

DRAFT
Library/Learning Resource Center Project
(Building 100 Replacement)
Initial Study/Mitigated Negative Declaration
City of Fairfield, Solano County, California

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Report Date: January 25, 2018

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius (Centigrade)
°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
ALUC	Airport Land Use Commission
ARB	California Air Resources Board
BAAQMD	Bay Area Air Quality Management District
BIOS	Biogeographic Information and Observation System
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CEQA	California Environmental Quality Act
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
dB	decibels
dBA	A-weighted decibel scale
DPR	Department of Parks and Recreation
FEMA	Federal Emergency Management Agency
FTA	Federal Transit Administration
GIS	Geographic Information System
gpd	gallons per day
HVAC	heating, ventilation, and air conditioning
IPaC	Information, Planning and Conservation
IS/MND	Initial Study/Mitigated Negative Declaration
L _{dn}	day/night sound level
LOMC	Letter of Map Correction
LUCP	Land Use Compatibility Plan
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MLD	most likely descendant
MM	Mitigation Measure
mph	miles per hour
NAHC	Native American Heritage Commission
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetlands Inventory

Acronyms and Abbreviations

NWIC	Northwest Information Center
OSHA	Occupational Safety and Hazard Association
PPV	peak particle velocity
SCCD	Solano Community College District
SHPO	State Historic Preservation Office
sv	Sonoma Volcanics
SWPPP	Storm Water Pollution Prevention Plan
TRCs	tribal cultural resources
UCMP	University of California Museum of Paleontology
USGS	United States Geological Survey
VHFHS	Very High Fire Hazard Severity Zone
VOC	volatile organic compounds

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 Library/Learning Resource Center Building Project in the City of Fairfield, California. Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15367, Solano Community College District (SCCD) is the Lead Agency in the preparation of this IS/MND and any additional environmental documentation required for the project. The SCCD has discretionary authority over 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.

The remainder of this section provides a brief description of the project location and the characteristics of the project. Section 2 includes an environmental checklist giving an overview of the potential impacts that may result from project implementation. Section 3 elaborates on the information contained in the environmental checklist, along with justification for the responses provided in the environmental checklist.

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SECTION 2: PROJECT DESCRIPTION

2.1 - Project Location

The proposed project would be located on the Fairfield campus of the Solano Community College, at 4000 Suisun Valley Road in Solano County, within the city of Fairfield (Exhibits 1 and 2). The project replaces Building 100 on the southern interior area of the campus with new Library/Learning Resource Center in the northern interior area of the campus.

2.2 - Environmental Setting

The Fairfield campus is located in Fairfield, California along Suisun Valley Road approximately 1 mile to the north of Interstate 80 (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 because of 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 that 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.

The proposed Library/Learning Resource Center site is currently open space, with trees and walkways connecting to various campus buildings. There is a collector drain for storm runoff from this open space area on the eastern portion and other utilities are also located underground below this open space. Light poles are located along the pathway of the project site. The light poles are not of a uniform height. A group of dilapidated temporary, or “portable,” buildings sit at the north end of the site.

2.2.1 - Project Background

The 192-acre Solano Community College campus was constructed 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. This project is funded by Measure Q bond funds and State Facilities bond funds, and would implement the Fairfield Long Range Site Plan provided in the 2013 Facilities Master Plan, Book 1: The Master Plan and Guidelines (SCCD Board, approved April 2, 2014.) The current library, housed in Building 100, was constructed in 1971. The existing Library Building 100 is aged with a dysfunctional floor plan that no

longer adequately serves the College. The building has a number of issues: structural deficiencies, ADA compliance issues, health issues due to bat infestation and asbestos-containing materials, and lack of technology infrastructure to support the current teaching and learning methodologies. A portion of the library space has been converted to a Tutoring Center. Approximately 900 students use the existing Library Building each day, based on foot traffic counts conducted by the College.

2.2.2 - Project Overview

The SCCD is proposing to develop a new Library/Learning Resource Center to replace the existing library at the Solano College campus. The approximately 59,252-square-foot, two-story building would be located in the center of the campus, as shown in Exhibit 3. The new building would contain traditional library print resources, computer commons and digital resources, study rooms, tutoring center, Data Center for the institution, audio visual arts television studio, related staff offices and service areas, faculty/staff training center, some faculty offices, and support spaces. Utility upgrades and site improvements would be implemented in conjunction with the proposed project. Demolition of five portable buildings and the old library is part of this project, along with site restoration and new landscaping. The location of the new Library building would be in the center of campus, between the new Science Building, the existing Library site, and the performing arts area, as shown in the Fairfield Campus Facilities Master Plan. The construction period is expected to be approximately 24 months in duration, with a goal to open the new Library/Learning Resource Center in the fall of 2021. The two library buildings would operate at the same time for about a month after completion of the new Library/Learning Resource Center to facilitate the transition of uses between the new and the old buildings.

The project will require the demolition of the current library, Building 100, and five old portable buildings on the northern edge of the project site. The footprint of the proposed building is shown in Exhibit 4 with the area of disturbance for demolition of existing structures and replacement of landscaping and walkways shown around it.

2.2.3 - Operational Characteristics

The new building will house the same programs as those housed in the existing building, with the exception of a Graphics Reproduction function and some offices that will be relocated to other buildings on campus. Table 1 lists the space program for the new building. In addition to the new library structure, a new walkway system with lighting and landscaping will be installed on the site of the former library. Because the new building would be a two-story replacement of the existing single-story building, its footprint will be smaller and it would have less impermeable surface than the existing Library/Learning Center structure.

Table 1: Space Program

Description	Net Square Feet
Library/Learning Resource Center Service Areas and Administration	29,748
IT Center	3,296

Table 1 (cont.): Space Program

Description	Net Square Feet
Student Success/Tutoring Center	6,747
Faculty Professional Development Lab	1,385
Support Spaces	585
TV Studio Educational Program	2,678
Total Assignable Square Feet	44,439
Gross Square Feet Allowable	59,252
Notes: LLRC = Library/Learning Resource Center Building will also include corridors, lobby, restrooms, mechanical, electrical, data, custodial rooms, etc. Source: Solano Community College District, 2017	

2.2.4 - Architecture and Visual Appearance

The proposed Library/Learning Resource Center would conform to the aesthetic vision for the campus of “California Contemporary” and “California Modern,” as described in the Facilities Master Plan. The two-story building will provide a visual connection between the newer buildings on the site and continue the height of the performing arts building to the north. As described above, the footprint of the new building would be slightly smaller, so new landscaping and walkways would occupy more space on the campus, replacing the old building and the former site of the demolished portable buildings. The elevations of the new building as designed are shown in Exhibits 4 and 5.

2.2.5 - Utilities

The project would require some relocation of existing utilities throughout the site, in particular, the existing stormwater collector in the north section of the site. New connections would be provided to the College’s existing utilities systems for water, sewer, and electricity. The solar arrays on the campus parking lots provide some of the College’s power supply.

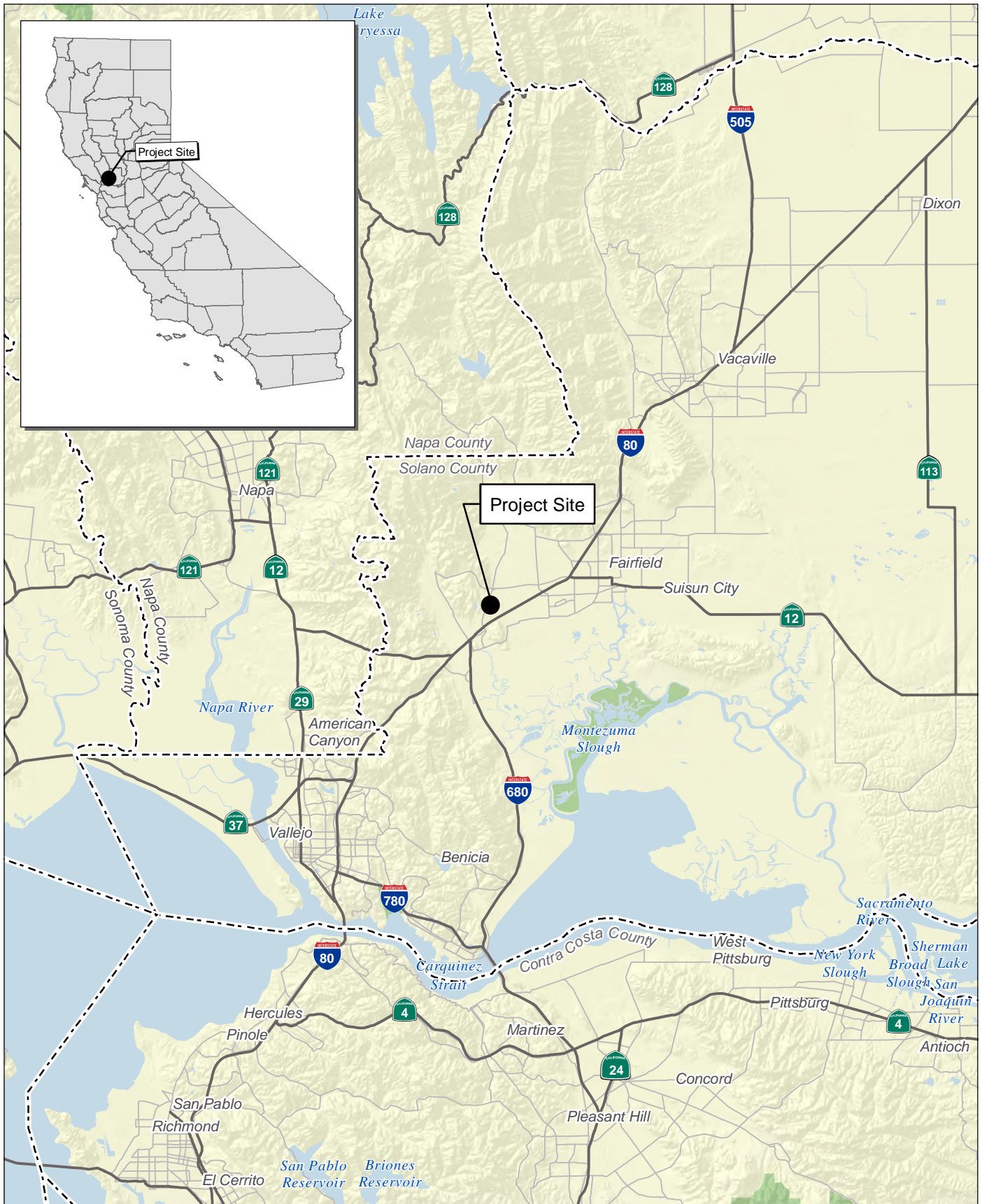
2.3 - Required Discretionary Approvals

The SCCD is not subject to local land use regulation by either Solano County or the City of Fairfield. The Fairfield Fire Department reviews plans to confirm fire access. The SCCD has its own landscaping and design standards, and master plan addressing future needs and construction on each of its campuses. Plan review and health and safety code compliance is conducted by the Division of the State Architect. The SCCD Board will approve the project and is the lead agency for CEQA.

2.4 - Intended Uses of this Document

This IS/MND has been prepared to determine the appropriate scope and level of detail required in completing the environmental analysis for the proposed project. This document will also serve as a basis for soliciting comments and input from members of the public and public agencies regarding the proposed project. The Draft IS/MND will be circulated for a minimum of 20 days, during which period comments concerning the analysis contained in the IS/MND should be sent to:

Pam Kinzie, Program Manager
Kitchell, Building 1102
Solano Community College District
4000 Suisun Valley Road
Fairfield, CA 94534
Phone: 707.863.7870
Email: pam.kinzie@solano.edu



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

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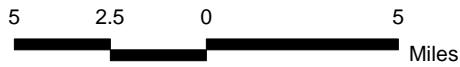
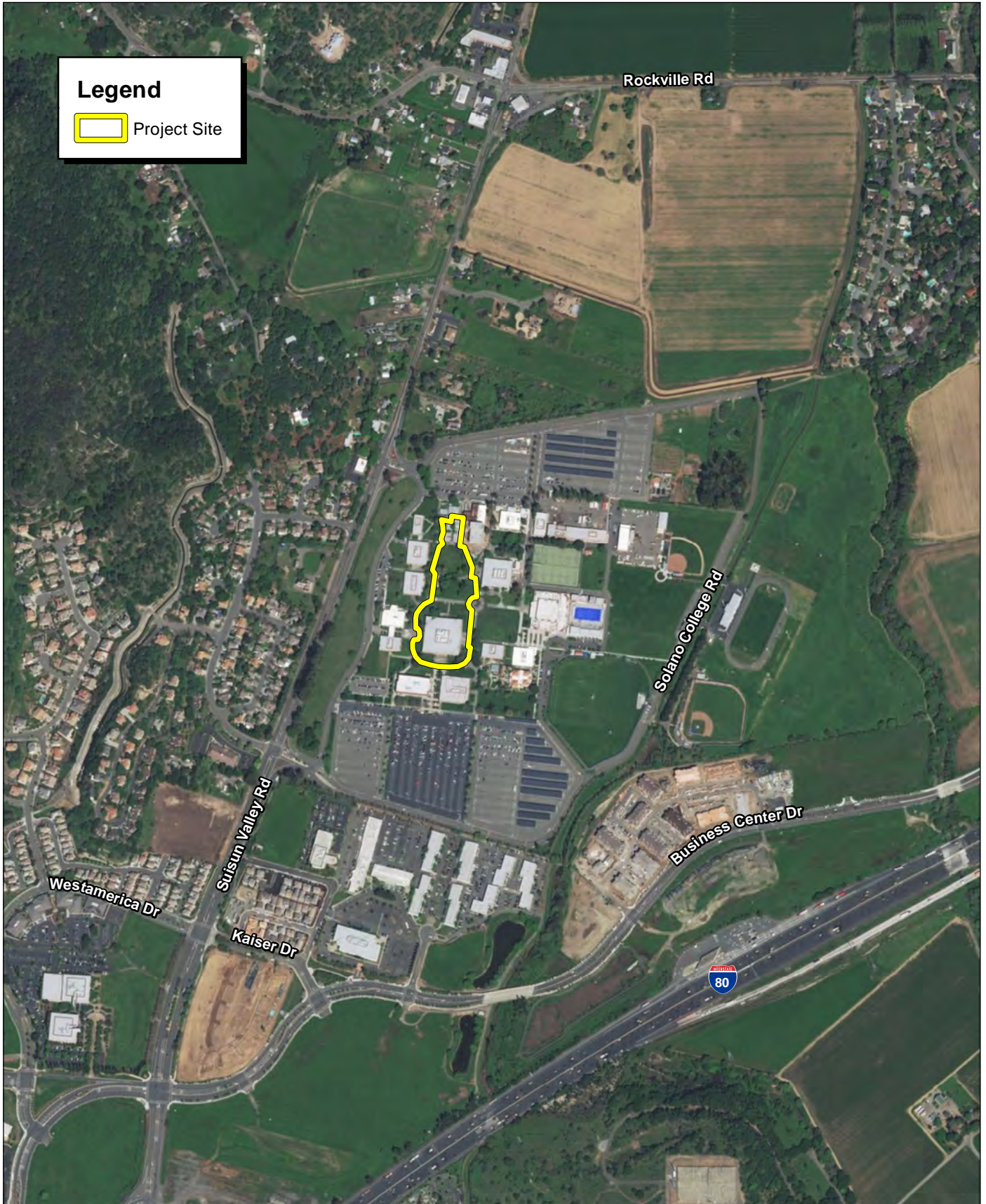


Exhibit 1 Regional Location Map

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Source: ESRI Imagery, 2014

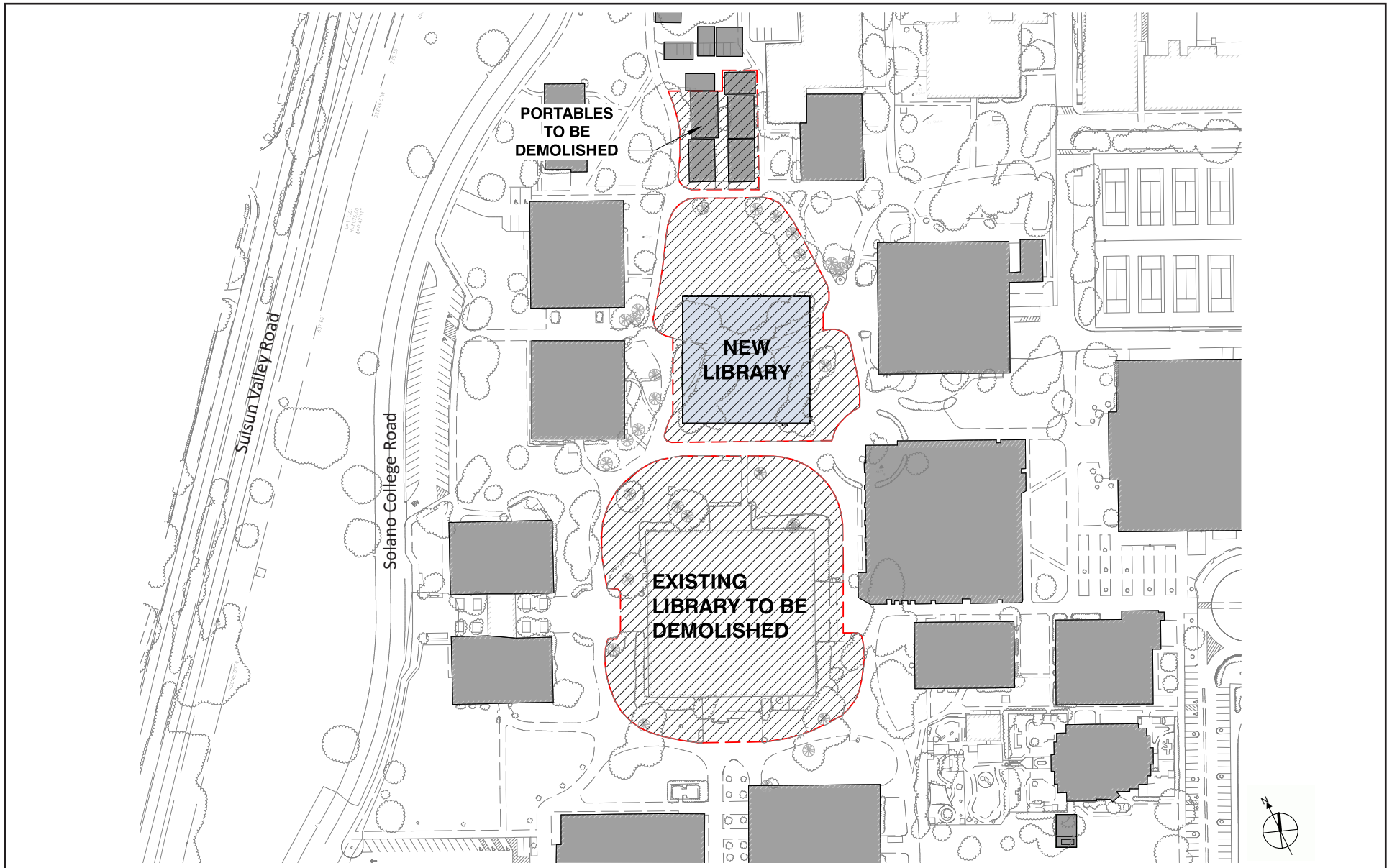
Exhibit 2

Local Vicinity Map

Aerial Base

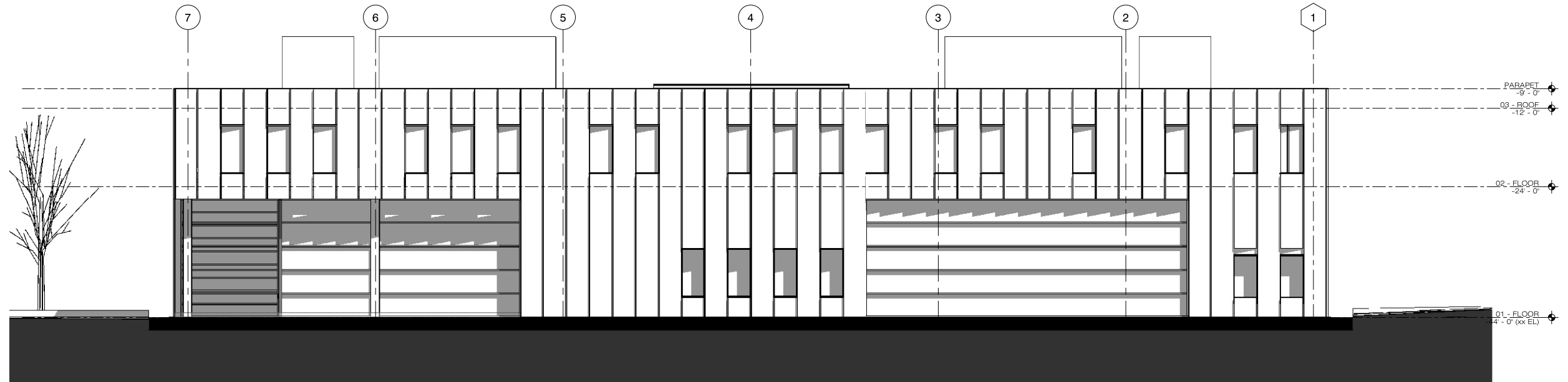


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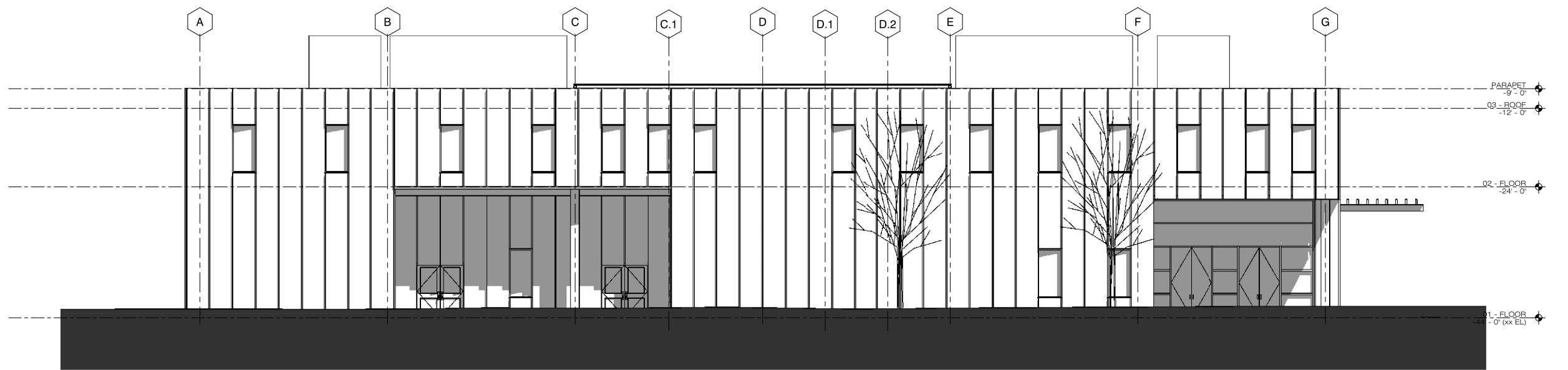


Source: Noll & Tam Architects, January 2018.

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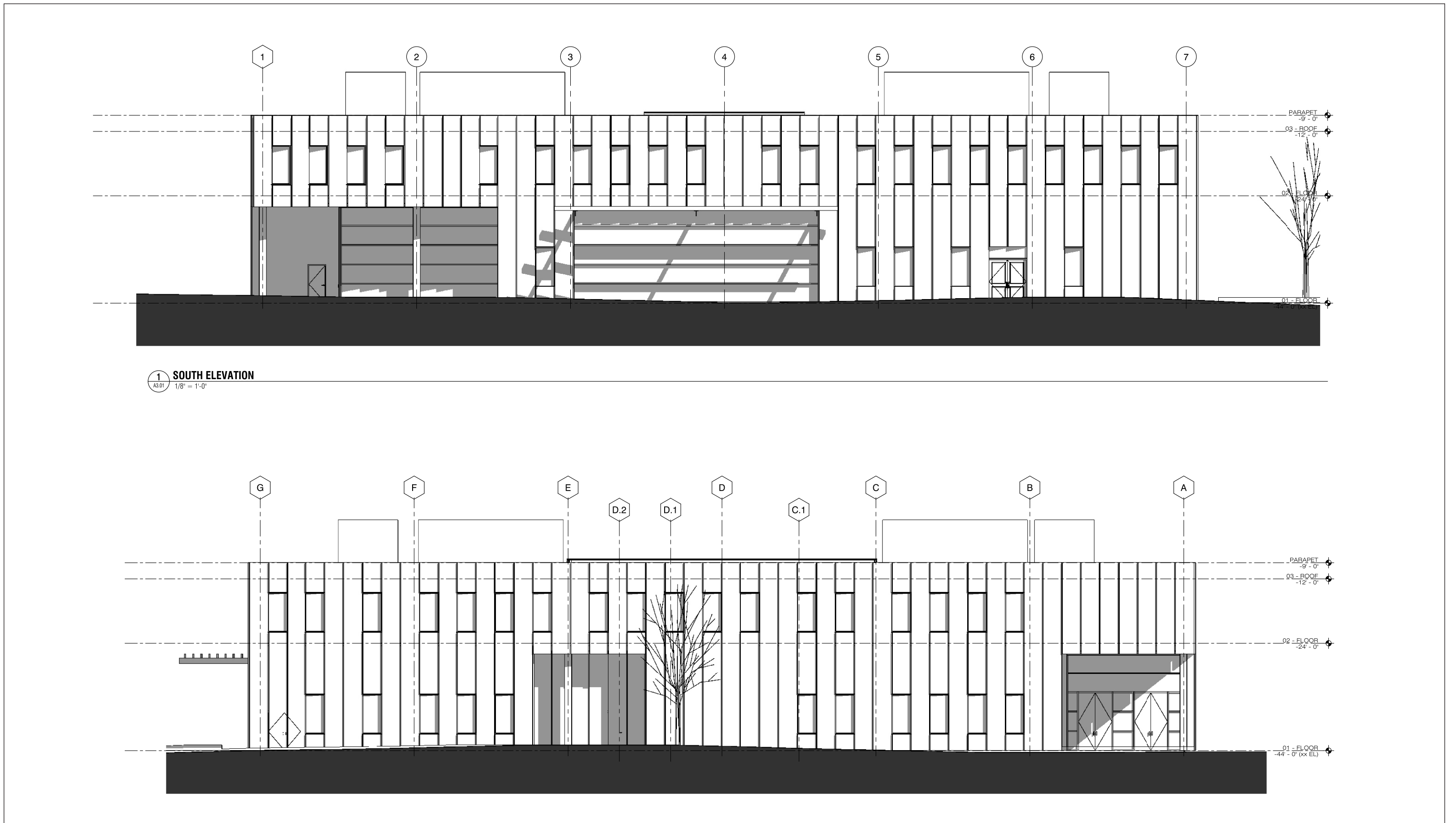
1 NORTH ELEVATION
AS.02 1/8" = 1'-0"



2 WEST ELEVATION
AS.02 1/8" = 1'-0"

Source: Noll & Tam Architects, January 2018.

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1 SOUTH ELEVATION
A3.01 1/8" = 1'-0"

Source: Noll & Tam Architects, January 2018.

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SECTION 3: CHECKLIST AND ENVIRONMENTAL EVALUATION

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 checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Cultural/Tribal 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 type="checkbox"/> Transportation/Traffic	<input type="checkbox"/> Utilities/Services Systems	<input checked="" type="checkbox"/> Mandatory Findings of Significance	

Environmental 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.

Date: 1/24/18 Signed: 

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
1. Aesthetics <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 two-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, surrounded by existing college buildings on all sides. The project building would complement the architectural style of the adjacent Theater building, the renovation of which has been completed as of 2017. New hardscaping and landscaping would also be provided and would tie into existing features within the surrounding campus. The project building would also contain traditional library print resources, computer commons and digital resources, study rooms, a tutoring center, a Data Center for the institution, an audio visual arts television studio, related staff offices and service areas, a faculty/staff training center, some faculty offices, and support spaces—consistent with the surrounding uses on the campus—and would not have unusual operational characteristics that may be potentially visually incompatible with neighboring uses. The Solano Community College District 2013 Facilities Master Plan does not call for the use of specific materials provided that the materials are environmentally friendly and should conform to the aesthetic vision for the campus of “California Contemporary” and “California Modern,” according to the Master Plan. 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 be located in a new area of the campus and 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.

Mitigation Measures

None.

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

Environmental Evaluation

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. The project site is part of the existing Solano Community College campus, which was previously graded and contains site improvements consisting of underground utilities, ornamental landscaping, and sidewalks. 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. The project site is located on the existing Solano Community College campus, which was previously graded and contains site improvements consisting underground utilities, light poles, ornamental landscaping, and sidewalks. 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. The project site is part of a larger area, which was previously graded and contains site improvements consisting of underground utilities, light poles, ornamental landscaping, signage, and sidewalks. 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.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
3. Air Quality <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.</i> <i>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

Where available, the significance criteria established or recommended by the Bay Area Air Quality Management District (BAAQMD) were used to make the following determinations. The 2017 BAAQMD thresholds of significance are shown below in Table 2. In developing thresholds of significance for air pollutions, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Project construction and operational impacts are assessed separately below. The analysis in this section is based, in part, on the California Emissions Estimator Model (CalEEMod Version 2016.3.2) analysis completed by FirstCarbon Solutions (FCS). The modeling data is provided in its entirety in Appendix A.

Table 2: Thresholds of Significance

Pollutant	Construction Thresholds Average Daily Emissions (lbs/day)	Operational Thresholds	
		Average Daily Emissions (lbs/day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀ (exhaust only)	82	82	15
PM _{2.5} (exhaust only)	54	54	10
Health Risks and Hazards for New Sources			
Excess Cancer Risk	10 per one million	10 per one million	
Chronic or 1-hour Acute Hazard Index	1.0	1.0	
Incremental annual average PM _{2.5}	0.3 µg/m ³	0.3 µg/m ³	
Notes: ROG = reactive organic gases NO _x = oxides of nitrogen PM ₁₀ = particulate matter with aerodynamic diameter less than 10 microns PM _{2.5} = particulate matter with aerodynamic diameter less than 2.5 microns Source: BAAQMD 2017.			

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 (Air Basin) is currently non-attainment for ozone (state and federal ambient standards) and particulate matter (PM_{2.5} and PM₁₀) (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 2017 Clean Air Plan (2017 CAP). The 2017 CAP is an update to the previous state ozone plan, the 2010 Clean Air Plan (2010 CAP), and builds upon well-established BAAQMD programs, including regulation and air quality monitoring. The primary goals of the 2017 CAP are to protect public health and protect the climate. As previously noted, the 2010 CAP, adopted in September 2010, is the most recent ozone plan for the Air Basin. The 2010 CAP identifies how the Air Basin would achieve compliance with the state 1-hour and 8-hour air quality standard for ozone, and how the region will reduce ozone from being transporting to other basins downwind wind of the Air Basin. The 2017 CAP updates the BAAQMD's 2010 CAP, pursuant to air quality planning requirements defined in the California Health & Safety Code.

Similar to the 2010 CAP, the 2017 CAP also 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 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 2017 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 designates 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 2017 Clean Air Plan and is consistent with Criterion 1.

Criterion 2: Applicable Control Measures of AQP

The 2017 CAP contains 85 control measures aimed at reducing air pollution in the Air Basin. Along with the traditional stationary, area, mobile source, and transportation control measures, the 2017 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 2017). The 2017 CAP also includes an account of the implementation status of control measures identified in the 2010 CAP.

None of the stationary source control measures contained in the 2017 CAP are directly applicable to the project, which is an institutional land use development that would not contain stationary sources. In addition, none of the mobile source measures or six land use and local impact measures contained in the 2017 CAP directly apply to the project. Of the transportation control measures contained in the 2017 CAP, TCM D (Support Focused Growth) measures D-1 through D-2 apply to the project. The project is part of an existing community college campus that provides pathway access to pedestrians and bicyclists.

The 2010 CAP contains Energy and Climate measures that are carried forward in the 2017 CAP. Relative to the Energy and Climate measures contained in the 2017 CAP, 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, as applied to nonresidential buildings. Specifically, the project must implement the requirements of the most recent Building Energy Efficiency Standards, which is the current version of Title 24.
- The 2016 Building Energy Efficiency Standards (which are updated on an approximately three-year cycle) went into effect on January 1, 2017, which continue to improve upon the 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. For each year of construction, in both newly constructed buildings and alterations to existing buildings, the 2013 Standards (for residential and nonresidential buildings) were expected to reduce the growth in electricity use by 555.5 gigawatt-hours per year and to reduce the growth in peak electrical demand by 148.4 megawatts on a statewide basis. The 2013 Standards were also expected to reduce the growth in natural gas use by 7.04 million therms per year beyond the prior 2008 Standards. Overall, the 2013 Standards used 30 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2008 Standards for non-residential buildings. For comparison purposes, non-residential buildings built to the 2016 standards will use about 5 percent less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards.
- **Renewable Energy.** Pacific Gas and Electric Company (PG&E) would provide electricity and natural gas service to the project site. PG&E facilities include nuclear, natural gas, and hydroelectric facilities. PG&E's 2016 power mix consisted of nuclear generation (24.0 percent), large hydroelectric facilities (12.0 percent) and renewable resources (33.0 percent), such as wind, geothermal, biomass and small hydro. The remaining portion came from natural gas (17.0 percent), and unspecified sources (14.0 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 2017 Clean Air Plan. The project would therefore be consistent with Criterion 2.

Criterion 3: Hinder or Disrupt AQP Control Measures

The project is part of an existing community college campus. The college campus contains existing pedestrian and bicycle accessible pathways connecting buildings and land uses throughout the site. 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. As such, 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_{2.5}, PM₁₀, or carbon monoxide (CO). Particulate matter emissions (both PM₁₀ and PM_{2.5}) 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 PM₁₀ and PM_{2.5} from construction dust be evaluated separately from PM₁₀ and PM_{2.5} from equipment and vehicle exhaust. Thresholds and impact assessment for exhaust PM₁₀ and PM_{2.5} 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 Mitigation 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 proposes the construction of a new library, which is intended to serve the existing community college campus. The project would demolish and replace the existing library and remove five portable buildings on-site. The project net square footage would increase by a nominal 1,002 square feet. According to the Traffic Impact Assessment prepared by KD Anderson & Associates, Inc., the project would result in a net increase of 33 daily trips over existing conditions. These vehicle trips would be dispersed throughout the local roadway network and occur at different times of the day. Therefore, considering these factors, it is highly unlikely that the nominal net increase in vehicle trips would substantially affect a local intersection and result in any new CO hotspot impacts. As such, the project would not conflict with the BAAQMD's first, second, and third screening criteria for determining the project's potential to contribute to a CO hotspot. 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, PM₁₀ and PM_{2.5}. 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, and it is based on the thresholds of significance method provided in the BAAQMD's 2017 CEQA Air Quality Guidelines.

Short-Term Construction Impacts

Construction emissions would result from on- and off-site activities. On-site emissions principally consist of exhaust emissions from the heavy-duty off-road construction equipment, on-site motor vehicle operation, and fugitive dust (mainly PM₁₀) from disturbed soil. Off-site emissions are caused by motor vehicle exhaust associated with delivery and haul truck vehicles, construction worker traffic, and road dust to a lesser degree.

Project construction-related impacts are compared with the applicable 2017 BAAQMD regional thresholds of significance below in Table 4. The CalEEMod Version 2016.3.2 land use emission model was used to estimate the Project's construction emissions. The CalEEMod model provides a consistent platform for estimating construction and operational emissions from a wide variety of land use projects and is the model recommended by the BAAQMD for estimating project emissions. Modeling for construction emissions used the default assumptions (e.g., construction equipment mix, number of on-site workers) contained in CalEEMod for the specific type of proposed land uses.

Project construction is anticipated to begin in October 2019 and last until November 2021. Construction activities would include demolition of existing structures, site preparation, grading, building construction, paving, and architectural coating. The duration of construction phases were based on information provided by the client and CalEEMod model defaults. The construction schedule and associated equipment list are provided below in Table 3 and Table 4, respectively.

Demolition activities would include demolition of five portable buildings totaling 8,643 square feet and the 49,600 square feet existing library building. The project would generate fugitive dust emissions during all construction activities. It is anticipated the project site would be balanced (would not require import/export of soil). Detailed construction parameters are provided in Appendix A.

Table 3: Construction Schedule

Phase Name	Start Date	End Date	Total Duration (workdays)
Site Preparation/Tree Removal	10/21/2019	11/04/2019	11
Grading	11/05/2019	11/19/2019	11
Demolition (Old Portable Buildings) & Revise Underground Utilities	10/21/2019	11/19/2019	22
Building Construction	11/25/2019	05/28/2021	395
Architectural Coating	05/01/2021	05/28/2021	20
Demolition (B100 Old Library)	06/28/2021	10/01/2021	70
Paving/Site Improvements (Area of B100 Demo)	10/04/2021	11/26/2021	40

Table 4: Anticipated Construction Equipment List

Construction Phase	Construction Equipment	Quantity	Operating Hours per Day
Site Preparation/Tree Removal	Rubber Tired Dozers	3	8
	Tractors/Loaders/Backhoes	4	8
Grading	Excavators	1	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Tractors/Loaders/Backhoes	3	8
Demolition (Old Portable Buildings) & Revise Underground Utilities	Concrete/Industrial Saws	1	8
	Excavators	3	8
	Rubber Tired Dozers	2	8
Building Construction	Cranes	1	7
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	7
	Welders	1	8

Table 4 (cont.): Anticipated Construction Equipment List

Construction Phase	Construction Equipment	Quantity	Operating Hours per Day
Architectural Coating	Air Compressors	1	6
Demolition (B100 Old Library)	Concrete/Industrial Saws	1	8
	Excavators	3	8
	Rubber Tired Dozers	2	8
Paving/Site Improvements/(Area of B100 Demo)	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8

Table 5 shows the project's unmitigated annual and average daily construction emissions compared with the BAAQMD significance thresholds.

Table 5: Project Construction Average Daily Emissions (Unmitigated)

Category	Pollutants (tons/yr)			
	ROG	NO _x	PM ₁₀ (Exhaust)	PM _{2.5} (Exhaust)
Site Preparation/Tree Removal—2019	0.02	0.25	0.01	0.01
Demolition (Old Portable Buildings) & Revise Underground Utilities—2019	0.04	0.40	0.02	0.02
Grading—2019	0.01	0.16	0.01	0.01
Building Construction—2019	0.03	0.30	0.02	0.02
Building Construction—2020	0.30	2.67	0.15	0.14
Building Construction—2021	0.11	0.98	0.05	0.05
Architectural Coating—2021	0.31	0.02	0.00	0.00
Demolition (B100 Old Library)—2021	0.11	1.13	0.05	0.05
Paving/Site Improvements (Area of B100 Demo)—2021	0.03	0.26	0.01	0.01
Total Annual Emissions-(2019-2021)	0.96	6.17	0.33	0.30
Category	Pollutants (lbs/day)			
Average Daily Emissions (lbs/day) ¹	3.63	23.42	1.24	1.15
Significance Thresholds (lbs/day)	54	54	82	54
Exceeds Significance Threshold?	No	No	No	No

Table 5 (cont.): Project Construction Average Daily Emissions (Unmitigated)

Category	Pollutants (lbs/day)
<p>Notes: ¹ Calculated by dividing the total pounds of emissions by the total 527 working days of construction for the duration of construction (2019–2021). Calculations use rounded totals. lbs = pounds; ROG = reactive organic gases; NO_x = oxides of nitrogen PM₁₀ = particulate matter with aerodynamic diameter less than 10 microns PM_{2.5} = particulate matter with aerodynamic diameter less than 2.5 microns Source: CalEEMod and FirstCarbon Solutions, Appendix A; BAAQMD 2017.</p>	

As shown in Table 5, project construction-related regional emissions without mitigation would not exceed the applicable BAAQMD thresholds of significance and would result in a less than significant impact during construction.

Long-Term Operational Impacts

Long-term operational emissions would result from area sources (e.g., occasional architectural coatings for repainting the buildings), energy sources (e.g., generation of electricity consumed at the project buildings), and vehicle traffic.

Project operational-related emissions are compared with the applicable BAAQMD regional thresholds of significance below in Table 6 and Table 7. As shown, project operational-related average daily emissions and annual emissions would not result in any threshold exceedances.

Table 6: Project Operational Average Daily Emissions

Source	Pollutants (lbs/day)			
	ROG	NO _x	PM ₁₀ (Exhaust)	PM _{2.5} (Exhaust)
Area	1.44	0.00	0.00	0.00
Energy	0.05	0.42	0.03	0.03
Mobile	0.00	0.00	0.00	0.00
Average Daily Emissions (lbs/day)	1.49	0.42	0.03	0.03
Significance Thresholds (lbs/day)	54	54	82	54
Exceeds Significance Threshold?	No	No	No	No
<p>Notes: Calculations use rounded totals. lbs = pounds; ROG = reactive organic gases; NO_x = oxides of nitrogen PM₁₀ = particulate matter with aerodynamic diameter less than 10 microns PM_{2.5} = particulate matter with aerodynamic diameter less than 2.5 microns Source: CalEEMod and FirstCarbon Solutions, Appendix A; BAAQMD 2017.</p>				

Table 7: Project Operational Annual Emissions

Source	Pollutants (tons/year)			
	ROG	NO _x	PM ₁₀ (Exhaust)	PM _{2.5} (Exhaust)
Area	0.26	0.00	0.00	0.00
Energy	0.01	0.08	0.01	0.01
Mobile	0.01	0.05	0.00	0.00
Total Emissions (tons/year)	0.28	0.13	0.01	0.01
Significance Thresholds tons/year)	10	10	15	10
Exceeds Significance Threshold?	No	No	No	No
Notes: Calculations use rounded totals. ROG = reactive organic gases NO _x = oxides of nitrogen PM ₁₀ = particulate matter with aerodynamic diameter less than 10 microns PM _{2.5} = particulate matter with aerodynamic diameter less than 2.5 microns Source: CalEEMod and FirstCarbon Solutions, Appendix A; BAAQMD 2017.				

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 (PM₁₀ and PM_{2.5}), 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 2017): “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 border 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. An Early Learning Center is located 168 feet south of the construction site, adjacent to Building 1500 Math Building on campus. This Early Learning Center offers programs for children from age 1 to kindergarten entry. The hours of operation are 7:45 a.m. to 4:00 p.m. The nearest off-site sensitive receptors are existing residences located to the west, across Suisun Valley Drive. These

residences are located approximately 1,000 feet from the project site. 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.

Toxic Air Contaminants—Construction

Construction activities would occur over a brief duration within the estimated 24-month construction timeline. Students and faculty would be located within the vicinity of the construction activities intermittently, with exposure near the project site being short term in duration. The students and faculty would be temporarily exposed to construction-related emissions as they are accessing classrooms and would not be exposed for a constant 24-hour duration. This brief exposure period would substantially limit exposure to hazardous emissions. Furthermore, the level of construction emissions the students and faculty would be exposed to would fluctuate as a result of varying quantities/types of equipment associated with each construction phase. The Early Learning Center is located 168 feet south of the construction site. Considering that infants and children are sensitive receptors, the project-specific health risk impacts from construction were analyzed at the Early Learning Center.

Estimation of Construction DPM Emissions

Emissions of DPM represent the TAC of greatest concern with regard to potential health risk impacts from the project. Construction DPM emissions (as PM_{2.5} exhaust) were estimated using the CalEEMod model as discussed above, as shown in Table 8. The construction DPM emissions were assumed to be distributed over the project area affected by each construction phase with a working schedule of 8 hours per day and 5 days per week.

Table 8: Project DPM Construction Emissions—Unmitigated

Year	On-site DPM (grams/m ² -sec)	Off-site DPM From Lincoln Hwy through Solano College Rd to project (grams/sec)
Annual Construction Emissions (No Mitigation)		
2019	6.58E-06	3.75E-06
2020	4.04E-06	5.06E-06
2021	3.61E-06	1.53E-06

Source: CalEEMod and FirstCarbon Solutions; see Appendix A.

Estimation of Cancer Risks

The BAAQMD has developed a set of guidelines for estimating cancer risks that provide adjustment factors that emphasize the increased sensitivities and susceptibility of young children to exposures

to TACs.¹ These adjustment factors include age-sensitivity weighting factors, age-specific daily breathing rates, and age-specific time-at-home factors. The recommended method for the estimation of cancer risk is shown in the equations below with the cancer risk adjustment factors provided in Table 9 for several types of sensitive/residential receptors (infant, and child).

$$\text{Cancer Risk} = C_{\text{DPM}} \times \text{Inhalation Exposure Factor} \quad (\text{EQ-1})$$

Where:

Cancer Risk = Total individual excess cancer risk defined as the cancer risk a hypothetical individual faces if exposed to carcinogenic emissions from a particular source for specified exposure durations; this risk is defined as an excess risk because it is above and beyond the background cancer risk to the population; cancer risk is expressed in terms of risk per million exposed individuals.

C_{DPM} = Period average DPM air concentration calculated from the air dispersion model in $\mu\text{g}/\text{m}^3$

Inhalation is the most important exposure pathway to impact human health from DPM and the inhalation exposure factor is defined as follows:

$$\text{Inhalation Exposure Factor} = \text{CPF} \times \text{EF} \times \text{ED} \times \text{DBR} \times \text{AAF}/\text{AT} \quad (\text{EQ-2})$$

Where:

CPF = Inhalation cancer potency factor for the TAC: $1.1 \text{ (mg/kg-day)}^{-1}$ for DPM

EF = Exposure frequency (days/year)

ED = Exposure duration (years of construction)

AAF = set of age-specific adjustment factors that include age sensitivity factors (ASF), daily breathing rates (DBR), and time at home factors (TAH)—see Table 9.

AT = Averaging time period over which exposure is averaged (days)

The Office of Environmental Health Hazards Assessment (OEHHA)-recommended values for the various cancer risk parameters shown in EQ 2, above, are provided in Table 9.

Table 9: Exposure Assumptions for Cancer Risk

Receptor Type	Exposure Frequency		Exposure Duration (years)	Age Sensitivity Factors	Time at Home Factor (%) ⁽²⁾	Daily Breathing Rate ⁽³⁾ (l/kg-day)
	Hours/day	Days/year ⁽¹⁾				
Sensitive/Residential—Infant						
3 rd Trimester	24	270	0.25	10	34	361

¹ BAAQMD. 2016. Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines. Website: http://www.baaqmd.gov/~media/files/planning-and-research/rules-and-regs/workshops/2016/reg-2-5/hra-guidelines_clean_jan_2016-pdf.pdf?la=en.

Table 9 (cont.): Exposure Assumptions for Cancer Risk

Receptor Type	Exposure Frequency		Exposure Duration (years)	Age Sensitivity Factors	Time at Home Factor (%) ⁽²⁾	Daily Breathing Rate ⁽³⁾ (l/kg-day)
	Hours/day	Days/year ⁽¹⁾				
0–2 years	24	270	2	10	34	1,090
Sensitive Receptor—Child						
3–16 years	24	270	3	3	34	572
<p>Notes:</p> <p>⁽¹⁾ The Child Care Center operates 5 days a week, therefore, the maximum annual operation days are 270 days. For year 2019 and 2021, the total construction days are 65 and 245 days respectively. The exposure days for 2019 and 2021 are consistent with the construction days.</p> <p>⁽²⁾ The Child Care Center operates 8 hours per day (34% of total hours per day), therefore, the time at home factor has been revised to 34%.</p> <p>⁽³⁾ The daily breathing rates recommended by the BAAQMD for sensitive/residential receptors assume the 95th percentile breathing rates for all individuals less than 2 years of age and 80th percentile breathing rates for all older individuals.</p> <p>(l/kg-day) = liters per kilogram body weight per day</p> <p>Source: BAAQMD 2016. Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines. Website: http://www.baaqmd.gov/~/media/files/planning-and-research/rules-and-regs/workshops/2016/reg-2-5/hra-guidelines_clean_jan_2016-pdf.pdf?la=en</p>						

Estimation of Non-Cancer Hazards

An evaluation of the potential non-cancer effects of chronic chemical exposures was also conducted. Adverse health effects are evaluated by comparing the annual receptor concentration of each chemical compound with the appropriate reference exposure limit (REL). Available RELs promulgated by the OEHHA were considered in the assessment.

Risk characterization for non-cancer health hazards from TACs is expressed as a hazard index (HI). The HI is a ratio of the predicted concentration of the project’s emissions to a concentration considered acceptable to public health professionals, termed the REL.

To quantify non-carcinogenic impacts, the hazard index approach was used.

$$HI = C_{ann}/REL \quad (EQ-3)$$

Where:

HI = chronic hazard index

C_{ann} = annual average concentration of TAC as derived from the air dispersion model (µg/m³)

REL = reference exposure level above which a significant impact is assumed to occur (µg/m³)

The hazard index assumes that chronic exposures to TACs adversely affect a specific organ or organ system (toxicological endpoint) of the body. For each discrete chemical exposure, target organs presented in regulatory guidance were used. To calculate the hazard index, each chemical

concentration or dose is divided by the appropriate toxicity REL. For compounds affecting the same toxicological endpoint, this ratio is summed. Where the total equals or exceeds 1, a health hazard is presumed to exist. For purposes of this assessment, the TAC of concern is DPM, for which the OEHHA has defined a REL for DPM of 5 µg/m³. The principal toxicological endpoint assumed in this assessment was through inhalation.

The estimated health and hazard impacts at the Child Care Center (Early Learning Center) from project’s construction emissions prior to mitigation measures are provided in Table 10.

Table 10: Estimated Health Risks and Hazards from Construction Emissions—Unmitigated

Health Impact Metric	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index ⁽²⁾	Annual PM _{2.5} Concentration (µg/m ³)
Risks and Hazards at the Child Care Center: Infant ⁽¹⁾	9.1	0.05	0.2
Risks and Hazards at the Child Care Center: Child ⁽¹⁾	2.1	0.05	0.2
BAAQMD Significance Threshold	10.0	1.0	0.3
Exceeds Individual Source Threshold?	No	No	No
Notes: ¹ The Child Care Center is located approximately 168 feet south of the project adjacent to Building 1500. ² Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as PM _{2.5} exhaust) by the REL of 5 µg/m ³ . Source: CalEEMod and FirstCarbon Solutions; see Appendix A.			

As shown above, the cancer risks, non-cancer hazard index and PM_{2.5} impacts at the Child Care Center would not exceed the BAAQMD’s recommended thresholds of significance, and the project’s construction would not result in significant health impacts prior to mitigation measures. Therefore, the project would result in a less than significant impact from health risks associated with construction 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—Operation

When siting a new receptor, the existing or future proposed sources of TACs and/or PM_{2.5} 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_{2.5} 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 Library/Learning Resource Center that would replace the existing Library/Learning Resource Center within the current campus boundaries of the Fairfield campus of the Solano Community College District; therefore, operational activities of the project are 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 and the potential for 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.

Asbestos

Asbestos fibers can be emitted when construction and demolition activities disturb naturally occurring asbestos deposits or when asbestos containing building materials are removed during demolition of older buildings. 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.

The project would be required to comply with BAAQMD's Regulation 11 Rule 2 for Asbestos demolition, renovation, and manufacturing that would reduce the potential to emit asbestos during demolition of the existing structures. Asbestos-containing materials are known to occur in the existing library.

Fugitive Dust

Fugitive dust emissions from grading, trenching, or land clearing activities can create nuisances and localized health impacts. As addressed in Impact 3b) above, 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.

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

Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The project does not contain land uses typically associated with emitting objectionable odors. During operation of the project, odors would primarily consist of vehicles traveling to the site. These occurrences would not produce significant odors; therefore, operational impacts would be less than significant.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
4. Biological Resources <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

An FCS biologist researched readily available information, including relevant literature, databases, agency websites, various previously completed reports and management plans, Geographic Information System (GIS) data, maps, aerial imagery from public domain sources, and in-house records to (1) assess habitats, special-status plant and wildlife species, jurisdictional waters, critical habitats, and wildlife corridors that may occur in and near the project site, and (2) identify local or regional plans, policies, and regulations that may apply to the project. Plant and wildlife species protected by

federal agencies, state agencies, and nonprofit resource organizations, such as the California Native Plant Society (CNPS), are collectively referred to as “special-status species” in this report. Some of these plant and wildlife species are afforded special legal or management protection because they are limited in population size, and typically have a limited geographic range and/or habitat. The following data sources were accessed and can be found in Appendix B.

- United States Geological Survey (USGS) 7.5-Minute Topographic Map *Fairfield South* Quadrangle and current aerial imagery.
- California Natural Diversity Database (CNDDDB) provided by the California Department of Fish and Wildlife (CDFW) (CDFW, 2017c).
- Information, Planning and Conservation (IPaC) provided by the United States Fish and Wildlife Service (USFWS) (USFWS, 2017b).
- Inventory of Rare and Endangered Plants of California provided by the CNPS (CNPS, 2017).
- National Wetlands Inventory (NWI) and Wetlands Mapper provided by the USFWS (USFWS, 2017c).
- Biogeographic Information and Observation System (BIOS) provided by CDFW (CDFW 2017a and 2017b).
- Critical Habitat Portal provided by the USFWS (USFWS, 2017a).

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 is developed, but it supports landscaped/ornamental trees and/or structures that could potentially provide cover, foraging, and nesting habitat for resident and migratory birds that have adapted to urban areas, such as rock pigeons (*Columba livia*) and mourning doves (*Zenaida macroura*). Mourning doves are protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (Sections 3503, 3503.5, and 3513), which render it unlawful to take native breeding birds, and their nests, eggs, and young. The project has the potential to result in direct impacts to nesting birds if project activities occur during the breeding season and birds are nesting within the project site and/or immediate vicinity. Temporary direct impacts on nesting birds may occur from increased noise, vibration, and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment. As such, impacts on nesting birds would be considered significant. Accordingly, MM 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 less than significant level.

The demolition of the old library and portable buildings may have potential impacts to special-status resident bat populations. Implementation of Mitigation Measures BIO-2 and BIO-3 would help to avoid, eliminate, or reduce direct impacts to resident bats. With the implementation of mitigation, impacts to protected bat species would be reduced to a less than significant level.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, 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. The project site is developed and does not support aquatic features, natural or man-made water bodies, wetlands, or jurisdictional areas; therefore, the project is not anticipated to have direct or indirect impacts on federally protected wetlands as defined by section 404 of the Clean Water Act. 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 SCCD is exempt from compliance with the City of Fairfield Municipal Code, including Section 25.36, Tree Conservation. However, the SCCD 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.

Mitigation Measures

MM BIO-1 Pre-construction surveys for nesting birds and roosting bats

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).

If suitable roosting habitat for special-status bats will be affected by project construction (e.g., removal of buildings, modification of bridges), a qualified wildlife biologist shall conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (Anabat, etc.). Visual surveys will include trees within 0.25 mile of project construction activities.

MM BIO-2 Avoid and minimize loss of bat species

Not more than two weeks prior to building demolition, the City shall ensure that a qualified biologist (i.e., one familiar with the identification of bats and signs of bats) survey buildings proposed for demolition for the presence of roosting bats or evidence of bats. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (Anabat, etc.). If no roosting bats or evidence of bats are found in the structure, demolition may proceed. If the biologist determines or presumes bats are present, the biologist shall exclude the bats from suitable spaces by installing one-way exclusion devices. After the bats vacate the

space, the biologist shall close off the space to prevent recolonization. Building demolition shall only commence after the biologist verifies seven to 10 days later that the exclusion methods have successfully prevented bats from returning. To avoid impacts on non-volant (i.e., non-flying) bats, the biologist shall only conduct bat exclusion and eviction from May 1 through October 1. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young).

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
5. Cultural and Tribal Cultural Resources				
<i>Would the project:</i>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §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 resource pursuant to §15064.5?	<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"/>
<i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</i>				
e) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<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, archaeological, paleontological, and tribal cultural resources that could be affected by the proposed project. It presents the methods employed to identify historical resources, assesses impacts to those resources, and presents mitigation measures to address significant impacts. This section draws partially on the research and findings of a cultural resources assessment conducted by FCS for the immediately adjacent SCC Science Building Project in 2015. The following updated and additional tasks were conducted to complete this section:

- Updated Records Search and Literature Review
- Initiate Notification/Consultation with Tribal Representatives
- Pedestrian Survey

Northwest Information Center

FCS conducted a records search at the Northwest Information Center (NWIC) in Rohnert Park on October 15, 2015 and an updated records search on November 13, 2017 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 Solano 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 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 are 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 mile 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 miles to the south-southeast, and it too yielded a horse, *Equus occidentalis* (*Blancan fauna*), and dozens of isolated bone fragments identified only as mammalian.

Notification/Consultation with California Native American Tribal Representatives

On October 15, 2015, FCS sent a request to the Native American Heritage Commission (NAHC) to review its Sacred Lands file and provide a list of Native American Representatives who may be interested in consulting on the SCC Science Building Project immediately adjacent to the project area. On October 29, 2015, a response was received from the NAHC indicating that no Tribal Cultural Resources were listed in its Sacred Lands File as being present in the in project area. The letter included a list of two Native American representatives who may have additional information or

interest in consultation. Letters informing these representatives of the project details and inviting them to consult were sent by the SCCD 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 area, and the desire to consult pursuant to Assembly Bill (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 were agreed upon and incorporated into the mitigation measures for the SCC Science Building Project. On December 15, 2017, letters containing project information and an invitation to consult on the current SCC Library Project were sent to both tribal representatives. No responses have been received to date; however, all agreed upon mitigation for the adjacent Science Building Project have been incorporated into Mitigation Measure CUL-1 for the Library project. Copies of all tribal correspondence can be found in Appendix A: Cultural Resources.

Pedestrian Survey

FCS Professional Archaeologist Dana DePietro, PhD surveyed the proposed project area on December 4, 2017. The entire area was covered using 10-meter east-west transects to insure complete coverage. The project area is a rectangular, approximately 200 x 250 feet in size, and is bordered on all sides by paved pathways and college buildings. While the majority of the project area is covered in sod that limits surface visibility (less than 10 percent), sections worn down by pedestrian traffic provided 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 or obsidian, were not observed. The project area appears to have been highly disturbed by grading, irrigation, and construction activities.

Dr. DePietro also previously attempted to identify two 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 0.5 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 College campus, however, and the pedestrian survey showed that all six will be unaffected by the proposed Library/Learning Resource Center Building Project. 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 unlikely, subsurface construction activities always have the potential to damage or destroy previously undiscovered historic 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. Accordingly, implementation of Mitigation Measure 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 resource pursuant to §15064.5?

Less than significant impact with mitigation incorporated. While no archaeological resources were recorded within the project area or observed during the pedestrian survey, the records search results show that six prehistoric archaeological resources lie within a 0.5-mile radius of the building footprint. Three of these six resources are located within 1,000 feet of the building footprint, and the others range from 1,200 to 2,600 feet away from the project footprint. Of the three archaeological sites located within 1,000 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-foot-diameter) scattering of lithic debitage and artifacts, including handstones, projectile points and so-called “charmstones.” Jackmond also recorded a 3-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. 6,

was located immediate southwest of the proposed project area. The trench was roughly 4 meters long by 0.70 meter wide, and dug to a maximum depth of 1.4 meters. 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. Trench "T" was located along the entire western edge of the project area, and was dug to a maximum depth of 1.3 meters. 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 prehistoric resources. 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 CUL-1 will be required to reduce potential impacts to archaeological 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.

Tribal Cultural Resources

Public Resources Code Sections 21080.3.1 and 21080.3.2 (also known as AB 52) establishes a category of resources in CEQA called "Tribal Cultural Resources" (TCRs) 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 CEQA 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.

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

e) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)

Less than significant impact. A review of the California Register of Historical Resources, local registers of historic resources, a records search conducted at the NWIC, and an NAHC Sacred Lands file search failed to identify any listed TCRs that may be adversely affected by the proposed project. As such, no known eligible or potentially eligible TCRs will be adversely affected by the proposed project.

- f) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.**

Less than significant impact with mitigation incorporated. AB 52 consultation for the adjacent SCC Library Project took place 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 and potential to impact undiscovered TCRs, 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 and were incorporated into the mitigation measures for the SCC Science Building Project. On December 15, 2017, letters containing project information and an invitation to consult on the current SCC Library Project were sent to both tribal representatives. No responses have been received to date; however, all previously agreed upon mitigation for the adjacent Science Building Project has been incorporated into Mitigation Measure CUL-1. As this mitigation addresses the same potential resources identified by the tribe and taken into consideration by the lead agency, its implementation would reduce potential impacts to a less than significant level.

Mitigation Measures

MM CUL-1 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, and Public Resources Code Sections 5097.94 and 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
6. Geology and Soils <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 Evaluation and Geologic Hazard Assessment prepared by Ninyo & Moore Geotechnical and Environmental Sciences Consultants 2017, which is provided in Appendix D.

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 Geotechnical Hazard Assessment 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 Hazard Assessment 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 SCCD to retain a qualified geotechnical consulting firm to prepare a design-level geotechnical report for the Library/Learning Resource Center that complies with the latest adopted edition of the California Building Standards Code, and to incorporate all applicable recommendations into the project plans. With the implementation of mitigation, impacts would be reduced to a level of less than significant.

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

Less than significant impact. According to geotechnical analysis for the project (Ninyo & Moore 2017), thin layers of sandy soil, which would liquefy during ground motion, were found beneath the project site. The potential for liquefaction of the soils beneath the site is low to moderate if the site experiences significant ground shaking during an earthquake.

The Library/Learning Resource Center 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 for the Fairfield South, California Quadrangle (USGS 1980) indicates the surface elevation at the site is

approximately 40 feet above mean sea level. 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 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 fill, up to about 2 feet, consisted of dry to moist, firm to stiff lean clay. Sand layers at the depth of about 17 to 19.5 feet consisted of wet, medium dense, clayey sand with trace amounts of gravel. The results of the liquefaction analysis indicate a factor of safety against liquefaction below 1.3 or less. A factor of safety below 1.3 requires a liquefaction-induced settlement analysis, which was performed. No liquefiable layers of significant continuity were found; thus, the site is not considered to be in an area of lateral spreading. Standard geotechnical engineering and design following the recommendations of the Geotechnical Investigation and the design-level engineering provided by Mitigation Measure GEO-1 would 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 Hazard Assessment (Ninyo and Moore, 2017) 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.

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 Library/Learning Resource Center. The design-level report shall be prepared in accordance with the latest adopted edition of the California Building Code Standards, and it shall 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.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
7. Greenhouse Gas Emissions <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.

The Project is located within the City of Fairfield in Sonoma County, where air quality is regulated by the Bay Area Air Quality Management District (BAAQMD). Therefore, where available, the significance criteria established or recommended by the BAAQMD were used to make the following determinations for construction-related and operational-related greenhouse gas (GHG) emissions. The applicable BAAQMD GHG thresholds of significance is shown below in Table 11.

Table 11: BAAQMD GHG Thresholds of Significance

Pollutant	Thresholds	
	Construction	Operational
GHGs—Projects other than Stationary Sources	None	Compliance with Qualified GHG Reduction Strategy OR 1,100 MT of CO ₂ e/yr OR 4.6 MT CO ₂ e/SP/yr (residents + employees)
GHGs—Stationary Sources	None	10,000 MT/yr

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 project operations. The BAAQMD has not developed a specific construction GHG threshold; however, some agencies, including the Sacramento Metropolitan Air Quality Management District (SMAQMD), have adopted 1,100 metric tons of carbon dioxide equivalent (MT CO₂e) per year as a threshold for construction-related GHG emissions.² For the purposes of this analysis, the SMAQMD construction threshold is used to evaluate the Project’s construction-related emissions. 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 GHG reduction goals. The lead agency is also encouraged to incorporate BMPs to reduce GHG emissions during project construction, as feasible and applicable.

The analysis in this section is based, in part, on the California Emissions Estimator Model (CalEEMod Version 2016.3.2) analysis completed by FirstCarbon Solutions (FCS). The modeling data is provided in its entirety in Appendix A.

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. Therefore, construction emissions are compared to the SMAQMD 1,100 MT CO₂e GHG threshold in Table 12.

Table 12: Construction Greenhouse Gas Emissions

Construction Phase	MT CO ₂ e/year
Site Preparation/Tree Removal—2019	20
Demolition (Old Portable Buildings) & Revise Underground Utilities—2019	41
Grading—2019	15
Building Construction—2019	38
Building Construction—2020	365
Building Construction—2021	147
Architectural Coating—2021	3
Demolition (B100 Old Library)—2021	132

² Sacramento Metropolitan Air Quality Management District (SMAQMD). 2015. SMAQMD Thresholds of Significance Table. Website: <http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable5-2015.pdf>. Accessed November 2, 2016.

Table 12 (cont.): Construction Greenhouse Gas Emissions

Construction Phase	MT CO ₂ e/year
Paving/Site Improvements (Area of B100 Demo)—2021	42
Total Construction Emissions	803
Construction Thresholds¹	1,100
Exceed Threshold?	No
Notes: MT CO ₂ e = metric tons of carbon dioxide equivalent ¹ Construction-related threshold was obtained from SMAQMD’s CEQA Guidelines. Source: CalEEMod and FirstCarbon Solutions; see Appendix A, SMAQMD 2015.	

As shown, project construction-related GHG emissions would not exceed the applicable 1,100 MT CO₂e construction GHG thresholds. Therefore, a less than significant impact would occur.

Operation

The BAAQMD’s 2017 Air Quality Guidelines provide screening criteria developed for greenhouse gases emissions assessment. As shown in Table 13, the project’s proposed land use is more than the BAAQMD’s applicable screening size for operational greenhouse gas emissions. Therefore, a detailed estimates were made of the project’s greenhouse gas emissions during operations.

Table 13: Operational Greenhouse Gas Screening

Land Use Type	Construction-Related Screening Size	Project Size	Project Percent of Screening Size
Library	15 ksf	59.252 ksf	1.21 %
Note: ksf = thousand square feet Source of BAAQMD’s Screening Threshold: Bay Area Air Quality Management District 2017.			

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 MTCO₂e annually, or
- 4.6 MTCO₂e/Service Population/Year

The project’s operational GHG emissions are compared to the applicable BAAQMD GHG thresholds are in Table 14. As shown therein, the project’s annual emissions are estimated to be 316 MTCO₂e,

which is less than the BAAQMD’s threshold of 1,100 MTCO₂e. Therefore, impacts associated with operational greenhouse gas emissions would be less than significant.

Table 14: Greenhouse Gas Operational Emissions

Source	Annual Emissions (MT CO ₂ e)
Area	0
Energy	227
Mobile	27
Waste	27
Water	8
Amortized Construction ¹	27
Total Operational Emissions	316
Operational Thresholds²	1,100
Exceed Threshold?	No
Notes: MT CO ₂ e = metric tons of carbon dioxide equivalent ¹ Construction emissions amortized by 30 years; Based on South Coast Air Quality Management District CEQA Guidelines ² Operational-related threshold was obtained from BAAQMD’s CEQA Guidelines. Source: CalEEMod and FirstCarbon Solutions; see Appendix A, BAAQMD 2017.	

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.

AB 32 Scoping Plan

The ARB’s adopted AB 32 Scoping Plan (Scoping Plan) states, “The 2020 goal was established to be an aggressive, but achievable, mid-term target, and the 2050 GHG emissions reduction goal represents the level scientists believe is necessary to reach levels that would stabilize climate” (ARB 2008a). The year 2020 GHG emission reduction goal of AB 32 corresponds with the mid-term target established by Executive Order S-3-05, which aims to reduce California’s fair-share contribution of GHGs in 2050 to levels that would stabilize the climate.

The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As shown in Table 15, the project is consistent with the applicable strategies and would not conflict with the recommendations of AB 32 in achieving a statewide reduction in greenhouse emissions. The impact would be less than significant.

Table 15: Consistency with Scoping Plan Reduction Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
Transportation	California Cap-and-Trade Program Linked to Western Climate Initiative	Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanism October 20, 2015 (CCR 95800)	Not Applicable Cap and Trade does not apply directly to projects, but the motor vehicle fuels used by project customers and electricity used by project buildings are subject to Cap and Trade. The cost of products or services (such as electricity) subject to Cap and Trade offset requirements would be transferred to the consumers and end users by the regulated entities.
	California Light-Duty Vehicle Greenhouse Gas Standards.	Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles	Not Applicable. This is a statewide measure that cannot be implemented by a project applicant or lead agency. However, the standards would be applicable to the light-duty vehicles that would access the project site.
		2012 LEV III Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards	
	Low Carbon Fuel Standard.	2009 readopted in 2015. Regulations to Achieve Greenhouse Gas Emission Reductions Subarticle 7. Low Carbon Fuel Standard CCR 95480	Consistent. This measure applies to transportation fuels utilized by vehicles in California. The project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the project would utilize low carbon transportation fuels as required under this measure.
	Regional Transportation-Related Greenhouse Gas Targets.	SB 375. Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28	Consistent. The project would provide services to support growth in the region that are consistent with the 2016 Regional Transportation Plan/Sustainable Communities Strategy (SCS). The project is not within a SCS priority area and so is not subject to requirements applicable to those areas.
Vehicle Efficiency Measures	2009 ARB Regulation for under Inflated Vehicle Tires	Consistent. The standards would be applicable to the light-duty vehicles that would access the project site.	

Table 15 (cont.): Consistency with Scoping Plan Reduction Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
	Goods Movement	Goods Movement Action Plan January 2007.	Not applicable. The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
	Medium/Heavy-Duty Vehicles	2010 Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer Greenhouse Gas Regulation	Consistent. This measure applies to medium and heavy-duty vehicles that operate in the State. The project would not conflict with implementation of this measure. Medium- and heavy-duty vehicles associated with construction and operation of the project would be required to comply with the requirements of this regulation.
	High Speed Rail	Funded under SB 862	Not applicable. This is a statewide measure that cannot be implemented by a project applicant or lead agency.
Electricity and Natural Gas	Energy Efficiency	CEC Title 20 Appliance Efficiency Regulation	Consistent. The project would not conflict with implementation of this measure. The project will comply with the latest energy efficiency standards.
		Title 24 Part 6 Energy Efficiency Standards for Residential and Non-Residential Building	
		Title 24 Part 11 California Green Building Code Standards	
	Renewable Portfolio Standard/Renewable Electricity Standard.	2010 Regulation to Implement the Renewable Electricity Standard (33% 2020) SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2030)	Consistent. Pacific Gas and Electric will be required to obtain 33 percent of its power supply from renewable sources by 2020. The project would not conflict with implementation of this measure. Electricity purchased for the project will be purchased through PG&E, which is required to comply with the appropriate renewable energy content.
Million Solar Roofs Program.	Tax incentive program	Consistent. This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. The College currently produces an average of 150 MWh from a photovoltaic array, which is used by the campus.	

Table 15 (cont.): Consistency with Scoping Plan Reduction Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
Water	Water	Title 24 Part 11 California Green Building Code Standards	Consistent. The project would comply with Green Building Code regulations and would implement required water conservation features.
		SBX 7-7—The Water Conservation Act of 2009	
		Model Water Efficient Landscape Ordinance (MWEL0)	
Green Building	Green Building Strategy	Title 24 Part 11 California Green Building Code Standards	Consistent. Under this strategy, the State is to increase the use of green building practices. The project would implement required green building strategies through compliance with the CalGreen code.
Industry	Industrial Emissions	2010 ARB Mandatory Reporting Regulation	Not Applicable. The majority of the regulations pertain to oil and gas facilities, and materials extraction, which is not applicable to the project. The project is not considered to be a large emitter of GHGs (more than 0.5 MMT CO ₂ e).
Recycling and Waste Management	Recycling and Waste	Title 24 Part 11 California Green Building Code Standards	Consistent. The project would not conflict with implementation of these measures. The project is required to achieve the recycling mandates via mandatory compliance with the CALGreen code.
		CalRecycle Mandatory Commercial Recycling	
		Mandatory Commercial Organics Recycling	
		AB 341 Statewide 75 Percent Goal	
Forests	Sustainable Forests	Cap and Trade Offset Projects	Not applicable. The project site is in an area designated for urban uses and would not be a candidate as a Cap and Trade Forestry Offset project.

Table 15 (cont.): Consistency with Scoping Plan Reduction Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
High Global Warming Potential	High Global Warming Potential Gases	ARB Refrigerant Management Program CCR 95380	Consistent. CARB's Refrigerant Management Program applies to refrigeration systems with 50 pounds or more of refrigerants. If the project installs air conditioning and refrigerators requiring this amount of refrigerants, the project will be required to comply with refrigerant management regulations, such as registering through the Refrigerant Registration and Reporting (R3) Tool.
Agriculture	Agriculture	Cap and Trade Offset Projects for Livestock and Rice Cultivation	Not applicable. The project site is designated for urban development. No grazing, feedlot, or other agricultural activities that generate manure occur currently exist on-site or are proposed to be implemented by the project.
Source of ARB Scoping Plan Reduction Measure: California Air Resources Board 2008. Source of Project Consistency or Applicability: FirstCarbon Solutions.			

In summary, the project incorporates a number of features that would minimize GHG emissions. These features are consistent with project-level strategies identified by the ARB's Scoping Plan and the BAAQMD GHG emission guidelines. The project promotes the goals of the Scoping Plan through implementation of design measures that reduce energy consumption, water consumption, and reduction in vehicle miles traveled. Therefore, the project does not conflict with any plans to reduce GHG 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
8. Hazards and Hazardous Materials <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 checked="" type="checkbox"/>	<input 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 59,252-square-foot Library/Learning Resource Center and associated site improvements on the project site, including the demolition of the old Library building and portable buildings. Construction of the project would involve limited amounts of hazardous materials (such as diesel fuels for equipment, solvents, cleaners, and architectural coatings).

During demolition activities associated with the proposed project, potentially hazardous building materials (such as lead-based paint and mercury), small quantities of hazardous materials stored or used at existing buildings may be encountered. Removal of these materials, if present, by contractors licensed to remove and handle these materials in accordance with existing federal, state, and local regulations would ensure that risks associated with the transport, storage, use, and disposal of such materials would be reduced to less than significant.

In addition, the proposed project would result in the on-site use of common types of hazardous materials, such as the use of cleaners and disinfectants by maintenance staff. However, these potentially hazardous materials would not be of a type or occur in sufficient quantities to pose a significant hazard to the public and safety of the environment. These products are labeled to inform users of potential risks and to instruct them in appropriate handling procedures. Maintenance staff will be provided adequate training and safety information on how to properly handle hazardous materials. Therefore, hazardous materials used during project operation would not pose any substantial public health or safety hazards. With the implementation of the following Standard Project Conditions, impacts would be less than significant.

Standard Project Conditions

- 1) In accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines, an asbestos survey shall be performed on all structures proposed for demolition that are known or suspected to have been constructed prior to 1980. If asbestos-containing materials are determined to be present, the materials shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of BAAQMD. Demolition and disposal of ACM will be completed in accordance with the procedures specified by BAAQMD's Regulation 11, Rule 2.
- 2) A lead-based paint survey shall be performed on all structures proposed for demolition that are known or suspected to have been constructed prior to 1980. If lead-based paint is identified, then federal and state construction worker health and safety regulations shall be followed during renovation or demolition activities. If loose or peeling lead-based paint is identified at the building, it shall be removed by a qualified lead abatement contractor and

disposed of in accordance with existing hazardous waste regulations. Requirements set forth in the California Code of Regulations will be followed during demolition activities, including employee training, employee air monitoring, and dust control. Any debris or soil containing lead-based paint or coatings will be disposed of at landfills that meet acceptance criteria for the waste being disposed.

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 59,252-square-foot Library/Learning Resource Center and associated site improvements on the project site, including the demolition of the old Library building and portable buildings. Construction of the project would involve limited amounts of hazardous materials (such as diesel fuels for equipment, solvents, cleaners, and architectural coatings).

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 two-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?

Less than significant 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, and ornamental landscaping. The project site is surrounded on four sides by urban development and infrastructure. The State of California Department of Forestry and Fire Protection (CAL FIRE) designates the area as a Non-Very High Fire Hazard Severity zone (VHFHS) on the CAL FIRE fire hazard maps. Further, the proposed facility would be equipped with fire sprinklers and would comply with the applicable fire safety provisions of the CBC, thereby reducing the risk of damage from fire to the maximum extent practicable. Impacts would be less than significant.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
9. Hydrology and Water Quality				
<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 type="checkbox"/>	<input checked="" 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.

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.

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 2015 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 a variety of 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. Because the proposed building will replace the existing Library structure, no net increase in impermeable surface will result and surface runoff amounts would be the same or less than the current condition. On-site retention of stormwater runoff would be accomplished with drainage swales to allow the water to percolate through the open grass areas of the site, reducing the amount of stormwater to be conveyed off-site via the existing storm drain. The existing infrastructure would be able to serve the new Library/Learning Resource Center. 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 serve the Library/Learning Resource Center. On-site retention of stormwater runoff would be accomplished with drainage swales to allow the water to percolate

through the open grass areas of the site, reducing the amount of stormwater to be conveyed off-site via the existing storm drain. Therefore, 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 59,252-square-foot Library/Learning Resource Center, 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, a less than significant impact related to the risk of loss, injury or death involving flooding would occur.

j) Inundation by seiche, tsunami, or mudflow?

No impact. The project site is located more than 43 miles from the Pacific Ocean and approximately 13.40 miles from the San Pablo Bay, so tsunami inundation is unlikely. There are no lakes or reservoirs in the vicinity, so there would be no seiche hazard. According to Exhibit 4.7-9, Slope Hazards in the Solano County General Plan Draft Environmental Impact Report, the project site is not located in an area designated as having a high slope by percentage. Thus, mudflow would not affect this site.

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.

MM HYD-2 Prior to occupancy of the Library/Learning Resource Center, 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 into the Library/Learning Resource Center design. 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 (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 Solano Community 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.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
10. Land Use and Planning <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, paved sidewalks, and ornamental landscaping. 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 SCCD 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 Library/Learning Resource Center 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.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
11. Mineral Resources <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. As part of Solano Community College campus, the project site is part of a larger area that was previously graded and developed and contains site improvements consisting of structures, underground utilities, light poles, and ornamental landscaping. 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.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
12. Noise <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 or 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 groundborne vibration or groundborne 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 and Vibration. 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 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.³ 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.

Table 16 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 16: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)	Acoustical Usage Factor (%)
Pickup Truck	55	40
Pumps	77	50
Air Compressors	80	40
Backhoe	80	40
Front-End Loaders	80	40
Portable Generators	82	50
Dump Truck	84	40
Tractors	84	40
Auger Drill Rig	85	20
Concrete Mixer Truck	85	40
Cranes	85	16
Dozers	85	40
Excavators	85	40
Graders	85	40
Jackhammers	85	20

³ 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 16 (cont.): Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)	Acoustical Usage Factor (%)
Man Lift	85	20
Paver	85	50
Pneumatic Tools	85	50
Rollers	85	20
Scrapers	85	40
Concrete/Industrial Saws	90	20
Impact Pile Driver	95	20
Vibratory Pile Driver	95	20

Source: FHWA 2006. Roadway Construction Noise Model User's Guide. January.

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 17.

Table 17: 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

Table 17 (cont.): Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Auger Drill Rig	0.051	82
Backhoe	0.051	82
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 18.

Table 18: 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.

Existing Noise Sources

The project site is located in the City of Fairfield, Solano County, California, within the existing SCCD campus. The project site is surrounded on all sides by walkways and existing campus buildings, including Building 700 (Social Sciences and Humanities) and Building 800 (Nursing/Public Services) to the west; grass lawn and Building 1000 (Theatre) to the north, the existing Library/Learning Resource Center, Building 300 (Science) and Building 400 (Student Services) to the south; and the construction site of the New Science Building and Building 1400 (Student Center/Bookstore) to the east.

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 obtained for the other proposed Science building will be utilized for analysis of this project. The proposed Science building is located within close proximity, approximately 100 feet east of the project site. As such, the noise levels on both sites are similar. The noise measurements were taken on Wednesday, October 21, 2015 between 4:00 p.m. and 4:50 p.m. The locations of the measurements are shown in Exhibit 6. The noise environment has not changed substantially since that time as development in the immediate area has remained the same. 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 is provided in Table 19.

Table 19: Noise Monitoring Summary

Site Location	Location Description—Primary Noise Sources	dBA L _{eq}	dBA L _{max}	dBA L _{min}
ST-1	Southwest corner of the Science building site—people conversing, wind, distant freeway noise	46.4	52.7	44.6
ST-2	Northern edge of the New Science building site—people conversing, wind, distant freeway noise	48.2	62.8	44.4
ST-3	Southeast corner of the New Science building 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_{eq} and 70 dBA L_{max}, 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_{eq} 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 result in:

- 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.

As shown in Table 16, 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 620 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. Therefore, assuming a minimum 5 dBA reduction for shielding, noise levels from project-related construction activities would attenuate to below 64 dBA L_{max} at these nearest off-site 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. Therefore, implementation of Mitigation Measure NOI-1, requiring 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.

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 proposed project would not result in significant changes in traffic as the project only involves the replacement of existing uses. Because the square footage of the new Library/Learning Resource Center would exceed that of the existing Library, using ITE generation rates it was estimated that few automobile trips would be generated to add to the existing traffic. A traffic analysis prepared by K.D. Anderson & Associates found that the amount of traffic likely to be generated would meet the threshold for preparation of a full traffic study as required by the City of Fairfield. Therefore, a traffic study was not performed for this project. However, traffic analysis and traffic noise modeling were performed for the Solano Community College New Science Building Project Initial Study, approved in 2016. Traffic conditions have not changed substantially since that date; therefore, the traffic noise modeling from that approved Initial Study is used in the following traffic noise impact analysis.

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 E of this document. A summary of the modeling results is shown in Table 20.

Table 20: 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

Table 20 (cont.): 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—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, 2016.						

The project’s nearest building façade would be located approximately 505 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 43.8 dBA and 44.3 dBA CNEL under existing and year 2035 plus project conditions, respectively.

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 building. Based on the EPA’s Protective Noise Levels (EPA 550/9-79-100, November 1978), with a combination of walls, doors, and windows, standard construction for northern California buildings would provide approximately 25 dBA in exterior to interior noise reduction with windows closed and approximately 15 dBA with windows open. With windows open, interior spaces of rooms in the proposed library facing Suisun Valley Road would experience traffic noise levels of up to 29.3dBA CNEL (44.3 dBA–15 dBA = 29.3 dBA) under year 2035 plus project conditions. Therefore, traffic noise levels would be 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 620 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 33 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 groundborne vibration or groundborne noise levels?

Less than significant impact. 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 inch per second (in/sec) peak particle velocity (PPV) at 25 feet from the operating equipment.

The nearest structure to the proposed demolition areas where heavy construction equipment would operate is the new science building, approximately 50 feet east of the demolition footprint of the old library. At this distance, groundborne vibration levels could range up to 0.074 PPV from operation of a large vibratory roller. This is below the industry standard vibration damage criterion 0.5 PPV for this type of structure, a steel-frame building (see Table 18). The closest structure to the construction area of the new library is the Building 700, located approximately 70 feet west of the construction footprint where heavy construction equipment would be operating. At this distance, groundborne vibration levels could range up to 0.045 PPV from operation of a large vibratory roller. This is well below the industry standard vibration damage criterion of 0.3 PPV for engineered concrete and masonry buildings (see Table 18). 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 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 20, 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 Impact 12a), noise levels from project-related stationary noise sources such as operation of new mechanical ventilation equipment could range up to 33 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 19. In addition, they are below the existing traffic noise levels at the nearest off-site receptors along Suisun Valley Road shown in Table 20. 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 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.

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 from 7:00 a.m. to 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.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
13. Population and Housing <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 59,252-square-foot Library/Learning Resource Center located within the existing SCCD campus. The new Library/Learning Resource Center would replace an existing, aging facility. No new jobs would be created by the Library/Learning Resource Center. Most of the SCCD faculty and staff assigned to the new building would be expected to be employees who are currently employed in the existing library structure. 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 Library/Learning Resource Center 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.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
14. Public Services				
<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 59,252-square-foot Library/Learning Resource Center and associated site improvements on the project site, including the demolition of the old Library building and portable buildings. 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, is 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 59,252-square-foot Library/Learning Resource Center and associated site improvements on the project site, including the demolition of the old Library building and portable buildings. The SCCD 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 these hours. Additionally, both the Fairfield Police Department and Solano County Sheriff's Office are available to support the SCCD Police Department pursuant to standard mutual aid agreements. The proposed Library/Learning Resource Center 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 impacts. The proposed project would develop a 59,252-square-foot Library/Learning Resource Center 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 59,252-square-foot Library/Learning Resource Center 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 59,252-square-foot Library/Learning Resource Center 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.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
15. Recreation				
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 59,252-square-foot Library/Learning Resource Center 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 59,252-square-foot Library/Learning Resource Center on the project site. The proposed project does not include any recreational facilities, which precludes the possibility of impacts, and no impacts would occur.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
16. Transportation/Traffic <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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 a Traffic Impact Assessment prepared by KD Anderson & Associates, December 28, 2017, which is provided in Appendix F.

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?**

Standards of Significance/Level of Service Thresholds

In the traffic assessment prepared by K.D. Anderson & Associates, the significance of the proposed project’s trip generation impact on traffic operating conditions is based on two criteria:

1. City of Fairfield Study Guidelines for determining the need for a Traffic Impact Analysis
2. The relative increase in traffic volume on Suisun Valley Road resulting from the project and the likely effect of that increase on intersection Level of Service.

Trip Generation

The number of vehicle trips that are expected to be generated by development of the proposed project was estimated using trip generation data published by the Institute of Transportation Engineers (ITE), as shown in Table 21.

Table 21: Net Project Trip Generation

Land Use	Unit	Trips per Unit				
		Daily	AM Peak Hour		PM Peak Hour	
		Rate	Rate	In/Out	Rate	In/Out
Community College (ITE 540)	ksf	20.25	2.07	77%/23%	1.86	50%/50%
Note: ksf = 1,000 gross square feet Source: Trip Generation Manual, 10 th Edition.						

Using a “screen line” assessment under the City of Fairfield’s Study Guidelines, the report determined a traffic impact analysis would not be required. The City’s minimum threshold for requiring an impact analysis is 50 peak-hour trips, and the net increase in trips associated with the Library/Learning Resource Center project is three to four peak-hour trips, as shown in Table 22.

Table 22: Net Project Trip Generation

Land Use	Quantity (ksf)	Trips Generated						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Existing Permanent and Portable Buildings	57.64	1,167	92	27	119	54	53	107
New Library	59.25	1,200	94	29	123	55	55	110
Net Change		33	2	2	4	1	2	3

Source: KD Anderson & Associates, 2018

Furthermore, a review of KD Anderson & Associates’ 2015 Traffic Study prepared for Solano Community College’s Science Building Project showed Suisun Valley Road carries 919 AM and 1,018 PM peak-hour vehicles per hour in the area north of Business Center Drive under the “Existing Plus Approved Projects Plus Science Building” condition. The report indicates that the net trips associated with the Library/Learning Resource Center project would represent less than a 1 percent increase to the volumes from the 2015 Traffic Study. The net increase is too small to measure the effect on peak-hour intersection Level of Service (LOS). The acceptable conditions identified in the 2015 Traffic Study would continue for the proposed project. Therefore, the impacts would be less than significant.

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. The estimated net trip increase associated with the proposed project is not considered substantial enough to require a traffic impact analysis and to change the LOS during peak-hour intersections. 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 would consist of a two-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 of which is 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.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
17. Utilities and Service Systems <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 59,252-square-foot Library/Learning Resource Center. 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 the existing library, which will be demolished. Because the new Library/Learning Resource Center would be an

institutional use occupied by SCCD faculty, staff, and students, comparable agency projections for a medical office building will be used. That rate is 27.5 gallons per year per square foot. When applied to the proposed Library/Learning Resource Center's 59,252 square feet, the proposed project is estimated to consume 16,929,430 gallons annually or 46,382 gallons daily. Assuming wastewater as 90 percent of potable water use, the estimated effluent generated is 41,744 gallons per day (0.042 million gallons per day [gpd]). Fairfield-Suisun Sewer District has a dry weather capacity of 15.5 million gallons per day (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 17a) and 17d), 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. According to the Appendix section of the Solano Community College District 2013 Facilities Master Plan the existing sewer system is under capacity for future conditions. The Master Plan designates approximately 1,150 linear feet of 10-inch main to 12-inch. The upsizing sewer system would have sufficient capacity to convey the sewage loads at the college campus. With the planned improvements, 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 Library/Learning Resource Center. 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 that 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 2015 Urban Water Management Plan sets forth a water consumption target of 181 gallons per capita per day for 2020. Because the new Library/Learning Resource Center would be an institutional use occupied by the SCCD faculty, staff, and students, comparable agency projections for a medical office building will be used. That rate is 27.5 gallons per year per square foot. When applied to the proposed Library/Learning Resource Center's 59,252 square feet, the proposed project is estimated to consume 16,929,430 gallons annually. The projected water supply for 2020 is 9,808 million gallons. The estimated water consumption of the proposed project would

be less than 0.001 percent of the project 2020 water supply. As such, adequate water supplies would be available to serve the proposed project. Furthermore, the proposed project would not involve an increase in users because it is a replacement of an existing building that is being demolished. There would be no substantial increase in water use. Impacts would be less than significant.

- 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. Furthermore, the proposed project would not involve an increase in users because it is a replacement of an existing building that is being demolished. There would be no substantial increase in wastewater. 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 59,252 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 136.46 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. Furthermore, the proposed project would not involve an increase in users because it is a replacement of an existing building that is being demolished. There would be no substantial increase the College's need for waste disposal. 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.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
18. Mandatory Findings of Significance				
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. In addition, cultural or tribal cultural resources could be impacted by excavation on the site. Mitigation Measures BIO-1 and BIO-2 and CUL-1 and CUL-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 and noise 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. 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.

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