



**DRAFT**  
**Initial Study/Mitigated Negative Declaration**  
**New Science Building Project**  
**City of Fairfield, Solano County, California**

Prepared for:  
**Solano Community College District**  
4000 Suisun Valley Road  
Fairfield, CA 94534  
707.863.7189

Contact: Brian Bush, Project Manager

Prepared by:  
**FirstCarbon Solutions**  
1350 Treat Boulevard, Suite 380  
Walnut Creek, CA 94597  
925.357.2562

Contact: Jason Brandman, Vice President  
Elizabeth Johnson, Project Manager

Date: March 31, 2016

THIS PAGE INTENTIONALLY LEFT BLANK

## Table of Contents

<b>Executive Summary .....</b>	<b>1</b>
Project Summary .....	1
Mitigation Measures .....	1
<b>Section 1: Introduction .....</b>	<b>7</b>
1.1 - Purpose.....	7
<b>Section 2: Project Description .....</b>	<b>9</b>
2.1 - Project Location.....	9
2.2 - Environmental Setting .....	9
2.2.1 - Land Use Activities .....	9
2.2.2 - General Plan and Zoning .....	9
2.3 - Project Description .....	9
2.3.1 - Project Background .....	9
2.3.2 - Project Overview .....	10
2.3.3 - Operational Characteristics .....	10
2.3.4 - Architecture and Visual Appearance.....	10
2.3.5 - Vehicular Access and Parking .....	19
2.3.6 - Utilities .....	19
2.3.7 - Public Transit, Bicycles, and Pedestrians .....	19
2.3.8 - Schedule .....	19
2.3.9 - Discretionary Approvals .....	19
<b>Section 3: Environmental Analysis.....</b>	<b>23</b>
1. Aesthetics, Light, and Glare .....	24
2. Agriculture and Forestry Resources .....	26
3. Air Quality.....	29
4. Biological Resources .....	40
5. Cultural Resources .....	43
6. Geology and Soils .....	51
7. Greenhouse Gas Emissions .....	55
8. Hazards and Hazardous Materials .....	59
9. Hydrology and Water Quality .....	63
10. Land Use and Planning .....	69
11. Mineral Resources .....	71
12. Noise.....	72
13. Population and Housing .....	84
14. Public Services .....	86
15. Recreation .....	88
16. Transportation/Traffic.....	89
17. Utilities and Service Systems .....	95
18. Mandatory Findings of Significance .....	99
<b>Section 4: References .....</b>	<b>101</b>
<b>Section 5: Report Preparation Personnel.....</b>	<b>103</b>

## List of Appendices

### Appendix A: Cultural Resources

- A.1 - NAHC Correspondence
- A.2 - AB 52 Correspondence

### Appendix B: Geotechnical Investigation

### Appendix C: Noise Analysis

### Appendix D: Traffic Analysis

## List of Tables

Table 1: Construction Criteria Air Pollutants and Precursors Screening Level Sizes .....	34
Table 2: Operational Criteria Air Pollutants and Precursors Screening Level Sizes .....	35
Table 3: Construction Greenhouse Gas Emissions .....	56
Table 4: Operational Greenhouse Gas Screening.....	56
Table 5: Greenhouse Gas Operational Emissions.....	57
Table 6: Project Operational Greenhouse Gases .....	57
Table 7: Noise Monitoring Summary .....	73
Table 8: Typical Construction Equipment Maximum Noise Levels, $L_{max}$ .....	75
Table 9: Traffic Noise Model Results Summary .....	78
Table 10: Vibration Levels of Construction Equipment.....	79
Table 11: Federal Transit Administration Construction Vibration Impact Criteria .....	81
Table 12: Supply and Demand Comparison—Multiple Dry-Year Events.....	97

## List of Exhibits

Exhibit 1: Regional Location Map.....	11
Exhibit 2: Local Vicinity Map, Aerial Base .....	13
Exhibit 3: Site Plan.....	15
Exhibit 4: Noise Monitoring Locations .....	17

## EXECUTIVE SUMMARY

### Project Summary

The proposed project will involve the construction of a new, approximately 33,880-square-foot Science Building on the Solano Community College Fairfield Campus. The new building will accommodate relocated classrooms, offices, and facilities for the instruction of science classes from the existing Building 300, as well as relocation and expansion of the campus veteran's center. Refer to Section 2, Project Description for further detail about the proposed project.

### Mitigation Measures

This Mitigated Negative Declaration (MND) sets forth the following mitigation measures for the proposed project:

- MM AIR-1** The following Basic Construction Emission Control Measures shall be included in the project design and implemented during construction
- a. All active construction areas shall be watered at least two times per day.
  - b. All exposed non-paved surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and access roads) shall be watered at least three times per day and/or non-toxic soil stabilizers shall be applied to exposed nonpaved surfaces.
  - c. All haul trucks transporting soil, sand, or other loose material off-site shall be covered and/or shall maintain at least two feet of freeboard.
  - d. 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.
  - e. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
  - f. 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.
  - g. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of CCR). Clear signage regarding idling restrictions shall be provided for construction workers at all access points.
  - h. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
  - i. The prime construction contractor shall post a publicly visible sign with the telephone number and person to contact at the College regarding dust complaints. The College and the construction contractor shall take corrective

action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

**MM AIR-2** The Solano Community College District shall require its construction contractor to demonstrate compliance with the following Construction Emissions Minimization Practices prior to commencement of construction activities:

1. All off-road equipment greater than 25 horsepower and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:
  - a. Where access to alternative source of power is available, portable diesel engines shall be prohibited;
  - b. All off-road equipment shall have:
    - i. Engines that meet or exceed either U.S. Environmental Protection Agency (EPA) or California Air Resources Board (ARB) Tier 2 off-road emission standards, and
    - ii. Engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS)
  - c. Exceptions:
    - iii. Exceptions to 1(a) may be granted if the project sponsor has submitted information providing evidence to the satisfaction of the State Center that an alternative source of power is limited or infeasible at the project site and that the requirements of this exception provision apply.
    - iv. Exceptions to 1(b)(ii) may be granted if the project sponsor has submitted information providing evidence to the satisfaction of the State Center that a particular piece of off-road equipment with an ARB Level 3 VDECS: (1) is technically not feasible, (2) would not produce desired emissions reductions due to expected operating modes, (3) installing the control device would create a safety hazard or impaired visibility for the operator, or (4) there is a compelling emergency need to use off-road equipment that are not retrofitted with an ARB Level 3 VDECS and the sponsor has submitted documentation to the City that the requirements of this exception provision apply.

**MM BIO-1** No more than 14 days prior to initial ground disturbance and vegetation removal during the nesting season (February 1 to August 31), the Solano Community College District shall retain a qualified biologist to perform pre-construction breeding bird surveys. If any nests are found, they shall be flagged and protected with a suitable buffer. Buffer distance will vary by species and conditions at the site, but it is usually at least 50 feet, and up to 250 feet for raptors. Note that this mitigation measure does not apply to ground disturbance and vegetation removal activities that occur outside of the nesting season (September 1 to January 31).

- MM BIO-2** Prior to the first ground-disturbing activities, the Solano Community College District shall retain a qualified biologist to conduct two pre-construction surveys for the burrowing owl. The first survey shall be conducted no more than 14 days prior to ground-disturbing activities, and the second survey shall be conducted within 48 hours of initial ground disturbance. The surveys shall be conducted in accordance with the California Department of Fish and Wildlife (CDFW) Staff Report on Burrowing Owl Mitigation. If owls are determined to be present, an appropriate no-disturbance buffer shall be placed around active burrows until young have fledged the nest. If burrowing owl is detected during the non-nesting season and the burrow cannot be avoided, consultation with CDFW shall be required to passively exclude burrowing owls from the site.
- MM CUL-1** All ground-disturbing activities on Solano Community College property, such as trenching and construction excavation, shall be preceded by a limited field study to insure that previously unrecorded resources are not unintentionally harmed. Because of the high potential for undiscovered cultural resources within the project area, all construction activity resulting in sub-surface disturbance shall be monitored by an archaeologist who meets the Secretary of Interior's Professional Qualification Standards for archaeology. If a potentially significant cultural resource is encountered during subsurface earthwork activities, all construction activities within a 100-foot radius of the find shall cease until the archaeologist determines whether the resource requires further study. The Applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction activities shall be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. If the resource is determined significant under CEQA, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant in accordance with Section 15064.5 of the CEQA Guidelines. The archaeologist shall also perform appropriate technical analyses, prepare a comprehensive report complete with methods, results, and recommendations, and provide for the permanent curation of the recovered resources. The report shall be submitted to the City of Fairfield, the Northwest Information Center, and the State Historic Preservation Office (SHPO), if required.
- MM CUL-2** In the event that fossils or fossil-bearing deposits are discovered during construction activities, excavations within a 50-foot radius of the find shall be temporarily halted or diverted. The Project contractor shall notify a qualified paleontologist to examine the discovery. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall document the discovery as needed in accordance with Society of

Vertebrate Paleontology standards and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If the Applicant determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The plan shall be submitted to the Solano Community College District for review and approval prior to implementation, and the Applicant shall adhere to the recommendations in the plan.

**MM CUL-3**

In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and Section 5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.
2. Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance:
  - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.
  - The descendant identified fails to make a recommendation.
  - The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Additionally, California Public Resources Code Section 15064.5 requires the following relative to Native American Remains:



When an initial study identifies the existence of, or the probable likelihood of, Native American Remains within a project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop a plan for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American Burials with the appropriate Native Americans as identified by the Native American Heritage Commission.

**MM GEO-1** Prior to grading activities, the Solano Community College District shall retain a qualified geotechnical consulting firm to prepare a design-level geotechnical report for the Science Building. The design-level report shall be prepared in accordance with the latest adopted edition of the California Building Code Standards and address the potential for seismic hazards to occur on-site and identify abatement measures to reduce the potential for such an event to acceptable levels. The recommendations of the approved design-level geotechnical report shall be incorporated into the project plans.

**MM HYD-1** Prior to grading activities, the Solano Community College District shall prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the requirements of the statewide Construction General Permit. The SWPPP shall be designed to address the following objectives: (1) all pollutants and their sources, including sources of sediment associated with construction, construction site erosion, and all other activities associated with construction activity are controlled; (2) where not otherwise required to be under a Regional Water Quality Control Board permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated; (3) site Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity; and (4) stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.

The SWPPP shall be prepared by a qualified SWPPP preparer. The SWPPP shall include the minimum BMPs required for the identified risk level. BMP implementation shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association Stormwater Best Management Handbook-Construction or the Caltrans Stormwater Quality Handbook Construction Site Best Management Practices (BMPs) Manual.

The SWPPP shall include a construction site monitoring program that identifies requirements for dry weather visual observations of pollutants at all discharge locations, and as appropriate, depending on the project risk level, sampling of site effluent and receiving waters. A qualified SWPPP practitioner shall be responsible for implementing the BMPs at the project site. The practitioner shall also be

responsible for performing all required monitoring, BMP inspection, and maintenance and repair activities.

**MM HYD-2**

Prior to occupancy of the Science Building, the Solano Community College District shall verify that operational stormwater quality control measures that comply with the requirements of the current Municipal Regional Permit have been implemented. Responsibilities include but are not limited to designing BMPs into project features and operations to reduce potential impacts to surface water quality and to manage changes in the timing and quantity of runoff (i.e., hydromodification) associated with operation of the project. These features shall be included in the design-level drainage plan and final development drawings. Specifically, the final design shall include measures designed to mitigate potential water quality degradation and hydromodification of runoff from all portions of completed developments.

The proposed project shall incorporate site design and BMPs described in the current version of the local C.3 Stormwater Technical Guidance manual. Low Impact Development features, including minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source, shall be used at each development covered by the Municipal Regional Permit. Funding for long-term maintenance of all BMPs shall be specified. The College District shall establish a self-perpetuating Operation and Maintenance of Stormwater Treatment Systems Plan (Municipal Regional Permit provision C.3.h). This plan shall specify a regular inspection schedule of stormwater treatment facilities in accordance with the requirements of the Municipal Regional Permit.

## SECTION 1: INTRODUCTION

### 1.1 - Purpose

The purpose of this Initial Study/Mitigated Negative Declaration (IS/MND) is to identify any potential environmental impacts from implementation of the Solano Community College District Science Building Project in Fairfield, California. Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15367, the Solano Community College District is the Lead Agency in the preparation of this IS/MND and any additional environmental documentation required for the project. The Solano Community College District has discretionary authority over the proposed project and would also construct and operate the proposed project. The intended use of this document is to determine the level of environmental analysis required to adequately prepare the project IS/MND and to provide the basis for input from public agencies, organizations, and interested members of the public.

Section 2 provides a brief description of the project location and the characteristics of the project. Section 3 includes an environmental checklist giving an overview of the potential impacts that may result from project implementation and elaborates on the information contained in the environmental checklist.

THIS PAGE INTENTIONALLY LEFT BLANK

## SECTION 2: PROJECT DESCRIPTION

### 2.1 - Project Location

The project site is located in the City of Fairfield, Solano County, California (Exhibit 1), within the existing Solano Community College District campus. The project site is surrounded on all sides by walkways and existing campus buildings, including Building 100 (Library) to the west; Building 1400 (Student Center) to the north, Building 1500 (Math) to the south; and Building 1700 (Physical Education/Gym) to the east (Exhibit 2).

The community college campus is located east of Suisun Valley Road, and is bounded on all sides by Solano College Road. Suisun Creek is located approximately 0.43 mile to the east, and the Interstate 80 (I-80) Freeway is located approximately 0.47 mile to the southeast. The site is located at approximately 38.2350 degrees north latitude and 122.1224 degrees west longitude. The site is relatively flat, and based on review of the topographic map of the Fairfield South, California Quadrangle, published by the USGS, dated 1949 (photo revised 1980), the elevation of the site is approximately 40 feet above mean sea level (msl).

### 2.2 - Environmental Setting

#### 2.2.1 - Land Use Activities

The approximately 1.35-acre project site consists of vacant, open space area with rock elements and student use tables in the center of the existing Solano Community College campus. Site photographs are provided in Exhibit 3.

#### 2.2.2 - General Plan and Zoning

##### General Plan

The project site and the larger Solano Community College Campus are designated Public Facilities (PF) by the City of Fairfield General Plan.

##### Zoning

The project site and the larger Solano Community College Campus are zoned Public Facilities (PF) District by the City of Fairfield.

### 2.3 - Project Description

#### 2.3.1 - Project Background

The 192-acre Solano Community College campus was completed in 1971 and now serves over 11,000 students. Classes are held on a semester system (spring and fall) plus summer sessions. Courses are offered during weekdays, evenings and Saturdays, as well as online.

The Fairfield Campus is located in Fairfield, California along Suisun Valley Road approximately 1 mile to the north of I-80. The campus property encompasses 192 acres and is relatively flat. It is surrounded by residential developments, light commercial facilities, and small agricultural operations. The eastern property boundary approximately aligns with Suisun Creek, a channelized stream surrounded by riparian vegetation, which flows from north to south. The western boundary is adjacent to and parallel with Suisun Valley Road. All on-site storm drain systems for developed campus areas flow toward Dan Wilson Creek, which flows from north to south through the property parallel and adjacent to Solano College Road. Immediately adjacent to the western property boundary is a drainage ditch parallel to Suisun Valley Road, which intercepts runoff from the road before it enters the campus. A wide variety of vegetation and land types exist due to the overall size and diversity of amenities throughout the lot. Structures with interspersed landscaped grass lawns, playing fields, and paths are prevalent throughout the developed portions of the campus. Trees are interspersed in the landscaping throughout the campus. Tree growth is dense within the riparian area surrounding Suisun Creek. Trees also grow more densely at the southern end of the drainage ditch which is parallel to Solano College Road. Approximately 42.8 acres of the eastern side of the property is undeveloped field covered by grass that dries out during summer months.

### **2.3.2 - Project Overview**

The new, approximately 33,880-square-foot Science Building is being built to replace an aging facility and will relocate existing labs and prep spaces for Biology, Chemistry, Anatomy, Geology, Physics, and Geography from Building 300 into this new facility. Along with the lab spaces and faculty offices, the building will include the Veteran's Center, a Science Activity Center, and an open-air student commons that will support an outdoor learning environment.

The capacity of the new building is expected to be nine labs/classrooms with associated preparation spaces, 23 offices, and associated common spaces. As part of this project, the Veteran's Center is expanding from its current space of approximately 1,200 square feet to 3,432 square feet. The site plan is shown in Exhibit 4.

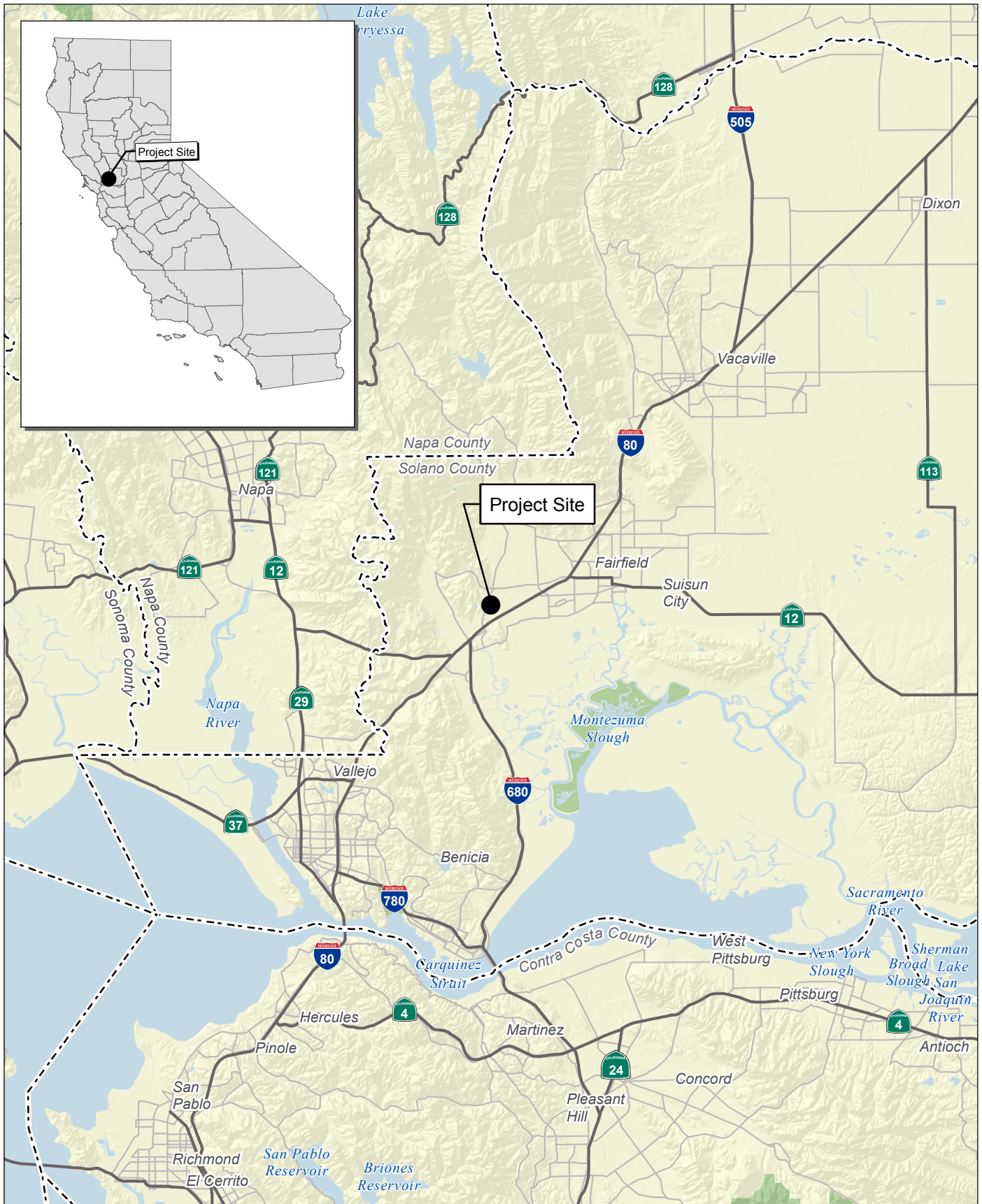
### **2.3.3 - Operational Characteristics**

The building would be used for academic activities Monday through Saturday during the academic year (spring, summer, and fall semesters). No classes would be scheduled for Sundays or holidays. The Science Building would be sized to accommodate a maximum of approximately 475 students and instructors per semester.

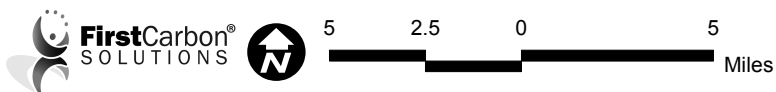
### **2.3.4 - Architecture and Visual Appearance**

The building will be a one-story structure that would employ a modern appearance, which will complement the architectural style of the existing campus architecture and provide visual continuity of the college at this site.

New landscaping and hardscaping will be added to the site to blend in with the surrounding campus.



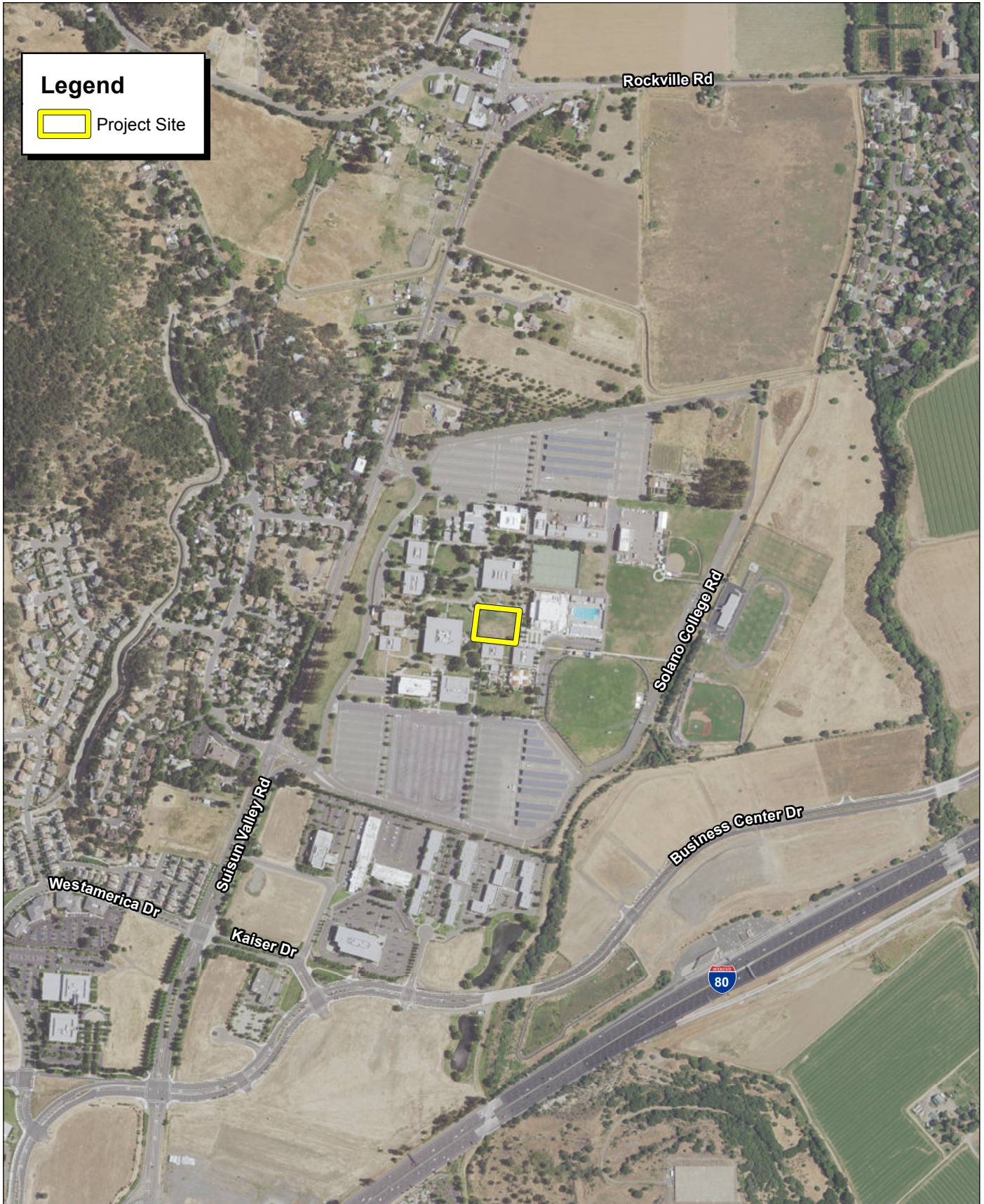
Source: Census 2000 Data, The CaSIL, FCS GIS 2013.



## Exhibit 1 Regional Location Map

THIS PAGE INTENTIONALLY LEFT BLANK





Source: ESRI Imagery, 2014

### Exhibit 2

### Local Vicinity Map

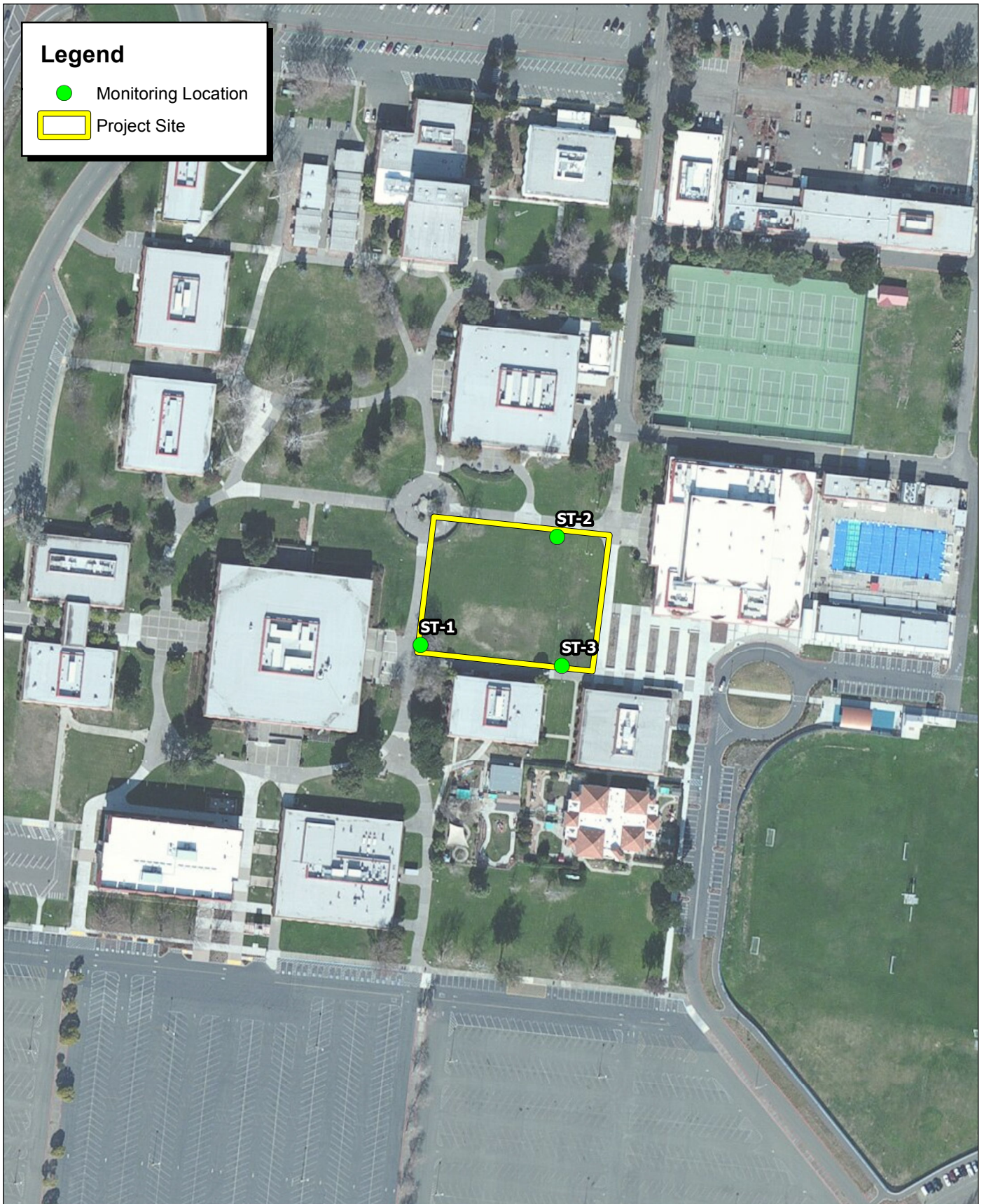
### Aerial Base



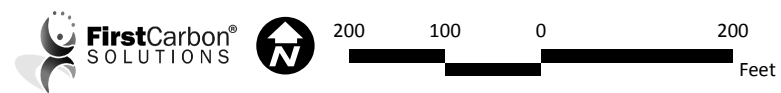
THIS PAGE INTENTIONALLY LEFT BLANK



THIS PAGE INTENTIONALLY LEFT BLANK



Source: ESRI Imagery, 2014



## Exhibit 4 Noise Monitoring Locations

THIS PAGE INTENTIONALLY LEFT BLANK

### 2.3.5 - Vehicular Access and Parking

No additional parking will be provided as part of the project. Because of the project site's central location within the existing campus, no new vehicular access points will be provided.

### 2.3.6 - Utilities

The existing community college campus is already served by utilities, including storm drainage, potable water, wastewater, electricity, and natural gas. The project site is bounded by existing underground utility lines which would be extended to serve the project. Storm drain, compressed air, and hot and chilled water supply and return piping are located to the west and north of the project site. A domestic water line is located south of the project site, and compressed air, gas, sanitary sewer, storm drain, hot and chilled water supply and return piping, and a joint trench (electrical, telephone, cable, data) are located to the east.

### 2.3.7 - Public Transit, Bicycles, and Pedestrians

The campus is currently served by two public transit lines (Fairfield and Suisun Transit [FAST] Route Number 5 and Route Number 7), through the Solano Transportation Authority. The project will provide additional short-term and long-term bicycle parking in accordance with CalGreen requirements. The project site is surrounded by existing walkways for use by pedestrians. Because of the central location of the project site within the campus, the project will not create any new pedestrian-vehicle conflicts or interface with roadways.

### 2.3.8 - Schedule

The construction period is expected to be 18 to 20 months, with building occupancy in the spring of 2019. All construction staging would occur on-site.

### 2.3.9 - Discretionary Approvals

The Solano Community College District, as Lead Agency for the project, has discretionary authority over the project. In order to implement this project, the following approvals would be necessary:

- Adoption of the Initial Study/Mitigated Negative Declaration
- Approval of the Science Building Project

THIS PAGE INTENTIONALLY LEFT BLANK



Environmental Factors Potentially Affected					
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.					
<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry Resources	<input checked="" type="checkbox"/>	Air Quality
<input type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input checked="" type="checkbox"/>	Geology/Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards/Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology/Water Quality
<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources	<input checked="" type="checkbox"/>	Noise
<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input checked="" type="checkbox"/>	Transportation/Traffic	<input type="checkbox"/>	Utilities/Services Systems	<input type="checkbox"/>	Mandatory Findings of Significance

**Lead Agency Determination**

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measure based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signed: 

SCCD  
 Agency

Brian Bush, Senior Project Manager  
 Signer's Name, Title

3/30/2016  
 Date

THIS PAGE INTENTIONALLY LEFT BLANK

## SECTION 3: ENVIRONMENTAL ANALYSIS

Sections 1 through 18 analyze the potential environmental impacts associated with the project. The environmental issue areas that are evaluated are:

- Aesthetics, Light, and Glare
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Services Systems
- Mandatory Findings of Significance

The environmental analysis in the following sections is patterned after the Initial Study Checklist recommended by the CEQA Guidelines, as amended, and used by the District in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the development's impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- **No impact.** The development will not have any measurable environmental impact on the environment.
- **Less than significant impact.** The development will have the potential for impacting the environment, although this impact will be below established thresholds that are considered to be significant.
- **Less than significant impact with mitigation incorporated.** The development will have the potential to generate impacts, which may be considered as a significant effect on the environment, although mitigation measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.
- **Potentially significant impact.** The development could have impacts, which may be considered significant, and therefore additional analysis is required to identify mitigation measures that could reduce potentially significant impacts to less than significant levels.

The following is a discussion of potential project impacts as identified in the Initial Study/Environmental Checklist. Explanations are provided for each item.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>1. Aesthetics, Light, and Glare</b> <i>Would the project:</i>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

Would the project:

**a) Have a substantial adverse effect on a scenic vista?**

**No impact.** The project site is located within a central portion of the existing Solano Community College campus. The project would consist of a single-story building that would be surrounded by existing buildings on all sides. There are no features on the project site commonly associated with scenic vistas (peaks, overlooks, ridgelines, etc.). Moreover, views of the surrounding area largely consist of the existing college campus, which has been developed since 1971. This condition precludes the possibility of adverse impacts on a scenic vista. No impact would occur.

**b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?**

**No impact.** There are no state scenic highways within view of the project site. The segment of the I-80 located to the southwest of the project site is not listed as a designated or eligible scenic highway, and the project building would not be visible to motorists on the I-80 because it is substantially surrounded by existing buildings. This condition precludes the possibility of adverse impacts to state scenic highways. No impact would occur.

**c) Substantially degrade the existing visual character or quality of the site and its surroundings?**

**Less than significant impact.** The project site is located within the existing Solano Community College campus, which has been in existence since 1971. The project site is located in a central portion of the campus, and is substantially surrounded by existing college buildings on all sides. The

project building would complement the architectural style of the existing campus architecture and provide visual continuity. New hardscaping and landscaping would also be provided, and would tie into existing features within the surrounding campus. The project building would contain classroom, office, and laboratory space—consistent with the surrounding uses on the campus—and would not have unusual operational characteristics that may be potentially visually incompatible with neighboring uses. For these reasons, the proposed project would not degrade the visual character of the project vicinity. Impacts would be less than significant.

**d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

**Less than significant impact.** The project site is centrally located within the existing Solano Community College campus, which contains sources of existing lighting (parking lot, security, and building lighting). The campus also contains existing sources of glare, such as from building windows and automobiles. The project would include new interior and exterior light fixtures similar to those currently in use on the campus. These new lighting sources would incrementally contribute to increased nighttime lighting but would not be substantial in the context of the surrounding area. Because the project is centrally located within the existing campus, no unwanted light trespass onto adjoining properties would occur. The project would not utilize reflective building design features that would result in a significant amount of glare. Impacts would be less than significant.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<p><b>2. Agriculture and Forestry Resources</b>  <i>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:</i></p>				
<p>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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>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))?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

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 Department 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.** In connection with development of the existing Solano Community College campus, the project site is part of a larger area, which was previously graded and contains site improvements consisting of underground utilities, ornamental landscaping, and a picnic area. The project site does not support agricultural uses. The project site is mapped as “Urban and Built-Up Land” by the California Department of Conservation Farmland Mapping and Monitoring Program, a non-agricultural land use designation. Thus, project implementation would not result in the conversion of farmland to non-agricultural use. No impacts would occur.

- b) **Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

**No impact.** According to the California Department of Conservation’s Solano County Williamson Act Map, the project site is located on Urban and Built-Up Land that would not support agricultural land uses and is not subject to a Williamson Act contract. These conditions preclude the possibility of conflicts. No impact would occur.

- c) **Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?**

**No impact.** The project site is zoned Public Facilities by the City of Fairfield, a non-forest zoning designation. This condition precludes the possibility of conflicts with forest or timberland zoning. No impact would occur.

- d) **Result in the loss of forest land or conversion of forest land to non-forest use?**

**No impact.** In connection with development of the existing Solano Community College campus, the project site is part of a larger area, which was previously graded and contains site improvements consisting underground utilities, light poles, ornamental landscaping and large boulders, and a picnic area. The project site does not contain forest land. This condition precludes the possibility of conversion of forest land to non-forest use. No impact would occur.

- 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.** In connection with development of the existing Solano Community College campus, the project site is part of a larger area, which was previously graded and contains site improvements

consisting of building pads, drive aisles, parking areas, underground utilities, light poles, ornamental landscaping, and signage. Neither the project site nor the surrounding campus contains agricultural uses or forest uses. These conditions preclude the possibility of impacts to agriculture or forest land. No impact would occur.



Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>3. Air Quality</b>				
<i>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</i>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

Would the project:

**a) Conflict with or obstruct implementation of the applicable air quality plan?**

**Less than significant impact.** The San Francisco Bay Area Air Basin is currently non-attainment for ozone (state and federal ambient standards) and particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>) (state ambient standard). While an air quality plan exists for ozone, none currently exists for particulate matter. A project would be judged to conflict with or obstruct implementation of the regional air quality plan if it would result in substantial new regional emissions not foreseen in the air quality planning process. Regional emissions forecasts in the air quality plan are based on population and employment forecasts based on city and county general plans.

The BAAQMD's current Clean Air Plan is the 2010 Clean Air Plan (2010 CAP). The 2010 CAP accounts for projections of population growth provided by Association of Bay Area Governments and vehicle miles traveled provided by the Metropolitan Transportation Commission, and it identifies strategies to bring regional emissions into compliance with federal and state air quality standards. The BAAQMD's Guidance provides two criteria for determining if a plan-level project is consistent with the current Air Quality Plan (AQP) control measures. However, the BAAQMD does not provide a threshold of

significance for project-level consistency analysis. Therefore, the following criteria will be used for determining a project's consistency with the AQP:

- Criterion 1: Does the project support the primary goals of the AQP?
- Criterion 2: Does the project include applicable control measures from the AQP?
- Criterion 3: Does the project disrupt or hinder implementation of any AQP control measures?

### **Criterion 1: Support Primary Goals of AQP**

The primary goals of the 2010 CAP, the current AQP to date, are to:

- Attain air quality standards;
- Reduce population exposure to unhealthy air and protecting public health in the Bay Area; and
- Reduce greenhouse gas emissions and protect the climate.

Section 10, Land Use and Planning determined that the project would be consistent with the applicable General Plan and zoning land use designations. Furthermore, the City of Fairfield General Plan and Zoning Ordinance designate the project site as Public Facilities. As an independent special district, the Solano Community College District is exempt from compliance with local General Plan and zoning regulations pursuant to Government Code Section 53094 (b) for the construction of classroom facilities.

As discussed in Section 3, impacts b) through e), the project would not create a localized violation of state or federal air quality standards, significantly contribute to cumulative nonattainment pollutant violations, expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors affecting a substantial number of people after incorporation of mitigation measures. Therefore, the project would not conflict with the 2010 Clean Air Plan and is consistent with Criterion 1.

### **Criterion 2: Applicable Control Measures of AQP**

The 2010 CAP contains 55 control measures aimed at reducing air pollution in the Bay Area. Along with the traditional stationary, area, mobile source, and transportation control measures, the 2010 CAP contains a number of new control measures designed to protect the climate and promote mixed use, compact development to reduce vehicle emissions and exposure to pollutants from stationary and mobile sources (Bay Area Air Quality Management District 2010).

None of the 18 stationary source control measures are applicable to the project. In addition, none of the 10 mobile source measures or six land use and local impact measures applies to the project. Of the transportation control measures, TCM D (Support Focused Growth), measures D-1 through D-3, apply to the project. The project would provide access to pedestrians and bicyclists.

Relative to the Energy and Climate measures contained in the 2010 Plan, the project would be consistent with all applicable measures:

- **Energy Efficiency:** The project applicant would be required to conform to the energy efficiency requirements of the California Building Standards Code, also known as Title 24. Specifically, the project must implement the requirements of the most recent Building Energy Efficiency Standards, which is the current version of Title 24. The 2013 Building Energy Standards were adopted, in part, to meet an Executive order in the Green Building Initiative to improve the energy efficiency of buildings through aggressive standards.
- **Renewable Energy.** Pacific Gas and Electric Company (PG&E) provides electricity and natural gas service to the City. PG&E facilities include nuclear, natural gas, and hydroelectric facilities. PG&E's 2012 power mix consisted of nuclear generation (21.0 percent), large hydroelectric facilities (11.0 percent) and renewable resources (19.0 percent), such as wind, geothermal, biomass and small hydro. The remaining portion came from natural gas (27.0 percent), and unspecified sources (21.0 percent).
- **Urban Heat Island Mitigation and Shade Tree Planting.** The project would implement landscaping including trees on-site.

In summary, the project would meet all of the applicable Land Use Measures and Energy and Climate Measures contained in the 2010 Clean Air Plan. The project would be consistent with Criterion 2.

### **Criterion 3: Hinder or Disrupt AQP Control Measures**

The project will not preclude extension of a transit line or bike path, propose excessive parking beyond parking requirements, or otherwise create an impediment or disruption to implementation of any AQP control measures. Indeed, as shown above, the project incorporates several AQP control measures as project design features. The project would be consistent with Criterion 3.

### **Impact Summary**

The project would be consistent with the criteria; impacts would be less than significant.

#### **b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

**Less than significant impact with mitigation incorporated.** This impact relates to localized criteria pollutant impacts. Potential localized impacts would consist of exceedances of state or federal standards for PM<sub>2.5</sub>, PM<sub>10</sub>, or carbon monoxide (CO). Particulate matter emissions (both PM<sub>10</sub> and PM<sub>2.5</sub>) are of concern during project construction because of the potential to emit fugitive dust during earth-disturbing activities. CO emissions are of concern during project operation because operational CO hotspots are related to increases in on-road vehicle congestion.

#### *Short-Term Construction Impacts*

##### **Construction Fugitive Dust**

The BAAQMD recommends that fugitive PM<sub>10</sub> and PM<sub>2.5</sub> from construction dust be evaluated separately from fugitive PM<sub>10</sub> and PM<sub>2.5</sub> from equipment and vehicle exhaust. Thresholds and impact assessment for exhaust PM<sub>10</sub> and PM<sub>2.5</sub> are provided in impact c). The BAAQMD's Air Quality Guidelines do not include a recommended threshold for construction-generated fugitive dust. For

construction dust, the BAAQMD recommends incorporation of best management practices (BMPs) to reduce localized dust impacts to less than significant. Therefore, without application of BMPs, this impact is potentially significant. However, incorporation of Mitigation Measure (MM) AIR-1 reduces this impact to less than significant.

## Mitigation Measures

- MM AIR-1** The following Basic Construction Emission Control Measures shall be included in the project design and implemented during construction:
- a. All active construction areas shall be watered at least two times per day.
  - b. All exposed non-paved surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and access roads) shall be watered at least three times per day and/or non-toxic soil stabilizers shall be applied to exposed nonpaved surfaces.
  - c. All haul trucks transporting soil, sand, or other loose material off-site shall be covered and/or shall maintain at least two feet of freeboard.
  - d. 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.
  - e. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
  - f. 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.
  - g. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of CCR). Clear signage regarding idling restrictions shall be provided for construction workers at all access points.
  - h. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
  - i. The prime construction contractor shall post a publicly visible sign with the telephone number and person to contact at the College regarding dust complaints. The College and the construction contractor shall take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

### *Long-Term Operational Impacts*

#### **Operational CO Hotspot**

CO emissions from project-related traffic would be the greatest pollutant of concern at the local level, since congested intersections with a large volume of traffic have the greatest potential to cause high, localized concentrations of CO.

BAAQMD recommends a screening analysis to determine whether a project has the potential to contribute to a CO hotspot. The screening criteria identify when subsequent site-specific CO dispersion modeling is necessary.

BAAQMD considers a project's local CO emissions to be less than significant if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans; or
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; or
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

The project is within the jurisdiction of the Solano Transportation Authority (STA). The STA was most concerned with projects that require a General Plan Amendment and/or small land use developments and all large developments having 2,000 or more ADT; neither of these conditions would be created by the project.

The traffic analysis indicated that the anticipated vehicle volume at the highest volume intersection would be less than the BAAQMD's second and third screening criteria. Furthermore, the adjacent roadways are not located in an area where vertical and/or horizontal mixing, or the free movement of the air mass, is substantially limited by physical barriers such as bridge overpasses or urban or natural canyon walls. Therefore, the project would not result in any impact related to these criteria and would result in a less than significant impact for CO hotspot.

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

**Less than significant impact.** Non-attainment pollutants of concern include ozone, PM<sub>10</sub> and PM<sub>2.5</sub>. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified thresholds of significance, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. The analysis considers construction and operation period impacts separately, as described below.

*Short-Term Construction Impacts*

A preliminary screening method is provided in BAAQMD's 2010 Guidelines for construction-related impacts associated with criteria air pollutants and precursors. The preliminary screening is used to

indicate whether a project’s construction-related air pollutants or precursors could potentially exceed BAAQMD’s thresholds of significance. The construction of the project would result in a less than significant impact to air quality if the following screening criteria are met:

1. The project is below the applicable screening level size (Table 1).
2. All construction period Standard Project Conditions would be included in the project design and implemented during construction.
3. Construction-related activities would not include any of the following:
  - a) Demolition activities inconsistent with District Regulation 11, Rule 2: Asbestos Demolition, Renovation, and Manufacturing;
  - b) Simultaneous occurrence of more than two construction phases;
  - c) Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site), (not applicable to high density infill development);
  - d) Extensive site preparation (i.e., greater than default assumptions used by the California Emissions Estimator Model (CalEEMod) for grading, cut/fill, or earth movement); or
  - e) Extensive material transport (e.g., greater than 10,000 cy of soil import/export) requiring a considerable amount of haul truck activity.

As shown in Table 1, project does not exceed the screening size for construction-related criteria air pollutants and precursors. Therefore, the project would not trigger the need for additional analysis to determine the project’s potential significance and would have a less than significant impact in regards to construction related criteria pollutants and precursors.

**Table 1: Construction Criteria Air Pollutants and Precursors Screening Level Sizes**

Land Use Type	Construction-Related Screening Size	Project Size	Project Percent of Screening Size
Junior College	277,000 square feet	33,880 square feet	11%

Source of BAAQMD’s Screening Threshold: Bay Area Air Quality Management District 2011.

*Long-Term Operational Impacts*

Long-term operational emissions would result primarily from project-related traffic. BAAQMD’s 2010 Guidelines provide guidance and screening criteria for determining if a project could potentially result in significant air quality impacts. As shown in Table 2, the project is well below BAAQMD’s screening threshold, indicating that ongoing project operations would not be considered to have the potential to generate a significant quantity of air pollutants. Therefore, long-term operation impacts associated with criteria pollutant emissions would be less than significant would be less than significant.

**Table 2: Operational Criteria Air Pollutants and Precursors Screening Level Sizes**

Land Use Type	Operational Criteria Pollutant Screening Size	Project Size	Project Percent of Screening Size
Junior College	152,000 square feet	33,880 square feet	22%

Source of BAAQMD's Screening Threshold: Bay Area Air Quality Management District 2011.

**d) Expose sensitive receptors to substantial pollutant concentrations?**

**Less than significant impact.** This impact addresses whether the project would expose sensitive receptors to asbestos, construction-generated fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>), construction-generated diesel particulate matter (DPM), operational-related toxic air contaminants (TACs), or operational CO hotspots.

A sensitive receptor is defined as the following (from BAAQMD 2010): “Facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and residential areas.”

Two scenarios have the potential for exposing sensitive receptors to TACs. The first is when a project includes a new or modified source of TACs and would be located near an existing or proposed sensitive receptor. The second scenario involves a residential or other sensitive receptor development locating near an existing or planned source of TACs. As an extension of the Solano Community College District, the project itself is a sensitive receptor. Additional sensitive receptors near the project site include existing residences, which borders the project site to the north, east, and south.

The BAAQMD guidance identifies the area within 1,000 feet of the project site as the zone of influence for TACs. The project’s zone of influence was reviewed to identify locations of sensitive receptors. The nearest sensitive receptors are existing residences located to the west, across Suisun Valley Drive. These residences are located more than 1,100 feet from the project site, but are included in order to ensure a conservative analysis. Therefore, this analysis examines potential exposure of off-site receptors from development and operation of the project site, as well as potential exposure of on-site receptors from surrounding uses.

The following analysis evaluates whether the project would result in construction or operation-period impacts to sensitive receptors.

**Asbestos**

The Department of Conservation, Division of Mines and Geology (DMG) published a guide for generally identifying areas that are likely to contain naturally occurring asbestos (NOA). The associated DMG map indicates that there are locations within Solano County that are likely to contain NOA; however, none of these sites are located in the project vicinity.

### **Fugitive Dust**

Fugitive dust emissions from grading, trenching, or land clearing activities can create nuisances and localized health impacts. As addressed in Impact 3b), the project would be required to apply the BAAQMD recommended Basic Construction Emission Control Measures in order to reduce fugitive dust impacts; therefore, the project would not generate a substantial amount of fugitive dust emissions that could affect nearby residents.

### **Carbon Monoxide Emission Impacts**

As noted in the discussion of Impact 3b), the project is not expected to generate a CO hotspot. Therefore, the project would not expose receptors to substantial CO concentrations from operational activities.

### *Toxic Air Contaminants—On-site Construction Workers*

A variety of state and national programs protect workers from safety hazards, including high air pollutant concentrations (California OSHA and CDC 2012).

On-site workers are not required to be addressed through this health risk assessment process. A document published by the California Air Pollution Control Officers Association (CAPCOA 2009), Health Risk Assessments for Proposed Land Use Projects, indicates that on-site receptors are included in risk assessments if they are persons not employed by the project, such as construction workers. Persons not employed by the project would not remain on-site for any significant period. Therefore, a health risk assessment for on-site workers—in this case, construction workers—is not required or recommended.

### *Toxic Air Contaminants—Construction*

Construction activities would occur over a brief duration within the estimated 11-month construction timeline. Students and faculty would be located within the vicinity of the construction activities temporarily, with visits to the project site being short term in duration and periodic. This brief exposure period would substantially limit exposure to hazardous emissions. In addition, Mitigation Measure AIR-2 would reduce exposure to DPM. Therefore, the project would result in a less than significant impact from health risks associated with construction activities.

**MM AIR-2** The Solano Community College District shall require its construction contractor to demonstrate compliance with the following Construction Emissions Minimization Practices prior to commencement of construction activities:

1. All off-road equipment greater than 25 horsepower and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:
  - a. Where access to alternative source of power is available, portable diesel engines shall be prohibited;
  - b. All off-road equipment shall have:



- i. Engines that meet or exceed either U.S. Environmental Protection Agency (EPA) or California Air Resources Board (ARB) Tier 2 off-road emission standards, and
- ii. Engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS)
- c. Exceptions:
  - iii. Exceptions to 1(a) may be granted if the project sponsor has submitted information providing evidence to the satisfaction of the State Center that an alternative source of power is limited or infeasible at the project site and that the requirements of this exception provision apply.
  - iv. Exceptions to 1(b)(ii) may be granted if the project sponsor has submitted information providing evidence to the satisfaction of the State Center that a particular piece of off-road equipment with an ARB Level 3 VDECS: (1) is technically not feasible, (2) would not produce desired emissions reductions due to expected operating modes, (3) installing the control device would create a safety hazard or impaired visibility for the operator, or (4) there is a compelling emergency need to use off-road equipment that are not retrofitted with an ARB Level 3 VDECS and the sponsor has submitted documentation to the City that the requirements of this exception provision apply.

#### *Toxic Air Contaminants—Operation*

When siting a new receptor, the existing or future proposed sources of TACs and/or PM<sub>2.5</sub> emissions that would adversely affect individuals within the planned project should be examined, according to the following criteria:

- The extent to which existing sources would increase risk levels, hazard index, and/or PM<sub>2.5</sub> concentrations near the planned receptor,
- Whether the existing sources are permitted or non-permitted by the BAAQMD, and
- Whether there are freeways or major roadways near the planned receptor.

The project includes construction of a new Science Building that would serve as an extension of the Solano Community College District; therefore, operational activities of the project is not expected to cause any localized emissions that could expose off-site sensitive receptors to unhealthy long-term air pollutant levels. However, as stated previously, the project itself is a sensitive receptor. The potential of those receptors to be exposed to substantial pollutants is examined.

The ARB Air Quality and Land Use Handbook contains recommendations that will “help keep California’s children and other vulnerable populations out of harm’s way with respect to nearby sources of air pollution” (ARB 2005), including recommendations for distances between sensitive receptors and certain land uses. These recommendations are assessed as follows.

- Heavily traveled roads. ARB recommends avoiding new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. Epidemiological studies indicate that the distance from the roadway and truck traffic densities were key factors in the correlation of health effects, particularly in children. The project site is located over 4,000 feet north of the Lincoln Highway and Business Center Drive/Mangels Boulevard intersection which averages approximately 23,859 vehicles per day.
- Distribution centers. ARB also recommends avoiding siting new sensitive land uses within 1,000 feet of a distribution center. The project site is not within 1,000 feet of a distribution center.
- Fueling stations. ARB recommends avoiding new sensitive land uses within 300 feet of a large fueling station (a facility with a throughput of 3.6 million gallons per year or greater). ARB recommends a 50-foot separation for typical gas dispensing facilities. The nearest gas station is approximately 0.9 mile south of the project site.
- Dry cleaning operations. ARB recommends avoiding siting new sensitive land uses within 300 feet of any dry cleaning operation that uses perchloroethylene. For operations with two or more machines, ARB recommends a buffer of 500 feet. For operations with three or more machines, ARB recommends consultation with the local air district. The nearest dry cleaning operation is approximately 3.9 miles southwest of the project site.

Based on the above, the project would not be exposed to substantial pollutant concentrations; therefore, long-term operation impacts associated with exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

**e) Create objectionable odors affecting a substantial number of people?**

**Less than significant impact.** The BAAQMD does not have a recommended odor threshold, but it does recommend screening criteria based on distance between types of sources known to generate odor and the receptor. For projects within the screening distances, the BAAQMD uses the following threshold for project operations:

An odor source with five (5) or more confirmed complaints per year averaged over three years is considered to have a significant impact on receptors within the screening distance shown in the Bay Area Air Quality Management District's guidance, Table 3-3.

Two circumstances would have the potential to cause odor impacts:

- A source of odors is proposed to be located near existing or planned sensitive receptors, or
- A sensitive receptor land use is proposed near an existing or planned source of odor.

**Project Construction**

During construction and grading, diesel-powered vehicles and equipment used on the site could create localized odors, but these would be temporary in nature and would dissipate in the prevailing

winds. As such, construction-period and operation-period odor impacts would be considered less than significant.

***Project Operation***

The proposed Science Building's laboratory space would be located within an enclosed facility. To the extent that objectionable odors would be emitted by laboratory activities, they would be localized to the interior of the facility and expelled via the heating, ventilation, and air condition system, which will be equipped with adequate ventilation hoods in compliance with standard industry design requirements for laboratories. Moreover, the nearest residential uses are located more than 1,000 feet away—a sufficient distance to allow expelled odors to dissipate. Impacts would be less than significant.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>4. Biological Resources</b> <i>Would the project:</i>				
a) 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 Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

Would the project:

- a) **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 Game or U.S. Fish and Wildlife Service?**

**Less than significant impact with mitigation incorporated.** The project site contains ornamental landscaping including mature trees that may provide suitable habitat for nesting birds protected by

the Migratory Bird Treaty Act. Accordingly, Mitigation Measure BIO-1 is proposed requiring pre-construction surveys for nesting birds, and if necessary, implementation of avoidance measures if such species are found to be present. With the implementation of mitigation, impacts would be reduced to a level of less than significant.

## Mitigation Measures

**MM BIO-1** No more than 14 days prior to initial ground disturbance and vegetation removal during the nesting season (February 1 to August 31), the Solano Community College District shall retain a qualified biologist to perform pre-construction breeding bird surveys. If any nests are found, they shall be flagged and protected with a suitable buffer. Buffer distance will vary by species and conditions at the site, but it is usually at least 50 feet, and up to 250 feet for raptors. Note that this mitigation measure does not apply to ground disturbance and vegetation removal activities that occur outside of the nesting season (September 1 to January 31).

**b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

**No impact.** In connection with development of the existing Solano Community College campus, the project site is part of a larger area that was previously graded and contains site improvements consisting of building pads, drive aisles, parking areas, underground utilities, parking lot lighting, ornamental landscaping, fencing, and signage. The project site does not contain riparian habitat or other sensitive natural communities. This condition precludes the possibility of impacts, and no impact would occur.

**c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

**No impact.** In connection with development of the existing Solano Community College campus, the project site is part of a larger area that was previously graded and contains site improvements consisting of building pads, drive aisles, parking areas, underground utilities, parking lot lighting, ornamental landscaping, fencing, and signage. The project site does not contain any waterways or isolated wetlands that would be classified as jurisdictional features. This condition precludes the possibility of impacts, and no impact would occur.

**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 wildlife nursery sites?**

**No impact.** In connection with development of the existing Solano Community College campus, the project site is part of a larger area that was previously graded and contains site improvements consisting of building pads, drive aisles, parking areas, underground utilities, parking lot lighting,

ornamental landscaping, fencing, and signage. The project site is surrounded by existing campus buildings on all sides and does not contain any features commonly associated with wildlife or fish movement (waterways, arroyos, ridgelines, etc.). This condition precludes the possibility of impacts, and no impact would occur.

**e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

**No impact.** The project site contains ornamental landscaping including mature trees. As an independent special district, the Solano Community College District is exempt from compliance with the City of Fairfield Municipal Code, including Section 25.36, Tree Conservation. However, the College District intends to replace any landscaping removed as part of the proposed project with new landscaping (including trees) consistent with the spirit of the City's tree ordinance. This condition precludes the possibility of impacts, and no impact would occur.

**f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

**No impact.** The project site is not within the jurisdiction of an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, project implementation would not conflict with the provisions of an approved local, regional, or state habitat conservation plan. No impact would occur.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>5. Cultural Resources</b> <i>Would the project:</i>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Public Resources Code Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological or Tribal Cultural Resource (TCR) pursuant to Public Resources Code Sections 21080.3.1 and 21080.3.2 (a.k.a. AB 52)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

This section describes the existing cultural resources setting including historical and archaeological resources (resources determined eligible for listing in the California Register of Historical Resources that could be affected by the proposed project. It presents the methods employed to identify historical resources, assesses impacts to those historical resources, and presents mitigation measures to address significant impacts. The following tasks were conducted to complete this section:

- Records Search and Literature Review
- Initiate Assembly Bill (AB) 52 Consultation
- Pedestrian Survey

### Northwest Information Center

FCS conducted a record search at the Northwest Information Center (NWIC) in Rohnert Park on October 15, 2015 in order to determine the presence or absence of cultural resources within the proposed project area and a 0.5-mile radius. The current inventories of the National Register of Historic Places, the California Register of Historic Resources, the California Historical Landmarks list, the California Points of Historical Interest list, the California State Historic Resources Inventory for Sonoma County, and historic aerial photographs of the area were reviewed to determine the existence of previously documented cultural and historical resources.

Results from the NWIC indicate that 11 resources have been recorded within 0.5 mile of the project area, none of which are located within the project area itself. In addition, 32 area-specific survey

reports have been documented with the NWIC for the search radius. Three of these reports (S-30509, S-30867 and S-32514) assessed the project area in its entirety, suggesting that the project area has been previously surveyed for cultural resources.

### ***University of California Museum of Paleontology (UCMP) Paleontology Database***

On October 18, 2015, consulting Paleontologist Dr. Kenneth Finger conducted a thorough search of the University of California Museum of Paleontology (UCMP) paleontology database for the proposed project area. The project site entirely consists of Quaternary alluvium, with some Sonoma Volcanics (sv), within a 0.5-mile radius of the site that likely extend into the subsurface of the alluvium. For Solano County, the database lists nine Quaternary (Pleistocene) vertebrate localities, three of which are assigned to the Montezuma Fm., while the other six are unassigned). It also lists one Pliocene vertebrate locality, in the Sonoma Volcanics. None of these UCMP localities is within the 0.5-mile search perimeter. There are two localities within a mile of that perimeter. Locality V65143 (Suisun Creek) is in an unidentified late Pleistocene unit, about 0.8 mi. to the northeast, and yielded the horse, *Equus pacificus* (*Rancholabrean fauna*). The other locality, 1356 (Portland Cement Co.), is in a quarry of the Sonoma Volcanics, about 1.2 mi. to the south-southeast, and it too yielded a horse, *Equus occidentalis* (*Blancan fauna*), and dozens of isolated bone fragments identified only as mammalian.

### ***Initiate Consultation with Potentially Interested Parties and California Native American tribes***

On October 15, 2015, FCS sent a request to the Native American Heritage Commission (NAHC) to review its sacred lands file search and to provide a consultant list of Native American Representatives who may be interested in providing additional information or consulting pursuant to Public Resources Code Section 21080.3.1 and 21080.3.2 (Assembly Bill [AB] 52). On October 29, 2015, a response was received from the NAHC indicating that no sacred sites were listed as present in the project area. The letter included a list of two Native American representatives. Letters informing these representatives of the project details and inviting them to consult were sent by the Solano Community College District on November 19, 2015. On December 14, 2015, a letter was received from James Kinter, Tribal Historic Preservation Officer of the Yocha Dehe Wintun Nation, expressing interest in the project, and the desire to consult pursuant to AB-52. Consultation and a site visit were initiated on January 22, 2016, with representatives of the Yocha Dehe Wintun Nation, FirstCarbon Solutions, and Solano Community College in attendance. All parties agreed that given the sensitivity of the project site, monitoring of all ground disturbing activity by both a qualified archaeologist and a Tribal Cultural Monitor would be necessary. These points and additional comments were summarized by James Sarmiento, Cultural Resource Manager for the Yocha Dehe Wintun Nation in an Email to FCS dated March 4, 2016. All of Mr. Sarmiento's comments have been agreed upon and incorporated into Mitigation Measure CUL-1, and consultation pursuant to AB-52 in now complete. Copies of all tribal correspondence can be found in Appendix A: Cultural Resources.

On October 15, 2015, FCS sent a letter to the Solano County Historical Society requesting any additional information regarding potential historic or cultural resources in proximity to the proposed project. As of this date, no response has been received.



### **Pedestrian Survey**

FCS Professional Archaeologist Dana DePietro, PhD surveyed the proposed project area on October 21, 2015. The entire area was covered using 10-meter east-west transects to insure complete coverage. The project area is a rectangular lawn measuring 200 feet by 250 feet that is bordered on all sides by paved pathways and college buildings. Much of the southern half of the lawn is occupied by a picnic area that contains chairs, tables and large stones that mark its boundaries. While the majority of the project area is covered in sod that limits surface visibility (less than 10 percent), sections including the picnic area are worn down by pedestrian traffic, and provide a limited view of the underlying soils. Visible soils are light brown in color, silty with low clay content, and are interspersed with small rocks (2 to 5 centimeters). Raw materials commonly used in the manufacture of tools such as Franciscan Chert, were not observed. The project area appears to have been highly disturbed by grading, irrigation, and construction activities.

The survey also attempted to identify two previously recorded prehistoric resources, P-48-000087 (CA-SOL-243) and P-49-001206 (CA-SOL-441), that lie within 1,000 feet of the boundaries of the project area. No evidence of either site was visible from the surface; however, both sites were covered with brush and groundcover that limited visibility of native soils. No additional prehistoric or historic resources were discovered during the course of the survey.

Would the project:

- a) **Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**

**Less than significant impact with mitigation incorporated.** The results of the records search show that six historic resources and properties, including the historic Martin House (P-48-000077/CA-SOL-71/H), lie within 0.05 mile of the project site. The Martin House, also known as *Stonedene* (Scottish for stone house) is of particular historic importance, and is listed on the National Register of Historic Places as being a significant resource under all four criteria for evaluation. All six historic resources lie beyond the boundaries of the Solano Community Campus, however, and the pedestrian survey showed that all six are located beyond the view-shed of the proposed Science Building. Furthermore, historic maps, records, and aerial photographs failed to reveal any documented buildings, structures, or other historic resources within the project area itself. For these reasons, the potential for the proposed project to have an adverse effect on known historic resources is considered low.

While no archaeological resources were recorded within the project area or observed during the pedestrian survey, the records search results show that six Native American archaeological resources lie within a 0.5 mile radius of the building footprint. Two of these six resources are located within 1000 feet of the building footprint, and the others range from 1200 to 2600 feet away from the project footprint. Of the two archaeological sites located within 1000 feet of the project area, P-48-000087 (CA-SOL-243) is of particular importance. This resource is a prehistoric and ethnographic village and burial site designated as Ule Ule/Ululato or “Chief Solano’s Village.” The site was first recorded in 1949 by Piling and Bennyhoff who described it as a “late site of dark midden [and]

abundant obsidian chips in an orchard.” According to the record, the orchard owner S.H. Martin claimed that “Chief Solano” had lived in a stone house on the premises, and was buried nearby. Excavations conducted during the construction of the college campus in 1969 included chert scrapers, handstones, projectile points, fragments of European ceramics, Olivella beads and obsidian debitage. A subsequent study performed by Jackmond in 1971 attempted to define the boundaries of the site, describing it as an extensive (800 ft. diameter) scattering of lithic debitage and artifacts including handstones, projectile points and so-called “charmstones.” Jackmond also recorded a three-foot high mound and milling area in conjunction with CA-SOL-71/H that most likely had a direct connection with CA-SOL-243. In 2006, H. Koenig conducted a comprehensive cultural resources study of the Solano Community College Campus (S-30509). Her findings included a continuation of CA-SOL- 243 that contained lithic debitage, bifaced blades, an earthenware rim fragment and burnt mammal bone. She also recorded a second site, P- 48-000441 (CA-SOL-441) that contained three pieces of obsidian debitage, and was probably also associated with CA-SOL-243.

In November of 2005, J. McIlroy and A. Praetzellis carried out test excavations in multiple locations across the Solano Community College campus (S-30867). One of these test trenches, trench No. 5, was located in the eastern half of the proposed project area. The trench was roughly 4 meters long by .70 meters wide, and dug to a maximum depth of 1 meter. No anthropogenic soils or buried A-horizon sediments (the original ground surface that would relate to CA-SOL-243) were found. In November of 2006, this study was followed by the installation of hot and cold water conveyance systems that required extensive trenching across campus. Trenches M and J were located along the northwest and northeast perimeters of the project area. The associated archaeological monitoring report (S-32514) noted that no archaeological materials were observed at any time during subsurface excavation. While the pedestrian survey also failed to reveal any prehistoric cultural resources within the proposed project area, the lack of surface visibility and proximity to archaeological resources means the potential for the proposed project to have an adverse effect on unknown archaeological resources should still be considered high.

Subsurface construction activities have the potential to damage or destroy previously undiscovered historic and prehistoric resources. Historic resources can include wood, stone, foundations, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, and other refuse. Prehistoric resources can include flaked-stone tools (e.g., projectile points, knives, and choppers) or obsidian, chert, or quartzite toolmaking debris; culturally darkened soil (such as midden soil containing heat-affected rock, ash, and charcoal, shellfish remains, and animal bones); and stone milling equipment (e.g., mortars, pestles, handstones). Accordingly, implementation of Mitigation Measure (MM) CUL-1 will be required to reduce potential impacts to historic resources that may be discovered during project construction. With the incorporation of mitigation, impacts associated with historic resources would be less than significant.

**b) Cause a substantial adverse change in the significance of an archaeological or Tribal Cultural Resource (TCR) pursuant to §15064.5 or Public Resources Code 21074?**

**Less than significant impact with mitigation incorporated.** Public Resources Code Sections 21080.3.1 and 21080.3.2 (a.k.a. AB 52) established a new category of resources in the California

Environmental Quality Act called “tribal cultural resources” (TRCs) that considers tribal cultural values in addition to scientific and archaeological values when determining impacts and mitigation. The bill recognizes that California Native American tribes have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated. Because the California Environmental Quality Act calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources.

The College District sent letters requesting the tribes to indicate whether they wish to initiate consultation in accordance with AB 52. On December 14, 2015, a letter was received from James Kinter, Tribal Historic Preservation Officer of the Yocha Dehe Wintun Nation, expressing interest in the project, and the desire to consult pursuant to AB-52. Consultation and a site visit were initiated on January 22, 2016, with representatives of the Yocha Dehe Wintun Nation, FirstCarbon Solutions, and Solano Community College in attendance. All parties agreed that given the sensitivity of the project site, monitoring of all ground disturbing activity by both a qualified archaeologist and a Tribal Cultural Monitor would be necessary. These points and additional comments were summarized by James Sarmento, Cultural Resource Manager for the Yocha Dehe Wintun Nation in an Email to FCS dated March 4, 2016. All of Mr. Sarmento’s comments have been agreed upon and incorporated into Mitigation Measure CUL-1, and consultation pursuant to AB-52 is now complete. Accordingly, implementation of Mitigation Measure (MM) CUL-1 will be required to reduce potential impacts to historic resources that may be discovered during project construction. With the incorporation of mitigation, impacts associated with historic resources would be less than significant.

**c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**Less than significant impact with mitigation incorporated.** The results of the UCMP database search revealed that project site consists entirely of Quaternary alluvium, with some Sonoma Volcanics (sv) within a 0.5-mile radius of the site that likely extend into the subsurface of the alluvium. There are no known paleontological resources within the project site boundaries, or within a 0.5-mile radius. In connection with development of the existing Solano Community College campus, the project site is part of a larger area that was previously graded and contains site improvements consisting of underground utilities, light poles, ornamental landscaping with large boulders, and a picnic area. Additionally, construction activities would be limited to the upper soil layers that have been previously disturbed by grading, a condition that limits the possibility of inadvertently encountering undiscovered paleontological resources. For these reasons, the potential for the proposed project to have an adverse effect on paleontological resources should be considered low.

Although impacts to known paleontological resources are unlikely to occur during development of the project, subsurface construction activities occurring at depths of 10 feet or deeper may have the potential to damage or destroy previously undiscovered paleontological resources. Paleontological resources may include but are not limited to fossils from mammoths, saber-toothed cats, rodents,

reptiles, and birds. Accordingly, implementation of Mitigation Measure CUL-2 will be required to reduce potential impacts to paleontological resources that may be discovered during project construction. With the incorporation of mitigation, impacts associated with paleontological resources would be less than significant.

**d) Disturb any human remains, including those interred outside of formal cemeteries?**

**Less than significant impact with mitigation incorporated.** While there are no existing or known formal cemeteries on or adjacent to the site, human remains have been discovered in the general vicinity of the project site, apparently in conjunction with CA-SOL-243. In Jackmond's 1971 analysis of CA-SOL-243, he states that three burials were excavated by a Solano Community College science teacher during campus construction in 1969. Jackmond also mentions that up to 15 additional burials were discovered during orchard cultivation prior to campus construction. Some artifacts and one set of remains were given U.C. accession numbers, but their current locations are unknown. In addition to the remains recovered in proximity to the campus, several other prehistoric sites in the general region have produced human remains. CA-SOL-346 revealed several human burials, as did CA-SOL-391 near Cordelia. While test excavations in the project area did not reveal anthropogenic soils, its proximity to CA-SOL-243 and the associated burials indicates the potential for the proposed project to disturb human remains should be considered moderate to high.

There is always the possibility that construction activities associated with the proposed project, such as trenching and grading, could potentially damage or destroy previously undiscovered human remains. Accordingly, this is a potentially significant impact. However, if human remains were discovered, implementation of Mitigation Measure CUL-3 would reduce this potential impact to a less than significant level.

## Mitigation Measures

**MM CUL-1** All ground-disturbing activities on Solano Community College property, such as trenching and construction excavation, shall be preceded by a limited field study to insure that previously unrecorded resources are not unintentionally harmed. Because of the high potential for undiscovered cultural resources within the project area, all construction activity resulting in sub-surface disturbance shall be monitored by an archaeologist who meets the Secretary of Interior's Professional Qualification Standards for archaeology, as well as a Tribal Cultural Monitor. If a potentially significant cultural resource is encountered during subsurface earthwork activities, all construction activities within a 100-foot radius of the find shall cease and workers should avoid altering the materials until the Archaeologist or Tribal Monitor has evaluated the situation and provided appropriate recommendations. Project Workers should also not collect or remove any cultural resources. The Applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction activities shall be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA.

criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. If the resource is determined significant under CEQA, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant in accordance with Section 15064.5 of the CEQA Guidelines. The archaeologist shall also perform appropriate technical analyses, prepare a comprehensive report complete with methods, results, and recommendations, and provide for the permanent curation of the recovered resources. The report shall be submitted to the City of Fairfield, the Northwest Information Center, and the State Historic Preservation Office (SHPO), if required.

**MM CUL-2**

In the event that fossils or fossil-bearing deposits are discovered during construction activities, excavations within a 100-foot radius of the find shall be temporarily halted or diverted. The Project contractor shall notify a qualified paleontologist to examine the discovery. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If the Applicant determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The plan shall be submitted to the Solano Community College District for review and approval prior to implementation, and the Applicant shall adhere to the recommendations in the plan.

**MM CUL-3**

In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and Section 5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance within 100 feet of the remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate

dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.

2. Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance:
  - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.
  - The descendant identified fails to make a recommendation.
  - The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Additionally, California Public Resources Code Section 15064.5 requires the following relative to Native American Remains:

When an initial study identifies the existence of, or the probable likelihood of, Native American Remains within a project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop a plan for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American Burials with the appropriate Native Americans as identified by the Native American Heritage Commission.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>6. Geology and Soils</b>				
<i>Would the project:</i>				
a) Expose people or structures to 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

The analysis in this section is supported by the Geotechnical Engineering and Geologic Hazards Investigation prepared by Wallace-Kuhl and Associates, Geotechnical Engineers, which is provided in Appendix B.

Would the project:

- a) **Expose people or structures to 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.** The Geological Hazards Investigation indicated that there were no mapped faults within the project site. The nearest fault to the project site is the Cordelia Fault, a part of the Concord/Green Valley fault system, located 0.5 mile to the west. This condition precludes the possibility of the proposed project being exposed to fault rupture. No active or potentially active faults are known to underlie the site. The site is not located within an Alquist-Priolo Earthquake Fault Zone or a seismic hazard zone pursuant to the Seismic Hazard Zone Mapping Act, and no surface evidence of faulting has been observed. No impact would occur.

- ii) **Strong seismic ground shaking?**

**Less than significant impact with mitigation incorporated.** The Geological Hazards Investigation indicated that the project site is located in a seismically active region, and may be exposed to strong ground shaking during a seismic event. As such, Mitigation Measure GEO-1 is proposed, requiring the College District to retain a qualified geotechnical consulting firm to prepare a design-level geotechnical report for the Science Building that complies with the latest adopted edition of the California Building Standards Code, and incorporate all applicable recommendations into the project plans. With the implementation of mitigation, impacts would be reduced to a level of less than significant.

## Mitigation Measures

**MM GEO-1** Prior to grading activities, the Solano Community College District shall retain a qualified geotechnical consulting firm to prepare a design-level geotechnical report for the Science Building. The design-level report shall be prepared in accordance with the latest adopted edition of the California Building Code Standards and address the potential for seismic hazards to occur on-site and identify abatement measures to reduce the potential for such an event to acceptable levels. The recommendations of the approved design-level geotechnical report shall be incorporated into the project plans.

- iii) **Seismic-related ground failure, including liquefaction?**

**Less than significant impact.** According to geotechnical analysis for the project (Wallace-Kuhl 2015) the potential for liquefaction of the soils beneath the site is moderate if the site experiences significant ground shaking during an earthquake.



The Science Building should be designed to comply with California Administrative Code, Title-24, Section 4-301 to repairable architectural and structural damage from “worst-case scenario” total seismic settlements of 3.75 inches and differential settlements of 2 inches across 50 feet, or the shortest dimension of the structure, whichever is less.

**iv) Landslides?**

**No impact.** The topography across the site is relatively flat. The USGS Topographic Map of the Fairfield South, California Quadrangle (USGS 1980) indicates the surface elevation at the site is approximately 40 feet above msl. Review of the Health and Safety Element of the Solano County General Plan (Solano County 2008) revealed the site is not considered to be in an area of landslide potential. Based on the flat topography of the site and the lack of slopes in the vicinity of the site the potential for landslides is nonexistent. No impact would occur.

**b) Result in substantial soil erosion or the loss of topsoil?**

**Less than significant impact with mitigation incorporated.** Development of the proposed project would include construction activities that would expose soils and could potentially result in substantial erosion. As discussed in Section 9, Hydrology and Water Quality, the State Water Resources Control Board adopted a National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). To obtain coverage under the Construction General Permit, a project applicant must submit various documents, including a Notice of Intent and a Storm Water Pollution Prevention Plan (SWPPP). Activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as grubbing or excavation.

The purpose of the SWPPP is to identify the sources of sediment and other pollutants that could affect the quality of stormwater discharges and to describe and ensure the implementation of Best Management Practices (BMPs) to reduce or eliminate sediment and other pollutants in stormwater as well as non-stormwater discharges resulting from construction activity. Implementation of Mitigation Measure HYD-1 would reduce this impact to a level of less than significant.

**c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

**Less than significant impact with mitigation incorporated.** Surface and near-surface soils consist of stiff to hard, silty and sandy clay to depths ranging from 10 to 24.5 feet below existing site grades. The results of the liquefaction analysis indicates the granular soil layer at a depth of 18 to 30 feet below existing site grades has a factor of safety against liquefaction below 1.3. A factor of safety below 1.3 requires a liquefaction-induced settlement analysis, which was performed. Standard geotechnical engineering and design following the recommendations of the Geotechnical Investigation and the design-level engineering provided by Mitigation Measure GEO-1 will mitigate the potential impact from liquefaction and resulting subsidence to less than significant.

- d) **Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

**Less than significant impact with mitigation incorporated.** Laboratory testing of the soils on the project site indicated that they possess high expansive properties. The Geological Hazards Investigation indicated that implementation of standard soil engineering practices would serve to abate these conditions. The design-level geotechnical report required by Mitigation Measure GEO-1 would provide these recommendations. With the implementation of mitigation, impacts would be reduced to a level of less than significant.

- 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.** The proposed project would be served with sanitary sewer service provided by the Fairfield Suisun Sewer District; no septic or alternative wastewater disposal systems would be used. No impact would occur.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>7. Greenhouse Gas Emissions</b> <i>Would the project:</i>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

Would the project:

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

**Less than significant impact.** This analysis is restricted to greenhouse gases identified by Assembly Bill (AB) 32, which include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The project would generate a variety of greenhouse gases during construction and operation, including several defined by AB 32 such as carbon dioxide, methane, and nitrous oxide.

BAAQMD currently provides multiple recommended thresholds for project-level greenhouse gas generation from operation of a project and for plan-level analysis of project operations. BAAQMD does not presently provide a construction-related greenhouse gas generation threshold, but recommends that construction-generated greenhouse gases be quantified and disclosed. BAAQMD also recommends that lead agencies make a determination of the level of significance of construction-generated greenhouse gas emissions in relation to meeting AB 32 greenhouse gas reduction goals. The lead agency is also encouraged to incorporate best management practices (BMPs) to reduce GHG emissions during project construction, as feasible and applicable.

### Construction

The project would emit greenhouse gas emissions during construction from the off-road equipment, worker vehicles, and any hauling that may occur. As stated previously, the BAAQMD does not have a greenhouse gas threshold for construction emissions. Emissions would occur prior to the year 2020, which is the year by which the State of California is required to reduce its emissions to 1990 levels. The emissions would not occur in the year 2020 and emissions would be negligible. Therefore, construction emissions would be less than significant. Greenhouse gas emissions from project construction equipment and worker vehicles are shown in Table 3. The emissions are from all

phases of construction. It should be noted that the emissions would be significantly less than the 1,100 MTCO<sub>2</sub>e the BAAQMD has established as the threshold of significance for operational emissions.

**Table 3: Construction Greenhouse Gas Emissions**

2016 Construction Year	MTCO <sub>2</sub> e
Site Preparation	2
Grading	3
Building Construction	208
Paving	7
Architectural Coating	1
Total	221
Source: FirstCarbon Solutions and CalEEMod.	

**Operation**

The BAAQMD’s 2010 Air Quality Guidelines provide screening criteria developed for greenhouse gases emissions assessment. As shown in Table 4, the project’s proposed land use is more than the BAAQMD’s applicable screening size for operational greenhouse gas emissions. Therefore, the greenhouse gas emissions for the project were estimated.

**Table 4: Operational Greenhouse Gas Screening**

Land Use Type	Construction-Related Screening Size	Project Size	Project Percent of Screening Size
Junior College	28 ksf	33.88 ksf	1.21 %
Note: ksf = thousand square feet Source of BAAQMD’s Screening Threshold: Bay Area Air Quality Management District 2011.			

The BAAQMD provides multiple threshold options for project-level greenhouse gas impact analysis. A significant impact would occur if the project would exceed all of the significance thresholds. Accordingly, the impact would be less than significant if the project was below any of the thresholds. The BAAQMD’s 2010 thresholds for operational greenhouse gas emissions are:

- Compliance with Qualified GHG Reduction Strategy, or
- 1,100 MTCO<sub>2</sub>e annually, or
- 4.6 MTCO<sub>2</sub>e/Service Population/Year

The operational emissions are shown in Table 5. As shown, the project’s annual emissions are estimated to be 874 MTCO<sub>2</sub>e, less than the BAAQMD’s threshold of 1,100 MTCO<sub>2</sub>e. Therefore, impacts associated with operational greenhouse gas emissions would be less than significant.

**Table 5: Greenhouse Gas Operational Emissions**

Source	Annual Emissions (MTCO <sub>2</sub> e)
Area Sources	0
Energy	119
Mobile	730
Waste	18
Water	7
<b>Total Emissions</b>	<b>874</b>
<b>Significance Threshold</b>	<b>1,100</b>
<b>Does project exceed threshold?</b>	<b>No</b>
Note: MTCO <sub>2</sub> e = metric tons of carbon dioxide equivalent Source: FirstCarbon Solutions and CalEEMod.	

**b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?**

**Less than significant impact.** The project is located within the Solano Community College in the City of Fairfield. The City of Fairfield adopted its Climate Action Plan in March 2012. The City’s Climate Action Plan identifies policies that will achieve the state-recommended greenhouse gas reduction target of 15 percent below 2008 levels by the year 2020. As shown in Table 6, operation of the project would generate approximately 583 MTCO<sub>2</sub>e per year, after full buildout in 2020. This represents a 57.55 percent reduction from 2008 emissions and meets the required reduction established by the Climate Action Plan. Therefore, no mitigation is necessary.

**Table 6: Project Operational Greenhouse Gases**

Source	Emissions (MTCO <sub>2</sub> e per year)	
	Business as Usual*	2020 (with Regulation and Design Features)
Area	0	0
Energy	119	83
Mobile	869	487
Waste	18	9
Water	7	4

**Table 6 (cont.): Project Operational Greenhouse Gases**

Source	Emissions (MTCO <sub>2</sub> e per year)	
	Business as Usual*	2020 (with Regulation and Design Features)
Total	1,013	583
Reduction		57.55%
Significance Threshold		15.0%
Are emissions significant?		No
Notes: * CalEEMod does not have a 2008 operational year; however, emission factors for 2005 reflect the Business as Usual Emissions for 2008 established by the City Vallejo as its baseline emissions threshold and reflects emission factors prior to the adoption of new regulations beginning in 2010. MTCO <sub>2</sub> e = metric tons of carbon dioxide equivalent. Source: FirstCarbon Solutions and CalEEMod.		

As shown in Table 6, the project has a reduction of 57.55 percent from Business as Usual to the year 2020 with Regulations and Design features incorporated. The reductions from regulatory measures and existing project are conditions alone are adequate to meet the City’s 15 percent reduction goal; therefore, the project would not conflict with an applicable plan, policy or regulation adapted for the purpose of reducing greenhouse gas emissions, the impact is less than significant.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>8. Hazards and Hazardous Materials</b> <i>Would the project:</i>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

Would the project:

- a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

**Less than significant impact.** The proposed project would include the construction of a 33,880-square-foot Science Building and associated site improvements on the project site. Construction of the project would involve limited amounts of hazardous materials (such as diesel fuels for equipment, solvents, cleaners and architectural coatings).

Once occupied, the project building will contain laboratory space associated with the instruction of science courses. The laboratory space may involve the use of hazardous materials in limited quantities for instructional purposes. Regarding containment measures, Biosafety Level 1 (BSL-1) represents a basic level of containment that relies on standard microbiological practices with no special primary or secondary barriers recommended, other than a sink for hand washing. BSL-1 practices, safety equipment and facility design and construction are appropriate for undergraduate and secondary educational training and teaching laboratories. Fume exhaust fans will be installed, along with other features in compliance with Scientific Equipment and Furniture Association (SEFA) Guidelines and Occupational Safety and Health (OSHA) regulations related to hazardous chemicals in laboratories.

The handling and transport of all hazardous materials on-site would be performed in accordance with applicable federal, state, and local laws and regulations. Furthermore, the types and quantities of hazardous materials to be used and stored on-site would not be acutely hazardous such that would create a significant hazard to the public from routine use. Less than significant impacts would occur.

- 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.** The proposed project would include the construction of a 33,880-square-foot Science Building and associated site improvements on the project site. Construction of the project would involve limited amounts of hazardous materials (i.e., diesel fuels for equipment, solvents, cleaners and architectural coatings).

Once occupied, the project building will contain laboratory space associated with the instruction of science courses. The laboratory space may involve the use of hazardous materials in limited quantities for instructional purposes. With regard to containment measures, Biosafety Level 1 (BSL-1) represents a basic level of containment that relies on standard microbiological practices with no special primary or secondary barriers recommended, other than a sink for hand washing. BSL-1 practices, safety equipment and facility design and construction are appropriate for undergraduate and secondary educational training and teaching laboratories. Fume exhaust fans will be installed,



along with other features in compliance with SEFA Guidelines and OSHA regulations related to hazardous chemicals in laboratories.

The handling and transport of all hazardous materials on-site would be performed in accordance with applicable federal, state, and local laws and regulations. Furthermore, the types and quantities of hazardous materials that would be transported in connection with the construction or operation of the project would not be acutely hazardous or in sufficient quantities to create a significant hazard to the public from upset or accident conditions. Less than significant impacts would occur.

**c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

**No impact.** The nearest school to the project site is Mundy Elementary School, located more than 1.5 miles to the southwest. This condition precludes the possibility of the proposed project handling hazardous materials within 0.25 mile of a school. No impacts would occur.

**d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

**No impact.** The State Water Resources Control Board Geotracker Database indicates that the project site is not listed on any hazardous materials database compiled pursuant to Government Code Section 65962.5. Additionally, the Geological Hazards Assessment found no evidence of illegal dumping or soil contamination on the project site. Impacts would be less than significant.

**e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

**Less than significant impact.** The project is located within the Airport Influence Area of the Travis Air Force Base Land Use Compatibility Plan (LUCP), prepared by the Solano County Airport Land Use Commission (ALUC). The project site is located within Compatibility Zone "D" of the LUCP. The only compatibility factor within Zone D is a limitation on the height of structures, which requires airspace review for objects that are 200 feet in height or greater. The project will consist of a single-story building, and will not exceed this limitation. Zone D does not impose any other occupancy, density or use restrictions, except for prohibiting hazards to flight such as visual or electronic forms of interference with the safety of aircraft operations, or land use development that may cause the increased attraction of birds. The project will not include any such features, and will not conflict with any Zone D Criteria that could result in safety hazards. Impacts would be less than significant.

- f) **For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

**No impact.** There are no private airstrips located in the project vicinity, a condition that precludes the possibility of creating aviation safety hazards for people residing or working in the project area. No impact would occur.

- g) **Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

**No impact.** The project site is centrally located within the existing Solano Community College site, which has vehicular access points from Suisun Valley Road and Solano College Road. The proposed project would not alter the locations of these access points and does not propose any alterations to either of the adjoining roadways that would have the potential to impair emergency response or evacuation. No impact would occur.

- h) **Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

**No impact.** In connection with development of the existing 192-acre Solano Community College campus, the project site is part of a larger area that was previously graded and contains site improvements consisting of underground utilities, light poles, ornamental landscaping with large boulders, and a picnic area. Additionally, the project site is surrounded on four sides by urban development and infrastructure. This condition precludes the possibility of exposure to wildland fires. No impacts would occur.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>9. Hydrology and Water Quality</b>				
<i>Would the project:</i>				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

Would the project:

a) **Violate any water quality standards or waste discharge requirements?**

**Less than significant impact with mitigation incorporated.** Development activities associated with the proposed project could result in the discharge of pollutants and could impact the quality of receiving waters during construction activities and during the operational phase. Each phase is discussed separately on the pages that follow.

### Construction Period

Development activities would involve demolition, grading, construction, and paving. During these activities, there would be the potential for surface water runoff from construction sites to carry sediment and pollutants into stormwater drainage systems and local waterways.

Grading and the exposure of shallow soils related to grading could result in erosion and sedimentation. The accumulation of sediment could result in the blockage of flows, potentially causing increased localized ponding or flooding. Construction activities would require the use of gasoline and diesel-powered heavy equipment, such as bulldozers, backhoes, water pumps, and air compressors. Chemicals such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, paints, solvents, glues, and other substances could be used during construction. An accidental release of any of these substances could degrade the quality of the surface water runoff and adversely affect receiving waters. As such, Mitigation Measure HYD-1 is proposed requiring the implementation of stormwater quality control measures during construction activities to prevent pollutants from entering downstream waterways. Impacts would be less than significant.

## Mitigation Measures

**MM HYD-1** Prior to grading activities, the Solano Community College District shall prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the requirements of the statewide Construction General Permit. The SWPPP shall be designed to address the following objectives: (1) all pollutants and their sources, including sources of sediment associated with construction, construction site erosion, and all other activities associated with construction activity are controlled; (2) where not otherwise required to be under a Regional Water Quality Control Board permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated; (3) site Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity; and (4) stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.

The SWPPP shall be prepared by a qualified SWPPP preparer. The SWPPP shall include the minimum BMPs required for the identified risk level. BMP

implementation shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association Stormwater Best Management Handbook-Construction or the Caltrans Stormwater Quality Handbook Construction Site Best Management Practices (BMPs) Manual.

The SWPPP shall include a construction site monitoring program that identifies requirements for dry weather visual observations of pollutants at all discharge locations, and as appropriate, depending on the project risk level, sampling of site effluent and receiving waters. A qualified SWPPP practitioner shall be responsible for implementing the BMPs at the project site. The practitioner shall also be responsible for performing all required monitoring, BMP inspection, and maintenance and repair activities.

### **Operation-Period**

The development of new impervious surfaces on the project site could result in the discharge of associated pollutants. Runoff from new landscaped areas may contain residual pesticides and nutrients, and occupants of the building and associated foot traffic could increase the amount of trash and debris entering the stormwater drainage system. As such, Mitigation Measure HYD-2 is proposed requiring the implementation of stormwater quality control measures during operational activities to prevent pollutants from entering downstream waterways. Impacts would be less than significant.

**MM HYD-2** Prior to occupancy of the Science Building, the Solano Community College District shall verify that operational stormwater quality control measures that comply with the requirements of the current Municipal Regional Permit have been implemented. Responsibilities include but are not limited to designing BMPs into project features and operations to reduce potential impacts to surface water quality and to manage changes in the timing and quantity of runoff (i.e., hydromodification) associated with operation of the project. These features shall be included in the design-level drainage plan and final development drawings. Specifically, the final design shall include measures designed to mitigate potential water quality degradation and hydromodification of runoff from all portions of completed developments.

The proposed project shall incorporate site design and BMPs described in the current version of the local C.3 Stormwater Technical Guidance manual. Low Impact Development features, including minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source, shall be used at each development covered by the Municipal Regional Permit. Funding for long-term maintenance of all BMPs shall be specified. The College District shall establish a self-perpetuating Operation and Maintenance of Stormwater Treatment Systems Plan (Municipal Regional Permit provision C.3.h). This plan shall specify a regular inspection schedule of stormwater treatment facilities in accordance with the requirements of the Municipal Regional Permit.

- b) **Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?)**

**No impact.** The proposed project would be served with potable water service provided by the City of Fairfield. The City's 2010 Urban Water Management Plan indicates that it obtains all of its water supply from imported or surface water sources; no groundwater sources are used. This condition precludes the possibility of the proposed project contributing to groundwater overdraft. Additionally, the project site is not used for groundwater recharge, a condition that precludes the possibility of interference with this activity. No impacts would occur.

- c) **Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?**

**Less than significant impact with mitigation incorporated.** Development of the proposed project would include construction activities that would expose soils and could potentially result in substantial erosion. As discussed previously, the State Water Resources Control Board adopted a NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). To obtain coverage under the Construction General Permit, a project applicant must submit various documents, including a Notice of Intent and a SWPPP. Activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as grubbing or excavation.

The purpose of the SWPPP is to identify the sources of sediment and other pollutants that could affect the quality of stormwater discharges and to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-stormwater discharges resulting from construction activity. Implementation of Mitigation Measure HYD-1 would reduce this impact to a level of less than significant.

- d) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**

**Less than significant impact.** The project site contains existing storm drainage infrastructure. The existing storm drainage infrastructure discharges runoff to connections with the Fairfield-Suisun Sewer District storm drainage system. This existing infrastructure would be repurposed to serve the new Science Building. As such, the proposed project would not result in flooding on- or off-site. Impacts would be less than significant.

- e) **Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

**Less than significant impact.** The project site contains existing storm drainage infrastructure consisting of catch basins and underground piping. The existing storm drainage infrastructure discharges runoff to connections with the Fairfield-Suisun Sewer District storm drainage system. This existing infrastructure would be repurposed to serve the Science Building. As such, the proposed project would not result in downstream flooding. Impacts would be less than significant.

- f) **Otherwise substantially degrade water quality?**

**Less than significant impact with mitigation incorporated.** The proposed project's construction and operational activities have the potential to result in pollutants entering downstream waterways. Implementation of Mitigation Measures HYD-1 and HYD-2 would reduce impacts to a level of less than significant.

- g) **Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

**No impact.** The proposed project consists of the development of a 33,880-square-foot Science Building, a non-residential educational facility. This condition precludes the possibility of placement of housing within a 100-year flood hazard area. No impacts would occur.

- h) **Place within a 100-year flood hazard area structures which would impede or redirect flood flows?**

**No impact.** According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the City of Fairfield and Solano County, California (Community-Panel Numbers 06095C0451E, May 4, 2009, and subsequent Letter of Map Corrections or LOMCs), the site is located within ZONE X defined as "Areas of 0.2% annual chance of flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas with less than 1 square mile; and areas protected by levees from 1% annual chance flood." The FEMA map is reproduced in Appendix B.

Review of Figure HS-1 contained within the Health and Safety Element of the Solano County General Plan (Solano County 2008) revealed that the site lies outside of a 100-year flood hazard area.

- i) **Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

**Less than significant impact.** According to the Health and Safety Element of the Solano County General Plan (Solano County 2008) there are 10 dams in Solano County that have the potential for human injury or loss of life in the event of failure. The California Office of Emergency Services has identified that the failure of dams at Lake Curry, Lake Frey, and Lake Madigan as having the potential to cause property damage, injury, or loss of human life in the Fairfield area. Detailed mapping by FEMA shows that the college is outside the mapped inundation areas for these dams, as shown in

Appendix B. Therefore, there is a less than significant impact to the risk of loss, injury or death involving flooding.

**j) Inundation by seiche, tsunami, or mudflow?**

**No impact.** The project site is located at a significant distance from the ocean or other large bodies of water, such as San Francisco Bay, that could generate a seiche or tsunami. Mudflow would not affect this site because it is not near to slopes that could generate mudflows.



Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>10. Land Use and Planning</b> <i>Would the project:</i>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

Would the project:

**a) Physically divide an established community?**

**No impact.** The project site does not contain any dwelling units. The project site is centrally located within the larger, 192-acre Solano Community College campus, which was previously graded and contains site improvements consisting of underground utilities, light poles, ornamental landscaping with large boulders, and a picnic area. As such, it does not support any established communities or serve as a linkage between any established communities. This condition precludes the possibility of impacts, and no impacts would occur.

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

**Less than significant impact.** The City of Fairfield General Plan and Zoning Ordinance designate the project site as Public Facilities. As an independent special district, the Solano Community College District is exempt from compliance with local General Plan and zoning regulations pursuant to Government Code Section 53094 (b) for the construction of classroom facilities. Moreover, public facilities such as the proposed Science Building are consistent with the applicable General Plan and zoning land use designations. Therefore, no conflicts with the City of Fairfield General Plan or Fairfield Zoning Ordinance would occur. Impacts would be less than significant.

c) **Conflict with any applicable habitat conservation plan or natural communities conservation plan?**

**No impact.** The project site is not within the jurisdiction of an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, project implementation would not conflict with the provisions of an approved local, regional, or state habitat conservation plan. No impacts would occur.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>11. Mineral Resources</b> <i>Would the project:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

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.** In connection with development of the existing Solano Community College campus, the project site is part of a larger area that was previously graded and contains site improvements consisting of underground utilities, light poles, ornamental landscaping with large boulders, and a picnic area. No mineral resource extraction activities have occurred on the project site in the recent past, and the project is not located within a State-Designated Mineral Resource Zone. This condition precludes the possibility of a loss of availability of a statewide or regionally important mineral resource. No impacts would occur.

- 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.** No mineral resource extraction activities have occurred on the project site in the recent past, and the City of Fairfield General Plan does not identify the project site as a mineral resource zone. This condition precludes the possibility of a loss of availability of a locally important mineral resource. The project site is completely surrounded by the larger, existing Solano Community College Campus; thus, mineral extraction activities would be incompatible with the established educational uses that occur surrounding the site. This condition precludes the possibility of a loss of availability of a statewide or regionally important mineral resource. No impacts would occur.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>12. Noise</b>				
<i>Would the project result in:</i>				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

**Characteristics of Noise.** Noise is defined as unwanted sound. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. Most of the sounds that we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. Noise is typically generated by transportation, specific land uses, and ongoing human activity.

The standard unit of measurement of the loudness of sound is the decibel (dB). The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. A change of 3 dB is the lowest change that can be perceptible to the human ear in outdoor environments, while a change of 5 dBA is considered to be the minimum readily perceptible change to the human ear in outdoor environments.

Since the human ear is not equally sensitive to sound at all frequencies, the A-weighted decibel scale (dBA) was derived to relate noise to the sensitivity of humans. The scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Furthermore, the A-weighted sound level is the basis for a number of various sound level metrics, including the day/night sound level ( $L_{dn}$ ) and the Community Noise Equivalent Level (CNEL), both of which represent how humans are more sensitive to sound at night.<sup>1</sup> In addition, the equivalent continuous sound level ( $L_{eq}$ ) is the average sound energy of time-varying noise over a sample period and the  $L_{max}$  is the maximum instantaneous noise level occurring over a sample period.

### Existing Noise Sources

The project site is located in the City of Fairfield, Solano County, California (Exhibit 1), within the existing Solano Community College District campus. The project site is surrounded on all sides by walkways and existing campus buildings, including Building 100 (Library) to the west; Building 1400 (Student Center) to the north, Building 1500 (Math) to the south; and Building 1700 (Physical Education/Gym) to the east (Exhibit 2).

The community college campus is located east of Suisun Valley Road and is bounded on all sides by Solano College Road. Suisun Creek is located approximately 0.43 mile to the east, and I-80 is located approximately 0.47 mile to the southeast.

The existing noise levels on the project site were documented through short-term ambient noise measurements taken on the project site in order to determine the existing ambient noise environment in the project vicinity.

The noise measurements were taken on Wednesday, October 21, 2015 between 4:00 p.m. and 4:50 p.m. The noise measurement locations are shown in Exhibit 4 and the noise measurement data sheets are provided in Appendix C of this document. The noise monitoring locations were selected in order to document existing daytime ambient noise levels on the project site and to determine compatibility of the proposed residential land use development with the City’s land use compatibility standards. A summary of the results of the noise level measurements are provided in Table 7.

**Table 7: Noise Monitoring Summary**

Site Location	Location Description—Primary Noise Sources	dBA $L_{eq}$	dBA $L_{max}$	dBA $L_{min}$
ST-1	Southwest corner of project site—people conversing, wind, distant freeway noise	46.4	52.7	44.6
ST-2	Northern edge of project site—people conversing, wind, distant freeway noise	48.2	62.8	44.4

<sup>1</sup>  $L_{dn}$  is the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m. CNEL is the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m. Source: Harris, Cyril M. 1998. Handbook of Acoustical Measurement and Noise Control.

**Table 7 (cont.): Noise Monitoring Summary**

Site Location	Location Description—Primary Noise Sources	dBA L <sub>eq</sub>	dBA L <sub>max</sub>	dBA L <sub>min</sub>
ST-3	Southeast corner of project site—people conversing, wind, distant freeway noise	46.8	63.6	44.0

Source: FirstCarbon Solutions, 2015.

### Regulatory Framework

The City of Fairfield addresses noise in the General Plan and in the Municipal Code. The Fairfield General Plan addresses noise in the Health and Safety Element. The noise element includes policies that establish maximum allowable noise standards for transportation and non-transportation noise sources. For example, for transportation noise sources, the maximum allowable exterior noise exposure standard for receiving residential land uses is 60 dBA CNEL as measured in the outdoor activity areas of residential land uses. Similarly, the City’s exterior noise-level performance standard for non-transportation noise sources is 60 dBA L<sub>eq</sub> and 70 dBA L<sub>max</sub>, as measured at the property line of receiving residential land uses. For proposed school land use development, the City’s maximum allowable noise exposure to traffic noise sources is 45 dBA L<sub>eq</sub> as measured in the interior spaces of a building.

The noise ordinances of the Fairfield Municipal Code prohibit the operation of any tools or equipment used in construction, grading, or demolition works between the hours of 10:00 p.m. and 7:00 a.m. except by written permission of the Director of Public Works. The noise ordinances also provide exemptions for certain noise sources. For example, sound or noise emanating from the normal operation of public and private schools typically consisting of classes and other school-sponsored activities, such as school bands and school athletic events are exempt from the provisions of the noise ordinance.

### Impact Analysis

Would the project:

- a) **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

**Less than significant impact with mitigation incorporated.**

### Short-Term Construction Impacts

Two types of short-term noise impacts could occur during the construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the project site. Although there would be a relatively high single event noise exposure potential causing intermittent noise nuisance, the effect on longer-term (hourly or daily) ambient noise levels would be small.

Therefore, short-term construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during construction on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Table 8 lists typical construction equipment noise levels, based on a distance of 50 feet between the equipment and a noise receptor. Typical operating cycles for the heaviest types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings. Impact equipment such as pile drivers is not expected to be used during construction of this project.

**Table 8: Typical Construction Equipment Maximum Noise Levels,  $L_{max}$**

Type of Equipment	Impact Device? <sup>2</sup> (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Pickup Truck	No	55
Pumps	No	77
Air Compressors	No	80
Backhoe	No	80
Front-End Loaders	No	80
Portable Generators	No	82
Dump Truck	No	84
Tractors	No	84
Auger Drill Rig	No	85
Concrete Mixer Truck	No	85
Cranes	No	85
Dozers	No	85
Excavators	No	85
Graders	No	85
Jackhammers	Yes	85
Man Lift	No	85

<sup>2</sup> Impact devices are pieces of construction equipment that create high levels of noise and vibration such as jackhammers and pile drivers.

**Table 8 (cont.): Typical Construction Equipment Maximum Noise Levels,  $L_{max}$**

Type of Equipment	Impact Device? <sup>3</sup> (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Paver	No	85
Pneumatic Tools	No	85
Rollers	No	85
Scrapers	No	85
Concrete/Industrial Saws	No	90
Impact Pile Driver	Yes	95
Vibratory Pile Driver	No	95

Source: FHWA 2006. Highway Construction Noise Handbook, August.

As shown in Table 8, the typical maximum noise level generated by backhoes and front-end loaders is assumed to be 80 dBA  $L_{max}$  at 50 feet from the operating equipment. The maximum noise level generated by excavators, dozers, rollers, or concrete mixer trucks is 85 dBA  $L_{max}$  at 50 feet. The maximum noise level generated by dump trucks and tractors is 84 dBA  $L_{max}$  at 50 feet from these vehicles. Each doubling of the sound sources with equal strength would increase the noise level by 3 dBA. Assuming each piece of construction equipment operates at some distance apart from the other equipment, the worst-case combined noise level during this phase of construction would be 90 dBA  $L_{max}$  at a distance of 50 feet from multiple pieces of heavy construction equipment operating at full power simultaneously.

The closest off-site noise sensitive land uses to the proposed project's construction footprint are the residential land uses located approximately 1,000 feet west of the project across Suisun Valley Road. Intervening structures of the school campus would block the line of sight to most of these residential land uses. However, assuming a direct line of sight, noise levels from project-related construction activities would attenuate to below 66 dBA  $L_{max}$  at these nearest off-sight receptors. These projected maximum noise levels from construction activities would be below the City's maximum daytime exterior noise level standard of 70 dBA  $L_{max}$  for non-transportation noise sources as measured at the nearest off-site receptors.

In addition, compliance with the City's standards for noise producing construction activities, which limits noise-producing construction activity to between the hours of 7:00 a.m. and 10:00 p.m. daily, except as specifically permitted by the Director of Public Works, would further ensure construction noise impacts would not result in exceedance of the nighttime exterior noise standards for non-transportation noise sources as measured at the nearest off-site receptors.

<sup>3</sup> Impact devices are pieces of construction equipment that create high levels of noise and vibration such as jackhammers and pile drivers.



Therefore, although there would be the potential for single event noise exposure causing intermittent noise nuisance, the effect on longer-term (hourly or daily) ambient noise levels would be small. Implementation of standard noise reduction measures (including required use of approved mufflers on equipment) and compliance with the City's Municipal Code ordinances establishing permissible hours of noise-producing construction activity would reduce short-term construction impacts to a less than significant level.

## Mitigation Measures

**MM NOI-1** In accordance with City standards, implementation of the following multi-part mitigation measure for project construction would reduce potential construction period noise impacts to less than significant levels:

- The construction contractor shall limit all noise producing construction related activities, including haul truck deliveries or warming up and idling of heavy construction equipment, to the hours of 7:00 a.m. and 10:00 p.m. daily.
- The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction and placed so that emitted noise is directed away from adjacent residences.
- The construction contractor shall ensure all construction equipment utilize noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
- The construction contractor shall ensure that unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes) is prohibited.
- The construction contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.

### **Long-Term Operational Impacts**

#### *Traffic Noise Impacts*

Implementation of the project would result in a significant impact if it would expose the project to traffic noise levels in excess of the City's transportation noise standards. For proposed school land use development, the City's maximum allowable noise exposure to traffic noise sources is 45 dBA  $L_{eq}$  as measured in the interior spaces of a project's building.

The existing and projected future traffic noise levels adjacent to the project site were analyzed to determine compliance with the City's noise and land use compatibility standards. Noise from vehicular traffic was modeled using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). Site-specific information is entered, such as roadway traffic volumes, roadway active width, source-to-receiver distances, travel speed, noise source and receiver heights, and the percentages of automobiles, medium trucks, and heavy trucks that constitute traffic throughout the day, among other variables. The model inputs and outputs—including the 60-dBA, 65-dBA, and 70-dBA CNEL

noise contour distances for the modeled traffic conditions—are provided in Appendix D of this document. A summary of the modeling results is shown in Table 9.

**Table 9: Traffic Noise Model Results Summary**

Roadway Segment	Existing No Project (dBA) CNEL	Existing Plus Project (dBA) CNEL	Increase over Existing No Project (dBA)	Year 2035 No Project (dBA) CNEL	Year 2035 Plus Project (dBA) CNEL	Increase over Existing No Project (dBA)
Suisun Valley Road—Rockville Road to Monte Vista Court	62.3	62.5	0.2	63.2	63.3	0.1
Suisun Valley Road—Monte Vista Court to Solano College Road	60.5	60.5	0.0	61.0	61.0	0.0
Suisun Valley Road—Solano College Road to Kaiser Drive	64.3	64.5	0.2	64.9	65.1	0.2
Suisun Valley Road—Kaiser Drive to Business Center Drive	63.9	64.2	0.3	64.8	65.0	0.2

Note:  
CNEL (dBA) is stated as measured at 50 feet from the centerline of the outermost travel lane.  
Source: FirstCarbon Solutions, 2015.

The project’s nearest building façade would be located approximately 865 feet from the centerline of the nearest travel lane of Suisun Valley Road. At this distance noise levels from traffic on Suisun Valley Road would attenuate to approximately 38.9 dBA and 39.4 dBA CNEL under existing and year 2035 plus project conditions, respectively. Therefore, traffic noise levels would clearly be well below the interior noise level standard of 45 dBA  $L_{eq}$ , as measured within the closest proposed structure to Suisun Valley Road.

Therefore, implementation of the proposed project would not expose persons within the project to traffic noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Traffic noise impacts to the proposed project would be less than significant.

*Stationary-Source Noise*

A significant impact would occur for the proposed land use development if the project would generate stationary noise levels in excess of the City’s non-transportation noise level standards as measured at a receiving property line. For example, the daytime exterior noise-level standard for receiving residential land uses is 50 dBA  $L_{eq}$  and 70 dBA  $L_{max}$ ; while the nighttime standard is 45 dBA  $L_{eq}$  and 65 dBA  $L_{max}$ .

New stationary noise sources associated with implementation of the project would include new mechanical equipment, such as exterior heating, ventilation, and air conditioning (HVAC) systems. At the time of preparation of this analysis, details of mechanical ventilation systems were not

available; therefore, a reference noise level for typical HVAC systems was used. Noise levels from typical rooftop mechanical ventilation equipment are anticipated to range up to approximately 60 dBA  $L_{eq}$  at a distance of 25 feet. Proposed HVAC systems could be located as close as 1,000 feet from the nearest off-site receptor (the closest residential land use west of the project site). At this distance, noise generated by proposed HVAC systems would be expected to attenuate to less than 34 dBA  $L_{eq}$  as measured at the nearest off-site sensitive receptor. These noise levels are below the City’s non-transportation exterior noise level standards for receiving residential land uses. Therefore, noise levels from new stationary noise sources would be considered a less than significant impact.

Therefore, stationary operational noise levels would not exceed the City’s noise performance standards and would be considered less than significant.

**b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?**

**Less than significant impact.** Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings.

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include construction activities such as blasting, pile driving, and operating heavy earthmoving equipment. Construction vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). For purposes of this analysis, project related impacts are expressed in terms of PPV. Typical vibration source levels from construction equipment are shown in Table 10.

**Table 10: Vibration Levels of Construction Equipment**

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Water Trucks	0.001	57
Scraper	0.002	58
Bulldozer-small	0.003	58
Jackhammer	0.035	79
Concrete Mixer	0.046	81
Concrete Pump	0.046	81
Paver	0.046	81
Pickup Truck	0.046	81
Auger Drill Rig	0.051	82
Backhoe	0.051	82

**Table 10 (cont.): Vibration Levels of Construction Equipment**

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Crane (Mobile)	0.051	82
Excavator	0.051	82
Grader	0.051	82
Loader	0.051	82
Loaded Trucks	0.076	86
Bulldozer-Large	0.089	87
Caisson drilling	0.089	87
Vibratory Roller (small)	0.101	88
Compactor	0.138	90
Clam shovel drop	0.202	94
Vibratory Roller (large)	0.210	94
Pile Driver(impact-typical)	0.644	104
Pile Driver (impact-upper range)	1.518	112

Source: Compilation of scientific and academic literature, generated by FTA and FHWA.

Propagation of vibration through soil can be calculated using the vibration reference equation of

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

Where:

- PPV = reference measurement at 25 feet from vibration source
- D = distance from equipment to property line
- n = vibration attenuation rate through ground

According to Chapter 12 of the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment manual (2006), an “n” value of 1.5 is recommended to calculate vibration propagation through typical soil conditions.

The FTA has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in its Transit Noise and Vibration Impact Assessment document (FTA 2006). The FTA guidelines include thresholds for construction vibration impacts for various structural categories as shown in Table 11.

**Table 11: Federal Transit Administration Construction Vibration Impact Criteria**

Building Category	PPV (in/sec)	Approximate VdB
I. Reinforced—Concrete, Steel or Timber (no plaster)	0.5	102
II. Engineered Concrete and Masonry (no plaster)	0.3	98
III. Non Engineered Timber and Masonry Buildings	0.2	94
IV. Buildings Extremely Susceptible to Vibration Damage	0.12	90
Note: VdB=Velocity in Decibels Source: FTA, 2006.		

Of the variety of equipment used during construction, the vibratory rollers that are anticipated to be used in the site preparation phase of construction would produce the greatest groundborne vibration levels. Impact equipment such as pile drivers is not expected to be used during construction of this project. Large vibratory rollers produce groundborne vibration levels ranging up to 0.210 inches per second (in/sec) peak particle velocity (PPV) at 25 feet from the operating equipment.

The nearest off-site structure to the proposed construction areas where heavy construction equipment would operate is the math classroom building south of the project construction footprint. This receptor is located approximately 28 feet from the nearest construction footprint where heavy construction equipment would potentially operate. At this distance groundborne vibration levels could range up to 0.177 PPV from operation of a large vibratory roller. This is below the industry standard vibration damage criteria of 0.2 PPV for non-engineered timber and masonry buildings (see Table 11). Therefore, construction-related groundborne vibration impacts would be considered less than significant.

Upon completion of construction, the project would not include any permanent sources of groundborne vibrations. As such, implementation of the proposed project would not expose persons within the project vicinity to excessive groundborne vibration levels. Therefore, project-related groundborne vibration impacts would be considered less than significant.

**c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less than significant impact.** As noted in the characteristics of noise discussion, audible increases in noise levels generally refer to a change of 3 dBA or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. A change of 5 dBA is considered to be the minimum change considered readily perceptible to the human ear in outdoor environments. Therefore, for purposes of this analysis, an increase of 5 dBA or greater would be considered a substantial permanent increase in ambient noise levels.

Primary new permanent noise sources associated with implementation of the project would be project related traffic and new stationary noise sources such as new mechanical ventilation systems.

As shown in Table 9, the greatest increase in traffic noise levels along modeled roadway segments in the project vicinity would be 0.3 dBA CNEL, with implementation of the project. This is well below the 3 dBA increase that is considered to be perceptible in outdoor environments, and well below a 5 dBA or greater increase that would be considered substantial. Therefore, project-related traffic would not result in a substantial permanent increase in existing ambient noise levels along any roadway segment in the project vicinity, and project-related traffic noise impacts on off-site sensitive land uses would be less than significant.

As shown in the stationary-source noise impact discussion under 12a), noise levels from project-related stationary noise sources such as operation of new mechanical ventilation equipment could range up to 34 dBA  $L_{eq}$  at the nearest off-site sensitive receptors. These noise levels are below the measured ambient noise levels recorded on the project site, as shown in Table 7. In addition, they are well below the existing traffic noise levels at the nearest off-site receptors along Suisun Valley Road shown in Table 9. Therefore, implementation of the project would result in a less than significant permanent increase in noise levels existing without the project.

**d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less than significant impact with mitigation incorporated.** As addressed in Impact 12a), project-related construction activities could result in potential single event noise exposure causing intermittent noise nuisance at the closest noise sensitive land uses surrounding the project site. However, the effect on longer-term (hourly or daily) ambient noise levels would be small and would not be expected to result in a perceptible increase in ambient noise levels at off-site receptors in the project vicinity. In addition, restricting the permissible hours of construction activities, and by implementing the best management noise reduction techniques and practices outlined in Mitigation Measure NOI-1, would ensure that potential short-term construction noise impacts on sensitive receptors in the project vicinity would be reduced to less than significant.

**e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

**No impact.** The closest airport to the project site is the Napa County Airport, located approximately 8.2 miles west of the project site. The next closest airport is the Travis Airforce Base, located approximately 8.8 miles east of the project site. The project site is located outside the 60 dBA CNEL airport noise contours of these airports. While aircraft noise is occasionally audible on the project site from aircraft flyovers, aircraft noise associated with nearby airport activity would not expose people residing or working in the project area to excessive noise levels. Therefore, no impacts associated with public airport noise would occur.

- f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

**No impact.** The project site is not located in the vicinity of a private airstrip. The closest private airstrip is the Garibaldi Brothers Airport, located approximately 4.3 miles south of the project site. While aircraft noise is occasionally audible on the project site from aircraft flyovers, aircraft noise associated with nearby private airstrip activity would not expose people residing or working in the project area to excessive noise levels. Therefore, no impacts associated with private airstrip noise would occur.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>13. Population and Housing</b> <i>Would the project:</i>				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

Would the project:

- a) **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

**No impact.** The proposed project consists of the development of a 33,880-square-foot Science Building located within the existing Solano Community College District campus. The new Science Building would replace an existing, aging facility. The new building will accommodate relocated classrooms, offices, and facilities for the instruction of science classes from the existing Building 300, as well as relocation and expansion of the campus veteran’s center. Building 300 will be repurposed for other uses. To the limited extent that the new Science Building would accommodate additional enrollment growth relative to the capacity of the College District’s existing facilities, this would be considered “growth accommodating” in that it would serve persons who already reside in Solano County. Moreover, any new jobs created by the Science Building would be expected to be limited to a small number of new employment positions, as most of the College District faculty and staff assigned to the new building would be expected to be existing employees who are currently assigned elsewhere. Regardless, the creation of a small number of new employment positions would not trigger substantial growth inducement within Fairfield or Solano County. Finally, development of the new Science Building would not remove a physical barrier to growth, as the site is located within the larger, existing Solano Community College campus. Impacts would be less than significant.



**b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

**No impact.** The project site does not contain any existing dwelling units. This condition precludes the displacement of dwelling units. No impacts would occur.

**c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

**No impact.** The project site does not contain any existing dwelling units. This condition precludes the displacement of persons. No impacts would occur.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>14. Public Services</b>				
<i>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:</i>				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

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:

### a) Fire protection?

**Less than significant impact.** The proposed project would develop a 33,800-square-foot Science Building on the project site. The Fairfield Fire Department is the primary fire protection/emergency medical response agency for the Solano Community College. The project site is 5 miles from Fairfield Fire Station #1 and 3 miles from Fairfield Fire Station #35, and, therefore, would be located within an area where adequate emergency response times can be achieved. Additionally, the proposed project would be required to comply with the applicable provisions of the latest adopted edition of the California Fire Code, including those that pertain to emergency access, fire suppression systems, and fire detection/warning systems. For these reasons, the proposed project would not be expected to generate substantial calls for service such that new or expanded fire protection facilities would be required. Impacts would be less than significant.

### b) Police protection?

**Less than significant impact.** The proposed project would develop a 33,880-square-foot Science Building on the project site. The Solano Community College District Police Department provides primary law enforcement at the campus between the hours of 8:00 a.m. and 10:30 p.m., Monday through Friday. The Fairfield Police Department acts as the primary law enforcement agency outside of these hours. Additionally, both the Fairfield Police Department and Solano County Sheriff’s Office

are available to support the Solano Community College District Police Department pursuant to standard mutual aid agreements. The proposed Science Building will be located within the central portion of the existing community college campus, and would provide standard security measures such as alarm and monitoring systems and exterior lighting. For these reasons, the proposed project would not be expected to generate substantial calls for service such that new or expanded police protection facilities would be required. Impacts would be less than significant.

**c) Schools?**

**No impact.** The proposed project would develop a 33,880-square-foot Science Building on the project site. The proposed project would not directly induce population growth within Fairfield or Solano County and, therefore, would not have the potential to increase enrollment in K-12 schools. This would preclude the need for new or expanded school facilities. No impacts would occur.

**d) Parks?**

**No impact.** The proposed project would develop a 33,880-square-foot Science Building on the project site. The proposed project would not directly induce population growth within Fairfield or Solano County and, therefore, would not have the potential to increase demand for parks. This would preclude the need for new or expanded park facilities. No impacts would occur.

**e) Other public facilities?**

**No impact.** The proposed project would develop a 33,880-square-foot Science Building on the project site. The proposed project would not directly induce population growth within Fairfield or Solano County and, therefore, would not have the potential to increase demand for public facilities such as libraries or community centers. This would preclude the need for new or expanded public facilities. No impacts would occur.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>15. Recreation</b>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Environmental Evaluation

- a) **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

**No impact.** The proposed project would develop a 33,880-square-foot Science Building on the project site. The proposed project would not directly induce population growth within Fairfield or Solano County and, therefore, would not have the potential to increase demand for existing neighborhood or regional parks. This would preclude the possibility of physical deterioration of park facilities. No impacts would occur.

- b) **Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?**

**No impact.** The proposed project would develop a 33,880-square-foot Science Building on the project site. The proposed project does not include any recreational facilities, which precludes the possibility of impacts, and no impacts would occur.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>16. Transportation/Traffic</b> <i>Would the project:</i>				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

The analysis in this section is supported by the Traffic Study prepared by KD Anderson & Associates, which is provided in Appendix D.

Would the project:

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

**Less than significant impact with mitigation incorporated.** KD Anderson & Associates assessed intersection and queuing impacts at six locations in the project vicinity. The findings are summarized as follows and the complete traffic impact study is provided in Appendix D.

**Standards of Significance/Level of Service Thresholds.** In this traffic impact study, the significance of the proposed project's impact on traffic operating conditions is based on a determination of whether project-generated traffic results in intersection operating conditions below acceptable standards as defined by the governing agency. A project's impact on traffic conditions is considered significant if implementation of the project would result in levels of service (LOS) changing from levels considered acceptable to levels considered unacceptable, or if the project would significantly worsen an already unacceptable LOS without the project. Relevant policies for the study area consist of the following:

### **City of Fairfield**

Objective C1 3 of the City of Fairfield General Plan Circulation Element requires intersections to maintain a peak hour LOS D or better for arterial intersections, C or better for collector street intersections and B or better for local intersections unless public health, safety or welfare factors determine otherwise.

### **Solano County**

Section 1-4 of the Solano County Road Improvement Standards and Land Development Requirements establishes LOS C for all roads and intersections. This standard requires all projects to maintain a LOS C except where the existing LOS is below C, at which point the project should not decrease the LOS.

### **Trip Generation**

The number of vehicle trips that are expected to be generated by development of the proposed project has been estimated using published trip generation data. The Institute of Transportation Engineers (ITE) publication Trip Generation Manual, 9<sup>th</sup> Edition, was used by KD Anderson to estimate the number of trips that would be generated by the Science Building in a traffic analysis prepared in November, 2015. These calculations are shown in Appendix D. Subsequently, the Solano College Board of Trustees changed the project square footage by adding 3,480 square feet in area, approximately 10% of the originally proposed size of 30,400. Although this has the potential increase the number of trips generated by the new building by 10%, these trips would not change

the level of service calculations or the results of the traffic study. The proposed 33,880-square-foot building is projected to generate a 918 weekday daily trips, 100 a.m. and 84 p.m. peak hour trips.

The new Science Building is intended to house programs from the existing Science building, a portion of which may be repurposed for additional instructional space. For this analysis, trips associated with the new building area have been added to background traffic to present a conservative estimate of the traffic impacts associated with the new building space.

As originally analyzed for the 30,400 square foot project, the proposed Science Building would generate 835 weekday daily trips, 91 AM weekday peak-hour trips and 77 PM weekday peak-hour trips. The following analysis is based on these original numbers.

### **Study Intersections**

KD Anderson & Associates studied intersection operations and queuing at the following six locations:

- Suisun Valley Road/Rockville Road
- Suisun Valley Road/Monte Vista Court
- Suisun Valley Road/Oakwood Drive/Solano College Road
- Suisun Valley Road/Westamerica Drive/Kaiser Drive
- Suisun Valley Road/Business Center Drive
- Suisun Valley Road/Neitzel Road

### **Existing Conditions**

All six study intersections operate at acceptable LOS under existing conditions. Level of Service “C” or better delays are currently experienced at five of the six study intersections during the a.m. and p.m. peak hours, with LOS D operations at the Suisun Valley Road/Neitzel Road intersection during the a.m. peak traffic hour.

#### *Existing Plus Project Traffic Conditions*

The trips accompanying development of the new Science Building were superimposed onto existing background traffic. The addition of project-generated traffic is projected to result in relatively minor increases in delay at each of the study intersections, generally in the range of one (1) second or less at the signalized intersections and 2 to 3 seconds at the stop sign controlled intersections. No changes to existing Levels of Service are projected. These impacts are considered less than significant based upon the city of Fairfield’s identified operating standards.

#### *EPAP Traffic Conditions and Levels of Service*

The Existing Plus Approved Project (EPAP) background condition is composed of existing traffic volumes and projected changes in background traffic conditions associated with development of previously approved or pending projects in the vicinity of the study area.

**EPAP No Project—Intersection Levels of Service.** Although traffic volumes under EPAP No Project conditions would incrementally increase over current conditions, all study intersections would continue to operate at acceptable LOS D or better under EPAP No Project conditions.

**EPAP plus Project—Intersection Levels of Service.** The trips accompanying development of the proposed project were superimposed onto the background EPAP condition as previously identified. The addition of project-generated traffic is projected to result in relatively minor increases in delay at each of the study intersections, similar to Existing plus Project conditions. No changes to base background Levels of Service are projected with the addition of project traffic. Level of Service “D” or better operations are projected to continue at all study intersections. These impacts are considered less than significant based upon the city of Fairfield’s identified operating standards.

*Long Term Cumulative Traffic Conditions*

Year 2035 peak hour traffic model forecasts and base year model volume data was obtained from the City of Fairfield. Peak hour traffic model forecasts were compared to the base model year forecasts and local growth rates were calculated for individual roadway segments. These growth rates were then applied to the existing turning movement counts at each study intersection, and the results were balanced using the techniques contained in *Transportation Research Board’s (TRB’s) NCHRP report 255, Highway Data for Urbanized Area Project Planning and Design*.

**Cumulative No Project Intersection Levels of Service.** Satisfactory operating Levels of Service are projected to continue at four of the six study intersections, with LOS C or better operations forecast. The Suisun Valley/Monte Vista Court intersection is projected to experience LOS D delays for left turns out of the college onto southbound Suisun Valley Road. However, as with current conditions, this left turn volume is projected to remain relatively low and volumes do not warrant signalization of the intersection. Therefore, delays associated with this turn movement are not judged to be significant.

The Suisun Valley Road/Neitzel Road intersection is projected to experience LOS E delays during the morning peak hour. This exceeds the identified LOS D operating standard for the intersection. This intersection is currently controlled by stop signs at each approach and forecast volumes warrant signalization of the intersection. Signalization of the existing intersection configuration would provide LOS “A” a.m. peak hour operations; however, the City of Fairfield has not determined that a new signal is warranted at this time.

**Cumulative Plus Project Intersection Levels of Service.** The addition of projected generated traffic to the study intersections is not projected to result in any changes in projected operating LOS when compared to the year 2035 base condition. Project traffic will incrementally contribute to LOS E delays projected for the Suisun Valley Road/Neitzel Road intersection during the a.m. peak hour. As with cumulative base conditions, signalization of this intersection would similarly result in satisfactory LOS A operations with project traffic should signalization ultimately be determined to be warranted. Because this occurs under the “No Project” scenario, it is not considered a significant project impact.



- b) **Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

**Less than significant impact.** Two of the six identified intersections for the study are projected to fall below the City of Fairfield’s operating standard, LOS D, in the Cumulative No Project scenario and the Cumulative with Project scenario: Suisun Valley/Monte Vista Court and Suisun Valley Road/Neitzel Road. Because this occurs under the No Project scenario, it is not considered a significant project impact.

- c) **Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

**Less than significant impact.** The project is located within the Airport Influence Area of the Travis Air Force Base Land Use Compatibility Plan (LUCP), prepared by the Solano County Airport Land Use Commission (ALUC). The project site is located within Compatibility Zone “D” of the LUCP. The only compatibility factor within Zone D is a limitation on the height of structures, which requires airspace review for objects that are 200 feet in height or greater. The project will consist of a single-story building, and will not exceed this limitation. Zone D does not impose any other occupancy, density or use restrictions, except for prohibiting hazards to flight such as visual or electronic forms of interference with the safety of aircraft operations, or land use development that may cause the increased attraction of birds. The project will not include any such features, and will not conflict with any Zone D Criteria that could result in safety hazards. The proposed use would not require a change in air traffic patterns. Impacts would be less than significant.

- d) **Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**No impact.** The project site has existing access points located on Suisun Valley Road and Solano College Road. The proposed project would maintain the locations of these access points, and does not propose any alterations to any adjoining roadways that would have the potential to create roadway safety hazards. No impact would occur.

- e) **Result in inadequate emergency access?**

**No impact.** The project site has existing vehicular access points located on Suisun Valley Road and Solano College Road. The proposed project would maintain the locations of these access points, which are suitable for large emergency vehicles such as fire engines. As such, adequate emergency access would be provided. No impact would occur.

- f) **Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?**

**No impact.**

## **Transit Service**

FAST provides bus service to the college. Bus stops are located at the college campus, the closest being on Solano College Road. Route 7 provides service to the campus at half-hour intervals throughout the day.

## **Bicycle and Pedestrian Facilities**

Sidewalks currently exist along Suisun Valley Road from Business Center Drive north to the college campus. There are no sidewalk facilities north of the campus and south of Business Center Drive. Business Center Drive, Westamerica Drive and Oakwood Drive are improved with sidewalk facilities.

There are no delineated bike lane facilities along study area streets. The City of Fairfield General Plan Circulation Element identifies proposed Class II bike lanes along the length of Suisun Valley Road through the study area. Therefore, there would be no impact to adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or the performance or safety of such facilities.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>17. Utilities and Service Systems</b> <i>Would the project:</i>				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

Would the project:

- a) **Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

**Less than significant impact.** Fairfield-Suisun Sewer District would provide wastewater treatment to the proposed project. The proposed project would construct an approximately 33,880-square-foot Science Building. The existing Solano Community College campus serves approximately 11,000 students (Solano Community College 2015). The proposed project is not expected to increase enrollment; rather, the project will relocate existing uses from other existing facilities, which will be repurposed. According the Solano College Master Plan, the estimated sewage flow for the campus is

of 20 gallons per day (gpd) per student. The proposed project is estimated to have a maximum of 475 occupants per day, generating 9,500 gallons of effluent per day (0.009 million gpd). Fairfield-Suisun Sewer District has a dry weather capacity of 15.5 mgd and treats an average of 10.0 mgd of effluent under dry weather conditions. The proposed project's effluent would represent less than 0.01 percent of average dry weather flow. As such, it would not exceed the wastewater treatment requirements of the plant. Impacts would be less than significant.

**b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less than significant impact.** As discussed in impact discussions a) and d), the City of Fairfield and Fairfield-Suisun Sewer District would be able to serve the proposed project with water and wastewater service, respectively, using existing facilities. Accordingly, no new or expanded facilities would be required. Impacts would be less than significant.

**c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less than significant impact.** The project site contains existing storm drainage infrastructure, which would be extended to serve the new Science Building. The extension would be minimal, and would not require the upsizing or expansion of the existing infrastructure. As such, the proposed project would not require the construction of new stormwater drainage or expansion of existing facilities which could cause significant environmental effects. Impacts would be less than significant.

**d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

**Less than significant impact.** The City of Fairfield would serve the proposed project with potable water service. The City's Urban Water Management Plan sets forth an interim target for 2015 as 201 gallons per capita per day. Because the new Science Building would be an institutional use occupied by College District faculty, staff, and students (the latter of whom are not employees), the water consumption rate for employees will be applied to all occupants of the building, not just those employed by the College District. Four hundred persons (or equivalents thereof) are expected to use the building on a daily basis. Using the 20-gallon-per-occupant rate projected in the Solano College Master Plan, the proposed project would demand 9,500 gpd and 3.47 million gallons per year (10.64 acre-feet per year). This latter figure represents less than 0.03 percent of the City of Fairfield's total annual water supply of 41,450 acre-feet. Table 12 shows the Supply and Demand Comparison for Multiple Dry-Year Events. As such, adequate water supplies would be available to serve the proposed project. Impacts would be less than significant.

**Table 12: Supply and Demand Comparison—Multiple Dry-Year Events**

Category		2015	2020	2025	2030	2035–opt
Multiple-dry year first year supply	Supply Totals	41,450	41,550	42,250	42,850	43,550
	Demand Totals	30,460	32,620	36,080	39,420	42,120
	Difference	10,990	8,930	6,170	3,430	1,430
	Difference as % of Supply	26.5%	21.5%	14.6%	8.0%	3.3%
	Difference as % of Demand	36.1%	27.4%	17.1%	8.7%	3.4%
Multiple-dry year second year supply	Supply Totals	41,450	41,550	42,250	42,850	43,550
	Demand Totals	30,460	32,620	36,080	39,420	42,120
	Difference	10,990	8,930	6,170	3,430	1,430
	Difference as % of Supply	26.5%	21.5%	14.6%	8.0%	3.3%
	Difference as % of Demand	36.1%	27.4%	17.1%	8.7%	3.4%
Multiple-dry year third year supply	Supply Totals	41,450	41,550	42,250	42,850	43,550
	Demand Totals	30,460	32,620	36,080	39,420	42,120
	Difference	10,990	8,930	6,170	3,430	1,430
	Difference as % of Supply	26.5%	21.5%	14.6%	8.0%	3.3%
	Difference as % of Demand	36.1%	27.4%	17.1%	8.7%	3.4%
Note: Units are in acre-feet per year. Source: City of Fairfield. 2010. Urban Water Management Plan. Website: <a href="http://www.water.ca.gov/urbanwatermanagement/2010uwmps/Fairfield,%20City%20of/Fairfield_2010_UWMP.pdf">http://www.water.ca.gov/urbanwatermanagement/2010uwmps/Fairfield,%20City%20of/Fairfield_2010_UWMP.pdf</a> .						

- e) **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?**

**Less than significant impact.** Fairfield-Suisun Sewer District would provide wastewater treatment to the proposed project. The proposed project is estimated to generate 9,500 gallons of effluent per day (0.01 million gpd). Fairfield-Suisun Sewer District’s Wastewater Treatment Plant has a dry weather capacity of 15.5 million gpd and treats an average of 10.0 million gpd of effluent under dry weather conditions. The proposed project’s effluent would represent less than 0.01 percent of average dry weather flow. As such, it would not exceed the wastewater treatment requirements of the plant. Impacts would be less than significant.

**f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

**Less than significant impact.** The Solano Community College Fairfield campus is served by the Potrero Hills Landfill near Suisun City, which has a remaining capacity of 13.8 million cubic yards. The proposed project would develop 33,880 square feet of non-residential uses. Using non-residential construction solid waste generation rates provided by the United States Environmental Protection Agency (3.29 pounds/square foot), the proposed project is estimated to generate 78.03 cubic yards of solid waste. This would represent less than 0.01 percent of the available landfill capacity. Using the statewide per capita solid waste disposal rate of 4.4 pounds per person per day, the operation of proposed project is estimated to generate 534 cubic yards of solid waste annually. This would represent less than 0.01 percent of the available landfill capacity. Impacts would be less than significant.

**g) Comply with federal, state, and local statutes and regulations related to solid waste?**

**Less than significant impact.** The proposed project would be required to comply with state waste reduction and recycling requirements that pertain to construction/demolition and operations (the project would not involve demolition activities). These requirements include minimum waste diversion requirements for construction waste, and the provision of recycling and green waste receptacles for the project uses. Impacts would be less than significant.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>18. Mandatory Findings of Significance</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

- a) **Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?**

**Less than significant impact with mitigation incorporated.** The proposed project may result in several impacts associated with biological resources that would be significant if left unmitigated. Mitigation Measures BIO-1 and BIO-2 would fully mitigate all potential impacts to levels of less than significant. With the implementation of these mitigation measures, the proposed project would have less than significant impacts.

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

**Less than significant impact with mitigation incorporated.** All cumulative impacts related to air quality, noise, and traffic are either less than significant after mitigation or less than significant and do not require mitigation. Given the size of the project and its impacts and mitigation measures, the incremental effects of this project are not considerable relative to the effects of past, current, and probably future projects. As discussed previously, the project does not have a significant cumulative traffic impact. Therefore, the proposed project would not result in cumulatively considerable impacts on these areas. Impacts would be less than significant.

- c) **Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?**

**Less than significant impact.** All impacts identified in this IS/MND are either less than significant after mitigation or less than significant and do not require mitigation. Therefore, the proposed project would not result in environmental effects that cause substantial adverse effects on human beings either directly or indirectly. Impacts would be less than significant.



## SECTION 4: REFERENCES

- Bay Area Air Quality Management District. 2011. California Environmental Quality Act Air Quality Guidelines. Website: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Updated-CEQA-Guidelines.aspx>.
- Bay Area Air Quality Management District. 2011. California Environmental Quality Act Air Quality Guidelines. Website: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Updated-CEQA-Guidelines.aspx>.
- California Air Pollution Control Officers Association (CAPCOA). 2009. Health Risk Assessments for Proposed Land Use Projects. Website: [www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA\\_HRA\\_LU\\_Guidelines\\_8-6-09.pdf](http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf).
- California Air Resources Board (ARB). 2005. Air Quality Land Use Handbook. Website: <http://www.arb.ca.gov/ch/handbook.pdf>.
- California Department of Conservation. 2012. Solano County Important Farmland Map. Website: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2012/sol12.pdf>. Accessed October 14, 2015.
- California Department of Conservation. 2014. Solano County Important Farmland Map 2012. May. Website: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2012/sol12.pdf>.
- California Department of Conservation. 2014. Solano County Williamson Act FY. Website: [ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Solano\\_13\\_14\\_WA.pdf](ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Solano_13_14_WA.pdf). Accessed October 14, 2015.
- California Department of Resources Recycling and Recovery. 2015. "Local Government Central." Website: <http://www.calrecycle.ca.gov/LGCentral/Default.htm>. Accessed October 23, 2015.
- California Department of Resources Recycling and Recovery. 2015. "Local Government Central." Website: <http://www.calrecycle.ca.gov/LGCentral/Default.htm>. Accessed October 16, 2015.
- California Department of Transportation. 2015. California Scenic Highway Mapping System. Website: [http://www.dot.ca.gov/hq/LandArch/scenic\\_highways/](http://www.dot.ca.gov/hq/LandArch/scenic_highways/). Accessed October 23, 2015.
- Centers for Disease Control and Prevention (CDC). 2012. Department of Health and Human Services, the National Institute for Occupational Safety and Health. Carbon Dioxide. Website: <http://www.cdc.gov/niosh/docs/81-123/pdfs/0103.pdf>.
- City of Fairfield. 2011. 2010 Urban Water Management Plan. June.
- Occupational Safety and Health Administration (OSHA). 2003. United States Department of Labor. Safety and Health Topics: Methane. Website: [www.osha.gov/dts/chemicalsampling/data/CH\\_250700.html](http://www.osha.gov/dts/chemicalsampling/data/CH_250700.html).
- Solano Community College District Master Plan. 2013. Published May 2014.

**References**

Solano Community College. 2015. Campus Information Website Page. Website:  
[http://www.solano.edu/campus\\_info/](http://www.solano.edu/campus_info/). Accessed October 16, 2015

Travis Air Force Base Land Use Compatibility Plan. 2002. Website: <http://www.co.solano.ca.us/civicax/filebank/blobdload.aspx?blobid=3929>. Accessed October 26, 2015.

Travis Air Force Base Land Use Compatibility Plan. 2002. Website: <http://www.co.solano.ca.us/civicax/filebank/blobdload.aspx?blobid=3929>. Accessed October 26, 2015.

United States Environmental Protection Agency. 1998. Characterization of Building Related Construction and Demolition Debris in the United States. June.

Wallace-Kuhl and Associates, Geotechnical Engineers. 2015. September 4.

## SECTION 5: REPORT PREPARATION PERSONNEL

FirstCarbon Solutions  
1350 Treat Boulevard, Suite 380  
Walnut Creek, CA 94597  
Phone: 925.357.2562

Project Director ..... Jason Brandman  
Project Manager ..... Elizabeth Johnson  
Quality Control/Legal Counsel ..... Tracy Inscore  
Air Quality Lead ..... Elena Nuño  
Noise Lead ..... Philip Ault  
Cultural Resources Lead ..... Dana DePietro, PhD  
Biological Resources Lead ..... Kristiaan Stuart  
Quality Control (QC) ..... Tracy Owens  
GIS/Graphics ..... John DeMartino  
Publications ..... Ed Livingston  
Publications ..... Ericka Rodriguez  
Environmental Analyst ..... Daisy Sims  
Air Quality Analyst ..... Ian McIntire

Wallace-Kuhl and Associates  
Geotechnical Consultants  
3050 Industrial Blvd, West Sacramento, CA 95691  
916.372.1434

THIS PAGE INTENTIONALLY LEFT BLANK