight project objectives. Without the installation of the artificial turf, the existing multipurpose field would continue to be in a state of disrepair and existing sports programs would continue to use the track and field stadium for practices and games. Therefore, this alternative would not achieve the objectives of reducing hazards at Terra Linda High School athletic facilities and improve the Terra Linda High School's physical education and athletic programs. Additionally, there would continue to be no softball facilities on the campus; students would continue to walk over to the Miller Creek District Office to use their baseball field. Therefore, this alternative would not meet the objective to construct state-of-the-art, high-performance indoor and outdoor instructional spaces with flexible learning environments and replace outmoded teaching facilities. This alternative would not implement all District-Wide Target Initiatives applicable to the District's high schools and the Terra Linda High School campus, including installing artificial turf. The No Artificial Turf at Southeast Fields Alternative would not meet the goals to maximize the use of limited District bond funds and District-owned property, as the turf field would not be installed.

This comment letter does not address the adequacy of the EIR analysis. Nevertheless, it will be considered by the Board of Education.

D-2 The comment states that plastic pollution causes habitat and species loss, damage from fossil fuel extraction, toxicity from manufacturing, and environmental injustice that introduces pollution into low-income communities. The comment further states that the

choice between natural and artificial turf is a decision on the climate, environment, solid waste, and other issues that will affect the future atmosphere and environment. The comment provides examples of how artificial turf affects the climate, environment, and landfills. The comment references an investigative report attached to the email, "'Forever Fields': How Pennsylvania became a dumping ground for discarded artificial turf," dated December 13, 2023, published in *The Philadelphia Inquirer* (included as Comment D-7). This article discusses the difficulties of disposing and recycling artificial turf, that there is no government agency that monitors or regulates the disposal of artificial turf, which contains per- and polyfluoroalkyl substances (PFAS) known as "forever chemicals" that do not break down in the environment or human body, and that organizations and governments (New York and California) are banning turf fields and sales.

The comment will be considered by the Board of Education. To the extent this comment concerns the Project's potential environmental effects on biological resources, greenhouse gas emissions, or hydrology and water quality, such potential impacts are addressed in the Draft EIR at Chapter 4.3, Chapter 4.7, and Chapter 4.8, respectively, and where needed, are mitigated to a less than significant impact. The remainder of the comment does not address the adequacy of the EIR analysis. Therefore, no additional response is required.

D-3 The comment provides an infographic of potential health effects caused by PFAS and includes two links and attachments. The first attachment (Comment D-8) is an opinion from The Editorial Board of *The Philadelphia Inquirer*, dated March 21, 2024, explaining why artificial turf should be banned at City parks in Philadelphia due to their link to cancer from PFAS found in the artificial turf. The second attachment (Comment D-9) is an informational flyer on PFAs, "PFAS in Artificial Turf Fields: Uncertainties and Cause for Concern," created by the PFAS Project Lab at Northwestern University.

The comment will be considered by the Board of Education. It does not address the adequacy of the EIR analysis. Therefore, no additional response is required.

D-4 The comment concludes the comment letter and requests the District to consider the environmental effects of artificial turf and consider natural grass for the field upgrade project instead. The comment does not address the adequacy of the EIR analysis. Therefore, no response is required.

D-5 The comment is the abovementioned news article, "Huge Amounts of Plastic from Artificial Grass End Up in the Sea," dated July 25, 2023, from *New Scientist.* The comment does not concern the adequacy of the EIR analysis. Therefore, no response is required.

D-6 The comment is the abovementioned research study, "The Dark Side of Artificial Greening: Plastic Turfs as Widespread Pollutants of Aquatic Environments," published in *Environmental Pollution Journal*. The comment does not concern the adequacy of the EIR analysis. Therefore, no response is required.

D-7 The comment is the abovementioned investigative report, "'Forever Fields': How Pennsylvania became a dumping ground for discarded artificial turf," dated December 13, 2023, published in The Philadelphia Inquirer. The comment does not concern the adequacy of the EIR analysis. Therefore, no response is required.

D-8 The comment is the abovementioned opinion from The Editorial Board of *The Philadelphia Inquirer*, dated March 21, 2024. The comment does not concern the adequacy of the EIR analysis. No additional response is required.

D-9 The comment is the abovementioned informational flyer, “PFAS in Artificial Turf Fields: Uncertainties and Cause for Concern,” created by the PFAS Project Lab at Northwestern University. The comment does not concern the adequacy of the EIR analysis. No response is required.

Letter E

[redacted]
4/8/24

Mr. Tim Ryan
Snr. Director of Strategic Facility Planning
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903

Dear Mr. Ryan

Re: Draft 2024 EIR for Terra Linda High School ("TLHS)
Capital Improvements Project

Thank you for forwarding the Notice that the above EIR was available.

I note that all the "improvements" are listed as "Less than Significant Impact." Therefore, there is no point in me making any further comments. My comments dated September 14, 2024 stand. I note that 10 beautiful mature trees are to be cut as well as further trees by the tennis courts. We are going through severe droughts and climate change and all of us are asked to do our part. Planting trees is one of the suggestions and TLHS is doing just the opposite. Planting small trees will not make up for the mature trees. A bad example for the students. E-1

Lights. According to the EIR, 50' and other lights are to be installed. The grounds between the Auto Shop ("shop") and the school is already like Disneyland. A light on the drive to the shop is so bright that it reaches my house windows on the left-hand side. The only area that is quite dark is by and around the shop and the path leading from Devon Drive. There used to be lights on the shop but those were removed. I was told early in 2021 that although there were security cameras over most of the school and the drive to the shop, there were no cameras by the shop and surrounding area.

With all the millions being spent on "improvements", could you please install security cameras to cover the area of the shop as well as low strength lights on the shop. Thank you. E-2

Yours Sincerely,

Heather Patrick

Response to Letter E – Heather Patrick, April 8, 2024.

E-1 The comment concerns the Project's removal of 10 mature trees near the tennis courts and states that the community is experiencing severe drought and climate change, and everyone is doing their part, including planting trees, yet Terra Linda High School is doing the opposite. The comment states that planting small trees will not make up for the mature trees and is a bad example for students.

The District understands the benefits of trees. However, it must also consider other effects associated with the trees, such as improving campus safety by improving the supervision of students when they are outside by teachers and staff; addressing unhealthy trees that may injure passersby and trees with roots that damage walkways that cause tripping hazards and affect the District's compliance with the ADA; limiting rodents and other pests on the campus; and reducing potential wildfire risks on the campus.

The District is required to comply with CALGreen Section 5.106.12, which requires the planting of shade trees at surface parking, landscape, and hardscape areas on the campus in order to provide shade over 50 percent, 20 percent, and 20 percent of the respective areas within 15 years. Exceptions apply, however, related to areas covered by solar photovoltaic shade structures and organized sports fields. Nevertheless, the District would be planting many trees to meet the CALGreen shading requirement. Please see Section 4.3.4 of the Draft EIR for further discussion.

Please also see Response to Comment A-9, above.

E-2 The comment concerns exterior lighting at the campus, specifically near the Auto Shop area, north of the tennis courts. The comment states this area is very bright and some lights were removed. The comment further provides that security cameras are located throughout most of the school, but there are no cameras in the area of the Auto Shop. The commenter requests that a security camera and low-strength lights be installed at the Auto Shop.

The comment is noted. It does not concern the adequacy of the EIR analysis. Please note that the analysis of lighting is set forth in the Draft EIR in Chapter 4.1, Aesthetics.

Letter F

Subject: FW: EXTERNAL: Fwd: Comments on DEIR TLHS
Attachments: TLHS DEIR comments lovette 04152024.pdf

From: **Stephanie** [redacted]
Date: Mon, Apr 15, 2024 at 4:34 PM
Subject: Comments on DEIR TLHS
To: <tryan@srcs.org>

F-1

Dear Mr. Ryan, Attached please find my comments on the DEIR for TLHS. Thank you

Stephanie Lovette

April 15, 2024

Stephanie Lovette

[redacted]

San Rafael, Ca 94903

[redacted]

Mr. Tim Ryan, Senior Director of Strategic Facility Planning

310 Nova Albion Way San Rafael Ca 94903

Via Email tryan@srcs.org

RE: DEIR for TLHS improvements

Dear SRCS Board Members,

I provided comments on the Initial Study for the Bond Measure Capital Improvement for TLHS. I appreciate that the DEIR provided additional information that addressed many of my questions. However, I continue to have concerns about the impact of the construction and the school operations on the surrounding neighborhood. F-1 (Cont'd)

I have lived in my home at [redacted] since 1992. I voted for the bond issue with the understanding that the educational facilities would be upgraded. I am concerned that a large portion of the funding is being spent on athletic facilities and improvements that have a negative impact on the neighborhood. The neighborhood is being impacted during the school day, after school, and on weekends, year-round. Many of the points of friction could be addressed by better District policies and management. I urge the Board to consider our neighborhood concerns and provide operational mitigation measures during the construction period and beyond.

My main areas of concern are:

- TLHS student parking.
- Construction management issues including hours, parking and noise especially during the early morning hours.
- Impact of large-scale sporting events including the cumulative impacts of multiple events in the same time period.
- The visual impacts of the urbanization of the campus including the removal of mature trees.
- Lack of notification of major neighborhood disruptions.

Student Parking:

I would ask the Board to consider the information in the Executive summary. There are 1,250 students enrolled at TLHS. If all the seniors drove cars there would be a need for about 500 spaces. There are currently 86 student parking spaces, actually even less due to the spots reserved for electric vehicles. Neighborhood surveys have shown that there is a parking overflow into the surrounding neighborhood of at least 100 vehicles. At the same time, the District office has reserved 213 spaces for their exclusive use. This seems a bit excessive. Some or all of the 46 spaces in Lot C need to be opened for student use. F-2

Lovette DEIR Comments Page 2

Construction Best Management Practices:

The DEIR lists a list of actions that the contractor will undertake to prohibit offloading on Nova Albion and signage for contractor parking. (Page 72). Based on past experiences with the school construction, I don't think these actions are adequate. During the last field rebuilding project, I faced weeks of construction trucks idling in front of my house in the early morning. The field gate is directly across from my residence and the contractors did not want to use the school parking lot due to the tight turning radius. Therefore, they just idled in front of the house from 5:30 am until the gate was opened at 8 am. Sometimes, the various truckers decided to have their early morning coffee and chat in my front yard. F-3

During the project, the District did not post construction signage forbidding parking on Nova Albion, there was no mention of delivery and contractor parking in the construction plan and no contractor penalty- except for my early morning tirades. The Board and neighborhood should have the opportunity to review the construction management plan to assure the document contains adequate neighborhood protections.

Parking impacts from school events and rentals:

I believe that the chart comparing the current number of sporting events and the projected number of new events does not adequately account for the increase in facility rentals due to the field and pool upgrades. This is a critical point, because the neighborhood parking is already saturated during large events and field rentals. I have had my driveway blocked and Nova Albion backs up due to people looking for parking. The street parking on the adjacent courts is also taken up with sports parking. It has been much worse since the track was rebuilt the last time. F-4

The District could minimize some of the neighborhood impact of large-scale events with a good management plan. The plan could include a requirement for parking signage that encourages people to park in the TLHS lots or the Miller Creek lot, assure the west gate to the field remains closed, and provide dedicated bus parking. In addition, ALL the TLHS lots (A-C) need to be available for after school and weekend events.

Visual Impacts:

Lighting

The construction at TLHS has resulted in multiple visual negative visual impacts. The campus has now become a light donut disrupting our beautiful views of the night sky. The light donut includes the recent LED lighting facing Nova Albion and the electronic signage on Nova Albion. The District is now installing new "security" lighting. The District has not provided information about the use of the "security" lighting, and it is unclear if that lighting impact was included in the DEIR. The amount of lighting currently on the campus and the proposed security lighting is not necessary and is inappropriate for a residential neighborhood. F-5

Tree removal

The District's previous documents indicate there will be some amount of tree removal. The DEIR states thirty-four trees will be removed. The District has not provided a landscape plan showing the trees that are to be removed or the number and location of replacement trees. F-6

Lovette DEIR Comments Page 3

Cumulative impact of the Construction Projects

TLHS is located in a neighborhood. It is a neighborhood where we sit outside on warm summer evenings and look at the stars. It's a neighborhood where we enjoy our trees, the views of the surrounding hills and our community garden. The District is now installing "security" fencing and lighting and solar panel canopies along Nova Albion, along with the electronic reader board that stays on after school hours and the façade with LED lighting. All of these "improvements" serve to sever the campus from the neighborhood and the neighbors on each side of the valley from one another. TLHS does not share the urban environment of San Rafael High and I fear that District is pursuing a strategy to standardize two campuses with very different physical situations. F-7

Lack of notification of major neighborhood disruptions

The heavy use of the field has impinged on the enjoyment of my home. I have trouble scheduling social events because there is nowhere for my guests to park on heavy sports days. Backyard get togethers are also unpleasant due to the noise of the announcers and the crowd with loud whistles. My parents have trouble finding parking that works with my Mom's wheelchair on event days. This was not as much of a problem before the track was rebuilt.

I have repeatedly requested the schedule of the events at TLHS from the District. The TLHS calendar includes the big football games and graduation, but not the track and field tournaments or the large events sponsored by other entities. I understand that Ms. Puga and her staff are working to implement an athletic facility master calendar that can be accessed by the public. An accessible calendar would really be helpful to address many of the neighbor's frustrations. F-8

I appreciate the opportunity to address the DEIR for the 2024-2029 construction at TLHS. I hope that Board will seriously consider the neighborhood concerns regarding the proposed project and the overall impacts of the school on the neighborhood.

Sincerely,

Stephanie Lovette

Stephanie Lovette

Response to Letter F – Stephanie Lovette, April 15, 2024.

F-1 The comment letter was delivered via email. The comment states that comments submitted by the commenter during the scoping period were addressed in the EIR. However, the commenter still has concerns. The commenter supported the school bond with the understanding that the educational facilities would be upgraded. However, most of the bond funds would be allocated to improvements of the athletic facilities that the commenter believes would have a negative effect on the community. The comment believes their concerns can be addressed by better District policies and management. The comment provides a list of concerns that are elaborated further in the letter and summarized in the below responses.

The comment is noted. It does not concern the adequacy of the EIR analysis.

F-2 The comment concerns student parking. The comment states that if all the high school seniors drove, 500 parking spaces would be needed, that there are currently 86 student parking spaces, and neighborhood parking surveys show that school occupants park on the streets in the surrounding neighborhood. The comment further states that the District office has reserved 213 spaces and that some or all of the spaces in Lot C should be made available for students.

The District has reviewed the neighborhood parking study, which is included as Comment A-17. Please refer to Response to Comment A11 for the District's to the parking study.

The Draft EIR has analyzed the Project's parking impacts. As discussed in Draft EIR, page 4.11-7, approximately 29 vehicles can park on the south side of Nova Albion Way, adjacent to Terra Linda High School, and there are 299 parking stalls on the campus. Draft EIR, page 4.11-16, analyzes the parking effects caused by the increase in facility use and finds that because the expanded use would occur after normal school hours when students have left school, on-site parking on the campus would be available for the additional facility uses, similar to existing conditions. Therefore, the Project would not trigger a demand for additional parking.

Nevertheless, based on comments received during the EIR scoping period, the District considered a parking structure project alternative proposed on either existing surface lot; see Draft EIR Section 6.2.2. This alternative was proposed to reduce potential parking impacts. However, it was eliminated from further consideration as the Project would not result in significant parking impacts as documented in the EIR, and the parking structure would likely result in greater construction-related environmental effects compared to the Project and cause potential aesthetic impacts related to public views of the existing school fields and open space, assuming development of the structure in the student lot.

F-3 The comment concerns construction best management practices. The comment states that the best management practices listed under Draft EIR Section 3.4 are insufficient based on the commenter's experience from previous construction activities at Terra Linda High School (described in the comment). The comment requests the opportunity to review the construction management plan to ensure it contains adequate neighborhood protections.

Per Comment Letter A, the District modified #6 of the best management practices and added two new best management practices (#10 and #11) to Draft EIR Section 3.4; see

Responses A-4, A-5, and A-6. In an effort to further address construction effects mentioned in this comment, the District has also added the below best management practice (#12) to provide the neighborhood the opportunity to review the Project's construction management plan:

12) The District and its construction contractor will prepare a construction management plan that will provide an overview of how the District will handle the Project's construction phasing and logistics to reduce construction effects and nuisances. The construction management plan will be posted on the Bond website (https://www.srcsbondprogram.org/).

The Project proposes a new internal driveway that would provide vehicular access between the northern and southern halves of the campus during Phase 1 of the Project. The new driveway would start from the existing fire access road, south of Building B (Student Commons), and lead to the basketball courts. When development of the driveway is complete, the basketball court would be used for construction staging, storage, and contractor parking. Construction vehicles would be off the public right-of-way. Please refer to Response to Comment A-2 for further discussion.

The proposed construction schedule is presented under Draft EIR Section 3.3.4. As shown, each Project phase would commence as soon as summer starts. It is the District's intent to schedule the bulk of construction during the summers when students are not on the campus and there is available parking on the campus. The heavy construction activities associated with Phase 1 and most of Phases 2 and 3 would occur during the summer; to the extent feasible, construction would be limited during the school year in an effort to reduce impacts to the community and school program.

F-4 The comment concerns parking impacts from school events and rentals. The comment states that a chart comparing existing sporting events and the project number of events do not reflect the increase in facility rentals due to the field and pool upgrades. The comment further states that the neighborhood parking is already saturated during large events and field rentals. The commenter has had their driveway blocked, and Nova Albion is backed up from people looking for parking. The comment notes that traffic has been worse since the track was rebuilt. The comment provides recommendations to minimize neighborhood impact of large-scale events with a good management plan, including parking signage to encourage people to park on all of the lots on the campus and at the Miller Creek lot, as well as providing designated bus parking.

The comment is likely referring to EIR Table 3-1, *Proposed School-Sponsored After-School Events*. The point of this table is to show how many additional school-sponsored events would occur at Terra Linda High School. As shown on Table 3-1, the Project would result in 72 new school-sponsored events, which includes relocating 57 varsity and junior varsity softball practices, games, and tournaments that are currently using the ballfield at the Miller Creek School District, adjacent to the Terra Linda High School campus, and 15 new aquatic tournaments and events.

Discussion of community facility rentals follows Table 3-1. The District is not able to quantify the number of additional community rentals. Please refer to Response to Comment A-10 for further discussion. However, based on the historical rental data at Terra Linda High School and San Rafael High School, the following was assumed: rental of the proposed aquatic center would roughly double from existing rental hours to

approximately 300 hours per year; rental of the artificial turf is assumed to be similar to San Rafael High School, which was rented for 2,100 hours by community groups in 2023; and the increase in rental of the baseball field and tennis courts was anticipated to be low, as these facilities are readily available at nearby parks and other schools.

Traffic and parking of the proposed modernized athletic facilities was analyzed in the Draft EIR. Per comments received during the scoping period, the Draft EIR even assumes a worst-case analysis of operating the proposed artificial turf fields as a new park use. Notwithstanding the conservative analysis, the environmental effects caused by the Project, as documented throughout the Draft EIR, do not rise beyond adopted thresholds. As analyzed, the Project would not conflict with an adopted program, plan, ordinance, or policy on the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and impacts are less than significant. Therefore, the Project would not require mitigation for parking and traffic impacts, as discussed in Impact TRA-1 (Draft EIR, pages 4.11-9 through 4.11-20). For further discussion, please refer to Chapter 4.11 of the Draft EIR.

Nevertheless, the recommendations included in Comment F-4 will be reviewed by the Board of Education who may consider them to address existing parking and traffic conditions not related to the Project.

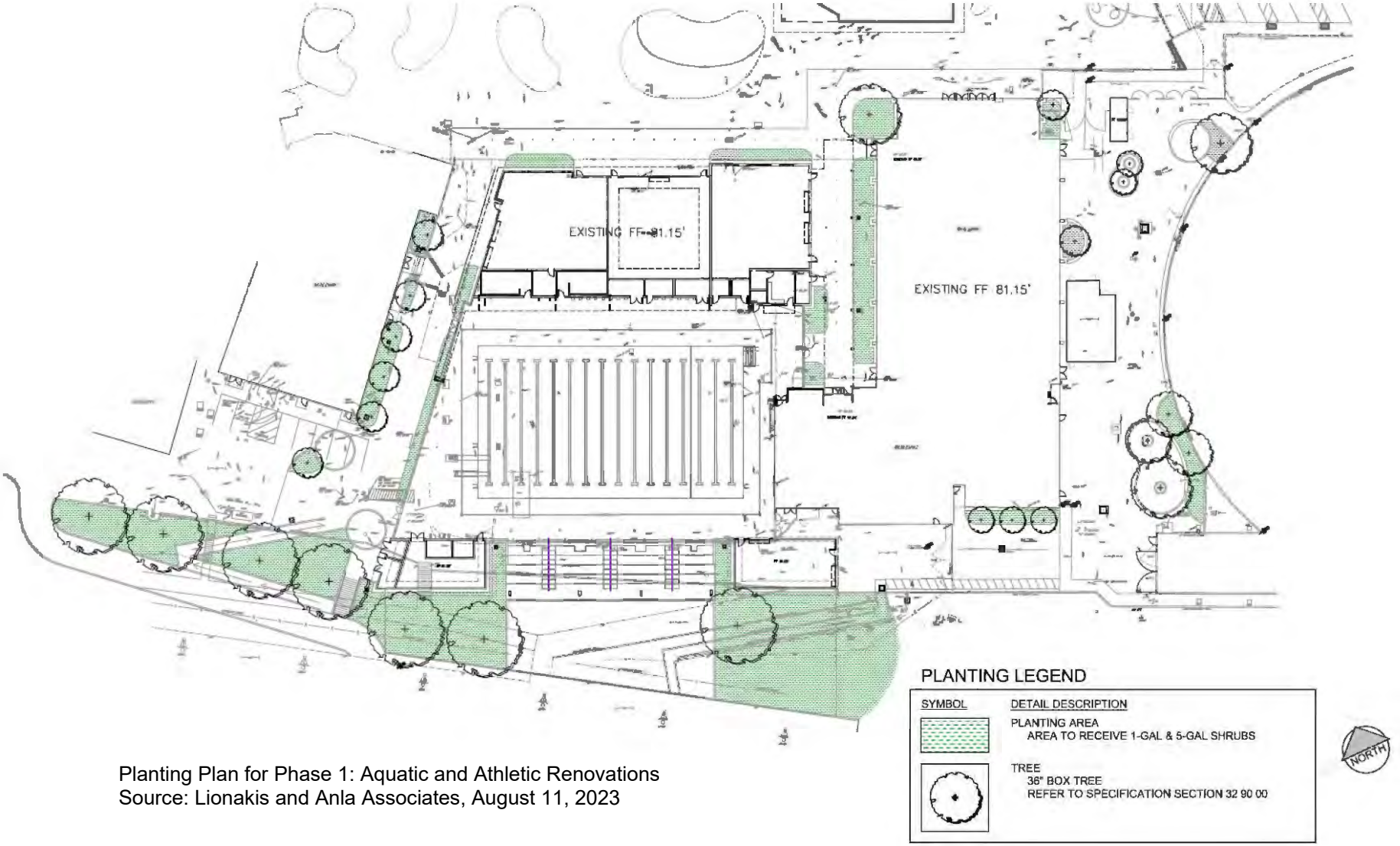
F-5 The comment concerns lighting impacts and provides that recently installed LED lighting facing Nova Albion and electronic signage on Nova Albion have impacted views of the night sky. The commenter is concerned that new security lighting could impact the surrounding residential neighborhood. The District has not finalized the details of the security building and walkway lighting. Draft EIR Impact AES-2 on Page 4.1-12 discusses the proposed lighting and requires Mitigation Measure AES-A to reduce lighting impacts to acceptable standards.

AES-A Prior to the use of any of the exterior stationary lights during operation of the Project, the District and/or its construction contractor shall first test each light source at least 30 minutes after dusk to ensure that the illumination does not create glare or spill into the property lines of adjacent residential uses. All exterior stationary lights used during operation of the Project shall be the minimum intensity necessary, fully shielded (full cutoff), and downcast (emitting no light above the horizontal plan of the fixture). Light levels shall be below 1 footcandle at the property line, and the lamp bulb shall not be directly visible to the light-sensitive viewer.

F-6 The comment concerns tree removal and states that the District has not provided a landscape plan showing the trees proposed for removal and the location of the replacement trees.

EIR Figure 3-6, Proposed Trees for Removal, shows the location of the 34 trees proposed for removal. The trees proposed for removal are those surrounding the tennis and basketball courts, along the east-west slope that separates the campus into upper and lower halves, and three ornamental trees on the northeast end of the track and field stadium. Mature vegetation and trees along the western, southern, and eastern perimeters of the campus will not be removed.

Page P-76, below, shows the proposed planting plan for Phase 1 of the Project. The District has not finalized the planting improvements for Phase 3 of the Project. Notwithstanding the availability of a landscape plan, as provided on Page 3-4 of the EIR, "Project landscaping would comply with shade tree requirements, pursuant to California Green Building Standards Code Section 5.106.12." This section applies to all three Project phases and would require the District to plant trees at surface parking, landscape, and hardscape areas on the Terra Linda High School campus to provide shade over 50 percent, 20 percent, and 20 percent of the respective areas within 15 years. Exceptions apply, however, related to areas covered by solar photovoltaic shade structures and organized sports fields. Nevertheless, the District would be required to plant many trees to meet the CALGreen shading requirement, which does not require the District to prepare a landscape plan. Please also refer to Response to Comment A-9.



Planting Plan for Phase 1: Aquatic and Athletic Renovations
Source: Lionakis and Anla Associates, August 11, 2023

F-7 The comment describes the environmental setting of the residential neighborhood that surrounds Terra Linda High School. The commenter is concerned that the facility improvements previously completed and those that are proposed under the Project would sever the campus from the neighborhood. The comment provides that Terra Linda High School does not share the urban environment of San Rafael High School, and the proposed standardization of facilities for the two high school campuses (situated in different environmental settings) may not be appropriate.

The comment is noted and will be reviewed by the Board of Education. The comment does not concern the adequacy of the EIR analysis. Please note that the environmental setting is addressed in Chapter 2.0 of the Draft EIR.

F-8 The comment requests notification of major events. Since the reconstruction of the track, the heavy use of the field has affected the enjoyment of the commenter's home. They have not been able to schedule social events because there is no street parking on heavy sports days, including parking for aging parents who need to park closer. Noise from the school affects backyard get-togethers. The Terra Linda High School calendar includes big football games and graduation but does not include track and field tournaments. The comment states the school is working on creating an athletic facility master calendar. The commenter hopes the Board will seriously consider the neighborhood concerns related to the Project and the overall impacts of the school on the neighborhood.

The comment is noted and will be reviewed by the Board of Education. The comment does not concern the adequacy of the EIR analysis. Please also refer to Response to Comment A-13.

P.3 Revisions to the Draft EIR

This section lists the revisions made to the Draft EIR as were a result of comments received, text clarification, and/or minor edits and errors discovered subsequent to the circulation of the Draft EIR for public review. The provision of these changes do not alter any impact significance conclusions as disclosed in the Draft EIR. The changes made to the Draft EIR text are shown in underlined text for additions and ~~strikeout~~ for deletions.

The following text have been revised in response to comments received on the Draft EIR.

- Page 3-14, Section 3.4, *Best Management Practices*. The following best management practice has been revised in response to Comment A-4.

  6) The District and its construction contractor will post temporary construction signage to identify where deliveries should be made on-site to prohibit offloading of materials on Nova Albion Way, as well as ~~identifying acceptable locations for contractor parking~~ to prohibit construction vehicles to park on the north side of Nova Albion Way, Devon Drive, Esmeyer Drive, El Pavo Real Circle, Corte Pacheco, Cermenho Court, Don Timoteo Court, and Viscaino Way.

- Page 3-14, Section 3.4, *Best Management Practices.* The following best management practice has been added in response to Comment A-5.

  10) To reduce greenhouse gas emissions and the exposure of neighboring residents to toxic emissions, the District and its construction contractor will implement the following provisions:

  (a) Limit idling time of vehicles and equipment to less than 2 minutes.

  (b) Encourage carpools, secure bicycle parking to construction workers, and encourage use of public transportation.

- Page 3-14, Section 3.4, *Best Management Practices.* The following best management practice has been added in response to Comment A-6.

  11) To the extent feasible, the District and its construction contractor will announce and provide notice of anticipated lane or road changes resulting from the proposed Project on the Terra Linda High School digital sign board along Nova Albion Way.

- Page 3-14, Section 3.4, *Best Management Practices.* The following best management practice has been added in response to Comment F-3.

  12) The District and its construction contractor will prepare a construction management plan that will provide an overview of how the District will handle the Project's construction phasing and logistics to reduce construction effects and nuisances. The construction management plan will be posted on the Bond website (https://www.srcsbondprogram.org/).

- Page 4.1-9, Section 4.1.4, *Impact Analysis.* The following text been revised in response to Comment A-7.

  The Project is not subject to City municipal regulations. Nonetheless, the proposed improvements would be generally consistent with the City's Design Guidelines for nonresidential development regarding landscaping, lighting, building form, pedestrian circulation, entryways, and materials and colors; refer to Section 4.1.1, Regulatory Setting, above.

The following text have been revised to clarify the Draft EIR.

- **Page 3-2, Section 3.2, *Project Objectives.*** The following project objective has been revised to be consistent with that listed on Page ES-2, Section ES.4, S*ummary of Project Alternatives*; Page 5-2, Section 5.2.2, *Justification for the Use of Nonrenewable Resources*; and Page 6-2, Section Ch 6.1, *Project Objectives.*

  - Improve ~~the experience of users of~~ Terra Linda High School's physical education and athletic programs for its ~~facilities, including~~ students and other students in the District who use the facilities.

- **Page 3-15, Section 3.4, Best Management Practices.** Best management practice #8 has been removed because it duplicates Mitigation Measure AQ-A, as shown on Page ES-6, Table ES-1: *Summary of Project Impacts and Mitigation Measures*, and on Page 4.2-17, Section 4.2.4, *Impact Analysis.*

  ~~8) The District and its construction contractor will comply with the Bay Area Air Quality Management District's (BAAQMD) Basic Construction BMPs, as follows:~~

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

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

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

  ~~d) All vehicle speeds on unpaved roads shall be limited to 15 mph.~~

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

  ~~f) All trucks and equipment, including their tires, shall be washed off prior to leaving the site.~~

  ~~g) Unpaved roads providing access to sites located 100 feet or farther from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.~~

  ~~h) Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's General Air~~

~~Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.~~

- **Page 6-15, Section 6.3.3, *No Artificial Turf at Southeast Fields Alternative.*** The finding in the following paragraph has been revised to clarify whether the No Artificial Turf at Southeast Fields Alternative is superior to the Project related to the topic of greenhouse gas emissions.

  The combined area of impact for construction of the proposed Project would be smaller under the No Artificial Turf at Southeast Fields Alternative. Therefore, construction-related GHG emissions would be less than the proposed Project. Similar to the proposed Project, this alternative would include improvements to energy efficiency, including the replacement of existing boilers and the use of solar energy, which would reduce operational emissions. As such, the No Artificial Turf at Southeast Fields Alternative would be ~~neither~~ environmentally superior ~~nor inferior~~ to the proposed Project.

- **Page 6-17, Section 6.4, *Environmentally Superior Alternative.*** The following summary been revised based on the changes made to Page 6-15, see above.

  Table 6-1, Comparison of Alternatives, summarizes the comparative analysis presented above (i.e., the alternatives compared to the proposed Project). As shown in Table 6-1, the No Artificial Turf at Southeast Fields Alternatives would be environmentally superior under <u>ten</u> ~~nine~~ environmental issues, environmentally inferior under one environmental issue, and neither environmentally superior nor inferior under <u>one</u> ~~two~~ environmental issues. Accordingly, the No Artificial Turf at Southeast Fields Alternative is the environmentally superior alternative, as it would avoid and have less inferior environmental impacts as compared to the proposed Project.

  The No Artificial Turf at Southeast Fields Alternative would result in reduced environmental impacts regarding air quality, cultural resources, energy, geology and soils, <u>greenhouse gas emissions</u>, hydrology and water quality, noise, recreation, transportation, and tribal cultural resources. This alternative would result in a greater environmental impact under aesthetics and have similar impacts under biological resources ~~and GHG emissions~~.

- **Page 6-18, Section 6.4, *Environmentally Superior Alternative.*** Table 6-1*: Comparison of Alternatives*, has been updated based on the changes made to Page 6-15, see above.

Table 6-1: Comparison of Alternatives

Environmental Issue	Proposed Project	Alternative: No Project	Alternative: No Reconstruction of Aquatic Facility	Alternative: No Artificial Turf at Southeast Fields
Aesthetics	Less Than Significant Impact With Mitigation Incorporated	=	+	/
Air Quality	Less Than Significant Impact With Mitigation Incorporated	+	+	+
Biological Resources	Less Than Significant Impact With Mitigation Incorporated	+	=	=
Cultural Resources	Less Than Significant Impact	+	+	+
Energy	Less Than Significant Impact	/	/	+
Geology and Soils	Less Than Significant Impact	+	+	+
Greenhouse Gas Emissions	Less Than Significant Impact	/	/	+ ~~=~~
Hydrology and Water Quality	Less Than Significant Impact	+	+	+
Noise	Less Than Significant Impact	+	+	+
Recreation	Less Than Significant Impact	+	+	+
Transportation	Less Than Significant Impact	+	=	+
Tribal Cultural Resources	Less Than Significant Impact	+	+	+
Summary of Comparison		+ 9 / 2 = 1	+ 8 / 2 = 2	+ 10 ~~9~~ / 1 = 1 ~~2~~

\+ Indicates the alternative's impact is less than the proposed Project. The alternative is environmentally superior.
/ Indicates the alternative's impact is greater than the proposed Project. The alternative is environmentally inferior.
= Indicates the alternative's impact is equal to the proposed Project. The alternative is neither environmentally superior nor inferior.

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EXECUTIVE SUMMARY

This Environmental Impact Report (EIR) addresses the potential environmental effects associated with the proposed Terra Linda High School Capital Improvements Project (Project). The California Environmental Quality Act (CEQA) requires that government agencies consider the environmental consequences before taking action on projects over which they have discretionary approval authority. An EIR analyzes potential environmental consequences in order to inform the public and support informed decisions by local and state governmental agency decision makers. This document focuses on environmental impacts determined to be potentially significant in the Initial Study completed for this Project (see Appendix A-1).

San Rafael City Schools (District), as the lead agency, through its Board of Education, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment.

The data for this EIR derive from on-site field observations; discussions with affected agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature; and specialized environmental assessments for aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hydrology and water quality, noise, recreation, transportation and traffic, and tribal cultural resources.

ES.1 Environmental Procedures

This EIR has been prepared pursuant to CEQA to assess the environmental effects associated with implementation of the Project, as well as anticipated future discretionary actions and approvals. CEQA has established six main objectives for an EIR:

1. Disclose to decision makers and the public the significant environmental effects of proposed activities.
2. Identify ways to avoid or reduce environmental damage.
3. Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
4. Disclose to the public reasons for agency approval of projects with significant environmental effects.
5. Foster interagency coordination in the review of projects.
6. Enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental review documentation under CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the environmental consequences of a proposed project with the potential to result in significant, adverse environmental impacts.

An EIR is one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR; determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines; determine that it reflects the independent judgment of the lead agency; adopt findings concerning the project's significant environmental impacts, if any, and project alternatives; and adopt a statement of overriding considerations if significant impacts cannot be avoided.

ES.2 Type and Purpose of the Environmental Impact Report

This EIR has been prepared as a "Project EIR," as defined by Section 15161 of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3). This type of EIR examines the environmental impacts of a specific development project and focuses primarily on the changes in the environment that would result from the proposed development. The EIR must examine all phases of the project, including planning, construction, and operation.

ES.3 Summary of Project

The Project, proposed at 320 Nova Albion Way, is located in the City of San Rafael (City), in southeastern Marin County, California (campus and Project site). The campus is bounded by Nova Albion Way on the north and east, the Miller Creek School District Office to the southeast, and single-family residences along Devon Drive to the south and west and Esmeyer Drive to the north. The Project site comprises 30 acres and is developed with a high school campus.

The proposed Project would be implemented in three general phases. Phase 1 consists of the demolition and reconstruction of the existing pool and related facilities, renovation of the existing locker and team rooms (southern half of Building K), demolition and reconstruction of Building H (ancillary gymnasium with dance, weight room, mat room, restrooms, storage, aquatic concessions), and stadium upgrades. Phase 2 consists of the modernization of the main classroom buildings and installation of campus-wide security fencing. Phase 3 consists of the replacement of natural turf with artificial turf for the creation of baseball and multiuse (softball and soccer) fields, improvements at the tennis courts, and beautification improvements to the track and field stadium.

The proposed Project would not increase the student seating capacity at Terra Linda High School but would result in a reduction in enrollment capacity by 70 seats to 1,400 seats. The proposed aquatic facility would meet California Interscholastic Federation standards, which would allow the existing swimming and water polo programs to host regional and state championship competitions. The proposed artificial turf would accommodate Terra Linda High School's existing physical education and athletic programs, and allow Terra Linda High School's junior varsity and varsity softball program, including practices and games, to be relocated on-campus. The proposed facilities would continue to be available for community use through the Civic Center Act.

ES.4 Summary of Project Alternatives

In accordance with the CEQA Guidelines, alternatives to the proposed Project have been considered in this EIR to explore potential means to mitigate or avoid the significant environmental impacts associated with implementation of the Project while still achieving the below primary objectives for the Project. Refer to Chapter 6, Alternatives, for a complete discussion of the Project alternatives.

- Maximize the use of limited District bond funds.
- Maximize the use of District-owned property.
- Construct climate-resilient and sustainable facilities and implement "green building" practices.
- Improve campus safety and security for students and staff.

- Construct state-of-the-art, high-performance indoor and outdoor instructional spaces with flexible learning environments and replace outmoded teaching facilities.

- Reduce hazards at Terra Linda High School athletic facilities.

- Improve Terra Linda High School's physical education and athletic programs for its students and other students in the District who use the facilities.

- Implement District-wide Target Initiatives applicable to the District's high schools and the Terra Linda High School campus.

ES.4.1 No Project Alternative

Under the No Project Alternative, the proposed improvements at the campus would not be implemented. The existing facilities at the Project site would remain in their existing conditions at the time the Notice of Preparation (NOP) was prepared (August 29, 2023).[1] No new development or improvements (i.e., reconstruction, modernization, or upgrades of the athletic and classroom facilities) would occur. The No Project Alternative would not achieve any of the Project's basic objectives.

ES.4.2 No Reconstruction of Aquatic Facility Alternative

Under the No Reconstruction of Aquatic Facility Alternative, the Project would implement the proposed improvements with the exception of the competition-level aquatic facility. The aquatic facility, replacement outdoor swimming pool and deck, new light-emitting diode video display, grandstand, and battery storage facility would not be constructed or installed. The existing pool and deck, lunch shelter, pool equipment building, lighting, fire lane route, and slope separating the campus from northern and southern halves would remain as they are. The No Reconstruction of Aquatic Facility Alternative would not achieve six of the eight Project objectives to the same extent as the proposed Project: (1) maximize the use of limited District bond funds, (2) maximize the use of District-owned property, (3) construct climate-resilient and sustainable facilities and implement "green building" practices, (4) construct state-of-the-art, high-performance indoor and outdoor instructional spaces with flexible learning environments and replace outmoded teaching facilities, (5) improve Terra Linda High School's physical education and athletic programs for its students and other students in the District who use the facilities, and (6) implement District-wide Target Initiatives, as the aquatic facility would not be redeveloped.

ES.4.3 No Artificial Turf at Southeast Fields Alternative

Under the No Artificial Turf at Southeast Fields Alternative, the Project would implement the proposed improvements with the exception of the artificial turf in the southern half of the campus. There would be no installation of permeable, artificial turf, a shot put station, or potential other improvements including dugouts, portable bleacher stands, new scoreboards, site lighting, pathway upgrades compliant with the Americans with Disabilities Act, new drinking fountain, batting cages, and other features. Additionally, improvements to capture runoff would not be installed within the fields, including a new irrigation system and storm drainage infrastructure. The existing fields would remain in their current condition, including with gopher holes. The No Artificial Turf at Southeast Fields Alternative would not fully meet six of the Project's objectives: (1) maximize the use of limited District bond funds, (2) maximize the use of District-owned property, (3) construct state-of-the-art, high-performance indoor and outdoor instructional spaces with

[1] Existing conditions include any improvements previously approved by the District's Board of Education that are yet to be constructed.

flexible learning environments and replace outmoded teaching facilities, (4) reduce hazards at Terra Linda High School athletic facilities, (5) improve Terra Linda High School's physical education and athletic programs for its students and other students in the District who use the facilities, and (6) implement District-wide Target Initiatives, as the artificial turf field and related improvements would not be installed.

ES.5 Issues Raised by the Public and Agencies

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR address issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the Project, the major issues to be resolved include decisions by the lead agency as to:

1. Whether this EIR adequately describes the environmental impacts of the Project.
2. Whether the benefits of the Project override the environmental impacts that cannot be feasibly avoided or mitigated to a level of insignificance.
3. Whether there are any alternatives to the Project that would substantially lessen any of the significant impacts of the Project and achieve most of the basic Project objectives.

ES.6 Areas of Controversy

In accordance with Section 15123(b)(2) of the CEQA Guidelines, the EIR summary must identify areas of controversy known to the lead agency, including issues raised by agencies and the public.

Prior to preparation of the EIR, the NOP and Initial Study were distributed for a 30-day scoping period from September 1, 2023, to October 2, 2023. A summary of the NOP comments received are in Chapter 1, Introduction (see Tables 1-1, 1-2, and 1-3). Agency letters and public comments received included requests to address existing conditions, aesthetics, air quality, greenhouse gases, hydrology and water quality, noise, transportation and traffic, and other general considerations for development of the site.

ES.7 Summary of Environmental Impacts

An analysis of the potential environmental impacts associated with the Project has been conducted and is contained in this EIR. Based on the findings of the Initial Study and the comments received during the scoping period, it was determined that impacts related to agriculture and forestry resources, hazards and hazardous materials, land use and planning, mineral resources, population and housing, public services, utilities and service systems, and wildfire do not require further evaluation as part of the EIR. Twelve environmental issue areas are analyzed in detail in Chapter 4, Impact Analysis and Mitigation Measures, of this EIR. Table ES-1 summarizes the potential environmental impacts detailed in Chapter 4 that would result during construction and operation of the proposed Project, mitigation measures that would lessen potentially significant environmental impacts, and the level of significance of the environmental impacts that would remain after implementation of any necessary mitigation. The EIR identifies potentially significant impacts requiring mitigation measures for the topics of aesthetics, air quality, biological resources, and recreation; implementation of the mitigation measures would reduce impacts to below significance. With adherence to existing laws and regulations and the implementation of best management measures (see Section 3.4), the Project would result in less than significant impacts to the cultural resources, energy, geology and soils, greenhouse gas emissions, hydrology and water quality, noise, transportation and traffic, and tribal cultural resources. The Project would not result in any significant and unavoidable impacts.

Table ES-1: Summary of Project Impacts and Mitigation Measures

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
AESTHETICS			
AES-1: Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than significant	No mitigation measures are required.	Less than significant
AES-2: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Potentially significant	**AES-A:** Prior to the use of any of the exterior stationary lights during operation of the Project, the District and/or its construction contractor shall first test each light source at least 30 minutes after dusk to ensure that the illumination does not create glare or spill into the property lines of adjacent residential uses. All exterior stationary lights used during operation of the Project shall be the minimum intensity necessary, fully shielded (full cutoff), and downcast (emitting no light above the horizontal plan of the fixture). Light levels shall be below 1 footcandle at the property line, and the lamp bulb shall not be directly visible to the light-sensitive viewer.	Less than significant
AIR QUALITY			
AQ-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?	Less than significant	No mitigation measures are required.	Less than significant
AQ-2: Would the project 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?	Potentially significant	**AQ-A:** The District shall implement the following Bay Area Air Quality Management District Construction Best Management Practices by inclusion of such requirements in all construction contracts:	Less than significant

Table ES-1, continued

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• All exposed surfaces (e.g., unpaved parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. • All trucks and equipment, including their tires, shall be washed off prior to leaving the site. • Unpaved roads providing access to sites located 100 feet or farther from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel. • Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's General Air Pollution	

Table ES-1, continued

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		Complaints number shall also be visible to ensure compliance with applicable regulations.	
AQ-3: Would the project expose sensitive receptors to substantial pollutant concentrations?	Less than significant	No mitigation measures are required.	Less than significant
BIOLOGICAL RESOURCES			
BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Potentially significant	**BIO-A:** If disturbance (including trimming of large limbs) of on-site trees along the Project Site's eastern and southern perimeters is required to accommodate the Project, the following measure will apply: Prior to the removal of trees along the eastern and southern perimeters of the Campus, a qualified biologist shall conduct a habitat assessment for bats. A qualified bat biologist must have: 1) at least two years of experience conducting bat surveys that resulted in detections for relevant species, such as pallid bat, with verified project names, dates, and references, and 2) experience with relevant equipment used to conduct bat surveys. The habitat assessment shall be conducted a minimum of 30 to 90 days prior to tree removal and shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, exfoliating bark, suitable canopy for foliage roosting species). If the qualified biologist identifies potential bat habitat trees, then tree trimming and tree removal shall not proceed unless the following occurs: 1) a qualified biologist conducts night emergence surveys or completes visual examination of roost features that establishes absence of roosting bats, or 2) tree trimming and tree removal occurs only during seasonal periods of bat activity, from approximately March 1 through April 15 and September 1 through October 15, and tree removal occurs	Less than significant

Table ES-1, continued

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		using the two-step removal process. Two-step tree removal shall be conducted over two consecutive days. The first day (in the afternoon), under the direct supervision and instruction by a qualified biologist with experience conducting two-step tree removal, limbs and branches shall be removed by a tree cutter using chainsaws only; limbs with cavities, crevices or deep bark fissures should be avoided. The second day the entire tree shall be removed. **BIO-B:** To avoid impacts to nesting birds, removal of trees and shrubs (including tree trimming) shall be performed from September 1 to January 31, outside of the general nesting bird season. This seasonal avoidance may also apply to other Project activities that occur in proximity to trees and vegetation to the extent feasible, including (but not limited to) ground disturbance and the demolition of existing structures and facilities. If such avoidance is not feasible, a preconstruction nesting bird survey by a qualified biologist shall be performed no more than 14 days prior to the initiation of tree/vegetation removal under each Phase. The survey shall cover impacted vegetation/substrates and surrounding areas (as accessible) within approximately 250 feet. If active bird nests are found during the survey, an appropriate no-disturbance buffer shall be established by the qualified biologist. Once it is determined that the young have fledged (left the nest) or the nest otherwise becomes inactive (e.g., due to predation), the buffer may be removed and work may be initiated within the formerly buffered area.	

Table ES-1, continued

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
CULTURAL RESOURCES			
CUL-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Less than significant	No mitigation measures are required.	Less than significant
CUL-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Less than significant	No mitigation measures are required.	Less than significant
CUL-3: Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Less than significant	No mitigation measures are required.	Less than significant
ENERGY			
ENE-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than significant	No mitigation measures are required.	Less than significant
ENE-2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less than significant	No mitigation measures are required.	Less than significant

Table ES-1, continued

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
GEOLOGY AND SOILS			
GEO-1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i. Strong seismic ground shaking? ii. Seismic-related ground failure, including liquefaction? iii. Landslides?	Less than significant	No mitigation measures are required.	Less than significant
GEO-2 Would the project result in substantial soil erosion or the loss of topsoil?	Less than significant	No mitigation measures are required.	Less than significant
GEO-3: Would the project 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	No mitigation measures are required.	Less than significant
GEO-4: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less than significant	No mitigation measures are required.	Less than significant
GEO-5: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less than significant	No mitigation measures are required.	Less than significant
GREENHOUSE GAS EMISSIONS			
GHG-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than significant	No mitigation measures are required.	Less than significant

Table ES-1, continued

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
GHG-2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less than significant	No mitigation measures are required.	Less than significant
HYDROLOGY AND WATER QUALITY			
HWQ-1: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less than significant	No mitigation measures are required.	Less than significant
HWQ-2: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in (i) substantial erosion or siltation on- or off-site, (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, or (iii) 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	No mitigation measures are required.	Less than significant
HWQ-3: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less than significant	No mitigation measures are required.	Less than significant

Table ES-1, continued

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
NOISE			
NOI-1: Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than significant	No mitigation measures are required.	Less than significant
NOI-2: Would the project generate excessive groundborne vibration or groundborne noise levels?	Less than significant	No mitigation measures are required.	Less than significant
RECREATION			
REC-1: Would 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	Mitigation Measures **AES-A, AQ-A, BIO-A,** and **BIO-B**.	Less than significant
TRANSPORTATION			
TRA-1: Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Less than significant	No mitigation measures are required.	Less than significant
TRA-2: Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less than significant	No mitigation measures are required.	Less than significant

Table ES-1, continued

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
TRIBAL CULTURAL RESOURCES			
TCR-1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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 California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Less than significant	No mitigation measures are required.	Less than significant
TCR-2: Would the project the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Less than significant	No mitigation measures are required.	Less than significant

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CHAPTER 1
INTRODUCTION

This Environmental Impact Report (EIR) has been prepared by San Rafael City Schools (District) to evaluate potential environmental effects that would result from implementation of the proposed Terra Linda High School Capital Improvements Project (Project). This EIR has been prepared in conformance with the California Environmental Quality Act of 1970 (CEQA) statutes (California Public Resources Code Section 21000 et seq., as amended) and its implementing guidelines (California Code of Regulations, Title 14, Section 15000 et seq.). The District is the lead agency responsible for compliance with CEQA for the Project.

1.1 Purpose of the EIR

CEQA requires the preparation of an EIR when there is substantial evidence supporting a fair argument that a proposed project may have a significant effect on the environment. The purpose of an EIR is to provide decision makers, public agencies, and the general public with an objective and informational document that fully discloses the environmental effects of a proposed project. Additionally, the EIR process is intended to identify the ways that environmental damage can be avoided or significantly reduced; identify feasible mitigation measures and alternatives that might prevent significant, avoidable damage to the environment; and disclose to the public the reasons that a governmental agency approves a project if significant environmental effects are involved. This EIR provides information about the potential effects of the Project.

As the lead agency for the Project, the District is required to consider the information in the EIR, along with any other relevant information, in making its decisions about the Project. Although an EIR does not determine the ultimate decision that will be made regarding implementation of a project, CEQA requires lead agencies to consider the information in the EIR and make findings regarding each significant effect identified therein. The District has sole authority to consider and certify the Final EIR, approve the Project, and adopt a Mitigation Monitoring and Reporting Program, Findings of Fact, and Statement of Overriding Considerations, if warranted. Other agencies may also use this EIR in their review and approval processes, as indicated in Chapter 3.0, Project Description.

1.2 Summary of the Proposed Project

The District proposes capital improvements at Terra Linda High School to modernize and/or replace existing outdated and aging academic and physical education facilities. The Project would be funded by Local Bond Measure B, approved by the District's constituents in June 2022.

The Project is located within the jurisdictional boundary of the City of San Rafael (City), in southeastern Marin County, California. The Project, proposed at 320 Nova Albion Way, is in the northwestern area of the City (campus and Project site). The campus is irregularly shaped and bounded by Nova Albion Way on the north and east, the Miller Creek School District Office to the southeast, and single-family residences along Devon Drive to the south and west and Esmeyer Drive to the north. The Project site consists of 30 acres and is developed with a high school campus.

The proposed Project would be implemented in three general phases, summarized as follows:

- Phase 1 involves the renovation of the existing locker and team rooms (southern half of Building K), modernization of the western-end of the track and field stadium, demolition

and reconstruction of Building H (ancillary gymnasium with dance, weight room, mat room, restrooms, storage, aquatic concessions), and the complete demolition and reconstruction of the existing pool, equipment room, storage areas, and the pool deck.

- Phase 2 consists of two components: the modernization of the main classroom buildings (Buildings A, M, and L) and installation of campus-wide security fencing.

- Phase 3 is composed of three components: replacement of natural turf with artificial turf for the creation of baseball and multiuse (softball and soccer) fields; improvements at the tennis courts; and beautification improvements to the stadium.

The proposed Project would not increase the student seating capacity at Terra Linda High School. The proposed removal of Buildings Q/R (which are temporarily being used as office space for the Bond Program) would result in a corresponding reduction in enrollment capacity by 70 seats to 1,400 seats. The proposed aquatic center would meet California Interscholastic Federation (CIF) standards, which would allow the existing swim/dive and water polo programs to host CIF competitions. The proposed artificial turf would accommodate Terra Linda High School's existing physical education and athletic programs, and allow off-site Terra Linda High School junior varsity and varsity softball program, including practices and games, to be relocated on-campus. The proposed facilities would continue to be available for community use through the Civic Center Act.

For more detailed information about construction and operation, refer to Chapter 3.0, Project Description.

1.2.1 Resource Areas Analyzed in this EIR

In accordance with the State CEQA Guidelines Section 15143, this EIR focuses on the environmental impacts identified as potentially significant during the public scoping process, including comments received as part of the process. The NOP and Initial Study are included in Appendix A-1 of this EIR, and comments received as part of the public scoping process are included as Appendix A-2. Based on the findings of the Initial Study and the comments received during the scoping period, it was determined that impacts related to agriculture and forestry resources, hazards and hazardous materials, land use and planning, mineral resources, population and housing, public services, utilities and service systems, and wildfire do not require further evaluation as part of the EIR. These resource areas are briefly addressed in Chapter 5.0, Other CEQA Considerations, of this EIR. The resource areas analyzed in this EIR include the following:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Noise
- Recreation
- Transportation
- Tribal Cultural Resources

This EIR also includes a discussion of other CEQA-mandated issues, including cumulative impacts, significant irreversible environmental changes, growth-inducing impacts, and alternatives.

1.3 The CEQA Environmental Process

1.3.1 Notice of Preparation and Initial Study

An NOP was published for the Project on August 29, 2023, to notify responsible and trustee agencies, stakeholders, and other interested parties that the District planned to prepare a Draft EIR and to request input regarding the scope and content of the environmental analysis and information to be included in the Draft EIR. The NOP and Initial Study were circulated for a 30-day scoping period from September 1, 2023, to October 2, 2023. The NOP was published in the *Marin Independent Journal* on September 1, 2023, and also sent to five regional public agencies, stakeholders, and interested parties, as well as over 200 residences and businesses surrounding the campus. The NOP was also submitted to the State Clearinghouse in the Governor's Office of Planning and Research (OPR) for review by state agencies. The NOP and Initial Study were available for review online at https://www.srcsbondprogram.org and OPR's CEQAnet web portal, and a hard copy was available at the San Rafael City Schools District Office, located at 310 Nova Albion Way, Room 505, San Rafael, CA 94903.

The District received eight comment letters, including two from public agencies, during the EIR scoping period. The written responses to the NOP and Initial Study are included in Appendix A-2. Table 1-1 and Table 1-2 summarize the public comment letters received from agencies and the public, respectively.

The District also held one public scoping meeting to inform interested parties of the Project and obtain input on the scope of the contents of the EIR. The in-person meeting was held at the Terra Linda High School Innovation Hub, located at 320 Nova Albion Way, San Rafael, CA, 94903, on September 14, 2023. Verbal and written comments received at the scoping meeting are summarized in Table 1-3 and a meeting summary memorandum, which is included in Appendix A-3.

Table 1-1: Agency Comments on the NOP

Issue Topic Area and EIR Reference Section	Comment Summary
Department of Toxic Substances Control (DTSC): Hazards and Hazardous Materials (Appendix A-1, Initial Study)	• Requires that the District comply with the requirements of California Education Code Sections 17210, 17213.1 and 17213.2 if using state funds for the Project (unless otherwise specifically exempted under Section 17268). • If not using state funds, recommends that the District continue to investigate and clean up the Project site, if necessary, under review of the County and DTSC. • Recommends that a Phase I Environmental Site Assessment and/or Preliminary Environmental Assessment be conducted to assess presence or absence of hazardous materials at the Project site, and due to no records of prior assessments. • If structures are to be demolished, recommends surveys for lead-based paint/products, mercury, asbestos-containing materials, and polychlorinated biphenyl caulk. • Recommends soil sampling for potential contamination for soil import to backfill excavated areas.
Native American Heritage Commission (NAHC): Cultural Resources (Section 4.4) and Tribal Cultural Resources (Section 4.12)	• The Project requires tribal consultation under Assembly Bill 52. • Senate Bill 18 applies if a 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. • Recommends tribal consultation with California Native American tribes that are traditionally and culturally affiliated with the Project's geographic area. • Provides additional requirements of Assembly Bill 52, such as a 14-day period to provide notice, mandatory topics of consultation, and examples of mitigation measures. • Provides provisions of Senate Bill 18. • Recommends contact with the California Historical Research Information System Center for an archaeological record search. • If an archaeological inventory survey is required, recommends a report detailing the findings and recommendations of the records search and field survey. • Recommends contact with the NAHC for a Sacred Lands File search and a Native American Tribal Consultation List. • Advises that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence and recommends measures for a mitigation and monitoring reporting program.

Table 1-2: Public Comments on the NOP

Topic Area and EIR Reference Section	Comment Summary
Environmental Setting (Chapter 2.0)	• Acknowledge residents on Nova Albion are directly impacted. • Ongoing construction effects (hours, noise, vehicles) affect adjacent residents. • Suggests the analysis include cumulative impact from Northgate Mall Project and potential construction at the Kaiser campus. • Suggests cumulative impact analysis of the increased programming of sports facilities, including all lights turned on. • Suggests the school provide a complete schedule of sports events. • Suggests the EIR analyze cumulative impacts of extended facility use. • Suggests discussion of the presence of residences on Nova Albion Way and adjacent courts and impacts on residences. • Analysis should assume all facilities will be used on the weekends from August to June, and events will be amplified. • Suggests a full evaluation of expanded facility use; concerned that although enrollment would remain static, the number of days and hours of facility use would change.
Project Description (Chapter 3.0)	• Recommends the Project exceed CALGreen standards. • Suggests more details and discussion regarding proposed pool lighting, security lighting, site lighting, scoreboards, physical education lighting, and stadium lighting (if applicable). • Not supportive of the expanded field use and intensification of weekend and night use of the fields and gym. • Suggests the District provide a complete construction management plan.
Aesthetics (Section 4.1)	• Concerned that public views would be impacted by tree removal for the ADA-compliant pathways, as existing trees buffer the views from residences of high activity areas at the school. Recommends a tree replacement plan and buffer landscaping to mitigate the impact of tree removal. • Requests to evaluate the maintenance of the existing community character. • Requests a landscaping plan that details existing trees to be removed and new trees to be planted. • Agrees with the Initial Study's finding of potentially significant impact for light and glare. Recommends the analysis include impacts from the aquatic center, field turf, and extended use of facilities. • Concerned about impacts of new lighting for aquatic center, site lighting, scoreboards, etc., as current LED lighting for the gymnasium creates sky glow at night. • Suggests analysis of cumulative impact of simultaneous proposed lighting combined with existing lighting. • Concerned about degradation of neighborhood due to litter.

Table 1-2, continued

Topic Area and EIR Reference Section	Comment Summary
Air Quality (Section 4.2)	• Requests the analysis include consideration of increased traffic from sporting events, the adjacent preschool and daycare facility, several nearby group homes for the disabled, elderly residents in surrounding neighborhood, and cumulative impacts with future nearby new development (245 Nova Albion Way, Northgate Town Square Project).
Greenhouse Gases (GHG) (Section 4.7)	• Recommends the GHG technical report evaluate increased GHG emissions for additional vehicle travel resulting from extended sports activities. • Recommends that the EIR analyze combined GHG emissions from construction trips and existing student and staff trips with future additional visitors resulting from extended use of the facilities.
Hydrology and Water Quality (Section 4.8)	• Concerned about potential impacts to Las Gallinas Creek and San Pablo Bay wetlands from increased runoff and stormwater drainage from the new impermeable surfaces, including artificial turf fields. Recommends further analysis for runoff capture and possible alternatives for artificial turf. • Concerned about the impacts of surface runoff and flooding resulting from Project improvements that would increase impervious surfaces. Concerned about the continuation of the campus's use as an emergency evacuation location due to possible flooding.
Noise (Section 4.9)	• Suggests that analysis of noise impacts consider adjacent residences, sensitive facilities, and hillside residences. • Requests the Project to conform to the City's Noise Ordinance. • Suggests the noise analysis consider alternatives for extended use of facilities (e.g., modification of amplified sound during events). • Recommends the noise analysis consider noise impacts from multiple events, and early and late events. Concerned about event organizers who go over allowed noise limits.
Transportation (Section 4.11)	• Address increased traffic and lack of parking, including for buses, from intensified operations, including overlapping sports events. • Recommends analysis of vehicle miles traveled. • Concerned about coordination between the District, the City, and residents regarding safe routes to campus. • Concerned that additional sporting events would result in blocking surrounding streets in the evening and weekends. • Concerned about lack of parking for additional vehicles resulting from extended use of facilities, as existing parking is not adequate for the student population and the existing lack of parking causes issues for neighbors (e.g., spillover, litter, and loitering). • Concerned about sports events increasing the use of off-campus parking; suggests overflow parking for events. • Concerned about impacts of increased use of off-site parking and impacts to neighborhood access and emergency and service vehicles. Suggests current lot be turned into a parking structure.

Table 1-2, continued

Topic Area and EIR Reference Section	Comment Summary
	• Concerned about school event attendees taking up neighborhood parking and blocking driveways.
Other	• Suggests bond money be prioritized for main school buildings, e.g., Phase 2 of the Project, rather than the sports facilities. • Concerned about recent construction work that resulted in the narrowing of Nova Albion Way. • Suggests another meeting and more effective canvassing of neighborhood to inform neighbors of potential Project meetings. • Suggests the District provide a complete construction management plan. • Suggests compliance with the City of San Rafael General Plan Goals and Policies, and mitigation measures.

Table 1-3: Scoping Meeting Comments

Topic Area and EIR Reference Section	Comment Summary
Environmental Setting (Chapter 2.0)	• Concerned about conflicts with other projects, including Northgate's project nearby.
Aesthetics (Section 4.1)	• Concerned about students leaving the campus during lunch, which leads to litter and loitering around the neighborhood.
Hydrology and Water Quality (Section 4.8)	• Concerned about greywater use. • Suggested the Project use permeable pavement to catch runoff water and sustainable construction materials.
Noise (Section 4.9)	• Concerned about morning construction noise. • Concerned about the increased use of tennis courts and resulting additional noise. • Concerned about additional noise from new construction projects.
Transportation (Section 4.11)	• Concerned about existing parking issues caused by the school because students park in the neighborhood and cause secondary issues (noise, litter, etc.). • Concerned about the amount of available parking for students. • Concerned about traffic and construction impacts due to narrowing streets. • Concerned about the increase of people and traffic resulting from expanded use of District facilities.
Other	• Concerned about District's use of funds on athletic facilities versus other uses (e.g., teacher pay). • Concerned about neighborhood impacts. Neighbors are not aware of upcoming changes.

Note: The notes included in this table are a summary of the oral comments received during the scoping meeting. Refer to Appendix A-1 for a full table of the comments.

1.3.2 Public Review of the Draft EIR

The~~is~~ Draft EIR ~~is being~~ was circulated for a 45-day public review and comment period from March 1, 2024, to April 15, 2024. During this public review period, written comments on the adequacy of the Draft EIR to address the proposed Project's environmental impacts ~~can be~~ were submitted by agencies, stakeholders, and other interested parties to the following contact by mail, email, in-person, or online, and ~~must be~~ were received by **no later than 5 p.m., April 15, 2024**:

Tim Ryan
Senior Director of Strategic Facility Planning
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903
tryan@srcs.org

The Draft EIR ~~will be~~ was available for download at https://www.srcsbondprogram.org and a hard copy ~~will be~~ was available for review at the San Rafael City Schools District Office at 310 Nova Albion Way, Room 505, San Rafael, CA 94903 for those who ~~are~~ were unable to access the online version. The District encourage~~d~~s agencies, stakeholders, and other interested parties to provide written comments on the Draft EIR prior to the end of the 45-day public review period.

1.3.3 Final EIR/Project Approval

Following the close of the public and agency comment period on the Draft EIR, all comments will be included in the Project's administrative record for consideration as part of the Project approval process. The Draft EIR text will be updated as necessary, and responses will be prepared for comments received during the public review period that raise CEQA-related environmental issues regarding the Project in accordance with Section 15088(c) of the State CEQA Guidelines. The responses will be published in the Final EIR. As required by CEQA Section 21092.5 and State CEQA Guidelines Section 15088(b), written responses to comments submitted by public agencies will be provided to the agencies for review at least 10 days prior to the consideration of certification of the EIR. The EIR will be considered by the District in a public meeting anticipated in ~~March~~ May 2024 and will be certified if it is determined to be compliant with CEQA. Upon certification of the EIR, the District will consider the Project for approval during the same public meeting.

1.3.4 Adoption of a Mitigation Monitoring and Reporting Program

Pursuant to the State CEQA Guidelines Section 15097, a lead agency is required to adopt a program for monitoring or reporting on mitigation measures required to mitigate or avoid significant environmental effects resulting from the project as part of the project approval process. The Mitigation Monitoring and Reporting Program will be prepared following preparation of the Final EIR so that it reflects any changes or revisions to mitigation measures made in response to public comments on the Draft EIR. Upon approval of the Project or an alternative to the Project, the lead agency will be responsible for the implementation of the Mitigation Monitoring and Reporting Program.

1.4 Organization of the EIR

This EIR is organized as follows:

- **Preface and Responses to Comments**: This section introduces the Final EIR, including the requirements under CEQA, a general description of the organization of the document, comments received on the Draft EIR, and the District's response to the comments.

- **Executive Summary**: presents an overview of the information provided in detail in subsequent chapters. It consists of an introduction; brief descriptions of the Project background, location, setting, purpose, need, objectives, and characteristics; a description of the alternatives to the Project; a discussion of issues raised by the public and agencies relative to the construction and operation of the Project; and a table that summarizes the potential environmental impacts in each issue area, the significance determination for those impacts, mitigation measures, and significance after mitigation.

- **Chapter 1.0, Introduction**: provides a description of the purpose of the EIR; a brief summary of the proposed Project; a discussion of issues raised by the public and agencies relative to the construction and operation of the Project; an overview of the CEQA environmental process; and a description of the organization of the EIR.

- **Chapter 2.0, Environmental Setting**: discusses the Project location and setting; campus history and background; and related projects.

- **Chapter 3.0, Project Description**: discusses the objectives of the proposed Project and provides a description of the Project and information on the Project characteristics, including the three phases. This chapter also includes a description of the intended uses of the EIR and anticipated public agency actions related to the Project.

- **Chapter 4.0, Impact Analysis and Mitigation Measures**: provides an overview of the organization of the impact analysis contained in the EIR. This chapter also analyzes the potential environmental effects of implementing the Project under 12 environmental issue areas. Each environmental issue area includes a discussion of the regulatory requirements, existing environmental setting, methodology and approach of the analysis, thresholds of significance, impact analysis, mitigation measures, level of significance after mitigation, and cumulative impacts.

- **Chapter 5.0, Other CEQA Considerations**: presents the other mandatory CEQA sections, including significant unavoidable impacts, significant and irreversible environmental changes, and growth-inducing impacts.

- **Chapter 6.0, Alternatives**: describes and evaluates the comparative merits of a reasonable range of Project alternatives that would feasibly attain most of the basic objectives of the Project and avoid or substantially lessen potentially significant Project-related impacts. This chapter also describes the analysis and rationale for selecting the range of alternatives discussed in the EIR and identifies the alternatives considered by the District that were rejected from further detailed analysis. Chapter 6.0 also includes a discussion of the environmental effects of the No Project Alternative and identifies the environmentally superior alternative.

- **Chapter 7.0, List of Preparers and Persons Consulted**: identifies those persons responsible for the preparation of this EIR.

- **Chapter 8.0, References**: provides a bibliography of reference materials used in the preparation of this EIR.

CHAPTER 2
ENVIRONMENTAL SETTING

The purpose of this chapter is to provide a "description of the physical environmental conditions in the vicinity of the of the project" (14 California Code of Regulations Section 15125). The environmental setting provides the baseline physical conditions as they exist at the time the Notice of Preparation is published and from which the lead agency will determine the significance of Project-related environmental impacts.

2.1 Project Location

The Project is proposed on the existing Terra Linda High School campus located at 320 Nova Albion Way (campus and Project site) in the northwestern area of the City of San Rafael (City). The campus is irregularly shaped and bounded by Nova Albion Way on the north and east, the Miller Creek School District Office to the southeast, and single-family residences along Devon Drive to the south and west and Esmeyer Drive on the north. The Project site is approximately 1 mile west of US Route 101. Figure 2-1, *Regional Vicinity,* shows the regional vicinity of the Project site and Figure 2-2, *Project Location Map,* shows the neighborhood as described above.

2.2 Regional Setting

The Project site is located within the jurisdictional boundary of the City, which is in the southeastern part of Marin County, California. The Project would serve high school-age students who reside within the City, which is in the North Bay region of the San Francisco Bay Area. The City is bordered on the west by the incorporated towns of San Anselmo and Ross, and on the south by the City of Larkspur and the unincorporated communities of Kentfield and Greenbrae. The eastern perimeter of the City is formed by the San Francisco and San Pablo Bays, and the City of Novato is to the north.

Additional information on the regional setting and applicable plans and policies critical to the assessment of the Project's environmental impacts are provided under each environmental topic analyzed in Chapter 4.0 of this EIR.

2.3 Existing Uses

The Project site comprises 30 acres and includes Assessor's Parcel Numbers 175-060-31, 175-060-28, and 175-060-29. It is developed with a high school campus, as shown in Figure 2-2, *Project Location Map*. School buildings are in the northwest portion, and outdoor recreational uses and athletics facilities are located throughout the remainder of the campus (Figure 2-3, *Existing Campus Plan*). The campus is maintained and in good condition, and also contains areas that are under construction (previously approved projects), as shown in Figure 2-4 through Figure 2-7, *Site Photographs.*

The campus has varying topography. The highest elevation is approximately 105 feet above mean sea level (amsl) in the southwest perimeter of the campus, and the lowest elevation is approximately 75 feet amsl in the northwesternmost corner. The campus is generally separated into northern and southern halves by a slope with a grade differential between 5 and 20 feet. The northern portion of the campus is relatively flat and developed with school buildings and the track and field. The elevation of the northern half is approximately 80 feet amsl. The elevation in the southern half varies between 90 and 105 feet amsl; outdoor recreational uses in the southern half are developed on terraced pads.

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Legend

★ Project Site

Michael Baker INTERNATIONAL

0 1 2 Miles

Source: Esri, Michael Baker Intl, County of Marin, USGS, Caltrans.

TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Regional Vicinity Map

Figure 2-1

Legend

- Terra Linda High School Campus Boundary
- District Office (Not Part of Project Site)

Michael Baker INTERNATIONAL

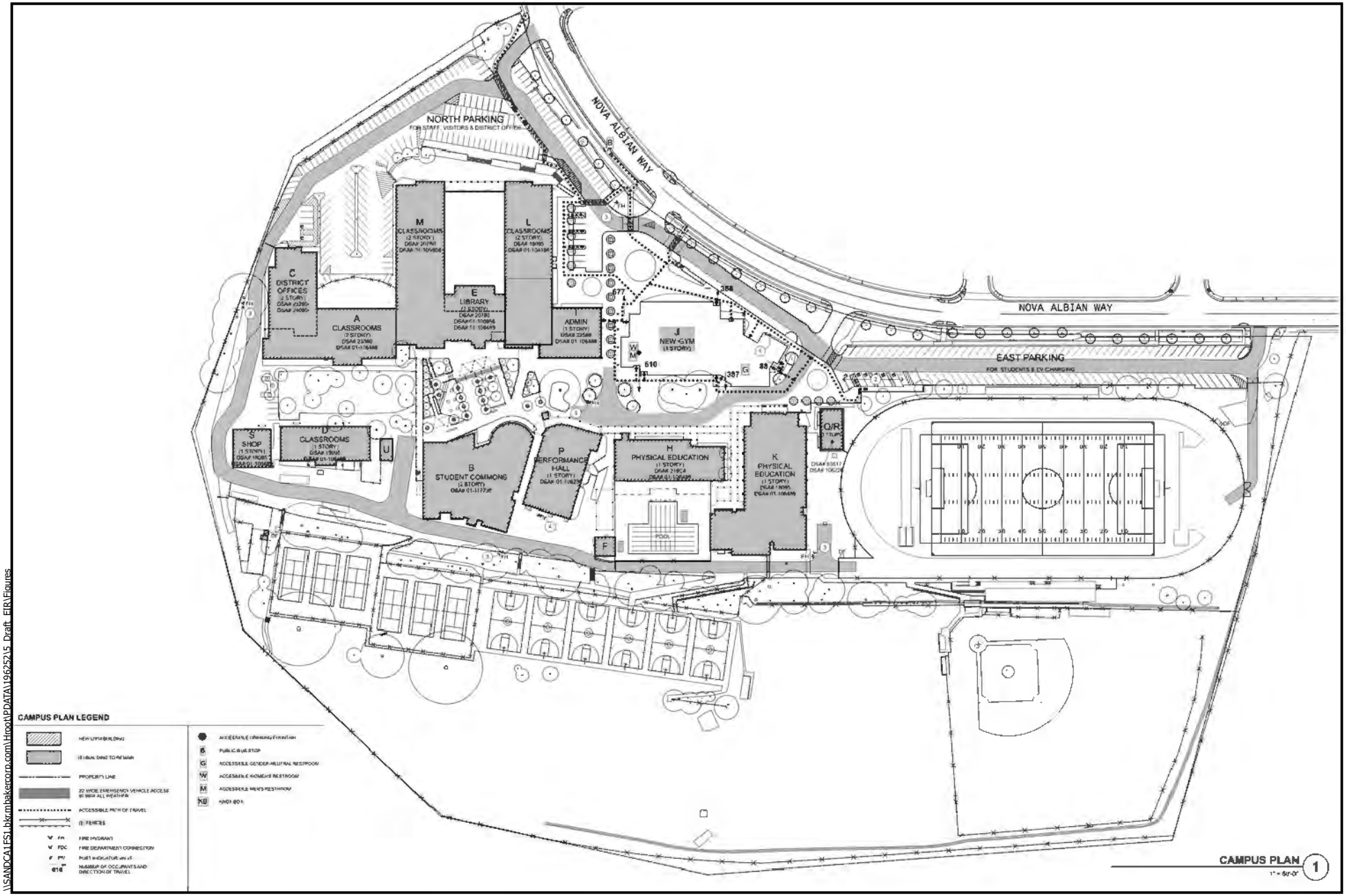
0 150 300 US Feet

Source: Esri, Michael Baker Intl, County of Marin.

TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Project Location Map

Figure 2-2



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TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Michael Baker INTERNATIONAL

NOT TO SCALE

Existing Campus Plan

Source: Quattrocchi Kwok Architects, June 10, 2021.

Figure 2-3

North facing wall of the Competitive Gymnasium, along Nova Albion Way.

Facing south with a view of the school courtyard and the north side of the Student Commons. The north-facing side of Sorich Park is in the background.

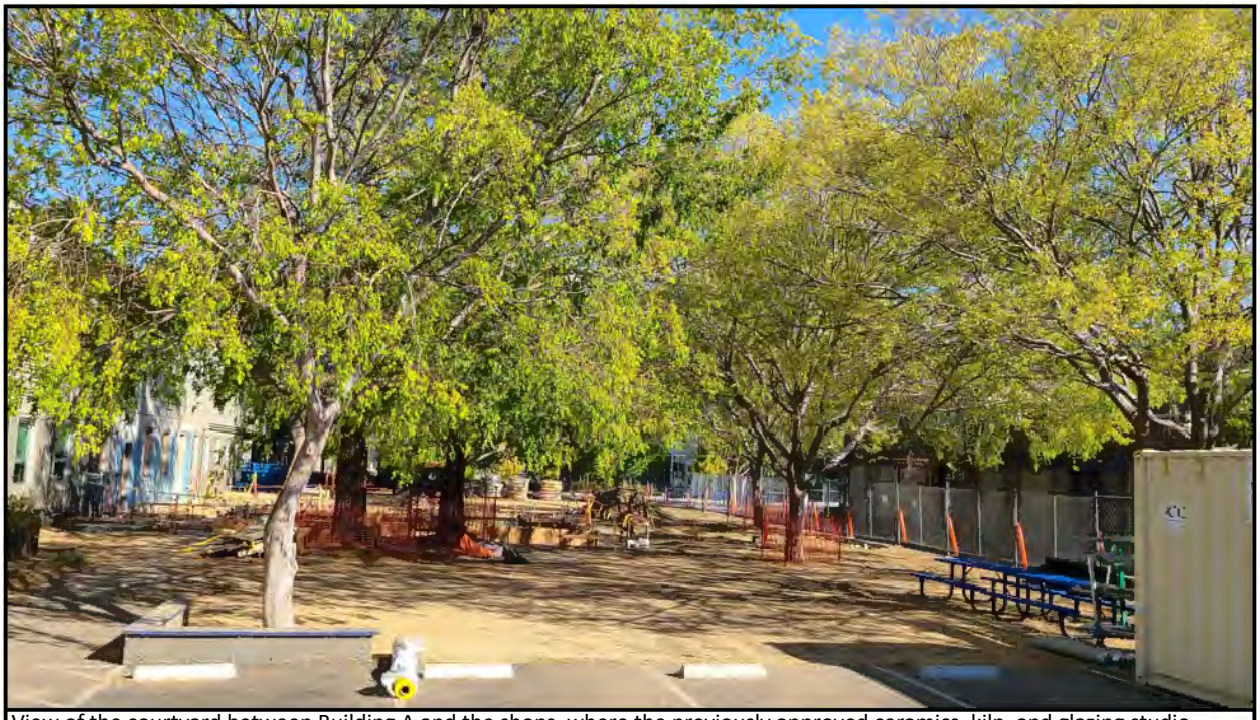
TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Michael Baker INTERNATIONAL

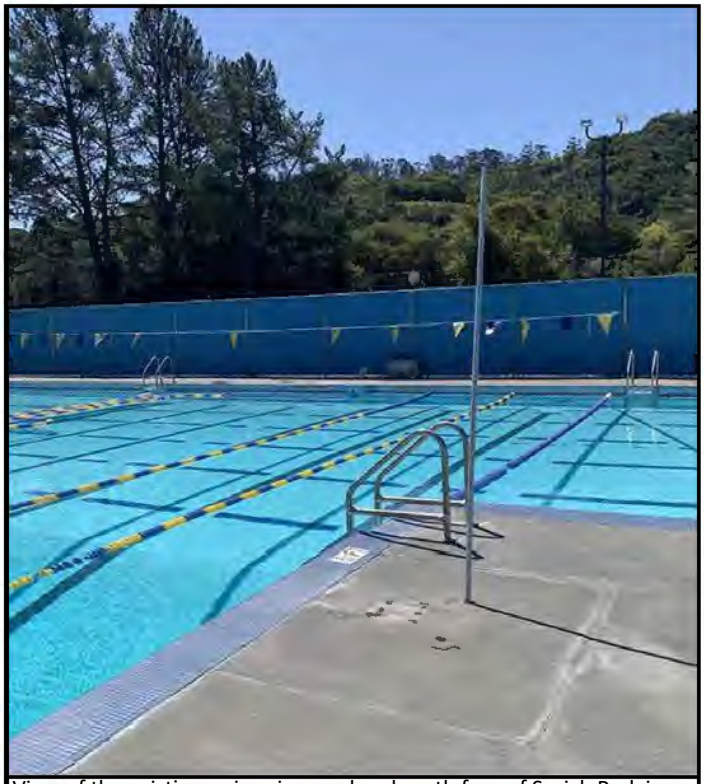
Site Photographs

Source: Michael Baker Intl., September 14, 2023; BHM Construction, Inc.

Figure 2-4



View of the courtyard between Building A and the shops, where the previously approved ceramics, kiln, and glazing studio project is currently being constructed.



View of the existing swimming pool and north face of Sorich Park in the background.

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TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Michael Baker INTERNATIONAL

Site Photographs

Source: Michael Baker Intl., September 14, 2023; Lionakis, Schematic Design, May 30, 2023.

Figure 2-5

Facing east, atop the slope at the northwest corner of the tennis courts with a view of the Student Commons in the background.

Facing west from the ramp between the track and field stadium and baseball field with a view of Building K and the portable structure (Building Q/R) that is proposed for removal.

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TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Michael Baker INTERNATIONAL

Site Photographs

Source: Michael Baker Intl., September 14, 2023.

Figure 2-6

Facing northwest in the southwest corner of the campus showing the pedestrian access from Devon Drive and the vehicle access to the fields, between the western perimeter and tennis courts on the right side.

Facing northeasterly, from the mid-southern perimeter, showing the multipurpose field in the foreground and baseball field in the background.

TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Site Photographs

Michael Baker INTERNATIONAL

Source: Michael Baker Intl., September 14, 2023.

Figure 2-7

2.3.1 Campus Facility Improvements

Since its construction in 1959, the District has maintained Terra Linda High School to ensure the campus meets District standards and the school's educational programming and functional needs, including improvements constructed in the 1960s and the 2000s. In the last decade, the District passed two bond measures for major capital improvement projects for its two high schools: Measure B in November 2015 and Measure B in June 2022. At Terra Linda High School, the 2015 bond allowed the District to improve infrastructure and operational challenges related to the former cafeteria and the music building; expand indoor physical education (PE) opportunities; and provide additional instructional spaces to relieve classroom overcrowding, reduce the school's reliance on portable facilities, and expand career and technical education programs. The 2022 bond, which is the subject of this environmental document, would allow the District to continue improving the campus, as further detailed in Chapter 3.0.

Table 2-1, *Existing Facilities,* summarizes the existing facilities at Terra Linda High School. Discussion of the built facilities follows.

Table 2-1: Existing Facilities

Permanent Facilities	Size	Year Modernized or Constructed
School Administration (Building I)	7,175 square feet	2019
Innovation Hub (Building E)	11,379 square feet	2022
Classrooms (Buildings A, M, L)	97,511 square feet	2002–2009
Student Commons: Library, Technology, Media, Music, Drama, and Food Services (Building B)	32,971 square feet	2019
Performance Center (Building P)	9,648 square feet	2006
Shop Buildings: Auto, Wood, Applied Technology (Buildings G and D)	11,077 square feet	2021
Competition Gymnasium (Building J)	24,343 square feet	2022
Weight Room and Dance Studio (Building H)	9,469 square feet	2006
Practice Gymnasium and Locker Rooms (Building K)	21,218 square feet	2019
Portable Buildings (Building Q/R) (Temporary Bond Program Office)	2,500 square feet	2019
Swimming Pool	75 feet x 100 feet	2006
Pump House	866 square feet	1997
Track and Field (Stadium)	157,889 square feet	2018
Tennis Courts	36,369 square feet	2023
Basketball Courts	36,403 square feet	2006
Grass Fields (including Baseball)	406,594 square feet	--
Surface Parking (Lots A, B, C)	299 stalls	2019, 2022, 2023

School Buildings

Since its construction in 1959, the District has continued to add new buildings and facilities to the campus to meet programming needs. The newest buildings on the campus include the Performance Center, Student Commons, and Competition Gymnasium. Other permanent buildings include the main classroom buildings, school administration, PE buildings, and shop buildings.[1] The campus has two portable buildings that were previously used as classrooms and now used as office space. As shown in Figure 2-4, the Competition Gymnasium provides a prominent frontage on Nova Albion Way. School courtyards are located between buildings to provide shaded outdoor areas for students to congregate between classes and during lunch.

Outdoor Athletic Facilities

The campus is developed with the below outdoor recreational facilities:

- The track and field stadium is in the northeast corner of the campus. It is composed of artificial turf and a rubberized track. The track and field has north and south home and visitor aluminum bleachers, and a press box on the south side. There is an east-facing scoreboard mounted on Building K and a concession stand, which is a 40-foot converted storage container, south of Building K. The track and field do not have nighttime field lights.

- The outdoor swimming pool is south of Building H and west of Building K and east of the Performance Hall (Building P) and a pump house. The pool is 75 feet by 100 feet and secured with chain-link fencing. The aquatic facility operates exterior pool lighting for morning and evening uses and includes several 5-row, tip-and-roll bleacher sections with seating for approximately 70 spectators.

- The baseball field is in the southeast corner of the campus. It consists of natural turf and is bounded by chain-link fencing. The backstop is in the northwest corner of the field. There are dugouts and aluminum bleacher seats for home and visitor spectators. A north-facing scoreboard is located behind right field. There are no nighttime lights at the baseball field.

- The natural turf multipurpose field is west of the baseball field. It has historically been used for the high school's soccer, lacrosse, and golf athletic programs. However, due to numerous gopher holes on the field that make it dangerous, soccer and lacrosse practices and games have been relocated to the track and football field in recent years; golf has also been relocated off-campus. Discus and shot put throw grounds are on the perimeter of the multipurpose field. No nighttime lighting is on the multipurpose field.

- Tennis courts and basketball courts separate the school buildings from the multipurpose field. The tennis court is surrounded by chain-link fencing. There are six tennis courts and six basketball courts. Conex containers are currently stored on the west end of the basketball courts. There is no nighttime lighting at the tennis and basketball courts.

[1] The District Administration Office is co-located on the property. It operates on the first and second floors of the northwesternmost wing (Building C) of the main school building and shares the northwest parking lot with the school staff and employees. The District Administration Office is not a part of the Project site.

Parking and Access

The main entrance to Terra Linda High School is from Nova Albion Way. Four driveways provide ingress and egress into three general parking areas and off-street student and bus loading zones located in front of the school buildings along Nova Albion Way. The campus provides a total of 299 stalls. Lot A is in the northwest corner of the campus and includes 167 stalls. Lot A is used by staff, visitors, and the District Office. Lot B is along the northeast perimeter along Nova Albion Way and has 86 stalls; it is used mainly by students. Lot C is in the southwest portion of the campus and accessed via Lot A; there are 46 stalls that can be used by staff and visitors. Although there is parking on the campus, students, visitors, and staff often also park on the surrounding streets.

Pedestrian access is from the front of the campus along Nova Albion Way. Access is available from several areas between buildings that front Nova Albion Way. Access is also available behind the school, from a walkway via Devon Drive at the Tamarack Drive intersection. There are 146 bike parking stalls on the campus. During the 2015 bond measure, the District added close to 100 bike parking spots. The District also added a new bike path along the entire frontage of the campus on Nova Albion Way that extends to the closest intersection on either end of Nova Albion Way. A new sidewalk was also installed along the campus frontage, and new flatwork and pedestrian pathways were installed over a significant portion of the campus to improve accessibility. Pedestrian access between the northern and southern halves of the campus is via stairs and one ramp between the home bleachers and baseball field (see Figure 2-7).

As shown in Figure 2-3, the northern portion of the campus includes a fire access road that is accessed via Lot A and traverses along the western perimeter until the start of the slope, where it continues behind the school buildings and across the synthetic track and field to the eastern end of Lot B. Vehicle access to the southern half of the campus is via earthen ramps from the western and eastern perimeters of the campus where the slope separates the campus into northern and southern halves.

Utility Systems

The campus is developed with wet and dry underground utility systems, including potable and recycled water, sewer, electric, gas, stormwater, fire alarm, and telecommunication. They are mainly in the northern portion of the campus. The southern half of the campus has a recycled water irrigation system; electrical lines along the north, west, and south of the baseball field; stormwater drains north of the baseball field; and an open concrete stormwater drain along the southern, western, and eastern perimeters. Nighttime security lighting is provided at Lots A and B, the exterior of buildings, and one light pole at the aquatic facility.

Other Approved Campus Improvements

The District is continuing to implement previously approved projects at the campus. Construction of some of these projects were underway when the proposed Project's environmental review process started in 2023. Since the release of the Notice of Preparation in August 2023, the District has completed the repair and repaving of Lot A in the northwest portion of the campus, as well as the installation of a new shade structure south of the wood shop. The District is scheduled to complete the construction of a new ceramics, kiln, and glazing studio in June 2024. Starting May 2024, the District will install new solar arrays, including a solar carport in the student parking lot, solar shade structures on the north and south sides of the basketball courts, and a row of ground-mounted solar arrays on the field, immediately south of the basketball courts. The District previously considered the potential environmental effects of these approved improvements at the

time these projects were being considered for approval by the Board in 2020 and in 2022; these projects are therefore not the subject of this EIR, but rather baseline conditions.

2.3.2 Campus Operations

Terra Linda High School operates a comprehensive high school program that serves grades 9 through 12. It is one of two high schools in the District. Students who reside within District boundaries may choose to attend either Terra Linda High School or San Rafael High School, which is the other District high school campus.

Terra Linda High School currently has 42 classrooms and a corresponding enrollment capacity of 1,470 seats, based on a maximum classroom loading factor of 35 students. In September 2023, the school enrolled approximately 1,250 students. Over the past ten years, enrollment peaked during the 2019-20 school year with 1,317 students. The lowest enrollment was in 2013-14 with 1,039 students.

Terra Linda High School follows the District's school-year calendar. The school year typically starts in August and ends the following year in June. School hours vary; however, most students arrive between 8:15 AM and 8:30 AM and leave around 3:00 PM. The first class (0 period) starts at 7:25 AM, and the last class (7th period) ends at 3:50 PM. With after-school clubs and sports practices and games, the campus is typically busy until dusk during the school year.

The campus offers a variety of curricula, including common courses that emphasize academic achievement and traditional subjects that all students are required to take, as well as visual and performing arts and career technical education. It also offers a variety of sports programs. Table 2-2, *Terra Linda High School Athletics (2023-2024),* lists the sports offered at the campus and the seasons they are offered. With the exception of golf and softball, all of the sports programs are held at the campus, including practices, home games, and where applicable regional and state-level competitions. Softball is offered at the field at the adjacent Miller Creek School District.

Table 2-2: Terra Linda High School Athletics (2023-2024)

Season	Sports Offered		
Fall (August–October)	• Football • Cross Country Running • Boys' Water Polo	• Girls' Water Polo • Cheerleading • Girls' Flag Football	• Girls' Volleyball • Girls' Tennis • Girls' Golf (off-site)
Winter (October–February)	• Boys' Basketball • Boys' Soccer	• Wrestling • Girls' Basketball	• Girls' Soccer • Cheerleading
Spring (February–May)	• Girls' Lacrosse • Boys' Lacrosse • Boys' Tennis	• Boys' Volleyball • Boys' Golf (off-site) • Track and Field	• Baseball • Softball (off-site) • Swim and Dive

All campus facilities are available outside of school hours for use by the community, as required under the Civic Center Act and pursuant to District Board Policy and Administrative Regulation 1330. The facilities that are often rented out include but are not limited to classrooms, the computer lab, career center, Innovation Hub, the Innovation Hub Courtyard, main courtyard, competition and practice gymnasiums, cafeteria, black box theater, library and associated conference rooms, tennis courts, swimming pool, performance hall, staff parking lot, track and/or field, and baseball field. Rental reservations are made by the applicant via an online facility

request and rental system, which is updated by the school to reserve the facilities for school-sponsored events, including but not limited to scheduled practices, games, and competitions/tournaments. Renters may select hours that have not been blocked off for school use or reserved by other applicants.

Academic Buildings

The academic buildings are in the northeastern-most quadrant of the campus and include the main two-story Buildings A, M, and L, which were last modernized between 2002 and 2009. These buildings include classrooms, labs, restrooms, corridors, storage, the Innovation Hub, and other ancillary spaces. They are generally used during the school day between 7:00 AM and 3:50 PM, and after school between 3:50 PM and 8:00 PM. Outside of school hours and when school or school-sponsored events are not scheduled, they are available for rental by outside user groups under the Civic Center Act, such as school clubs, for- and nonprofit organizations, and camps.

Recreational Buildings

On-campus buildings housing the District's PE and athletic support spaces are east of the academic buildings and include Buildings H, J, and K. Building H houses the weight room (used for PE and by school athletic teams), wrestling mat room (used by the wrestling team), and dance studio (used for PE and cheerleading, and also includes a climbing wall). Building J contains the Competition Gymnasium and Building K houses the practice gym. Both gyms are used for PE, basketball, volleyball, school assemblies, and school dances. The locker and team rooms, bathrooms, and other support spaces are located in the southern half of Building K. These recreational buildings are generally used during the school day between 7:25 AM and 3:50 PM, before school between 6:00 AM and 7:25 AM, and after school between 3:50 PM and 10:00 PM, and on Saturday between 6:00 AM and 10:00 PM. These facilities are also used by outside user groups for sports camps, Special Olympics, and other activities, under the Civic Center Act, Monday through Sunday between 6:00 AM and 10:00 PM. For a complete list of on-campus buildings, refer to Table 2-1.

Track and Field Stadium

The existing track and field stadium is currently used for PE and for the high school's girls' and boys' junior varsity and varsity athletics, including seasonal track and field (practices and meets), girls' and boys' lacrosse (practices and games), girls' and boys' soccer (practices and games), girls' and boys' cross country, boys' flag football (practices and games), and boys' football (practices and games). During the school day, the track and field is generally used between 7:25 AM and 3:50 PM. Practices typically occur between 3:50 PM and 10:00 PM Monday through Friday, and meets/games are generally held between 7:00 AM and 9:00 PM. Some meets/games take place on Saturdays during the same hours. In 2023, approximately 293 school-sponsored events were held at the track and field, including 56 games and competitions. The track and field was also used by outside user groups under the Civic Center Act, including soccer, rugby, and lacrosse soccer leagues, clubs, and camps. In 2023, 740 hours were allocated to community use of the track and field; these uses occurred outside of school and athletic program hours until approximately 9:00 PM and during the summer when school is not in session, generally between 6:00 AM and 9:00 PM.

Aquatic Facility

The existing pool is used for PE and for the high school's girls' and boys' junior varsity and varsity athletics, including seasonal water polo (practices and matches) and swim/dive (practices and meets). During the school day, the pool is generally used between 7:25 AM and 3:50 PM. Practices typically occur between 6:00 AM and 7:25 AM and 3:50 PM to 10:00 PM on Monday through Friday, and matches/meets are generally held between 3:50 PM and 8:00 PM. Practices, as well as matches/meets, generally take place on Saturdays (though Sunday events have also occurred) and are held between 7:00 AM and 10:00 PM. In 2023, 210 school-sponsored aquatic events were held at Terra Linda High School, including 196 weekday events and 14 weekend events. Up to 50 students participated in the swim/dive program. During practices, there was an average of 10 spectators, and during matches/meets, there was an average of 50 spectators. Weekend games and competitions average 100 participants and 200 spectators. Due to the availability of existing seating, it was (and has been) common for spectators to bring their own seats to aquatic events and set them up on the pool deck. Many visiting teams also bus their students to events held at the campus.

The pool is also used by outside user groups under the Civic Center Act, including community swimming leagues and clubs, for swim lessons, lap swimming, and other purposes. In 2023, community groups rented 140 hours of the swimming pool. These uses occurred outside of school and athletic program hours and events, typically Monday through Friday generally between 4:00 PM and 9:00 PM and on the weekends generally between 7:00 AM and 9:00 PM, and during the summer when school is not in session, generally between 7:00 AM and 9:00 PM.

The aquatic facility operates exterior pool lighting for morning and evening uses, typically between 6:00 AM and 9:00 AM, and 5:00 PM and 10:00 PM, seven days a week. Currently, swim and/or water polo practices utilize pool lighting between 6:00 AM and 9:00 AM and 5:00 PM and 10:00 PM. Swim/dive events and/or water polo events use the pool lighting generally between 5:00 PM and 8:00 PM.

Baseball Field

The existing baseball field is currently used for PE classes and by the school's junior varsity and varsity baseball teams (practices and games). During the school day, the baseball field is generally used between 7:25 AM and 3:50 PM. Baseball practices typically occur between 3:50 PM and 8:00 PM on Monday through Friday, and baseball games are generally held between 4:00 PM and 8:00 PM during the week and 8:00 AM and 8:00 PM on Saturday. In 2023, the baseball field held 174 school-sponsored events. The baseball field is also used by outside user groups under the Civic Center Act. In 2023, it was rented out for 28 hours to a nonprofit youth group. The facility use occurs outside of school and athletic program hours and events, typically between 4:00 PM and 8:00 PM during the week and 8:00 AM and 8:00 PM on the weekends. During the summer when school is not in session, the field is available for use every day of the weeks, generally between 8:00 AM and 8:00 PM.

Multipurpose Field

The existing multipurpose field has until recently been used for boys' and girls' JV and varsity soccer, boys' and girls' JV and varsity lacrosse, and boys' and girls' varsity golf. These programs currently reserve the football field for practices and games. Presently, the field is used in a limited capacity due to ongoing gopher holes which make its use unsafe. Discus and shot put throw grounds are on the perimeter of the field and are used by the track and field team. During the school day, the multipurpose field and perimeter facilities are used between 7:25 AM and 3:50 PM for PE. When soccer, lacrosse, and golf practices were held on the multipurpose field, they

occurred generally between 3:50 PM and 8:00 PM on Monday through Friday, and games were held generally between 4:00 PM and 8:00 PM on weekdays and 8:00 AM and 8:00 PM on Saturdays. Due to the gopher holes, in 2023, only 35 school-sponsored events were held at the multipurpose field.

The multipurpose field facilities are also used by outside user groups under the Civic Center Act, such as community soccer, rugby, and lacrosse clubs and teams. In 2023, 140 hours were reserved for community use of the multipurpose field; the low number is likely due to the damaged condition of the field. The rentals occur outside of school and athletic program hours and events, typically between 4:00 PM and 8:00 PM during the weekday and 8:00 AM and 8:00 PM on the weekend. During the summer when school is not in session, the field is available for use generally between 8:00 AM and 8:00 PM every day of the week.

Tennis Courts

The existing tennis courts are currently used for PE classes and by the school's junior varsity and varsity girls' tennis teams in the fall, and boys' tennis teams in the spring (practices and matches). During the school day, the tennis courts are generally used between 7:25 AM and 3:50 PM. Tennis practices typically occur between 3:50 PM and 8:00 PM on Monday through Friday, and tennis matches are generally held between 8:00 AM and 8:00 PM on Saturday. In 2023, the tennis courts held 165 school-sponsored events. The tennis courts are also used by outside user groups under the Civic Center Act, and such use occurs outside of school and athletic program hours and events, typically between 4:00 PM and 8:00 PM during the weekday and 8:00 AM and 8:00 PM on the weekends. During the summer when school is not in session, the courts are available for use generally between 8:00 AM and 8:00 PM every day of the week. In 2023, the community reserved a total of 70 hours of the tennis courts.

After-School Operations

Between school-sponsored events and community rentals, the athletic facilities on the northern half of the campus are usually fully used after the school day. The high use season for the southern fields (baseball and multipurpose) have been between January and August. Table 2-3 shows the days the facilities are typically used by the school, the high-use season, and the average number of participants and spectators at events. Table 2-4 summarizes the hours the facilities were rented by non-school entities.

Table 2-3: School-Sponsored Athletic Facility Operations

Athletic Facility	Event	Days of Week in Use	High-Use Season	Avg. No of Participants/ Spectators Per Event
Aquatic Facility	Weekday Practice	Mon–Fri	Aug–July	40 / 10
Aquatic Facility	Weekday Games/ Competitions	Mon–Fri	Aug–July	40 / 50
Aquatic Facility	Weekend Practice	Sat	Aug–July	50 / 20
Aquatic Facility	Weekend Games/ Competitions	Sat	Aug–July	100 / 200
Multipurpose Field	Practice	Mon–Sat	Jan–Aug	20 / 15
Multipurpose Field	Games/Competitions	Mon– Sat	Jan–Aug	20 / 50
Baseball Field	Practice	Mon–Sat	Jan–Aug	20 / 15
Baseball Field	Games/Competitions	Mon–Sat	Jan–Aug	20 / 50
Practice Gym (Building K)	Practice	Mon–Sat	Aug–July	25 / 25
Practice Gym (Building K)	Games/Competitions	Mon–Sat	Aug–July	25 / 75
Competition Gym (Building J)	Practice	Mon–Sat	Aug–July	25 / 25
Competition Gym (Building J)	Games/Competitions	Mon–Sat	Aug–July	25 / 75
Track and Field Stadium	Practice	Mon–Sat	Aug–July	20 / 15
Track and Field Stadium	Games/Competitions	Mon–Sat	Aug–July	20 / 50
Tennis Courts	Practice	Mon–Sat	Aug–July	20 / 50
Tennis Courts	Games/Competitions	Mon–Sat	Aug–July	20 / 50

Table 2-4: Non-School Athletic Facility Operations

Athletic Facility	Days of Week in Use	Hours Per Year
Aquatic Facility	Mon–Sun	140
Multipurpose Field	Mon–Sun	140
Baseball Field	Mon–Sun	28
Practice Gym (Building K)	Mon–Sun	910
Competition Gym (Building J)	Mon–Sun	510
Track and Field Stadium	Mon–Sun	740
Tennis Courts	Mon–Sun	70

2.4 Surrounding Uses

Terra Linda High School is nestled in the Terra Linda community and immediately surrounded by residential uses and the Miller Creek School District Office to the east, which operates one ballfield. The backyards of single-family residences on Devon Drive and Esmeyer Drive border the campus on the south, west, and north. Most of these properties are at a higher elevation than the campus, separated by fencing and vegetation. Single-family residences are also north of Nova Albion Way.

In the greater vicinity of the campus, Kaiser Permanente San Rafael Medical Center is located approximately 1,980 feet (0.4 miles) north of the campus and multifamily housing and a shopping center are located approximately 1,690 feet (0.3 miles) to the northwest. The campus is also near parks and open space, including Hartzell Park, approximately 2,220 feet (0.4 miles) to the east, and Sorich Park (in the Terra Linda/Sleepy Hollow Preserve), approximately 350 feet to the south and rising to a height of about 600 feet amsl. Views of Sorich Park's hills are visible from most parts of campus.

2.5 Land Use and Zoning

The City of San Rafael 2040 General Plan designates the Project site Public/Quasi-Public, which includes public schools as an allowed land use type. The Project site is zoned Planned Development (PD) District. The purpose of the PD District is to promote and encourage cluster development on large sites to avoid sensitive areas of property; encourage innovative design on large sites by allowing flexibility in property development standards; and accommodate various types of large-scale, complex, mixed-use, phased developments. Existing school uses, including uses pursuant to the Civic Center Act, are permitted in the PD District. Moreover, the proposed Project and the Terra Linda High School campus are exempt from local zoning and land use regulations under District Board Resolution No. 2324-17, dated October 23, 2023, pursuant to Government Code Section 53094.

2.6 Related Projects

Section 15130 of the CEQA Guidelines requires that an EIR consider environmental effects of a proposed project as well as cumulative impacts. As defined in Section 15355 of the CEQA Guidelines, cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Pursuant to CEQA Guidelines Section 15130(b)(1)(A), cumulative impacts may be analyzed by considering a list of past, present, and probable future projects producing related or cumulative impacts.

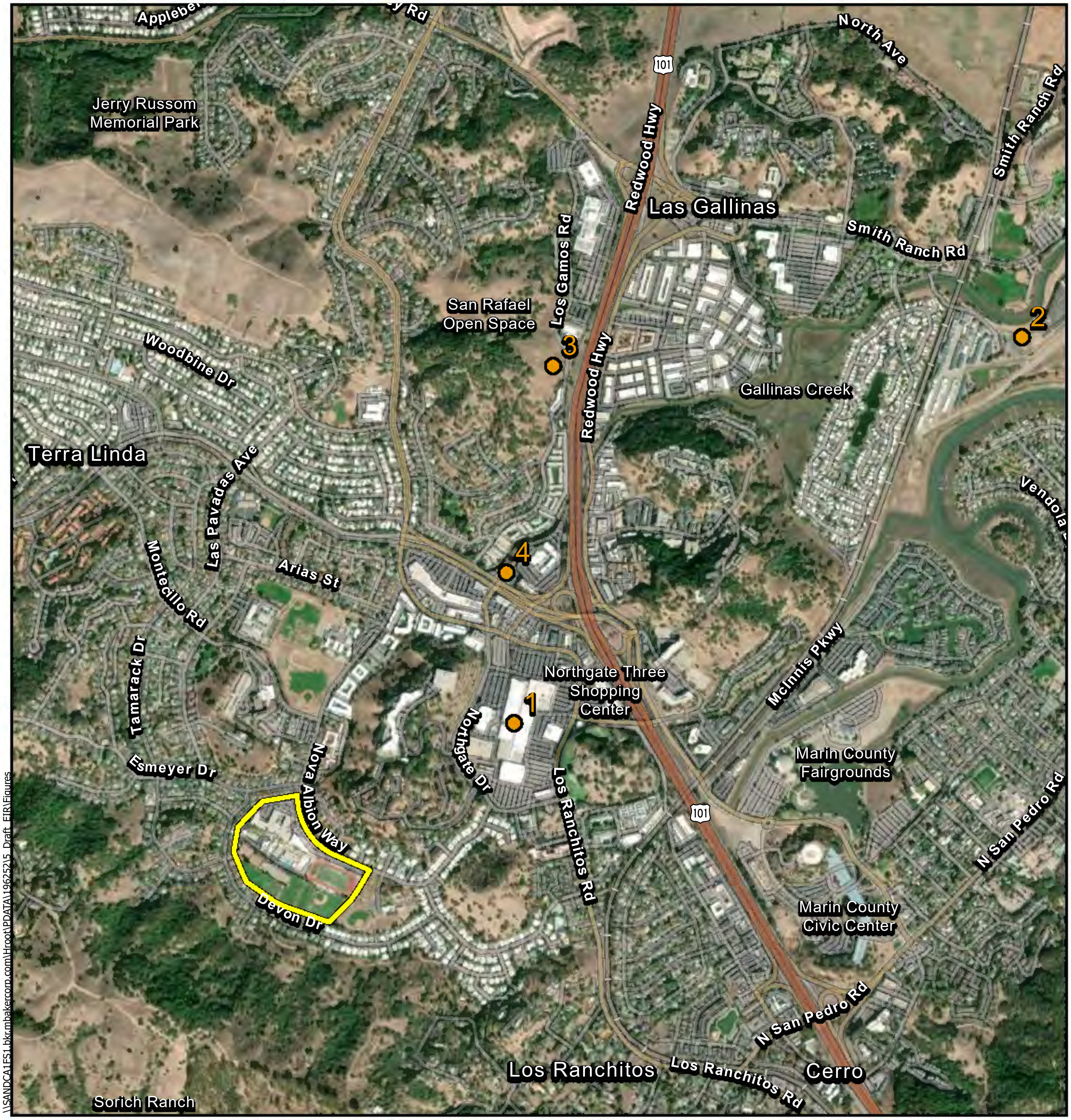
The City of San Rafael's Planning Division has a complete list of major planning projects located throughout the City.[2] Table 2-5, *Related Cumulative Projects,* lists the City-approved and reasonably foreseeable projects in the vicinity of the Proposed Project as of the release of the Notice of Preparation. Figure 2-8, *Related Projects*, shows where these projects are relative to the Project site. Analysis of the cumulative impacts associated with these related projects and the District's previously approved projects at Terra Linda High School (see "Other Approved Campus Improvements" in Section 2.3.1) in conjunction with the proposed Project is provided for each environmental issue area in Section 4.1 through Section 4.12 of this EIR.

[2] A comment received during the EIR scoping period requested the inclusion of a development at or near the Kaiser Permanente campus. As the time the Notice of Preparation was issued, the City had not identified such an application, and the proposed development details are unknown. Accordingly, it is speculative to include this development as a related project.

Table 2-5: Related Cumulative Projects

Map ID	Project Name	Project Location	Project Description	Status
1	Northgate Town Square	5800 Northgate Drive	The project proposes a comprehensive redevelopment of the existing mall into an open-air "main street experience," surrounded by mixed-use development of retail and up to 1,422 residences. The project proposes to reduce the existing commercial retail from 775,677 square feet to 225,100 square feet and construct high-density multifamily residential buildings in the form of townhome units and apartment buildings ranging in height from two to seven stories.	Under Review
2	Airport Recreation Facility	397-400 Smith Ranch Road	The project would consist of an 85,700-square-foot private recreational building that is 39 feet, 6 inches tall (overall height) building with the following uses: 1) a multipurpose gymnasium area for recreational uses, including two indoor soccer/sports fields and two multipurpose gymnasium sports courts, common locker, and restroom area on the 71,300-square-foot ground floor, and 2) an ancillary viewing area, care, restrooms, sports shop administrative offices, and meeting room on a 14,400-square-foot mezzanine level.	Under Review
3	Los Gamos Apartments	Los Gamos Road (vacant lot at end)	The project proposes a 192-unit apartment project on a hillside property located on the west side of Los Gamos Road. In addition, the project will include a 5,574-square-foot neighborhood market building and a 5,003-square-foot community building.	Approved
4	Northgate Walk - 1005 & 1010 Northgate Dr.	1005, 1010, 1020 and 1025 Northgate Drive	The project proposes to demolish the existing commercial building and gas station at the site and construct a new 4-story, 30-unit residential condominium building on that portion of the site.	Approved

Source: City of San Rafael, Major Planning Projects, accessed October 27, 2023, https://www.cityofsanrafael.org/major-planning-projects-2/.



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Legend

Terra Linda High School Campus Boundary

Related Projects

1. Northgate Town Square
2. Airport Recreation Facility
3. Los Gamos Apartments
4. Northgate Walk

Michael Baker INTERNATIONAL

0 0.25 0.5 Miles

Source: ESRI, Michael Baker Intl, County of Marin.

TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Related Projects

Figure 2-8

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CHAPTER 3
PROJECT DESCRIPTION

"Project," as defined by the California Environmental Quality Act (CEQA) Guidelines, means "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1) An activity directly undertaken by any public agency including but not limited to public works construction and related activities clearing or grading of land, improvements to existing public structures" (14 California Code of Regulations, Section 15378[a][1]).

San Rafael City Schools (District) proposes capital improvements at Terra Linda High School to modernize and/or replace existing outdated and aging academic and physical education (PE) facilities (Project). The Project would be funded by Local Bond Measure B, approved by the District's constituents in June 2022.

3.1 Project Location

The Project is proposed at the Terra Linda High School campus, located at 320 Nova Albion Way in the City of San Rafael, County of Marin. The Project involves improvements to existing school facilities on the 30-acre campus. The campus is bound by Nova Albion Way on the north. Devon Drive is south and west of the campus, Golden Hinde Boulevard is to the east, and Esmeyer Drive is farther north. US Route 101 is approximately 0.75 miles east of the campus. Regional access is from the Manuel T. Freitas Parkway interchange, located 1 mile northeast of the campus and via either Northgate Drive or Nova Albion Way. See Figure 2-2 in Chapter 2.0, Environmental Setting, the vicinity map of the Project area.

3.2 Project Objectives

CEQA Guidelines Section 15124(b) requires a written statement of project objectives that include the underlying purpose of the project and discuss the project benefits. The underlying purpose of the Project is to modernize Terra Linda High School with funds from Measure B, passed on June 6, 2022, by the San Rafael voters and to maintain existing capital facilities. The District proposes to continue making major capital improvements at the campus, based on the 2014 Master Plan, 2022 District-Wide Capital Improvements Project report, and current Target Initiatives, such as providing high performance classrooms and learning environments that can maximize teaching opportunities through technology infrastructure and flexible layouts and constructing climate-resilient and sustainable facilities, with campus safety and security in mind. With the consideration of these initiatives, the below objectives have been developed for the proposed Project:

- Maximize the use of limited District bond funds.
- Maximize the use of District-owned property.
- Construct climate-resilient and sustainable facilities and implement "green building" practices.
- Improve campus safety and security for students and staff.
- Construct state-of-the-art, high-performance indoor and outdoor instructional spaces with flexible learning environments and replace outmoded teaching facilities.

- Reduce hazards at Terra Linda High School athletic facilities.

- Improve ~~the experience of users of~~ Terra Linda High School's physical education and athletic programs for its ~~facilities, including~~ students and other students in the District who use the facilities.

- Implement District-wide Target Initiatives applicable to the District's high schools and the Terra Linda High School campus.

3.3 Project Characteristics

3.3.1 Facility Improvements

The proposed Project would be implemented in three general phases, as described below. Figure 3-1, *Capital Facilities Master Plan*, shows where the improvements would occur on the campus.

Phase 1

Phase 1 is composed of three components: complete renovation of the existing locker and team rooms (southern half of Building K) and upgrades to the western end of the existing track and field stadium; demolition and reconstruction of Building H (ancillary gymnasium with dance, weight room, mat room, restrooms, storage); and demolition and reconstruction of the existing pool, equipment room, storage areas, and the pool deck in its entirety.

- **Modernization of Locker/Team Rooms (Building K) and Stadium Upgrades.** The southern portion of existing Building K would be modernized. The existing locker rooms, bathrooms, team rooms, and other support spaces would be demolished. Nonstructural walls would also be removed; however, no major structural modifications would be made. As shown in Figure 3-2, *Conceptual Building K, Locker Facilities Renovations,* the renovated space would provide equal-sized team and locker rooms and restroom facilities to support Title IX requirements, as well as a gender-neutral locker room and restroom. A new pool team room would be constructed, and an east-west hallway would connect the pool team room to the track and field stadium on the east side of Building K. Seating/lounge areas would be provided along the hallway. The renovated area would have all new floor, wall and ceiling finishes, and lighting, along with new lockers, restroom fixtures, and accessories. The renovated facility would include new interior and exterior doors, windows, frames, and hardware to meet current District standards. The mechanical equipment would be replaced with new electric heat pumps. Existing plumbing, electrical, and low voltage systems would be modernized. Reclaimed waterlines would be installed to service lavatories and urinals. Domestic water would also be rerouted to accommodate the new layout of restroom facilities. The roof would be replaced, and the PG&E feeders for the main campus switchgear, as well as the PG&E gas line servicing the school's meter, would be rerouted as part of this Project component.

  The existing portable Building Q/R (2,500 sf), which was previously used as instructional space and now as the Bond Program's office, would be demolished, and two new modular buildings would be constructed. More specifically, as shown in Figure 3-3, *New Ticket, Concessions, and Restroom Buildings,* a new 183-square-foot ticket booth facility with storage and a restroom (Building Q) would be constructed in the general location of the existing portable buildings. The existing concession stand would be removed. New decorative fencing, landscaping, and site lighting would be installed between Building K and the stadium fence. The new fencing would improve campus security between the

track and field stadium and core building area. Elevated canopies would be installed along the new fencing. A “TERRA LINDA TROJANS” sign would be installed over the pedestrian gates, and a “TICKETS” sign would be installed at the ticket booth. These improvements would create a sense of entry into the school’s outdoor athletic facilities. A new restroom and concessions building of approximately 905 square feet (Building R) would be constructed near the south end of Building K. The existing space between Building K and the track would be modernized with decorative pavers, planters, retaining seat-walls, and benches to create a gathering area. Under this Project component, the track surface would also be improved with an in-kind rubberized surface. A new track runoff would be installed at the southeast corner of the track, and the jump pit would be retrofitted with sand catches. A small scoring/timing booth would be installed on the south side of the field to the east of the bleachers. Cleanouts would be installed at the track channel drain, as well. No nighttime lighting would be installed at the track and field stadium.

- **Reconstruction of Building H.** The existing 9,469-square-foot Building H, which currently houses the weight room, wrestling mat room, dance studio (used for cheerleading and also has a climbing wall), and pump room, would be demolished. A new building of approximately 10,000 square feet would be constructed to accommodate the same ancillary gym uses. As shown in Figure 3-4, *Conceptual Building H, Ancillary Gymnasium and Pool Facilities, a*ccess to these rooms would be from the north, east, and west sides of the building. The dance room would have a 20-foot-high clearance to accommodate competition-level cheerleading activities and include a replacement climbing wall. The southern side of the building would include storage rooms for both the ancillary gym uses and the proposed aquatic facility located south of Building H. It would also have restroom facilities and a concession room for the new aquatic facility. The exterior of the south side of the building would include outdoor plastic composite lockers and showers. The exterior wall of Building H, facing the courtyard, would have similar architectural materials and colors to the Competition Gymnasium and Student Commons buildings. Two ornamental trees adjacent to the east side of Building H would be removed for the reconstruction of Building H.

- **Reconstruction of Aquatic Facility.** A new competition-level aquatic facility would be constructed to support the existing PE, swim/dive, and water polo programs. Figure 3-5, *Aquatic Facility and Athletic Renovations Site Plan*, shows the improvements that are proposed under Phase 1. The existing pool and deck, and a lunch shelter and pool equipment building located west of the pool, would be demolished. A replacement outdoor swimming pool (132 feet by 75 feet) and new deck would be constructed. The pool would be a little over 12 feet deep on the west side, have 15 swim lanes, and accommodate a capacity of 495 occupants.

  A new light-emitting diode (LED) video display scoreboard would be mounted on the west wall of Building K. The existing pool lights would be replaced with four 50-foot light poles that would be installed generally in the four corners of the aquatic facility, providing lighting to the swimming pool, pool deck, and egress/emergency access areas. They would be shielded and directed downward to limit glare and light trespass. Underwater lights would also be installed in the new pool.

  A grandstand with five rows of seating would be constructed on the south edge of the pool deck and provide seating for up to 264 spectators, including 6 spaces compliant with the Americans with Disabilities Act (ADA). A new equipment and chemical storage room and a new pool storage room (Buildings S and T), each approximately 1,250 feet, would be

constructed on the left and right sides of the grandstand. The proposed grandstand and Buildings S and T would be developed within the existing slope. A retaining wall would be required to support these structures. A solar array cantilever shade structure would be installed above the grandstand. Fencing would be installed along the slope to ensure students cannot climb atop the roofs and cantilever to get into the pool area.

The portion of the slope from the west side of the Student Commons building (Building B) to an existing pedestrian ramp behind Building K would be modified to accommodate the proposed grandstand and Buildings S and T.

A new 3-phase, 150 kva battery storage facility would be installed to the east of the existing main campus switchgear located south of Building B. The battery storage facility, much like the switchgear, would be developed within the slope. A new vehicle driveway would also be constructed from the fire lane behind Building B to the basketball courts to provide new vehicular access to the southern fields. The existing pedestrian ramp south of Building K would be relocated to behind Building P, next to the new driveway. New stairs and the relocated pedestrian ramp would allow improved ADA-compliant access from the northern half of the campus to the southern half.

Existing vegetation within the development footprint of the slope, including 10 trees, would be removed. New trees and shrubbery would be planted within this area, along the exterior walls of Buildings H and K, and the area between Building K and the track and field stadium. Project landscaping would comply with shade tree requirements, pursuant to California Green Building Standards Code Section 5.106.12. One- and five-gallon shrubs and 36-inch tree boxes would be planted. Figure 3-6, *Proposed Trees for Removal,* identifies the general location of where trees are proposed for removal under Phases 1, 2, and 3.

This Project component would also require the rerouting of a segment of the fire lane located behind the new aquatic facility from behind Building P to the area between Building P and the new aquatic center. As shown in Figure 3-5, the rerouted fire lane would continue through the courtyard and toward the west end of the student parking lot where a curb cut would be created for ingress and egress of a fire truck. The curb cut would also provide access to another new fire lane on the east and south sides of Building K.

Phase 2

- **Modernization of Main Classroom Buildings.** The first and second floors of the main school buildings (Buildings A, M, and L) would be modernized to be more resilient to physical damage and comply with ADA standards. The modernized facilities would accommodate future classroom programming needs, such as a new wellness center and space for state-of-the-art technology and equipment. The improvements would affect classrooms, labs, and restrooms, as well as corridors, storage rooms, and other ancillary spaces. Room configurations may occur to better serve more modern functions; as an example, existing book storage rooms would be converted into a wellness center. The facilities would be improved with new LED lighting, flooring, counters, fixtures, painting and finishes, and technology. The restroom toilets would be improved to high-security, full-height partitions. The fire alarm system would be upgraded. The campus PA system, as well as its clock system, would be upgraded. Roofing at various buildings would be identified and replaced or coated as necessary. Mechanical systems would be evaluated and replaced, if determined necessary.

- **Campus-wide Security Fencing.** Fencing would be strategically installed throughout the campus to improve security and to prevent unauthorized pedestrian and vehicular access into the northern half of the campus. Fencing along the school frontage on Nova Albion Way would be decorative and up to 10 feet tall. New fencing and vehicle and pedestrian gates installed as a part of Phase 1 (between Buildings J and K and in the western end of the track and field stadium) would contribute to the goal of this Project component. Similar fencing would replace the existing fencing between the track and field stadium and student parking lot to the eastern property line. A new pedestrian gate would be installed between Buildings I and J, and fencing and pedestrian gates would be installed in front of the courtyard, between Buildings M and L. Access in and out of the campus before and after the school bells would be via the pedestrian gates between Buildings J and K, Buildings I and J, or Buildings M and L. During the school day, the pedestrian gates would be locked, and access would be via the administration office in Building I or the pedestrian gate between Buildings I and J.

  The proposed fencing in other areas of the campus would be either 6 or 8 feet high, no climb, and vinyl coated. On the west side of the campus, 6-foot-tall fencing would be installed between Buildings C and G, Buildings G and D, and Buildings D and B. A new electric vehicle gate would be installed across the fire lane, between the southwest corner of Building B and the northwest corner of the new battery storage facility. New 6-foot-high fence segments would be strategically placed along the top of the slope on the southern half of the campus, between Building B and the eastern property line. New 6-foot-high fencing would replace the existing fencing along the east property line, north of the slope and east of the track and field stadium.

Phase 3

- **Artificial Turf Fields.** The District proposes replacing its existing grass baseball and multipurpose fields with functioning baseball, softball, and soccer fields in the southern half of the campus. Approximately 200,000 square feet of natural turf would be replaced with permeable, artificial turf. The exact brand of material to be used has not been selected; however, no “crumb rubber” materials would be present in the synthetic turf. As shown in Figure 3-7, *Turf Field Option 1*, and Figure 3-8, *Turf Field Option 2,* two design options are proposed. Under both options, the baseball field would be in the same location and designed and striped to have the same orientation as the existing baseball field in the southeast corner of the campus. The new multipurpose field west of the baseball field would be striped for both softball and soccer uses. The backstop for the softball field would be in the northeast corner of the multipurpose field, next to the baseball field’s backstop. The soccer field would be striped either in an east-west or north-south orientation, as shown in the figures.

  The new fields may include other improvements, including dugouts, portable bleacher stands, and two new scoreboards, including a replacement scoreboard for the baseball field and a new one for the multipurpose field. The existing shot put and discus throw grounds would be relocated to the track and field stadium during improvements to beautify the stadium; see below discussion. Other improvements may include limited site lighting, ADA-compliant pathway upgrades, new drinking fountains, batting cages, and other features generally featured on such sports fields. The artificial turf would be designed to capture any increased runoff. Flat panel drains would be strategically laid out under the fields and perforated subdrains along the perimeters to collect stormwater that would slowly release into the adjoining natural grass areas to minimize erosion and flooding. A

new irrigation system would be installed to water the adjoining landscape and natural grass. Areas with impermeable improvements, such as the dugouts that could be constructed with concrete, would include storm drainage improvements that would connect to the existing system on the campus. Up to 12 trees located on the west and north sides of the fields would be removed as part of this Project component. No nighttime lighting would be installed at the artificial turf fields.

- **Tennis Court Improvements.** The existing tennis courts would be replaced, walkways would be improved to meet ADA standards, and the drinking fountain would be replaced with a new ADA-compliant fountain. The existing fencing around the tennis courts would be replaced. Improvements to the tennis courts would require the removal of up to seven trees located around the existing courts. No nighttime lighting is proposed for the tennis courts.

- **Stadium Beautification.** The remainder of the stadium would be improved under Phase 3. Improvements would enhance the appearance of the facility, including but not limited to replacing the existing fencing, painting the railings, repurposing with outdoor fitness equipment the existing natural turf areas that are in disrepair from reduced watering, relocating the long jump pit to another location, relocating the shot put and discus throw areas currently located in the multipurpose field, paving the currently unpaved access road along the eastern property line, improving site lighting for enhanced safety, installing a new scoreboard either in situ or at the eastern end of the track, installing new drinking fountains, landscaping areas adjacent to the track and bleachers, and installing additional site furnishings. Three ornamental trees located in the northeast corner of the stadium would be removed as a part of this Project component. No nighttime lighting would be installed at the track and field stadium.

Utilities

New wet and dry utilities would be required for the Project. The Project would not require off-site utility improvements.

Under Phase 1, new plumbing would be provided in the practice gym (Building K). Due to the depth of the existing pipes, the Project would require a sanitary sewer lift station and new manholes. Additionally, two inefficient boilers located at the practice gym and existing pool would be removed. High-efficiency electric heat pumps would be installed at the practice gym, and two high-efficiency boilers and a tankless water heater would be installed for the new aquatic facility. An existing natural gas pipeline located within the campus would be extended along the southern and eastern perimeters of the Phase 1 development footprint and connected to an existing line on the west side of the student parking lot, north of the track and field stadium.

Phase 2 would require new plumbing and electrical improvements within the building envelope as part of the proposed modernization of the buildings. However, no utility improvements would be required outside the building envelope.

The proposed artificial turf improvements and installation of scoreboards, under Phase 3, would require new storm drain piping, replacement water lines for watering of the remaining natural grass in the Phase 3 development footprint, and new electrical lines for the scoreboards.

Sustainable Project Features

All improvements would comply with the latest applicable Title 24 Building Standards Code, which includes the Building Code (Part 2), Fire Code (Part 9), Energy Efficiency Code (Part 6), and CALGreen Code (Part 11), as well as with ADA and District standards. The Project would be designed to include the following sustainable features:

- Solar photovoltaic facilities, as a part of the aquatic grandstand shade structure.
- Increased building insulation values in new walls and attic spaces.
- Increased windows to maximize daylighting and minimize the need for artificial lights.
- High-efficiency windows and doors.
- Efficient heating, ventilation, and air conditioning systems.
- Use of Energy Star products.
- High-efficiency boilers.
- High-efficiency electric heat pumps.
- Low-flow, water-efficient plumbing fixtures for toilets and sinks.
- Tankless water heater systems.
- LED technology for interior and exterior building areas.
- Recycled water for common area landscape irrigation and building plumbing where feasible.
- Drought-tolerant plants in landscape design to minimize irrigation on-site.
- Low-water irrigation systems with smart sensor controls.

3.3.2 Campus Operations (Post-Construction, Long Term)

Academic Buildings

The proposed Project would not increase the student seating capacity at Terra Linda High School. The proposed removal of Buildings Q/R would result in a corresponding reduction in the enrollment capacity by 70 seats, resulting in a post-Project student capacity of 1,400 seats. Classroom Buildings A, M, and L would continue to be used for classroom purposes post-Project, with no change or increase in use from existing conditions. The facilities in Buildings A, M, and L would also continue to be available for community use.

Recreational Buildings

The proposed replacement Building H would accommodate the same ancillary gym uses as existing conditions (weight room, wrestling mat room, dance studio, climbing wall) and would continue to be used for PE and by the wrestling team, cheerleading team, and other athletic programs similar to existing operations. Post-renovation, Building K would continue to be used as

locker room, restroom, and team room facilities serving the high school's PE and athletic programs. Both Buildings H and K would also be available for community use.

Aquatic Facility

The proposed new pool would continue to be used for PE and for the high school's girls' and boys' junior varsity and varsity athletics, including seasonal water polo (practices and matches), and swim/dive (practices and meets). Students would continue to swim before the morning bell and after school, similar to existing operations. However, the proposed aquatic facility would meet California Interscholastic Federation standards, which would allow the existing swim/dive and water polo programs to host championship competitions. Accordingly, there would be an increase in school-sponsored aquatic events, including approximately 15 new events per year. These events would occur two to three weeks after the regular swim/dive and water polo seasons and held after school hours and over the weekends. The number of spectators would not be more than the existing aquatic events currently held at the campus; see Table 2-3. The proposed grandstand of 264 seats would provide sufficient spectator seating, and spectators would no longer be required to bring their own seats to events. The replacement pool lights would also be used, as needed, between 6 AM and 9 AM and 5 PM and 10 PM, matching existing pool lighting schedules. The modernized aquatic facility would continue to be available to outside community groups, as required under the Civic Center Act, outside of school and athletic program hours and events.

Multipurpose Fields

The proposed artificial turf at the baseball and multipurpose fields would continue to accommodate Terra Linda High School's existing PE and athletic programs. Post-Project, existing use of the baseball field for the high school's junior varsity and varsity baseball practices and games would continue at the modernized field. There would be no increase in school-sponsored programs.

Post-Project, the high school's girls' and boys' junior varsity and varsity soccer practices and games would return from the track and field stadium to the new multipurpose artificial turf field. The junior varsity and varsity softball practices and games currently held at the adjacent softball field at the Miller Creek School District would also return to the campus. The lacrosse program would remain at the track and field stadium, as it is offered during the same season as softball, and golf would remain off-site. Although the Project would not change the existing athletic programs, including the number of events and spectators currently attending events, the improved multipurpose field would hold 150 annual, school-sponsored, junior varsity and varsity soccer and softball practices, games, and competitions. Pursuant to Board Policy, as required under the Civic Center Act, the artificial multipurpose field would continue to be rented to community users. Use of the artificial turf fields would end at dusk, as no nighttime field lights are proposed.

Track and Field Stadium

The track and field stadium, post-improvements, would continue to be used for PE and for the high school's girls' and boys' junior varsity and varsity athletics, including track and field (practices and meets), boys' and girls' cross country (practices and meets), boys' flag football (practices and games) and boys' football (practices and games). The boys' and girls' junior varsity and varsity lacrosse practices and meets would remain at the track and field stadium and would not return to the multipurpose field, as it is offered during the same season as the softball season, and softball would need to use the softball field. With the soccer programs returning to the multipurpose field, there would be approximately 58 fewer annual school-sponsored events at the track and field

stadium. Community use and rental of the track and field, however, would continue as existing, in accordance with Board Policy and the Civic Center Act.

Tennis Courts

Post-construction, the tennis courts would continue to be used for PE and the girls' and boys' junior varsity and varsity tennis teams (practices and meets). No operational changes are proposed for the tennis program, and the tennis courts would continue to be available for rental through the Civic Center Act.

Summary of Long-Term Operational Changes

The Project would result in the expanded use of the modernized athletic facilities at Terra Linda High School from school-sponsored events and community rentals. Table 3-1, *Proposed School-Sponsored After-School Events,* summarizes the proposed changes to school-sponsored after-school events. As discussed above and summarized below, the Project would result in a net increase of 72 events. The additional school-sponsored events are associated with the new California Interscholastic Federation aquatic events and the softball practices, games, and competitions that would be relocated back to the campus. The number of participants and spectators at these events would not change from that existing (see Table 2-3).

Table 3-1: Proposed School-Sponsored After-School Events

Athletic Facility	Existing After-School Events Per Year	Proposed After-School Events Per Year	Change in After-School Events Per Year
Aquatic Facility	210	225	+15
Multipurpose (Soccer/Softball) Field	35	150	+115
Baseball Field	174	174	0
Track and Field Stadium	293	235	-58
Tennis Courts	165	165	0
Total	**877**	**949**	**+72**

Similar to existing conditions, pursuant to the Civic Center Act and District policy, all of the modernized athletic facilities would continue to be available for community use and rental when they are not in use by the school. At this time, the District is unaware of any potentially new renters of the proposed competition-level aquatic facility, artificial turf multipurpose soccer/softball field, artificial turf baseball field, and rehabilitated tennis courts. The District is also unaware of the demand for the rental of these athletic facilities in Marin County and San Francisco. Therefore, it would be speculative for the District to specify how much additional rental time would result from the Project. Notwithstanding the uncertainty, the District anticipates expanded rental of the facilities and provides the following, based on 2023 facility rentals at Terra Linda High School and San Rafael High School, for disclosure and use in the impact analysis of this EIR.

The new competition-level pool may attract new renters, as there are not many competition-level pools in Marin County and San Francisco and/or pools in the area are not available year-round.

Therefore, the District anticipates rental of the modernized facility to increase. New users may include but are not limited to existing swim leagues in Marin County. For the purpose of the EIR analysis, it is assumed that rental of the modernized aquatic facility would be similar to if not slightly more than that experienced at San Rafael High School; in 2023, the San Rafael High School aquatic facility was reserved 221 hours by community users. Accordingly, for purposes of the operational analysis, it is estimated the modernized aquatic facility would roughly double its existing use, i.e., be 300 hours per year.

As the multipurpose artificial turf field would no long have gopher holes and there would be no down time during and after heavy rain events, the District anticipates expanded community use of the modernized facility. On a worst-case basis, it is assumed the artificial turf field could be used similarly to that at San Rafael High School. In 2023, the soccer field at San Rafael High School was rented for 2,100 hours by community groups. Use of the artificial turf field would end at dusk, as no nighttime field lights exist or are proposed.

It is assumed the modernized baseball field and tennis courts would have some increased rental use. However, the District does not anticipate the increase to be substantially more than existing, as there are tennis court facilities and baseball fields locally in the City that are available for use and rental, including at parks and other schools. Therefore, the rental demand for tennis and baseball facilities would not be high. Moreover, although the existing baseball field at Terra Linda High School does not have artificial turf, the District has maintained the facility and there are no gopher holes; even so, in 2023, the baseball field was rented to one user for 28 hours (see Table 2-4). Nevertheless, for disclosure, the baseball field and tennis courts at San Rafael High School were rented for 51 hours and 69 hours, respectively. These are comparable to the 2023 rentals at Terra Linda High School (see Table 2-4). Therefore, any increase in the rental of the modernized baseball field and tennis courts would not be substantial.

3.3.3 Campus Operations (During Construction)

The proposed construction schedule has been designed to limit interruptions (to the extent feasible) on school operations and allow for existing academic and athletic programs to continue under all three phases. Building modernization improvements, under Phase 2, would be phased to avoid the need for temporary student classroom facilities. However, the proposed athletic improvements, under Phases 1 and 3, would displace existing programs offered at the facilities proposed for improvements.

Phase 1 improvements would affect sports programs that use the track and field, Buildings K and H, and the aquatic facility, including football, girls' flag football, wrestling, cheerleading, water polo, and swim/dive. The Phase 1 construction schedule prioritizes improvements to Building K and the western end of the track and field during the summer in an effort to minimize disruptions to the sports programs that use these facilities during the fall season of the school year. It also proposes construction activities, e.g., demolition and site preparation, during the summer when students are not around. There may be some overlap between the end of Phase 1 construction and the start of school year. If so, the sports programs (football and girls' flag football) that use the track and field stadium during the fall season would be temporarily relocated to the fields in the southern half of the campus; home games would be played off-site. Cheerleading and wrestling would be relocated to the Competition Gym (Building J). The water polo and swim/dive programs would be relocated to an aquatic facility located within a 10-mile radius of Terra Linda High School. Soccer (winter season) and lacrosse (spring season) would not be affected by Phase 1 construction activities; they would continue to use the track and field stadium, as they do now.

Phase 3 improvements would affect sports programs that use the baseball and multipurpose fields, tennis courts, and the eastern side of the track and field. The District proposes to initiate construction activities of each of the three Phase 3 Project components right before the start of the summer break to minimize disruptions to the academic and athletic programs. Major construction activities (demolition, site preparation, and grading) would occur during summer break when students are not on campus. Soccer and lacrosse would continue to use the track and field stadium during construction of the proposed artificial turf multipurpose field. The tennis program would not be affected, as construction of the tennis courts would be completed during summer. Softball would continue its program off-site, next door at the Miller Creek District Office, and baseball would also temporarily use the Miller Creek District Office field.

Community members would not be able to use the campus facilities proposed for modernization, as described herein, during their scheduled construction period, or if such facilities are needed to temporarily house the high school's academic or athletic programs during a different phase of construction. The District also proposes to not renew existing leases with organizations that use the campus facilities proposed for modernization or that would be affected by construction, such as the gymnasium in Building K during the summer of 2024. Once construction is completed, however, the facilities would be available again for community use through the Civic Center Act, and the District would be able to renew leases.

3.3.4 Project Construction

Construction Schedule and Hours

The proposed Project would be implemented in three general phases. The first phase would start the summer of 2024, and the last phase would end five years later, at the end of the third quarter in 2029.

- Phase 1 (Pool, Buildings H and K, Stadium): June 2024–November 2025
    - Phase 1a (Building K and Stadium): June 2024–January 2025
    - Phase 1b (Aquatic Facility and Building H): June 2024–November 2025
- Phase 2 (Classroom Buildings): June 2024–December 2028
    - Phase 2a: June 2024–August 2024
    - Phase 2b: June 2026–August 2026
    - Phase 2c: June 2027–December 2027
    - Phase 2d: June 2028–December 2028
- Phase 3 (Artificial Turf, Tennis Courts, Stadium): June 2027–August 2029
    - Phase 3a (Artificial Turf): June 2027–February 2028
    - Phase 3b (Tennis Courts): June 2028–August 2028
    - Phase 3c (Stadium Beautification): June 2029–August 2029

Construction under each phase would occur between 7:00 AM and 6:00 PM, Monday through Friday, and on Saturdays from 9:00 AM to 6:00 PM, and deliveries would not be allowed 15 minutes before and after the morning and afternoon bells.

Equipment Staging and Laydown

Table 3-2 lists the construction equipment that would be used during each of the three Project phases. The construction equipment staging and laydown areas would occur in areas closest to the construction site of each phase:

- Phase 1 (Pool, Buildings H and K, Stadium): the basketball courts.
- Phase 2 (Classroom Buildings): the area immediately north of Building A and the parking lot (approximately 30 stalls) west of the courtyard, north of Building G.
- Phase 3 (Artificial Turf, Tennis Courts, Stadium): the basketball courts, parking area immediately north of the tennis courts (12 stalls), and the multipurpose field, south of the tennis and basketball courts.

Table 3-2: Construction Equipment

Phase	Subphase	Equipment
Phase 1	Demolition	• 1 Excavator • 1 Skid Steer Loader • 1 Industrial Saw • 2 Tractors
Phase 1	Site Preparation	• 1 Tractor
Phase 1	Construction	• 1 Crane • 2 Excavators • 2 Tractors
Phase 1	Paving	• 1 Tractor • 4 Cement Mixers • 1 Paver • 1 Roller
Phase 1	Painting	• 1 Air Compressor
Phase 2	Demolition	• 1 Excavator • 1 Skid Steer Loader • 1 Industrial Saw • 2 Tractors
Phase 2	Construction	• 2 Excavators • 1 Skid Steer Loader • 6 Air Compressors • 2 Industrial Saws • 2 Tractors

Table 3-2, continued

Phase	Subphase	Equipment
Phase 3	Demolition	• 1 Excavator • 1 Skid Steer Loader • 1 Industrial Saw • 1 Excavator
Phase 3	Site Preparation	• 2 Tractors • 2 Small Dozers
Phase 3	Grading	• 1 Grader • 1 Excavator • 3 Tractors
Phase 3	Construction	• 1 Generator • 1 Welder • 1 Excavator • 1 Skid Steer Loader • 3 Tractors
Phase 3	Paving	• 1 Paver • 1 Roller

Construction Activities

All three Project phases would require the removal of demolished debris and/or soils; Phase 3 would also require the import of soils. Under Phase 1, 1,124 tons of demolished debris would be hauled off-site to an appropriate landfill. Under Phase 2, 248 tons of demolished debris would be removed. Under Phase 3, 25.1 tons of demolished debris and 7,407 cubic yards of soils would be hauled off-site, and 7,407 cubic yards of replacement materials would be imported on-site.

For each Project phase and subphase, the construction areas and material laydown and equipment staging areas would be fenced with privacy screening; existing storm drain inlets and catch basins would be protected; and fiber rolls would be placed along the interior perimeters of the fenced areas. Prior to building modernization and demolition, building materials and soils would be tested, in compliance with federal and state occupational safety and environmental health policies and regulations. Confirmed hazardous materials, such as lead-based paint and products, mercury, polychlorinated biphenyl caulk, and asbestos-containing materials would be removed, demolished, and disposed of in compliance with California environmental regulations and policies. Additionally, the soil that would be imported under Phase 3 would be tested to ensure that it is free of contamination.

Phases 1 and 3 would be required to comply with the Project-specific Stormwater Pollution Prevention Plan (SWPPP), as the construction areas are larger than an acre in size. The SWPPP would include erosion control best management practices (BMP) that would be implemented to limit pollution leaving the Project site. Construction equipment would be maintained to manufacturer specifications to ensure that potential noise and air pollution is minimized. Construction vehicles would access the staging areas and/or construction sites from existing access points. The entrances to the construction areas would be stabilized and installed with a tire wash.

3.4 Best Management Practices

The Project will implement the following construction BMPs and adopted regulations:

1) The District and its construction contractor will coordinate with Terra Linda High School administrators to ensure that construction activities are scheduled so as to minimize disruptions to campus programs and important test days.
2) For construction activities that would result in the displacement of sports programs (i.e., water polo and swim/dive) that typically use Terra Linda High School facilities, the District will encourage students to carpool to the off-site facility.
3) In the event that historical, unique archaeological, or paleontological resources are encountered during construction of the phased improvements, the District and its construction manager will halt construction activities in the immediate area of the find, in accordance with CEQA Guidelines Section 15064.5(f). The District will retain a qualified archaeologist and/or paleontologist to make an immediate evaluation of the significance of the find. If the find is determined to be significant, the District in conjunction with the qualified expert will make appropriate treatment of the resource. Construction activities may continue on other parts of the construction site while evaluation and treatment of the resource takes place. The District will comply with Public Resources Code Section 5097.5(a), which addresses the treatment of archaeological or historical resources and sites and paleontological features.
4) In the event of an accidental discovery or recognition of any human remains during earth-moving activities, the District will stop further excavation or disturbance of the site and areas nearby that are reasonably suspected to overlie adjacent human remains. The District will contact the Marin County coroner to determine whether investigation of the cause of death is required. If the coroner determines the remains to be of Native American descent, he or she must contact the Native American Heritage Commission within 24 hours.
5) The District and its construction contractor will follow the construction hours adopted by the City of San Rafael, under Municipal Code Section 8.13.050, which allows construction from Monday through Friday from 7:00 AM to 6:00 PM and on Saturdays from 9:00 AM to 6:00 PM and prohibits construction on Sundays and holidays.
6) The District and its construction contractor will post temporary construction signage to identify where deliveries should be made on-site to prohibit offloading of materials on Nova Albion Way, as well as ~~identifying acceptable locations for contractor parking~~ to prohibit construction vehicles to park on the north side of Nova Albion Way, Devon Drive, Esmeyer Drive, El Pavo Real Circle, Corte Pacheco, Cermenho Court, Don Timoteo Court, and Viscaino Way.
7) The District and its construction contractor will implement the following BMPs during construction:
    a) All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, consistent with manufacturer standards.
    b) All stationary construction equipment shall be placed so that emitted noise is directed away from the noise-sensitive receptors nearest the Project site.
    c) As applicable, all equipment shall be shut off when not in use.
    d) To the extent feasible, equipment staging shall be located in areas that create the greatest distance between construction-related noise/vibration sources and sensitive receptors surrounding the Project site.

e) Jackhammers, pneumatic equipment, and all other portable stationary noise sources shall be directed away from noise-sensitive receptors nearest the Project site to the extent possible. Either 1-inch plywood or sound blankets can be utilized for this purpose. They should reach up from the ground and block the line of sight between the equipment and the nearest off-site residences. The shielding should be without holes and cracks.

f) No amplified music and/or voices shall be allowed on the construction site.

~~8) The District and its construction contractor will comply with the Bay Area Air Quality Management District's (BAAQMD) Basic Construction BMPs, as follows:~~

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

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

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

~~d) All vehicle speeds on unpaved roads shall be limited to 15 mph.~~

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

~~f) All trucks and equipment, including their tires, shall be washed off prior to leaving the site.~~

~~g) Unpaved roads providing access to sites located 100 feet or farther from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.~~

~~h) Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.~~

9) The District and its construction contractor must comply with the Clean Water Act and the National Pollutant Discharge Elimination System Permit General Construction Permit. As the construction areas for Phases 1 and 3 are both larger than an acre in size, each phase would require its own Stormwater Pollution Prevention Plan. Phase 2 improvements would occur within the existing building envelope, and a Stormwater Pollution Prevention Plan would not be required; however, construction staging and laydown areas under Phase 2 would include erosion control measures, such as fencing of the staging and laydown areas with privacy screening, protection of existing storm drain inlets and catch basins, and the installation of fiber rolls along the interior perimeters of the fenced area to limit potential stormwater runoff.

   In accordance with the General Permit, the SWPPP for Phases 1 and 3 must be prepared by a qualified SWRCB-approved SWPPP Practitioner and must identify sources of sediment and other pollutants that can affect the quality of stormwater discharge. The SWPPP will describe the implementation of BMPs to reduce or prevent sediment and other pollutants from entering into stormwater and non-stormwater discharges, before leaving the Project site and downstream into receiving waters.

10) <u>To reduce greenhouse gas emissions and the exposure of neighboring residents to toxic emissions, the District and its construction contractor will implement the following provisions:</u>

   a) <u>Limit idling time of vehicles and equipment to less than 2 minutes.</u>

b) Encourage carpools, secure bicycle parking to construction workers, and encourage use of public transportation.

11) To the extent feasible, the District and its construction contractor will announce and provide notice of anticipated lane or road changes resulting from the proposed Project on the Terra Linda High School digital sign board along Nova Albion Way.

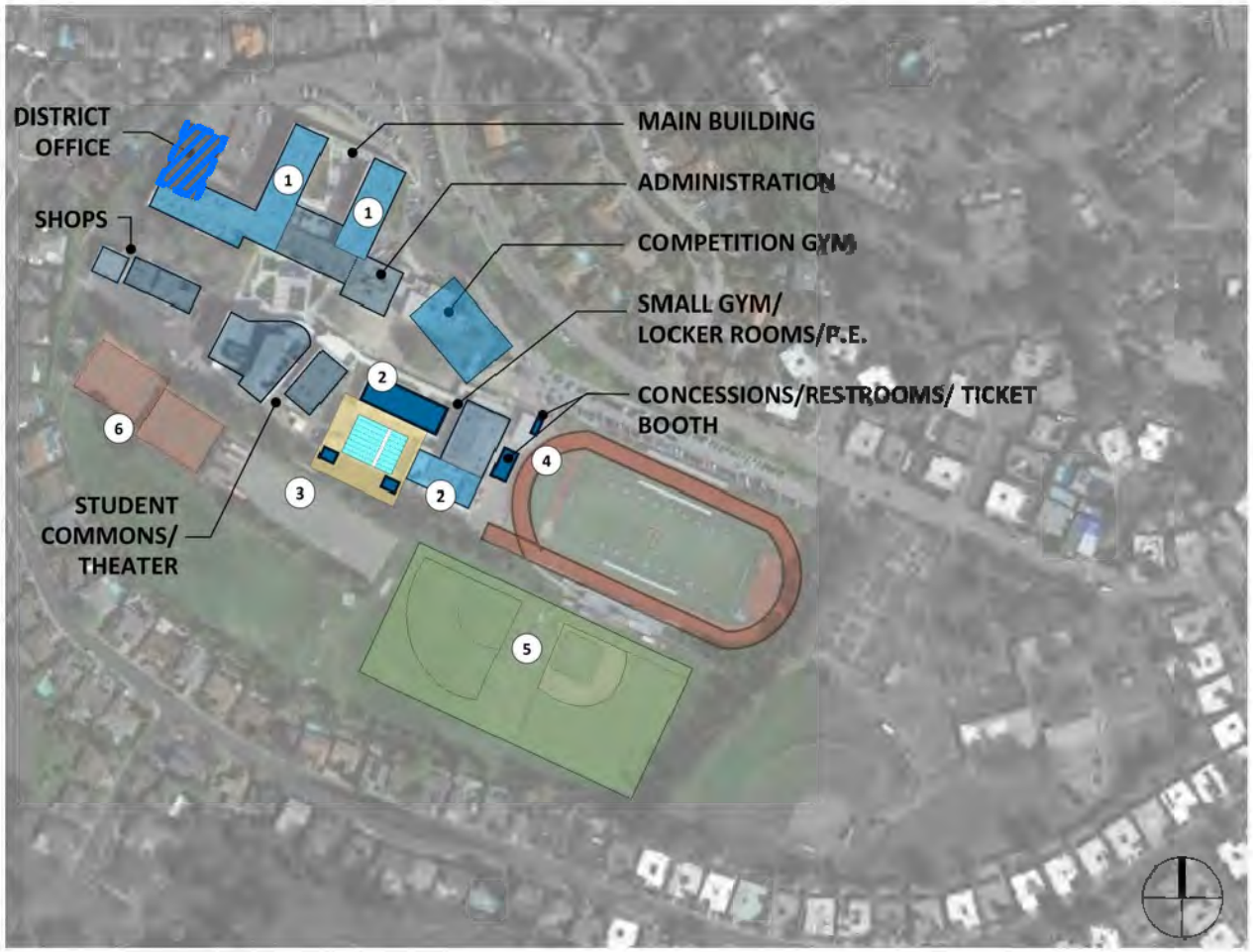
12) The District and its construction contractor will prepare a construction management plan that will provide an overview of how the District will handle the Project's construction phasing and logistics to reduce construction effects and nuisances. The construction management plan will be posted on the Bond website (https://www.srcsbondprogram.org /).

3.5 Intended Uses of the EIR

This EIR is a Project-level EIR that examines the potential environmental impacts associated with the approval of the Project and determines corresponding mitigation measures, as necessary. This EIR enables the District, responsible agencies, and interested parties to make informed decisions with respect to the approval of the Project and issuance of permits. The anticipated approvals required for the Project are listed in Table 3-3.

Table 3-3: Agency Activities

Agency	Discretionary Action
Lead Agency: San Rafael City Schools	• Certification of the EIR and Project approval
Responsible Agency: San Francisco Bay Regional Water Quality Control Board	• Issuance of National Pollutant Discharge Elimination System Permit General Construction Permit • Approval of Stormwater Pollution Prevention Plan
Responsible Agency: Bay Area Air Quality Management District	• Certification of the Project's proposed high-efficiency boilers
Reviewing Agency: Division of the State Architect	• Review of Project compliance with the California Building Standards Code for fire and life safety, California Energy Efficiency Code, and California Green Building Code
Reviewing Agency: San Rafael Fire Department	• Review of Project site access, fire lane markings, pavers and entrances; fire hydrant location and distribution; fire flow



Site Plan Diagram

PROPOSED IMPROVEMENTS

	Project Description
1	**Classroom & Campus Improvements:** • Main Building Modernization including LED Lighting, Flooring, Counters, Classroom Technology, Corridors, & Restroom Remodel
2	• Buildings K Modernization Building H Demolition & Replacement with New Facility • Security & Fire Alarm Systems Upgrades
3	**Aquatic Center with Competition Swimming & Water Polo**
4	**Site Work:** • Stadium Upgrades including Concessions, Restrooms, Ticket Booth, Portable Removal, & Track Surface, Sitework
5	• Artificial Turf Baseball & Softball Fields With Dugouts
6	• Tennis Court Replacement and Walkway Improvements

LEGEND:

- Existing Building
- Modernization
- New Building
- Non-school Building
- Sport Facilities Improvements
- Asphalt Paving Improvements
- Courtyard Improvements
- New Artificial Turf

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Michael Baker INTERNATIONAL

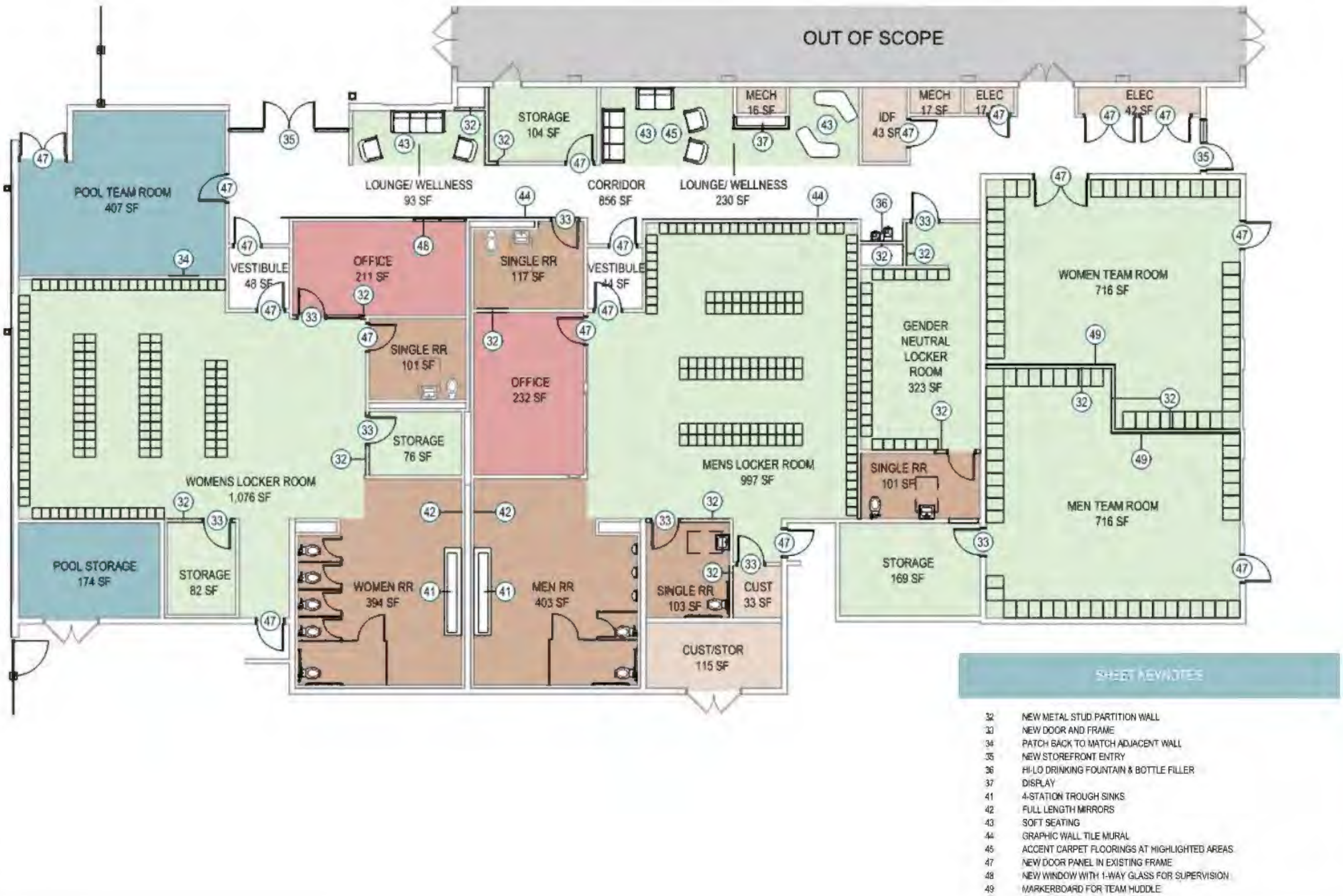
NOT TO SCALE

Source: San Rafael City Schools, August 21, 2023.

TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Capital Facilities Master Plan

Figure 3-1



TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

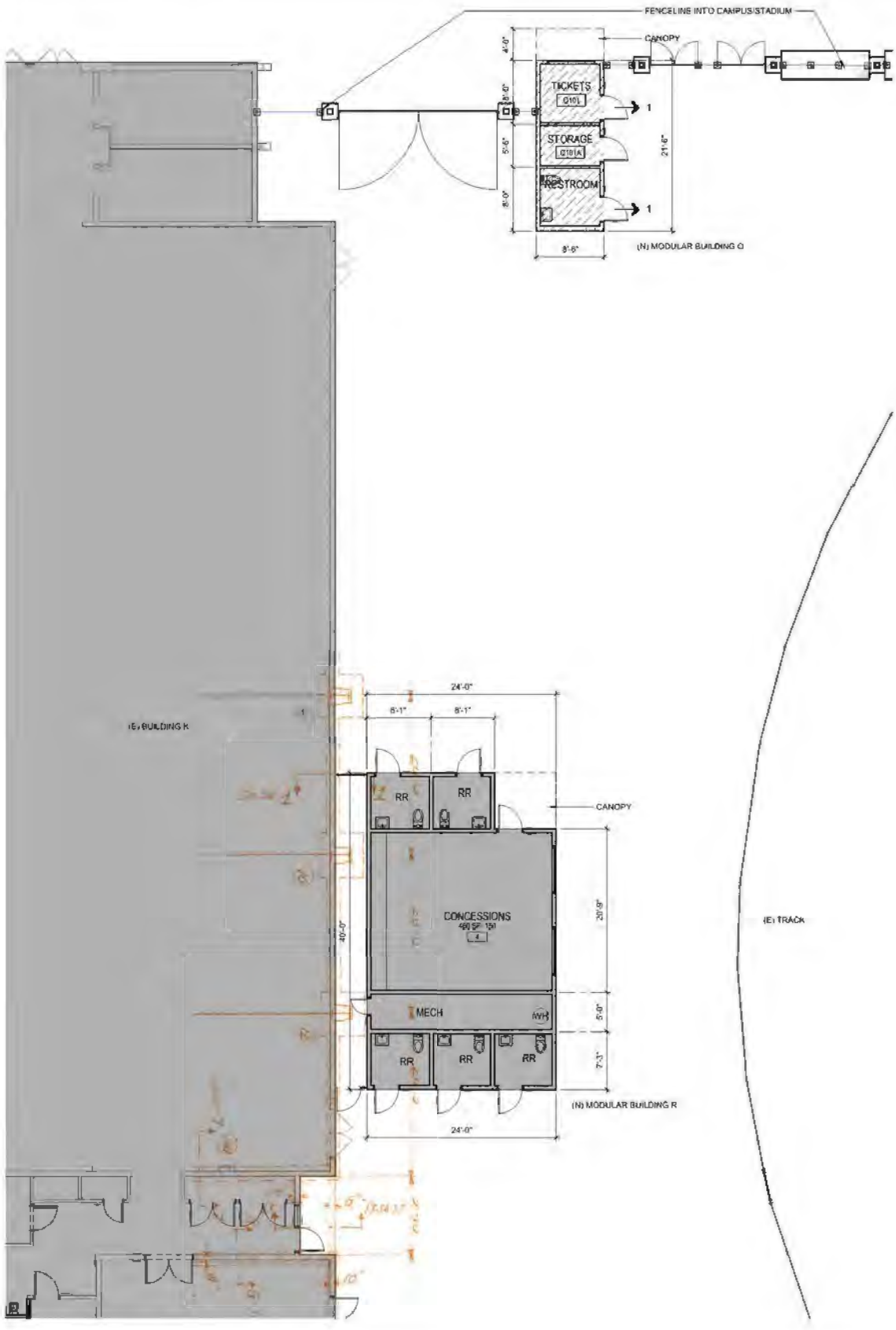
Michael Baker INTERNATIONAL

NOT TO SCALE

Conceptual Building K, Locker Facilities Renovations

Source: Lionakis, Schematic Design, Terra Linda High School Aquatic & Athletic Renovations, May 30, 2023.

Figure 3-2



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New Ticket, Concessions, and Restroom Buildings

Source: Lionakis, August 11, 2023.

Figure 3-3

SHEET KEYNOTES

- 36 HI-LO DRINKING FOUNTAIN & BOTTLE FILLER
- 38 5-TIER METAL LOCKERS ON CONCRETE CURBS, TYP
- 50 FULL MIRROR WALL
- 51 NEW GLAZED OVERHEAD STACKING DOOR
- 52 INTERIOR CLIMBING WALL
- 53 EXTERIOR SHOWERS WITH GLAZED CERAMIC WALL TILE

BUILDING H ROOM SCHEDULE

NAME	AREA
WEIGHT ROOM	2,476 SF
DANCE	2,560 SF
MAT ROOM	2,146 SF
WEIGHT STOR	136 SF
MAT STOR	62 SF
CONCESSIONS	189 SF
DRY STORAGE	136 SF
FR	34 SF
ELEC/IDF	105 SF
CUSTODIAL	83 SF
MENS	310 SF
RR	64 SF
WOMENS	310 SF
RR	64 SF
TOTAL NET	8,674 SF
GROSSING FACTOR OF 15%	1,306 SF
TOTAL GROSS	**+/- 10,011 SF**

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TERRA LINDA HIGH SCHOOL
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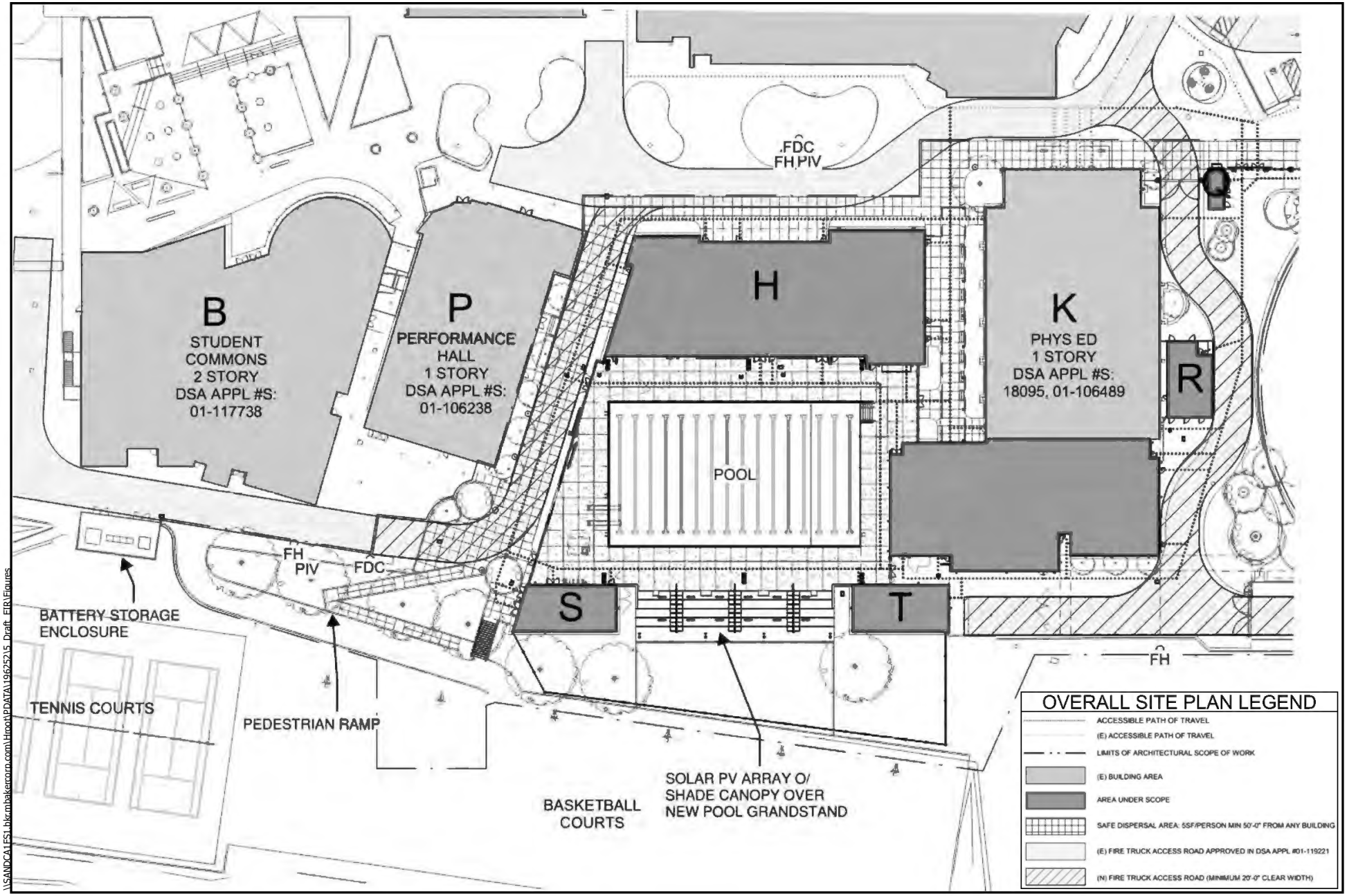
NOT TO SCALE

Conceptual Building H, Ancillary Gymnasium and Pool Facilities

Source: Lionakis, Schematic Design, Terra Linda High School Aquatic & Athletic Renovations, May 30, 2023.

Figure 3-4



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NOT TO SCALE

Source: Lionakis, 2017.

Aquatic Facility and Athletic Renovations Site Plan

Figure 3-5

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TERRA LINDA HIGH SCHOOL
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NOT TO SCALE

Source: Lionakis, 2017.

Proposed Trees for Removal

Figure 3-6

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TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Turf Field Option 1

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Source: Verde Design, March 14, 2023.

Figure 3-7

TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Turf Field Option 2

Figure 3-8

Michael Baker INTERNATIONAL

Source: Verde Design, March 14, 2023.

CHAPTER 4
IMPACT ANALYSIS AND MITIGATION MEASURES

Chapter 4 examines the environmental setting of the proposed Project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid significant impacts. This chapter has a separate section for each environmental issue area that was determined to need further study in the EIR. This scope was determined in the Initial Study and Notice of Preparation, and through public and agency comments received during the comment period (Appendix A-1). Environmental issues and their corresponding sections are:

- Section 4.1, Aesthetics
- Section 4.2, Air Quality
- Section 4.3, Biological Resources
- Section 4.4, Cultural Resources
- Section 4.5, Energy
- Section 4.6, Geology and Soils
- Section 4.7, Greenhouse Gas Emissions
- Section 4.8, Hydrology and Water Quality
- Section 4.9, Noise
- Section 4.10, Recreation
- Section 4.11, Transportation
- Section 4.12, Tribal Cultural Resources

Each environmental resource topic is discussed in the following subsections:

4.X.1 Regulatory Setting identifies the applicable federal, state, regional, and/or local regulations.

4.X.2 Environmental Setting includes a description of the existing physical environmental conditions, or "baseline conditions," at the time the environmental analysis commenced to compare and establish the type and extent of the potential environmental effects of the Project. The baseline conditions are tailored specifically for the resource area discussed in each section.

4.X.3 Methodology describes the sources or methods used in the preparation of the impact analysis for each environmental resource area. This section identifies the thresholds of significance, or standards, by which the lead agency measures the significance of an impact. Additionally, thresholds that were scoped out as part of the Initial Study are identified.

4.X.4 **Impact Analysis** provides the environmental analysis, which presents evidence, based on scientific and factual data, about the cause-and-effect relationship between the Project and potential changes in the environment. The magnitude, duration, extent, frequency, range, and other parameters of a potential impact are ascertained to the extent possible to support finding the impact significant or less than significant. In determining whether impacts may be significant, all the potential effects, including direct effects and reasonably foreseeable indirect effects, are considered. Each impact analysis will include mitigation, if the Project's impact is potentially significant, and the level of significance after mitigation, if applicable.

- **Mitigation Measures** identify actions that can reduce or avoid a potentially significant impact identified in the analysis. Existing regulations, policies, or best practices applicable to the Project are considered a part of the existing regulatory environment and are not considered or included in mitigation. Mitigation measures are those feasible, project-specific measures which are required, in addition to compliance with existing regulations and requirements, to reduce significant impacts. In addition to measures that the lead agency has sole authority to implement, mitigation can include measures that are the responsibility and jurisdiction of another public agency (CEQA Guidelines, Section 15091[a][2]).
- **Level of Significance After Mitigation** indicates what effects remain after the implementation of mitigation and whether the residual effects are considered significant. When impacts cannot be mitigated to a less than significant level, even with the inclusion of mitigation measures, they are identified as "unavoidable significant impacts." To approve a project with unavoidable significant impacts, the lead agency must adopt a Statement of Overriding Considerations at the time of EIR certification. In adopting such a statement, the lead agency must find that it has reviewed the EIR, balanced the benefits of the Project against its significant effects, and concluded that the benefits of the Project outweigh the unavoidable adverse environmental effects, and thus, the adverse environmental effects may be considered "acceptable" (CEQA Guidelines, Section 15093 [a]).

4.X.5 **Cumulative Impacts** evaluates the Project's impacts in the context of other projects that may affect the same environmental resources, potentially leading to compounded or increased effects. Table 2-5, *Related Cumulative Projects*, in Chapter 2.0, *Environmental Setting,* lists approved and reasonably foreseeable projects near the Project site that when considered with the proposed Project could result in cumulatively considerable environmental effects. Some impacts are site specific, such as geology and soils, and others may have impacts outside the District boundaries, such as regional air quality. The analysis will include a determination on whether the Project's contribution to cumulative effects is significant and identify mitigation and determine the level of significance after mitigation, if applicable.

4.1 AESTHETICS

This section assesses the potential for aesthetic impacts using accepted methods of evaluating visual quality, as well as identifying the type and degree of change the proposed Project would likely have on the character of the landscape. The analysis in this section is primarily based on information provided by the District and verified through site reconnaissance conducted by Michael Baker International on November 2, 2023. Further, visual simulations of the subject site, prepared by Digital Preview in November 2023, were considered in evaluating potential aesthetic effects resulting with Project implementation. A Photometric Plan was also prepared by Musco Lighting in 2023 and is referenced herein.

4.1.1 Regulatory Setting

No federal or regional regulations related to visual quality would pertain to the Project.

State

Division of State Architect

The California Division of the State Architect reviews plans for public school construction to ensure compliance with California's building codes. The Division of the State Architect further reviews projects for structural safety, fire and life safety, access compliance, and energy savings.

California Building Code

The State of California provides a minimum standard for building design through Title 24, Part 2, of the California Code of Regulations, commonly referred to as the California Building Code (CBC). The CBC is updated every three years. The CBC includes standards for outdoor lighting that are intended to reduce light pollution and glare by regulating light power and brightness, shielding, and sensor controls.

California Building Code: CALGreen

The California Building Standards Commission adopted the California Green Building Standards Code, also known as CALGreen, in Part 11 of Title 24 of the CBC. CALGreen establishes building standards aimed at enhancing the design and construction of buildings using concepts that reduce negative environmental impacts and increase positive environmental impacts by encouraging sustainable construction practices. CALGreen also addresses light pollution related to outdoor lighting systems, under Section 5.106.8, *Light Pollution Reduction.*

California Building Code: Energy Efficiency Standards

The Building Energy Efficiency Standards (Energy Code) provide energy conservation standards, including energy and water efficiency requirements for newly constructed buildings, and additions or alterations to existing buildings. The Energy Code is contained in Part 6 of Title 24 of the CBC.

Energy Code Section 130.2, *Outdoor Lighting Controls and Equipment,* lists requirements for nonresidential and hotel/motel buildings, including the requirement to shield all outdoor luminaires of 6,200 initial luminaire lumens or greater in accordance with CALGreen Section 5.106.8. It further provides that outdoor lighting shall be independently controlled from other electrical loads.

Energy Code Section 140.7, *Prescriptive Requirements for Outdoor Lighting,* provides parameters for calculating the wattage of outdoor luminaires. This section further specifies that

lighting for sports and athletic fields is exempt from the requirements of Energy Code Section 140.7.

Local

The City of San Rafael provides design and lighting guidelines in its General Plan and Municipal Code to minimize adverse impacts to visual resources within the City. Although not directly binding to the District, these standards are considered in the impact analysis to ensure the Project does not cause adverse effects on the visual quality of the surrounding community and light and glare on the surrounding sensitive uses.[1]

San Rafael General Plan 2040

The San Rafael General Plan 2040 identifies goals, policies, and programs contained in the Community Design and Preservation and Conservation and Climate Change Elements that address the design of proposed developments and lighting plans within the City:

Policy CDP-4.1 **Design Guidelines and Standards.** Use design guidelines and standards to strengthen the visual and functional qualities of San Rafael's neighborhoods, districts, and centers. Guidelines and standards should ensure that new construction, additions, and alterations are compatible with the surrounding neighborhoods while still allowing for innovative, affordable design.

Policy CDP-4.3 **Creative Architecture and Design.** Encourage creative architecture while respecting the context of each site.

Program CDP-4.3A **Reinforcing Design Context.** Ensure that design guidelines recognize the distinct characteristics of San Rafael neighborhoods. Guidelines should ensure that new development respects the character-defining elements of neighborhoods, including height, scale, materials, and setbacks.

Policy CDP-4.10 **Landscape Design.** Encourage—and where appropriate require—privately owned and maintained landscaping that conserves water, contributes to neighborhood quality, complements building forms and materials, improves stormwater management and drainage, and enhances the streetscape. Natural elements such as plants should be an integral part of site development and should enhance the built environment while supporting water conservation goals.

Policy CDP-4.11 **Lighting.** Encourage lighting for safety and security while preventing excessive light spillover and glare. Lighting should complement building and landscape design.

Program CDP-4.11A **Lighting Plans.** Continue to require lighting plans for projects proposing exterior lighting. The design review process should be used to evaluate

[1] Pursuant to California Government Code Section 53094, the District's Board adopted Resolution No. 2324-17, dated October 23, 2023, exempting the proposed Project and the Terra Linda High School campus from zoning and land use regulations of the City of San Rafael, including, without limitation, the City's General Plan, and related ordinances and regulations that would otherwise be applicable.

lighting for safety, consistency with dark sky objectives, and potential mitigation to reduce negative impacts on nearby properties.

Policy C-1.19 **Light Pollution.** Reduce light pollution and other adverse effects associated with night lighting from streets and urban uses.

San Rafael Municipal Code

Section 14.16.227, Light and Glare, of the Municipal Code regulates the type of colors, materials, and lighting for new or amended building construction and/or site development within the City to avoid creating undue off-site light and glare impacts. Additional requirements include discouraging the use of reflective or glossy materials, shielding of light fixtures, and minimization of footcandle intensity to reduce or avoid impacts on adjacent development. The District is not subject to conformance with City Municipal Code design regulations.[2]

The Project site is zoned Planned Development (PD) District (see Section 2.5 for details about this zoning designation). Section 14.07.030, Property Development Regulations, of the Municipal Code includes the development standards for the PD District. The section states that building heights shall be consistent with height standards contained in the General Plan. The San Rafael General Plan 2040 defines the height limit for the PD District as 30 feet.[3]

San Rafael Design Guidelines

The City adopted the interim San Rafael Design Guidelines for residential and nonresidential structures to ensure the design of new buildings and additions are compatible with their surroundings. The Design Guidelines reflect what the City considers to be desirable design and are applicable in all areas except those that are amended by subsequent plans. Design guidelines specific to nonresidential developments include:

Landscaping

- Landscaped areas should be planned as integral parts of the development and to create a strongly landscaped character for the site.
- Unsightly uses should be screened.
- Trees should be planted in a variety of locations, such as along the side property lines, clustered in planting areas, or distributed throughout the parking lot, consistent with the zoning ordinance.
- Pedestrian areas should be made visually attractive with special planting and flowering trees.
- Where feasible, landscape the area between the building and the property line even when a building is located at the minimum required side or rear yard setback.

[2] See Footnote No. 1.

[3] City of San Rafael, *San Rafael General Plan 2040 and Downtown Precise Plan Draft EIR*, *Figure 3-3 Height Limits*, accessed January 22, 2024, https://storage.googleapis.com/proudcity/sanrafaelca/uploads/2021/09/FullDocument-Adopted080221.pdf.

Lighting

- Limit the intensity of lighting to provide for adequate site security and for pedestrian and vehicular safety.
- Shield light sources to prevent glare and illumination beyond the boundaries of the property.
- Lighting fixtures should complement the architecture of the project.

Pedestrian Circulation

- Consider pedestrian orientation when designing building entries, windows, signage and doors.
- Where appropriate, pedestrian walkways should be provided between adjacent lots.
- Special design elements should be included, such as bollards, pots, benches, trash cans, unique paving, tree grates, tree guards and pedestrian lighting to add visual richness to areas designed for pedestrian access.
- Where appropriate, include outdoor gathering places and seating for the public.

Building Form

- Consider the pedestrian experience when designing the ground floor of buildings.
- A continuity of design, materials, color, form and architectural details is encouraged for all portions of a building and between all the buildings on the site.
- Consider the development's visual and spatial relationship to adjacent buildings and other structures in the area.

Entryways

- A defined sense of entry with pedestrian orientation should be provided.
- Building entrances should be defined with architectural elements such as roof form changes, awnings or other architectural elements.

Materials and Color

- Use articulation, texturing and detailing on all concrete exposed to exterior view.
- Exterior materials should minimize reflectivity.
- Use color to provide appropriate accents on a building.

4.1.2 Environmental Setting

Existing Setting

Visual Character

The Terra Linda High School campus is built with permanent classroom facilities in the northwest portion of the campus and recreational uses in the remaining areas. The campus has been undergoing previously approved facility modernization improvements.

The 30-acre campus has varying topography; a slope with a grade differential of 5 to 20 feet separates the campus into northern and southern halves. The northern portion of the campus is relatively flat and developed with school buildings and the track and field. Average elevation in the northern portion is approximately 80 feet above mean sea level (amsl). The elevation in the southern half varies between 90 and 105 feet amsl. Outdoor recreational uses located in the southern half are developed on terraced pads.

Terra Linda High School is surrounded by fully built-out, residential neighborhoods. The backyards of single-family residences along Devon Drive border the Project site to the south, adjacent to the fields. These properties are at elevations ranging from approximately 115 to 140 feet amsl,[4] and most are separated by fencing and vegetation; refer to Figures 2-4 through 2-7, Site Photographs. South of these residences is Sorich Park, which peaks at an elevation of approximately 600 feet amsl.[5] Single-family residences are also immediately north of Nova Albion Way to the north of the school campus. These properties are at an elevation of approximately 85 feet amsl.[6] Farther north are more residential uses along El Faisan Drive, at elevations ranging from approximately 175 to 190 feet amsl.[7] The above residences constitute the viewpoints of private viewers of the Project site; Sorich Park constitutes the viewpoint of public viewers. Residences exist east and west of the campus too, but they are not at higher elevations with substantial views of the campus.

Light and Glare

Lighting effects are associated with the use of artificial light during the evening and nighttime hours. There are two primary sources of light: light emanating from building interiors passing through windows, and light from exterior sources (i.e., street lighting, building illumination, security lighting, parking lot lighting, and landscape lighting). Excessive light and glare can be visually disruptive to humans and nocturnal animal species and often reflect an unnecessarily high level of energy consumption. In particular, light introduction can be a nuisance to adjacent residential areas, and if uncontrolled, can cause disturbances. Uses such as residences are considered light sensitive since occupants have expectations of privacy during evening hours and may be subject to disturbance by bright light sources.

Terra Linda High School is nestled in a residential community. The closest light-sensitive receptors are single-family residences along Devon Drive and Esmeyer Drive that abut the campus. However, as the campus is located at the bottom of a small valley formed by the ridgeline of Sorich Park on the south with an elevation of approximately 600 feet amsl and a smaller hillside

[4] US Geologic Survey, *San Rafael Quadrangle, California – Marin County, 7.5-Minute Series, San Rafael, CA*, 2021.

[5] US Geologic Survey, *San Rafael Quadrangle.*

[6] US Geologic Survey, *Novato Quadrangle, California, 7.5-Minute Series, Novato, CA*, 2021.

[7] US Geologic Survey, *Novato Quadrangle.*

on the north with an elevation of approximately 200 feet amsl, the campus can also be viewed from these areas.

Light pollution refers to all forms of unwanted light in the night sky around and above developed urban areas, including glare, light trespass, sky glow, and over lighting. Views of the night sky are an important part of the natural environment. Light pollution has the potential to become an issue of increasing concern as new development contributes additional outdoor lighting installed for safety and other reasons.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light by highly polished surfaces such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. Perceived glare is the unwanted and potentially objectionable sensation as observed by a person as they look directly into the light source of a luminaire. Daytime glare generation is common in urban areas and is typically associated with buildings with exterior facades largely or entirely composed of highly reflective glass. Glare can also be produced during evening and nighttime hours by the reflection of artificial light sources such as automobile headlights. Glare-sensitive uses include residences, transportation corridors, and aircraft landing corridors.

Figure 4.1-1, *Existing Nighttime View of Campus*, shows the existing sources of nighttime light and glare at the campus and surrounding areas. The photo from the north was taken by a drone on El Faisan Drive, near the El Condor Court intersection. Similarly, the photo from the south was taken by a drone on Ridgewood Fire Road, which is along the ridgeline of Sorich Park. In both photos, the drone was elevated above vegetation and building structures to allow for unobstructed views of the Project site at the public accessways.

As shown in Figure 4.1-1, existing sources of light and glare near and within the Project site are primarily headlamps from vehicles on public roadways, exterior and interior lighting from adjacent residential development visible through windows, security lighting in parking lots and school frontage along Nova Albion, streetlamps along public streets, security lighting from the existing outdoor swimming pool, and campus building lighting. Outdoor pool lighting is turned on during practices and competitions that extend past dusk during the school week and/or intermittently on weekends. Such activities are generally completed by 7:00 PM; however, there may be limited instances during the year where use of the outdoor pool extends past this time (i.e., for competitions).

Nighttime view of the existing campus from the north.

Nighttime view of the existing campus from the south.

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TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

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Existing Nighttime View of Campus

Source: Digital Preview.

Figure 4.1-1

4.1.3 Methodology

Thresholds of Significance

The significance thresholds used to evaluate potential impacts related to aesthetics are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, the Project would have a significant impact related to aesthetics if it would:

- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Further, based on public comments received, the EIR also evaluates the following threshold:

- Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The Appendix G significance criteria noted below were scoped out of the analysis for further consideration in the Initial Study (Appendix A-1); ,see Chapter 5, Other CEQA Considerations, of this Draft EIR.

- Would the project have a substantial adverse effect on a scenic vista?

- Would the project significantly damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

4.1.4 Impact Analysis

AES-1 Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact. The Project site is located in an urbanized area.[8] It supports a developed, operating high school campus and is surrounded by residential uses and the Miller Creek School District administration office. The Project would not conflict with any regulations governing scenic quality, which is generally defined as the impression a viewer retains after driving through, walking through, or flying over an area.

The Project would be required to comply with all applicable state codes, including the California Building Standards Code and related sections of CALGreen and the Energy Code that govern scenic quality and light pollution reduction requirements. Project plans would be plan-checked by the Division of the State Architect to ensure all Project components comply with state law and regulations.

[8] Section 15387 of the CEQA Guidelines defines “urbanized area” as “a central city or group of contiguous cities with a population of 50,000 or more, together with adjacent densely populated areas having a population density of at least 1,000 persons per square mile.”

The Project is not subject to City municipal regulations.[9] Nonetheless, the proposed improvements would be generally consistent with the City's Design Guidelines for nonresidential development regarding landscaping, lighting, building form, pedestrian circulation, entryways, and materials and colors; refer to Section 4.1.1, Regulatory Setting, above.

- **Landscaping.** The Project would improve the campus's landscape character. Due to the state's mandate to reduce water use, much of the natural grass on the campus is brown and in disrepair. The Project would visually improve these areas with the installation of artificial turf in the fields located in the southern half of the campus and permeable surfaces with outdoor fitness equipment surrounding the track and field in the northeast portion of the campus. The proposed landscaping improvements would beautify the overall appearance of the campus, and the Project meets the intent of this design guideline and General Plan Policy CDP-4.10.

- **Lighting.** The Project site has existing site security lighting for pedestrian and vehicular safety. The Project would improve the existing conditions with the installation of energy-efficient lighting improvements, namely along pathways within the campus for security purposes. New, replacement lighting is also proposed for the rehabilitated aquatic facility; the nighttime lighting would be aimed and include shields and louvres to prevent glare and illumination beyond the boundaries of the property (see Impact AES-2, below, for additional discussion on lighting improvements and effects). The intensity of the lighting would be limited to its intended purpose, e.g., security and nighttime use of the aquatic facility. The proposed lighting improvements would meet the lighting guidelines of the City's design guidelines and General Plan Policy CDP-4.11.

- **Pedestrian Circulation.** All three phases of the Project would include pedestrian circulation enhancements. All improvements would comply with the American with Disabilities Act and take into consideration the school's points of focus, including its frontage, along Nova Albion Way, the central quad in the center of the classroom buildings, and a proposed new gathering area between Building K and the track and field that would be modernized with decorative pavers, planters, retaining seat-walls, and benches. The classrooms of the reconstructed Building H would be oriented toward and accessed from the central quad. Improvements would be made to the existing entry to the track and field. A new ticket booth and decorative pedestrian gates would be installed and lead to a new gathering area that would include new trees, seating, and benches to add visual richness. The proposed pedestrian circulation improvements would meet City design guidelines.

- **Building Form.** The proposed new structures, including Building H, ticket booth, concessions and restroom, and storage facilities associated with the aquatic facility, are in areas that would maximize limited campus space and take into consideration the visual and spatial relationships of the surrounding buildings and uses. Access to the classrooms in Building H would be from the central quad; Building H would also incorporate materials, color, form and architectural details of the recently built Competition Gym and Student Commons. The storage facilities would be built into the slope, south of the aquatic facility.

[9] Pursuant to California Government Code Section 53094 et seq., the governing board of a school district may render city or county zoning ordinances and general plan requirements inapplicable. On October 23, 2023, the District's Board of Education adopted Resolution No. 2324-17 exempting the proposed Project and campus from any zoning ordinances or regulations of the City of San Rafael, including, without limitation, the City's Municipal Code, General Plan, and related ordinances and regulations that otherwise would be applicable.

The ticket booth, concessions, and restroom buildings would be placed in areas between Building K and the track and field where their uses would make most sense, e.g., ticket booth at the entrance of the outdoor athletic facilities and restroom and concessions close to the home bleachers. The new Project structures would meet City design guidelines on building form.

- **Entryways.** The Project proposes an enhanced entry to the campus's outdoor recreational facilities. The existing Buildings Q/R and perimeter chain-link fencing near Buildings Q/R would be removed. A new ticket booth, pedestrian and fire-access gates, and decorative fencing would be installed. Elevated canopies would be installed along the fencing. A "TERRA LINDA TROJANS" sign would be installed over the pedestrian gates, and a "TICKETS" sign would be installed at the ticket booth. These improvements would create a sense of entry into the school's outdoor athletic facilities. As the aquatic facility is located behind the main school buildings, its main entrance would be through a new steel-framed entry canopy between Buildings H and K, which is near the new entryway into the athletic facilities. Accordingly, the Project complies with the City's entryway design guidelines.

- **Materials and Color.** The new buildings and improvements would have similar architectural design, materials, color, articulation, and accents as the existing facilities on the campus, and would strive to meet the Materials and Color guidelines of the City's Design Guidelines to the extent feasible.

The Project would comply with the City's Design Guidelines for nonresidential development and would not conflict with applicable regulations governing scenic quality of the Project site. Project impacts on scenic quality would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would be less than significant.

AES-2 Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact With Mitigation Incorporated.

Construction

The proposed Project's construction hours would occur between 7:00 AM and 6:00 PM, Monday through Friday, and on Saturdays from 9:00 AM to 6:00 PM. Accordingly, lighting for nighttime construction activities would not be required. However, security lighting would still be installed at the construction areas and equipment laydown areas. The level of illumination of the security lighting would be similar to the existing security lighting at the campus, as well as porch lighting at nearby properties. The security light would not blink or flash and would be directed down toward the areas intended to be lit. The lighting would be shielded to limit light trespass and glare. Construction equipment and vehicles would also have the potential to create glare during the day; however, the type and amount of glare generated would be similar to that of existing vehicles that park on the campus and pass by on adjacent roadways. Therefore, light and glare impacts during Project construction would be less than significant.

Operation

The proposed improvements under all three phases would be designed and constructed to have similar exterior and architectural building materials and colors as the existing facilities on the campus. Accordingly, new building structures would not cause substantial light and glare. The Project, however, would include new and replacement light sources, such as scoreboards, swimming pool lights, and exterior building and walkway lighting. These sources of light have the potential to cause light and glare impacts, as discussed below.

Scoreboards. New and/or replacement scoreboards would be installed for the track/football and baseball fields, track and field, aquatic facility, and artificial multipurpose turf field. The scoreboards would have light-emitting diode (LED) video displays, which are typical of scoreboards used by public schools, and that can be adjusted for brightness. The proposed replacement scoreboards for the track and field and aquatic facility would be installed generally in the same locations as the existing scoreboards on the respective eastern and western walls of Building K. The existing scoreboard at the baseball field, currently behind right field, may be replaced in-place or relocated to behind left field; the new scoreboard for the artificial multipurpose field would be installed outside the play areas of the artificial turf, near the basketball courts. The closest distance between a sensitive viewer and the face of either scoreboard is approximately 200 feet. As the scoreboards would be operated only during events and turned off shortly afterwards, potential light and glare impacts would be limited and considered less than significant.

Aquatic Facility Lights. The aquatic facility component of the Project would involve the removal of three existing pool fixtures and the installation of four new 50-foot-tall light poles located generally at the four corners of the aquatic facility to light the swimming pool, pool deck, and egress/emergency access areas. Underwater lights would also be installed in the new pool. Figure 4.1-2 and Figure 4.1-3 compare the nighttime views of the Project site with the existing and proposed pool lights on. The views are from the same public locations as shown in Figure 4.1-1. As shown in Figure 4.1-2 and Figure 4.1-3, the proposed lights would be brighter than the existing pool lights. This is because the new lights would be designed to provide the minimum lighting required for nighttime operation of the pool, while limiting shadows of the pool walls. Although the new lights would result in increased area illumination, each fixture would include a hood and side shields with reflectors that aim light downward to light only the intended areas and minimize light trespass. Further, all new lighting to be implemented as part of the Project would be dark sky certified.[10]

As shown in Figure 2-2, *Project Location Map*, the aquatic facility is within the interior of the school campus and surrounded by buildings on the east, north, and west and a slope on the south. The closest light-sensitive viewer of the aquatic facility would be residences on Devon Drive, approximately 400 feet south of the proposed aquatic facilities.

The most common type of light trespass is spill light, which is unwanted light that reaches beyond the property line. Spill light is measured by footcandle, which is the amount of visible light falling on a surface. Horizontal footcandles describe the amount of light that extends on a horizontal plane, e.g., the ground, and vertical footcandles describe the amount of light that extends on a vertical plane, e.g., a wall. Figure 4.1-4 and Figure 4.1-5 show the horizontal and vertical footcandles, respectively, of the new lights, measured at approximately 100 feet from the aquatic facility. As shown, at 100 feet from the aquatic facility, the anticipated illumination would be 0

[10] The DarkSky Approved program provides objective, third-party certification for products, designs, and completed projects that minimize glare, reduce light trespass, and do not pollute the night sky.

horizontal and vertical footcandle, which is below the City's threshold of 1 footcandle. Accordingly, the proposed lights at the aquatic center would not spill onto the adjacent residential properties, which are approximately 400 feet away. Spill light is limited at the property line due to intervening structures between the aquatic center and surrounding residences and varying elevation and topography between the aquatic center and surrounding uses, as well as the design and proprietary technology of the proposed light fixtures, which would also reduce potential glare for light-sensitive viewers. As mentioned, each light fixture would have a hood and side shields that would capture and reflect light downward more effectively. The hood and side shields would also block direct view of the light source and limit impacts from glare. Therefore, light and glare impacts caused by the new lights at the aquatic center would be less than significant.

Another type of light trespass is skyglow. The Project would not require the installation of upward lighting, which is typical for nighttime lighting of baseball and football fields (so spectators can see the ball in the air). Upward lighting is a typical contributor to skyglow. The proposed fixtures would be installed with hoods and side shields that aim light downward and result in limited light emitted above the horizontal plane of the fixture. Therefore, Project impacts related to sky glow would be less than significant.

Exterior Building and Walkway Lighting. Proposed stationary lighting sources may include interior and exterior building lighting, as well as area and walkway lighting for security and safety. The new lighting improvements would have a similar illumination as the existing lighting fixtures at the campus and surrounding community and therefore would not be substantially greater than the existing conditions. However, due to the adjacency of the Project site to light-sensitive residential uses, Mitigation Measure AES-A has been included to ensure that the stationary light sources do not spill over onto surrounding properties, beyond the City's threshold of 1 footcandle. Impacts would be less than significant after mitigation.

Mitigation Measures

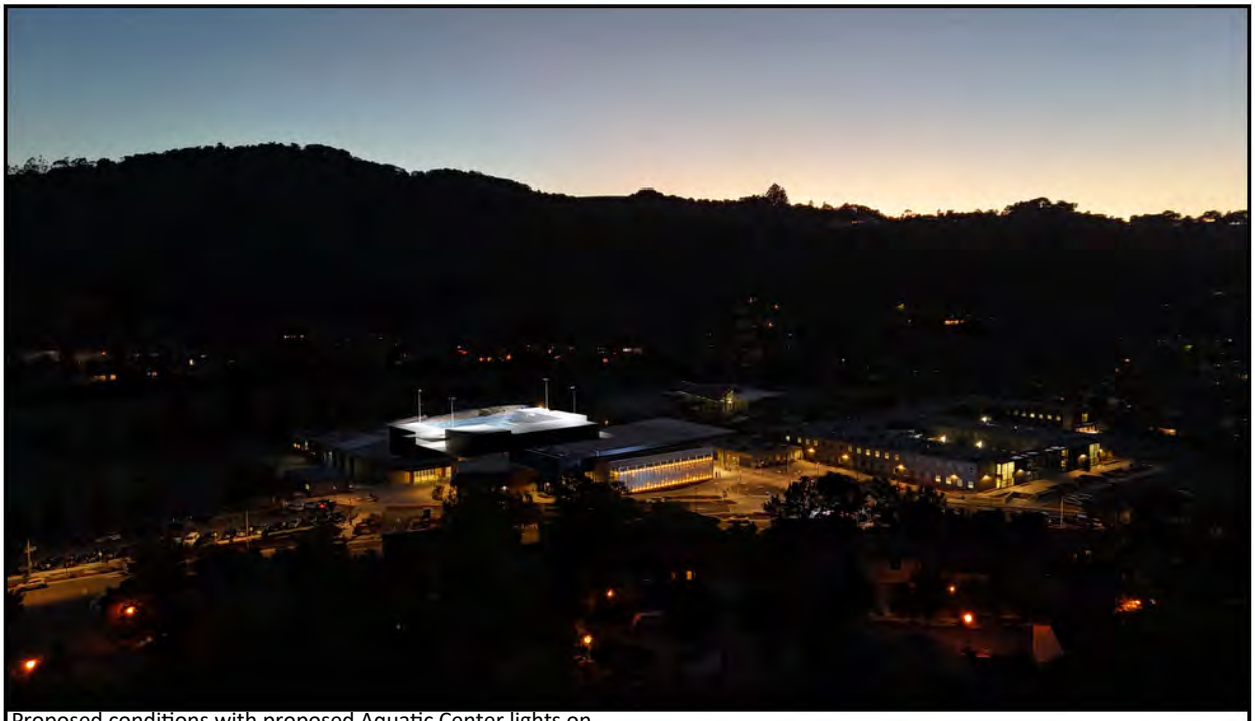
The following mitigation measure will reduce light spillover onto light-sensitive uses.

AES-A Prior to the use of any of the exterior stationary lights during operation of the Project, the District and/or its construction contractor shall first test each light source at least 30 minutes after dusk to ensure that the illumination does not create glare or spill into the property lines of adjacent residential uses. All exterior stationary lights used during operation of the Project shall be the minimum intensity necessary, fully shielded (full cutoff), and downcast (emitting no light above the horizontal plan of the fixture). Light levels shall be below 1 footcandle at the property line, and the lamp bulb shall not be directly visible to the light-sensitive viewer.

Level of Significance After Mitigation

Implementation of Mitigation Measure AES-A would ensure that lighting impacts would be less than significant.

Existing conditions with pool lights on.



Proposed conditions with proposed Aquatic Center lights on.

TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

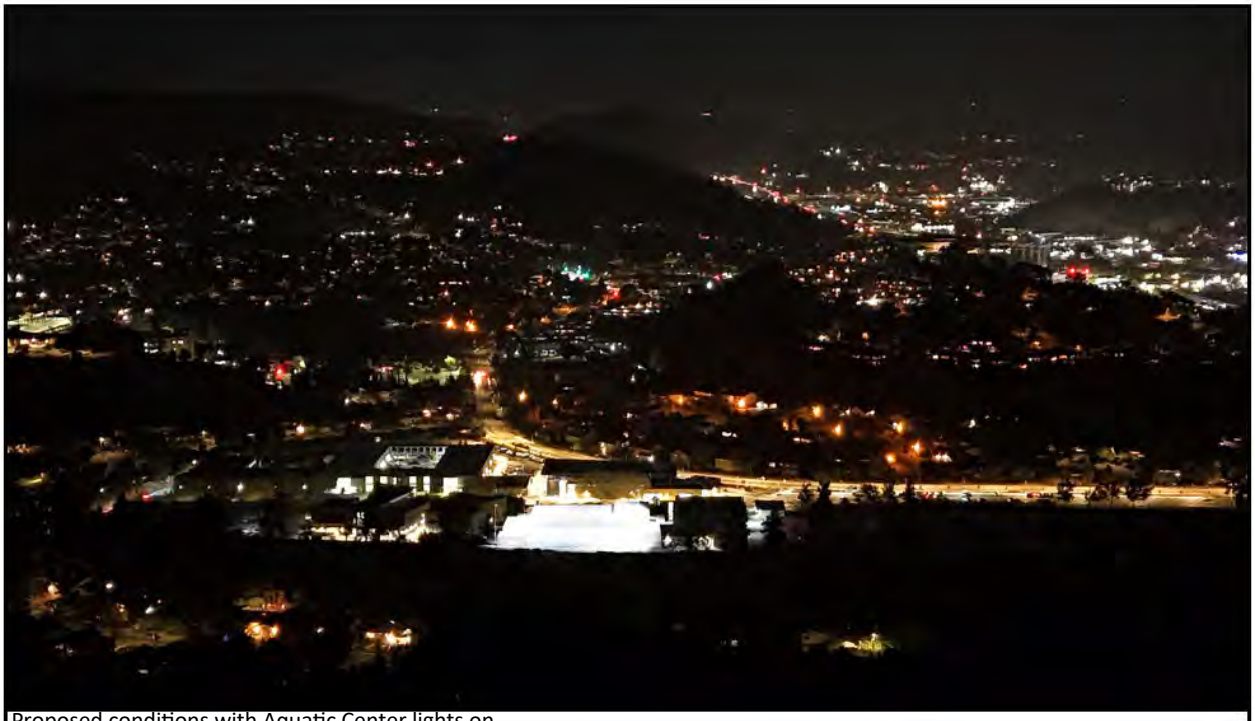
Michael Baker INTERNATIONAL

Comparison of Existing and Proposed Pool Lights (North)

Source: Digital Preview.

Figure 4.1-2

Existing conditions with pool lights on.



Proposed conditions with Aquatic Center lights on.

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TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Michael Baker INTERNATIONAL

Comparison of Existing and Proposed Pool Lights (South)

Source: Digital Preview

Figure 4.1-3

Equipment List For Areas Shown

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
4	P1-P4	50'	-	50'	TLC-LED-550	2	1	1
				50'	TLC-LED-900	1	1	0
4	Totals					12	8	4

Terra Linda High School Aquatic

San Rafael,CA

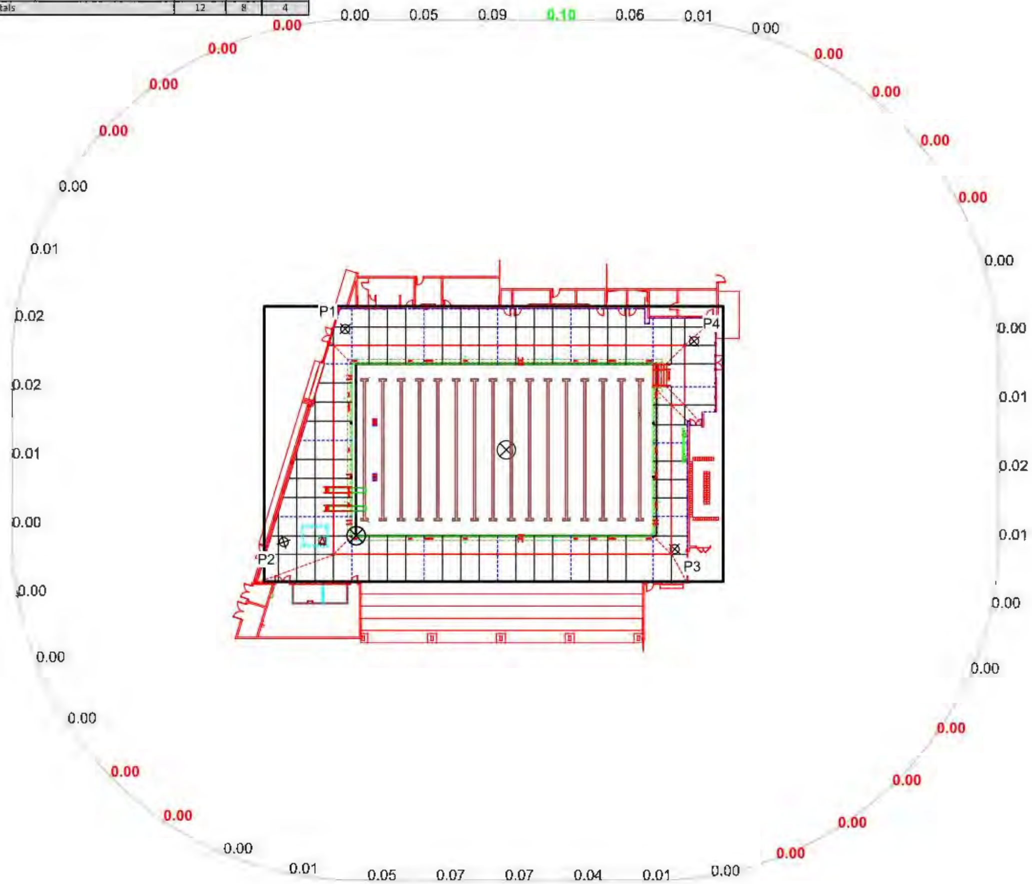
Grid Summary

Name	SwimmingPool Spill
Spacing	30.0' x 30.0'
Height	3.0' above grade

Illumination Summary

MAINTAINED HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average	0.0149
Maximum	0.10
Minimum	0.00
CU	0.00
No. of Points	45
LUMINAIRE INFORMATION	
Applied Circuits	A
No. of Luminaires	8
Total Load	5.72 kW



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Michael Baker INTERNATIONAL

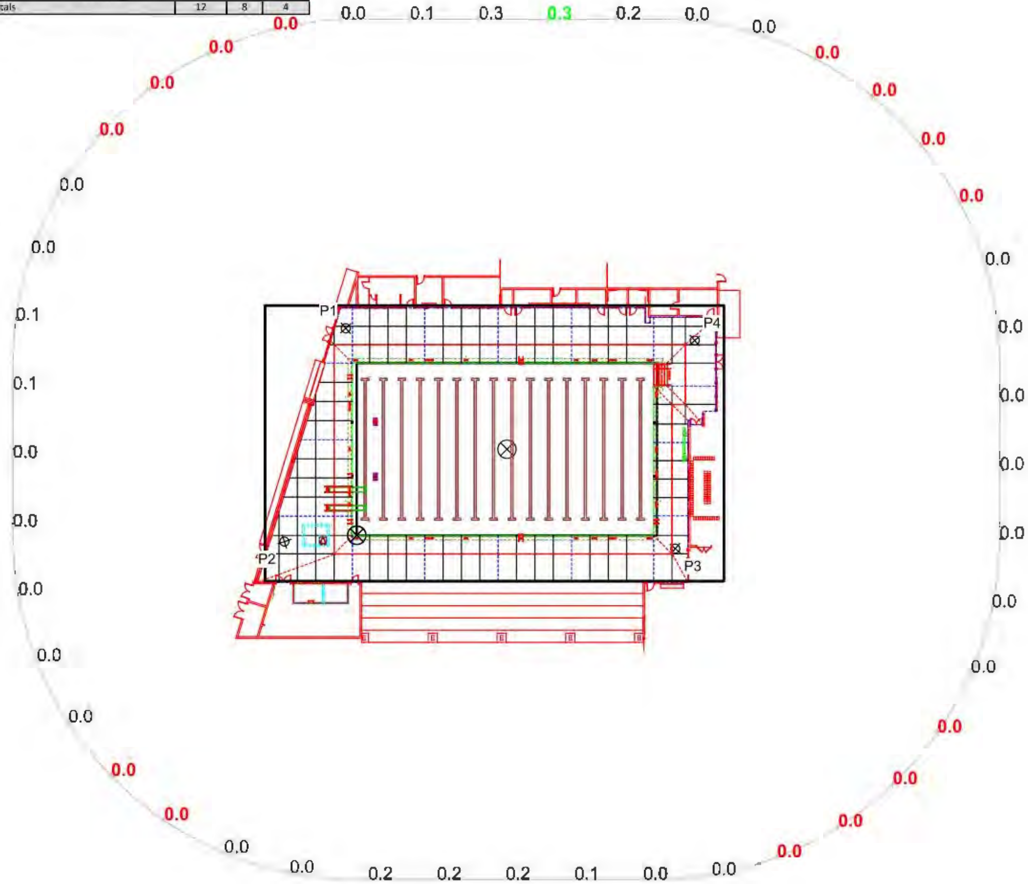
NOT TO SCALE

Horizontal Illumination Measurement

Source: Musco Sports Lighting, LLC., 2023.

Figure 4.1-4

Equipment List For Areas Shown								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
4	P1-P4	50'	-	50'	TLC-LED-550	2	1	1
				50'	TLC-LED-900	1	1	0
4	Totals					12	8	4



Pole location(s) dimensions are relative to 0.0 reference point(s)

Terra Linda High School Aquatic

San Rafael,CA

Grid Summary	
Name	SwimmingPool Spill
Spacing	30.0' x 30.0'
Height	3.0' above grade

Illumination Summary	
	MAINTAINED MAX VERTICAL FOOTCANDLES
	Entire Grid
Scan Average	0.0463
Maximum	0.30
Minimum	0.00
CU	0.00
No. of Points	45
LUMINAIRE INFORMATION	
Applied Circuits	A
No. of Luminaires	8
Total Load	5.72 kW

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TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

Vertical Illumination Measurement

Michael Baker INTERNATIONAL

NOT TO SCALE

Source: Musco Sports Lighting, LLC., 2023.

Figure 4.1-5

4.1.5 Cumulative Impacts

The proposed Project would be implemented in three general phases that would occur from the summer of 2024 to the end of the third quarter of 2029. The proposed Project combined with other District-sponsored projects (see Section 2.3.1) would combine to enhance the scenic quality of the existing campus and have a cumulatively beneficial effect.

City-sponsored projects (listed on Table 2-5) would be required to undergo project-specific environmental review under CEQA and the City's discretionary review process, as applicable, to determine potential impacts with regards to scenic quality. As indicated under Impact AES-1, the proposed Project would not be subject to City zoning ordinances or General Plan requirements, but would be consistent with these regulations, nonetheless. Overall, these standards would serve to improve the scenic quality within the Project site and surrounding area. Moreover, the Project would comply with CALGreen and Building Energy Efficiency Standards. As such, the proposed Project would not combine with other related projects to contribute to a cumulatively considerable impact to scenic quality, and impacts would not be cumulatively considerable.

The other District-sponsored projects do not include any nighttime lighting or materials that would cause spill light, glare, or sky glow and therefore would not combine with the proposed Project to cause cumulatively considerable light and glare impacts. Development of the City-sponsored projects could result in increased lighting in the City. All future development sponsored by the City would be required to comply with the exterior lighting requirements included in Municipal Code Section 14.16.227, which requires exterior lighting to be shielded or recessed so that direct glare and reflections are contained within the boundaries of the property and directed downward and away from adjoining properties and public rights-of-way. In addition, the City would review the future cumulative development proposals against the General Plan and Design Guidelines for all future projects requiring discretionary approval. This regulatory procedure would review building materials and exterior lighting elements to ensure neighboring uses are not exposed to substantial daytime glare or excessive nighttime lighting. As discussed under Impact AES-2, short-term and long-term impacts relative to lighting would be reduced to less than significant levels following conformance with CALGreen and Building Energy Efficiency Standards and implementation of Mitigation Measure AES-A. Related projects would also be required to comply with the General Plan, Municipal Code Section 14.16.227, and the City's Design Guidelines. Thus, the Project in combination with related projects would not contribute to cumulatively considerable lighting or light and glare impacts, and cumulative impacts would be less than significant after mitigation.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would not be cumulatively considerable.

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4.2 AIR QUALITY

This section presents an analysis of the potential air quality impacts associated with implementation of the Project. This section identifies local air quality conditions in the San Francisco Bay Area Air Basin (SFBAAB) region, as well as regulatory requirements pertaining to air quality; estimates the air pollutant emissions generated by implementation of the Project; and describes potential direct and indirect impacts from implementation of the Project. This section is based, in part, on the Air Quality and Greenhouse Gas Emissions Assessment prepared by ECORP Consulting Inc., dated February 2024 (Appendix B) and trip generation rates and vehicle miles traveled (VMT) for the Project, further detailed in Section 4.11, Transportation.

4.2.1 Regulatory Setting

Federal

Clean Air Act

The US Environmental Protection Agency (USEPA) is responsible for implementing the federal Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971. The CAA required the USEPA to establish federal air quality standards known as the National Ambient Air Quality Standards (NAAQS), with states retaining the option to adopt more stringent standards or to include other specific pollutants. The NAAQS are the levels of air quality considered safe, with an adequate margin of safety, to protect public health and welfare. The NAAQS are designed to protect "sensitive receptors," who are most susceptible to further respiratory distress (e.g., asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise). Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available to be able to form a nonattainment or attainment designation.

State

California Clean Air Act

The California Clean Air Act (CCAA) allows the state to adopt ambient air quality standards and other regulations if they are at least as stringent as the federal standards. The California Air Resources Board (CARB), a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. CARB sets the California ambient air quality standards (CAAQS), conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California and sets fuel specifications to further reduce vehicular emissions. CARB, while working closely with the federal government and the local air districts, has primary responsibility for the development of California's State Implementation Plan (SIP).

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations

of air basins as reported by the agencies with jurisdiction over the air basins. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the federal CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the federal CAA.

CARB is the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements for submittal to CARB for review and approval. CARB then submits SIP revisions to the USEPA for approval and publication in the Federal Register. The SFBAAB currently has four air quality plans in place, discussed below, which collectively constitute the SFBAAB SIP elements.

- 2001 Ozone Attainment Plan: This plan was developed for compliance with the NAAQS for the 1-hour ozone (O_3) standard. In June 2005, the USEPA revoked the standard for 1-hour O_3; however, the state standard for 1-hour O_3 remains. Therefore, the Bay Area Air Quality Management District (BAAQMD) continues to implement the strategies outlined in the 2001 Ozone Attainment Plan.

- 2005 Bay Area Ozone Strategy: This plan served as an update to the 2001 Ozone Attainment Plan and expanded on strategies to achieve compliance with the state 1-hour O_3 standard.

- 2010 Clean Air Plan: This plan addresses various pollutants including O_3, particulate matter (PM), and air toxics, as well as greenhouse gas (GHG) emissions, within the SFBAAB. The 2010 Clean Air Plan served to update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the CCAA to implement all feasible measures, to reduce O_3, and to consider the impacts of O_3 control measures on PM, air toxics, and GHG emissions in a single, integrated plan and review progress in improving air quality in recent years.

- 2017 Clean Air Plan: Adopted by the BAAQMD in April 2017, the primary goals of this plan are to protect public health and the climate. The 2017 Clean Air Plan updates the Bay Area 2010 Clean Air Plan and complies with state air quality planning requirements, as codified in the California Health and Safety Code (although the 2017 plan was delayed beyond the three-year update requirement of the code). State law requires the Clean Air Plan to include all feasible measures to reduce emissions of O_3 precursors and to reduce the transport of O_3 precursors to neighboring air basins. The 2017 Clean Air Plan contains 85 measures to address reduction of several pollutants, including O_3 precursors, PM, air toxics, and GHGs. Other measures focus on a single type of pollutant: super GHGs such as methane and black carbon that consists of harmful fine particles that affect public health. These control strategies are grouped into the following categories: Stationary Source Measures; Transportation Control Measures; Energy Control Measures; Building Control Measures; Agricultural Control Measures; Natural and Working Lands Control Measures; Waste Management Control Measures; Water Control Measures; and Super GHG Control Measures.

Assembly Bill 1807 (Tanner Air Toxics Act)

CARB's statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of

1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as toxic air contaminants (TAC). Once a TAC is identified, CARB adopts an airborne toxics control measure for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

Assembly Bill 2588 (Air Toxics "Hot Spot" Information and Assessment Act)

CARB administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by an air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, AB 2588 was amended by Senate Bill (SB) 1731, which requires facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Regional

Bay Area Air Quality Management District

The BAAQMD adopts and enforces regulations to achieve and maintain ambient air quality standards. The BAAQMD's responsibilities include preparing plans for the attainment of ambient air quality standards, adopting and enforcing air pollution rules, issuing permits for and inspecting stationary air pollution sources, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing state and federal programs and regulations. The BAAQMD has also adopted various rules and regulations that are designed to reduce and control pollutant emissions from construction and operational activities of projects. The provisions applicable to the proposed Project are summarized as follows:

- Regulation 2, Rule 1, General Permit Requirements: Includes criteria for issuance or denial of permits, exemptions, appeals against decisions of the Air Pollution Control Officer and BAAQMD actions on applications.

- Regulation 2, Rule 2, New Source Review: Applies to new or modified sources and contains requirements for best available control technology and emission offsets. Rule 2 implements federal New Source Review and Prevention of Significant Deterioration requirements.

- Regulation 6, Rule 1, General Requirements: Limits the quantity of PM in the atmosphere by controlling emission rates, concentration, visible emissions, and opacity.

- Regulation 6, Rule 6, Prohibition of Track-out:1 Controls track-out of solid material onto public paved roads from three types of sites: large bulk material sites, large construction sites, and large disturbed area sites. Under this regulation, the owners and operators of a construction site are required to clean up track-out on public roadways within four hours of identification and at the conclusion of each workday. The rule also includes

[1] Track-out is dirt, mud, or other debris tracked onto a paved public roadway by a vehicle leaving a construction site.

requirements regarding the emission of fugitive dust during cleanup of track-out, and requirements for monitoring and reporting track-out at regulated sites.

- Regulation 7, Odorous Substances: Places general limitations on odorous substances and specific emission limitations on certain odorous compounds. A person (or facility) must meet all limitations of this regulation; however, meeting such limitations shall not exempt the person or facility from any other requirements of the BAAQMD, state, or national law.

BAAQMD Best Management Practices

The BAAQMD recommends quantifying a proposed project's construction-generated emissions by implementing the Basic Best Management Practices (BMP) for dust and exhaust construction impacts in California Environmental Quality Act (CEQA) compliance documentation. The Basic BMPs are as follows:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or farther from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- Publicly visible signs shall be posted 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 BAAQMD's General Air Pollution Complaints phone number shall also be visible to ensure compliance with applicable regulations.

If additional measures are required to reduce construction-generated emissions, the BAAQMD's Enhanced BMPs should then be applied. In addition, all projects must implement any applicable air toxic control measures. The Enhanced BMPs are as follows:

- Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.

- Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.

- Plant vegetative ground cover (e.g., fast-germinating native grass seed) in disturbed areas as soon as possible and watered appropriately until vegetation is established.

- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.

- Minimize the amount of excavated material or waste materials stored at the site.

- Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 10 calendar days.

4.2.2 Environmental Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. An air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants.

The Project site is located in the SFBAAB. The following discussion describes the pertinent characteristics of the SFBAAB and provides an overview of the physical conditions affecting pollutant dispersion in the Project area.

San Francisco Bay Area Air Basin

The SFBAAB is approximately 5,600 square miles in area and consists of nine counties that surround the San Francisco Bay, including all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties; the southwestern portion of Solano County; and the southern portion of Sonoma County. The topography of the SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays.

The complex terrain of the SFBAAB, especially the higher elevations, distorts the normal wind flow patterns within the region. The greatest distortions of wind patterns occur when low-level inversions are present and the air beneath the inversion flows independently of air above the inversion, a condition that is common in the summertime.[2] The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in the late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends majorly upon the height and strength of the inversion. If the inversion is low and strong, and hence stable, the flow of the sea breeze will be inhibited, and stagnant conditions are likely to result.

Summertime temperatures in the SFBAAB are determined by the effect of differential heating between land and water surfaces, as land tends to heat up and cool off more quickly than water. Differential heating, or a large-scale gradient in temperature, is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. During the summer, winds flowing from the northwest of the SFBAAB are drawn inland through the Golden Gate and over the lower portions of the San Francisco

[2] An inversion is a layer of warmer air over a layer of cooler air.

Peninsula. Immediately south of Mount Tamalpais, the northwesterly winds accelerate considerably and move more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San Jose when it meets the East Bay hills. Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno Gap.

Inversions affect air quality conditions significantly because they influence the mixing depth, which is the vertical depth in the atmosphere available for diluting air contaminants near the ground. The highest air pollutant concentrations in the SFBAAB generally occur during inversions. The areas having the highest air pollution potential tend to be those that experience the highest temperatures in the summer and the lowest temperatures in the winter. The coastal areas are exposed to the prevailing marine air, creating cooler temperatures in the summer, warmer temperatures in winter, and stratus clouds all year. The inland valleys are sheltered from the marine air and experience hotter summers and colder winters. Thus, the topography of the inland valleys creates conditions conducive to high air pollution potential.

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and O_3 are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized below.

Carbon Monoxide

CO, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Exceedances of CO concentrations are generally known to be caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. High concentrations of CO can reduce the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system; impair vision; cause dizziness; and lead to unconsciousness or death. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973.

Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitric oxides (NO_x). NO_x is a reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities, and industrial sources. NO_x is a respiratory irritant, and long-term exposure aggravates lung and heart problems.

Ozone

O_3 is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOC), also known as reactive organic gases (ROG), and NO_x undergo photochemical reactions that occur only in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints, and landfills. Ground-level O_3 exposure has been linked to a variety of problems including lung irritation, difficulty breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

Sulfur Dioxide

SO_2 is a colorless gas with a pungent odor; however, it can react with other particulates in the atmosphere which contribute to the haze effect. Currently, SO_2 is primarily a result of the burning of fossil fuels for power generation and other industrial sources. Modern regulations on diesel fuel have greatly reduced the amount of SO_2 in the atmosphere and there are currently no areas in California that have levels of SO_2 that are not acceptable by state or federal standards.

Particulate Matter

PM includes both aerosols and solid particulates of a wide range of size and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM_{10}) and smaller than or equal to 2.5 microns in diameter ($PM_{2.5}$). PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances. $PM_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SO_x) and VOCs. $PM_{2.5}$ can remain suspended in the atmosphere for days and/or weeks and can be transported long distances. The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high $PM_{2.5}$ and PM_{10} levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, TACs are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur; these levels are determined on a pollutant-by-pollutant basis. Carcinogenic TACs can also have noncarcinogenic health hazard levels. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

Diesel Particulate Matter

CARB has identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs because it is not a single substance, but rather a complex mixture of hundreds of substances.

Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer, as many compounds found in diesel exhaust are carcinogenic.

The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty or light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs due to their extremely small size and resulting ability to be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs.

Local Ambient Air Quality

Ambient air quality at the Project site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. O_3, PM_{10}, and $PM_{2.5}$ are the pollutants most potently affecting the Project's region. The closest air quality monitoring station is Station No. 21451 located at 534 4th Street in San Rafael, approximately 2.6 miles southeast of the Project site. This station monitors ambient concentrations of O_3, PM_{10}, and $PM_{2.5}$. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered as a general representation of ambient concentrations in the Project area.

Table 4.2-1 summarizes the published data concerning O_3, PM_{10}, and $PM_{2.5}$ since 2020 for each year that the monitoring data was provided for Station No. 21451.

Table 4.2-1: Summary of Ambient Air Quality Data (Pollutants)

Pollutant Scenario	2020	2021	2022
Ozone (O_3)			
Max 1-hour concentration (ppm)	0.086	0.082	0.074
Max 8-hour concentration (ppm) (state/federal)	0.064 / 0.064	0.066 / 0.066	0.066 / 0.066
Number of days above 1-hour standard (state/federal)	0 / 0	0 / 0	0 / 0
Number of days above 8-hour standard (state/federal)	0 / 0	0 / 0	0 / 0
Particulate Matter (PM_{10})			
Max 24-hour concentration (µg/m^3) (state/federal)	118.0 / 115.7	30.0 / 29.9	40.0 / 38.2
Number of days above 24-hour standard (state/federal)	6.1 / 0	0 / 0	0 / 0
Fine Particulate Matter ($PM_{2.5}$)			
Max 24-hour concentration (µg/m^3) (state/federal)	155.5 / 155.5	29.1 / 29.1	30.8 / 30.8
Number of days above federal 24-hour standard	9.0	0.0	0.0

Notes: µg/m^3 = micrograms per cubic meter; ppm = parts per million; a bold value signifies that this category is above the applicable standard.

The USEPA and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the ambient air quality standards are classified as nonattainment areas. Acceptable exceedances of the maximum value vary for the NAAQS. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The CAAQS are not to be exceeded during a three-year period.

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. As shown in Table 4.2-2, the Marin County region, which includes the Project site, is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$.

Table 4.2-2: Summary of Ambient Air Quality Data (Region)

Pollutant	State Designation	Federal Designation
Ozone (O_3)	Nonattainment	Nonattainment
Particulate Matter (PM_{10})	Nonattainment	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO_2)	Attainment	Unclassified/Attainment

Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases. Examples of sensitive receptors are residences, schools, hospitals, and daycare centers.

As schools are classified as noise-sensitive land uses, the Project site itself is considered a sensitive land use when school is in session. The nearest off-site existing sensitive land uses to the Project site include residences to the north, south, and west, including some that operate as group homes for the elderly, and a preschool located just east of the Project site. In the greater vicinity of the Project site, Kaiser Permanente San Rafael Medical Center is located approximately 1,980 feet to the north and multifamily housing is located approximately 1,690 feet to the northwest. The Project site is also near parks and open space, including Hartzell Park, approximately 2,220 feet to the east, and Sorich Park, approximately 1,380 feet to the south.

4.2.3 Methodology

Air quality impacts were assessed in accordance with methodologies recommended by the BAAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operation of a variety of land use projects. Project construction-generated air pollutant emissions were calculated using a combination of CalEEMod model defaults for Marin County and Project-specific information, such as Project construction equipment, average hours of daily equipment use, and duration of construction activities. Operational air pollutant emissions were calculated based on the site dimensions and building square footage identified in the Project's site plans and the average VMT identified in the VMT Analysis prepared for the Project (Appendix J).

DPM concentrations and associated dispersion generated from both construction off-road equipment and haul trucks were modeled using CARB's Hotspots Analysis and Reporting Program (HARP2) modeling and risk tool. HARP2 was used to perform the dispersion and health risk modeling for this analysis. HARP2 implements the latest regulatory guidance to develop inputs to the USEPA's Air Quality Dispersion Modeling System (AERMOD) for dispersion and as the inputs for calculations for the various health risk levels. The resultant concentration values at sensitive receptors in the vicinity were then used to calculate chronic and carcinogenic health risk, using the standardized equations contained in the Office of Environment Health Hazard Assessment's *Guidance Manual for Preparation of Health Risk Assessments*.

Thresholds of Significance

The significance thresholds used to evaluate the impacts of the proposed Project related to air quality are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, a project would have a significant impact related to air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- 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; or
- Expose sensitive receptors to substantial pollutant concentrations.

The Appendix G significance criterion noted below was scoped out of the analysis for further consideration in the Initial Study (Appendix A-1); see Chapter 5, Other CEQA Considerations, of this Draft EIR.

- Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Bay Area Air Quality Management District Thresholds of Significance

To assist local jurisdictions in evaluating air quality impacts under CEQA, the BAAQMD has published a guidance document for the preparation of the air quality portions of environmental documents that include thresholds of significance to be used in evaluating land use proposals. The BAAQMD most recently revised its guidelines in 2022; however, its recommended thresholds

of significance for air quality remain unchanged from those adopted in 2010.[3] Thresholds of significance are based on a source's projected impacts and are a basis from which to apply mitigation measures. The BAAQMD's CEQA thresholds have also been used to determine air quality impacts in this analysis. The BAAQMD's established thresholds of significance for air quality for construction and operational activities of land use development projects are shown in Table 4.2-3.

Table 4.2-3: BAAQMD Significance Thresholds

Activity	Air Pollutant	Average Daily Emissions (pounds per day)	Maximum Annual Emissions (tons per year)
Construction	Reactive Organic Gases (ROG)	54	None*
Construction	Nitrogen Oxides (NO_X)	54	None*
Construction	Particulate Matter (PM_{10}) (exhaust)	82	None*
Construction	Fine Particulate Matter ($PM_{2.5}$) (exhaust)	54	None*
Construction	Particulate Matter (PM_{10})/ Fine Particulate Matter ($PM_{2.5}$) (fugitive dust)	Best Management Practices**	Best Management Practices**
Construction	Local Carbon Monoxide (CO)	None	None
Operation	Reactive Organic Gases (ROG)	54	10
Operation	Nitrogen Oxides (NO_X)	54	10
Operation	Particulate Matter (PM_{10}) (exhaust)	82	15
Operation	Fine Particulate Matter ($PM_{2.5}$) (exhaust)	54	10
Operation	Particulate Matter (PM_{10})/ Fine Particulate Matter ($PM_{2.5}$) (fugitive dust)	None	None
Operation	Local Carbon Monoxide (CO)	9.0 ppm (8-hour average) 20.0 ppm (1-hour average)	9.0 ppm (8-hour average) 20.0 ppm (1-hour average)

* BAAQMD does not list maximum annual emissions (tons per year) for construction related activities.

** PM_{10}/$PM_{2.5}$ (fugitive dust) is also recognized to impact local communities. The Air District strongly recommends implementing all feasible fugitive dust management practices especially when construction projects are located near sensitive communities, including schools, residential areas, or other sensitive land uses.

The BAAQMD's 2022 guidelines also include recommended best practices for centering environmental justice, health, and equity for overburdened and/or AB 617 communities. The Terra Linda High School campus is not located in an overburdened and/or AB 617 community.

[3] As discussed further in Section 4.7, Greenhouse Gas Emissions, the recommended thresholds of significance for climate impacts from GHG emissions were updated in 2022.

Health Risk Assessment

A health risk assessment was performed to determine the health risk associated with construction and operation of the proposed phased improvements. Specifically, the analysis includes the potential exposure of on-site sensitive receptors (i.e., students on campus) and nearby sensitive receptors (i.e., existing residents) to DPM emissions from off-road equipment during construction and from heavy-duty trucks during operation.

All on-site and off-site diesel truck traffic related emissions were generated using EMFAC2021 for construction beginning in the year 2024 and conservatively utilized throughout the proposed period of construction. The EMFAC emissions model is developed and used by CARB to assess emissions from on-road vehicles including cars, trucks, and buses in California. Construction off-road equipment for on-site activities was modeled at construction sites on the campus. Construction on-road equipment for on-site activities was modeled as line-volume sources traversing the parking lot and proposed paths of travel leading to the construction areas on the Project Site. Construction on-road equipment for off-site activities was modeled traversing sources for northern and southern entry/exit routes.

The health risk assessment analyzed cancer and chronic non-cancer risk calculated for construction emissions for six years for residents and workers and two years for students. The students were calculated for a two-year exposure scenario as most of the construction would take place during the summer months when students would not be present at the campus. In addition, the maximum annual $PM_{2.5}$ concentration was modeled for comparison with BAAQMD thresholds. The BAAQMD thresholds for an exposure of substantial air toxics are as follows:

- Cancer Risk: Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulative impact.

- Non-Cancer Risk: Emit toxic contaminants that exceed the maximum hazard quotient of 1 in one million. A hazard index of less than one (1.0) means that adverse health effects are not expected. Within this analysis, non-carcinogenic exposures of less than 1.0 are considered less than significant.

4.2.4 Impact Analysis

AQ-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The most recently adopted and applicable air quality plan for determining Project consistency is the BAAQMD's 2017 Clean Air Plan. The 2017 Clean Air Plan includes a wide range of control measures and actions to reduce combustion-related activities, decrease combustion of fossil fuels, improve energy efficiency, and reduce emissions of potent GHGs.

Whether a project is consistent with the goals of the 2017 Clean Air Plan is determined by a comparison of project-estimated emissions with the BAAQMD thresholds of significance. If project emissions would not exceed the BAAQMD thresholds of significance after the application of all feasible BMPs, the project is consistent with the goals of the 2017 Clean Air Plan. As discussed in Impact AQ-2 below, emissions generated during Project construction and operation would not exceed the BAAQMD's significance thresholds. Therefore, the Project would not conflict with or

obstruct the implementation of the 2017 Clean Air Plan. Impacts associated with compliance with the 2017 Clean Air Plan would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would be less than significant.

AQ-2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact with Mitigation Incorporated.

Construction

Construction-related activities associated with the proposed phased improvements would result temporarily in emissions of criteria air pollutants and precursors, primarily from three basic sources: operation of the construction vehicles (i.e., tractors, forklifts, pavers), creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving and coating activities. Construction activities such as excavation and grading, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that would affect local air quality at various times during construction.

The predicted maximum daily construction-generated emissions for the proposed three phases of the Project, based on the results of the CalEEMod modeling, are summarized in Table 4.2-4. As all construction projects within BAAQMD's jurisdiction are required to implement their regulations and BMPs, the emissions shown assume that the quantifiable components of BAAQMD's Basic BMPs, listed above in Section 4.2.1, Regulatory Setting, would be implemented. For purposes of the construction analysis, the proposed improvements are phased during the following calendar years of construction:

- Phase 1: June 2024–November 2025
- Phase 2: June 2024–December 2028
- Phase 3: June 2027–August 2029

Table 4.2-4: Construction-Related Emissions

Construction Year	Activity	ROG (average pounds per day)	NO_X (average pounds per day)	PM_{10} (exhaust) (average pounds per day)	$PM_{2.5}$ (exhaust) (average pounds per day)	PM_{10} (fugitive dust) (average pounds per day)	$PM_{2.5}$ (fugitive dust) (average pounds per day)
Calendar Year 2024	Phase 1 Demolition, Site Preparation, Building Construction & Phase 2 Building Construction	2.38	7.19	0.22	0.20	4.82	1.22
Calendar Year 2024	Phase 2 Demolition & Building Construction	2.19	5.30	0.14	0.13	4.79	1.21
Calendar Year 2025	Phase 1 Site Preparation, Building Construction, & Paving	2.15	5.48	0.15	0.15	4.78	1.21
Calendar Year 2025	Phase 1 Building Construction, Paving, & Painting	2.96	5.68	0.13	0.14	4.78	1.21
Calendar Year 2026	Phase 2 Demolition and Building Construction	1.86	4.20	0.09	0.08	4.78	1.21
Calendar Year 2027	Phase 2 Demolition, Building Construction & Phase 3 Demolition, Site Preparation	2.32	6.74	0.19	0.19	6.60	2.15
Calendar Year 2027	Phase 3 Site Preparation & Grading	2.23	6.09	0.18	0.18	6.59	2.14
Calendar Year 2027	Phase 3 Grading, Building Construction, and Paving	2.12	5.02	0.13	0.12	4.79	1.22
Calendar Year 2028	Phase 3 Paving	1.86	2.66	0.05	0.05	4.78	1.21

Table 4.2-4, continued

Construction Year	Activity	ROG (average pounds per day)	NO_X (average pounds per day)	PM_{10} (exhaust) (average pounds per day)	$PM_{2.5}$ (exhaust) (average pounds per day)	PM_{10} (fugitive dust) (average pounds per day)	$PM_{2.5}$ (fugitive dust) (average pounds per day)
Calendar Year 2028	Phase 2 Demolition, Building Construction & Phase 3 Demolition, Site Preparation, Grading, Building Construction, Paving	2.43	7.83	1.59	0.87	6.30	1.97
Calendar Year 2029	Phase 3 Demolition, Site Preparation, Grading, Building Construction	2.20	5.72	0.16	0.15	6.29	1.97
BAAQMD Thresholds		*54*	*54*	*82*	*54*	*Basic Construction BMPs*	*Basic Construction BMPs*
Threshold Exceeded?		***No***	***No***	***No***	***No***	***No***	***No***

Source: Refer to Appendix B for detailed model input/output data.

Notes: Emission calculations account for the demolition and hauling of 1,124 tons of material during Phase 1, 248 tons of material during Phase 2, and 25 tons of material during Phase 3. Additionally, emission calculations account for 7,407 cubic yards of soil material export as well as 7,407 cubic yards of soil import during Phase 3. Water polo and swim/dive programs would be temporarily displaced during construction. Therefore, emission calculations for each phase account for the additional automobile trips.

As shown in Table 4.2-4, emissions generated during construction of the proposed phased improvements would not exceed the BAAQMD's numeric thresholds of significance during construction. Further, the emissions generated during construction would be short-term and temporary, lasting only for the duration of construction activities.

The BAAQMD thresholds for fugitive dust emissions rely on the implementation of BAAQMD BMPs. Therefore, to ensure Project construction activities would be limited to the emissions shown in Table 4.2-4, Mitigation Measure AQ-A, which are BAAQMD's Basic BMPs, is required. With implementation of Mitigation Measure AQ-A, criteria pollutant emissions generated during construction of the proposed phased improvements would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard. Therefore, impacts would be less than significant during construction.

Operation

Implementation of the proposed phased improvements would result in long-term air quality impacts, consisting of area, energy, and mobile source emissions. Area source emissions may be generated from consumer products, area architectural coatings, and landscaping equipment. Energy source emissions may be generated from electricity and natural gas use. Mobile source emissions may be generated from motor vehicles, including tailpipe and evaporative emissions. Operational emissions attributable to each source are summarized in

Table 4.2-5.

The emissions projections shown in

Table 4.2-5 were predominantly based on the CalEEMod model defaults for Marin County, site acreage and building dimensions, and 92 additional average daily vehicle trips under operational conditions. Refer to Section 4.11, Transportation, for analysis of the average daily vehicle trips. As discussed therein, the transportation analysis assumed the proposed artificial turf fields would be available for use like a community park, when not used by the school. Under this worst-case assumption, using the Institute of Transportation Engineers' *Trip Generation Manual* for Public Park use, the potential expanded use of the artificial fields would generate 92 additional daily vehicle trips with 0 AM peak hour trips and 23 new PM peak hour trips. As shown in

Table 4.2-5, the increase in operational criteria air pollutant emissions over the existing baseline would not surpass BAAQMD significance thresholds. Therefore, impacts from operation of the proposed phased improvements would be less than significant.

Table 4.2-5: Operational Emissions

Emissions Source	Pollutant Emissions						
	ROG	NO_X	CO	PM_{10} (exhaust)	$PM_{2.5}$ (exhaust)	PM_{10} (fugitive dust)	$PM_{2.5}$ (fugitive dust)
Average Daily Emissions (pounds per day)							
Area Source	6.04	0.04	4.63	0.01	0.01	0.00	0.00
Energy Source	0.14	2.46	2.07	0.19	0.19	0.00	0.00
Mobile Source	0.29	0.23	2.32	<0.00	<0.00	0.65	0.17
Total	**6.47**	**2.73**	**9.02**	**0.20**	**0.20**	**0.65**	**0.17**
BAAQMD Regional Threshold	*54*	*54*	*9.0 ppm (8-hr avg); 20.0 ppm (1-hr avg)*	*82*	*54*	*None*	*None*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Total Annual Emissions (tons per year)							
Area Source	1.10	0.01	0.85	<0.00	<0.00	0.00	0.00
Energy Source	0.02	0.45	0.38	0.03	0.03	0.00	0.00
Mobile Source	0.05	0.04	0.42	<0.00	<0.00	0.12	0.03
Total	1.18	0.50	1.65	0.04	0.04	0.12	0.03
BAAQMD Regional Threshold	*10 tons/ year*	*10 tons/ year*	*None*	*15 tons/ year*	*10 tons/ year*	*None*	*None*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: Refer to Appendix B for detailed model input/output data.

Mitigation Measures

The following mitigation measure will ensure construction-related emissions will not contribute to a cumulatively considerable increase in criteria pollutants.

AQ-A The District shall implement the following Bay Area Air Quality Management District Best Management Practices by inclusion of such requirements in all construction contracts:

- All exposed surfaces (e.g., unpaved parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or farther from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

Level of Significance After Mitigation

Implementation of Mitigation Measure AQ-A would ensure that the Project would not result in a cumulatively considerable increase in criteria pollutants during Project construction, and Impact AQ-2 would be less than significant.

AQ-3 Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. The following analysis includes the potential exposure of on-site sensitive receptors (i.e., students on campus) and nearby sensitive receptors (i.e., existing neighboring residents) to DPM emissions from off-road equipment during construction and from heavy-duty trucks during operation.

Construction

Carcinogenic Hazards

The cancer risk calculations for sensitive receptors are based on the exposure period that would occur during the estimated six years of construction. The calculated cancer risk accounted for 350 days per year of exposure to residential receptor. Although the average American spends 87 percent of their life indoors, neither the pollutant dispersion modeling nor the health risk calculations account for this reduced exposure. Instead, the health risk calculations use the most conservative scenario, accounting for the equivalent exposure of continual outdoor living. The calculated carcinogenic risks for the sensitive receptors within the Project area are summarized in Table 4.2-6.

Table 4.2-6: Maximum Carcinogenic Health Risk Summary During Construction

Maximum Exposure Scenario	Total Maximum Risk
Six Years of Exposure for Residents	6.45
Six Years of Exposure for Construction Workers and District Employees	4.81
2 Years of Exposure for Students	0.09
BAAQMD Significance Threshold	*10*
Threshold Exceeded?	**No**

Source: Refer to Appendix B for detailed calculations.

The Maximumly Exposed Individual Resident for construction emissions are residences located directly to the north of the Project site, fronting Esmeyer Drive. The Maximumly Exposed Individual Worker for construction emissions is located on the Project site, accounting for faculty that would be present during the summer months of construction. The maximum exposure for the students on the Project site would occur adjacent to the main school building. The off-site Point of Maximum Impact is located at the northeastern Project boundary line. As shown in Table 4.2-6, construction-related impacts related to cancer risk for all modeled scenarios would be below the 10-in-one-million threshold set by BAAQMD. These calculations do not account for any pollutant-reducing remedial components inherent to the Project or the Project site. Therefore, even with the most conservative scenario, construction associated with the proposed phased improvements is not anticipated to result in an elevated cancer risk to sensitive receptors, and the impact would be less than significant.

Non-Carcinogenic Hazards

In addition to cancer risk, the BAAQMD significance thresholds for TAC exposure require an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the reference exposure level for that substance. The BAAQMD threshold defines an acute or chronic hazard index of 1.0 as considered individually significant. The highest maximum chronic hazard indexes for students, residents, and workers in the Project area as a result of DPM exposure is summarized in Table 4.2-7. No acute risk was analyzed for construction as DPM has no identified acute risk.

Table 4.2-7: Maximum Non-Carcinogenic Health Risk Summary During Operation

Exposure Scenario	Chronic Hazard Value: Maximum Residential Hazard	Chronic Hazard Value: Maximum Worker Hazard	Chronic Hazard Value: Maximum Student Hazard	Chronic Hazard Value: Maximum $PM_{2.5}$ Annual Concentration ($\mu g/m^3$)
Construction	0.0039	0.0027	0.0027	0.16
BAAQMD Significance Threshold	*1*	*1*	*1*	*0.3*
Threshold Exceeded?	No	No	No	No

Source: Refer to Appendix B for detailed calculations.

As shown in Table 4.2-7, impacts related to non-cancer risk (chronic hazard index) as a result of Project construction would not surpass the BAAQMD significance thresholds. Therefore, construction associated with the proposed phased improvements is not anticipated to result in an elevated non-cancer risk to sensitive receptors, and the impact would be less than significant.

Operation

The allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SFBAAB is designated as in attainment. Because detailed modeling of Project-specific CO "hot spots" is not necessary, the analysis is addressed qualitatively.

A CO "hot spot" would occur if an exceedance of the state 1-hour standard of 20 ppm or the 8-hour standard of 9 ppm were to occur. The BAAQMD concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix in order to generate a significant CO impact.

As discussed in Impact AQ-2, the expanded use of the artificial fields would potentially generate approximately 92 new automobile trips per day. Therefore, implementation of the Project would not generate traffic volumes at any intersection exceeding 44,000 vehicles per day, and thus, would not result in a significant CO impact.

Further, implementation of the Project would involve improvements for school facilities such as an aquatic facility, classrooms, and fields. Such improvements would result in very limited operational activities with potential health risks, such as landscaping maintenance operations. Athletic facilities are currently used on campus under existing conditions and would be continued to be used with implementation of the Project. Although Project implementation would allow for additional competitions, the proposed aquatic facility would not introduce any new stationary sources of TACs. As such, the proposed use of the aquatic facility would not equate to a new use or a new source of emissions. Implementation of the Project would not introduce new uses for the campus or result in the generation of excessive TAC emissions that are more intensive than existing conditions, or associated health risks from Project operation. Therefore, operation

associated with the proposed phased improvements would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would be less than significant.

4.2.5 Cumulative Impacts

Air pollution is largely a cumulative impact by its very nature. No single project is sufficient in size by itself to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulatively considerable.

The Project would be implemented in three general phases that would occur from the summer of 2024 to the end of the third quarter of 2029. Some of the subphases would overlap, and the modeling has taken this into consideration. As demonstrated in the analysis under Impact AQ-2, as mitigated with Mitigation Measure AQ-A, criteria pollutant emissions generated during construction of the three phases and the Project's operational emissions would not surpass the BAAQMD significance thresholds for criteria pollutants. Therefore, the proposed Project would not result in cumulatively considerable impacts related to short-term construction air quality emissions or long-term operational air quality emissions. Further, related projects would be required to analyze construction and operational emission impacts on a project-level under CEQA and implement mitigation as needed.

Construction of the other approved campus improvements (see Section 2.3.1) would occur at the same time for the proposed Project. The District would be completing the installation of an art studio in June 2024 and starting construction of a new solar photovoltaic system in May 2024. These projects may coincide with Phase 1 of the proposed Project, and construction emissions from these improvements would combine with the Project's. Any combined construction emissions from the art studio, however, would be de minimis as this project would be at the end of its construction process. Construction emissions from the solar array project would also not be substantial, as the District proposes ground arrays on the field south of the basketball that would involve little to no grading. The elevated arrays on the basketball courts and parking lot would require minimal site preparation and little to no grading. Therefore, construction-related emissions generated by the solar array project would be de minimis, and any combined emissions would not be cumulatively considerable, since the Project's air quality impacts are less than significant.

Because emissions generated during Project construction and operation would not exceed the BAAQMD's significance thresholds, the Project would be in compliance with the BAAQMD's 2017 Clean Air Plan. Future related projects would also be required to analyze project-level consistency with applicable air quality plans. As such, impacts associated with consistency with the applicable air quality plan would not be cumulatively considerable for the implementation of the proposed Project.

Additionally, as emission reduction technology, strategies, and plans are constantly being developed, emissions and air quality impacts associated with development are generally

anticipated to be lower in the future. As a result, implementation of the proposed phased improvements, taking into account related projects, would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant or expose sensitive receptors to potentially significant health risk impacts. Therefore, implementation of the Project would not contribute to cumulatively significant impacts related to air quality.

Mitigation Measures

Mitigation Measure AQ-A; see above.

Level of Significance After Mitigation

Impacts would not be cumulatively considerable.

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4.3 BIOLOGICAL RESOURCES

This section describes the biological resources that occur or have the potential to occur at the Project site and evaluates the potential impacts that could occur on those resources with implementation of the phased improvements as part of the Project. Specifically, this section identifies candidate, sensitive, or special-status plant and animal species that may occur at the Project site, as well as regulatory requirements pertaining to those resources. The analysis describes potential direct and indirect impacts from implementation of the phased improvements as part of the Project and identifies mitigation measures for those impacts determined to be significant. This section is based on the Biological Evaluation Report prepared by WRA Environmental Consultants on September 29, 2023, included as Appendix C of this Draft EIR.

4.3.1 Regulatory Setting

Federal

Federal Endangered Species Act

Enacted in 1973, the federal Endangered Species Act (FESA) (US Code, Title 16, Chapter 35, Sections 1531-1544) provides for the conservation of threatened and endangered species and their ecosystems. Consultation with the US Fish and Wildlife Service (USFWS) or the National Oceanic and Atmospheric Administration's National Marine Fisheries Service is required when it is likely that a project could affect species that are federally listed as threatened or endangered. The purpose of FESA is to conserve the habitats that listed species depend on so that they can recover such that protection under FESA is no longer needed.

Section 9 of FESA prohibits the "take" of threatened and endangered species except under certain circumstances and only with authorization from the USFWS through a permit under Section 4(d), 7 or 10(a) of FESA. "Take" under FESA is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The USFWS has also interpreted the definition of "harm" to include significant impacts to habitat that could result in take. If implementing a project would result in take of a federally listed species, either the project applicant must acquire an incidental take permit under Section 10(a) of FESA, or if a federal discretionary action is involved, the federal agency must consult with the USFWS under Section 7 of the act.

Migratory Bird Treaty Act

Congress passed the Migratory Bird Treaty Act (MBTA) (US Code, Title 16, Chapter 7, Subchapter II, Sections 703-712) in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. Under the MBTA, it is unlawful to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. "Take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." Take does not include habitat destruction or alteration, as long as there is not a direct take of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA includes approximately 1,000 bird species native to the United States. No permit is issued under the MBTA for take; measures that would avoid or minimize impacts on protected migratory birds would need to be employed during project implementation to avoid take if such impacts are identified.

State

California Endangered Species Act

The California Endangered Species Act (CESA; Fish and Game Code [CFGC] Sections 2050-2115) regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles. Wildlife "take" is defined by the California Department of Fish and Wildlife (CDFW) as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Protection extends to the animals, dead or alive, and all their body parts. Section 2081 of CESA allows the CDFW to issue an incidental take permit for state-listed threatened or endangered species, should the project have the potential to "take" a state-listed species that has been detected within or adjacent to the Project site. Certain criteria are required under CESA prior to the issuance of such a permit, including the requirement that impacts of the take are minimized and fully mitigated.

All birds except European starlings, English house sparrows, rock doves (pigeons), and non-migratory game birds such as quail, pheasant, and grouse are protected under the MBTA. However, non-migratory game birds are protected under CFGC Section 3503. Many other bird species are considered by the CDFW to be California Species of Special Concern and others are on a CDFW Watch List.[1] The California Natural Diversity Database (CNDDB) tracks species within California for which there is conservation concern, including many that are not formally listed, and assigns them a CNDDB rank. Although the CDFW California Species of Special Concern and Watch List species and species that are tracked by the CNDDB but not formally listed are afforded no official legal status, they may receive special consideration during the environmental review process.

The CDFW further classifies some species under the following categories: "Fully Protected," "Protected birds" (CDFW Code § 3511), "Protected mammals" (CDFW Code § 4700), "Protected amphibian" (CDFW Code § 5050 and Chapter 5, § 41), "Protected reptile" (CDFW Code § 5050 and Chapter 5, § 42), and "Protected fish" (CDFW Code § 5515). The designation "Protected" indicates that a species may not be taken or possessed except under special permit from the CDFW; "Fully Protected" indicates that a species can be taken for scientific purposes by permit only.[2] CDFW Code §§ 3503, 3505, and 3800 prohibit the take, destruction, or possession of any bird, nest, or egg of any bird except English house sparrows and European starlings unless express authorization is obtained from the CDFW.

4.3.2 Environmental Setting

The Project site is approximately 30 acres in size and consists of an operating public high school campus and associated facilities. The Project site is entirely developed or otherwise managed and maintained for school-related uses. The Project site is surrounded by residential development (predominantly single-family homes) to the north, south, and west. The Miller Creek School District Office is located adjacent and to the east of the campus.

[1] California Department of Fish and Wildlife, Point Blue Conservation Science, and Western Field Ornithologists, *Bird Species of Special Concern in California: an Annotated List of Declining or Vulnerable Bird Species,* 1978; California Department of Fish and Wildlife and Williams, D. F., *Mammalian Species of Special Concern in California*, 1986, Wildlife Management Division Administrative Report 86-1; California Department of Fish and Wildlife, *Special Animals List*, October 2023.

[2] California Department of Fish and Wildlife, Special Animals List.

Vegetation Community Types

The majority of the Project site consists of existing buildings, paved surfaces, and maintained athletic fields and facilities. No sensitive vegetation community types are present within the Project site. Landscaping is present throughout much of the Project site, including in rows and clusters adjacent to the campus buildings, and along the edges of the athletic facilities, including the tennis and basketball courts and the stadium and track.

Landscaping within the Project site features a mix of native and non-native (ornamental) tree and shrub species. Native species are present primarily adjacent to the basketball and tennis courts as well as in some bordering areas. Ornamental species are found throughout the Project site including within central portions of the campus and areas adjacent to the buildings. Existing native trees include coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), and coast redwood (*Sequoia sempervirens*). Primary non-native trees include the Monterey pine (*Pinus radiata*), sweetgum (*Liquidambar sp*.), elm (*Ulmus sp.*), privet (*Ligustrum sp.*; larger individuals), weeping willow (*Salix babylonica*), and peppertree (*Schinus mole*). Native shrubs include toyon (*Heteromeles arbutifolia*) and coyote brush (*Baccharis pilularis*), as well as non-native privet, cotoneaster (*Contoneaster sp.*), and others. Himalayan blackberry (*Rubus armeniacus*) is present as groundcover and non-woody shrubbery in some lesser-disturbed areas.

Special-Status Species

Special-Status Plant Species

Special-status plant species include those listed as endangered, threatened, or rare, or those species proposed for listing by the USFWS under FESA, those listed by the CDFW under CESA, and the California Native Plant Society (CNPS).[3] The CNPS inventory is sanctioned by the CDFW and serves as the list of candidate plant species for state listing. CNPS's California Rare Plant Ranks 1B and 2 species are considered eligible for state listing as endangered or threatened.

The Project site is located in the US Geological Survey's San Rafael and Novato 7.5-minute quadrangles. Based on a review of the CNDDB records and CNPS Inventory records for the San Rafael and Novato 7.5-minute quadrangles, a total of 54 special-status plant species have been documented within the vicinity of the Project site. A complete list of these special-status plant species documented from the vicinity and their potential to occur in the Project site is provided in Appendix C of this Draft EIR.

All of the special-status plant species were determined to be unlikely or have no potential to occur within the Project site due to one or more of the following reasons:

- The Project site is a thoroughly developed and maintained high school campus. Although some native species are used in landscaping, the Project site lacks native plant diversity, likely precluding the presence of special-status plant species.

[3] Respectively, species listed or proposed for listing as threatened or endangered under the FESA (Title 50 Code of Federal Regulations [CFR] 17.12 [listed plants], Title 50 CFR 17.11 [listed animals] and includes notices in the Federal Register for proposed species); species listed or proposed for listing by California as threatened or endangered under the CESA (Title 14 California Code of Regulations 670.5); and plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.).

- The Project site is fully surrounded by residential or school uses that are developed and landscaped, thus limiting the potential habitat and seed sources for special-status plant species in the surrounding areas.

- The Project site does not contain hydrologic conditions (e.g., seasonal wetlands, freshwater, brackish, or salt marsh) necessary to support the special-status plant species.

- The Project site does not contain soil conditions (e.g., serpentine or volcanics) necessary to support the special-status plant species.

- The Project site does not contain vegetation communities (e.g., natural chaparral, coastal scrub, or vernal pools) associated with the special-status plant species.

Special-Status Wildlife Species

Based on a review of the CNDDB records for the San Rafael and Novato 7.5-minute quadrangles, as well as Shuford, Shuford and Gardali, and Thomson et al.[4], a total of 39 special-status wildlife species, including mammals, birds, reptiles and amphibians, fish, and invertebrates, have been documented within the vicinity of the Project site. A complete list of these special-status wildlife species documented from the vicinity and their potential to occur in the Project site is provided in Appendix C of this Draft EIR.

All of the special-status wildlife species were determined to be unlikely or have no potential to occur within the Project site for one or more of the following reasons:

- Aquatic habitats (e.g., rivers/streams or ponds) necessary to support the special-status wildlife species are not present in the Project site.

- Vegetation types (e.g., grassland, chaparral, or marsh) that provide nesting and/or foraging resources necessary to support the special-status wildlife species are not present within the Project site.

- Structures or vegetative substrates (e.g., emergent wetland/marsh vegetation, large tree cavities/snags, or old growth forest) necessary to provide nesting or cover habitat to support the special-status wildlife species are not present or within the Project site.

- Host plants (e.g., dog violet or harlequin lotus) necessary to provide larval and nectar resources for the special-status wildlife species are not present in the Project site.

- The Project site is located outside of the special-status wildlife species' known local range, including the nesting/breeding range for birds.

[4] Shuford, W. D., *The Marin County Breeding Bird Atlas: A Distributional and Natural History of Coastal California Birds*, 1993, California Avifauna Series 1. Bolinas, CA: Bushtit Books; Shuford, W.D. and Gardali, T., eds., *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California*, 2008, Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento; Thomson, R. C., A. N. Wright, and H. B. Shaffer, *California Amphibian and Reptile Species of Special Concern*, 2016, University of California Press and California Department of Fish and Wildlife.

- The Project site is located within a developed (suburban and residential) portion of Marin County and is subject to regular human disturbance.

Bat Species

More than 15 bat species are currently listed as federally endangered, threatened, or under review in the candidate or petition process under FESA and CESA.[5] Trees (and other vegetation) within the Project site are unlikely to support bat roosting, including maternity (breeding) roosting. Native trees and many of the non-native landscape species present within the evaluated areas are relatively small, lacking developed cavities/hollows or other roost substrates, such as exfoliating bark. Larger landscape trees existing on-site include mature Monterey pines, elms, and sweetgums. These trees also lacked any apparent cavities and other relevant substrates and appear subject to regular maintenance (trimming and limb removal) for safety and aesthetic purposes that preclude formation of hollows, areas of loose bark, and/or other conditions that may support bat roosting. Buildings within the Project site scheduled for renovations are all well-maintained and regularly occupied structures, lacking ingress/egress points to secluded areas, and as such are also unlikely to support any bat roosting.

Migratory Bird Species

While the Project site is disturbed overall, the trees and shrubs within the Project site have some potential to be used by a variety of native birds for nesting. The likelihood of birds using the existing vegetation for nesting depends on several factors, primarily the frequency and magnitude of disturbance due to school and vegetation maintenance activities, and characteristics of the vegetation (e.g., foliage density or species). Although the field survey performed as part of the Biological Evaluation for the Project was not exhaustive, no obvious nest structures were observed during the site visit, including remnant structures on buildings.

4.3.3 Methodology

Prior to conducting the field survey, a preliminary review and records search was conducted to determine which special-status biological resources have the potential to occur on or within the general vicinity of the Project site. Resources reviewed included the CDFW CNDDB and the CNPS online Inventory of Rare and Endangered Plants of California for the USGS San Rafael and Novato USGS 7.5-minute quadrangles. For special-status wildlife, literature by Shuford, Shuford and Gardali, and Thomson et al. (see footnote #4) was also reviewed.

Following the background literature review, a general field survey was conducted to document existing biological conditions and determine the potential for special-status plant and wildlife species and sensitive habitats to occur within the Project site. A biologist from WRA Environmental Consultants conducted the field survey on August 2, 2023. The Project site was examined to determine if special-status species or suitable habitat to support such species were present. Trees and vegetation throughout most of the Project site were evaluated directly where potential impacts and disturbances to vegetation would occur as a result of the Project; vegetation in some peripheral portions of the Project site was not evaluated.

[5] United States Fish and Wildlife Service, “Bats are one of the most important misunderstood animals,” accessed October 6, 2023, https://www.fws.gov/story/bats-are-one-most-important-misunderstood-animals#:~:text=Conservation%20efforts&text=More%20than%2015%20bat%20species,under%20the%20Endangered%20Species%20Act.

Thresholds of Significance

The significance thresholds used to evaluate the impacts of the Project related to biological resources are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, a project would have a significant impact related to biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

The Appendix G significance criteria noted below were scoped out of the analysis for further consideration in the Initial Study (Appendix A-1); see Chapter 5, Other CEQA Considerations, of this Draft EIR.

- Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

- Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

- Would the project 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?

- Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

- Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

4.3.4 Impact Analysis

BIO-1 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation Incorporated.

Construction

Special-Status Plant Species

If present, individual special-status plants typically could be damaged or destroyed from crushing or trampling during Project construction such as vegetation removal and earth-moving activities. The majority of these construction activities would occur during Phase 1 (aquatic facility reconstruction, physical education space modernization, and stadium upgrades) and Phase 3 (artificial turf for fields, tennis court improvements, and stadium beautification).

A total of 54 special-status plant species were identified at the Project site during the literature review. However, as discussed in Section 4.3.2, Environmental Setting, all of the special-status plant species were determined to be unlikely or have no potential to occur within the Project site due to the developed nature of the campus, the lack of native plant diversity, and the absence of hydrologic, soil, and vegetation/habitat conditions to support such species. The Project proposes the removal of 34 trees, including mature trees, as shown in Figure 3-6. They are all within District property, and none of them are listed special-status plant species. They are mostly non-native, ornamental species. Additionally, native plant species that are on the Project site have no special status. Thus, construction activities associated with the proposed phased improvements would not have the potential to directly affect special-status plant species. No direct impacts on special-status plants would occur with implementation of the proposed phased improvements. Nevertheless, the Project would be subject to the California Green Building Standards Code Section 5.106.12, which requires the planting of shade trees. The Project would include the planting of new trees as a part of the landscaping under each Project component, where applicable. Tree species will be selected based on their ability to reduce wildfire risk, as the Project area is in a Very High Fire Hazard Severity Zone.

Further, suitable habitat for special-status plants is not present in the urban environment surrounding the Project site, which includes residential and school uses that are developed and landscaped. As a result, construction activities associated with implementation of the proposed phased improvements would not have the potential to result in indirect impacts to special-status plants in adjacent areas. As such, no indirect impacts to special-status plants would occur during construction associated with implementation of the proposed phased improvements.

Special Status Wildlife Species

If present, individual special-status wildlife species could be crushed or trampled during construction activities such as vegetation removal and earth-moving activities. As discussed above, the majority of these construction activities would occur during Phase 1 and Phase 3.

A total of 39 special-status wildlife species have been documented within the vicinity of the Project site during the literature review. However, as discussed in Section 4.3.2, Environmental Setting, all of the special-status wildlife species were determined to be unlikely or have no potential to occur within the Project site due to the absence of aquatic habitats, vegetation types, structures or vegetative substrates, and host plants necessary to support them. Further, the Project site is located outside of the special-status wildlife species' known local ranges, and within a developed area subject to regular human disturbance. As such, it is unlikely that any of the special-status wildlife species identified during the literature review would occur within the Project site. Additionally, fugitive dust, noise, and vibration during construction activities could cause wildlife to move away or temporarily avoid the construction area.

The existing trees and buildings on-site that were evaluated as part of the Biological Evaluation are not likely to support roosting habitat for bat species. However, other trees along the eastern and southern perimeters may potentially provide roosting habitat for bat species. Further, although no obvious nest structures were observed during the field survey, existing trees and shrubs may potentially be used by a variety of native birds for nesting. Construction activities and proposed tree removal activities could impact potential nesting and/or roosting habitat for migratory bird species and bat species. As such, during vegetation removal activities of Phase 1 and Phase 3, Mitigation Measures BIO-A and BIO-B would be implemented. Mitigation Measure BIO-A requires a qualified biologist to conduct a habitat assessment for bats, and Mitigation Measure BIO-B requires tree and shrub removal to occur outside of the nesting season for

migratory birds, or a preconstruction nesting bird survey by a qualified biologist if such avoidance is not possible. With implementation of Mitigation Measures BIO-A and BIO-B, potential direct and indirect impacts to bats and migratory birds would be less than significant.

Sensitive Natural Vegetation Communities

Sensitive natural vegetation communities include those that provide potentially suitable habitat for special-status plant and wildlife species. No natural communities preferred by such species occur within the Project site. Existing vegetation includes native and non-native ornamental species, and the removal of such vegetation during construction activities would not affect sensitive natural communities. Therefore, no impact to sensitive natural vegetation communities would occur during construction of the proposed phased improvements.

Operation

The improvements during Phase 1 and Phase 3 of the Project would result in landscaping improvements. New landscaping is not anticipated to provide or create suitable habitat for special-status species. Additionally, Project operation and routine maintenance activities, such as removing or trimming trees or other vegetation to maintain ornamental landscapes, would occur within previously disturbed areas where special-status species are not anticipated to occur and that lack suitable habitats preferred by such species. Therefore, no direct or indirect impacts to special-status plant and wildlife species would occur during operation and routine maintenance of the Project as implemented.

Mitigation Measures

The following mitigation measures will be required to reduce impacts to nesting birds and roosting bats.

BIO-A If disturbance (including trimming of large limbs) of on-site trees along the Project site's eastern and southern perimeters is required to accommodate the Project, the following measure will apply:

Prior to the removal of trees along the eastern and southern perimeters of the campus, a qualified biologist shall conduct a habitat assessment for bats. A qualified bat biologist must have: 1) at least two years of experience conducting bat surveys that resulted in detections for relevant species, such as pallid bat, with verified project names, dates, and references, and 2) experience with relevant equipment used to conduct bat surveys. The habitat assessment shall be conducted a minimum of 30 to 90 days prior to tree removal and shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, exfoliating bark, suitable canopy for foliage roosting species).

If the qualified biologist identifies potential bat habitat trees, then tree trimming and tree removal shall not proceed unless the following occurs: 1) a qualified biologist conducts night emergence surveys or completes visual examination of roost features that establishes absence of roosting bats, or 2) tree trimming and tree removal occurs only during seasonal periods of bat activity, from approximately March 1 through April 15 and September 1 through October 15, and tree removal occurs using the two-step removal process. Two-step tree removal shall be conducted over two consecutive days. The first day (in the afternoon), under the direct supervision and instruction by a qualified biologist with experience conducting two-step tree removal, limbs and branches shall be removed by a tree cutter using chainsaws only; limbs with cavities, crevices or deep bark fissures should be avoided. The second day the entire tree shall be removed.

BIO-B To avoid impacts to nesting birds, removal of trees and shrubs (including tree trimming) shall be performed from September 1 to January 31, outside of the general nesting bird season. This seasonal avoidance may also apply to other Project activities that occur in proximity to trees and vegetation to the extent feasible, including but not limited to ground disturbance and the demolition of existing structures and facilities. If such avoidance is not feasible, a preconstruction nesting bird survey by a qualified biologist shall be performed no more than 14 days prior to the initiation of tree/vegetation removal under each phase. The survey shall cover impacted vegetation/substrates and surrounding areas (as accessible) within approximately 250 feet. If active bird nests are found during the survey, an appropriate no-disturbance buffer shall be established by the qualified biologist. Once it is determined that the young have fledged (left the nest) or the nest otherwise becomes inactive (e.g., due to predation), the buffer may be removed and work may be initiated within the formerly buffered area.

Level of Significance After Mitigation

Implementation of Mitigation Measures BIO-A and BIO-B would ensure that impacts to nesting birds and roosting bats would be less than significant.

4.3.5 Cumulative Impacts

The Project site is fully developed and surrounded by urban uses. Additionally, based on the biological study completed for the Project, there are no sensitive plant or wildlife species or habitat on the Project site. Therefore, the Project when combined with the other District-approved projects (see Section 2.3.1) would not result in cumulative impacts to biological resources.

Like the proposed Project, the City-sponsored projects listed in Table 2-5 are located in urban environments and sites that are fully developed and do not likely include substantial habitats for biological resources. Similar to the proposed Project, which would be required to implement Mitigation Measures BIO-A and BIO-B to minimize impacts to migratory birds and bat species, the City-sponsored projects in the vicinity would also be required to comply with applicable state, federal, and local regulations concerning biological resources. Therefore, implementation of the proposed phased improvements in combination with the related projects would not contribute to cumulatively significant impacts to biological resources.

Mitigation Measures

Mitigation Measures BIO-A and BIO-B; see above.

Level of Significance After Mitigation

Impacts would not be cumulatively considerable.

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4.4 CULTURAL RESOURCES

Cultural resources encompass the physical evidence of past human activity. They are nonrenewable resources that are important to our history as they tell the story of human past and interaction with the natural environment. Cultural resources may include places, objects, buildings, structures, and landscapes. By statute, the California Environmental Quality Act (CEQA) is primarily concerned with two classes of cultural resources: "historical resources," which are defined in Public Resources Code (PRC) Section 21084.1 and CEQA Guidelines Section 15064.5; and "unique archaeological resources," which are defined in PRC Section 21083.2. This section addresses potential impacts resulting with the Project in relation to historical and archaeological resources. Project impacts to tribal cultural resources are evaluated in Section 4.12 of this EIR. The analysis in this section is based on the *Cultural Resources Survey Report*, dated October 2023 (Appendix D), and prepared by Archaeological/Historical Consultants.

4.4.1 Regulatory Setting

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966 established the National Register of Historic Places as the official designation of historical resources, including districts, sites, buildings, structures, and objects. Eligibility for inclusion in the National Register is determined by applying the following criteria, i.e., demonstrating that the resource is:[1]

a) Associated with events that have made a significant contribution to the broad patterns of our history; or

b) Associated with the lives of persons significant in our past; or

c) Embodies distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or

d) Able to yield, or may be likely to yield, information important in prehistory or history.

Secretary of the Interior's Professional Qualifications Standards

The Secretary of the Interior's Professional Qualifications Standards define minimum education and experience required to perform historic resources identification, evaluation, registration, and treatment activities.[2]

State

California Environmental Quality Act

State historic preservation regulations are provided in CEQA (PRC Sections 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5).

[1] Code of Federal Regulations, 36 CFR Part 60.4.

[2] Code of Federal Regulations, 36 CFR Part 61.

Historical Resources

CEQA Guidelines Section 15064.5 states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant impact on the environment. CEQA Guidelines Section 15064.5(a) states that, for purposes of CEQA, the term "historical resources" shall include the following:

a) A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the California Register.

b) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in an historical resource survey meeting the requirements PRC Section 5024.1(g), shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

c) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register including the following:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies 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; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

Archaeological Resources

PRC Section 21083.2 specifies lead agency responsibilities to determine whether a project may have a significant effect on an archaeological resource. An archaeological resource can be separated as either a “unique archaeological resource” or “nonunique archaeological resource.”

- According to PRC Section 21083.2(g), a unique archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; (2) has a special and particular quality such as being the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

- A nonunique archaeological resource is an archaeological artifact, object, or site which does not meet the criteria in PRC Section 21083.2(g). According to subsection (h), a nonunique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects.

PRC Section 21083.2 also sets out detailed requirements for projects for which it can be demonstrated will damage a unique archaeological resource. For such projects, the lead agency may require reasonable efforts for the resources to be preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation.

California Register of Historical Resources

California Assembly Bill (AB) 2881 was signed into law in 1992, establishing the California Register of Historical Resources. The California Register establishes a list of properties to be protected from substantial adverse change (PRC Section 5024.1). A historical resource may be listed in the California Register if it is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California, and meets any of the above criteria provided in Historical Resources, section (c).

The California Register includes properties that are listed or have been formally determined eligible for listing in the National Register, State Historical Landmarks and eligible Points of Historical Interest. Other potential resources require nomination for inclusion in the California Register. A property eligible for listing in the California Register must possess integrity as well as be significant. Integrity is the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period. Loss of integrity, if sufficiently great, will render a resource ineligible for the California Register. Integrity is determined through application of seven factors:

- *Location*. Location is the place where the historic property was constructed or the place where the historic event occurred.
- *Design*. Design is the combination of elements that create the form, plan, space, structure, and style of a property.
- *Setting*. Setting is the physical environment of the historic property.
- *Materials*. Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration form a historic property.
- *Workmanship*. Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- *Feeling*. Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.
- *Association*. Association is the direct link between an important historic event or person and a historic property.

The California Historical Resources Information System (CHRIS) manages an inventory of paper documents, maps, and digital files relating to historical, archaeological, and tribal cultural resources. CHRIS operates structurally through the California Office of Historic Preservation, nine Information Centers located on California State University and University of California campuses throughout the state, and the State Historical Resources Commission. The Information Centers maintain information on cultural resources within their respective geographic areas.

California Health and Safety Code Sections 7050.5 and 7051

California Health and Safety Code Sections 7050.5 and 7051 address the illegality of interference with human burial remains in the event of the discovery or recognition of human remains at a location other than a dedicated cemetery. The sections provide that excavation and disturbance of the site or nearby areas must halt until the county coroner evaluates the remains; investigates the circumstances, manner and cause of death; and provides recommendations concerning the treatment and disposition of the human remains. If determined to be Native American, the coroner must contact the Native American Heritage Commission (see Section 4.12, Tribal Cultural Resources for additional information).

Public Resources Code Section 5097.5(a)

PRC Section 5097.5(a) specifies that a person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, or archaeological sites, which can include fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

4.4.2 Environmental Setting

The Project site is in the Santa Margarita Valley at an elevation of approximately 75 to 100 feet above mean sea level. The hills of the Terra Linda/Sleepy Hollow Preserve are to the south and west, rising to a maximum height of approximately 600 feet above mean sea level. Prior to development of the Project site and surrounding uses, fluvial drainages flowed out of the hills, crossed the Project site, and traveled north between two hills to the northeast and northwest before joining additional drainages and traveling east towards San Francisco Bay, approximately 3 miles to the northeast and east of the site.

Europeans first arrived on the Marin Coast in 1579 when Sir Francis Drake stopped to recondition his ship. The second contact occurred in 1595 when Sebastian Rodriquez Cermeño's ship was wrecked along the coast. Survivors were offered hospitality and food by members of the Coast Miwok, the local Native American tribe. After those two contacts, the Coast Miwok were left alone for nearly 200 years. The European settlers began to establish a mission system, including the construction of the San Francisco Presidio and Mission Dolores, in 1776. The Project area continued to slowly grow until California's statehood in 1850, when the area entered an accelerated period of commercial and residential growth. Additional details on the ethnography and historic overview of the Project area can be found in Appendix D of this EIR.

The Project site remained undeveloped through the middle of the twentieth century. Historic-period land use prior to 1960 was limited to ranching. Buildings belonging to Terra Linda High School were apparent at the site by 1960. The majority of the Project site currently supports existing concrete surface parking lots and buildings. The remainder of the site includes developed athletic fields and courts, of which only the soccer and baseball fields are grass, while the tennis, basketball, track, and football fields are covered in varying types of artificial surfaces.

4.4.3 Methodology

Records Search

A records search for the Project site and surrounding one-quarter mile radius was conducted in July 2023 at the Northwest Information Center at Sonoma State University. The CHRIS records search did not identify any previously recorded historical or archaeological resources at the Project site and quarter-mile radius. Additionally, no previous studies included the Project site.

One previous study was conducted within a quarter-mile radius. In 2012, an archaeological survey report was completed for a project located 500 feet northeast of the Project site.

Archaeological Survey

A Registered Professional Archaeologist meeting the Secretary of the Interior's Standards for archaeology from Archaeological/Historical Consultants surveyed Terra Linda High School on July 27, 2023. The pedestrian survey involved inspection of the Project area for cultural resources. Open patches of ground were closely inspected for historical debris and features. Only 11 acres of the 30-acre campus contained visible soil, including turf grass, landscaping, and an ongoing construction site in the northwestern portion of the property. All areas with exposed soils were observed. No historic-era cultural resources or soils were observed.

Thresholds of Significance

The significance thresholds used to evaluate the impacts of the proposed Project related to cultural resources are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, a project would have a significant impact related to cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5; or
- Disturb any human remains, including those interred outside of dedicated cemeteries.

4.4.4 Impact Analysis

CUL-1 Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

Less Than Significant Impact.

Section 4.4.1, Regulatory Setting, provides the definition of a historical resource pursuant to CEQA Guidelines Section 15064.5(a). The records search for historical and archaeological resources conducted for the Project, along with an additional review of locally designated historic properties, did not identify Terra Linda High School or any properties within one-quarter mile of the Project site as listed on a national, state, or local register of historical sources.[3] No previously recorded historic-era resources, including districts, sites, buildings, structures, objects, and landscapes, were identified within the boundaries of the Project site and one-quarter mile of the Project site. Therefore, development of the Project site as proposed would not directly or indirectly cause a substantial adverse change in the significance of a known historical resource pursuant to CEQA Guidelines Section 15064.5.

Mitigation Measures

No mitigation measures would be required.

[3] San Rafael, Historic Resources and Preservation, 2015, accessed November 15, 2023, https://storage.googleapis.com/proudcity/sanrafaelca/uploads/Historic-Preservation-Handout.pdf.

Level of Significance After Mitigation

Impacts would be less than significant.

CUL-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less Than Significant Impact.

Based on historic research, survey and topographic maps, and aerial photographs, the Project site was undeveloped through the middle of the twentieth century. Historic-period land use prior to 1960 appears to have been limited to ranching activities. The first buildings were constructed on-site in 1960 and belonged to Terra Linda High School, which were unlikely to have left intact historic period resources. There are no known unique archaeological resources on the Project site. Previous construction activities at Terra Linda High School have not identified any archaeological resources. Nevertheless, there is a potential that unknown archaeological resources on the property may be obscured by previous grading, earthwork, or materials over the years. Accordingly, in the event of a discovery, the District would comply with regulatory requirements as stated in PRC Section 5097.5(a), which address the treatment of archaeological or historical sites or features. Compliance with the regulatory requirement would reduce potential impacts on unknown archaeological resources to less than significant.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would be less than significant.

CUL-3 Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant Impact.

Prior to its current development, the Project site was part of a ranch. There are no known cemeteries on-site. Additionally, previous construction activities at Terra Linda High School have not identified any human remains interred outside of a dedicated cemetery. Although no known human remains have been identified on-site, the potential for Project ground-disturbing activities to result in impacts to human remains exists. If human remains are discovered, all work must stop in the immediate vicinity of the discovery. The Marin County coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed, pursuant to Health and Safety Code Sections 7050.5 and 7051. Project compliance with regulatory requirements would reduce Project impacts on undiscovered human remains to less than significant levels.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

4.4.5 Cumulative Impacts

Impacts to cultural resources tend to be site-specific. However, cumulative impacts would occur if a series of actions led to the loss of a resource. For example, while the loss of a single historic building may not be significant to the character of a neighborhood or streetscape, continued loss of such resources on a project-by-project basis could constitute a significant cumulative effect. This is most obvious in historic districts, where destruction or alteration of a percentage of the contributing elements may lead to a loss of integrity for the district overall.

The Project site is not a designated historical resource nor is it part of a historical district and none of the properties within one-quarter mile are listed on a national, state, or local register; accordingly, Project implementation in combination with the other District-sponsored projects (see Section 2.3.1) and City-sponsored projects identified in Table 2-5 would not result in a cumulatively considerable impact to historical resources.

Similarly, there are no known archaeological resources and human remains on the Project site. Similar to the Project, related projects would comply with the requirements of Health and Safety Code Sections 7050.5 and 7051 and PRC Section 5097.5(a), which address the discovery and recovery of unknown historical and archaeological resources and human remains. Mandatory adherence to these regulations for the Project and related projects would reduce the potential to cause a cumulatively considerable effect.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would not be cumulatively considerable.

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4.5 ENERGY

This section evaluates the potential direct and indirect environmental impacts associated with energy consumption, including the depletion of nonrenewable resources (e.g., oil, natural gas, coal) resulting from implementation of the proposed Project, as well as regulatory requirements pertaining to energy resources. This section is based on the Energy Consumption Assessment, dated February 2024, prepared by ECORP Consulting, Inc., and included as Appendix E.

4.5.1 Regulatory Setting

Federal

Energy Independence and Security Act

Signed into law in December 2007, the Energy Independence and Security Act contains provisions designed to increase energy efficiency and availability of renewable energy. This act contains provisions for increasing fuel economy standards for cars and light trucks, while establishing new minimum efficiency standards for lighting as well as residential and commercial appliances and equipment.

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair, and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

State

California Energy Commission

The California Energy Commission (CEC) was created in 1974 as the state's principal energy planning organization. The CEC is charged with six basic responsibilities as follows:

1. Forecast statewide electricity needs.
2. License power plants to meet those needs.
3. Promote energy conservation and efficiency measures.
4. Develop renewable energy resources and alternative energy technologies.
5. Promote research, development, and demonstration.
6. Plan for and direct the state's response to energy emergencies.

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report (IEPR) that assesses major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors. The IEPR provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance California's economy; and protect public health and safety (Public Resources Code Section 25301[a]). Each biennial IEPR accounts for various factors such

as energy supply, demand, infrastructure, environmental considerations, and economic impacts. The report aims to address key energy challenges and provide recommendations to achieve a reliable, affordable, and sustainable energy system for California.

The IEPR typically includes, but is not limited to, the following key topics:

1. Renewable Energy: The IEPR focuses on promoting renewable energy sources such as solar, wind, geothermal, and biomass. The IEPR assesses the state's progress in meeting its renewable energy goals, identifies barriers, and proposes strategies to increase renewable energy generation and integration into the grid.

2. Energy Efficiency: The IEPR highlights the importance of energy efficiency measures to reduce energy consumption and greenhouse gas (GHG) emissions, and explores policies and initiatives to promote energy-efficient technologies and practices in buildings, transportation, and industries.

3. Grid Modernization: The IEPR addresses the modernization and optimization of the electrical grid infrastructure to accommodate a higher penetration of renewable energy, improve grid reliability, and support emerging technologies such as energy storage and electric vehicles.

4. Transportation: The IEPR typically includes a section on transportation, focusing on reducing dependence on fossil fuels and promoting the adoption of electric vehicles and alternative fuels. The IEPR may discuss infrastructure development, incentives, and policies to accelerate the transition to cleaner transportation options.

5. Climate Change Mitigation: Given California's commitment to combating climate change, the IEPR often emphasizes strategies to reduce GHG emissions and achieve the state's climate goals. This may include discussions on carbon pricing, cap-and-trade programs, and the integration of climate considerations into energy planning.

6. Energy Resilience: The IEPR may address strategies to enhance the resilience of the energy system, considering factors such as extreme weather events, natural disasters, and cybersecurity risks. The IEPR may discuss measures to ensure the reliable and uninterrupted supply of energy during emergencies.

7. Economic Impacts and Equity: The IEPR often explores the economic implications of energy policies and initiatives, including job creation, investment opportunities, and the equitable distribution of benefits across different communities and socioeconomic groups.

The CEC prepares these assessments and associated policy recommendations every two years, with updates on alternate years, as part of the IEPR.

The 2023 IEPR focuses on next steps for transforming transportation energy use in California and addresses the role of transportation in meeting state climate, air quality, and energy goals: the transportation fuel supply; the Alternative and Renewable Fuel and Vehicle Technology Program; current and potential funding mechanisms to advance transportation policy; transportation energy demand forecasts; the status of statewide plug-in electric vehicle infrastructure; and challenges and opportunities for electric vehicle infrastructure.

Executive Order B-55-18

In September 2018, Governor Jerry Brown signed Executive Order B-55-18, which establishes a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Carbon neutrality refers to achieving net zero carbon dioxide emissions. Carbon neutrality may be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for the reduction of GHG emissions. The executive order required the California Air Resources Board to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal."

Senate Bill 1368

On September 29, 2006, Governor Arnold Schwarzenegger signed into law SB 1368 (codified as Public Utilities Code, Section 8340 et seq.), which limits long-term investments in baseload generation by the state's utilities to those power plants that meet an emissions performance standard jointly established by the CEC and the California Public Utitilies Commission (CPUC). The CEC has designed regulations that achieve the following:

- Establish a standard of 1,100 pounds carbon dioxide per megawatt hour for baseload generation owned by, or under long-term contract to, publicly owned utilities. This would encourage the development of power plants that meet California's growing energy needs while minimizing their GHG emissions.

- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the CEC website. This would facilitate public awareness of utility efforts to meet customer needs for energy over the long term while meeting the state's standards for environmental impact.

- Establish a public process for determining the compliance of proposed investments with the Emissions Performance Standard.

Renewables Portfolio Standard

The Renewables Portfolio Standard (RPS) is a statewide program for the advancement of renewable energy. The program sets continuously increasing renewable energy procurement requirements for the state's load-serving entities.[1] The RPS obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33 percent of their electricity from renewable energy sources by 2020. Eligible renewable resources are defined in the 2013 RPS, and include but are not limited to biodiesel, biomass, hydroelectric and small hydro, geothermal, solar photovoltaic, and wind.

Senate Bill 350

SB 350 (Clean Energy and Pollution Reduction Act of 2015) expands the RPS by establishing a goal of 60 percent of the total electricity sold to retail customers in California to come from renewable energy sources per year by December 31, 2030. In addition, SB 350 includes the goal of doubling the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, and lighting) of retail customers through energy conservation and efficiency. SB 350 also

[1] California Energy Commission, Renewables Portfolio Standard, accessed November 13, 2023, https://www.energy.ca.gov/programs-and-topics/programs/renewables-portfolio-standard.

requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator (CAISO) into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by CAISO to those markets, pursuant to a specified process. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 for the RPS.

California Building Code: Building Energy Efficiency Standards

In 1978, the CEC established the Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6), commonly referred to as Title 24, California's energy efficiency standards for residential and nonresidential buildings, in response to a legislative mandate to create uniform building codes to reduce California's energy consumption. Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2022 California Energy Code is the most recent version and improves upon the previous 2019 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2022 Title 24 standards encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, and strengthen ventilation standards. Public school plans submitted to the Division of the State Architect on or after January 1, 2023, must comply with the 2022 Title 24 standards.

California Building Code: CALGreen

The California Green Building Standards Code (CALGreen) (California Code of Regulations, Title 24, Part 11) is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt which encourage or require additional measures in the five green building topics. CALGreen requires new buildings to reduce water consumption by 20 percent, divert 65 percent of construction waste from landfills, and install low pollutant-emitting materials.

4.5.2 Environmental Setting

Energy use results in environmental impacts to air quality, water quality, and other natural resources. The vast majority of California's air pollution is caused by burning fossil fuels, which is linked to changes in global climate and the depletion of stratospheric ozone.[2] Varying levels of energy use in the transportation sector is related to the fuel efficiency of cars, trucks, and public transportation; choice of different travel modes (auto, carpool, and public transit); vehicle speeds; and miles traveled by these modes. The construction and routine operation and maintenance of transportation infrastructure also consume energy. In addition, residential, commercial, and industrial land uses consume energy, typically through the usage of natural gas and electricity for heating, cooling, cooking, and other activities.

[2] The stratospheric ozone layer is the earth's "sunscreen" – protecting living things from harmful ultraviolet radiation from the sun.

Energy Types and Sources

California's power system comprises a diverse mix of natural gas, renewable, hydroelectric, and nuclear energy resources. Natural gas provides California with a majority of its electricity followed by renewables, large hydroelectric, and nuclear.

Pacific Gas & Electric (PG&E) provides electricity and natural gas to 5.5 million customers throughout the state of California, including the Project site. The company provides various sources of clean power to customers. In 2021, approximately 93 percent of PG&E's electricity provided to customers came from energy resources free of GHG emissions, including renewables, nuclear, and hydroelectric power. Furthermore, approximately 50 percent was from renewable resources that qualified under the California RPS, and the company remains on track for the RPS mandate from SB 100, which mandates 60 percent of renewable procurement by 2030. PG&E also offers a program to customers to purchase up to 100 percent of their electricity from either solar or regional renewable energy sources.

Marin Clean Energy (MCE) is a nonprofit public agency that offers clean energy options to several counties in the Bay Area, including Contra Costa, Marin, Napa, and Solano, and serves over 585,000 customers, including those in San Rafael and the Project site. MCE is the default electricity provider for all communities in Marin County. MCE provides electricity generated from renewable sources such as solar, wind, bioenergy, geothermal, and hydropower, which is delivered to customers through PG&E transmission lines.

Customers of PG&E can enroll in MCE's energy generation service, which provides customers with the choice to have 60 percent or 100 percent of their electricity supplied from renewable energy sources. However, PG&E still provides electricity delivery service to customers, such as meter reading and power line maintenance. Additionally, MCE has developed several plans that promote goals such as supplying 95 percent carbon-free energy by the end of 2023.

The CPUC regulates PG&E and has developed energy efficiency programs such as smart meters, low-income programs, distribution generation programs, self-generation incentive programs, and a California solar initiative. Additionally, the CEC maintains a power plant database that describes all of the operating power plants in the state by county.

Existing Transmission and Distribution Facilities

The components of transmission and distribution systems include the generating facility, switching yards and stations, primary substation, distribution substations, distribution transformers, various sized transmission lines, and the customers. The U.S. contains over 250,000 miles of transmission lines, most of them capable of handling voltages between 115 kilovolts (kv) and 345 kv, and a few systems capable of handling up to 500 kv and 765 kv capacity. Transmission lines are rated according to the amount of power they can carry, the product of the current (i.e., rate of flow), and the voltage (i.e., electrical pressure). Generally, transmission is more efficient at higher voltages. Generating facilities, hydroelectric dams, and power plants usually produce electrical energy at fairly low voltages, which is increased by transformers in substations. From the substation, energy is delivered through switching facilities to the transmission lines. At various points in the system, the energy is reduced to lower voltages for distribution to customers.

Power lines are either high voltage (115, 230, 500, and 765 kv) transmission lines or low voltage (12, 24, and 60 kv) distribution lines. Overhead transmission lines consist of conductors, which are the wires carrying the electrical energy, insulators, support towers, and shield wires, which are grounded wires to protect the lines from lightening.

Towers must meet the structural requirements of the system in several ways. They must be able to support the electrical wires, conductors, and shield wires under varying weather conditions, including wind and ice loading, as well as a possible unbalanced pull caused by one or two wires breaking on one side of a tower. Every mile or so, a “dead-end” tower must be able to handle the resulting strain if all wires on one side of a tower break. Every change in direction requires a special tower design. In addition, the number of towers required per mile varies, depending on the electrical standards, weather conditions, and terrain. All towers must have appropriate foundations and be available at a fairly regular spacing along a continuous route accessible for both construction and maintenance.

A right-of-way (ROW) is a fundamental requirement for all transmission lines. A ROW must be kept clear of vegetation that could obstruct the lines or towers by falling limbs or interfering with the sag or wind sway of the overhead lines. If necessary, land acquisition and maintenance requirements can be substantial. The dimension of a ROW depends on the voltage, number of circuits carried, and the tower design. Typically, transmission line ROWs range from 100 to 300 feet in width.

The California Power Pool is an electric power supply grid that connects with PG&E in Northern California, and San Diego Gas and Electric in Southern California. These companies coordinate the development and operation, as well as purchase, sale, and exchange, of power throughout the state. CAISO manages the flow of electricity across the high-voltage, long-distance power lines (i.e., high-voltage transmissions system) that make up 80 percent of California’s and a small percentage of Nevada’s electrical grid. CAISO, a nonprofit public benefit corporation, keeps power moving to and throughout California by operating a competitive wholesale electricity market designed to promote a broad range of resources at lower prices, and by managing the reliability of the electrical transmission grid. In managing the grid, CAISO centrally dispatches generation and coordinates the movement of wholesale electricity in California. As the only independent grid operator in the western U.S., CAISO grants equal access to 26,000 circuit miles of transmission lines and coordinates competing and diverse energy resources into the grid, where it is distributed to consumers. Every five minutes, CAISO forecasts electrical demand and dispatches the lowest cost generator to meet demand while ensuring enough transmission capacity for delivery of power.

Regional Energy Consumption

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g., gallons of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh. The four energy sources relevant to the Project are electricity usage, natural gas usage, the equipment-fuel necessary for Project construction, and the automotive fuel necessary for Project operation. Electricity usage, natural gas usage, and automotive fuel consumption for Marin County are discussed below.

The electricity consumption associated with all nonresidential uses in Marin County from 2018 to 2022 is shown in Table 4.5-1. As shown, electricity consumption has decreased since 2018.

Table 4.5-1: 2018–2022 Nonresidential Electricity Consumption in Marin County

Year	Electricity Consumption (kilowatt hours)
2022	618,916,795
2021	622,918,340
2020	626,508,356
2019	692,874,596
2018	677,776,197

Source: California Energy Commission, 2022, Electricity Consumption by County, accessed December 12, 2023, https://ecdms.energy.ca.gov/elecbycounty.aspx.

Natural gas consumption in Marin County from 2018 to 2022 is shown in Table 4.5-2. As shown, natural gas consumption has decreased since 2018.

Table 4.5-2: 2018–2022 Natural Gas Consumption in Marin County

Year	Natural Gas Consumption (therms)
2022	18,464,623
2021	18,034,674
2020	16,795,816
2019	19,080,801
2018	19,288,790

Source: California Energy Commission, 2022, Gas Consumption by County, accessed December 12, 2023, http://www.ecdms.energy.ca.gov/gasbycounty.aspx.

Automotive fuel consumption in Marin County from 2018 to 2022 is shown in Table 4.5-3. As indicated, automotive fuel consumption has decreased since 2018.

Table 4.5-3: 2018–2022 Automotive Fuel Consumption in Marin County

Year	Total Fuel Consumption (gallons)
2022	128,607,865
2021	129,810,242
2020	116,504,351
2019	130,496,253
2018	132,915,614

Source: California Air Resources Board, 2022, Mobile Source Emissions Inventory, accessed December 12, 2023, https://ww2.arb.ca.gov/our-work/programs/msei/mobile-source-emissions-inventory.

4.5.3 Methodology

The levels of energy consumption during construction and operation of the Project include the number of kWh of electricity, therms of natural gas, and gallons of gasoline. The amount of total construction-related fuel used was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1. Electricity consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod is a statewide land use computer model designed to quantify resources associated with both construction and operations from a variety of land use projects. Operational automotive fuel consumption was calculated with Emission FACtor (EMFAC) 2021, a mathematical model that was developed to calculate emission rates and rates of gasoline consumption from motor vehicles that operate on highways, freeways, and local roads in California.

Thresholds of Significance

The significance thresholds used to evaluate the impacts of the proposed Project related to energy are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, a project would have a significant impact related to energy if it would:

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

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

Background Information

Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use. Therefore, for the purposes of the following impact analysis, the amount of electricity and natural gas estimated to be consumed by the Project is quantified and compared to the amount consumed by nonresidential land uses in Marin County. Similarly, the amount of fuel necessary for Project construction and operation is calculated and compared to the amount consumed in Marin County.

4.5.4 Impact Analysis

ENE-1 Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact.

Construction

Construction activities would consume energy through the operation and maintenance of construction equipment and the transportation of materials by construction vehicles to and from the Project site. Table 4.5-4 shows automotive fuel consumption during construction of the proposed phased improvements. For purposes of the construction analysis, the proposed improvements are phased during the following calendar years of construction:

- Phase 1: June 2024–November 2025

- Phase 2: June 2024–December 2028
- Phase 3: June 2027–August 2029

Table 4.5-4: Project Construction Automotive Fuel Consumption

Calendar Year	Annual Energy Consumption	Percent Increase Countywide
2024	80,296 gallons	0.062 percent
2025	75,961 gallons	0.059 percent
2026	67,389 gallons	0.052 percent
2027	88,374 gallons	0.068 percent
2028	82,266 gallons	0.063 percent
2029	73,300 gallons	0.056 percent

Source: Refer to Appendix E for the CalEEMod data.

Note: The increases in construction fuel consumption resulting from the Project are compared with the anticipated countywide fuel consumption in 2022 (the most recent full year of data).

As shown in Table 4.5-4, the Project's annual automotive fuel consumption during each of the six construction years would increase between 0.052 percent and 0.068 percent and represents a de minimis increase of the anticipated countywide fuel consumption in 2022. Accordingly, construction of the proposed phased improvements would not result in the wasteful, inefficient, or unnecessary use of energy or have a significant effect on local and regional energy supplies. Additionally, construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the state. Further, transportation fuel demand during construction would be further reduced by construction equipment fleet turnover, increasingly stringent state and federal regulations on engine efficiency, state regulations limiting engine idling times, and recycling of construction debris. Transportation fuel energy consumed during construction would not represent a significant demand on energy resources. Therefore, construction of the proposed phased improvements would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature, and, as such, impacts would be less than significant.

Operation

Implementation of the proposed phased improvements would result in an increase in automotive fuel, electricity, and natural gas consumption. Table 4.5-5 shows the estimated energy consumption during operation.

Table 4.5-5: Project Operation Energy Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Automotive Fuel Consumption[1] – Operation	33,580 gallons	0.025 percent
Annual Project Energy Consumption (Construction and Operation)[2] – Electricity Consumption	1,433,213 kilowatt-hours	0.232 percent
Annual Project Energy Consumption (Construction and Operation)[2] – Natural Gas Consumption	91,599 therms	0.496 percent

Source: [1] Refer to Appendix E for the EMFAC2021 data. [2] Refer to Appendix E for the CalEEMod data.

Note: The increases in electricity consumption resulting from the Project are compared with all nonresidential uses in Marin County in 2022 (the latest data available). The increases in natural gas consumption resulting from the Project are compared with all nonresidential uses in Marin County in 2022 (the latest data available). The increases in operational fuel consumption resulting from the Project are compared with the anticipated countywide fuel consumption in 2022 (the most recent full year of data).

As shown in Table 4.5-5, the annual electricity consumption resulting from Project operation is estimated to be 1,433,213 kWh, resulting in an increase of 0.232 percent in the typical annual electricity consumption attributable to all nonresidential uses in Marin County. However, this would be a conservative estimate as the District previously approved new solar arrays on the campus in 2022, including a solar carport in the student parking lot, solar shade structures on the north and south sides of the basketball courts, and a row of ground-mounted solar arrays on the multipurpose field, immediately south of the basketball courts. The approved solar array project would be separate from the proposed Project and would begin installation in May 2024; thus, this potential reduction in energy usage was not accounted for in this EIR analysis.

Additionally, Project operations are estimated to consume approximately 91,599 therms of natural gas annually. This would result in an increase of 0.496 percent in the typical annual natural gas consumption attributable to all nonresidential uses in Marin County.

The Project would not increase student enrollment at the campus; however, for the purpose of providing a worst-case analysis, the EIR assumes the Project—specifically, community use of the artificial turf fields, via the Civic Center Act—would generate 92 addiitional daily vehicle trips (see Section 4.11, Transportation, of this Draft EIR). The increase in daily vehicle trips would equate to a consumption of approximately 33,580 gallons of automotive fuel per year. This would result in a countywide percentage increase in gasoline fuel consumption of 0.025 percent.

Implementation of the proposed improvements would consume energy; however, when compared to existing conditions, the amount of natural gas used would be reduced and electricity usage would be similar or reduced. Natural gas usage would be reduced due to the proposed removal of inefficient boilers in the practice gym (Building K) and existing pool, and their replacement with high-efficiency electric heat pumps at the practice gym and two high-efficiency boilers and a tankless water heater for the proposed aquatic facility. This would result in a 5.1 percent reduction in the consumption of natural gas compared to existing conditions.

Electricity consumption would be the same or less than existing conditions as the Project would be required to comply with the Energy Efficiency Standards and CALGreen. Thus, the modernization of school buildings proposed by the Project would result in greater electricity efficiency when compared to existing conditions.

Although Project operations would consume energy, implementation of the Project would reduce consumption of natural gas and electricity at the campus compared to existing conditions, and produce only a nominal increase in automotive fuel consumption. Therefore, implementation of the Project would not cause wasteful, inefficient, and unnecessary consumption of energy resources, and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would be less than significant.

ENE-2 Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. As discussed in Section 4.5.2, Environmental Setting, MCE provides electricity services to Marin County generated from renewable energy sources that offer cleaner and more sustainable power. MCE has also developed several plans that aim to supply its customers with at least 95 percent carbon-free energy by the end of 2023. Electricity at the Project site would continue to be provided by MCE via PG&E transmission lines. Separate from the proposed Project, the District previously approved new solar arrays in 2022 that would be installed throughout the campus beginning in May 2024 to increase the District's use of renewable energy. Accordingly, electricity consumed by the Project would primarily be sourced from renewable energy sources. By extension, the Project, which would utilize electricity from MCE via PG&E transmission lines, would not conflict or obstruct with the goals of the 2023 IEPR.

Natural gas at the Project site would continue to be provided by PG&E. Under the RPS, PG&E remains on track for the RPS mandate from SB 100, which requires 60 percent of renewable procurement by 2030. Additionally, as discussed in Impact ENE-1, implementation of the Project would result in a 5.1 percent reduction in the natural gas consumption compared to existing conditions due to the replacement of inefficient boilers. Therefore, the Project would not conflict with or obstruct PG&E's goal to to comply with the 2023 IEPR. Moreover, development of the Project would comply with Title 24 California Building Standards Code. The Title 24 standards are updated approximately every three years; the 2022 standards went into effect January 1, 2023. The 2022 Energy Efficiency Standards improve upon the 2019 Energy Efficiency Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Additionally, the Project would comply with the requirements of CALGreen, which establishes mandatory green building standards for all buildings in California. As discussed in Chapter 3, Project Description, the Project would include the following sustainable features:

- Solar photovoltaic facilities, as a part of the aquatics grandstand shade structure.
- Increased building insulation values in new walls and attic spaces.
- Increased windows to maximize daylighting and minimize the need for artificial lights.
- High-efficiency windows and doors.
- Efficient heating, ventilation, and air conditioning systems.

- Use of Energy Star products.
- Low-flow, water-efficient plumbing fixtures for toilets and sinks.
- High-efficiency boilers.
- High-efficiency electric heat pumps.
- Tankless water heater system.
- LED technology for interior and exterior improvements.
- Recycled water for common area landscape irrigation and building plumbing where feasible.
- Drought-tolerant plants in landscape design to minimize irrigation on-site.
- Low-water irrigation systems with smart sensor controls.

With these building standards in place, implementation of the Project would be consistent with renewable energy or energy efficiency plans. Therefore, the impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would be less than significant.

4.5.5 Cumulative Impacts

Cumulative impacts would occur if a series of actions lead to a wasteful, inefficient, or unnecessary consumption of energy resources or a conflict with or obstruction of a state or local plan for renewable energy and energy efficiency. The Project would be implemented in three general phases that would occur from the summer of 2024 to the end of the third quarter of 2029. Some of the subphases would overlap, and the analysis has taken this into consideration.

The geographic context for cumulative impacts associated with energy consumption for electricity and natural gas is countywide and relative to MCE's and PG&E's service areas, respectively. While the geographic context for transportation-related energy use is more difficult to define, it is meaningful to consider the Project in the context of countywide consumption. Future growth in Marin County is anticipated to increase the demand for electricity, natural gas, and transportation energy, as well as the need for energy infrastructure. As shown above in Tables 4.5-4 and 4.5-5, implementation of the Project would only nominally increase the county's consumption of electricity, natural gas, construction fuel, and operational fuel. However, when compared to existing conditions, the Project's use of natural gas would be reduced and use of electricity would be similar or reduced.

Additionally, per the RPS, implementation of the Project and related projects would use electricity provided by MCE that would be made of 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045. Furthermore, implementation of the Project, District-sponsored

projects (Section 2.3.1), and City-sponsored projects (Table 2-5) would be subject to Title 24 and CALGreen standards. Additionally, the District's solar array project in combination with the proposed Project with high-efficiency boilers, electric heat pumps, and tankless water heater system would substantially reduce energy consumption. The related projects sponsored by the City of San Rafael would also be required to comply with the City of San Rafael Climate Change Action Plan. New buildings from the related projects would use new energy-efficient appliances and equipment and implement renewable energy measures and the City of San Rafael General Plan goals, policies, and programs concerning energy reduction. Thus, the Project and related projects would comply with energy conservation plans and efficiency standards required in the region and state to ensure that energy is used efficiently. As such, implementation of the Project in conjunction with the related projects would not result in wasteful, inefficient, or unnecessary consumption of energy resources, and the Project's cumulatively considerable impacts would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would not be cumulatively considerable.

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4.6 GEOLOGY AND SOILS

This section evaluates the potential impacts to geology, soils, and paleontological resources that would result from implementation of the Project. This section presents the regulatory setting, environmental setting, methodology for determining potential impacts, impact analysis, proposed measures to mitigate significant impacts, and an analysis of potential cumulative impacts pertaining to geology, soils, and paleontological resources. This section is based in part, on the following documents:

- Geotechnical Investigation & Geologic Hazards Study Report for the Terra Linda High School Aquatic Center Project (Geotechnical Report for Phase 1 of the Project), prepared by A3GEO and Lettis Consultants International, dated September 29, 2023, and provided as Appendix F;

- Geotechnical Investigation & Geologic Hazards Study Report for the Terra Linda High School – Kiln Room Addition, prepared by A3GEO and Lettis Consultants International, dated December 22, 2021, and provided as Appendix G; and

- Results of the paleontological records search conducted for the Project site and vicinity at the University of California, Berkeley's Museum of Paleontology, on July 31, 2023, provided as Appendix H.

4.6.1 Regulatory Setting

Federal

Earthquake Hazards Reduction Act of 1977

The Earthquake Hazards Reduction Act established the National Earthquake Hazards Reduction Program as a long-term earthquake risk reduction program for the United States. The act focuses on creating effective measures to reduce earthquake hazards; promoting the adoption of earthquake hazard reduction activities by federal, state, and local governments; improving the public's knowledge of earthquakes by increasing the overall understanding of the effects of earthquake on humans and their surroundings; and developing and maintaining systems for advancing these causes. The National Earthquake Hazards Reduction Program designates the Federal Emergency Management Agency as the lead agency of the program and assigns the agency with planning, coordinating, and reporting responsibilities.

Occupational Safety and Health Administration Regulations

The Occupational Safety and Health Administration Excavation and Trenching Standard covers requirements for excavation and trenching operations. The Occupational Safety and Health Administration requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

Paleontological Resources Preservation Act of 2002

The Paleontological Resources Preservation Act was enacted to codify the generally accepted practice of limiting the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers. These researchers must obtain a permit from the appropriate state or federal agency and agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and to other researchers.

Paleontological resources are classified as nonrenewable scientific resources and are protected by federal and state statutes, most notably the 1906 federal Antiquities Act. Professional standards for assessment and mitigation of adverse impacts on paleontological resources have been established by the Society for Vertebrate Paleontology

State

California Building Code

The California Building Code (CBC), codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress facilities, and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or those standards are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building, structure, or appurtenance connected or attached to such buildings or structures throughout California.

The 2022 edition of the CBC is based on the 2021 International Building Code published by the International Code Council. The code is updated triennially, and the 2022 edition of the CBC was published by the California Building Standards Commission on July 1, 2022, effective January 1, 2023. Every three years, the state adopts new codes (known collectively as the California Building Standards Code) to establish uniform standards for the construction and maintenance of buildings, electrical systems, plumbing systems, mechanical systems, and fire and life safety systems. Sections 17922, 17958, and 18941.5 of the California Health and Safety Code require that the latest edition of the California Building Standards Code apply to local construction 180 days after publication.

California Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act addresses the effects of strong ground shaking, liquefaction, landslides, and other ground failures due to seismic events. Under the Seismic Hazards Mapping Act, the State Geologist is required to delineate “seismic hazard zones.” Cities and counties must regulate certain development projects within these zones until the geologic and soil conditions of their project sites have been investigated and appropriate mitigation measures, if any, have been incorporated into development plans. The State Mining and Geology Board provides additional regulations and policies to assist municipalities in preparing the safety element of their general plans and to encourage the adaptation of land use management policies and regulations to reduce and mitigate seismic hazards to protect public health and safety. Under Public Resources Code Section 2697, cities and counties must require, prior to the approval of a project located in a seismic hazard zone, submission of a geotechnical report defining and delineating any seismic hazards.

California Public Resources Code Section 5097.5

California Public Resources Code Section 5097.5 defines and details the unauthorized disturbance or removal of archaeological, paleontological, or historical resources located on public lands which is considered a misdemeanor violation:

> "A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands."

Field Act

The Field Act, contained in Education Code Sections 17280-17317, adds additional seismic safety requirements for California schools. The Field Act includes requirements for seismic design standards, plan review, construction inspections, and testing. The Division of the State Architect (DSA) oversees the implementation of the Field Act through plan review, permitting, and inspection of schools under construction. Among other provisions, the Field Act requires construction plans to be prepared by licensed structural engineers and architects, requires plans to be reviewed and approved by the DSA, and requires continuous inspection during construction by qualified inspectors to verify compliance with the approved plans. Architects, engineers, inspectors, and contractors must certify that school construction complies with approved plans.

4.6.2 Environmental Setting

Regional Geology and Seismicity

Geology

The Project site is located within the San Francisco Bay region. The geology of the San Francisco Bay region includes three basement rock complexes that are Mesozoic in age (225 to 65 million years old):[1] the Great Valley complex, the Franciscan Complex, and the Salinian complex. Within the region, the Mesozoic basement rocks are locally overlain by a diverse sequence of Cenozoic Era (younger than 65 million years) sedimentary and volcanic rocks. Since their deposition, the Mesozoic and Cenozoic rocks have been extensively deformed by repeated episodes of folding and faulting. The San Francisco Bay region has experienced several episodes of uplift and faulting during the late Tertiary Period (about 25 million to 2 million years ago) that produced the region's characteristic northwest-trending mountain ranges and valleys.

World-wide climate fluctuations during the Pleistocene (about 1.8 million to 11 thousand years ago) resulted in several distinct glacial periods accompanied with a lowering of sea levels. Evidence suggests that during the maximum extent of the latest glacial period, the sea level was 300 to 400 feet below its present elevation and the valley now occupied by the San Francisco Bay drained to the Pacific Ocean more than 30 miles west of the Golden Gate. Near the beginning of the Holocene age (about 11 thousand years ago) the rising sea reentered the Golden Gate, and sediments accumulated rapidly beneath the rising San Francisco Bay and on the surrounding floodplains. The Holocene-age surface deposits are generally less dense and weaker than Pleistocene-age soils that predate the last sea level rise.

Seismicity

Since 1836, six earthquakes of magnitude 6.5 or greater have occurred in the Bay Area, including the Hayward Earthquake in 1868, the San Francisco Earthquake in 1906, and the Loma Prieta Earthquake in 1989. The Working Group on California Earthquake Probabilities has developed

[1] Basement rock is the thick foundation of ancient, and oldest, metamorphic and igneous rock that forms the crust of continents, often in the form of granite.

authoritative estimates of the magnitude, location, and frequency of future earthquakes in California, which are published in the Uniform California Earthquake Forecast reports. The forecast reports indicate the likelihoods for one or more earthquake events of specified magnitudes occurring within the San Francisco Bay region in the next 30 years, starting in 2014. The Working Group on California Earthquake Probabilities has also made estimates of the likelihood of earthquakes with magnitude greater than or equal to 6.7 occurring on specific faults. Compared to the previous forecasts, the likelihoods of moderate-sized earthquakes of magnitude 6.5 to 7.5 in the next 30 years, starting in 2014, are generally lower, whereas those of larger events are higher. This change reflects a better understanding of the regional fault system and the potential for multi-fault ruptures on many faults.

Project Site Geology and Seismicity

Geology

The Project site is situated on a gentle, northeast-sloping alluvial fan bounded by the lower hills of Mount Tamalpais to the south, and a set of northwest-trending hills to the northeast. The hills in the direct vicinity of the Project site are composed of Franciscan bedrock. The hills southwest of the Project site are part of a continuous range extending northwest from downtown San Rafael, with localized peaks at elevations above 600 feet. To the northeast of the Project site are smaller isolated hills, the closest of which to the campus rises to elevations above 200 feet.

Historical photographs indicate that the alluvial fan underlying the campus was once incised by several creeks emanating from the hills to the southwest and an unnamed northwesterly-flowing creek along the northeastern property boundary. According to a US Geological Survey (USGS) geologic map from 2000, the hills that surround the Project site are predominantly Franciscan Complex Mélange.[2] The Franciscan Complex Mélange extends onto the far western corner of the Project site. The remainder of the Project site is mapped as Quaternary (less than about 2.6 million years old) alluvium, which consists of sand, gravel, silt, and clay that range from loose to soft and friable (i.e., easily crumbled).

An older geologic map from 1976 shows the Project site to be underlain by Quaternary alluvium and colluvium. Alluvium refers to deposits that have been deposited by streams whereas colluvium refers to soils that have moved downslope by gravity. The surficial geology at the Project site has been recorded as Holocene alluvial fan deposits. The alluvium projects to the northeast where it merges with Holocene bay mud over several thousand feet to the northeast of the Project site.

Liquefaction Potential

Liquefaction is a phenomenon by which certain types of soils that are below groundwater can lose strength (liquefy), compress (settle), and gain mobility (flow) in response to earthquake ground shaking. The California Geological Survey has issued official seismic hazard maps for liquefaction for many parts of California; however, no liquefaction maps have been issued for Marin County. Soils that are most likely to experience classic liquefaction-type behavior include loose to medium dense, clean, coarse-grained soils (i.e., sands and gravels) that are below groundwater. Fine-grained materials (i.e., silts and clays) with very low plasticity that are below groundwater can also

[2] Mélange is a tectonic mixture of variably sheared shale and sandstone containing: (1) hard tectonic inclusions largely of greenstone, chert, graywacke, and their metamorphosed equivalents, plus exotic high-grade metamorphic rocks and serpentinite and (2) variably resistant masses of graywacke, greenstone, and serpentinite up to several miles in longest dimension, and including minor discrete masses of limestone too small to be shown.

experience generally similar cyclic degradation in response to seismic shaking and are considered susceptible to liquefaction-type behavior if certain criteria are met. It is generally understood that cohesive soils with a plasticity index of 12 or greater can be considered highly resistant to liquefaction.[3]

The USGS has published maps of liquefaction susceptibility for the central San Francisco Bay region, which show that the entire Project site is located within an area of moderate liquefaction susceptibility. It is to be noted that the liquefaction susceptibility mapping by the USGS is based on accompanying regional-level maps of Quaternary deposits coupled with groundwater depth estimates, earthquake ground motion estimates, and documented historical accounts of liquefaction occurrence. As such, the USGS susceptibility maps are not "site-specific," as no on-site data was used in their development.

Landslide Potential

Landslides are the downslope movement of earth materials under the force of gravity that are often driven by hazards such as storm events and earthquakes. Although the California Geological Survey has issued official seismic hazard maps for earthquake-induced landsliding within parts of California, no landslide maps have been issued for Marin County.

A USGS landslide map from 1997 shows areas of "mostly landslides" at higher elevations in the hills to the south and southwest of the Project site. Areas of "few landslides" are mapped immediately surrounding the Project site and extending into adjacent residential neighborhoods, and the western and southwestern portions of the Project site.[4] A comparison between related maps suggests that the mapped area of "few landslides" within the Project site correlates to the geologic mapping of Franciscan Mélange in the same area.

An earlier geologic map from 1976 that includes landslides generally shows the Project site as free of landslide deposits. This is consistent with the site reconnaissance that shows the Project site located within alluvial fan deposits and well outboard of the steep and potentially more landslide-prone hills to the west-southwest.

Project Site History

Historical photographs from 1950 and 1958 show the Project site prior to development, and photographs from 1959 show the development of the entire campus in progress. Previous site plans show the nearly-level central portion of the Project site was created by cutting and filling, with less than 10 feet of cut at the upper (southwest) margin of the Project site and less than about 5 feet of fill at the lower margin of the Project site, adjacent to Nova Albion Way.

The available 1958 site drawings generally show Buildings A through E with concrete slab-on-grade floors and spread footing foundations typically extending to depths of 3–3.5 feet below the top-of-slab elevation. Newer buildings, built in 2003 or later, at the Project site were most likely

[3] The plasticity index is expressed in percentage of the dry weight of the soil sample. It shows the size of the range of the moisture contents at which the soil remains plastic. In general, the plasticity index depends only on the amount of clay present.

[4] "Mostly landslides" meaning areas consisting of mapped landslides, intervening areas typically narrower than 1,500 feet, and narrow borders around landslides; "few landslides" meaning areas consisting of few, if any, large, mapped landslides, but locally containing scattered small landslides and questionably identified larger landslides.

founded on spread footing foundations. However, the existing gymnasium (Building K) includes drilled pier foundations that extend into rock.

Previous Geotechnical Investigations at the Campus

Previous geotechnical reports and associated borings have been conducted throughout the campus in accordance with previous development (e.g., the Kiln Room Addition). Previous borings throughout the campus indicate that the primary geologic units at the Project site consist of artificial fill, alluvium/colluvium, and Franciscan Complex bedrock.

Based on observations, artificial fill typically consisted of medium stiff to stiff sandy clay, or medium dense to dense clayey sand, with varying amounts of gravel. Artificial fill materials encountered in previous borings generally contained fine-grained materials of low to moderate plasticity. The plasticity index values of previous borings were generally indicative of soil with a low to moderate expansion potential, though fill soils with different characteristics (such as clay, which generally has a high expansion potential) were interpreted to be present in other areas of the Project site. With the exception of the former creeks and swales in the Project site, artificial fill was either observed as a thin layer (up to approximately 5 feet in thickness) or was absent from previous studies.

All of the previous borings drilled at the campus encountered alluvial/colluvial soils either at the ground surface or below artificial fill, and directly overlying bedrock. Throughout the campus, logs of borings generally show alluvial/colluvial soils consisting of lean clay and fine- to medium-grained sand that classify as either sandy lean clay or clayey sand with trace gravel.

Previous borings show the surface of bedrock at depths of approximately 12–16 feet below ground surface (bgs), specifically at the site of the existing Kiln Room in the western portion of the campus. The upper part of the bedrock is interpreted as sandstone bedrock, weathered completely to soil and unconformably overlain by Pleistocene alluvial sand and gravel. The bedrock materials encountered in previous borings are typically described as weathered near the contact with the overlying alluvium/colluvium, with adjusted sampler blow counts in bedrock generally increasing with depth.[5]

The majority of previous borings did not encounter groundwater. Groundwater was encountered for three borings at depths ranging from 7 to 20 feet bgs. Groundwater conditions for two of the three borings may be related to their location within a historic creek channel, identified on pre-development aerial photographs, which runs along the northeast boundary of the campus. It is to be noted that groundwater measurements made in open boreholes are not necessarily representative of stabilized groundwater conditions at the time that the measurements are made, which is particularly true for holes drilled in low-permeability clayey soils. Groundwater levels may vary in response to rainfall or other factors, or may also be present at times within permeable zones (particularly where such zones coincide with the alignments of the historic creeks or tonal lineaments) and/or due to locally perched conditions.

[5] The Standard Penetration Test involves driving a split-spoon sampler into the soil with a hammer, and the number of blows required to drive the sampler to a specified distance is recorded as the blow count (expressed as N). The blow count is used to assess the strength and density of the soil. Soils with higher blow counts are generally stronger and denser than soils with lower blow counts.

Project Site and Aquatic Center Borings

The following presents a discussion of the borings and soil types present at the Project site, including the borings performed for the proposed aquatic center to be implemented as part of Phase 1 of the Project. Table 4.6-1 shows the depths and elevations of rock encountered in the borings, along with the rock type encountered.

Table 4.6-1: Project Site Borings

Location	Boring	Surface Elevation (feet)	Bedrock Depth (feet)	Top of Bedrock Elevation	Rock Type
Building S (Proposed equipment and chemical storage room)	A3-23-1	80.7	6.0	74.7	Claystone/Shale/ Mélange
Building T (Proposed Pool Storage Room)	A3-23-2	82.6	15.5	67.1	Sandstone/Shale/ Mélange
South of Pool	A3-23-3	91.0	15.0	76.0	Shale/Mélange
Building R/Q (Portables)	A3-23-4	80.7	14.0	66.7	Sandstone
Building H (Physical Education)	A3-23-5	80.8	14.0	66.8	Sandstone/Shale/ Clayey Sandstone
Building H (Physical Education)	A3-23-6	80.7	17.0	63.7	Sandstone
Pool	A3-23-7	80.9	15.0	65.9	Sandstone/Sandy Claystone
Building H (Physical Education)	A3-23-8	80.8	18.0	62.8	Sandstone/Sandy Claystone
Pool	A3-23-9	80.8	19.0	61.8	Sandstone

The artificial fill present on campus typically consists of medium stiff to stiff sandy clay, or medium dense to dense clayey sand, with varying amounts of gravel. The fill materials present are generally similar to the natural on-site colluvial/alluvial soils from which the fill materials were likely derived. Consequently, precise determinations of fill thicknesses and depths are not always feasible.

Of the nine borings drilled for the Aquatic Center site, only four borings (A3-23-5, A3-23-6, A3-23-8, and A3-23-9) are interpreted to have encountered fill that was distinctive enough from the reworking of alluvial fan deposits at the site. The remainder of the borings were typically logged as undifferentiated fill/alluvium in the very shallow subsurface layer. Borings A3-23-5 and A3-23-6, which were drilled along the north side of Building H, encountered about 2–3 feet of fill classified as clayey sand with gravel. Due to the shallowness of this layer, drive samples in the fill layer extended into the underlying natural soils.

Borings A3-23-8 and A3-23-9, which were drilled along the north side of the existing pool, encountered approximately 7 feet of fill classified as sandy lean clay that is interpreted to be fill, based on the presence of gravel-size angular rock fragments not seen in other borings and due to their close proximity to the existing pool footprint.

Cross sections evaluated as part of the Geotechnical Report for Phase 1 of the Project showed that the Project site was cut to grade with cut depths generally increasing from north to south. The borings where fill was noted are either directly adjacent to existing Building H (Borings A3-23-5 and A3-23-6) or directly adjacent to the deep end of the existing pool (Borings A3-23-8 and A3-23-9). Based on these observations, the presence of fill at these isolated locations is likely related to localized excavation and backfilling performed to construct Building H and the pool rather than mass grading performed during site development.

In the borings drilled for the aquatic center, the bottom of the alluvium/colluvium layer (i.e., top of bedrock) ranged approximately from 6 to 19 feet bgs. Rock was encountered at a depth of 6 feet bgs in Boring A3-23-1, 15.5 feet bgs in Boring A3-23-2, and between depths of 14 feet bgs and 19 feet bgs in Borings A3-23-3 through A2-23-9. The 6 feet of sandy lean clay with gravel directly overlying shale in Boring A3-23-2 is interpreted as residual soil, or completely weathered claystone.

The borings drilled for the proposed aquatic center site encountered rock materials characterized primarily as sandstone, siltstone, claystone, shale, or mélange, consistent with Franciscan Complex rocks depicted on regional geologic maps. The bedrock surfaces indicated on the boring logs prepared for this study represent an abrupt transition between alluvium/colluvium and Franciscan Complex rock.

Paleontological Resources

A paleontological records search was conducted for the Project site and vicinity at the University of California, Berkeley's Museum of Paleontology (July 31, 2023). The review of the University of California Museum of Paleontology records indicated that the Project site and vicinity are mapped as Quaternary alluvium or Franciscan. The review concluded there were no records of prior paleontological resource finds in the Project site or vicinity for similar rock units (refer to Appendix H).

4.6.3 Methodology

The analysis of impacts related to geology and soils is based, in part, on the following:

- Geotechnical Investigation & Geologic Hazards Study Report for the Terra Linda High School Aquatic Center Project, prepared by A3GEO, Inc. and Lettis Consultants International, Inc., dated September 29, 2023, provided as Appendix F; and

- Geotechnical Investigation & Geologic Hazards Study Report for the Terra Linda High School – Kiln Room Addition, prepared by A3GEO, Inc. and Lettis Consultants International, Inc., dated December 22, 2021, and provided as Appendix G.

Information, conclusions, and recommendations included in this assessment are based on site-specific data, including information obtained from subsurface investigations at the Project site, which was used to characterize geotechnical and geologic conditions at the Project site. The Geotechnical Reports were also prepared based on a review of published and unpublished references containing information on geologic, seismic and historical conditions from sources

such as the California Division of Mines and Geology, USGS, California Geological Survey, Federal Emergency Management Agency, and other sources.

The analysis of Project effects on paleontological resources is based on the written correspondence with the University of California, Berkeley's Museum of Paleontology regarding their review of the University of California Museum of Paleontology records, provided as Appendix H.

Thresholds of Significance

The significance thresholds used to evaluate the impacts of the proposed Project related to geology and soils are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, a project would have a significant impact related to geology and soils if it would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Strong seismic ground shaking;
    - Seismic-related ground failure, including liquefaction;
    - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- 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;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The Appendix G significance criteria noted below were scoped out of the analysis for further consideration in the Initial Study (Appendix A-1); see Chapter 5, Other CEQA Considerations, of this Draft EIR.

- Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
- Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

4.6.4 Impact Analysis

GEO-1 Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Strong seismic ground shaking?

ii. Seismic-related ground failure, including liquefaction?

iii. Landslides?

Less Than Significant Impact.

Seismic Ground Shaking

The San Francisco Bay region is seismically active and as such, it is likely that the Project site will experience seismic ground shaking within the foreseeable lifetime of the Project. The type and magnitude of seismic hazards that may affect the Project site are dependent on both the distance to causative faults and the intensity and duration of the seismic event.

In compliance with the CBC, ground-shaking hazards posed by earthquakes occurring along regional active faults would be considered in the design and construction of the proposed Project, under all three phases. The proposed structures would be designed to resist strong ground shaking in accordance with the requirements of the CBC. The seismic design provisions of the CBC include a methodology by which sites are classified as A through F in order to quantify site-specific ground shaking effects. Based on the available data, a seismic Site Class C designation (soft rock and very dense soil profile) is appropriate for the Project site. The Project would implement the CBC seismic design parameters associated with Site Class C, provided as part of the Geotechnical Report for the Project.

The proposed phased improvements would not exacerbate underlying geologic and seismic conditions that produce ground shaking. According to the Geotechnical Report for Phase 1 of the Project, the closest major active fault that could produce seismic shaking at the Project site is the San Andreas fault, located approximately 8.5 miles southwest of the Project site. Other active faults that may result in shaking at the Project site include the San Gregorio, Hayward, and Rodgers Creek faults, all located approximately 9–12 miles away from the Project site.

With implementation of the recommendations in the Geotechnical Report for Phase 1 of the Project, Phase 1 of the Project would have less than significant impacts related to seismic ground shaking. Further, geotechnical investigations may be prepared for the proposed improvements under Phase 2 and Phase 3 of the Project, as applicable. All proposed phased improvements would be designed and constructed in compliance with the CBC and other applicable federal and state codes to minimize impacts related to seismic ground shaking. Therefore, impacts related to strong seismic ground shaking would be less than significant.

Liquefaction

The Project site is mapped by the USGS within an area of moderate liquefaction susceptibility. As discussed in Section 4.6.2, Environmental Setting, soils that are most likely to experience classic liquefaction-type behavior include loose to medium dense, clean, coarse-grained soils (i.e., sands and gravels) that are below groundwater.

The borings performed at the campus indicate the following:

- The Project site is generally underlain by natural alluvial/colluvial soils consisting predominantly of very stiff sandy lean clay and dense clayey sand.
- The adjusted blow counts obtained in the natural alluvium/colluvium below a depth of about 5 feet typically exceeded 20 blows per foot, indicating the soil is denser and harder.
- Screening for the presence of expansive soils showed a plasticity index ranging from 12 to 17, indicating medium plasticity and resistance to liquefaction.

As part of the recommendations of the Geotechnical Report for Phase 1 of the Project, artificial fill would be removed from beneath any planned building foundations for the proposed aquatic center. With adherence to this recommendation and based on the borings at the Project site, the site-specific Geotechnical Report concluded that the potential for liquefaction is very low for the improvements to be implemented as Phase 1 of the Project. As for the improvements to be implemented as Phase 2 and Phase 3, all phases as part of the Project would be designed and constructed in compliance with the CBC and other applicable federal and state codes to minimize impacts related to liquefaction. Further, geotechnical investigations may be prepared for the proposed improvements under Phase 2 and Phase 3 of the Project, as applicable. Therefore, impacts related to liquefaction would be less than significant.

Landslides

A USGS map, included as part of the Geotechnical Report for Phase 1 of the Project, shows the Project site within a region of “surficial deposits” and void of landslide-related deposits (e.g., “few landslides”). The mapping of “few landslides” appears to correlate directly with the mapping of Cretaceous/Jurassic (Franciscan) Mélange on a separate USGS geologic map.

The Geotechnical Report prepared for Phase 1 of the Project evaluated the potential for deep-seated landsliding to occur below the location of the proposed aquatic center. This evaluation was based primarily on previous evaluations of the Project site, which concluded that the Project site is approximately level and part of a broad alluvial fan. Further, Franciscan Complex bedrock underlies the Project site between 6 and 19 feet bgs and lacks distinct changes in elevation across the Project site. The soils that underlie the site of the proposed aquatic center are not susceptible to liquefaction or seismic strength loss. Based on these evaluations, there is almost no potential for deep-seated landsliding to occur beneath the site of the proposed aquatic center.

In addition, the Geotechnical Report prepared for Phase 1 of the Project evaluated the potential for cut slope failure to occur at the site of the proposed aquatic center. Grading of the campus produced a low-cut slope, at about less than 10 feet high. Based on a review of historical aerial photography and the Project site reconnaissance, the cut slope appears to have performed acceptably since it was created more than 60 years ago. Additionally, Phase 1 of the Project would locally flatten the cut slope in the vicinity of the proposed equipment and chemical storage room and a pool storage room (Buildings S and T). Boring A3-23-2, drilled on the cut slope behind the proposed Building T, encountered very stiff lean clay overlying rock. Based on these observations, the overall potential for significant cut slope failures to occur within the site of the proposed aquatic center is considered very low, and impacts related to landslides for improvements implemented as part of Phase 1 would be less than significant. Furthermore, all proposed phased improvements (i.e., Phase 2 and Phase 3) would be designed and constructed in compliance with the CBC and other applicable federal and state codes to minimize impacts

related to landslides. With adherence to existing regulations and compliance with the CBC, impacts related to landslides would be less than significant. In addition, geotechnical investigations may be prepared for the proposed improvements under Phase 2 and Phase 3 of the Project, as applicable. Therefore, impacts related to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides, would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would be less than significant.

GEO-2 Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact.

Construction

The Project site supports an existing and developed high school campus. Construction of the proposed phased improvements would include demolition, site preparation, grading, and paving activities. The import and export materials resulting from construction of the Project's proposed phased improvements are broken down as follows:

- Phase 1: 1,124 tons of demolished debris would be hauled off-site;
- Phase 2: 248 tons of demolished debris would be hauled off-site; and
- Phase 3: Approximately 25 tons of demolished debris would be hauled off-site, 7,407 cubic yards of material would be exported off-site, and 7,407 cubic yards of replacement material would be imported on-site.

The proposed improvements that would disturb more than one acre of soils would be required to obtain a National Pollutant Discharge Elimination System Construction General Permit from the San Francisco Bay Regional Water Quality Control Board. Specifically, Phase 1 and Phase 3 would require the Construction General Permit, as these phases would disturb more than one acre of soils. Nonetheless, all proposed phased improvements would still require and implement erosion control measures.

The Construction General Permit requires construction sites that disturb one or more acres of land to implement stormwater controls and to develop a stormwater pollution prevention plan. The measures identified in the stormwater pollution prevention plan are intended to minimize the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. Best management practices (BMP) may fall under the categories of materials and waste management; equipment management and spill control; earthwork and contaminated soils; paving and asphalt work; concrete, grout, and mortar application; and painting and paint removal. Examples of BMPs specific to erosion control and sediment control during construction may include, but would not be limited to, the following:

- Scheduling grading and excavation work for dry weather only.
- Seeding or planting vegetation for erosion control on slopes.

- Implementing wind erosion controls.
- Providing effective soil cover for inactive areas and all finished slopes, open space, utility backfill, and completed lots, such as geotextiles and mats.
- Controlling erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control hydroseeding, or an alternative method.
- Prior to completion of construction, applying permanent erosion control to remaining disturbed soils.
- Preserving existing vegetation where required and when feasible.
- Protecting storm drain inlets, gutters, ditches, and drainage courses with gravel bags, fiber rolls, berms, etc.
- Keeping excavated soils on-site and transferring excavated materials to dump trucks.

For additional discussion, refer to Section 4.8, Hydrology and Water Quality, of this Draft EIR.

As discussed above, construction of the proposed phased improvements would result in a total of approximately 1,397 tons of demolished debris and approximately 7,407 cubic yards of exported material. However, with compliance with the Construction General Permit requirements relative to sediment and erosion control, impacts related to the substantial soil erosion or the loss of topsoil would be less than significant during construction.

Operation

Upon completion of construction activities, the Project would include impervious surfaces from building structures and other paved surfaces, and landscaping. These improvements would eliminate the potential for erosion to occur within areas covered by impervious surfaces and would substantially reduce the potential for erosion in landscaped areas. Additionally, proposed improvements to existing landscaping would provide soil stabilization, and landscaped areas would stabilize the underlying soil materials, providing anchoring during rain or high wind events. Therefore, implementation of the proposed phased improvements would result in less than significant impacts with regard to substantial soil erosion or the loss of topsoil during operation.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would be less than significant.

GEO-3 Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. Secondary effects of earthquakes are nontectonic processes such as seismically induced landslides, liquefaction, lateral spreading, and ground deformation (e.g., fissures, settlement, displacement, and loss of bearing strength). As discussed under Impact GEO-1 above, the proposed phased improvements would be designed and constructed

in accordance with regulations under the CBC and result in less than significant impacts related to landslides and liquefaction.

Lateral spreading occurs when surface material extends or spreads on gentle slopes. Lateral spreading is a pervasive type of liquefaction-induced ground failure often associated with earthquake shaking. As discussed under Impact GEO-1 above, the potential for liquefaction is very low for the Project site. As such, the potential for lateral spreading at the Project site would also be very low.

Subsidence is typically caused by extraction of substances such as oil, water, or gas from below the ground surface and can cause severe structural impacts such as cracks in building foundations or dislocated pipelines and drains. A type of ground subsidence is the settlement and ground collapse that occurs in certain types of geologically recent, unconsolidated sediments. Collapsible soils are defined as any unsaturated soil that goes through a radical rearrangement of particles, and greatly decreases in volume upon wetting, additional loading, or both. The Project site is not identified as being susceptible to subsidence.[6] As such, the Project site would not be susceptible to collapse.

According to the Geotechnical Report prepared for Phase 1 of the Project, the site of the proposed aquatic center contains materials generally unsuitable for the support of new buildings, including the following:

- Topsoil, tree roots, and organic-laden soils;
- Old foundations, abandoned utilities, concrete/brick fragments, and other debris;
- Existing fill/backfill materials for which there are no records documenting placement under modern engineering controls (undocumented fill); and
- Soils disturbed by future demolition-related activities.

To reduce risks related to unsuitable soils, construction activities requiring earth movement for the proposed improvements as part of Phase 1 of the Project would remove all existing unsuitable soils.

With implementation of the recommendations in the Geotechnical Report prepared for Phase 1 of the Project, the proposed development under Phase 1 of the Project would have less than significant impacts related to unstable soils. Further, all Project phases would adhere to the requirements of the CBC and other applicable federal and state codes to minimize impacts related to unstable soils. Therefore, the proposed phased improvements would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Impacts would be less than significant in this regard.

Mitigation Measures

No mitigation measures would be required.

[6] City of San Rafael, General Plan 2040/EIR – Geology and Soils, 2021, https://www.cityofsanrafael.org/departments/general-plan-2040/.

Level of Significance After Mitigation

Impacts would be less than significant.

GEO-4 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact. Expansive soils are clay-based soils that tend to expand (increase in volume) as they absorb water and shrink (lessen in volume) as water is drawn away. If soils consist of expansive clays, foundation movement and/or damage can occur if wetting and drying of the clay does not occur uniformly across the entire area. Expansive soils are known to occur at various locations throughout the campus.

According to the Geotechnical Report prepared for Phase 1 of the Project, the site of the proposed aquatic center contains moderately expansive soils. Therefore, Project design for improvements implemented as part of Phase 1 would implement alternative foundation types commonly used in the San Francisco Bay region to reduce any potentially damaging effects of expansive soils on structures. Alternative foundation types include shallow foundations (footings or mats) supported on a layer of engineered non-expansive material; deepened spread footings supported on natural soils below the zone of significant shrink/swell behavior; and true deep foundations (piers/piles) that gain support at significant depths below the zone of shrink/swell behavior. In addition, Project design would implement alternative options for slabs-on-grade and pavements, including removal and replacement of expansive subgrade materials with engineered non-expansive fill and engineered treatment of expansive subgrade materials using lime or cement. The removal and replacement of expansive soils with engineered non-expansive fill and the lime/cement treatment would reduce potentially damaging effects of expansive soils. With implementation of the recommendations of the Geotechnical Report for Phase 1 of the Project, implementation of the proposed phased improvements under Phase 1 would result in less than significant impacts related to expansive soils. Further, all proposed phased improvements would comply with the CBC and other applicable federal and state codes to minimize impacts related to expansive soils. In addition, geotechnical investigations may be prepared for the proposed improvements under Phase 2 and Phase 3 of the Project, as applicable. Therefore, impacts related to expansive soils would be less than significant for all proposed phased improvements.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would be less than significant.

GEO-5 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. As discussed in Section 4.6.2, Environmental Setting, the paleontological records search conducted by the University of California Museum of Paleontology yielded no records of fossil localities within the Project site. Additionally, no localities have been identified in the vicinity of the Project from similar geologic units to those underlying the Project site (Quaternary alluvium and Franciscan Complex rocks). It is common for Quaternary alluvium to have fossils. However, it is less likely to find fossils in the Franciscan complex, due to varying degrees of metamorphism, though they do exist (such as invertebrate microfossils, like

radiolarians). However, the Project would be implemented in developed areas of the existing high school campus, and no paleontological resources have been encountered during previous ground-disturbing activities. Per standard assessment procedures for paleontological resources set forth by the Society of Vertebrate Paleontology, due to the fossil sensitivity of the rock formations present within the Project site, lack of records of fossils in the Project area, and no encounters during recent construction activities at the campus, the likelihood of the Project to potentially disturb paleontological resources within undisturbed sedimentary deposits and bedrock remains low and would not require impact mitigation measures to protect fossils.[7]

Although not expected to occur, in the event that previously uncovered paleontological resources are encountered during Project construction, the construction manager would halt construction activities in the immediate area, in accordance with CEQA Guidelines Section 15064.5(f). The District would retain a qualified paleontologist to make an immediate evaluation of the significance and appropriate treatment of the resource. Construction activities may continue on other parts of the construction site while evaluation and treatment of paleontological resources take place, if necessary. Therefore, Project impacts to paleontological resources would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would be less than significant.

4.6.5 Cumulative Impacts

Due to the site-specific nature of geological conditions (e.g., soils, geological features, subsurface features, seismic features), geological impacts are typically assessed on a project-by-project basis, rather than on a cumulative basis. As a result, whether a project would indirectly or directly cause substantial adverse effects, including risk of loss involving the rupture from a known earthquake fault, seismic ground shaking, liquefaction, or landslides, depends on the geotechnical conditions of the individual development site.

The proposed Project would be implemented in three general phases that would occur from the summer of 2024 to the end of the third quarter of 2029. The implementation of each phase would be consecutive in order. Some phases may overlap; however, the proposed improvements would be in separate areas of the 30-acre campus. Construction and operational activities for each phase would occur within the existing footprints of the facilities to be improved and comply with state law to address geologic hazards. Therefore, the implementation of the three phases as part of the Project would not result in cumulatively considerable impacts to geology and soils.

The Project in combination with the other District-approved campus improvements (see Section 2.3.1) would also not result in cumulatively considerable geologic hazards, as each related District project would comply with the CBC and be plan-checked by the DSA, if appropriate. Their installation would also comply with the Construction General Permit and include BMPs to limit stormwater runoff and the loss of topsoil. Therefore, the combined effects related to geology and soils of the Project and the previously approved solar arrays would not be cumulatively considerable. Further, grading activities on any one project site would not directly interact or

[7] Society of Vertebrate Paleontology, *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources,* 2010, https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf.

combine with similar effects involving a project located miles away from the Project site. The closest related non-school project to the Project site is located approximately 0.2 miles northwest of the campus. Due to its proximity, the nearest related project may be located on a site with similar geological conditions. However, proposed development at each of the related project sites would be required to be individually assessed for geologic conditions; further, site-specific recommendations would be identified for each individual project, as appropriate. Additionally, related projects would be required to comply with CBC regulations and may be required to comply with the San Rafael Municipal Code, which mandate that structures be designed/constructed to meet seismic safety standards and to address any unsuitable soil conditions. Given these circumstances, the combined effects of the Project and related projects would not result in cumulatively considerable impacts related to geology and soils. Therefore, cumulative impacts related to geology and soils would be less than significant.

With regard to potential cumulative impacts related to paleontological resources, the greater area of the City of San Rafael is not known to contain fossils, unique paleontological resources, or unique geologic features.[8] Regardless, potential impacts to paleontological resources would be assessed as part of the environmental review process for each related project. Therefore, the Project and related projects would not result in cumulatively considerable impacts to paleontological resources. The Project's contribution to impacts to paleontological resources would not be cumulatively considerable, and cumulative impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would not be cumulatively considerable.

[8] City of San Rafael, General Plan 2040/EIR – Geology and Soils.

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4.7 GREENHOUSE GAS EMISSIONS

This section presents an analysis of the greenhouse gas (GHG) emissions impacts associated with implementation of the Project. This section estimates GHG emissions resulting from short-term construction and long-term operational activities of the Project; assesses the Project's consistency with applicable regulations to reduce GHG emissions; and describes potential direct and indirect impacts from implementation of the Project. This section is based on the Air Quality and Greenhouse Gas Emissions Assessment, dated February 2024, prepared by ECORP Consulting Inc. (Appendix B).

4.7.1 Regulatory Setting

State

Executive Order S-3-05

Executive Order S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, Executive Order S-3-05 established total GHG emission targets for the state. Specifically, statewide emissions of GHGs would be progressively reduced: the state would reduce GHG emissions to 2000 levels by 2010; reduce GHG emissions to 1990 levels by 2020; and ultimately reduce GHG emissions to 80 percent below 1990 levels by 2050.

Assembly Bill 32

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code Section 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 required the California Air Resources Board (CARB) to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlined measures to meet the 2020 GHG reduction goals. California exceeded the target of reducing GHG emissions to 1990 levels by the year 2017.

2022 Scoping Plan

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2022 Scoping Plan Update, outlines strategies and actions to reduce GHG emissions in California. The plan focuses on achieving the state's goal of reaching carbon neutrality by 2045 and reducing GHG emissions to 40 percent below 1990 levels by 2030. The plan includes a range of strategies across various sectors, including transportation, industry, energy, and agriculture. Some of the key strategies include transitioning to zero-emission vehicles, expanding renewable energy sources, promoting sustainable land use practices, implementing a low-carbon fuel standard, and reducing building emissions. Additionally, the plan addresses equity and environmental justice by prioritizing investments in communities most impacted by pollution and climate change. The plan also aims to promote economic growth and job creation through the transition to a low-carbon economy.

Senate Bill 32 and Assembly Bill 197

In August 2016, Governor Brown signed Senate Bill (SB) 32 and AB 197, which are companion bills. SB 32 and AB 197 serve to extend California's GHG reduction programs beyond 2020. SB

32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight for implementation of the state's climate policies. AB 197 also requires CARB to make available and update (at least annually) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities, and to identify specific information for GHG emission-reduction measures when updating the Scoping Plan.

Renewables Portfolio Standard Program

The California Renewables Portfolio Standard (RPS) program was established in 2002 under SB 1078 (California Public Utilities Code Section 399.11 et seq.) and required that by 2017, a retail seller of electricity purchase 20 percent of electricity generated by eligible renewable energy resources (e.g., solar thermal, photovoltaic, wind, biomass, geothermal, hydroelectric, municipal solid waste conversion, ocean/tidal). The RPS program is jointly implemented by the California Public Utilities Commission and the California Energy Commission.[1]

Senate Bill X1-2

Senate Bill X1-2 (2011) established the California Renewable Energy Resources Act and modified provisions in Public Resources Code Sections 25740 through 25751 and Public Utilities Code Sections 399.11 through 399.20 to advance the state's RPS goal to at least 33 percent of total retail sales of electricity in California by December 31, 2020, and to expand the same RPS goals to the publicly owned electric utilities as to the retail sellers. SB X1-2 made other changes to the RPS, including replacing the annual procurement targets with compliance periods, replacing the market price referent with new cost containment provisions, and creating renewable energy product categories with specific procurement requirements for each compliance period.[2]

Senate Bill 350

SB 350 (2015) further expanded the RPS program by establishing a goal of 50 percent renewable electricity sold to retail customers in California by 2030. In addition, SB 350 required California to double the energy efficiency savings in electricity and natural gas end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency measures by 2030.[3]

Senate Bill 100

SB 100 (2018) increased the standards set forth in SB 350 and required 44 percent RPS by 2024, 52 percent RPS by 2027, and 60 percent RPS by 2030. Furthermore, California's electricity is required to be 100 percent carbon-free by 2045. This bill requires that the achievement of 100

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1 California Public Utilities Commission, Renewables Portfolio Standard (RPS) Program, accessed November 9, 2023, https://www.cpuc.ca.gov/rps/.

2 California Energy Commission, Renewables Portfolio Standard Eligibility, 2012, https://www.energy.ca.gov/sites/default/files/2021-07/CEC-300-2012-002-CMF.pdf.

3 California Energy Commission, Clean Energy and Pollution Reduction Act - SB 350, accessed November 9, 2023.https://www.energy.ca.gov/rules-and-regulations/energy-suppliers-reporting/clean-energy-and-pollution-reduction-act-sb-350.

percent zero-carbon energy resources does not increase carbon emissions elsewhere or be offset through resource shuffling.[4]

Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building Energy Efficiency Standards, also known as the Energy Code, were first adopted in 1976 and have been updated periodically since. These standards have placed California on the forefront of energy efficiency, sustainability, energy independence, and climate change issues. The 2022 Energy Code includes provisions related to energy efficiency to reduce energy consumption and GHG emissions from buildings, such as:

1. Energy Performance Requirements: The codes specify minimum energy performance standards for the building envelope, lighting, heating and cooling systems, and other components.

2. Lighting Efficiency: The codes require that lighting systems meet minimum efficiency standards, such as the use of energy-efficient light bulbs and fixtures.

3. Heating, Ventilation, and Air Conditioning (HVAC) Systems: The codes establish requirements for HVAC systems, including the use of high-efficiency equipment, duct sealing, and controls.

4. Building Envelope: The codes include provisions for insulation, air sealing, glazing, and other building envelope components to reduce energy loss and improve indoor comfort.

5. Renewable Energy: The codes encourage the use of renewable energy systems, such as photovoltaic panels and wind turbines, to reduce dependence on nonrenewable energy sources.

6. Commissioning: The codes require the commissioning of building energy systems to ensure that they are installed and operate correctly and efficiently.

Overall, the energy efficiency provisions of the 2022 Energy Code aim to reduce the energy consumption of buildings, lower energy costs for building owners and occupants, and reduce the environmental impact of the built environment. The 2022 Building Energy Efficiency Standards improve upon the 2019 version for new construction of, and additions and alterations to, residential and nonresidential buildings. In general, the 2022 Energy Code has been updated to include increased requirements for energy efficiency, such as higher insulation and air sealing standards, which are intended to result in more efficient buildings. The 2022 Building Energy Efficiency Standards are a major step toward achieving zero net energy.[5] Buildings permitted on or after January 1, 2023, must comply with the 2022 Standards.

[4] California Energy Commission, SB 100 Joint Agency Report, accessed November 9, 2023, https://www.energy.ca.gov/sb100.

[5] Zero net energy may refer to an energy-efficient building, campus, portfolio, or community where, on a source energy basis, the actual annual consumed energy is less than or equal to the on-site renewable generated energy.

California Green Building Standards Code

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as CALGreen, establishes voluntary and mandatory standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The CALGreen standards are periodically updated with increasing energy savings and efficiencies associated with each code update. CALGreen contains voluntary "Tier 1" and "Tier 2" standards that are not mandatory statewide but may be required at the local level. These are 'reach' standards that can be adopted by local jurisdictions and may be incorporated as mandatory standards.

California Air Pollution Control Officers Association

The California Air Pollution Control Officers Association (CAPCOA) is an association of air pollution control officers representing all 35 local air quality agencies across California, including the Bay Area Air Quality Management District (BAAQMD). Established in 1976, CAPCOA's primary objectives include advancing clean air initiatives and providing a platform for the exchange of knowledge, experience, and information among air quality regulatory bodies statewide. The association is dedicated to fostering unity and efficiency, aiming to promote consistency in methods and practices pertaining to air pollution control. CAPCOA convenes regularly with federal and state air quality officials to formulate statewide regulations and ensure uniform adherence to established rules.

CAPCOA has instituted a GHG emissions significance threshold of 900 metric tons of carbon dioxide equivalents (CO_2e) annually for the evaluation of proposed land use development projects. This threshold indicates a 90 percent capture rate, i.e., encompasses projects that represent approximately 90 percent of GHG emissions from new sources. The 900 metric tons of CO_2e per year threshold is typically utilized to classify small projects in California as inconsequential, as it accounts for less than 1 percent of the future 2050 statewide GHG emissions target. CAPCOA considers the 900 metric ton threshold sufficiently low to capture a significant portion of future residential and nonresidential development necessary for accommodating statewide population and economic growth. Simultaneously, the 900 metric ton threshold establishes the emission threshold at a level that excludes small projects contributing a relatively minor fraction of cumulative statewide GHG emissions.

Regional

Bay Area Air Quality Management District

To assist local lead agencies on determining significance for GHG emissions in CEQA documents, the BAAQMD CEQA Guidelines include guidance on assessing GHGs and climate change impacts as required under CEQA Section 15183.5(b). On April 20, 2022, the BAAQMD 2022 CEQA Guidelines were adopted. These guidelines present a project-level operational threshold of significance for GHG emissions based on compliance with a Qualified GHG Reduction Strategy or adherence to a suite of BAAQMD performance standards for land use projects directly related to building design, transportation, and consistency with the CEQA Guidelines Section 15183.5(b).

This approach for analyzing potential impacts associated with GHG emissions is endorsed by the California Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal. 4th 204, which evaluates a project based on its effect on California's efforts to meet the state's long-term climate goals. As upheld in this case, the Supreme Court determined that a

project that would be consistent with meeting the state's long-term climate goals can be found to have a less-than-significant impact on climate change under CEQA. If a project would contribute its "fair share" of what will be required to achieve the state's goals, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change.

Applying this approach, the BAAQMD analyzed what will be required of new land use development projects to achieve California's long-term climate goal of carbon neutrality by 2045. The BAAQMD found that a new land use development project being built today needs to incorporate the following design elements to contribute its fair share of implementing the state's goal of carbon neutrality by 2045:

1) Buildings

    a) The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).

    b) The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

2) Transportation

    a) The project will achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted SB 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's *Technical Advisory on Evaluating Transportation Impacts in CEQA*:

        i) Residential projects: 15 percent below the existing VMT per capita;

        ii) Office projects: 15 percent below the existing VMT per employee; and

        iii) Retail projects: no net increase in existing VMT.

    b) The project will achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

<u>Recommended Best Management Practices</u>

Because construction-related GHG emissions are temporary and variable, the BAAQMD has not developed a quantitative threshold of significance for construction-related GHG emissions. In order to minimize GHG emissions and emissions of other air quality pollutants, projects should incorporate the best management practices (BMP) for reducing GHG emissions. The BAAQMD BMPs are as follows:

- Use zero-emission and hybrid-powered equipment to the greatest extent possible, particularly if emissions are occurring near sensitive receptors or located within a BAAQMD-designated Community Air Risk Evaluation area or Assembly Bill 617 community.

- Require all diesel-fueled off-road construction equipment be equipped with the U.S. Environmental Protection Agency Tier 4 Final compliant engines or better as a condition of contract.

- Require all on-road heavy-duty trucks to be zero emissions or meet the most stringent emissions standard, such as model year 2024 or 2026, as a condition of contract.

- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than two minutes (a five-minute limit is required by the state Airborne Toxics Control Measure).6 Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure.

- Prohibit off-road diesel-powered equipment from being in the “on” position for more than 10 hours per day.

- Use CARB–approved renewable diesel fuel in off-road construction equipment and on-road trucks.

- Use the U.S. Environmental Protection Agency SmartWay certified trucks for deliveries and equipment transport.

- Require all construction equipment to be maintained and properly tuned in accordance with manufacturer’s specifications. Equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- Where grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.

- Where grid power is not available, use alternative fuels, such as propane or solar electrical power, for generators at construction sites.

- Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking to construction workers and offer meal options on-site or shuttles to nearby meal destinations for construction employees.

- Reduce electricity use in the construction office by using LED bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.

- Minimize energy used during site preparation by deconstructing existing structures to the greatest extent feasible.

- Recycle or salvage nonhazardous construction and demolition debris, with a goal of recycling at least 15 percent more by weight than the diversion requirement in CALGreen.

- Use locally sourced or recycled materials for construction materials (goal of at least 20 percent based on costs for building materials and based on volume for roadway, parking

6 Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations.

lot, sidewalk, and curb materials). Wood products used should be certified through a sustainable forestry program.

- Use low-carbon concrete, minimize the amount of concrete used and produce concrete on-site if it is more efficient and lower emitting than transporting ready-mix.

- Develop a plan to efficiently use water for adequate dust control since substantial amounts of energy can be consumed during the pumping of water.

- Include all requirements in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant on- or off-road construction equipment for use prior to any ground-disturbing and construction activities.

4.7.2 Environmental Setting

Greenhouse Effect and Global Climate Change

The natural process through which heat is retained in the troposphere is called the "greenhouse effect."[7] The greenhouse effect is responsible for maintaining a habitable climate on the earth. Without the greenhouse effect, the earth would not be able to support life as we know it. The greenhouse effect begins when solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere (i.e., the greenhouse effect).

Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. Climate change is a global problem, as GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough periods to be dispersed around the globe.

The prominent GHGs contributing to the greenhouse effect include the following:

Carbon Dioxide (CO_2). Carbon dioxide is a colorless, odorless gas that is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. Specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead

[7] The troposphere is the bottom layer of the atmosphere, which varies in height from the earth's surface to 10 to 12 kilometers.

to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere.

Methane. Methane is a colorless, odorless gas and is the major component of natural gas, making up about 87 percent of natural gas by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of methane is about 12 years.

Nitrous Oxide (N_2O). Nitrous oxide is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.

Fluorinated gases make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, these gases are not associated with typical land use development.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Methane traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in CO_2e, which weigh each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Despite the sequestration of CO_2, human-caused climate change is already causing damaging effects, including weather and climate extremes in every region across the globe.

Sources of Greenhouse Gas Emissions

In 2022, CARB released the 2022 edition of the California GHG inventory covering emissions during 2020. In 2020, California emitted 369.2 million gross metric tons of CO_2e from sources including imported electricity. The combustion of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2020, accounting for approximately 38 percent of total GHG emissions in the state. Continuing the downward trend from previous years, transportation emissions decreased 27 million metric tons of CO_2e in 2020, though the intensity of this decrease was most likely due to shelter-in-place orders enacted in response to the COVID-19 pandemic. California's industrial sector accounts for the second largest source of the state's GHG emissions, accounting for 23 percent of the state's emissions in 2020. Emissions from the electricity sector account for 16 percent of the inventory and have remained at a similar level to 2019, despite a 44 percent decrease in in-state hydropower generation, due to the below average

precipitation levels. This decrease in in-state hydropower generation was offset by a 10 percent growth in in-state solar generation and cleaner imported electricity, incentivized by California's clean energy policies.

4.7.3 Methodology

Project emissions were calculated using CalEEMod, Version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operation from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using a combination of CalEEMod model defaults for Marin County and Project construction equipment, average hours of equipment use daily, and duration of construction activities. Operational air pollutant emissions were calculated based on the site dimensions and building square footage identified in Project site plans and the average VMT (Appendix J).

The methodology considers that the proposed modernization of buildings would not result in the consumption of energy or the generation of solid waste beyond existing conditions. The Project would replace the existing boilers at the practice gym with high-efficiency electric heat pumps and the existing boilers at the aquatics center with high-efficiency boilers and tankless water heater, reducing the consumption of natural gas by 5.1 percent compared to existing conditions. Solid waste associated with the new aquatics center is accounted for in the emissions calculations due to the proposed increase in size compared to existing conditions. The estimation of emissions conservatively does not account for solid waste generated at the existing aquatics center under current conditions.

Thresholds of Significance

The significance thresholds used to evaluate the impacts of the proposed Project related to greenhouse gases are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, a project would have a significant impact related to greenhouse gas emissions if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Background Information

The GHG emissions significance thresholds based on the CEQA Guidelines do not prescribe specific methodologies for performing a GHG emissions assessment, establish specific thresholds of significance, or mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards."[8] A lead agency may use a model or methodology to estimate GHG emissions and has the discretion to select the model or

[8] California Code of Regulations, Title 14, Section 15064.4(b).

methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change."[9] CEQA Guidelines Section 15064.4(b) provides that the lead agency should consider the following factors when determining the significance of impacts from GHG emissions on the environment:

1. The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting.

2. Whether the project's emissions exceed a threshold of significance that the lead agency determines applies to the project.

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[10]

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

Cumulative Analysis

Section 15130(f) of the CEQA Guidelines clarifies that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis. The CEQA Guidelines were amended in response to SB 97 to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant. Per CEQA Guidelines, Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program (e.g., water quality control plan, air quality attainment or maintenance plan, or integrated waste management plan) that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or specify the law enforced or administered by the public agency. CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

Standards for Significance Evaluation. The BAAQMD is the regional air pollution control officer for the San Francisco Bay Area Air Basin, which includes the Project site. As discussed in Section 4.7.1, Regulatory Setting, the BAAQMD 2022 CEQA Guidelines present a project-level operational threshold of significance for GHG emissions based on adherence to a suite of BAAQMD performance standards for land use projects directly related to building design, transportation, and consistency with the CEQA Guidelines Section 15183.5(b) or compliance with a Qualified GHG Reduction Strategy.

The BAAQMD has developed performance standards for land use projects based on typical residential and commercial land use projects and long-term community-wide planning documents,

[9] California Code of Regulations, Title 14, Section 15064.4(c).

[10] California Code of Regulations, Title 14, Section 15064.4(b).

such as general plans and similar long-range development plans. According to the BAAQMD, these performance standards may not be appropriate for other types of projects that do not fit into the mold of a typical residential or commercial project or general plan update, and lead agencies should keep this in consideration when evaluating other project types. Additionally, the BAAQMD performance standards are intended for new land use development projects to achieve California's long-term climate goal of carbon neutrality by 2045. The Project is not a typical residential or commercial project and does not involve a new land use. Therefore, these performance standards are not applicable for this analysis.

As discussed in Section 4.7.1, Regulatory Setting, CAPCOA has instituted a GHG significance threshold of 900 metric tons of CO_2e annually for the evaluation of proposed land use development projects. This threshold is typically used to classify small projects in California as inconsequential, as it accounts for less than 1 percent of the future 2050 statewide GHG emissions target. As the BAAMQD performance standards do not apply to the Project, the following analysis uses the CAPCOA significance threshold of 900 metric tons of CO_2e annually to determine Project impacts.

4.7.4 Impact Analysis

GHG-1 Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact.

Construction

Construction of the proposed phased improvements would occur over a five-year period, beginning in 2024 and ending in 2029. Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, and excavators). Table 4.7-1 presents GHG emissions that would result from construction of the Project over the five-year period. For purposes of the construction analysis, the proposed improvements are phased during the following calendar years of construction:

- Phase 1: June 2024–November 2025
- Phase 2: June 2024–December 2028
- Phase 3: June 2027–August 2029

Table 4.7-1: Construction-Related Greenhouse Gas Emissions

Description	CO_2e Emissions (Metric Tons/Year)
Calendar Year 2024 Construction: Phase 1 Demolition, Site Preparation, Building Construction & Phase 2 Demolition & Building Construction	815
Calendar Year 2025 Construction: Phase 1 Site Preparation, Building Construction, Paving & Painting	771
Calendar Year 2026 Construction: Phase 2 Demolition and Building Construction	684
Calendar Year 2027 Construction: Phase 2 Demolition, Building Construction & Phase 3 Demolition, Site Preparation, Grading, Building Construction, and Paving	897
Calendar Year 2028 Construction: Phase 2 Demolition, Building Construction & Phase 3 Demolition, Site Preparation, Grading, Building Construction, Paving	835
Calendar Year 2029 Construction: Phase 3 Demolition, Site Preparation, Grading, Building Construction	744
CAPCOA Significance Threshold	*900*
Exceed CAPCOA Significance Threshold During Any Construction Year?	***No***

Source: Refer to Appendix B for detailed calculations.

Note: Emission calculations account for the demolition and hauling of 1,124 tons of material during Phase 1, 248 tons of material during Phase 2, and 25 tons of material during Phase 3. Additionally, emission calculations account for 7,407 cubic yards of soil material export as well as 7,407 cubic yards of soil import during Phase 3. Water polo and swim/dive programs would be temporarily displaced during construction. Therefore, emissions calculations for each phase account for the additional automobile trips.

As shown in Table 4.7-1, construction of the proposed phased improvements would generate a maximum of 897 metric tons of CO_2e during any single year of construction. This would be below the CAPCOA significance threshold of 900 metric tons of CO_2e per year. Moreover, construction emissions would be temporary; once construction is complete, the generation of GHG emissions would cease. In addition, GHG emissions generated by the construction sector have been declining in recent years, due to factors such as improved construction equipment engine efficiency. As construction equipment technology improves, construction equipment emission factors would be lower in the future, resulting in reduced emissions for projects. Furthermore, the Project would be required to divert (recycle) 65 percent of construction waste materials generated during the construction phases. This requirement would further reduce GHG emissions by reducing decomposition at landfills and demand for natural resources. Therefore, construction-generated GHG emissions would be less than significant.

Operation

The Project would generate similar types of GHG emissions compared to existing conditions through sources such as vehicle trips (mobile source), landscape maintenance equipment operation (area source), electricity and natural gas use (energy source), waste generation, and water usage. The District is required to comply with the California Building Standards Code, which

includes Building Energy Efficiency Standards (Title 24, Part 6) and Green Building Standards (Title 24, Part 11), which require the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and adequate interior air quality. The Project includes replacing two inefficient boilers in the practice gym (Building K) and existing pool with high-efficiency electric heat pumps at the practice gym and two high-efficiency boilers and a tankless water heater for the new aquatic facility. This would result in a 5.1 percent reduction in the consumption of natural gas compared to existing conditions. Thus, these improvements would reduce the GHG emissions at the campus as compared to existing conditions.

Table 4.7-2 presents the long-term operational GHG emissions resulting from implementation of the Project.

Table 4.7-2: Operations-Related Greenhouse Gas Emissions

Description	CO_2e Emissions (Metric Tons/Year)
Area Source Emissions	3
Energy Emissions	-2
Mobile Source Emissions	108
Waste Emissions	18
Water Emissions	20
Total Operational Emissions	***147***
CAPCOA Significance Threshold	*900*
Exceed CAPCOA Significance Threshold?	***No***

Source: Refer to Appendix B for CalEEMod calculations.

The emission projections shown in Table 4.2-5 were predominantly based on the CalEEMod model defaults for Marin County, site acreage and building dimensions, and 92 additional average daily vehicle trips under operational conditions. Refer to Section 4.11, Transportation, for analysis of the average daily vehicle trips. As discussed therein, the transportation analysis assumed the proposed artificial turf fields would be available for use like a community park, when not used by the school. Under this worst-case assumption, using the Institute of Transportation Engineers' *Trip Generation Manual* for Public Park use, the potential expanded use of the artificial fields would generate 92 additional daily vehicle trips with 0 AM peak hour trips and 23 new PM peak hour trips. As shown in Table 4.7-2, operation of the proposed phased improvements would generate a maximum of 147 metric tons of CO_2e per year, which would be below the CAPCOA significance threshold of 900 metric tons of CO_2e annually. Further, the projected emissions do not account for the reduction in CO_2e from the proposed high-efficiency electric heat pumps, high-efficiency boilers, and tankless water heater. As such, impacts related to the Project's generation of GHG emissions would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would be less than significant.

GHG-2 Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. As discussed in Impact GHG-1, Project-generated GHG emissions would not surpass the CAPCOA GHG significance threshold, which was developed in consideration of statewide GHG reduction goals. Additionally, the proposed phased improvements would be designed in a manner that is consistent with relevant energy conservation plans that encourage the efficient use of energy resources in development. During Phase 2 of the Project, there would be renovations to the interior of the main school buildings, including classrooms, labs, restrooms, and corridors. These improvements would ensure that the buildings are more energy efficient and effective at reducing the need for heating and air conditioning compared to existing conditions. Further, the new facilities would have LED lighting, which have greater energy efficiency and lifespan than traditional fluorescent light bulbs. Additionally, the Project site would utilize solar energy by installing solar arrays as part of a separate, previously approved project (2022), projected to begin in the summer of 2024. Specifically, the District would install five new solar arrays throughout the campus (i.e., on the roof of the gymnasium, as a canopy above the parking lot, as shade structures adjacent to the tennis courts, and mounted to the ground adjacent to the baseball fields). The solar array project is separate but concurrent with the beginning phase of this Project, and would enable the campus to generate its own energy in a sustainable manner.

The proposed phased improvements would be built to California's Energy Efficiency Standards, improving the energy efficiency of newly constructed buildings and additions/alterations to existing buildings, encouraging better energy efficiency, strengthening ventilation standards, and more. The 2022 Energy Efficiency Standards are a major step toward meeting zero net energy. Thus, the modernization of school buildings as part of the Project would result in greater energy efficiency compared to existing conditions. Specifically, the proposed phased improvements would replace the existing boilers at the practice gym with high-efficiency electric heat pumps and the existing boilers at the aquatics center with high-efficiency boilers, resulting in a 5.1 percent reduction in the consumption of natural gas compared with existing conditions. For these reasons, the Project would not conflict with any applicable plan, policy, or regulation related to the reduction in GHG emissions, and impacts would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would be less than significant.

4.7.5 Cumulative Impacts

Project-related GHG emissions are not confined to the air basin within which a project site is located; instead, GHG emissions are dispersed worldwide. GHG impacts are recognized as exclusively cumulative impacts, and there are no non-cumulative GHG emission impacts from a climate change perspective. No single project is large enough to result in a measurable increase in global concentrations of GHG emissions. Therefore, impacts identified under Impact GHG-1 are not project-specific impacts to global climate change, but rather, the proposed Project's

contribution to this cumulative impact. As such, significant direct impacts associated with the Project also serve as the Project's cumulative impact.

As discussed in Section 4.7.3, Methodology, per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program (i.e., the CAPCOA significance threshold) that has specific requirements to avoid or substantially lessen the cumulative problem within the geographic area of the project. Similar to the Project, the other District-approved projects discussed in Section 2.3.1 and each of the related City-sponsored projects in Table 2-5 would be required to evaluate their consistency with the applicable plan or mitigation program.

As analyzed under Impacts GHG-1 and GHG-2, the Project's generation of GHG emissions would not result in conflicts with applicable plans adopted for the purpose of reducing the emissions of GHGs. Thus, implementation of the Project would not result in a cumulatively considerable contribution to a significant cumulative GHG emissions impact, and the cumulative impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would not be cumulatively considerable.

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4.8 HYDROLOGY AND WATER QUALITY

This section analyzes potential Project impacts to water quality and drainage patterns. This section presents the regulatory setting, environmental setting, methodology for determining potential impacts, impact analysis, proposed measures to mitigate significant impacts, and an analysis of potential cumulative impacts pertaining to hydrology and water quality.

4.8.1 Regulatory Setting

Federal

Clean Water Act

The principal law governing pollution of the nation's surface waters is the federal Water Pollution Control Act (Clean Water Act [CWA]). Originally enacted in 1948, it was amended in 1972 and has remained substantially the same since. The CWA consists of two major parts: provisions that authorize federal financial assistance for municipal sewage treatment plant construction and regulatory requirements that apply to industrial and municipal dischargers. The CWA authorizes the establishment of effluent standards on an industry-by-industry basis. The CWA also requires states to adopt water quality standards that "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses."

The CWA forms the basic national framework for the management of water quality and the control of pollution discharges; it provides the legal framework for several water quality regulations, including the National Pollutant Discharge Elimination System (NPDES), effluent limitations, water quality standards, pretreatment standards, antidegradation policy, nonpoint source discharge programs, and wetlands protection.

Under federal law, the US Environmental Protection Agency (USEPA) has published water quality regulations under Volume 40 of the Code of Federal Regulations. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question and (2) criteria that protect the designated uses. Section 304(a) requires the USEPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use.

The CWA places the primary responsibility for the control of surface water pollution and for planning the development and use of water resources with the states, although it establishes certain guidelines for the states to follow in developing their programs and allows the USEPA to withdraw control from states with adequate implementation mechanisms. In California, the USEPA has delegated the responsibility for administration of portions of the CWA to the State Water Resources Control Board (SWRCB), which has further delegated responsibility to its nine Regional Water Quality Control Boards (RWQCB) to identify beneficial uses and adopt applicable water quality objectives.

When water quality does not meet CWA standards and compromises designated beneficial uses of a receiving water body, Section 303(d) of the CWA requires that the water body be identified and listed as "impaired." Once a water body has been designated as impaired, a total maximum daily load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, nonpoint, and natural sources that a water body may receive without exceeding applicable water quality standards, with a factor of safety included. Once

established, the TMDL allocates the loads among current and future pollutant sources to the water body.

National Pollutant Discharge Elimination System

The CWA prohibits discharging pollutants through a point source into waters of the United States unless there is an NPDES permit. The permit contains limits on what can be discharged, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people's health. Overall, the permit translates general requirements of the CWA into provisions tailored to the operations of each facility's discharging pollutants. The USEPA recommends a balanced consideration of the following designation criteria on a watershed or other local basis: discharge to sensitive waters, high growth or growth potential, high population density, contiguity to an urbanized area, significant contributor of pollutants to waters of the United States, and ineffective protection of water quality by other programs.

The NPDES permit program regulates discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems (MS4). A MS4 is a conveyance or system of conveyances that is: 1) owned by a state, city, town, village, or other public entity that discharges to waters of the United States; 2) designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.); 3) not a combined sewer; and 4) not part of a Publicly Owned Treatment Works or sewage treatment plant.

In 1990, the USEPA established Phase I of the NPDES stormwater program. The Phase I program for MS4s requires operators of "medium" and "large" MS4s (i.e., operators that serve populations of 100,000 or greater) to implement a stormwater management program as a means to control polluted discharges from the MS4s. In 1999, the USEPA promulgated Phase II stormwater regulations, which requires state water boards to issue NPDES stormwater permits to operators of "small" MS4s, which includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, public (school) campuses, and highways and other thoroughfares. Small MS4s may include traditional and non-traditional small MS4s, which discharge the same types of pollutants that are typically associated with urban runoff. However, small MS4s are challenged with highly variable conditions both in terms of threats to water quality from their stormwater discharges and resources available to manage those discharges. Therefore, varying requirements are available for small MS4 permittees.

State

Porter-Cologne Water Quality Control Act

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act (Water Code Sections 13000, et seq.). The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its state water policy. The Porter-Cologne Act also provides that a RWQCB may

include in its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

State Water Resources Control Board

The SWRCB has broad authority over water quality control issues for California. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the state by the federal government under the CWA. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans.

The RWQCBs have adopted NPDES permits to regulate stormwater, including for large municipalities, industries, and construction projects, under the Phase 1 MS4 regulations. Phase I MS4 permits require the discharger to develop and implement a stormwater management plan/program with the goal of reducing the discharge of pollutants to the maximum extent practicable.

In 2013, the SWRCB issued a general permit for the discharge of stormwater from small MS4s (Order 2003-0005-DWQ) to provide permit coverage for smaller municipalities (with a population less than 100,000) and non-traditional entities, including military bases, universities, prisons, hospital and medical complexes, fairgrounds, and state parks. In 2020, the SWRCB proposed to expand the Phase II Small MS4 to include K-12 school districts and community colleges. To date, the SWRCB has not adopted the amendment for the inclusion of school districts.

State Water Resources Control Board Construction General Permit

Construction activities that disturb one or more acres of land that could impact hydrologic resources must comply with the requirements of the Construction General Permit For Stormwater Discharges Associated With Construction and Land Disturbance Activities (General Permit), adopted by the SWRCB on September 8, 2022 (NPDES No. CAS000002, Order 2022-0057-DWQ). Under the terms of the permit, applicants must file Permit Registration Documents (PRD) with the SWRCB prior to the start of construction. The PRDs include a Notice of Intent, risk assessment, site map, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System website.

Applicants must also demonstrate conformance with applicable best management practices (BMPs) and prepare a SWPPP containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for nonvisible pollutants if there is a failure of the BMPs, and a sediment-monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Some sites (Risk Level 2 and 3) also require implementation of a Rain Event Action Plan 48 hours prior to a 50 percent or greater chance of a precipitation event.

Water Conservation in Landscaping Act of 2006

Model Water Efficient Landscape Ordinance (MWELO) requires cities and counties to adopt landscape water conservation ordinances. It is also referenced by Title 24, Part 11, Chapters 4 and 5 of the CALGreen Building Code. The MWELO, updated in July 2015 via Executive Order B-29-15, addresses and builds resiliency for future droughts. The 2015 revisions to the MWELO improve water conservation in the landscaping sector by promoting efficient landscapes in new developments and retrofitted landscapes. The revisions increase water efficiency by requiring more efficient irrigation systems, incentives for grey water usage, and improvements in on-site stormwater capture, and limiting the portion of landscapes that can be covered in high-water-use plants and turf. New development projects that include landscape areas of 500 square feet or more are subject to the MWELO. This applies to residential, commercial, industrial, and institutional projects.

Government Code Section 53097

California Government Code Section 53097 requires school districts to comply with city or county ordinances regulating drainage improvements and grading plans, as the ordinance provisions relate to the design and construction of on-site improvements that can affect off-site drainage and facilities. If a school district elects not to comply with the requirements of city or county ordinances relating to the design and construction of off-site improvements, the city or county shall not be liable for any injuries or for any damage to property caused by the failure of the school district to comply with the ordinances.

Regional

San Francisco Bay Regional Water Quality Control Board

The Project is within the jurisdiction of the San Francisco Bay RWQCB (Region 2), which regulates surface water and groundwater quality in the San Francisco Bay. The San Francisco Bay RWQCB's jurisdiction includes all San Francisco Bay segments extending to the mouth of the Sacramento-San Joaquin Delta. The RWQCB addresses regionwide water quality issues through the creation and triennial update of the San Francisco Bay Basin Water Quality Control Plan (Basin Plan). The Basin Plan was adopted in 1995 and most recently amended March 7, 2023. This Basin Plan designates beneficial uses of the state waters within Region 2, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan.[1] The *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*, as adopted by the SWRCB in 1995 and last amended in 2018, also provides water quality principles and guidelines to prevent water quality degradation and protect the beneficial uses of waters of enclosed bays and estuaries.[2]

Local

Pursuant to California Government Code Section 53097, a school district must comply with city and county ordinances regulating off-site drainage improvements and facilities. The City of San Rafael is a Responsible Agency for off-site drainage. Relevant policies and programs pertaining

[1] San Francisco Bay Regional Water Quality Control Board, *Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin*, 2023, https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html#basinplan.

[2] State Water Resources Control Board, *Water Quality Control Plan for Enclosed Bays and Estuaries of California*, 2018, *https://www.waterboards.ca.gov/water_issues/programs/bptcp/docs/sediment/sed_qual_provs.pdf*.

to hydrology and water quality set forth in the City of San Rafael General Plan 2040 that may affect the Project are as follows:

- **Policy C-1.9: Enhancement of Creeks and Drainageways.** Conserve or improve the habitat value and hydrologic function of creeks and drainageways so they may serve as wildlife corridors and green infrastructure to improve stormwater management, reduce flooding, and sequester carbon. Require creek enhancement and associated riparian habitat restoration/creation for projects adjacent to creeks to reduce erosion, maintain storm flows, improve water quality, and improve habitat value where feasible.

- **Policy C-3.1: Water Quality Standards.** Continue to comply with local, state and federal water quality standards.

- **Program C-3.1A: Interagency Coordination.** Coordinate with the local, state, and federal agencies responsible for permitting discharges to San Rafael's creeks and surface waters, monitoring water quality, and enforcing adopted water quality standards and laws.

- **Policy C-3.2: Reduce Pollution from Urban Runoff.** Require Best Management Practices (BMPs) to reduce pollutants discharged to storm drains and waterways. Typical BMPs include reducing impervious surface coverage, requiring site plans that minimize grading and disturbance of creeks and natural drainage patterns, and using vegetation and bioswales to absorb and filter runoff.

- **Program C-3.2B: Reducing Pollutants in Runoff.** Continue to reduce the discharge of harmful materials to the storm drainage system through inspections, enforcement programs, reduced use of toxic materials, and public education.

- **Program C-3.2C: Construction Impacts.** Continue to incorporate measures for stormwater runoff control, management, and inspections in construction projects and require contractors to comply with accepted pollution prevention planning practices. Provisions for post-construction stormwater management should also be included.

- **Policy C-3.5: Groundwater Protection.** Protect San Rafael's groundwater from the adverse effects of urban uses and impacts from sea level rise. Encourage opportunities for groundwater recharge to reduce subsidence and water loss, and support water-dependent ecosystems.

- **Policy S-3.8: Storm Drainage Improvements.** Require new development to mitigate potential increases in runoff through a combination of measures, including improvement of local storm drainage facilities. Other measures, such as the use of porous pavement, bioswales, and "green infrastructure" should be encouraged.

4.8.2 Environmental Setting

Topography

The Project site comprises 30 acres and is developed with a high school campus. It has varying topography, with the highest elevation at approximately 105 feet above mean sea level in the southwest perimeter of the campus, and the lowest elevation at approximately 75 feet above mean sea level in the northwesternmost corner. A slope with a grade differential of 5 to 20 feet separates the campus into northern and southern halves. The northern portion of the campus is relatively flat and developed with school buildings and the track and field. The elevation of the

northern half is approximately 80 feet above mean sea level. The elevation in the southern half varies between 90 and 105 feet above mean sea level; outdoor athletics facilities and recreational uses located in the southern half are developed on terraced pads.

Regional Hydrology

The Project site is located within the Gallinas Creek Watershed. The watershed encompasses 5.6 square miles that is split into two drainage areas: the North Fork and the South Fork. The North Fork is the larger of the two and flows from the ridgeline through Santa Margarita Valley and the Terra Linda neighborhood to the South Gallinas slough near McInnis Park. Because of tidal influences on the North Fork, the low-lying communities of Santa Venetia, Marin Lagoon, and Contempo Marin are protected by flood control levees. The South Fork originates in the San Rafael Hills and San Pedro Ridge and flows through San Rafael Meadows and Santa Venetia into the Gallinas Slough. Elevations of the Gallinas Creek Watershed range from 1,100 feet above mean sea level in the western portion to sea level in the eastern portion of the drainage area. The upper slopes of the watershed are County-owned open space, and the creek is tidally influenced and channelized east of US 101. A significant portion of the watershed consists of tidal marshes, and the marshes adjacent to San Pablo Bay contain man-made levees.[3]

Climate

The City experiences a semiarid, Mediterranean climate, which consists of hot, dry summers with low humidity and very mild winters. The City receives approximately 35.6 inches of rain annually, which is primarily recorded between November and March. The winter average low temperature is approximately 41 degrees Fahrenheit and the average summer high temperature is approximately 82 degrees Fahrenheit.[4]

Local Hydrology

Surface Water Resources

The Project site is located in the San Pablo Hydrologic Planning Area, as defined in the Basin Plan.[5] The nearest surface water body to the Project site is South Fork Gallinas Creek, located approximately 0.7 miles northeast of the Terra Linda High School campus.

Wet underground systems, including potable and recycled water, sewer, and stormwater, are located throughout the northern portion of the campus. The southern half of the campus is developed with a recycled water irrigation system; stormwater drains north of the baseball field; and an open concrete stormwater drains along the southern and western perimeters. The District maintains the underground systems within the campus.

Groundwater Resources

The Project site is not located within a groundwater basin.[6] Groundwater resources in the Project area are limited due to a lack of substantial underlying groundwater aquifers and poor

[3] City of San Rafael, *San Rafael General Plan 2040 & Downtown Precise Plan Draft EIR*, January 2021.

[4] City of San Rafael, *General Plan 2040*.

[5] San Francisco Bay Regional Water Quality Control Board, *Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin*, Figure 2-2, *Hydrologic Planning Areas*, 2023, https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/fig/fig_2-02.pdf.

[6] City of San Rafael, *General Plan 2040*.

groundwater quality. Additionally, the potential for municipal groundwater uses within the Project area is limited due to limited production capabilities, water quality constraints, and potential water rights issues.[7]

Water Quality

Stormwater runoff from the Project site indirectly discharges into the Miller Creek-Frontal San Pablo Bay Estuaries, which is listed as impaired due to sedimentation and/or siltation pursuant to CWA Section 303(d).[8]

4.8.3 Methodology

Thresholds of Significance

The significance thresholds used to evaluate the impacts of the proposed Project related to hydrology and water quality are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, a project would have a significant impact related to hydrology and water quality if it:

- Would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- Would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    - Result in substantial erosion or siltation on- or off-site;
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The Appendix G significance criteria noted below were scoped out of the analysis for further consideration in the Initial Study (Appendix A-1); see Chapter 5, Other CEQA Considerations, of this Draft EIR.

- Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

[7] City of San Rafael, *General Plan 2040*.

[8] Stormwater Specialists, Inc., *Storm Water Pollution Prevention Plan, Terra Linda High School Parking Quad, Ceramics & Courtyard*, June 1, 2023.

- Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

- Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

4.8.4 Impact Analysis

HWQ-1 Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. The proposed Project may contribute to water quality degradation due to stormwater runoff. As described in Section 4.8.2, Environmental Setting, Miller Creek-Frontal San Pablo Bay Estuaries, which receives runoff from the Terra Linda High School campus, has been classified as an impaired water body under the CWA.[9] Therefore, any potential discharges of pollutants via stormwater to this water body could affect water quality and violate water quality standards, as discussed in more detail below.

Construction

Construction sites are often a major source of stormwater pollution. Project-related construction activities could result in short-term impacts to water quality associated with the handling, storage, and disposal of construction materials; maintenance and operation of construction equipment; and earthmoving activities. These activities, if not controlled, could result in on- and off-site soil erosion due to stormwater runoff or operation of mechanical equipment. Poorly maintained construction vehicles and heavy equipment leaking fuel, oil, antifreeze, or other vehicle-related fluids on the site are also common sources of stormwater pollution and soil contamination. The following table summarizes typical stormwater pollutants and their sources at a construction site:

Table 4.8-1: Typical Construction-related Stormwater Pollutants

Pollutant	Source	Result
Sediments and Soil	Runoff from unprotected hillsides and stockpiled materials (gravel, sand, concrete), vehicles and feet tracking onto right-of-way	In rivers, sediments cover valuable habitat; toxins adhere to sediment and poison aquatic life
Nutrients	Decaying leaves and vegetation, fertilizers, food waste and detergents	Nutrients cause increased growth of algae which lowers oxygen for fish
Oil and Grease	Leaking automobiles and construction machinery	Harms wildlife and vegetation, leaves a toxic sheen
Metals	Batteries, brake pads, corrosion, paint and machinery	Toxic to aquatic wildlife
Garbage and Debris	Construction debris, leaking dumpsters, careless dumping, solvents, paints, food waste, etc.	May contain oxygen-depleting or toxic substances

[9] Stormwater Specialists, Inc., *Storm Water Pollution Prevention Plan*.

The Project would be required to comply with the CWA and the NPDES Construction General Permit. As the construction areas for Phases 1 and 3 are both larger than an acre in size, each phase would require its own SWPPP. Phase 2 improvements would occur within the existing building envelope, and a SWPPP would not be required; however, construction staging and laydown areas under Phase 2 would include erosion control measures, such as fencing of the staging and laydown areas with privacy screening, protection of existing storm drain inlets and catch basins, and the installation of fiber rolls along the interior perimeters of the fenced area to limit potential stormwater runoff.

In accordance with the General Permit, the SWPPP for Phases 1 and 3 must be prepared by a qualified SWRCB-approved SWPPP Practitioner and must identify sources of sediment and other pollutants that can affect the quality of stormwater discharge. The SWPPP will describe the implementation of BMPs to reduce or prevent sediment and other pollutants from entering into stormwater and non-stormwater discharges, before leaving the Project site and downstream into receiving waters. Table 4.8-2, Typical Construction Best Management Practices, lists BMPs that could be incorporated into any of the Project phases, including the SWPPP for Phases 1 and 3.

Table 4.8-2: Typical Construction Best Management Practices

Category	Purpose	BMP Examples
Erosion Controls and Wind Erosion Controls	• Use Project scheduling and planning to reduce soil or vegetation disturbance (particularly during the rainy season) • Prevent or reduce erosion potential by diverting or controlling drainage • Prepare and stabilize disturbed soil areas	Scheduling, preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextile and mats, wood mulching, earth dikes and drainage swales, velocity dissipation devices, slope drains, stream bank stabilization, compost blankets, soil preparation/ roughening, and non-vegetative stabilization
Sediment Controls	• Filter out soil particles that have been detached and transported in water	Silt fence, sediment basin, sediment trap, check dam, fiber rolls, gravel bag berm, street sweeping and vacuuming, sandbag barrier, straw bale barrier, storm drain inlet protection, manufactured linear sediment controls, compost socks and berms, and biofilter bags
Wind Erosion Controls	• Apply water or other dust palliatives to prevent or minimize dust nuisance	Dust control soil binders, chemical dust suppressants, covering stockpiles, permanent vegetation, mulching, watering, temporary gravel construction, synthetic covers, and minimization of disturbed area
Tracking Controls	• Minimize the tracking of soil off-site by vehicles	Stabilized construction roadways and construction entrances/exits, and entrance/outlet tire wash

Table 4.8-2, continued

Category	Purpose	BMP Examples
Non-Stormwater Management Controls	• Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment • Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges	Water conservation practices, temporary stream crossings, clear water diversions, illicit connection/discharge, potable and irrigation water management, and the proper management of the following operations: paving and grinding, dewatering, vehicle and equipment cleaning, fueling and maintenance, pile driving, concrete curing, concrete finishing, demolition adjacent to water, material over water, and temporary batch plants
Waste Management and Controls (i.e., good housekeeping practices)	• Manage materials and wastes to avoid contamination of stormwater	Stockpile management, spill prevention and control, solid waste management, hazardous waste management, contaminated soil management, concrete waste management, sanitary/septic waste management, liquid waste management, and management of material delivery storage and use

With the compliance with the CWA, Construction General Permit, SWPPP, and stormwater discharge management control BMPs, implementation of the proposed phased improvements would not violate water quality standards or waste discharge requirements during construction. Therefore, impacts pertaining to water quality during construction would be less than significant.

Operation

The Project site would continue to operate a high school campus, and the proposed improvements under the three Project phases would not introduce new sources of pollution. Therefore, Project operations would not impact water quality at the campus, stormwater system downstream, or Miller Creek-Frontal San Pablo Bay Estuaries. Operational impacts would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would be less than significant.

HWQ-2 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site?

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

iii. 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 Impact.

Construction

The proposed Project would expose soils at the site during construction activities. Demolition, ground disturbance, and paving activities may temporarily alter drainage patterns on the campus. All areas disturbed by the Project, however, would be restored with new pavement, buildings, and/or landscaping to minimize erosion and to allow continued school operations. During construction, potential sediments and soils may become entrained in stormwater runoff. As discussed in Impact HWQ-1, BMPs implemented during construction activities under all three Project phases would include erosion controls, sediment controls, and wind erosion/dust controls that would reduce or eliminate sediment and other pollutants from entering into stormwater and non-stormwater discharges. Therefore, Project construction would not result in polluted runoff that would result in erosion or siltation on- or off-site, increase the rate or amount of surface runoff that would result in flooding on- or off-site, or contribute to runoff water that would exceed the capacity of stormwater drainage system at or downstream of the campus, or add sources of polluted runoff to the Miller Creek-Frontal San Pablo Bay Estuaries. The District's adherence to regulatory requirements would ensure construction impacts would be less than significant.

Operation

The Project would increase impervious surfaces. Phase 1 improvements—including the proposed grandstand, Buildings S and T, and new driveway that would be developed within the existing vegetated slope that separates the campus into northern and southern halves—would convert the existing pervious area with pavement and structures. The increase in stormwater runoff from these improvements would not be substantial, however, and would not result in new pollution sources. The Project would be designed to capture the additional runoff. New drainage control measures, such as new stormwater collection infrastructure, would be installed. New pipes and inlets would be installed throughout the Phase 1 development footprint (including at the new aquatic facility, around the new Building H, the areas north and east of Building K, and the driveway). The new improvements would collect stormwater runoff and water splashed from the proposed aquatic facility. The new pipes would connect to the existing underground storm drain system in the northwest portion of the campus (composed of 6- to 24-inch pipe segments), which has sufficient capacity to accommodate the increased runoff. Stormwater collected from the Phase 1 improvements would combine with the stormwater collected in other areas of the campus and released from one of two points along the northern perimeter of the campus into a 36-inch municipal storm drain located on the south side of Nova Albion. Phase 1 improvements also include new planters along the exterior walls of Buildings H and K, between Building K and the track, and on the slope. Stormwater runoff not collected by the underground drainage system would drain into these planters. Therefore, the Project would not increase surface runoff that would cause flooding or exceed the capacity of the existing stormwater drainage system on the campus or downstream from the campus. Moreover, the entire development footprint under Phase 1 would be restored with new pavement, buildings, and landscape and would not require erosion or siltation control on a permanent basis.

Phase 2 improvements would not add impervious surfaces to the campus. All improvements would be within the existing buildings. There would be no potential for Phase 2 improvements, once in operation, to alter the drainage patterns of the campus or downstream of the campus.

Phase 3 improvements include replacing the tennis courts, installing artificial turf fields in place of natural turf fields, and replacing the baseball facilities, including the dugouts in the southern half of the campus, and repurposing the natural turf areas around the track in the northern half of the campus. The new tennis courts would be within the same footprint as the existing courts and would be constructed with a permeable pavement that would drain. Therefore, the replacement tennis court would not result in an increase in runoff. The proposed artificial turf fields would also consist of permeable material. There would be flat panel drains strategically laid under the fields and perforated subdrains along the perimeters to collect stormwater that would be slowly released underground and into the adjoining natural grass areas to minimize flooding on- and off-site of the field. The new dugouts would include stormwater inlets that would drain into the pipes below the artificial turf. A new low-water irrigation system with smart sensor controls would be installed to irrigate the adjoining natural grass areas and to minimize on-site flooding (as well as to conserve water). Phase 3 also includes removing existing natural turf on the north and east sides of the track and field in the northern half of the campus and replacing it with permeable pavement and/or a rubberized surface that would allow stormwater runoff to percolate, similar to the existing system below the track and field. Any additional runoff would be directed to an existing trench drain that surrounds the track. The proposed improvements under Phase 3 would not increase runoff that would exceed the capacity of the existing stormwater system on or downstream of the campus or cause flooding, erosion, or siltation on the campus and off-site.

The proposed improvements under all three Project phases would not introduce new sources of pollution. As designed, the proposed improvements would capture and limit stormwater runoff from leaving the campus. Therefore, Project operations would not increase the volume and rate of stormwater runoff or result in exceedances of storm drainage capacity at and downstream of the Project site. No potential flooding effects would occur. Operational impacts would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would be less than significant.

HWQ-3 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. Adherence to the CWA and Construction General Permit would ensure that surface water quality would not be adversely impacted during construction of the proposed Project. As discussed in Impact HWQ-2, operation of proposed improvements would not result in new uses that would introduce new pollution sources that would impact water quality. Project construction and operations would not conflict with or obstruct the San Francisco Bay RWQCB from implementing its Basin Plan.

Moreover, the Project site is not located within a groundwater basin, and the Project would not require extraction of groundwater. Accordingly, the Project would not conflict with or obstruct implementation of a sustainable groundwater management plan. Project impacts to the quality of groundwater would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would be less than significant.

4.8.5 Cumulative Impacts

The proposed Project would be implemented in three general phases that would occur from the summer of 2024 to the end of the third quarter of 2029. The implementation of each phase and subphase would be required to comply with the CWA to ensure the proposed improvements would not result in pollution to receiving waters downstream of the Project site. The Project phases would be implemented in consecutive order; as such, each phase and subphase, as mitigated with best management practices to limit water quality impacts, would not combine with the others to cause a cumulative impact. Therefore, the implementation of the three phases as part of the Project would not result in cumulatively considerable impacts.

Similarly, each of the District-sponsored other approved campus projects would comply with the CWA and include best management practices to limit stormwater runoff and pollution from entering water downstream of the Project site. Therefore, the environmental effects related to hydrology and water quality caused by simultaneous construction of the Project and the other District projects would not be cumulatively considerable.

Stormwater discharged from past and existing projects within the Project vicinity has contained pollutants that have contributed to impairment of the water quality of receiving waters, including the Miller Creek-Frontal San Pablo Bay Estuaries. Stormwater regulations have become progressively more stringent since the passing of the federal CWA, and current requirements now mandate new developments to manage and treat all significant sources of stormwater pollutants; in particular, stormwater runoff from past, present, and existing development is treated in accordance with Construction General Permit and MS4 Permit requirements. Through compliance with existing permits, plans, and regulations, such as the Construction General Permit, MS4 Permit, SWPPP, associated BMPs, and low-impact development requirements, implementation of the related projects would not violate any water quality standards or waste discharge requirements, or substantially alter the existing drainage patterns. As such, a reduction in overall pollutant loads in stormwater would occur over time. Therefore, no significant adverse impacts would be expected from cumulative water quality conditions, as existing conditions would be expected to cumulatively improve. Therefore, the proposed Project would not contribute to any significant cumulative impacts. Cumulative impacts on hydrology and water quality would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Level of Significance After Mitigation

Impacts would not be cumulatively considerable.

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4.9 NOISE

The purpose of this section is to evaluate noise source impacts to surrounding land uses as a result of implementation of the proposed Project. This section evaluates both short-term construction-related impacts and long-term operational impacts. Mitigation measures are also recommended to avoid or lessen the Project's noise and vibration impacts. This section is based on the Noise Impact Assessment prepared by ECORP Consulting, Inc., dated February 2024, and included as Appendix I.

4.9.1 Regulatory Setting

Federal

Occupational Safety and Health Act of 1970

The Occupational Safety and Health Administration (OSHA) regulates on-site noise levels and protects workers from occupational noise exposure. To protect hearing, worker noise exposure is limited to 90 decibels with A-weighting (dBA) over an eight-hour work shift (29 Code of Regulations 1910.95). Employers are required to develop a hearing conservation program when employees are exposed to noise levels exceeding 85 dBA. These programs include provision of hearing protection devices and testing employees for hearing loss on a periodic basis.

State

California Occupational Safety and Health Administration

Noise exposure of construction workers is regulated by the California Occupational Safety and Health Administration (Cal/OSHA). Title 8, Subchapter 7, Group 15, Article 105 of the California Code of Regulations (Control of Noise Exposure) sets noise exposure limits for workers and requires employers who have workers who may be exposed to noise levels above these limits to establish a hearing conservation program, make hearing protectors available, and keep records of employee noise exposure measurements.

State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines (2003), published by the Governor's Office of Planning and Research (OPR), also provide guidance for the acceptability of projects within specific average daily noise levels/community noise equivalent level (in L_{dn}/CNEL) contours. The guidelines include adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

State Office of Planning and Research Noise Element Guidelines

The State OPR Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a Land Use Compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL.

California Department of Transportation

In 2020, Caltrans published the *Transportation and Construction Vibration Manual*. The manual provides general guidance on vibration issues associated with the construction and operation of projects concerning human perception and structural damage. Table 4.9-4, Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels, below presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

Local

Development on the campus is not subject to local plans, policies, regulations, or ordinances governing noise and vibration.[1] However, the noise and vibration analysis considers the following local plans, policies, and ordinances as guidance in developing appropriate noise and vibration significance thresholds for assessing impacts.

San Rafael General Plan 2040

The San Rafael General Plan Noise Element includes goals, policies, and programs that are relevant to the Project, such as:

Policy N-1.3 Reducing Noise Through Planning and Design. Use a range of design, construction, site planning, and operational measures to reduce potential noise impacts.

Policy N-1.6 Traffic Noise. Minimize traffic noise through land use policies, law enforcement, street design and improvements, and site planning and landscaping.

Policy N-1.9 Maintaining Peace and Quiet. Minimize noise conflicts resulting from everyday activities such as construction, sirens, yard equipment, business operations, night-time sporting events, and domestic activities.

Policy N-1.11 Vibration. Ensure that the potential for vibration is addressed when transportation, construction, and nonresidential projects are proposed, and that measures are taken to mitigate potential impacts.

San Rafael Municipal Code

Operational Noise. The City of San Rafael Municipal Code (SRMC) Section 8.13.040, General Noise Limits, presents general noise limits for various land uses. The noise limits that pertain to the Project are presented in Table 4.9-1, General Noise Limits.

[1] The proposed Project and the Terra Linda High School campus are exempt from local zoning and land use regulations under District Board Resolution No. 2324-17, dated October 23, 2023, pursuant to Government Code section 53094. The City's General Plan and Municipal Code are discussed herein for purposes of addressing the proposed Project's consistency with such measures for informational purposes only.

Table 4.9-1: General Noise Limits

Land Use	Daytime Noise Limits[1]	Nighttime Noise Limits[2]
Residential	60 dBA Intermittent 50 dBA Constant	50 dBA Intermittent 40 dBA Constant
Public Property[3]	60 dBA Intermittent 50 dBA Constant	50 dBA Intermittent 40 dBA Constant

Source: San Rafael Municipal Code Section 8.13.040.

1. "Daytime" for purposes of this chapter means the period between 7:00 a.m. and 9:00 p.m., Sunday through Thursday, and between 7:00 a.m. and 10:00 p.m. on Friday and Saturday.
2. "Nighttime" for purposes of this chapter means the period between 9:00 p.m. and 7:00 a.m., Sunday through Thursday, and between 10:00 p.m. and 7:00 a.m. on Friday and Saturday.
3. Public Property Noise Limits: No person shall produce, suffer or allow to be produced by any machine, animal or device, or by any other means, a noise level, when measured on any public property, that is greater than the most restrictive noise standard applicable under this chapter to any private property adjoining the receiving public property.

Construction Noise. SRMC Section 8.13.050 presents standard exceptions to general noise limits. SRMC Section 8.13.050 includes exceptions to construction noise standards and allows construction from Monday through Friday from 7:00 a.m. to 6:00 p.m. and on Saturdays from 9:00 a.m. to 6:00 p.m. Construction is prohibited on Sundays and holidays. The section further provides that noise levels at any point outside of the construction property plane shall not exceed 90 dBA.

SRMC Section 8.13.050 also allows for sound generation devices used in athletic events and special events, provided they do not generate noise levels exceeding 80 dBA, as measured at 50 feet from the property plane. The use of sound generation devices is prohibited between the hours of 10:00 p.m. and 10:00 a.m.

4.9.2 Environmental Setting

Noise

Noise is described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Decibels are based on the logarithmic scale, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dBA higher than another is judged to be twice as loud, and 20 dBA higher four times as loud, and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud).

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as

well as the time of day when the noise occurs. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels/community noise equivalent level (in L_{dn}/CNEL). The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and defined as follows:

- Equivalent noise level (L_{eq}) is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

- Day-night average (L_{dn}) is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.

- Community noise equivalent level (CNEL) is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 p.m. to 10:00 p.m. and a 10-dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.7 dBA CNEL.

Table 4.9-2, Common Acoustical Descriptors, provides a list of other common acoustical descriptors.

Table 4.9-2: Common Acoustical Descriptors

Descriptor	Definition
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. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sounds are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
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.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.

Table 4.9-2, continued

Descriptor	Definition
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.
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 on its amplitude, duration, frequency, and time of occurrence and tonal or informational content, as well as the prevailing ambient noise level.

Source: Refer to Appendix I, Noise Impact Assessment.

The A-weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about ± 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 on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within about ± 1 to 2 dBA.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL or L_{dn} is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most would accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event, such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

OSHA has a noise exposure standard that is set at the threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources.

Ambient Noise Measurements

Noise measurements were taken to quantify the existing ambient noise levels in the Project area. Nine short-term noise measurements were conducted on October 3, 2023, between 1:19 p.m. and 4:22 p.m., on a weekday when school was in session. These short-term noise measurements are representative of typical noise exposure nearby the Project site during the daytime; refer to Appendix I, Noise Impact Assessment. The average noise levels measured at each location are listed in Table 4.9-3. As shown, ambient noise levels range from 43.6 to 58.4 dBA L_{eq} in the vicinity of the Project site. The most common noise in the Project vicinity is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles) on area roadways.

Table 4.9-3: Existing (Baseline) Noise Measurements

Location Number	Location	L_{eq} dBA	L_{min} dBA	L_{max} dBA	Time
1	On Corte Pacheco adjacent to house number 10.	48.2	37.6	61.5	1:19 p.m. to 1:34 p.m.
2	Nova Albion Way and El Pavo Real Circle intersection adjacent to high school football field.	58.4	38.6	71.5	1:36 p.m. to 1:51 p.m.
3	Upper loop of El Pavo Real Circle adjacent to house number 39.	43.6	35.0	66.1	1:54 p.m. to 2:09 p.m.
4	On Devon Drive adjacent to house number 280.	58.0	34.8	75.5	2:15 p.m. to 2:30 p.m.
5	Dias Way and Devon Drive intersection.	51.8	32.5	70.6	2:32 p.m. to 2:47 p.m.
6	Esmeyer Drive and Nova Albion Way Intersection adjacent to house number 9.	57.8	35.8	77.0	2:54 p.m. to 3:09 p.m.
7	On Wallace Way adjacent to house number 61.	46.1	60.3	69.4	3:32 p.m. to 3:47 p.m.
8	On Tamarack Drive adjacent to house number 868.	51.4	31.2	73.3	3:50 p.m. to 4:05 p.m.
9	On Devon Drive adjacent to house number 244.	48.5	33.2	66.4	4:07 p.m. to 4:22 p.m.

Source: Refer to Appendix I, Noise Impact Assessment.

Vibration

Sources of ground-borne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. PPV is typically used for evaluating potential building damage, whereas PPV and RMS vibration velocity amplitudes are typically used to evaluate human response to vibration.

Typically, ground-borne vibration, generated by man-made activities, attenuates rapidly with distance from the source of vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 500 feet or less) from the source. Both construction and operation of development projects can generate ground-borne vibration.

Effects of Vibration

Table 4.9-4, Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels, displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where ground-borne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Table 4.9-4: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels

Peak Particle Velocity (inches/second)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006–0.019	64–74	Range of threshold of perception.	Vibrations unlikely to cause damage of any type.
0.08	87	Vibrations readily perceptible.	Threshold at which there is a risk of architectural damage to extremely fragile historic buildings, ruins, ancient monuments.
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities.	Threshold at which there is a risk of architectural damage to fragile buildings. Virtually no risk of architectural damage to normal buildings.
0.25	94	Vibrations may begin to annoy people in buildings.	Threshold at which there is a risk of architectural damage to historic and some old buildings.
0.3	96	Vibrations may begin to feel severe to people in buildings.	Threshold at which there is a risk of architectural damage to older residential structures.
0.5	103	Vibrations considered unpleasant by people subjected to continuous vibrations.	Threshold at which there is a risk of architectural damage to new residential structures and modern industrial/commercial buildings.

Source: Caltrans, Transportation and Construction Vibration Guidance Manual, 2020.

Sensitive Land Uses

Existing Noise Environment

Noise-sensitive land uses are generally considered to include uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Land uses such as hospitals, historic sites, and certain recreation areas are also considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The Project site is an operating high school campus and, accordingly, is a noise-sensitive land use. The Project site also generates noise. Typical noise from the Project site include students socializing and yelling, band practices, cheering and hollering from spectators at events, stomping on the bleachers, fire alarms, vehicles traveling, vehicle horns and alarms, and slamming of car doors.

The Project site is primarily surrounded by residential land uses and other educational uses. The nearest off-site noise sensitive receptors from the Project site are residences fronting Nova Albion Way located north of the Project site, residences fronting Devon Drive located south and west of the Project site, and Miss Nicky's Preschool located east of the Project site. The most common and significant source of noise in the Project area is traffic from vehicles traveling on area roadways. Vehicular noise varies with the volume, speed, and type of traffic. Slower traffic produces less noise than fast-moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise associated with vehicles include sirens, vehicle alarms, slamming of doors, garbage collection, construction vehicle activity, and honking of horns.

Existing Vibration Environment

Vibration sources in urban environments are typically heavy construction equipment and traffic on rough roads. Neither the Project site nor the surrounding properties contain heavy-duty construction equipment or other facilities or operators, such as heavy industrial uses, that would result in perceptible ground-borne vibration. Several roadways are located adjacent to and near the Project site; they are paved and well-maintained. According to the Federal Transit Administration (FTA), it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. As such, there are no existing sources of perceptible vibration at the Project site or in the surrounding areas.

4.9.3 Methodology

The analysis of the existing and future noise environments is based on empirical observations and noise prediction modeling. Predicted construction noise levels were calculated using the Federal Highway Administration’s Roadway Construction Noise Model (2006) coupled with the SoundPLAN 3D noise model, which predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings, and barriers. Ground-borne vibration levels associated with construction-related activities for the Project have been evaluated using typical ground-borne vibration levels associated with construction equipment. Potential ground-borne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby structures and typically applied criteria for structural damage and human annoyance.

The information about construction equipment that would be used during each Project phase (Phases 1-3) and for each construction phase (i.e., demolition, site preparation, building construction, paving, painting, etc.) was provided by the Project construction contractor. The construction equipment data were entered individually into the Federal Highway Administration's Roadway Construction Model to obtain the reference noise measurement for each construction phase, at the source (the Project site). Phases with overlapping dates (e.g., demolition and site preparation for Phase 1) were modeled as occurring at the same time to account for worst-case noise levels. The reference noise measurement for each phase assumes a worst-case operation that all equipment are operating simultaneously to determine conservative noise levels that could occur at sensitive receptors and identify mitigation, if warranted.

The reference construction noise levels outputted by the model are then inputted into the SoundPLAN 3D noise model, which calculates the propagation of construction noise from the Project site in order to identify the predicted noise levels at 24 off-site noise-sensitive receivers in the Project area. This was completed by modeling each construction phase as a point source located at the center of each Phase's construction site. The methodology of using the center of the construction site is recommended by the FTA, since the majority of construction equipment is not situated at any one location during construction activities, but rather spread throughout the Project site and at various distances from receptors.

A brief summary of the proposed improvements and the general location on the campus where the construction noise point sources were modeled in SoundPLAN are described below.

- Phase 1 includes the demolition and rehabilitation of the aquatic center as well as the demolition/replacement and modernization of the physical education support spaces. A point source was modeled in SoundPLAN located at the approximate center of the aquatic facility for all construction phases.

- Phase 2 includes the modernization of existing classroom buildings, which includes new LED lighting, flooring, counters, fixtures, painting and finishes, and technology. A point source was modeled in SoundPLAN located at the approximate center of the main school building.

- Phase 3 includes stadium upgrades, new artificial turf on the baseball and softball fields, and improvements to the tennis courts. As multiple construction locations are spread out across the campus, three individual point sources were modeled in SoundPLAN located at the center of the football stadium, the center of the baseball/softball fields, and the center of the tennis courts.

On-site stationary source noise levels associated with the Project have been calculated with the SoundPLAN 3D noise model.

Thresholds of Significance

The significance thresholds used to evaluate the impacts of the proposed Project related to noise are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, a project would have a significant impact related to noise if it would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or

- Generate excessive groundborne vibration or groundborne noise levels.

The Appendix G significance criterion noted below was scoped out of the analysis for further consideration in the Initial Study (Appendix A-1); see Chapter 5, Other CEQA Considerations, of this Draft EIR.

- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The standards used to evaluate and determine the significance of the above checklist questions are provided below:

- **Construction Noise.** The Project's construction noise is compared to the City of San Rafael's construction noise standards, provided under SRMC Section 8.13.050, as explained in Section 4.9.1, above.

- **Stationary Noise.** The Project's operational noise levels from stationary noise sources are compared to the noise level limits established in SRMC Section 8.13.040 for residential and public property land uses, as shown in Table 4.9-1, as these are the uses located near the Project site.

- **Mobile Noise.** Vehicle noise from the Project is evaluated using a threshold provided in Caltrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. The threshold provides that a project will normally have a significant noise impact if the project doubles the traffic on a roadway, thereby resulting in an increase of 3 dBA, which is the sound level at which people can detect changes.

- **Vibration.** The FTA provides criteria for acceptable levels of ground-borne vibration for various types of buildings. The vibration that would be created by the Project is compared to the FTA's standard of 0.3 inch-per-second PPV, shown in Table 4.9-4, which is the level at which there is a risk of architectural damage to older residential structures and vibrations may begin to feel severe to people in buildings.

4.9.4 Impact Analysis

NOI-1 Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact.

Construction

Construction noise associated with the proposed Project would be temporary and would vary depending on the specific nature of the activities being performed. Construction noise would primarily be associated with the operation of off-road equipment for on-site construction activities, as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., site preparation, excavation, paving). Noise generated by construction equipment, including earth movers and

portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site.

The noise prediction modeling conducted for construction of each Project phase and its construction activities (demolition, site preparation, building construction, etc.) conservatively assumed that all equipment would operate simultaneously. The results of the predicted noise levels for each Project phase at off-site noise-sensitive receivers are presented in Table 4.9-5 through Table 4.9-7 and illustrated in Figure 4.9-1 through Figure 4.9-3. As shown, noise generated by the anticipated construction activities for each Project phase would not exceed the City's construction noise standard of 90 dBA L_{eq} at any of the off-site receptors.

The exterior noise level at the high school campus would exceed 65 dBA L_{eq} during the loudest construction activities for each Project phase. However, on-site noise sensitive receptors (i.e., students) would not be exposed to construction noise above 90 dBA L_{eq}, the City's construction noise threshold. Construction noise would vary greatly at the Project site based on the different types of on-site construction activities, the equipment and quantity used, and the varying distances to students on-site. Construction noise experienced within the specific construction zone per phase and subphase would reach levels beyond 90 dBA. However, students would not be within the immediate vicinity of the actual construction activities, as the construction area would be fenced off to limit trespassing and limit potential hazards. Therefore, students on the campus would not be exposed to such noise levels.

Moreover, sound level decreases (attenuates) at a rate of approximately 6 dBA for each doubling of distance from a point source such as a construction site. Accounting for this rate of noise attenuation, construction noise resulting from the worst-case scenario of 20 pieces of heavy-duty off-road construction equipment operating simultaneously (120+ dBA at the source) would be reduced to 85.9 dBA at 100 feet, which is below the 90 dBA standard. This worst-case scenario is unlikely to occur because it is not expected that 20 pieces of heavy-duty off-road construction equipment would be operating simultaneously. Therefore, the general noise levels experienced across the school campus during the most intense construction activities would be around 65 dBA.

The exterior-to-interior noise reduction of older buildings, such as those on campus, offers a noise reduction of about 20 to 25 dBA with closed windows. Therefore, construction noise occurring within the classroom would generally range between 45 and 40 dBA, which is within the normally acceptable noise level for schools according to the Office of Planning and Research's State of California General Plan Guidelines Appendix G and would not interrupt classroom activities. While construction activities may be a temporary annoyance to students on campus, noise as a result of construction activities would not surpass the 90 dBA construction threshold outside of the specific zones of construction.

While Project construction noise would not exceed the City's construction noise standard, the District plans to implement construction best management practices in an effort to further attenuate construction noise levels. These measures are listed in Section 3.4. Therefore, construction noise impacts would be less than significant.

Table 4.9-5: Phase 1 Construction Average (dBA) Noise Levels

Off-Site Receptor	Estimated Exterior Construction Noise Level @ Receptor (dBA L_{eq}) During Demolition and Site Preparation	Estimated Exterior Construction Noise Level @ Receptor (dBA L_{eq}) During Building Construction and Paving	Estimated Exterior Construction Noise Level @ Receptor (dBA L_{eq}) During Architectural Coating	Construction Noise Standard (dBA L_{eq})	Exceeds Standard?
#1 Residence on Devon Drive	61.1	61.2	47.3	90	**No**
#2 Residence on Devon Drive	61.6	61.7	47.8	90	**No**
#3 Residence on Devon Drive	62.3	62.4	48.5	90	**No**
#4 Residence on Devon Drive	63.8	63.9	50.0	90	**No**
#5 Residence on Devon Drive	63.5	63.6	49.7	90	**No**
#6 Residence on Devon Drive	62.2	62.3	48.4	90	**No**
#7 Residence on Devon Drive	57.3	57.4	43.5	90	**No**
#8 Residence on Devon Drive	53.8	53.9	40.0	90	**No**
#9 Residence on Devon Drive	58.6	58.7	44.8	90	**No**
#10 Residence on Devon Drive	61.2	61.3	47.4	90	**No**
#11 Residence on Devon Drive	56.5	56.6	42.7	90	**No**
#12 Residence on El Pavo Real Circle	62.4	62.5	48.6	90	**No**
#13 Residence on Esmeyer Drive	59.0	59.1	45.2	90	**No**
#14 Residence on Esmeyer Drive	57.3	57.4	43.5	90	**No**
#15 Residence on Esmeyer Drive	59.2	59.3	45.4	90	**No**
#16 Residence on Esmeyer Drive	58.6	58.7	44.8	90	**No**
#17 Residence on Malone Lane	59.1	59.2	45.3	90	**No**
#18 Residence on Minor Court	58.0	58.1	44.2	90	**No**
#19 Residence on Nova Albion Way	57.5	57.6	43.7	90	**No**

Table 4.9-5, continued

Off-Site Receptor	Estimated Exterior Construction Noise Level @ Receptor (dBA L_{eq}) During Demolition and Site Preparation	Estimated Exterior Construction Noise Level @ Receptor (dBA L_{eq}) During Building Construction and Paving	Estimated Exterior Construction Noise Level @ Receptor (dBA L_{eq}) During Architectural Coating	Construction Noise Standard (dBA L_{eq})	Exceeds Standard?
#20 Residence on Nova Albion Way	62.5	62.6	48.7	90	**No**
#21 Residence on Nova Albion Way	66.3	66.4	52.5	90	**No**
#22 Residence on Nova Albion Way	63.6	63.7	49.8	90	**No**
#23 Residence on Tamarack Drive	57.3	57.4	43.5	90	**No**
#24 Residence on Wallace Way	55.8	55.9	42.0	90	**No**

Source: Refer to Appendix I, Noise Impact Assessment.

Notes: Construction equipment used during construction is provided by the Project construction manager. Consistent with FTA recommendations for calculating construction noise, construction noise was modeled accounting for all construction equipment operating simultaneously from the center of the Phase I Project site.

L_{eq} = The equivalent energy noise level is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

Table 4.9-6: Phase 2 Construction Average (dBA) Noise Levels

Off-Site Receptor	Estimated Exterior Construction Noise Level @ Receptor (dBA L_{eq}) During Demolition and Building Construction	Construction Noise Standard (dBA L_{eq})	Exceeds Standard?
#1 Residence on Devon Drive	72.7	90	**No**
#2 Residence on Devon Drive	69.2	90	**No**
#3 Residence on Devon Drive	66.4	90	**No**
#4 Residence on Devon Drive	64.4	90	**No**
#5 Residence on Devon Drive	62.6	90	**No**
#6 Residence on Devon Drive	61.6	90	**No**

Table 4.9-6, continued

Off-Site Receptor	Estimated Exterior Construction Noise Level @ Receptor (dBA L_{eq}) During Demolition and Building Construction	Construction Noise Standard (dBA L_{eq})	Exceeds Standard?
#7 Residence on Devon Drive	58.6	90	**No**
#8 Residence on Devon Drive	56.5	90	**No**
#9 Residence on Devon Drive	63.3	90	**No**
#10 Residence on Devon Drive	61.0	90	**No**
#11 Residence on Devon Drive	59.0	90	**No**
#12 Residence on El Pavo Real Circle	68.2	90	**No**
#13 Residence on Esmeyer Drive	69.3	90	**No**
#14 Residence on Esmeyer Drive	65.7	90	**No**
#15 Residence on Esmeyer Drive	71.1	90	**No**
#16 Residence on Esmeyer Drive	71.7	90	**No**
#17 Residence on Malone Lane	60.4	90	**No**
#18 Residence on Minor Court	63.9	90	**No**
#19 Residence on Nova Albion Way	59.8	90	**No**
#20 Residence on Nova Albion Way	64.2	90	**No**
#21 Residence on Nova Albion Way	70.4	90	**No**
#22 Residence on Nova Albion Way	73.5	90	**No**
#23 Residence on Tamarack Drive	61.4	90	**No**
#24 Residence on Wallace Way	62.3	90	**No**

Source: Refer to Appendix I, Noise Impact Assessment.

Notes: Construction equipment used during construction is provided by the Project construction manager. Consistent with FTA recommendations for calculating construction noise, construction noise was modeled accounting for all construction equipment operating simultaneously from the center of the Phase 2 Project site.

L_{eq} = The equivalent energy noise level is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

Table 4.9-7: Phase 3 Construction Average (dBA) Noise Levels

Off-Site Receptor	Estimated Exterior Construction Noise Level @ Receptor (dBA Leq) During Demolition, Site Preparation, Grading, Building Construction, and Architectural Coating	Construction Noise Standard (dBA L_{eq})	Exceeds Standard?
#1 Residence on Devon Drive	68.8	90	**No**
#2 Residence on Devon Drive	72.5	90	**No**
#3 Residence on Devon Drive	77.3	90	**No**
#4 Residence on Devon Drive	72.7	90	**No**
#5 Residence on Devon Drive	72.5	90	**No**
#6 Residence on Devon Drive	76.8	90	**No**
#7 Residence on Devon Drive	69.4	90	**No**
#8 Residence on Devon Drive	63.5	90	**No**
#9 Residence on Devon Drive	70.4	90	**No**
#10 Residence on Devon Drive	72.4	90	**No**
#11 Residence on Devon Drive	69.5	90	**No**
#12 Residence on El Pavo Real Circle	69.1	90	**No**
#13 Residence on Esmeyer Drive	65.6	90	**No**
#14 Residence on Esmeyer Drive	65.6	90	**No**
#15 Residence on Esmeyer Drive	65.6	90	**No**
#16 Residence on Esmeyer Drive	65.3	90	**No**
#17 Residence on Malone Lane	68.0	90	**No**
#18 Residence on Minor Court	67.2	90	**No**
#19 Residence on Nova Albion Way	68.9	90	**No**
#20 Residence on Nova Albion Way	74.8	90	**No**

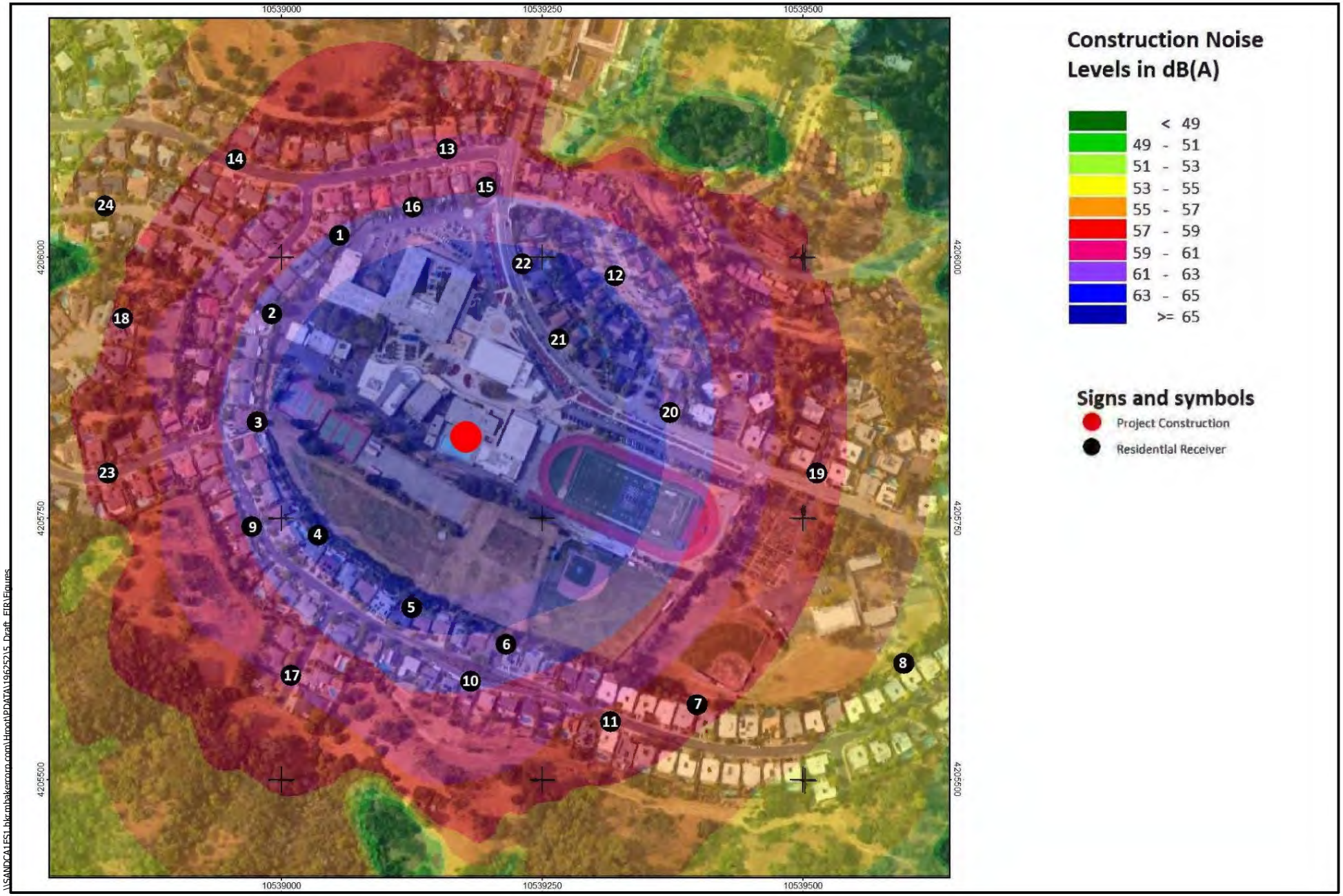
Table 4.9-7, continued

Off-Site Receptor	Estimated Exterior Construction Noise Level @ Receptor (dBA Leq) During Demolition, Site Preparation, Grading, Building Construction, and Architectural Coating	Construction Noise Standard (dBA L_{eq})	Exceeds Standard?
#21 Residence on Nova Albion Way	71.1	90	**No**
#22 Residence on Nova Albion Way	68.7	90	**No**
#23 Residence on Tamarack Drive	67.2	90	**No**
#24 Residence on Wallace Way	62.8	90	**No**

Source: Refer to Appendix I, Noise Impact Assessment.

Notes: Construction equipment used during construction is provided by the Project construction manager. Consistent with FTA recommendations for calculating construction noise, construction noise was modeled accounting for all construction equipment operating simultaneously from the center of the Phase 3 Project site.

L_{eq} = The equivalent energy noise level is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.



TERRA LINDA HIGH SCHOOL
CAPITAL IMPROVEMENTS PROJECT

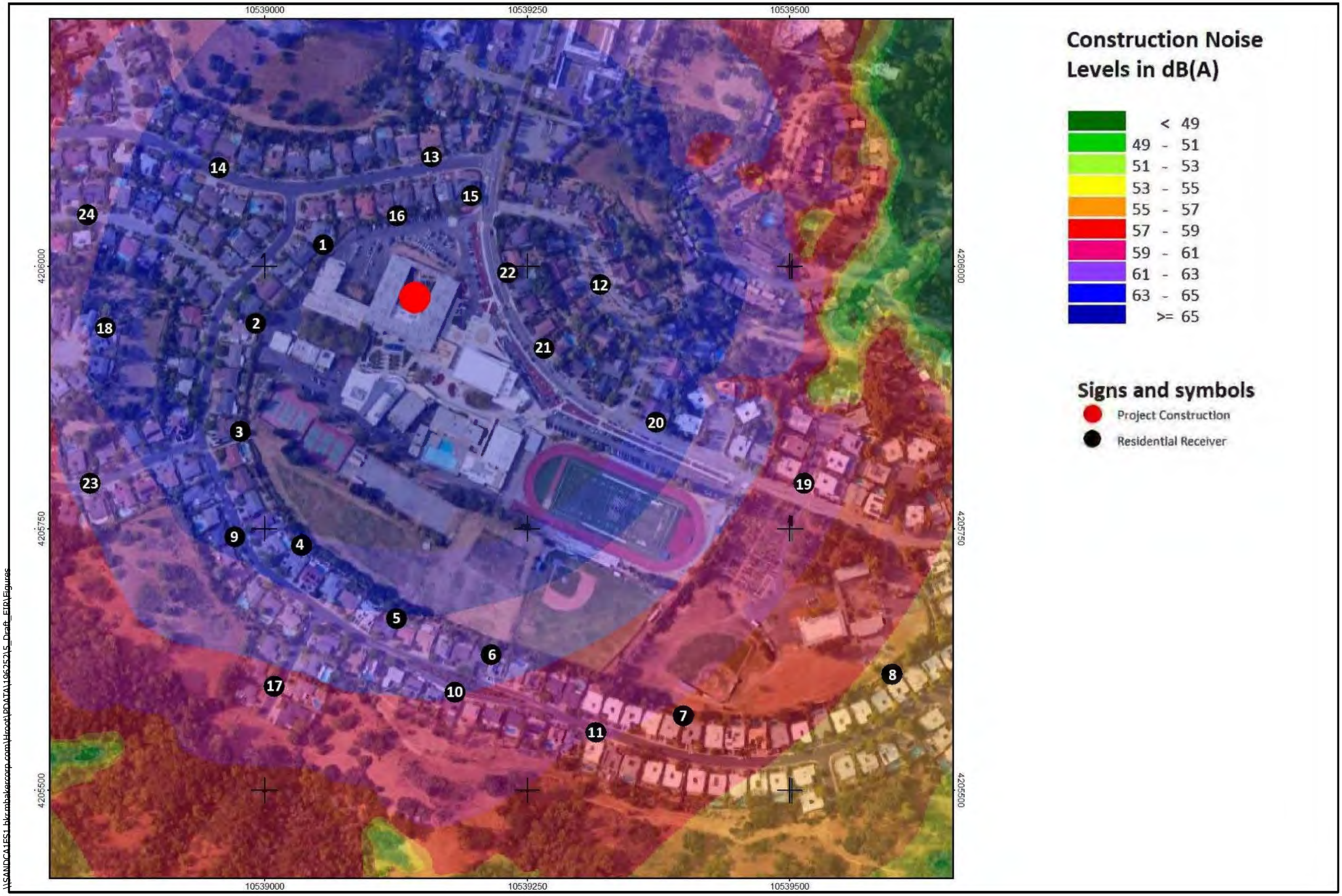
Michael Baker INTERNATIONAL

NOT TO SCALE

Phase 1 Construction Noise Levels

Source: ECORP Consulting, Inc., February 2024.

Figure 4.9-1



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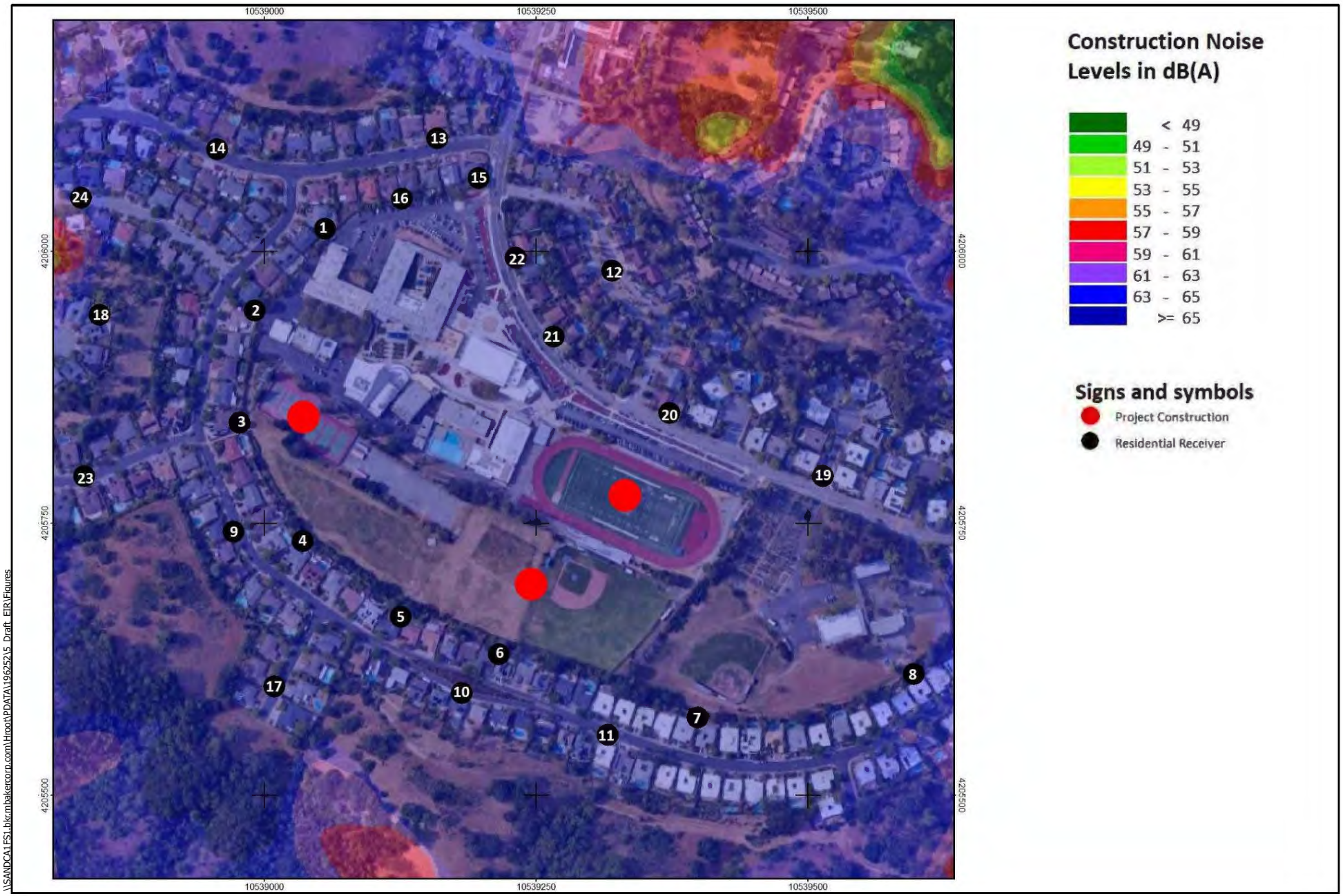
Phase 2 Construction Noise Levels

Source: ECORP Consulting, Inc., February 2024.

Figure 4.9-2



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Source: ECORP Consulting, Inc., February 2024.

Phase 3 Construction Noise Levels

Figure 4.9-3

Operation

Stationary Noise. The Project would increase the number of events on the campus. However, the number of participants and spectators at the events would not be different from existing events. The Project would expand the footprint of the aquatic facility and also include a new PA system. Accordingly, noise levels would increase, and the noise associated with this facility was modeled. Other improvements proposed by the Project, such as stadium upgrades and new artificial turf fields, were not modeled as the footprint of the areas and intensity of events would remain the same as the existing conditions. The frequency of the use of the facilities would increase; however, the noise levels would remain similar to the existing conditions. Therefore, only the proposed aquatic center was identified as a component of the Project that would intensify an existing noise source and modeled using the SoundPLAN for operational noise impacts.

The modeling scenario accounts for one large area source encompassing the modernized aquatic center including the pool area, pool deck, and bleachers. The area source reference noise measurement used in SoundPLAN accounts for normal activities occurring at a sporting event, such as people cheering, whistle blowing, and the use of an amplified sound system. Table 4.9-8 and Figure 4.9-4 show the predicted operational noise levels at noise-sensitive receivers in the vicinity of the Project site as predicted by SoundPLAN. As shown, Project operational noise would not exceed the daytime or nighttime noise standards of 60 and 50 dBA Leq, respectively, at any location in the Project area. Moreover, the modeled noise as predicted by SoundPLAN would be lower than what is currently experienced in the areas surrounding the campus (see Table 4.9-3). Therefore, operational on-site noise impacts would be less than significant.

Mobile Noise. As further discussed in Section 4.11, Transportation, the Project conservatively assumes the Project would generate 92 additional daily vehicle trips from expanded use of the proposed turf fields. According to Caltrans's *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, a doubling of traffic on a roadway would be likely to result in an increase of 3 dB (outside of the laboratory, a 3-dBA change is considered a just-perceivable difference to the human ear). The Project site is located in a highly developed area surrounded by residential land uses. Vehicular access to the Project site is provided via Nova Albion Way, which holds approximately 40 single-family residences in the immediate vicinity of the Project site. Additionally, Devon Drive and Esmeyer Drive are collector streets that are commonly used to access the Project site. Approximately 90 single-family residences front Devon Drive and approximately 75 residences front Esmeyer Drive.

According to the Institute of Transportation Engineers' *10th Edition Trip Generation Manual*, single-family homes generate an average of 9.44 trips daily. The approximately 40 residences on Nova Albion would generate 377 traffic trips daily under existing conditions (40 × 9.44 = 377). The approximately 90 residences are on Devon Drive would result in 849 traffic daily trips (90 × 9.44 = 849), and the 75 residences on Esmeyer Drive would generate 708 traffic daily trips (75 × 9.44 = 708). Note, these trips are conservative, as many more residences are located on surrounding streets that directly access Nova Albion Way, Devon Drive, and Esmeyer Drive. Accordingly, the Project's contribution of 92 additional daily trips would not double the existing traffic on Project vicinity roadways, and mobile noise from the Project's trips would not be perceptible. Therefore, impacts related to off-site traffic noise during Project operation would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

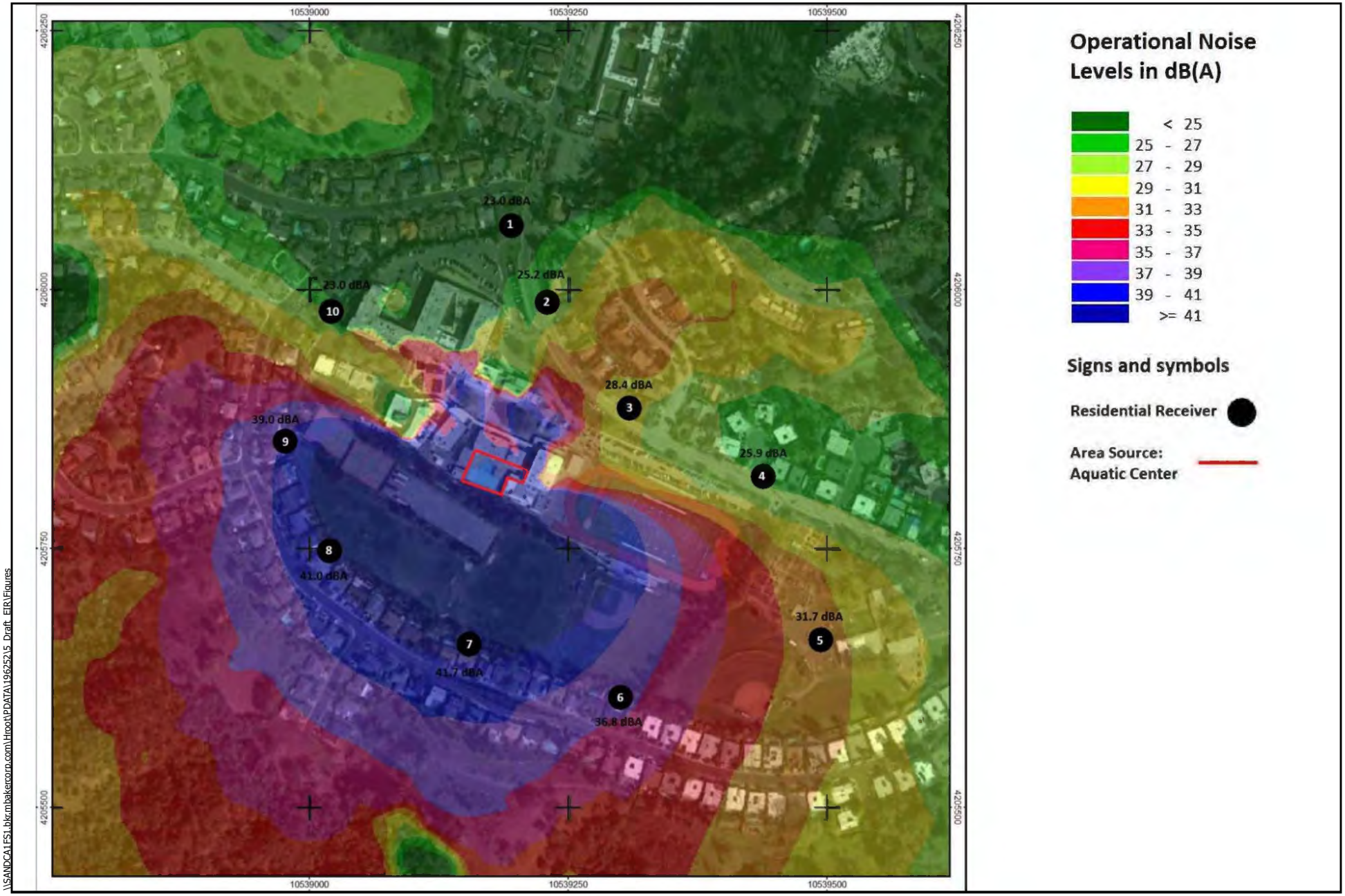
Impacts would be less than significant.

Table 4.9-8: Modeled Operational Noise Levels

Location	Modeled Operational Noise Attributed to the Project (dBA L_{eq})	Daytime/Nighttime Noise Standards (dBA L_{eq})[1]	Exceed Standard?
#1 Residence fronting Esmeyer Drive	23.0	60 / 50	No / No
#2 Residence fronting Nova Albion Way	25.2	60 / 50	No / No
#3 Residence fronting Nova Albion Way	28.4	60 / 50	No / No
#4 Residence fronting Nova Albion Way	25.9	60 / 50	No / No
#5 Miller Creek School District Office	31.7	60 / 50	No / No
#6 Residence fronting Devon Drive	36.8	60 / 50	No / No
#7 Residence fronting Devon Drive	41.7	60 / 50	No / No
#8 Residence fronting Devon Drive	41.0	60 / 50	No / No
#9 Residence fronting Devon Drive	39.0	60 / 50	No / No
#10 Residence fronting Devon Drive	23.0	60 / 50	No / No

Source: Refer to Appendix I, Noise Impact Assessment.

1. Due to the nature of the noise being produced at the aquatic center, noise levels are compared to the intermittent noise standards.



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Source: ECORP Consulting, Inc., December 2023.

On-site Operational Noise Levels

Figure 4.9-4

NOI-2 Would the project generate excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact.

Construction

Excessive ground-borne vibration impacts are typically associated with continuously occurring vibration levels. Increases in ground-borne vibration levels attributable to the Project would be primarily associated with short-term construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and the operations involved. Ground-borne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground-borne vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. According to construction-related information provided by the Project construction contractor, the use of pile drivers would not be employed. Ground-borne vibration levels associated with construction equipment are summarized in Table 4.9-9, Representative Vibration Source Levels for Construction Equipment.

Table 4.9-9: Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Hoe Ram	0.089
Jackhammer	0.035
Small Bulldozer/Tractor	0.003
Vibratory Roller	0.210

Source: Federal Highway Administration, *Construction Noise Handbook, 2017; Caltrans, Transportation and Construction Vibration Guidance Manual*, 2020.

According to FTA guidance, vibration levels for impact analysis should be measured from the center of the Project site. However, for a conservative analysis and since the Project is phased, the vibration impact analysis assumes the center of the Phase 2 construction area as the center of the Project site for all phases of the Project. This is because the Phase 2 construction area is located closest to the nearest off-site building, which is approximately 158 feet away from the center of the main school building. Table 4.9-10 shows the vibration levels at the nearest off-site building for each construction equipment listed in Table 4.9-9. As shown, under a worst-case scenario of operating heavy-duty construction equipment, vibration levels would not exceed the FTA's threshold of 0.3 PPV at the closest off-site building. Vibration caused by Project

construction activities would not be considered excessive. Thus, impacts would be less than significant.

Table 4.9-10: Construction Vibration Levels at 158 Feet

Receiver PPV Levels (in/sec): Bulldozer, Caisson Drilling, & Hoe Ram	Receiver PPV Levels (in/sec): Loaded Trucks	Receiver PPV Levels (in/sec): Jackhammer	Receiver PPV Levels (in/sec): Vibratory Roller	Peak Vibration	Threshold	Exceed Threshold?
0.005	0.004	0.002	0.013	0.013	0.3	No

Source: Refer to Appendix I, Noise Impact Assessment.

Operation

Project operations would not include the use of any stationary equipment that would create excessive vibration levels. Therefore, the Project would result in negligible ground-borne vibration impacts during operations, and no impact would occur.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would be less than significant.

4.9.5 Cumulative Impacts

The geographic scope for assessing cumulative noise and vibration impacts is the near vicinity of the Terra Linda High School campus. Noise and vibration dissipate with increased distance from the source; therefore, cumulative noise and vibration impacts would not be expected unless new sources of noise are located in close proximity to each other.

The District would be implementing approved campus improvements (see Section 2.3.1) during the same time as the construction of the proposed Project. The District will be completing the installation of an art studio and starting construction of photovoltaic solar system. Similar to the proposed Project, these campus improvements would comply with the City's construction noise standard and would include construction best management practices to reduce construction-related noise and vibration impacts. Accordingly, the combined effects of the Project and the other approved campus improvement projects would not result in cumulatively considerable impacts related to noise and vibration.

In Table 2-5, Related Cumulative Projects, the cumulative projects are located at distances of at least 0.4 miles from the proposed Project and are separated by the existing roadways, multiple blocks of buildings and/or residential developments, and topographic features such as hillsides. At these distances, and with the shielding provided by existing development and topography between construction sites, construction noise from the buildout of the proposed Project would

not be audible and vibration would not be perceptible. Therefore, there would be no potential for combined noise effects from construction of the proposed Project and the cumulative projects.

The cumulative projects involve the construction of land uses with primarily indoor uses. Therefore, the primary source of permanent noise from the cumulative projects would be HVAC systems, which would be subject to the noise limits specified in the SRMC. Compliance with the SRMC requirements would reduce potential cumulative permanent noise impacts to a less than significant level. None of the cumulative projects would have the potential to generate periodic increases in event noise, and therefore there would be no cumulative periodic noise impact.

The development of the cumulative projects would create mixed uses that would result in increased traffic along local roadways, which could increase traffic noise levels by 3 dBA. According to Caltrans's *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013), a doubling of traffic on a roadway would be likely to result in an increase of 3 dBA. Operation of the proposed Project is estimated to generate 92 additional daily vehicle trips, which would not result in a doubling of traffic on nearby roadways. Therefore, the buildout of the proposed Project would not make a cumulatively considerable contribution to the cumulative noise impact. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would not be cumulatively considerable.

4.10 RECREATION

This section assesses the potential for the Project to include recreational facilities, or require the construction or expansion of recreational facilities, that may cause adverse effects on the environment.

4.10.1 Regulatory Setting

There are no federal, state, or regional regulations related to recreational facilities to the Project.

4.10.2 Environmental Setting

Regional Setting

Recreational facilities exist throughout the region, including near the Project site. The County of Marin provides two region-serving parks in San Rafael: McInnis Park and Golf Center, located approximately 2.10 miles northeast of the campus, and McNears Beach, located approximately 5.5 miles east of the campus. China Camp State Park also serves the region and is located approximately 3.15 miles east of the campus. Additionally, the County of Marin manages and protects environmentally sensitive land under an Open Space District; the land occupied by the Open Space District is often used to accommodate low-impact recreational uses.[1] One such area, the Terra Linda-Sleepy Hollow Divide, includes Sorich Park and is located 350 feet south of the Terra Linda High School campus. It is separated from the campus by residential uses along Devon Drive. It should be noted that Sorich Park is within the jurisdiction of the Town of San Anselmo.

The City of San Rafael provides local parks and recreational facilities within City limits and unincorporated areas, including 4 community parks, 16 neighborhood parks, 9 pocket parks, and 10 special use parks. The parks and recreational facilities closest to the Terra Linda High School campus include Freitas Park, a neighborhood park located 0.45 miles to the northwest; Oliver Hartzell Park, a pocket park located 0.4 miles to the east; and Los Ranchitos, a neighborhood park located 1 mile to the east.

Schools operated by San Rafael City Schools also provide recreational opportunities for the community. The facilities are available for community use through the Civic Center Act.[2] Sun Valley Elementary School, approximately 1 mile south of the campus at 75 Happy Lane, and Venetia Valley K-8 School, located 1.25 miles east of the campus at 177 North San Pedro Road, are the closest District schools to the Project site. They include hardscape and softscape play areas, playground equipment, and sports fields.

Miller Creek School District, adjacent to Terra Linda High School at 380 Nova Albion Way, also has a baseball field available for community use via the Civic Center Act.

Project Site Setting

Existing recreational facilities on the Terra Linda High School campus include a track and field stadium (also used for football, lacrosse, and soccer), an outdoor swimming pool, a baseball field, a multipurpose field primarily used for soccer and discus and javelin throw grounds, six tennis courts, six basketball courts, a competitive gymnasium, and two physical education buildings.

1 County of Marin, *Marin Countywide Plan*, November 6, 2007.

2 California Education Code Section 38130.

These recreational facilities are also used by the community through the Civic Center Act when they are not being used by the school or District.

4.10.3 Methodology

Thresholds of Significance

The significance thresholds used to evaluate the impacts of the proposed Project related to recreation are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, a project would have a significant impact related to recreation if it would:

- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

The Appendix G significance criterion noted below was scoped out of the analysis for further consideration in the Initial Study (Appendix A-1); see Chapter 5, Other CEQA Considerations, of this Draft EIR.

- 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?

4.10.4 Impact Analysis

REC-1 Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less Than Significant Impact with Mitigation Incorporated. The proposed Project would entail reconstruction, modernization, and beautification of the existing recreational facilities on the campus, as well as developing new structures and site improvements. As detailed in Chapter 3, *Project Description*, the proposed Project would include the following recreational facility improvements:

- A reconstructed aquatic facility with an outdoor competition-level swimming pool and 264-seat grandstand;
- A reconstructed 10,000-square-foot building (Building H) to house the weight room, wrestling mat room, dance studio (used for competition-level cheerleading and includes a climbing wall), and pump room;
- Resurfaced track to an in-kind rubberized surface, retrofitted jump pit to include sand catches, and new track runoff;
- New artificial turf fields of approximately 200,000 square feet to replace existing (baseball and multiuse softball and soccer fields);
- A reconstructed shot put throw station;
- Reconstructed tennis courts; and

- Beautification of the stadium, which would include repurposing the existing natural turf areas with outdoor fitness equipment.

Other ancillary improvements would include new and/or renovated sports equipment/storage rooms, locker rooms and team rooms, video display scoreboards, pedestrian amenities such as walkways, ramps, and stairways, ticket booths, concessions, dugouts, bleachers, batting cages, outdoor fitness equipment, drinking fountains, restrooms, fencing, lighting, site furnishings, and landscaping.

The proposed reconstruction and modernization of the recreational facilities, as well as the expanded operations of the aquatic facility and southern turf fields, would result in changes to the environment. Their impacts, as analyzed as a part of the overall Project, are evaluated throughout this EIR. As discussed herein, any potentially significant impacts caused by the Project, including the proposed recreational facility improvements, would be mitigated to below significance, as summarized in Table ES-1, in the Executive Summary. Compliance with all mitigation measures would ensure that the impact of recreational facilities included as part of the proposed Project would be less than significant.

Mitigation Measures

To avoid the potentially significant environmental impacts caused by the Project's recreational improvements, the District shall implement Mitigation Measures AES-A, AQ-A, BIO-A, and BIO-B, as summarized in Table ES-1 of the Draft EIR.

Level of Significance After Mitigation

Implementation of Mitigation Measures AES-A, AQ-A, BIO-A, and BIO-B would ensure the potentially significant environmental impacts caused by the proposed Project's recreational improvements would be reduced to less than significant.

4.10.5 Cumulative Impacts

Similar to the proposed Project, the other District-sponsored projects discussed in Section 2.3.1 and related City-projects listed in Table 2-5 would be subject to environmental review, which would identify impacts resulting from construction or expansion of recreational facilities, if applicable, as well as measures to mitigate any potentially significant impacts. It is anticipated that mitigation measures or the payment of applicable development fees for the related projects, as appropriate, would reduce potentially significant environmental impacts associated with the construction or expansion of recreational facilities, or increased demand on existing facilities, to less than significant or to the extent feasible. As the proposed Project would not result in any significant environmental impacts, as mitigated, the Project would not substantially contribute to a significant cumulative environmental impact relative to recreational resources when considered with other related projects. Impacts would not be cumulatively considerable.

Mitigation Measures

The District shall implement Mitigation Measures AES-A, AQ-A, BIO-A, and BIO-B to reduce the proposed recreational facilities' potentially significant environmental impacts.

Level of Significance After Mitigation

Implementation of Mitigation Measures AES-A, AQ-A, BIO-A, and BIO-B would ensure the Project's contribution to cumulatively considerable environmental impacts are reduced to less than significant.

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4.11 TRANSPORTATION

This section evaluates the potential transportation impacts associated with implementation of the proposed Project. This section presents the applicable regulatory setting, environmental setting, methodology for determining potential impacts, analysis of the potential transportation impacts resulting from implementation of the proposed Project, proposed measures to mitigate any significant or potentially significant impacts if such impacts are identified, and an analysis of potential cumulative impacts. This section is based, in part, on the *Terra Linda High School Capital Improvements - Vehicle Miles Traveled (VMT) Memorandum*, prepared by Michael Baker International and dated October 17, 2023, and provided as Appendix J of this Draft EIR.

4.11.1 Regulatory Setting

Federal

Americans with Disabilities Act

Titles I, II, III, and IV of the Americans with Disabilities Act (ADA) have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination based on disability in “places of public accommodation” (businesses and nonprofit agencies that serve the public) and “commercial facilities” (other businesses). The regulation includes Appendix A to Part 36 (Standards for Accessible Design), which establishes minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility. The ADA requires public transit operators to meet its requirements. Transit facilities, intermodal centers, rail stations, and platforms must meet accessibility standards as set by the US Department of Transportation. Accessibility standards regulate paths of travel, bus stops and shelters, curb ramps, grade crossings, parking areas, passenger drop-off areas, platform edges, and others.

State

Senate Bill 743

Senate Bill (SB) 743, adopted in 2013 and effective as of July 2020, required the Governor’s Office of Planning and Research to develop new California Environmental Quality Act (CEQA) guidelines addressing transportation impact metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, “automobile delay, as described solely by LOS (level of service) or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any.”

The Governor’s Office of Planning and Research selected VMT as the preferred transportation impact metric and applied their discretion to recommend its use statewide, as amended under CEQA Guidelines Section 15064.3. The California Natural Resources Agency certified and adopted the amended CEQA Guidelines in December 2018. The amended CEQA Guidelines state that VMT is the most appropriate measure of transportation impacts and the provisions requiring the use of VMT apply statewide as of July 1, 2020. The adoption of VMT as the appropriate metric of transportation impacts reflects the stated intent of the legislation to “promote the reduction of greenhouse gas emissions, the development of multimodal networks, and a diversity of land uses.” Use of LOS alone as an impact criterion can result in many unintended consequences such as more sprawl, less walkability, more vehicle travel, and inefficient public transit. Use of VMT as an impact analysis metric helps to provide a more complete perspective

of the potential effects of land use and transportation decisions. CEQA Guidelines 15064.3(b) provides criteria for analyzing transportation impacts.

California Department of Transportation

The California Department of Transportation (Caltrans) is the state agency responsible for the design, construction, maintenance, and operation of the California State Highway System, as well as the segments of the Interstate Highway System that lie within California. Caltrans District 4 is responsible for the operation and maintenance of US Route 101 (US 101) in the Project area.

Caltrans provides uniform standards and specifications for all official traffic control devices, such as traffic signs, road surface markings, and traffic signals in California. The latest standards are provided in the California Manual of Uniform Traffic Control Devices (CA MUTCD), 2014 Revision 7 (effective March 10, 2023). Standards for traffic control for school areas are provided in Part 7 of the CA MUTCD.

Assembly Bill 1358, The Complete Streets Act

Assembly Bill 1358, the Complete Streets Act (Government Code Sections 65040.2 and 65302), was signed into law by Governor Arnold Schwarzenegger in September 2008. As of January 1, 2011, the law requires cities and counties, when updating the part of a local general plan that addresses roadways and traffic flows, to ensure that those plans account for the needs of all roadway users. Specifically, the legislation requires cities and counties to ensure that local roads and streets adequately accommodate the needs of bicyclists, pedestrians, and transit riders, as well as motorists.

At the same time, Caltrans, which administers transportation programming for the state, unveiled a revised version of Deputy Directive 64 (DD-64-R1 October 2008), an internal policy document that explicitly embraces Complete Streets as the policy covering all phases of state highway projects, from planning to construction to maintenance and repair.

Senate Bill 375

SB 375 requires metropolitan planning organizations to prepare a sustainable communities strategy (SCS) as part of their regional transportation plans (RTP). The SCS demonstrates how the region could meet its greenhouse gas emissions reduction targets through integrated land use, housing, and transportation planning. Specifically, the SCS must identify land use and transportation strategies that, combined with the RTP project list, will reduce greenhouse gas emissions from automobiles and light trucks in accordance with targets set by the California Air Resources Board.

Regional

Plan Bay Area 2050

Plan Bay Area 2050 is a state-mandated, integrated long-range transportation and land use plan. In the Bay Area, the Metropolitan Transportation Commission and the Association of Bay Area Governments are jointly responsible for developing and adopting an SCS that integrates transportation, land use, and housing to meet greenhouse gas reduction targets set by the California Air Resources Board. Key goals of the Plan Bay Area 2050 include addressing the Bay Area's inequities through improved affordability and lessened displacement risk, ensuring a robust economy, and protecting the environment for future generations.

Local

Pursuant to California Government Code Section 53097, a school district must comply with city and county ordinances regulating road improvements and conditions. Accordingly, the local regulations discussed below apply to the Project.

Transportation Authority of Marin Congestion Management Program

The Transportation Authority of Marin (TAM) funds transportation projects and programs that improve mobility, reduce congestion, and provide a transportation system with more options for those living, working, visiting, and traveling in Marin County. TAM is the designated congestion management agency for Marin County and is responsible for preparing a congestion management program (CMP) to fulfill the state legislative requirements of Propositions 111 and 116, approved in June 1990.

TAM's 2021 CMP update is the latest biennial update prepared under the state statute and is based on the goals and objectives of Plan Bay Area 2040.[1] The CMP monitors the County's local multimodal transportation networks' LOS on roadways, bicycle and pedestrian facilities, and transit services, and identifies improvements to the performance of these multimodal systems. The CMP consists of a system monitoring effort, performance measurement, and capital improvement plan for these systems. As required by state legislation, TAM maintains a travel demand model to forecast proposed changes to the transportation network.

TAM also administers the Marin County Safe Routes to Schools (SR2S) program, which works to relieve traffic congestion around schools by promoting alternatives to commuting to school, such as walking, biking, taking the bus, and carpooling. In addition, the program helps improve safety, promote a healthy lifestyle for youth, and enhance the sense of community in neighborhoods. The SR2S program does this through classroom education, special events, infrastructure improvements, a crossing guard program, and other strategies. The SR2S program has been in operation since 2000 and involves almost 60 schools, including Terra Linda High School.

City of San Rafael General Plan Mobility Element

The Mobility Element identifies the general location of existing and proposed major thoroughfares, transportation routes, terminals, airports, and ports in the City of San Rafael. The Mobility Element also correlates plans for these facilities with the Land Use Element. As required by Assembly Bill 1358, the Mobility Element must also plan for a "balanced, multimodal transportation network that meets the needs of all users of streets, roads and highways." These users include bicyclists and pedestrians, transit riders, children, seniors, movers of commercial goods, and persons with disabilities, among others. The Mobility Element begins with a "mobility profile" of the City of San Rafael based on census data and RTPs, including a general description of the City's transportation system as well as the travel characteristics of the City's households and workers.

The City of San Rafael is a Responsible Agency for off-site circulation improvements, including transit, roadway, bicycle, and pedestrian facilities. Relevant policies and programs set forth in the City's General Plan that are executed by the City and that may affect the Project are as follows:

- **Policy M-3.2: Using VMT in Environmental Review.** Require an analysis of projected Vehicle Miles Traveled (VMT) as part of the environmental review process for projects with the potential to significantly increase VMT. As appropriate, this shall include

[1] The recently adopted Plan Bay Area 2050 was in draft form when the 2021 CMP was underway.

transportation projects and land use/policy plans as well as proposed development projects.

- **Program M-3.2A: Screening Criteria for VMT Analysis.** Adopt and maintain screening criteria for different land uses and project types to determine when a VMT analysis is required as part of the environmental review process. Screening criteria should be revisited over time to ensure that they are appropriate. The criteria should include exemptions for projects with substantial VMT benefits, such as mixed use and infill development in Downtown San Rafael.

- **Program M-3.2B: Thresholds for Determining a Significant VMT Impact.** Adopt and maintain thresholds to determine if a VMT impact may be considered "significant" under the California Environmental Quality Act (CEQA).

- **Program M-3.2C: Mitigation Measures for VMT Impacts.** Develop and implement mitigation measures that can be applied to projects with potentially significant VMT impacts in order to reduce those impacts to less than significant levels.

- **Program M-3.3B: Support for TDM.[2]** Work cooperatively with governmental agencies, non-profits, businesses, institutions, schools, and neighborhoods to provide and support TDM programs.

- **Policy M-5.1: Traffic Calming.** Protect residential areas from the effects of speeding traffic from outside the neighborhood through appropriate traffic calming solutions such as speed humps, bulbouts, speed limits, stop signs, and chicanes. Traffic calming measures shall not conflict with emergency response capabilities.

- **Program M-5.1A: Traffic Calming Program.** Maintain a neighborhood traffic calming program under the direction of the City Traffic Engineer and seek funding for its implementation. Ensure neighborhood participation in the development and evaluation of potential traffic calming solutions.

- **Policy M-5.5: School-Related Traffic.** Actively encourage public and private schools to reduce congestion caused by commuting students and staff through improved provisions for pick-up and drop-off, parking management, staggered start and end times, and trip reduction.

- **Program M-5.5A: School Transportation.** Implement measures to improve the safety of students walking, bicycling, or taking the bus to school. Examples include pedestrian crossing enhancements, transit passes or reduced rates for students, locating transit stops near school campuses, supporting increased funding for school buses and crossing guards, and staggering school hours.

- **Policy M-6.1: Encouraging Walking and Cycling.** Wherever feasible, encourage walking and cycling as the travel mode of choice for short trips, such as trips to school, parks, transit stops, and neighborhood services.

[2] TDM stands for Transportation Demand Management.

- **Program M-6.2D: Safe Routes Programs.** Work collaboratively with local schools to implement Safe Routes to School programs.

City of San Rafael Transportation Analysis Guidelines

The City of San Rafael Transportation Analysis Guidelines provide a technical approach for projects that could have transportation impacts (adverse or beneficial) on the City's transportation system and services. The guidelines define how to evaluate a project's effect on transportation access and circulation for all travel modes. The analysis may focus solely on the project site and access points and may also include an evaluation of the nearby transportation system to ensure infrastructure supports the traveling public. The Transportation Analysis Guidelines incorporate SB 743 and subsequent changes to the CEQA Guidelines where vehicle delay is replaced with VMT.

4.11.2 Environmental Setting

Roadways

The City of San Rafael includes 245 miles of City streets, which serve as the primary conduit for most modes of travel. The location and layout of development within the City have resulted in a primarily east-west roadway network. The City's roads are organized using a hierarchical system consisting of highways, major arterials, minor arterials, collectors, and local streets. These classifications define the functional and operational characteristics of each roadway and are used as a tool for planning and design.[3] Descriptions of the roadways within the Project area are presented below.

- **US 101** is a Caltrans-operated facility that provides regional access to San Rafael. US 101 extends from Washington State to Los Angeles and is a major north-south Bay Area freeway. US 101 is approximately 0.75 miles east of the campus. It has four lanes in each direction in San Rafael and carries approximately 202,000 vehicles per day.[4]

- **Manuel T. Freitas Parkway** is a major four-lane, east-west arterial roadway, located approximately 0.75 miles north of the campus. The roadway begins off the exit of US 101 and terminates at the Mission Pass Path of Terra Linda Sleepy Hollow Ridge. The roadway contains a physical divider with two lanes on each side, except in areas with intersections. Manuel T. Freitas Parkway contains a Class II bicycle facility.[5]

- **Las Gallinas Avenue** is a two-lane, major arterial roadway that begins at the intersection of Northgate Drive, east of the campus, and terminates in the unincorporated community of Marinwood, north of San Rafael and the campus. South of Northgate Drive, Las Gallinas Avenue transitions to Los Ranchitos Road. The roadway mostly contains a physical divider with one lane on each side, except in areas with intersections. Las Gallinas Avenue contains a Class II (dedicated on-street lanes) bicycle facility.[6]

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3 City of San Rafael, General Plan – Mobility Element, 2021.

4 San Rafael General Plan Mobility Element.

5 Class I bicycle facilities are separated from automobile traffic for the exclusive use of bicyclists. Class II bicycle facilities provide a restricted right-of-way and are designated for use by bicyclists with a striped lane on the street. Class III bicycle facilities require bicyclists to share the right-of-way with motor vehicles; City of San Rafael, San Rafael General Plan 2040 & Downtown Precise Plan Draft EIR, 2021.

6 San Rafael General Plan/Downtown EIR.

- **Nova Albion Way** is a two-lane local road located between Northgate Drive, northeast of the campus, and Las Gallinas Avenue, north of the campus. The campus is bounded by Nova Albion Way on the north, and the main entrance of the campus is from Nova Albion Way. Nova Albion Way contains a Class III bicycle facility.[7] School area traffic control devices, including yellow roadway markings, crosswalks, and signage, exist along Nova Albion Way, notifying drivers of their approach to Terra Linda High School.

- **Northgate Drive** is a two-lane local road located approximately 0.4 miles northeast of the campus, between Los Ranchitos Road and Manuel T. Freitas Parkway. Northgate Drive contains a Class II bicycle facility.[8]

- **Golden Hinde Boulevard** is a two-lane local road located east of the campus, between Nova Albion Way and Los Ranchitos Road. Golden Hinde Boulevard contains a Class III bicycle facility.[9]

- **Devon Drive** is a two-lane local road that runs through the residential community south of the campus. It begins at the intersection of Golden Hinde Boulevard and terminates at Esmeyer Drive. Pedestrian access to the south side of the campus is available at the Devon Drive and Tamarack Drive intersection, which is designed with school crosswalks and roadway markings, and signage.

- **Esmeyer Drive** is a two-lane local road that runs through the residential community north and northwest of the campus. It begins at the intersection at Nova Albion Way and terminates at a cul-de-sac approximately 0.7 miles northwest of the campus.

Pedestrian and Bicycle Facilities

Sidewalks exist on most City roadways. Most signalized intersections have standard crosswalk treatments, which consist of two 12-inch-wide white stripes that delineate the sides of the pedestrian walking area. Several intersections have high visibility crosswalks that are marked using the continental pattern of crosswalk striping. Within some areas, especially in older areas of the City, sidewalks are nonexistent or discontinuous.[10] Within the Project area, the local roads provide sidewalks, including on both sides of Nova Albion Way, Golden Hinde Boulevard, Devon Drive, and Esmeyer Drive. Stop signs and/or crosswalks for pedestrians are provided at most intersections of these local roads.

The City of San Rafael has a limited number of Class I or Class II facilities in the existing bicycle network. Most existing facilities are designated as Class III where bicyclists and automobiles share a travel lane. There are no existing Class IV (cycle track) facilities within the City. As discussed above, parts of Manuel T. Freitas Parkway, Las Gallinas Avenue, and Northgate Drive contain a Class II bicycle facility, and Nova Albion Way and Golden Hinde Boulevard contain a Class III bicycle facility. The City of San Rafael General Plan states that the City proposes to

7 San Rafael General Plan/Downtown EIR.

8 San Rafael General Plan/Downtown EIR.

9 San Rafael General Plan/Downtown EIR.

10 San Rafael General Plan/Downtown EIR.

extend Class I and Class II bicycle facilities on Manuel T. Freitas Parkway, Las Gallinas Avenue, and Los Ranchitos Road.[11]

The Terra Linda High School campus contains pedestrian and bicycle facilities, including a total of 146 bike parking spaces. Recently completed improvements at the campus included the addition of significant bicycle infrastructure, including a new bike path along the entire frontage of the campus that extends to the closest intersection on either end of Nova Albion Way, as well as the addition of approximately 100 bike parking spots. The sidewalk along the campus frontage was also recently replaced with the installation of new flatwork, and pedestrian pathways were installed over a significant portion of the campus.

Public Transit

The City of San Rafael's transit network includes rail service, regional bus service, and local bus service. The Sonoma-Marin Area Rail Transit provides passenger rail service in Marin and Sonoma counties. The Golden Gate Bridge and Highway Transportation District directly operates two fixed-route transit services: Golden Gate Transit regional bus service and Golden Gate Ferry. Marin Transit provides a total of 29 fixed routes within Marin County, including nine local routes, six community shuttle routes, eleven supplemental school routes, two rural fixed routes, and one Muir Woods shuttle service.[12]

Within the Project vicinity, US 101 is served by Golden Gate Transit's Bus Routes 101 and 154.[13] Marin Transit's Bus Routes 57 and 245 begin in the City of Novato, and, within the Project area, run along Manuel T. Freitas Parkway, Montecillo Road, Nova Albion Way, and Las Gallinas Avenue.[14] The Project vicinity is also served by the Sonoma-Marin Area Rail Transit Marin Civic Center Station, located approximately 0.8 miles northeast of the Project site.

Parking

Street parking is available in the neighborhood surrounding the Project site. The south side of Nova Albion Way, adjacent to the campus, includes approximately 730 linear feet of unmarked curb space. Vehicle lengths vary from 10 feet for a subcompact vehicle (e.g., Mini Cooper) to 20 feet for a truck. Using a distance of 25 feet to account for vehicle length and space between vehicles, 29 vehicles could park on the south side of Nova Albion Way. Most of the curb on the north side of Nova Albion Way, across the campus, is painted red, and no parking is allowed in these areas. The red-painted curb also improves traffic circulation on Nova Albion Way. Street parking is available elsewhere on Nova Albion Way, east and west of the campus, as well as along Golden Hinde Boulevard, Devon Drive, and Esmeyer Drive.

The campus is served by three off-street parking lots with a total of 299 stalls. Lot A in the northwest corner of the campus has 167 stalls and is used by staff, visitors, and the District Office; Lot B in the northeast portion of the campus has 86 stalls and is used by students; and Lot C in the southwest area has 46 stalls and is used by staff and visitors.

[11] San Rafael General Plan/Downtown EIR.

[12] San Rafael General Plan/Downtown EIR.

[13] Golden Gate Transit, n.d., Marin County Routes.

[14] Marin Transit, n.d., Marin Transit System Map.

Safe Routes to School

Terra Linda High School participates in TAM's SR2S program. Data collected over a three-day period (Tuesday, Wednesday, and Thursday) in May 2022 for the Marin County SR2S Evaluation indicated that 60 percent of students used a family vehicle to access the campus, 13 percent walked, 4 percent biked, 1 percent rode the school bus, 7 percent used public transit, and 15 percent carpooled.[15]

4.11.3 Methodology

The proposed Project would expand operations at the Project site with the new artificial turf softball, baseball, and soccer fields. To determine if the expanded operations would trigger a traffic impact analysis or quantified VMT analysis, the transportation assessment uses trip generation rates from the Institute of Transportation Engineers' *Trip Generation Manual*, 11th edition. The analysis applies a public park land use classification, versus a high school land use classification to project the increase in vehicle trips. Selection of the public park land use classification was based on the expanded operations occurring outside typical school hours and as a matter of capturing the most trips during the PM peak hour.

Trip Generation Screening

The City of San Rafael Transportation Analysis Guidelines were used as the primary resource in determining the level of transportation evaluation required for the proposed Project. According to the guidelines, projects that generate fewer than 110 daily vehicle trips are not required to prepare a transportation impact analysis, local traffic analysis, or quantified VMT analysis.

VMT Screening Criteria

The City of San Rafael Transportation Analysis Guidelines state that specific land use projects that meet at least one or more of the VMT screening criteria are assumed to result in a less-than-significant transportation impact under CEQA and are exempt from a quantitative VMT assessment. The VMT screening criteria are as follows:

1) Transit Priority Area: Projects located within 0.5-mile walkshed around major transit stops (i.e., the Downtown San Rafael and Civic Center SMART Stations) in San Rafael.

2) Affordable Housing: 100% restricted affordable residential projects in infill locations (i.e., development in unused and underutilized lands within existing development patterns).

3) Small Projects: Projects defined as generating 110 or fewer average daily vehicle trips, absent substantial evidence indicating that a project would generate a potentially significant level of VMT.

4) Locally Serving Public Facility: Locally serving public facilities that encompass government, civic, cultural, health, and infrastructure uses and activities which contribute to and support community needs. Locally serving public facilities include police stations, fire stations, passive parks, branch libraries, community centers, public utilities, and neighborhood public schools.

[15] Transportation Authority of Marin, Marin County Safe Routes to Schools Program Evaluation, 2023, https://www.saferoutestoschools.org/wp-content/uploads/2023/08/SR2S-EVAL-REPORT-MAY-31-23.pdf.

5) Neighborhood-Serving Retail Project: Neighborhood-serving retail projects that are less than 50,000 square feet, which serve the immediate neighborhoods. Examples include dry cleaners, coffee shops, convenience markets, tutoring centers, and daycare centers.

6) Residential and Office Projects in Low VMT Area: Projects located within a low VMT area for its land use. Based on information from the TAM model, certain areas of San Rafael have lower rates of VMT generation than others. In existing locations where VMT per capita is below the thresholds, projects may be screened from further VMT analysis.

Thresholds of Significance

The significance thresholds used to evaluate the impacts of the proposed Project related to transportation are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, a project would have a significant impact related to transportation if it would:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit roadway, bicycle and pedestrian facilities; or

- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

The Appendix G significance criteria noted below were scoped out of the analysis for further consideration in the Initial Study (Appendix A-1); see Chapter 5, Other CEQA Considerations, of this Draft EIR.

- Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

- Would the project result in inadequate emergency access?

4.11.4 Impact Analysis

TRA-1 Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit roadway, bicycle and pedestrian facilities?

Less Than Significant Impact. The Project would improve existing school facilities on the Terra Linda High School campus and would have no direct effects on off-site transportation facilities. Specifically, the proposed phased improvements would implement the following features related to roadway and pedestrian facilities:

- **Phase 1**

    - A new ADA-compliant pathway to improve access between the northern (lower) campus and the southern (upper) campus;

    - A new stairway adjacent to the proposed ADA ramp to connect the northern and southern portions of the campus;

    - A new ADA-compliant pathway between the track/football field and the practice gym (Building K) ;

- A new vehicle ramp to provide improved vehicular access to the southern half of the campus;
- A new fire access lane that complies with standards from the local fire department.

- **Phase 3**
  - New ADA-compliant pathways at the multipurpose fields and tennis courts.

The Project would also result in expanded use of the school facilities, including the number of school-sponsored aquatic events; all events related to the Terra Linda High School softball program that are currently held at the Miller Creek District Office ballfield; and community rental of the modernized facilities. The impact analysis below evaluates the potential for the Project's expanded operations to conflict with applicable plans, programs, ordinances, and policies established in the Mobility Element of the City's General Plan, TAM's 2021 CMP, and the City of San Rafael Transportation Analysis Guidelines.

City of San Rafael General Plan Mobility Element

The goals of the Mobility Element, along with a detailed discussion of the Project's consistency with each goal, are provided in Table 4.11-1, below. As shown in the table, the Project would be consistent with the applicable goals of the Mobility Element.

Table 4.11-1: Project Consistency with City of San Rafael General Plan Mobility Element

Goal	Project Consistency Analysis
Goal M-1 (Regional Leadership in Mobility): Take a leadership role in developing regional transportation solutions.	**Not Applicable**. This goal is directed towards the City of San Rafael's role and responsibility in developing regional transportation policies and, therefore, it is not applicable to the Project.
Goal M-2 (Improved Transportation Efficiency and Access): Sustain an efficient, cost-effective transportation network that continuously improves mobility and accessibility for all users.	**Consistent**. The Project would result in less than significant impacts related to VMT, as further discussed under Impact TRA-2 below, and would not directly affect existing off-site transportation facilities. Nevertheless, the District will continue to work with the City to ensure safe and complete streets and improved mobility along the streets surrounding the campus for students and the surrounding community. Moreover, Phase 1 of the Project would reroute the existing fire lane (located generally east of the pool) to maintain emergency access. Thus, the Project would sustain the efficiency of the existing transportation network.
Goal M-3 (Cleaner Transportation): Coordinate transportation, land use, community design, and economic development decisions in a way that reduces greenhouse gas emissions, air and water pollution, noise, and other environmental impacts related to transportation.	**Consistent**. This objective is not directly applicable to the Project because it applies to the City of San Rafael's role and responsibility in transportation coordination. Nevertheless, the Project would maintain an existing campus in order to serve local high school students. Additionally, the campus would continue to promote the SR2S program to encourage students to walk, bike, carpool, and take public transit to school in an effort to reduce environmental impacts caused by transportation.

Table 4.11-1, continued

Goal	Project Consistency Analysis
Goal M-4 (High-Quality, Affordable Public Transit): Support accessible, reliable, cost-effective transit services that provide a convenient, affordable, efficient alternative to driving.	**Not Applicable**. This objective is directed towards the City of San Rafael's role and responsibility in providing public transit services, and, therefore, it is not applicable to the Project.
Goal M-5 (Safe, Attractive Streets that Connect the Community): Provide a transportation system that minimizes negative impacts on neighborhoods while maximizing access and connectivity in the community.	**Consistent**. The Project would result in less than significant impacts related to VMT, and thus, would not result in negative impacts on surrounding neighborhoods. Additionally, existing vehicle and pedestrian access points would be maintained and improved with implementation of the proposed phased improvements. Furthermore, no off-site improvements to surrounding roadways would be implemented as part of the Project, and existing connectivity would be maintained.
Goal 6 (Safe Walking and Cycling): Encourage walking and bicycling as safe, pleasurable, healthful ways to travel.	**Consistent**. The Project would improve pedestrian facilities on the campus. Under Phase 1, a new ADA-compliant pathway would be installed to improve access between the lower and upper campus; a new stairway would be installed adjacent to the proposed ADA ramp; and new concrete flatwork would be installed between the track/football field and Building K to bring the entire area into ADA compliance. Under Phase 3, new ADA-compliant pathways would be installed at the multipurpose fields and tennis courts. These improvements would provide better access to the southern portion of the campus, which is not as accessible currently or has narrow walkways that are cracked from underground roots. Additionally, the Project would not affect the existing SR2S program, which encourages students to walk, bike, carpool, and bus to school.
Goal 7 (Well Managed Parking): Manage parking in a way that meets resident, business, and visitor needs while supporting the City's goal of a more sustainable transportation system.	**Not Applicable**. This objective is directed towards the City of San Rafael's role and responsibility in managing parking, and, therefore, it is not applicable to the Project.

Source: City of San Rafael, General Plan – Mobility Element, 2021.

Transportation Authority of Marin Congestion Management Program

The CMP is required to be consistent with the goals and objectives established in the region's applicable long-range RTP. As discussed in Section 4.11.1, Regulatory Setting, TAM's 2021 CMP update is based on the goals and objectives of Plan Bay Area 2040. The goals that are applicable to the Project, along with a detailed discussion of the Project's consistency with each, are provided in Table 4.11-2, below. As shown, the Project would be consistent with the applicable goals of Plan Bay Area 2040, and accordingly, would also be consistent with the goals of the TAM's 2021 CMP Update.

Table 4.11-2: Project Consistency with Plan Bay Area 2040

Goal	Project Consistency Analysis
Transportation System Effectiveness (Target 11): Increase non-auto mode share.	**Consistent.** Non-auto mode share includes public transit, school bus transit, carpooling, walking, and biking. The Project would include ADA-compliant improvements throughout the campus and would improve pedestrian paths for students, staff, and visitors. Specifically, as shown in Figure 3-5, new ADA-compliant paths would be installed between the lower and upper campus, new concrete flatwork would be installed between the track/football field and Building K to bring the entire area into ADA compliance, and new ADA-compliant paths would be installed at the modernized multipurpose fields and tennis courts. Additionally, the campus would continue to participate in the SR2S program, which encourages non-auto modes to school, and the Project would not affect this program.
Transportation System Effectiveness (Target 12): Reduce vehicle operating and maintenance costs due to pavement conditions.	**Not Applicable.** This goal is directed towards the Metropolitan Transportation Commission and the Association of Bay Area Governments' role and responsibility in managing pavement conditions, and, therefore, it is not applicable to the Project.
Transportation System Effectiveness (Target 13): Reduce per-rider transit delay due to aged infrastructure.	**Not Applicable.** This goal is directed towards the Metropolitan Transportation Commission and the Association of Bay Area Governments' role and responsibility in improving aged transit infrastructure, and, therefore, it is not applicable to the Project.

Source: Metropolitan Transportation Commission and Association of Bay Area Governments, *Plan Bay Area 2040,* 2017.

City of San Rafael Transportation Analysis Guidelines

The Transportation Analysis Guidelines support the goals of the City's Mobility Element of the General Plan by evaluating new projects against the policies of the General Plan and other relevant documents. It provides CEQA thresholds of significance to analyze whether a project would conflict with a program, plan, ordinance, or policy addressing the circulation system. For environmental analysis, the guidelines also incorporate SB 743 and subsequent changes to CEQA Guidelines where vehicle delay is replaced with VMT, which is discussed below, under Impact TRA-2.

Roadway System

The Transportation Analysis Guidelines provide that a project would create a significant impact related to the roadway system if any of the following criteria are met:

1. At unsignalized intersections, the project results in any of the traffic signal warrants included in the CA MUTCD to be satisfied, or for a location where any of the warrants are satisfied prior to the project, the project increases overall travel through the intersection by more than 1 percent.[16]

[16] A warrant is a condition that an intersection must meet to justify a signal installation.

2. The project creates the potential for excessive vehicle queue spillback that could periodically block or interfere with pedestrian, bicycle or transit facilities.

Operation

The Project would not increase the enrollment capacity at Terra Linda High School and result in an increase in daily transportation effects associated with normal school operations on the roadway system. However, the Project would expand after-school events at the aquatic facility and southern turf fields.

Aquatic Programs. The new aquatic facility would be available for additional championship aquatic events that the school cannot currently offer, due to its irregular and smaller pool size. These events would be scheduled outside of the standard school hours during the weekdays and on weekends during the school year. Trips associated with these events would not conflict with existing school traffic or substantially affect the local neighboring streets during typical AM and PM peak hours.

Softball Program. The proposed relocation of the softball program back to the Terra Linda High School campus from the adjacent Miller Creek School District Office (380 Nova Albion Way) would not generate new vehicle trips. Most students currently walk to the adjacent ballfield for practices and games. Those who drive would no longer need to. Spectators attending practices and games would now drive to the Terra Linda High School campus, instead of to Miller Creek School District. No new trips would be generated by relocating the softball program back to the campus. Transportation impacts would be de minimis.

Community Use of Proposed Modernized Facilities. The Project would increase community rental of the modernized facilities. Similar to existing conditions, community use would occur when the school is not using the facilities during the week, weekends, and school breaks. During the school week, they would typically be rented after the school day, when most students have departed the campus and there is available parking on the campus. Although the rental frequency would increase, the number of attendees per event (and consequently the vehicle trips generated by the attendees) of the rented facility would be similar to that of the existing rental groups. Moreover, the additional rentals would not generate more peak hour vehicle trips than the underlying school use. Therefore, vehicle trips generated by the increased rental of any of the modernized facilities would be less than significant. Nevertheless, for the purpose of conducting a conservative analysis to ensure potential transportation impacts would be mitigated by the Project, it is assumed the proposed artificial turf fields would be available for use like a community park. Under this worst-case assumption, using the Institute of Transportation Engineers' *Trip Generation Manual* for Public Park use, the potential expanded use of the artificial fields would generate 92 additional daily vehicle trips with 0 AM peak hour trips and 23 new PM peak hour trips, as shown in Table 4.11-3.

Table 4.11-3: Project Trip Generation Summary

Land Use	Intensity	Daily Trips	AM Peak Hour Rate Total	AM Peak Hour Rate In : Out	PM Peak Hour Rate Total	PM Peak Hour Rate In : Out
Public Park	5 Acres	92 trips	0	0 : 0	23	13 : 10

Source: Terra Linda High School Capital Improvements - Vehicle Miles Traveled Memorandum.

As stated in the Transportation Analysis Guidelines, projects that generate less than 110 daily vehicle trips are not required to prepare a transportation impact analysis or local traffic analysis, and transportation impacts are considered de minimis. Accordingly, as the potential increased use of the artificial turf fields would not exceed 110 daily trips, a Project-specific transportation impact analysis was not conducted. The additional trips generated by the expanded use of the artificial turf fields would not result in the evaluation of traffic signal warrants under the CA MUTCD or cause excessive vehicle queue spillback that would block or interfere with pedestrian bicycle and transit facilities. Therefore, transportation impacts would be less than significant.

Construction

As provided in Chapter 3, Project Description, construction would occur over a 5.5-year period and the construction staging and laydown areas would occur mostly within the interior of the campus and away from the surrounding roadways. The construction staging area for Phase 1 would be in the basketball courts; Phase 2 construction staging would occur in the landscaped area and parking lot (approximately 30 stalls) adjacent to Buildings A and G; and Phase 3 construction staging would be in the basketball courts, multipurpose field, and parking lot north of the tennis courts (approximately 12 stalls). Construction access to the campus would mainly be via the northern driveway in Lot A to access the proposed staging areas. However, improvements at and surrounding the track and field may result in the use of Lot B access from the eastern perimeter of the campus. Regardless, construction vehicles and staging would occur on the campus and would not be on the surrounding roadways.

Construction deliveries would occur outside the morning and afternoon bells to avoid conflicts with the start and end of the school day. Table 4.11-4 shows the anticipated daily vehicle trips based on the proposed construction schedule and activities. The number of trips is conservative and accounts for workers, vendors, and hauling, if required, throughout the construction workday, between 7:00 AM and 6:00 PM, Monday through Friday, and 9:00 AM to 6:00 PM on Saturdays.

Table 4.11-4: Construction Trips

Construction Phase	Daily Worker Trips	Daily Vendor Trips	Daily Haul Trips	Total Daily Construction Trips
Phase 1: Demolition	13	0	14	27
Phase 1: Site Preparation	3	0	0	3
Phase 1: Building Construction, Paving, and Painting (Combined)	36	6	0	42
Phase 2: Demolition	13	0	2	15
Phase 2: Building Construction	10	4	0	14
Phase 3: Demolition	10	0	0	10
Phase 3: Site Preparation	13	0	93	106
Phase 3: Grading	13	0	46	59
Phase 3: Building Construction and Paving (Combined)	20	1	0	21

Source: CalEEMod Version 2016.3.1.

As shown in Table 4.11-4, the highest number of trips would occur during the site preparation phase in Phase 3, with a maximum of 106 daily trips. This number is less than the Transportation Analysis Guidelines' threshold of 110 daily vehicle trips, and thus, the construction transportation impacts are also considered de minimis. Since the Project's construction trips would not exceed established thresholds, construction activities would not result in the evaluation of traffic signal warrants under the Transportation Analysis Guidelines or cause excessive vehicle queue spillback that would block or interfere with off-site transportation facilities.

Transit System

Neither the construction nor operation of the proposed phased improvements would directly impact transit facilities. All improvements would occur on-site, and as discussed above, construction staging and laydown would also occur within the boundaries of the campus. Implementation of the Project would not interfere with existing transit facilities or preclude the construction of planned transit facilities.

Bicycle and Pedestrian Systems

In coordination with the City, the District improved the bike lane and sidewalk on the south side of Nova Albion Way, adjacent to the campus in 2022. The improved systems separate pedestrians from bicyclists and vehicles accessing curbside parking on the south side of the street. The improved sidewalk also meets ADA requirements. The Project would not directly disrupt or interfere with the existing bike lane and sidewalks adjacent to the campus or the bicycle and pedestrian facilities elsewhere. Implementation of the Project would not result in inconsistencies with the City's adopted bicycle and pedestrian system plans, guidelines, policies, or standards.

The San Rafael Transportation Analysis Guidelines further discuss cross-referencing with the Mobility Deficiency Criteria of the Guidelines, as presented in Table 4.11-5.

Table 4.11-5: Project Consistency with the Mobility Deficiency Criteria of the San Rafael Transportation Analysis Guidelines

Deficiency Criteria	Project Deficiency Analysis
Parking. Project increases off-site parking demand above a level required by the City Zoning Code or estimated demand.	**Not Deficient.** The Project would not increase the enrollment capacity at the campus, and therefore, would not increase daily transportation impacts associated with typical school operations related to off-site parking. The Project would increase the number of events held at the aquatic facility and southern turf fields. However, these events would be similar to those currently held on the campus, as the school already holds practices, games, competitions, and tournaments, as well as community-sponsored uses. The additional events would occur outside of the standard school hours and on weekends. The Project would not increase the number of spectators at the new events, which could increase the parking demand. Therefore, parking for the increased number of events would be accommodated with the existing on-site parking spaces, and the Project would not generate an increase in off-site parking demand. The Project proposes construction laydown and staging in parking areas of the campus. The construction laydown under Phase 2 would result in the loss of 30 parking spaces in the lot north of Building A. Phase 3 would result in the loss of 12 parking spaces, immediately north of the tennis courts. However, the loss of parking would be temporary, occurring mostly during the summer months and the beginning of the school year if classroom improvements under Phase 2 cannot all be completed during the summer. Construction effects would not result in the permanent loss of off-site parking.
On-Site Circulation. Project designs for on-street circulation, access, and parking fail to meet City design guidelines. Where City standards are not defined, industry standards (Highway Design Manual, MUTCD, etc.) should be referenced, as appropriate. Failure to provide adequate access for service and delivery trucks on-site, including access to loading areas. Project will result in a hazard or potentially unsafe conditions without improvements.	**Not Deficient.** The Project would not directly impact the City's transit facilities. All proposed improvements, as well as construction staging and laydown, would occur on-site. Implementation of the Project would not interfere with the City's existing on-street circulation, access, and parking. Further, because the Project would result in ADA-compliant pathway improvements and reroute the existing fire lane to maintain emergency access, the Project would not increase safety hazards.

Table 4.11-5, continued

Deficiency Criteria	Project Deficiency Analysis
Pedestrian Facilities. Project fails to provide safe and accessible pedestrian connections between project buildings and adjacent streets, trails, and transit facilities. Project adds trips to an existing facility along the project frontage that does not meet current pedestrian design standards.	**Not Deficient.** The Project would construct safe, ADA-compliant pedestrian paths throughout the campus for students, staff, and visitors. New ADA- compliant paths would be installed between the lower and upper campus; new ADA-compliant paths would be installed at the modernized multipurpose fields and tennis courts; and new concrete flatwork would be installed between the track/football field and Building K to bring the entire area into ADA compliance and to create a grand entrance into the outdoor athletic facilities from Nova Albion Way. The school frontage presently meets current pedestrian design and ADA standards. Accordingly, the Project would not add pedestrian trips to a location with substandard pedestrian facilities.
Bicycle Facilities. Project disrupts existing or planned bicycle facilities or is otherwise inconsistent with the Bicycle Master Plan or future plans. Project adds bicycle trips along project frontage to an existing facility that does not meet current bicycle design standards.	**Not Deficient.** The frontage of Terra Linda High School along Nova Albion includes a bike path that meets current bicycle design standards. The Project would not involve changes to the existing bicycle facilities at Terra Linda High School, along the frontage of the campus, or within the vicinity of the Project area. The Project would not increase the enrollment capacity at the campus and therefore would not result in an increase in bicycle trips over existing conditions. Additionally, the Project would not add bicycle trips to a location with substandard bicycle facilities.
Transit. Project disrupts existing or planned transit facilities and services or conflicts with City adopted plans, guidelines, policies, or standards.	**Not Deficient.** The Project would not involve off-site changes to the City's transit facilities. As discussed under Impact TRA-1, the Project would not conflict with the City's adopted plans, guidelines, policies, or standards.
TDM Program. A project does not comply with the City's Trip Reduction Ordinance.	**Not Deficient.** The City's Trip Reduction Ordinance applies to "employers within the City with 100 or more employees at an individual work site." The Terra Linda High School campus includes 59 teaching positions.[17] Assuming the campus employs another 25 administrative positions and student support services (e.g., counselors, librarian, nurse, and janitorial staff), there would be 84 employees at the campus. Therefore, the City's Trip Reduction Ordinance is not applicable to the Project.

[17] Terra Linda High School, 2021-2022 School Accountability Report Card (Published During the 2022-2023 School Year). https://drive.google.com/file/d/1r3c6pyUwr9OMGoTws47O4VuYzg_tgGhG/view.

Table 4.11-5, continued

Deficiency Criteria	Project Deficiency Analysis
Heavy Vehicles (Trucks and Buses). A project fails to provide adequate accommodation of forecasted heavy traffic or temporary construction-related truck traffic consistent with City or industry standards (Highway Design Manual, MUTCD, etc.).	**Not Deficient.** The Project would not result in the permanent operation of heavy vehicles. Construction would require the short-term operation of heavy vehicles. The Project would make provisions to accommodate the temporary construction-related traffic. A majority of the proposed improvements would be constructed when students are not on the campus. To reduce potential conflicts, deliveries would not occur during the morning and afternoon bells. Additionally, as shown in Table 4.11-4, the highest number of construction-related trips would occur during the site preparation phase in Phase 3, with a maximum of 106 daily trips. This number is less than the City's Transportation Analysis Guidelines' threshold of 110 daily vehicle trips; therefore, construction transportation impacts on off-site facilities are considered de minimis. Finally, construction vehicles would access the Project site along City-designated truck routes to the Project's construction staging and laydown areas located within the campus.
Off-Site Traffic Operations. 95th percentile vehicle queues exceed the existing or planned length of a turn pocket or freeway off-ramp, resulting in a speed differential with the adjacent lane of travel; or where a queue exceeds the available storage without the project, project traffic increases the queue by more than 50-feet. The proposed project introduces a design feature that substantially increases safety hazards.	**Not Deficient.** Project construction and operations would not exceed the City's threshold of 110 daily vehicle trips and cause significant impacts to transportation facilities. The Project would increase the number of school-sponsored and community events after the normal school day. However, the number of attendees (and consequently the number of vehicle trips generated by the attendees) would be similar to existing events held at the campus. Therefore, construction and operational activities would not cause vehicle queues that exceed the existing or planned length of a turn pocket or freeway off-ramp. Further, the Project does not propose changes to any off-site improvements or introduce a design feature that would increase off-site safety hazards. The proposed redesign of Building H would accommodate fire truck access along the rerouted fire access lane on the campus and reduce potential safety hazards. The proposed realignment of the fire lane has been reviewed and approved by the local fire department to limit potential hazards related to fire access. Therefore, the Project would not increase safety hazards on or off-site.
Intersection Traffic Control. Addition of project traffic causes an intersection to fail to maintain LOS Standards as specified in General Plan Policy M-2.5. If the intersection is already failing to maintain LOS standards under No Project conditions, a deficiency occurs if the project causes an increase in delay of five seconds or more at the intersection.	**Not Deficient.** As stated in the Transportation Analysis Guidelines, projects that generate fewer than 110 daily vehicle trips are not required to prepare a transportation impact analysis or local traffic analysis, and transportation impacts are considered de minimis. The Project would not increase the enrollment capacity at the campus, and thus would not increase daily transportation impacts associated with typical school operations. Additionally, the potential increased use of the artificial turf fields and aquatic center would not exceed 110 daily trips. Therefore, a Project-specific transportation impact analysis or an evaluation of LOS impacts is not warranted.

Table 4.11-5, continued

Deficiency Criteria	Project Deficiency Analysis
General Plan Consistency. Evaluate the project against mobility, safety, and other related goals, policies, and actions set forth in the General Plan.	**Not Deficient.** As shown in Table 4.11-1, the Project would be consistent with the applicable goals of the General Plan's Mobility Element. The District would provide ongoing notice to and communicate with emergency service providers regarding the construction schedule and worksite traffic control plans to coordinate emergency response routing and maintain emergency access. Therefore, the Project would also be consistent with the applicable goals of the General Plan's Safety Element.
Other Subject Areas. Consider other areas on a case-by-case basis (e.g., construction impacts, queuing between closely spaced intersections, emergency access, special event traffic, etc.).	**Not Deficient.** The Project involves the modernization of an existing high school and would increase the frequency of school-sponsored and community use of the proposed modernized campus facilities. The events would be similar to events that have been previously held at the campus and would not introduce more participants or spectators than already experienced at the campus. Therefore, the increase in the number of events would not introduce more vehicle trips that would conflict with school traffic or local neighboring streets during typical AM and PM peak hours. The increase in the number of events would not require additional coordination for emergency response or interfere with emergency access. Moreover, construction would be typical for public school projects, and the Project would not create unique circumstances that would cause transportation impacts. Although there would be a loss of approximately 30 parking spaces during each subphase of Phase 2 and 12 spaces under Phase 3, the loss would be temporary and occurring mainly during the summer months and the first half of the school year under subphases 2b and 2c.[18] The temporary displacement of parking would be short term. Therefore, the Project would result in less than significant impacts related to traffic and parking during construction and operational activities.
Requirements for Other Jurisdictions. The project exceeds established deficiency thresholds for transportation facilities and services under the jurisdiction of other agencies.	**Not Deficient.** The Project would result in de minimis impacts related to transportation. The Project would not exceed established deficiency thresholds for transportation facilities and services under the jurisdiction of other agencies.

Source: City of San Rafael, Transportation Analysis Guidelines, 2021.

[18] Refer to Chapter 3, Project Description, for a full list of phases and subphases.

As provided above, the Project complies with the requirements of the San Rafael Transportation Analysis Guidelines and does not conflict with local policy concerning the roadway circulation system.

Based on the Project consistency analyses above, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would be less than significant.

TRA-2 Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact. The City of San Rafael Transportation Analysis Guidelines outlines the locally adopted methodology and thresholds with which to evaluate a project's consistency with SB 743 and CEQA Guidelines Section 15064.3(b).

Construction

Due to the temporary nature of construction traffic associated with the Project phases, a substantial increase in VMT would not be anticipated to result from construction. Given the temporary nature of construction industry jobs, the relatively large regional construction industry, and the total number of construction workers needed during any construction phase, the labor force from within the region would be sufficient to complete the majority of construction without a substantial influx of new workers and their families and would not result in a substantial increase in VMT. Additionally, lead agencies are specifically directed by the Governor's Office of Planning and Research to consider automobile VMT only and not commercial truck VMT for CEQA transportation impact analyses; as such, the following analysis discusses impacts considering automobile VMT during construction.

The Project's proposed construction schedule has been designed to limit interruptions (to the extent feasible) on school operations, and existing school programs would continue under all three phases. Under Phase 1, the water polo and swim/dive programs would be temporarily relocated to an off-site aquatic facility located within a 10-mile radius of the campus, which would generate new VMT. Other sports programs affected by Phase 1 construction activities would be temporarily relocated to other areas of the campus, which would not generate VMT. The building modernization improvements under Phase 2 would be phased to avoid the need for temporary student classroom facilities, and all existing school programs during this phase would be offered at existing teaching stations and classroom facilities on the campus; thus, Phase 2 would not generate additional VMT from students. Under Phase 3, the only sports program that would be affected is baseball. Practices and games would be temporarily relocated to the adjacent Miller Creek District Office ballfield; baseball players would walk to the ballfield. Proposed improvements at the tennis courts and track and field stadium would occur during the summer months. Therefore, Phase 3 would not generate new VMT. Table 4.11-6 estimates the VMT as a result of the displaced aquatic programs during construction of Phase 1.

Table 4.11-6: VMT Estimates During Construction

Sports Program	Number of Students	Distance to Off-Site Facility (total miles roundtrip) (A)	Number of Vehicular Trips (B)	VMT During Construction (miles) (C=[AxB])
Water Polo (2024 Fall: August–October)	50	20	100	2,000
Swim/Dive (2024 Spring: February–May)	50	20	100	2,000
Water Polo (2025 Fall: August–October)	50	20	100	2,000

Notes: VMT is calculated by multiplying the length of the trip in miles (both directions) by the number of the daily vehicle trips. The distance to off-site facilities assumes both to and from the school site.

The number of vehicle trips assumes trips to and from the off-site facility assuming all students drive alone in a car. If students carpool, the vehicle trips reduce, thus reducing the overall VMT.

As shown in Table 4.11-6, the VMT generated by students traveling to the off-site aquatic facility during the construction of Phase 1 for each program is approximately 2,000 miles. With an average of 50 students per aquatic program, each program would result in 100 average daily trips to the off-site facility. According to the San Rafael Transportation Analysis Guidelines, projects generating 110 or fewer average daily trips would not require the preparation of a VMT analysis. Therefore, the VMT generated by the use of the off-site aquatic facility would be de minimis and considered less than significant.

It is further noted that this analysis is conservative, as it assumes each student would drive alone. If 20 percent of the students were to carpool to the off-site facility, the total VMT would reduce to 1,600 miles, or if the students did not return to school and instead drove home directly after practices and games, the VMT would be further reduced. The District proposes, as a best management practice, to encourage students to carpool to the off-site facility (see Section 3.4).

Operation

Implementation of the Project would not increase student enrollment at the campus; therefore, the Project would not result in increased vehicle trips due to an increase in students. Operation of the modernized aquatic facility as part of Phase 1 and field improvements as part of Phase 3 of the Project would be expanded outside of standard school hours and on weekends to include potential qualifying championship swim meets and water polo games and increased community use. However, because these activities would occur outside of the typical school instruction hours, trips associated with these events are not anticipated to substantially affect the local neighboring streets during typical AM and PM peak hours. However, based on a worst-case analysis of the proposed artificial turf to be used like a park, as shown in Table 4-11.3, the Project is estimated to generate 92 additional daily vehicle trips with 0 AM peak hour trips and 23 new PM peak hour trips.

As discussed in Section 4.11.3, Methodology, according to the City's Transportation Analysis Guidelines, projects that generate fewer than 110 daily vehicle trips are not required to prepare a

quantified VMT analysis. Therefore, a quantified VMT analysis is not required for the Project. Nevertheless, an evaluation of the Project against the VMT screening criteria, listed in Section 4.11.3, confirms the Project as meeting two of the six VMT screening criteria. The Project is classified as a Small Project because it would generate fewer than 110 daily vehicle trips. The Project is also a Locally Serving Public Facility Project because it consists of a neighborhood public school. Therefore, because the Project meets at least one of the VMT screening criteria, the Project is exempt from a quantitative VMT assessment. Long-term operation of the Project would result in a less-than-significant transportation impact under CEQA.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would be less than significant.

4.11.5 Cumulative Impacts

The Project would be implemented in three phases that would occur from the summer of 2024 to the end of the third quarter of 2029. Some of the subphases would overlap. As shown in Table 4.11-4, daily haul trips associated with site preparation and grading for the proposed artificial turf under Phase 3 would result in the most daily construction trips. These construction activities would coincide with Phase 2 (classroom building modernization). Construction of these phases would commence at the start of the 2027 summer break when students are not on the campus. Although there could be a combined maximum of 121 daily construction trips (15 trips during Phase 2 demolition and 106 trips during Phase 3 site preparation), there would be no traffic associated with school operations. The 121 daily construction trips during this period would also be significantly lower than the daily trips generated by normal operations of the 1,400-seat high school. Moreover, construction traffic for all phases would be managed on-site, including through the posting of signage to identify where deliveries should be made to prohibit offloading of materials on Nova Albion Way, as well as identifying acceptable locations for contractor parking (see Section 3.4, Best Management Practices). Therefore, construction traffic impacts caused by overlapping Project phases would be less than significant and not cumulatively considerable.

The Project would result in additional trips and VMT associated with students attending the off-site aquatic facility for practices during Phase 1. As Phases 2 and 3 would not result in the generation of additional VMT during construction, there would be no cumulative considerable effects related to VMT.

The District would be constructing approved campus improvements (see Section 2.3.1) during the same time as the construction of the proposed Project. The District would be completing the installation of an art studio in June 2024 and starting construction of a new solar photovoltaic system in May 2024. These projects would coincide with Phase 1 of the proposed Project. The solar array installation would mainly occur at the field and basketball courts in the southwest portion of the campus. Installation of the solar arrays would not be substantial, as compared to the Project. The construction staging for the solar array project would be at the multipurpose field; as solar arrays are also proposed at the basketball courts, which is the designated construction staging area for Phase 1, both projects would share the multipurpose field for construction staging until the installation of the arrays in the southwest portion of the campus is complete (August 2024), at which time the Phase 1 construction activities would return to the basketball courts. The solar array project would not require the closure of on-site parking areas during the school year. Additionally, similar to the proposed Project, the other campus improvements have been reviewed

to ensure their consistency with applicable transportation programs, plans, ordinances, and policies. As the District would coordinate construction zones for all activities on the campus, construction-related transportation effects would be managed and would not result in cumulatively considerable impacts.

Similar to the Project, related City-sponsored projects would be separately reviewed and approved by the City or other local agencies to ensure their consistency with applicable transportation programs, plans, ordinances, and policies, including but not limited to the TAM's 2021 CMP Update, City of San Rafael Transportation Analysis Guidelines, and the Mobility Element of the City's General Plan. As the Project is consistent with these plans and policies, as discussed under Impact TRA-1, the Project's transportation impacts would be limited and would not contribute to any cumulatively considerable transportation impacts that the related City-sponsored projects may have.

With regard to VMT impacts, as determined under Impact TRA-2 above, the Project would result in less-than-significant transportation impacts and is exempt from requiring a quantitative VMT assessment. As such, the overall or net effect of the Project on regional total VMT would not result in cumulative impacts. Therefore, Project impacts related to VMT would not be cumulatively considerable, and cumulative impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts would not be cumulatively considerable.

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4.12 TRIBAL CULTURAL RESOURCES

This section addresses the Project's potential impacts relative to tribal cultural resources. By statute, "tribal cultural resources," are generally described as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe and are further defined in Public Resources Code (PRC) Section 21074. The analysis in this section is based on the *Cultural Resources Survey Report*, dated October 2023 (Appendix D) and subsequent *Results Summary, Northwest Information Center Search for Terra Linda High School*, dated October 2023 (Appendix D), both prepared by Archaeological/Historical Consultants, as well as correspondence received from relevant Native American tribes in response to consultation requirements.

4.12.1 Regulatory Setting

Federal

American Indian Religious Freedom Act

The American Indian Religious Freedom Act establishes, as national policy, that traditional Native American practices, beliefs, sites (including the right of access) and the use of sacred objects shall be protected and preserved. It does not include provisions for compliance.

National Historic Preservation Act

The National Historic Preservation Act of 1966 established the National Register of Historic Places as the official designation of historical resources, including districts, sites, buildings, structures, and objects at the federal, state, and local level. In 1986 and 1992, the act was amended to include sites of cultural and religious significance to Native Nations on the National Register.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

State

California Environmental Quality Act

PRC Section 21074(1) defines tribal cultural resources as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either (1) included or determined to be eligible for inclusion in the California Register of Historical Resources or (2) included in a local register of historical resources as defined in PRC Section 5020.1(k), defined as a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution.

According to PRC Section 21084.3, public agencies must, when feasible, avoid damaging effects to any tribal cultural resource. If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the

consultation process, the following example mitigation measures can be considered to avoid or minimize the significant adverse impacts:

1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

2) 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:

    a. Protecting the cultural character and integrity of the resource.

    b. Protecting the traditional use of the resource.

    c. Protecting the confidentiality of the resource.

3) 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.

4) Protecting the resource.

CEQA Guidelines Section 15064.5 further specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These procedures include the following provisions: (1) protect such remains from disturbance, vandalism, and inadvertent destruction; (2) establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and (3) establish the Native American Heritage Commission as the authority to resolve disputes regarding disposition of such remains.

California Register of Historical Resources

The California Register of Historical Resources is an authoritative guide used by state and local agencies, private groups, and citizens to identify the state's historical resources, including tribal cultural resources, and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.

The California Register establishes a list of properties to be protected from substantial adverse change. According to PRC Section 5024.1(c), a historical resource may be listed in the California Register if it is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California, and meets any of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

- It is associated with the lives of persons important in California's past.

- It embodies 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 value.

- It has yielded or is likely to yield information important in prehistory or history.

The California Register includes properties that are listed or have been formally determined eligible for listing in the National Register, State Historical Landmarks, and eligible Points of Historical Interest. Other potential resources require nomination for inclusion in the California Register.

To be eligible for listing in the California Register, the resource must possess integrity, which is determined through the application of seven factors: location, design, setting, materials, workmanship, feeling, and association. See Section 4.4.1 for additional information concerning the California Register.

California Historic Resources Information System

The California Historical Resources Information System (CHRIS) manages an inventory of paper documents, maps, and digital files relating to historical, archaeological, and tribal cultural resources. The CHRIS operates structurally through the California Office of Historic Preservation, nine Information Centers located on California State University and University of California campuses throughout the state, and the State Historical Resources Commission. The Information Centers maintain information on cultural resources within their respective geographic areas.

Native American Heritage Commission

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of special religious or social significance to Native Americans. The NAHC records the historical territories of state-recognized tribes in a database called the Sacred Lands File. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

California Native American Historical, Cultural and Sacred Sites Act

The California Native American Historical, Cultural and Sacred Sites Act applies to both state and private lands. This act requires that upon discovery of human remains, construction or excavation activity cease and the county coroner notified. If the remains are of a Native American, the coroner must notify the NAHC. The NAHC then notifies the persons most likely to be descended from the Native American remains. This act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Assembly Bill 52

Assembly Bill (AB) 52, known as the Native American Historic Resource Protection Act, requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with a proposed project's geographic area, if they have requested to be notified, in order to include California tribes in determining if a project may result in significant impacts to tribal cultural resources. The requirements of AB 52 have been codified in PRC Sections 21080.3.1, 21080.3.2, and 21082.3.

Consultation with Native American tribes may include, but is not limited to, discussion of the type of environmental review necessary, the significance of tribal cultural resource, the significance of the proposed Project impacts on the tribal cultural resources, and alternatives and mitigation measures recommended by the tribe. Mitigation measures agreed upon must be included in the

environmental document. Consultation is considered concluded when the parties agree to measures to avoid or reduce a significant impact on a tribal cultural resource, or when a party concludes that mutual agreement cannot be reached. If no formal agreement on the appropriate mitigation has been established, mitigation measures that avoid or substantially lessen potential significant impacts should be implemented.

California Native American Graves Protection and Repatriation Act

This state law was established to complement and extend the provisions of the federal Native American Graves Protection and Repatriation Act (NAGPRA), providing specific guidelines and procedures for the handling of Native American cultural items and human remains in the state of California. Cal NAGPRA reflects California's commitment to respecting and preserving the cultural heritage of Native American tribes in the state.

California Health and Safety Code Sections 7050.5 and 7051

Health and Safety Code Sections 7050.5 and 7051 address the illegality of interference with human burial remains as well as the disposition of Native American burials. The law protects such remains from disturbance, vandalism, or inadvertent destruction and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures. Health and Safety Code Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the NAHC by telephone within 24 hours.

Public Resources Code Section 5097.5(a)

PRC Section 5097.5(a) specifies that a person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, or archaeological sites, which can include fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

4.12.2 Environmental Setting

The Project site lies approximately 75 to 100 feet above mean sea level (amsl). The hills of the Terra Linda/Sleepy Hollow Preserve are to the south and west, rising to a maximum height of approximately 600 feet amsl. Vegetation on the hills includes coyote brush, toyon, buckwheat, valley oak, coast live oak, and California bay trees. Prior to development, fluvial drainages flowed out of the hills, crossed the Project site, and traveled north between two hills to the northeast and northwest before joining additional drainages and traveling east toward San Francisco Bay, approximately 3 miles to the northeast and east of the site.

The Project site is within the traditional territory of the Coast Miwok who were hunter-gatherers, featuring sedentism that allowed for dense populations and social hierarchy, property ownership, and complex religious and symbolic systems. Coast Miwok material culture included sophisticated basketry, rope, and nets for fishing and trapping; bows, arrows, and slings for hunting; advanced stone working technologies; and elaborate feather decorations.

They settled in permanent villages, around which were distributed seasonal camps and task-specific sites. Primary village sites were occupied throughout the year, and other sites were visited to procure resources that were especially abundant or available only during certain seasons. Sites

were often situated near freshwater sources and in ecotones where plant life and animal life were diverse and abundant.

It is believed that members of the Coast Miwok were the Native Americans who met with both Sir Francis Drake and Sebastian Rodriquez Cermeño during their voyages to California. After those two contacts, the Coast Miwok were left alone for nearly 200 years until the construction of the San Francisco Presidio and Mission Dolores in 1776. Even then, the Coast Miwok did not enter the missions in significant numbers until 1800. They came into the missions through a mixture of choice, persuasion, and force. In the wake of secularization of the missions beginning in 1834, the Coast Miwok unsuccessfully attempted to claim their land back. Coast Miwok people continued to live in isolated communities, such as Nicasio and the Bodega area, which are respectively approximately 12 and 40 miles northwest of the Project site.

In 1920, the Bureau of Indian Affairs purchased a 15-acre parcel near Graton, Sonoma County, to serve as a reservation for Pomo, Coast Miwok, and other Indians. After the Bureau of Indian Affairs withdrew federal recognition in 1958, a 40-year struggle for the restoration of tribal status resulted in the recognition of the Federated Indians of Graton Rancheria in 2000. Since that time, the Federated Indians of Graton Rancheria have operated as a sovereign tribal nation.

4.12.3 Methodology

Cultural Resources Inventory Results

Records Search

In July 2023, a records search was conducted for the Project site and surrounding one-quarter-mile radius at the Northwest Information Center (NWIC) at Sonoma State University. The records search did not identify any previously recorded historical resources, including tribal cultural resources, within the boundaries of the Project site or any previously completed studies that included the Project site. The records search identified one archaeological survey performed in 2012, for a property located 500 feet northeast of the Project site; this study did not identify any cultural resources.

In October 2023, a second records search was conducted in response to tribal consultation. The subsequent records search expanded the search area to a one-mile radius of the Project site. The expanded search identified five additional resources and 65 previously conducted studies. The five resources included two historic-period resources (Mt. Olivet Cemetery and a portion of the Sonoma Valley Branch of the Northwestern Pacific Railroad) and three resources recorded as shell mounds, located 0.8–0.9 miles north and east of the Project site. None of the 65 prior studies included the Project site or identified resources on the Project site.

Sacred Lands File Results

A search of the Sacred Lands File was conducted through the NAHC in July 2023. The search resulted in a negative finding, indicating that no Native American Sacred Lands have been recorded in the study area. The response from the NAHC included a list of Native American groups who may have knowledge of cultural resources in the Project area.

Archaeological Survey

A pedestrian survey was conducted at Terra Linda High School in July 2023 by a Registered Professional Archaeologist meeting the Secretary of the Interior's Standards for archaeology from Archaeological/Historical Consultants. The survey involved the inspection of the Project area for

cultural resources within open patches of ground. No Native American cultural resources or soils were observed.

Tribal Consultation

In August 2023, the District sent notification to Native American tribes identified by the NAHC as possibly having knowledge of cultural resources in the Project area. The tribes included the Federated Indians of Graton Rancheria and the Guidiville Rancheria of California.

The Federated Indians of Graton Rancheria responded and requested consultation. The response also included a request for cultural resource studies, information solicited from CHRIS, and results from a search of the Sacred Lands File through the NAHC. The District submitted the requested documents to the tribe in August 2023. A consultation meeting was held on October 5, 2023, between the District and members of Graton Rancheria, at which time the tribe requested an expanded records search area from the original search radius of one-quarter mile to one mile around the Project site. In response, the District conducted a subsequent records search at the NWIC in October 2023 to include previously recorded cultural resources within one mile of the Project site (see *Records Search*, above); refer to Appendix D.

Thresholds of Significance

The significance thresholds used to evaluate the impacts of the proposed Project related to tribal cultural resources are based on Appendix G of the CEQA Guidelines. Pursuant to Appendix G, a project would have a significant impact related to tribal cultural resources if it would:

- 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 California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or

    - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.12.4 Impact Analysis

TCR-1 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 California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

Less than Significant Impact. Based on the records search of historical and archaeological resources conducted for the Project, and a review of the City of San Rafael adopted list of local

historical resources,[1] neither Terra Linda High School nor properties surrounding the Project site are listed on the California Register or the local register of historical sources, as defined in PRC Section 5020.1(k). Moreover, consultation with the Federated Indians of Graton Rancheria did not identify any tribal cultural resources on the Project site or areas immediately surrounding the Project site that are of cultural value to them. The Project would therefore not cause a substantial adverse change in the significance of a tribal cultural resource listed in the California Register or a local register of historical resources.

Additionally, the Project site is not on Native American sacred lands. It is fully developed with an operating high school campus that has been modernized numerous times since its construction in 1959, and no tribal cultural resources have been identified to date within the Project boundary. The Project site is also underlain by soils classified by the US Department of Agriculture as Xerorthents-Urbanland, characterized by extensive human modification and urbanization, and therefore, the sensitivity for buried Native American archaeological sites at the site is considered low. Further, the Project area is located in the foothills approximately 0.7 miles from the tidal marsh known to be inhabited during the early historic period. The elevation of the Project site is approximately 75-100 feet amsl, and based on a review of historic maps, a single seasonal drain traversed the Project site; however, it would have been too small to provide a year-round freshwater source. Thus, the Project area has a low probability of containing buried Native American archaeological sites, as most known sites were historically located on different landforms where tidal marsh, bay, and freshwater resources were more accessible.

Although the campus is entirely developed, subsurface construction disturbances (e.g., trenching, excavation, grading) could have the potential to result in accidental discoveries, including tribal cultural resources. The District and its construction contractor would comply with regulatory requirements as stated in PRC Section 5097.5(a), which addresses the treatment of archaeological or historical sites or features, including prehistoric ruins and burial grounds. Compliance with such regulatory requirements would reduce potential impacts on unknown resources to less than significant.

Additionally, in the event of an unexpected discovery of human remains during ground-disturbing activities, all work must stop in the immediate vicinity of the discovered remains. The Marin County coroner must be notified immediately so that an evaluation can be performed, pursuant to Health and Safety Code Sections 7050.5 and CEQA Guidelines Section 15064.5(e). If the remains are deemed to be Native American, the NAHC must be contacted by the coroner so that a “Most Likely Descendant” can be designated and further recommendations regarding treatment of the remains provided. Adherence to procedures required pursuant to Health and Safety Code Sections 7050.5 and 7051 and PRC Section 5097.98 would reduce Project impacts on the accidental discovery of tribal cultural resources and Native American human remains, respectively, to acceptable standards. Therefore, impacts to tribal cultural resources would be less than significant.

Mitigation Measures

No mitigation measures are required.

[1] San Rafael, “Historic Resources and Preservation,” 2015, https://storage.googleapis.com/proudcity/sanrafaelca/uploads/Historic-Preservation-Handout.pdf.

Level of Significance

Impacts would be less than significant.

TCR-2 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.

Less than Significant Impact. As noted above, neither the Project site nor properties surrounding the Project site are listed on the California Register. The Project site also does not qualify for listing as a historical resource as it relates to tribal significance under PRC Section 5024.1(c), which provides that a resource may be listed as historical if it meets the following criteria:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

2) Is associated with the lives of persons important in our past.

3) Embodies 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.

4) Has yielded, or may be likely to yield, information important in prehistory or history.

The Project site is within the traditional territory of the Coast Miwok. However, the Project site is currently developed with a high school campus and unlikely to be associated with events that have made a significant contribution to the tribal history and heritage of the Coast Miwok. Recorded resources suggest Native American sites in the region were located near the edges of the tidal marsh along the margins of the San Francisco Bay and close to the level of the marsh. The Project site is located in the foothills 0.7 miles from the tidal marsh known to be inhabited during the early historic period and sits 75-100 feet amsl. Although a single seasonal drain traversed the Project site, it would have been too small to provide a year-round freshwater source. Therefore, the Project site has a low probability of having been inhabited by Native Americans prior to its current development, whereby events that contributed to tribal history and heritage may have occurred. To that end, there would also be a low probability that the Project site was associated Native American persons important in our past.

The Project site and surrounding area have been extensively modified and urbanized; the site is currently developed with a high school and does not embody characteristics of tribal cultural sites, features, places, cultural landscapes, sacred places, and objects. Moreover, construction activities at the Project site and surrounding areas have not yielded information important to tribal history, and the probability is low that Project implementation would yield any information important to tribal history. Therefore, the Project does not qualify to be listed as a historical resource for tribal significance under PRC Section 5024.1(c), and the Project would not cause a

substantial adverse change in the significance of a tribal cultural resource. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

4.12.5 Cumulative Impacts

Impacts to tribal cultural resources are typically site specific, and cumulative impacts would occur if a series of actions led to the loss of a resource. The records searches conducted for the Project did not identify the Project site or any of the related projects listed in Table 2-3 as historical resources or tribal cultural resources. Moreover, similar to the proposed Project, the related District-sponsored other campus projects (Section 2.3.1) and City-sponsored projects (see Table 2-5) would comply with Health and Safety Code Sections 7050.5 and 7051 and PRC Section 5097.98, which would reduce each project's impacts on undiscovered subsurface tribal resources and Native American human remains, respectively, to acceptable standards. Therefore, each project's potential impact on tribal cultural resources would be limited and would not combine to cause a cumulatively considerable effect on tribal cultural resources.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would not be cumulatively considerable.

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CHAPTER 5
OTHER CEQA CONSIDERATIONS

Section 15126 of the CEQA Guidelines requires that all aspects of a project be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the environmental impact report (EIR) must identify the following types of impacts:

- Significant environmental effects which cannot be avoided if the proposed project is implemented;
- Significant irreversible environmental effects which would be caused by the proposed project should it be implemented; and
- Growth-inducing impacts of the proposed project.

The analysis in this chapter identifies each of these impacts based on analyses contained in Chapter 3, Project Description.

5.1 Significant and Unavoidable Impacts

CEQA Guidelines Section 15126.2(c) requires that an EIR describe any significant impacts that cannot be avoided if the proposed project is implemented. As presented in the Executive Summary and evaluated in Sections 4.1 through 4.12 of this Draft EIR, all environmental impacts, including cumulative impacts, associated with the Project would be less than significant or less than significant with mitigation incorporated. The final determination of significance of impacts and of the feasibility of mitigation measures will be made by the District as part of its consideration of Project approval and certification of the EIR.

5.2 Significant and Irreversible Environmental Effects

According to CEQA Guidelines Sections 15126(c) and 15126.2(d), an EIR is required to address any significant irreversible environmental changes that would occur should the project be implemented. As stated in CEQA Guidelines Section 15126.2(d):

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy);

- The project would involve a large commitment of nonrenewable resources; or
- The project involves uses in which irreversible damage could result from any potential environmental accident associated with the project.

5.2.1 Commitment of Future Generations

Implementation of the Project would result in the continued commitment of the campus to institutional uses, thereby precluding any other uses for the lifespan of the campus. Restoration of the campus to predeveloped conditions is not feasible given the degree of disturbance, the urbanization of the area, and the level of capital investment.

5.2.2 Justification for the Use of Nonrenewable Resources

Implementation of the proposed phased improvements would necessarily consume limited, slowly renewable, and nonrenewable resources in a phased manner over the course of the Project. This consumption would occur during the construction activities associated with each phase of development under the Project and continue during its operational lifetime. Construction materials required include certain types of lumber and other forest products; aggregate materials used in concrete and asphalt, such as sand, gravel, and stone; metals, such as steel, copper, and lead; and petrochemical construction materials, such as plastics. Construction activities would also use nonrenewable energy resources, primarily in the form of fossil fuels, such as petroleum and diesel, for construction vehicles and equipment. Operational activities associated with each phase of development under the Project would require the ongoing use of water, electricity, and fossil fuels.

Although implementation of the proposed phased improvements would consume nonrenewable resources, it would not represent the unnecessary, inefficient, or wasteful use of energy resources, as analyzed in Section 4.5, Energy, of this Draft EIR. As discussed therein, construction of the proposed phased improvements would not have a significant effect on local and regional energy supplies. Construction fuel use is temporary and would cease upon completion of construction activities. Further, transportation fuel demand during construction would be further reduced by construction equipment fleet turnover, increasingly stringent state and federal regulations on engine efficiency, state regulations limiting engine idling times, and recycling of construction debris. Operational activities would comply with the most current version of the Title 24 Building Energy Efficiency Standards and the California Green Building Standards (CALGreen) Code, which would reduce energy consumption. As discussed in the Initial Study (Appendix A-1) with regard to water resources, the Project would not result in a substantial increase in water usage because implementation of the Project would not increase student capacity at the campus. Development of the proposed phased improvements would be designed in compliance with the latest version of the California Building Code, which would require installation of water conservation features. Further, the Marin Municipal Water District would have sufficient water supply to meet development of each phase of the Project through 2040 during normal, dry, and multiple dry years.[1]

Furthermore, implementation of the Project would also achieve the underlying Project objectives identified in Chapter 3, Project Description, of this Draft EIR:

- Maximize the use of limited District bond funds.

[1] City of San Rafael, General Plan 2040/EIR – Utilities and Service Systems, 2021.

- Maximize the use of District-owned property.
- Construct climate-resilient and sustainable facilities and implement "green building" practices.
- Improve campus safety and security for students and staff.
- Construct state-of-the-art, high-performance indoor and outdoor instructional spaces with flexible learning environments and replace outmoded teaching facilities.
- Reduce hazards at Terra Linda High School athletic facilities.
- Improve Terra Linda High School's physical education and athletic programs for its students and other students in the District who use the facilities.
- Implement District-wide Target Initiatives applicable to the District's high schools and the Terra Linda High School campus.

Implementation of the Project would maximize the use of District bond funds (specifically, Local Bond Measure B, approved by the District's constituents in June 2022) by funding capital improvements for the modernization and/or replacement of existing, outdated, and aging academic and physical education facilities. Implementation of the Project would also maximize the use of District-owned property as all improvements would be constructed within the existing campus boundaries. The Project design would incorporate sustainability features (e.g., solar photovoltaic features, increased building insulation, water-efficient plumbing fixtures) and comply with the latest Title 24 Standards and CALGreen requirements. Project implementation would improve campus safety and security through improvements for compliance with the Americans with Disabilities Act (ADA), campus-wide security fencing, and upgrades of the fire alarm system and campus public address system. Furthermore, Project implementation would consist of several improvements to support the objective of state-of-the-art, high performance indoor and outdoor spaces, such as construction of a new competition-level aquatic facility, and the modernization of existing physical education support spaces and main classroom buildings to accommodate future classroom programming needs. The Project would likewise improve safety for athletic programs. In addition, the Project would implement District-Wide Target Initiatives applicable to the District's high schools and Terra Linda High School campus. Thus, all objectives would be met. As such, implementation of the Project would not involve a large commitment of nonrenewable resources, nor would the use of nonrenewable resources be unjustified.

5.2.3 Potential Environmental Accidents

Implementation of the Project would not result in significant impacts related to hazards and hazardous materials, as determined in the Initial Study (Appendix A-1). As discussed therein, construction activities would involve the temporary use, storage, and transport of hazardous materials typical of construction of buildings, such as asphalt, fuels, lubricants, paints, cleaners, and solvents. All potentially hazardous materials used during construction would be handled and disposed of in accordance with manufacturers' specifications and instructions, and would comply with existing federal, state, and local regulations related to the transport, use, management, and disposal of hazardous materials. Operation of some of the proposed phased improvements would involve the routine use of hazardous materials, such as cleaners and common chemicals used for swimming pool facilities, landscaping, and maintenance. However, schools generally do not generate significant amounts of hazardous materials, and only a necessary amount of common

day-to-day materials is stored on-site. These materials would be used, stored, and disposed of in accordance with existing regulations and product labeling. With adherence to existing hazardous materials regulations, the potential for the Project to cause irreversible damage from accident conditions is very low.

5.3 Growth-Inducing Impacts

As required by the CEQA Guidelines Sections 15126(d) and 15126.2(d), an EIR must discuss ways in which a potential project could induce growth. This discussion should include consideration of the ways in which a project could directly or indirectly foster economic or population growth in adjacent and/or surrounding areas. The removal of obstacles to population growth (such as removal of infrastructure limitations or regulatory constraints) must also be considered in this discussion. According to CEQA Guidelines Section 15126.2(e), "it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

According to the CEQA Guidelines, a project would have the potential to induce growth if it would:

- Result in economic expansion and population growth through employment opportunities and/or construction of new housing; or

- Remove obstacles to population growth (e.g., through the expansion of public services into an area that does not currently receive these services), or through the provision of new access to an area, or a change in restrictive zoning or land use designation.

5.3.1 Direct Population Growth

As discussed in the Initial Study (Appendix A-1), the Project would consist of capital improvements at an existing school campus within a built-out, urbanized community. The Project does not include the construction of new homes or businesses. Although Project implementation would allow extended use of the improved facilities by the high school and community, the Project would not increase student enrollment or capacity, or generate substantial new employment opportunities at the campus. Construction of the proposed improvements would generate short-term employment, which would be absorbed from the regional labor force and would not attract new workers to the region. Operation of the Project would not increase total employment at the District. As such, the Project would not directly foster economic or population growth.

5.3.2 Indirect Population Growth

Implementation of the Project would not result in changes to the existing land uses on-site. The Project would include improvements to existing paths of travel within the campus to meet ADA standards, replacement of the existing vehicle driveway, and rerouting of the existing fire lane. However, all of these would involve improvements to or the replacement of existing facilities within the existing campus boundaries. Development of each phase under the Project would require new wet and dry utilities; however, the new utilities would tie into the existing underground systems on the campus. As such, the Project would not indirectly foster economic or population growth or remove obstacles to population growth.

5.4 Impacts Found Not to be Significant

California Public Resources Code Section 21003 (f) states:

> *…it is the policy of the state that…[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment.*

This policy is reflected in CEQA Guidelines Section 15126.2(a), which states that "[a]n EIR shall identify and focus on the significant environmental impacts of the proposed project," and Section 15143, which states that "[t]he EIR shall focus on the significant effects on the environment."

The CEQA Guidelines allow use of an Initial Study to document project effects that are less than significant (Guidelines Section 15063[a]). Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the Draft EIR.

5.4.1 Initial Study Assessment

The Initial Study prepared for the Project, in August 2023, determined that the impacts listed below would either have no impact or a less than significant impact on the environment. Consequently, they have not been further analyzed in this Draft EIR. Please refer to Appendix A-1 for explanations of these conclusions. Impact categories and questions in Table 5-1 are summarized directly from the CEQA Environmental Checklist as contained in the Initial Study.

Table 5-1: Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
Aesthetics. *Except as provided in Public Resources Code Section 21099, would the project:*	
a) Have a substantial adverse effect on a scenic vista?	No Impact.
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact.
Agriculture and Forestry Resources. *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:*	
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.
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact.
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.
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact.
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 or conversion of forest land to non-forest use?	No Impact.

Table 5-1, continued

Environmental Issues	Initial Study Determination
Air Quality. *Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:*	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less Than Significant Impact.
Biological Resources. *Would the project:*	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	No Impact.
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No Impact.
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?	No Impact.
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact.
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.
Geology and Soils. *Would the project:*	
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 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.	No Impact.
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	No Impact.

Table 5-1, continued

Environmental Issues	Initial Study Determination
Hazards and Hazardous Materials. *Would the project:*	
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	No Impact.
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.
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Less Than Significant Impact.
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?	Less Than Significant Impact.
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 result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact.
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact.
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Less Than Significant Impact.
Hydrology and Water Quality. *Would the project:*	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less Than Significant Impact.
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: iv) impede or redirect flood flows?	No Impact.
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No Impact.

Table 5-1, continued

Environmental Issues	Initial Study Determination
Land Use and Planning. *Would the project:*	
a) Physically divide an established community?	No Impact.
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No Impact.
Mineral Resources. *Would the project:*	
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.
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.
Noise. *Would the project result in:*	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact.
Population and Housing. *Would the project:*	
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	No Impact.
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact.
Public Services. *Would the project:*	
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:	

Table 5-1, continued

Environmental Issues	Initial Study Determination
i) Fire protection?	Less Than Significant Impact.
ii) Police protection?	Less Than Significant Impact.
ii) Schools?	No Impact.
iv) Parks?	No Impact.
v) Other public facilities?	No Impact.
Recreation. *Would the project:*	
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?	Less Than Significant Impact.
Transportation. *Would the project:*	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less Than Significant Impact.
d) Result in inadequate emergency access?	Less Than Significant Impact.
Utilities and Service Systems. *Would the project:*	
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less Than Significant Impact.
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Less Than Significant Impact.
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less Than Significant Impact.

Table 5-1, continued

Environmental Issues	Initial Study Determination
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less Than Significant Impact.
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less Than Significant Impact.
Wildfire. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:*	
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact.
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Less Than Significant Impact.
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Less Than Significant Impact.
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Less Than Significant Impact.

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CHAPTER 6
ALTERNATIVES

Under CEQA, the identification and analysis of alternatives to a project is a fundamental part of the environmental review process. CEQA Public Resources Code Section 21002.l(a) establishes the need to address alternatives in an EIR by stating that in addition to determining a project's significant environmental impacts and indicating potential means of mitigating or avoiding those impacts, "the purpose of an environmental impact report is ... to identify alternatives to the project."

Direction regarding the definition of project alternatives is provided in Section 15126.6(a) of the CEQA Guidelines as follows:

> *An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.*

CEQA Guidelines Section 15126.6(b) emphasizes that the selection of project alternatives be based primarily on the ability to reduce significant effects relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." CEQA Guidelines Section 15126.6(f) further directs that the range of alternatives be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are considered. In selecting project alternatives for analysis, potential alternatives must pass a test of feasibility. According to CEQA Guidelines Section 15126.6(f)(1),

> *Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site…*

Beyond these factors, the CEQA Guidelines require the analysis of a No Project Alternative and an evaluation of alternative location(s) for the Project, if feasible. The purpose of the No Project Alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving it. Additionally, only locations that would avoid or substantially lessen any of the Project's significant effects need be considered for inclusion. An alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative need not be considered. The range of feasible alternatives must be selected and discussed in a manner to foster meaningful public participation and informed decision making.

Based on the alternatives analysis, an environmentally superior alternative is to be designated. If the environmentally superior alternative is the No Project Alternative, then the EIR must identify an environmentally superior alternative among the other alternatives analyzed.[1] In addition, CEQA Guidelines Section 15126.6(c) requires that an EIR identify any alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for the lead agency's determination.

[1] CEQA Guidelines Section 15126.6(e)(2).

6.1 Project Objectives

The underlying purpose of the Project is to modernize Terra Linda High School with funds from Measure B, passed on June 6, 2022, by the San Rafael voters and to maintain existing capital facilities. The District proposes to continue making major capital improvements at the campus, based on the 2014 Master Plan and current target initiatives from the 2022 District-Wide Capital Improvements Project report, such as providing high performance classrooms and learning environments that can maximize teaching opportunities through technology infrastructure and flexible layouts and constructing climate-resilient and sustainable facilities, with campus safety and security in mind. With the consideration of these initiatives, the below objectives have been developed for the proposed Project:

- Maximize the use of limited District bond funds.
- Maximize the use of District-owned property.
- Construct climate-resilient and sustainable facilities and implement “green building” practices.
- Improve campus safety and security for students and staff.
- Construct state-of-the-art, high-performance indoor and outdoor instructional spaces with flexible learning environments and replace outmoded teaching facilities.
- Reduce hazards at Terra Linda High School athletic facilities.
- Improve Terra Linda High School’s physical education and athletic programs for its students and other students in the District who use the facilities.
- Implement District-wide Target Initiatives applicable to the District’s high schools and the Terra Linda High School campus.

6.2 Alternatives Development Process

Throughout the following analysis, the potential impacts under each alternative are analyzed for each environmental issue area, as examined in Section 4.1, Aesthetics, through Section 4.12, Tribal Cultural Resources, of this EIR. In this manner, each alternative can be compared to the Project on an issue-by-issue basis. This section also identifies alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process. Among the factors used to eliminate alternatives from detailed consideration were failure to meet most of the basic Project objectives, infeasibility, or inability to avoid significant environmental impacts.

6.2.1 Summary of Proposed Project Impacts

As stated above, an EIR shall describe a range of reasonable alternatives to the project which would feasibly attain most of the project’s basic objectives and would avoid or substantially lessen any of its significant effects and evaluate the comparative merits of the alternatives. Only those impacts found significant and unavoidable are relevant in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. As detailed in Section 4.1 through Section 4.12 of this EIR, upon compliance with existing regulations and implementation of best management practices and mitigation measures, the proposed Project would not result in any significant and unavoidable impacts.

6.2.2 Alternatives Considered but Dismissed from Detailed Analysis

Parking Structure Alternative

An alternative that would involve the construction of a parking structure in place of the existing surface parking lot either north of the track and field stadium, along Nova Albion Way, or in the northwest corner of the campus was considered. A comment received in response to the Notice of Preparation asserted that the Terra Linda High School campus does not provide enough on-site parking, resulting in increased traffic, inadequate emergency access, and nuisance to neighbors due to overflow street parking. The comment concerns existing campus conditions.

Nonetheless, Section 4.11, Transportation, of this EIR discusses existing parking on and off the campus. There are 299 existing marked stalls within the campus, as well as 730 linear feet of unmarked curb space, or parking for approximately 29 vehicles assuming each vehicle required 25 feet, in front of the campus on the south side of Nova Albion Way. Moreover, Table 4.11-5 states that the Project would not increase the enrollment capacity at the campus and would not directly increase daily transportation impacts associated with typical school operations, including to off-site parking. The analysis further provides that although the Project would expand operations of the aquatic facility and southern turf fields, these events would occur outside the normal school hours and over the weekends, when most students would not be on the campus. Therefore, the parking demand associated with the expanded uses of the campus would not cause greater parking needs.

As the Project would not result in new impacts to parking, the suggested alternative to include a parking structure as a project alternative was eliminated from further consideration. Additionally, construction of a parking structure would increase construction-related environmental impacts beyond the proposed Project, as analyzed in this EIR. Further, funding for such an improvement was not included in the 2022 bond measure. Therefore, the Parking Structure Alternative was eliminated from further consideration.

Different Project Location Alternative

The Different Project Location Alternative was not considered for further evaluation. According to CEQA Guidelines Section 15126.6(f)(2), the key question and first step in analysis of an alternative project location is whether any of the significant effects of the Project would be avoided or substantially lessened by implementing the Project in another location. Additionally, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered.

The proposed Project would not result in any significant environmental effects. However, if the proposed Project were to be relocated to a different site, since the proposed improvements involve high school facilities, the most logical alternative location would be San Rafael High School, which is a District facility. Implementation of the proposed improvements at San Rafael High School would likely have similar, if not greater environmental effects. Site-specific evaluations would be required to confirm whether there are existing sensitive site-specific environmental conditions at the San Rafael High School campus.

It should be further noted that the proposed improvements are specific to the capital facility needs of Terra Linda High School (Project site), as outlined in the school's Facilities Master Plan and 2022 bond measure. Additionally, the District is already proposing similar capital facility improvements at San Rafael High School under the same 2022 bond program which are specific to the capital facility needs of San Rafael High School; under separate cover, the District is undertaking environmental review of these facility improvements.

As the proposed improvements at Terra Linda High School would not cause significant and unavoidable impacts, as discussed throughout this EIR, are site-specific, and have funding tied to the Project site, the Different Project Location Alternative would not be appropriate. This alternative would also not meet the underlying objective of the Project, which is to modernize the Terra Linda High School campus with funds from Measure B.

6.3 Alternatives Carried Forward for Detailed Analysis

CEQA Guidelines Section 15126.6 provides that alternatives should be selected based on their ability to avoid significant environmental effects. As summarized in Table ES-2, with the implementation of mitigation measures, the proposed Project would not result in any significant environmental impacts. Mitigation will be required to reduce potentially significant aesthetics impacts from exterior stationary lights, construction-related air quality impacts, and impacts to biological resources. Therefore, the alternatives analyzed below are for comparative purposes.

Three alternatives have been identified for detailed analysis in this EIR, including the No Project Alternative, as required by CEQA. In accordance with CEQA Guidelines Section 15126.6(d), each alternative has been evaluated in sufficient detail to determine whether the overall environmental impacts of the alternatives would be less than, similar to, or greater than the corresponding impacts identified for the proposed Project. The alternatives carried forward for detailed analysis in this chapter are:

- Alternative 1 – No Project Alternative
- Alternative 2 – No Reconstruction of Aquatic Facility Alternative
- Alternative 3 – No Artificial Turf at Southeast Fields Alternative

These alternatives were selected based on their potential to implement certain components of the Project to accomplish some or most of the basic objectives of the Project and avoid or substantially lessen one or more of the proposed Project's significant effects. Specifically, the No Project Alternative is considered to enable the decision-makers to compare the impacts of approving the Project with the impacts of not approving the Project. The No Reconstruction of Aquatic Facility Alternative was selected to evaluate an alternative that excludes reconstruction of the outdoor swimming facility and whether it would reduce any potentially significant impacts associated with the proposed Project. The No Artificial Turf at Southeast Fields Alternative was selected to evaluate an alternative that excludes the replacement of 200,000 square feet of natural turf athletic fields with permeable, artificial turf, and whether it would reduce any of the Project's potentially significant impacts.

6.3.1 No Project Alternative

According to CEQA Guidelines Section 15126.6(e), the No Project Alternative must evaluate the environmental effects of not implementing the proposed Project. The purpose of describing and analyzing the No Project Alternative is to allow decision makers to compare the impacts of approving the proposed Project with the impacts of not approving it. Under the No Project Alternative, the impacts are also analyzed by projecting what would reasonably be expected to occur in the foreseeable future if the proposed Project were not approved, based on current plans and consistent with available infrastructure and community services.

The No Project Alternative assumes the circumstance under which the Project and its proposed phased improvements would not proceed. The Project site's current condition would remain as is

and the previously approved activities, prior to the issuance of the Notice of Preparation (August 29, 2023), would continue to be implemented. The No Project Alternative is a "no build" alternative wherein the environmental circumstances at the time the Notice of Preparation was issued would be maintained.

Specifically, the No Project Alternative assumes none of the three Project phases would be approved and implemented. The existing facilities would not be improved to meet requirements of the American with Disabilities Act (ADA). The existing swimming pool and related amenities would not be modernized. Students would continue to use the existing undersized and declining aquatic improvements and would not have enhanced aquatic program opportunities. Additionally, no championship meets and games would be hosted at Terra Linda High School, as the existing aquatic facility does not meet California Interscholastic Federation standards. If the aquatic teams qualify, students would continue to travel off-site to other campuses and facilities for championship meets and games. Building H would not be reconstructed, the locker room facilities in Building K would not be modernized, the track would not be improved, and improvements between Building K and the track and field, including the grand entrance into the track and field and outdoor athletic facilities, would not be made. Portable buildings Q and R would not be removed, and Terra Linda High School would maintain the existing enrollment capacity.

Under the No Project Alternative, the existing classrooms, restrooms, and support facilities in Buildings A, M, and L would not be modernized to meet current-day educational specifications, including high-performance classrooms and learning environments that maximize teaching opportunities through flexible layouts, technology infrastructure, and campus safety and security. The existing facilities in these buildings were last modernized between 2002 and 2009, 15 and 21 years ago. Under the No Project Alternative, the existing classroom facilities would continue to be maintained by the District, but the proposed modernization to expand the life of the school facilities and enhance educational programming goals would not be met.

The third phase of the Project would also not be implemented. The multipurpose and baseball fields, tennis courts, and track and field facilities would remain in disrepair. The natural turf in the outdoor recreational fields and spaces would continue to appear brown due to the lack of watering. The multipurpose fields in the southern half of the campus would expose students and community users to tripping hazards, as the soils would continue to be uneven from settlement and damaged from the dead root system of the turf. The southern half of the campus would continue to have inadequate walkways and would not meet ADA standards. The school's softball team would continue to use off-site facilities. In addition, students would not be offered expanded outdoor recreational opportunities from the improved multipurpose fields, tennis courts, and new outdoor fitness equipment around the track and field.

Impact Analysis

Aesthetics

Under the No Project Alternative, temporary negative aesthetic effects caused by potential unappealing views of construction equipment and staging areas on the Project site and the increase in light and glare from the construction activities and staging areas would be avoided. Although the proposed Project's construction-related aesthetic effects would be de minimis, this alternative's short-term aesthetic impacts would be environmentally superior to the proposed Project. Under the No Project Alternative, there would be no incremental increase to long-term light levels caused by the campus-wide security lighting improvements and the reconstructed aquatic facility. On the other hand, under the No Project Alternative, the visual quality of the campus would remain as-is; the brown grass around the track and field, as well as in the area of

the proposed multipurpose fields, would not be removed, and the existing visual quality of the campus would not be improved. Accordingly, long-term aesthetic impacts under this alternative would be environmentally inferior compared to the proposed Project. Overall, the No Project Alternative would be neither environmentally superior nor inferior as compared to the proposed Project.

Air Quality

Under the No Project Alternative, no construction would occur, and temporary emissions would be avoided. Long-term air quality impacts, consisting of area, energy, and mobile source emissions, would not change from the existing conditions. Thus, no short-term construction or additional long-term operational air quality emissions would be generated. The No Project Alternative would be environmentally superior to the proposed Project.

Biological Resources

Under the No Project Alternative, vegetation removal due to Project construction would not occur. While no sensitive plants or wildlife species, sensitive habitats, or jurisdictional resources have been identified on-site, tree removal under the proposed Project would have the potential to impact nesting birds and bat habitat. As no trees would be removed under the No Project Alternative, it would be environmentally superior compared to the proposed Project.

Cultural Resources

No cultural resources have been identified on-site; however, ground-disturbing activities under the proposed Project would increase the potential to impact previously undiscovered resources. As the No Project Alternative would result in no ground-disturbing activities, the potential to impact previously undiscovered cultural resources would not occur. Therefore, the No Project Alternative would be environmentally superior to the proposed Project.

Energy

Under the No Project Alternative, no energy would be consumed under the construction phase, which is mainly from operating and maintaining on-site construction equipment and transporting materials by construction vehicles to and from the Project site. Therefore, the No Project Alternative's short-term effects would be environmentally superior to the proposed Project's. The expanded use of the multipurpose artificial turf under the proposed Project would result in more energy consumption than the No Project Alternative. However, under the No Project Alternative, existing operations would continue as they are—including with inefficient boilers used for the swimming pool and locker room facilities—and would result in the consumption of more energy than the proposed Project, which proposes a tankless water heater for the modernized locker facilities and high-efficiency hot water boiler for the proposed aquatic facility, thus reducing electricity and natural gas consumption compared to existing conditions. Under the No Project Alternative, these improvements would not be implemented and there would be no reduction in energy consumption. Specifically, given the age of some facilities within the Project site, the campus would not comply with the requirements of California Green Building Code and California Energy Code, and various sustainability features proposed under the Project would not be implemented under this alternative. As such, the No Project Alternative would be environmentally inferior to the proposed Project.

Geology and Soils

Operational impacts on geology and soils under the No Project Alternative would not be different from the proposed Project's operations. The No Project Alternative would not introduce structures

or people to geologic and seismic hazards on-site. Moreover, none of the existing structures on the Project site have been identified by the Division of the State Architect as being seismically unfit and requiring seismic upgrades. Therefore, the No Project Alternative would be neither environmentally superior nor inferior to the proposed Project.

The No Project Alternative would not result in any construction activities that could impact previously undiscovered paleontological resources. Under this alternative, there is no chance that paleontological resources would be uncovered. Overall, the No Project Alternative would be environmentally superior to the proposed Project.

Greenhouse Gas Emissions

Under the No Project Alternative, no short-term greenhouse gas (GHG) emissions would be generated from construction equipment and construction vehicle trips. However, according to the Bay Area Air Quality Management District, construction emissions do not generate a substantial amount of GHG emissions, as compared to operational emissions; this is because construction activities are short-term and newer models of construction equipment and vehicles have advanced technologies that reduce emissions. Moreover, proposed improvements that would increase energy efficiency on-site, such as the removal of two inefficient boilers and their replacement with a tankless water heater and a high-efficiency boiler, would not occur under the No Project Alternative. Under this alternative, no reduction in operational emissions would occur compared to the proposed Project. Overall, the No Project Alternative would be environmentally inferior to the proposed Project.

Hydrology and Water Quality

The No Project Alternative would not result in any construction or operational activities that would impact existing hydrologic and water quality conditions at or downstream from the Project site. Specifically, as no construction would occur, short-term impacts to water quality associated with the handling, storage, and disposal of construction materials; maintenance and operation of construction equipment; and earthmoving activities would be avoided. This alternative would not change impervious surfaces, thereby changing surface runoff and drainage. Overall, this alternative would be environmentally superior to the proposed Project.

Noise

No construction noise would occur under this alternative, and existing ambient noise levels would remain unchanged from existing conditions as no new development would occur. The No Project Alternative would be environmentally superior to the proposed Project related to noise.

Recreation

Under the No Project Alternative, the Project site would maintain its existing uses. As such, no new recreational facilities or expansion of existing facilities would occur, which could have an adverse physical effect on the environment. The No Project Alternative would be environmentally superior to the proposed Project.

Transportation

Under the No Project Alternative, no transportation impacts related to a potential conflict with a program, plan, ordinance, or policy addressing the circulation system, vehicle miles traveled (VMT), hazards due to a geometric design feature or incompatible use, or inadequate emergency access would occur. Additionally, as no artificial turf would be installed, which could increase

community use of the facilities, no new trips would be generated under the No Project Alternative. Overall, this alternative would be environmentally superior to the proposed Project.

Tribal Cultural Resources

The No Project Alternative would not result in any ground-disturbing activities. Thus, the potential to impact previously undiscovered tribal cultural resources during construction activities would not occur. As such, this alternative would be environmentally superior to the proposed Project.

Ability to Meet Project Objectives

The No Project Alternative would not achieve the underlying purpose of the Project or any of its objectives. Specifically, given that no new development would occur under this alternative, the District would not be able to expend voter-approved funds to modernize Terra Linda High School or maximize the use of limited District bond funds; maximize the use of District-owned property; construct climate-resilient and sustainable facilities and implement "green building" practices in all capital improvement projects; improve campus safety and security for students and staff; construct state-of-the-art, high-performance indoor and outdoor instructional spaces with flexible learning environments and replace outmoded teaching facilities; reduce hazards at Terra Linda High School athletic facilities; improve the experience of users of Terra Linda High School's athletic facilities, including students and others who use the facilities; and implement District-Wide Target Initiatives applicable to the District's high schools and the Terra Linda High School campus.

6.3.2 No Reconstruction of Aquatic Facility Alternative

The No Reconstruction of Aquatic Facility Alternative would include the same characteristics as the proposed Project, except that a new competition-level aquatic facility to support the existing swim/dive and water polo programs would not be constructed. The existing pool, deck, lunch shelter, and pool equipment building located to the west of the pool would not be demolished. A replacement outdoor swimming pool and new deck would not be constructed; a new LED video display scoreboard and underwater and pole lights would not be installed; new structures would not be developed, including a grandstand with a solar array cantilever shade structure, a chemical equipment storage room (Building S), and a pool storage room (Building T); and the portion of the slope south of the school buildings (from the west side of the Student Commons building to the pedestrian ramp behind the proposed Building T) would not be modified. Further, a new vehicle driveway would not be constructed from the existing fire lane behind Building B to the basketball courts; the fire lane would remain in its current alignment and not be rerouted between Building P and the outdoor swimming pool.

Similar to the proposed Project, the No Reconstruction of Aquatic Facility Alternative would include the following components in the three Project phases:

- Phase 1
    - Improve physical education support spaces (reconstruct Building H and modernize locker facilities in Building K) adjacent to the existing swimming pool.
    - Upgrade west end of the stadium: replace the existing scoreboard, construct a new ticket booth building and a new restroom/concessions building, and create a new grand entrance to the track and field and other outdoor recreational facilities.

- Phase 2
    - Modernize Buildings A, M, and L to accommodate future classroom programming needs, including a new wellness center and space for state-of-the-art technology and equipment, to be more resilient to physical damage and comply with ADA standards.
    - Install campus-wide security fencing.
- Phase 3
    - Install approximately 200,000 square feet of artificial turf at the southeast fields to modernize the existing baseball field and create a multiuse soccer and softball field. Other related improvements would include replacement dugouts, shot put station, ADA-compliant pathways, drinking fountains, batting cages, and irrigation systems.
    - Replace tennis courts and related facilities to be ADA-compliant.
    - Beautify the track and field stadium with new outdoor fitness equipment in the existing natural turf areas, replace the perimeter fencing, paint the railing, improve site lighting for improve safety, and install new drinking fountains.

Impact Analysis

Aesthetics

Under the No Reconstruction of Aquatic Facility Alternative, the existing deck lighting, underwater pool lighting, and LED scoreboard would not be replaced. As such, the increased area illumination associated with the proposed lighting improvements would not occur, and outdoor lighting in the area of the swimming pool would be similar to existing conditions. However, other area lighting improvements, including at exterior building perimeters and along replaced ADA-compliant walkways, would be implemented. These proposed lighting improvements would comply with Mitigation Measure AES-A, which requires testing of new light sources prior to the use of any lights during operation. Further, the Phase 1 construction footprint would be slightly smaller under the No Reconstruction of Aquatic Facility Alternative, thereby reducing temporary aesthetic impacts related to construction-related lighting.

The visual characteristic and quality of the campus, as viewed from public areas, would still improve under the No Reconstruction of Aquatic Facility Alternative. The main entrance into the track and field and outdoor recreational spaces, improvements between the track and Building K, and replacement of brown grass areas would still be implemented. The No Reconstruction of Aquatic Facility Alternative would still beautify and improve the visual character and quality of the campus. Overall, the No Reconstruction of Aquatic Facility Alternative would be environmentally superior to the proposed Project.

Air Quality

The area impacted by construction would be smaller under the No Reconstruction of Aquatic Facility Alternative. Therefore, construction-related emissions and air quality impacts would be less than the proposed Project. Still, implementation of Mitigation Measure AQ-A, which would implement Bay Area Air Quality Management District construction measures related to minimizing

fugitive dust and other air pollutants from construction equipment and truck trips, would still be required during construction of this alternative.

Without implementation of the aquatic facility improvements, the school would not meet California Interscholastic Federation standards and therefore would not host regional and state championship competitions. As such, operational emissions would be similar to existing conditions, and slightly less than the proposed Project. Therefore, the No Reconstruction of Aquatic Facility Alternative would be environmentally superior to the proposed Project.

Biological Resources

Under the No Reconstruction of Aquatic Facility Alternative, the Project footprint of disturbance would be smaller, including less vegetation removal. Thus, potential construction-related impacts to biological resources on-site, including nesting birds and roosting bats, would be reduced compared to the proposed Project. However, implementation of Mitigation Measures BIO-A and BIO-B, which would require a habitat assessment for bats prior to any tree removal and would limit the time frame for tree removal in order to avoid nesting birds, would be implemented for other portions of Phase 1 and Phase 3. As such, similar to the proposed Project, potential biological resource impacts as a result of the No Reconstruction of Aquatic Facility Alternative would be reduced to less than significant levels with implementation of mitigation measures. The No Reconstruction of Aquatic Facility Alternative would be neither environmentally superior nor inferior to the proposed Project.

Cultural Resources

The No Reconstruction of Aquatic Facility Alternative would result in a smaller development footprint and would therefore have less potential to encounter unknown archaeological resources during ground-disturbing activities compared to the proposed Project. Similar to the proposed Project, compliance with regulatory requirements would ensure impacts in this regard would be less than significant. Thus, the No Reconstruction of Aquatic Facility Alternative would be environmentally superior to the proposed Project.

Energy

The combined area of impact for construction of the proposed Project would be smaller under the No Reconstruction of Aquatic Facility Alternative. Therefore, construction-related energy consumption and energy impacts would be less than the proposed Project. Yet, without implementation of the outdoor pool improvements, sustainability features such as the removal of an inefficient boiler and its replacement with a high-efficiency boiler and the installation of solar photovoltaic facilities, as a part of the aquatic grandstand shade structure, would not be installed. As such, operational energy consumption would be less efficient than the proposed Project, and the No Reconstruction of Aquatic Facility Alternative would be environmentally inferior to the proposed Project.

Geology and Soils

Similar to the proposed Project, improvements under the No Reconstruction of Aquatic Facility Alternative would need to comply with state requirements related to geology and seismic hazards and impacts to geology and soils would be reduced to less than significant levels. However, given the smaller development footprint under this alternative, there would be less potential for unknown paleontological resources to be discovered. Thus, the No Reconstruction of Aquatic Facility Alternative would be environmentally superior to the proposed Project.

Greenhouse Gas Emissions

Under the No Reconstruction of Aquatic Facility Alternative, construction-related GHG emissions would be less than the proposed Project as there would be a smaller construction footprint. However, construction emissions do not substantially contribute to GHG emissions, as construction is short-term and construction equipment and vehicles have improved technology to capture emissions. Without implementation of the aquatic facility improvements, the school's students would continue to drive off-site for regional and state championship competitions. As such, operational GHG emissions from daily vehicle trips would be similar to existing conditions.

Without implementation of the outdoor pool improvements, the inefficient boiler that serves the swimming pool would not be replaced with a high-efficiency boiler, which would reduce natural gas consumption. As such, operational emissions would not be reduced to the extent of the proposed Project. Overall, the No Reconstruction of Aquatic Facility Alternative would be environmentally inferior to the proposed Project.

Hydrology and Water Quality

Under the No Reconstruction of Aquatic Facility Alternative, the construction footprint would be smaller than the proposed Project. Therefore, impacts to water quality due to erosion would be reduced, as compared to the proposed Project. Similar to the proposed Project, this alternative would comply with the Clean Water Act and National Pollutant Discharge Elimination System Construction General Permit, including implementation of a Stormwater Pollution Prevention Plan for Phases 1 and 3 and erosion control measures for Phase 2. Due to the reduced footprint, impacts to hydrology and water quality from construction activities would be environmentally superior compared to the proposed Project.

Similar to the proposed Project, the No Reconstruction of Aquatic Facility Alternative would include improvements to the storm drain network, underground detention basins, and best management practices to maintain water quality standards and reduce stormwater runoff similar to preconstruction levels. Therefore, operational impacts to water quality and hydrology would be similar to the proposed Project. Overall, the No Reconstruction of Aquatic Facility Alternative would be environmentally superior to the proposed Project.

Noise

Under the No Reconstruction of Aquatic Facility Alternative, the construction area would be smaller than the proposed Project. Therefore, construction-related noise impacts would be less than the proposed Project. Implementation of the proposed Project would result in changes to operational noise on the campus due solely to activity at the new aquatic center; however, it was determined that these changes would not exceed daytime or nighttime noise standards at any location in the Project area. Under the No Reconstruction of Aquatic Facility Alternative, no changes in operational noise on campus would occur. Therefore, the No Reconstruction of Aquatic Facility Alternative would be environmentally superior to the proposed Project.

Recreation

The combined area of impact for construction of the proposed Project would be smaller under the No Reconstruction of Aquatic Facility Alternative. As such, proposed reconstruction, modernization, and beautification of the existing recreational facilities on the campus, as well as the development of new structures and site improvements under this alternative, would result in fewer changes to the environment. Similar to the proposed Project, any potentially significant impacts caused by this alternative would be mitigated to below significance; compliance with

Mitigation Measures AES-A, AQ-A, BIO-A, and BIO-B would ensure that the impact of recreational facilities included as part of the No Reconstruction of Aquatic Facility Alternative would be less than significant. As such, this alternative would be environmentally superior to the proposed Project.

Transportation

Compared to the proposed Project, impacts of the No Reconstruction of Aquatic Facility Alternative would be less than significant related to VMT, as this alternative would meet two VMT screening criteria: being a Small Project generating fewer than 110 daily vehicle trips, and being a Locally Serving Public Facility Project consisting of a neighborhood public school. Similar to the proposed Project, all proposed improvements would comply with the requirements of the San Rafael Transportation Analysis Guidelines and would not conflict with local policies concerning the roadway circulation system. Overall, the No Reconstruction of Aquatic Facility Alternative would be neither environmentally superior nor inferior to the proposed Project.

Tribal Cultural Resources

The No Reconstruction of Aquatic Facility Alternative would result in a smaller development footprint and would therefore have less potential to impact previously undiscovered tribal cultural resources during construction activities compared to the proposed Project. Similar to the proposed Project, compliance with regulatory requirements would ensure impacts in this regard would be less than significant. Thus, the No Reconstruction of Aquatic Facility Alternative would be environmentally superior to the proposed Project.

Ability to Meet Project Objectives

The No Reconstruction of Aquatic Facility Alternative would achieve the underlying purpose of the Project, which is to expend voter-approved funds to modernize Terra Linda High School. However, it would not achieve six of the eight Project objectives to the same extent as the proposed Project. As this alternative would include the proposed security fencing under Phase 2 and the artificial turf multipurpose field under Phase 3, it would achieve the goals to improve campus safety and security for students and staff and reduce hazards associated with the gopher holes in the fields.

Under this alternative, the existing aquatic facilities would continue to operate as they are, and its operation would require the continued use of two antiquated and inefficient gas boilers; therefore, this alternative would not meet the goal to construct climate-resilient and sustainable facilities and implement “green building” practices. This alternative would also not meet the goal to construct state-of-the-art, high-performance outdoor instructional space with flexible learning environments and replace outmoded teaching facilities; therefore, this alternative would not meet the goal to improve Terra Linda High School’s physical education and athletic programs for its students and other students in the District who use the facilities. This alternative would not implement District-Wide Target Initiatives, including the modernization of outmoded swim facilities. Finally, the No Reconstruction of Aquatic Facility Alternative would not meet the goals to maximize the use of limited District bond funds and District-owned property as the aquatic center would not be redeveloped.

6.3.3 No Artificial Turf at Southeast Fields Alternative

The No Artificial Turf at Southeast Fields Alternative would include the same characteristics as the proposed Project, except that approximately 200,000 square feet of natural turf within the existing baseball/softball and soccer fields would not be replaced with permeable, artificial turf.

Further, the fields would not be improved with other amenities such as dugouts, portable bleacher stands, new scoreboards, a replacement shot put throw station, site lighting, ADA-compliant pathway upgrades, new drinking fountains, batting cages, and other features generally seen on such sports fields. Consequently, improvements to capture runoff would not be installed within the fields, including a new irrigation system and storm drainage infrastructure.

Similar to the proposed Project, the Artificial Turf at Southeast Fields Alternative would include the following components:

- Phase 1
    - Reconstruct the swimming facilities to meet California Interscholastic Federation standards, including the installation of a new permanent grandstand and replacement pool and area lighting.
    - Improve physical education support spaces (reconstruct Building H and modernize locker facilities in Building K) adjacent to the existing swimming pool.
    - Upgrade west end of the stadium: replace the existing scoreboard, construct a new ticket booth building and a new restroom/concessions building, and create a new grand entrance to the track and field and other outdoor recreational facilities.
- Phase 2
    - Modernize Buildings A, M, and L to accommodate future classroom programming needs, including a new wellness center and space for state-of-the-art technology and equipment, to be more resilient to physical damage and comply with ADA standards.
    - Install campus-wide security fencing.
- Phase 3
    - Replace tennis courts and related facilities to be ADA-compliant.
    - Beautify the track and field stadium with new outdoor fitness equipment in the existing natural turf areas, replace the perimeter fencing, paint the railing, improve site lighting for improve safety, and install new drinking fountains.

Impact Analysis

Aesthetics

Under the No Artificial Turf at Southeast Fields Alternative, the existing natural turf in the southeast corner of the campus would remain in its current condition; the grass in the multipurpose field area would remain brown with exposed and uneven soils due to reduced watering. Other related aesthetic improvements, including new scoreboards, bleachers, and pathways with site lighting that would enhance the visual quality, would not be made. Under this alternative, no aesthetic improvements would be made to the southeast portion of the campus, as compared to the proposed Project. Therefore, the No Artificial Turf at Southeast Fields Alternative would be inferior to the Project as it relates to visual quality.

This alternative would result in a smaller Phase 3 construction footprint, thereby reducing temporary construction-related glare and lighting impacts; however, these effects would be de minimis, as they would be short term and no construction would occur in the evenings that would require high-intensity lighting. Under this alternative, all other proposed improvements would be made, including improvements to the aquatic center with new lighting and campus-wide security lighting along pedestrian pathways and building exteriors, which would result in new and increased sources of light, similar to the proposed Project. Also under this alternative, implementation of Mitigation Measure AES-A, which would test new sources of light prior to their use, would still be required for exterior building and walkway lighting and would reduce impacts to levels similar to the proposed Project. Overall, the No Artificial Turf at Southeast Fields Alternative would be environmentally inferior to the proposed Project.

Air Quality

The combined area of impact for construction of the proposed Project would be smaller under the No Artificial Turf at Southeast Fields Alternative. Therefore, construction-related emissions and air quality impacts would be less than the proposed Project. Still, Mitigation Measure AQ-A, which would implement Bay Area Air Quality Management District construction measures related to minimizing fugitive dust and other air pollutants from construction equipment and truck trips, would still be required during construction of this alternative. Operational emissions would be similar to existing conditions and less than the proposed Project, as the existing softball, baseball, and soccer fields would continue regular use, whereas the Project would increase the use of the fields. Therefore, the No Artificial Turf at Southeast Fields Alternative would be environmentally superior to the proposed Project.

Biological Resources

Under the No Artificial Turf at Southeast Fields Alternative, the Project footprint of disturbance would be smaller and include less vegetation removal. Thus, potential construction-related impacts to biological resources on-site, including nesting birds and roosting bats, would be reduced compared to the proposed Project. However, Mitigation Measures BIO-A and BIO-B, which would respectively require a habitat assessment for bats prior to any tree removal and limit the time frame for tree removal in order to avoid nesting birds, would be implemented during Phase 1 and other portions of Phase 3. As such, similar to the proposed Project, potential biological resources impacts as a result of this alternative would be reduced to less than significant levels with implementation of mitigation measures. The No Artificial Turf at Southeast Fields Alternative would be neither environmentally superior nor inferior to the proposed Project.

Cultural Resources

The No Artificial Turf at Southeast Fields Alternative would result in a smaller development footprint and would therefore have less potential to encounter unknown archaeological resources during ground-disturbing activities compared to the proposed Project. Similar to the proposed Project, compliance with regulatory requirements would ensure that impacts in this regard would be less than significant. Thus, the No Artificial Turf at Southeast Fields Alternative would be environmentally superior to the proposed Project.

Energy

As the construction area of the No Artificial Turf at Southeast Fields Alternative would be reduced compared to the proposed Project, construction-related energy consumption and energy impacts would be less than the proposed Project. Operational energy consumption at the existing softball, baseball, and soccer fields would be similar to existing conditions as the fields would continue

regular use, whereas the Project would increase the use of the fields. Further, similar to the proposed Project, this alternative would implement energy-efficient building improvements that would result in a reduction in energy and natural gas consumption. Therefore, the No Artificial Turf at Southeast Fields Alternative would be environmentally superior to the proposed Project.

Geology and Soils

Project compliance with existing regulatory requirements related to geology and seismic hazards would reduce potential impacts in this regard to less than significant levels. Development under the No Artificial Turf at Southeast Fields Alternative would result in similar less than significant impacts. In addition, given the smaller development footprint under this alternative, there is less potential for unknown paleontological resources to be uncovered within the project area. Thus, the No Artificial Turf at Southeast Fields Alternative would be environmentally superior to the proposed Project.

Greenhouse Gas Emissions

The combined area of impact for construction of the proposed Project would be smaller under the No Artificial Turf at Southeast Fields Alternative. Therefore, construction-related GHG emissions would be less than the proposed Project. Similar to the proposed Project, this alternative would include improvements to energy efficiency, including the replacement of existing boilers and the use of solar energy, which would reduce operational emissions. As such, the No Artificial Turf at Southeast Fields Alternative would be ~~neither~~ environmentally superior ~~nor inferior~~ to the proposed Project.

Hydrology and Water Quality

Under the No Artificial Turf at Southeast Fields Alternative, the construction footprint would be smaller than the proposed Project. Therefore, impacts to water quality due to erosion would be reduced, as compared to the proposed Project. Under this alternative, the District would also comply with the Clean Water Act and National Pollutant Discharge Elimination System Construction General Permit, including implementation of a Stormwater Pollution Prevention Plan for Phases 1 and 3 and erosion control measures for Phase 2. Due to the reduced footprint, impacts to hydrology and water quality from construction activities would be environmentally superior compared to the proposed Project.

Similar to the proposed Project, this alternative would construct a new storm drain network and underground detention basins and include best management practices to maintain water quality standards and reduce stormwater runoff similar to preconstruction levels. Drainage control in the southeast fields would remain similar to existing conditions, which has adequate stormwater collection. As such, the No Artificial Turf at Southeast Fields Alternative would be environmentally superior to the proposed Project.

Noise

The combined area of impact for construction of the proposed Project would be smaller under the No Artificial Turf at Southeast Fields Alternative. Therefore, construction-related noise impacts would be less than the proposed Project. Under this alternative, expanded use of the southeast fields would not occur, and the frequency of noise in this area would remain the same as existing conditions. As such, noise impacts under the No Artificial Turf at Southeast Fields Alternative would be environmentally superior to the proposed Project.

Recreation

Similar to the proposed Project, the No Artificial Turf at Southeast Fields Alternative would not increase the use of existing neighborhood and regional parks. However, due to its reduced footprint—i.e., not improving the southeast fields of the campus—this alternative would result in less environmental impact. Similar to the proposed Project, any potentially significant impacts caused by this alternative would be mitigated to below significance; compliance with Mitigation Measures AES-A, AQ-A, BIO-A, and BIO-B would ensure that the impact of recreational facilities included as part of the No Artificial Turf at Southeast Fields Alternative would be less than significant. As such, this alternative would be environmentally superior to the proposed Project.

Transportation

Transportation impacts under the No Artificial Turf at Southeast Fields Alternative would be less than the proposed Project. There would be fewer construction vehicles, as the improvements in the southeast fields would not be made. Additionally, under this alternative, uses and operations would not change from existing conditions. There would not be an expansion of community use of the southeast fields that would increase VMT. Therefore, even though the proposed Project would result in less than significant impacts to transportation facilities, this alternative would result in even fewer impacts. Therefore, the No Artificial Turf at Southeast Fields Alternative would be environmentally superior to the proposed Project.

Tribal Cultural Resources

The No Artificial Turf at Southeast Fields Alternative would result in a smaller development footprint and would therefore have less potential than the proposed Project to impact previously undiscovered tribal cultural resources during construction activities. Similar to the proposed Project, compliance with regulatory requirements would ensure that impacts in this regard would be less than significant. Thus, the No Artificial Turf at Southeast Fields Alternative would be environmentally superior to the proposed Project.

Ability to Meet Project Objectives

The No Artificial Turf at Southeast Fields Alternative would achieve the underlying purpose of the Project, which is to expend voter-approved funds to modernize Terra Linda High School. However, it would not achieve six of the eight Project objectives to the same extent as the proposed Project. Under this alternative, the inefficient heating systems associated with the existing swimming and locker facilities would be removed and the new sustainable Project features listed in Chapter 3, including but not limited to green building materials, efficient boilers and heat pump systems, and solar photovoltaic facilities, and reduce water plumbing fixtures would be installed, this alternative would meet the goal to construct climate resilient and sustainable facilities and implement “green building” practices. This alternative would include security fencing; therefore, it would meet the goal to improve campus safety and security.

However, without the installation of the artificial turf, the existing multipurpose field would continue to be in a state of disrepair and existing sports programs would continue to use the track and field stadium for practices and games. Therefore, this alternative would not achieve the objectives of reducing hazards at Terra Linda High School athletic facilities and improve the Terra Linda High School’s physical education and athletic programs. Additionally, there would continue to be no softball facilities on the campus; students would continue to walk over to the Miller Creek District Office to use their baseball field. Therefore, this alternative would not meet the objective to construct state-of-the-art, high-performance indoor and outdoor instructional spaces with flexible learning environments and replace outmoded teaching facilities. This alternative would not

implement all District-Wide Target Initiatives applicable to the District's high schools and the Terra Linda High School campus, including installing artificial turf. The No Artificial Turf at Southeast Fields Alternative would not meet the goals to maximize the use of limited District bond funds and District-owned property, as the turf field would not be installed.

6.4 Environmentally Superior Alternative

Table 6-1, Comparison of Alternatives, summarizes the comparative analysis presented above (i.e., the alternatives compared to the proposed Project). As shown in Table 6-1, the No Artificial Turf at Southeast Fields Alternatives would be environmentally superior under ten ~~nine~~ environmental issues, environmentally inferior under one environmental issue, and neither environmentally superior nor inferior under one ~~two~~ environmental issue~~s~~. Accordingly, the No Artificial Turf at Southeast Fields Alternative is the environmentally superior alternative, as it would avoid and have less inferior environmental impacts as compared to the proposed Project.

The No Artificial Turf at Southeast Fields Alternative would result in reduced environmental impacts regarding air quality, cultural resources, energy, geology and soils, greenhouse gas emissions, hydrology and water quality, noise, recreation, transportation, and tribal cultural resources. This alternative would result in a greater environmental impact under aesthetics and have similar impacts under biological resources ~~and GHG emissions~~.

This alternative would achieve three of the eight Project objectives, but not to the same extent as the proposed Project. Specifically, this alternative would entail the same reconstruction, modernization, and beautification of existing recreational and academic facilities on the campus, as well as the development of new structures and site improvements, as the proposed Project, with the exception of proposed artificial turf. All improvements under this alternative would be designed to be climate resilient and sustainable, improve campus safety and security, and be state-of-the-art and high performance. However, without the installation of the artificial turf, the existing multipurpose field would continue to be in a state of disrepair and existing sports teams would have to continue to use off-site facilities for practices. This would not achieve the objective of improving safety for athletic programs, or fully improve and modernize the campus's physical education and athletic programs to the same extent as the proposed Project. Furthermore, this alternative would not implement all District-Wide Target Initiatives applicable to the District's high schools and the Terra Linda High School campus. Additionally, the fields would not be increasingly available to existing school programs or the community due to ongoing maintenance. Further, stormwater capture and drain improvements, as well as irrigation improvements, would not be installed under this alternative. As such, the No Artificial Turf at Southeast Fields Alternative would meet some objectives, but to a lesser extent than the proposed Project. Additionally, the No Artificial Turf at Southeast Fields Alternative would not meet two of the goals—to maximize the use of limited District bond funds and to maximize the use of District-owned property—as the turf field would not be installed.

Table 6-1: Comparison of Alternatives

Environmental Issue	Proposed Project	Alternative: No Project	Alternative: No Reconstruction of Aquatic Facility	Alternative: No Artificial Turf at Southeast Fields
Aesthetics	Less Than Significant Impact With Mitigation Incorporated	=	+	/
Air Quality	Less Than Significant Impact With Mitigation Incorporated	+	+	+
Biological Resources	Less Than Significant Impact With Mitigation Incorporated	+	=	=
Cultural Resources	Less Than Significant Impact	+	+	+
Energy	Less Than Significant Impact	/	/	+
Geology and Soils	Less Than Significant Impact	+	+	+
Greenhouse Gas Emissions	Less Than Significant Impact	/	/	+ ~~=~~
Hydrology and Water Quality	Less Than Significant Impact	+	+	+
Noise	Less Than Significant Impact	+	+	+
Recreation	Less Than Significant Impact	+	+	+
Transportation	Less Than Significant Impact	+	=	+
Tribal Cultural Resources	Less Than Significant Impact	+	+	+
Summary of Comparison		+ 9 / 2 = 1	+ 8 / 2 = 2	+ 10 ~~9~~ / 1 = 1 ~~2~~

\+ Indicates the alternative's impact is less than the proposed Project. The alternative is environmentally superior.

/ Indicates the alternative's impact is greater than the proposed Project. The alternative is environmentally inferior.

= Indicates the alternative's impact is equal to the proposed Project. The alternative is neither environmentally superior nor inferior.

CHAPTER 7
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CHAPTER 8
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